WORLD ARCHITECTURE

10TH ANNIVERSARY ISSUE

The business magazine for the global architect

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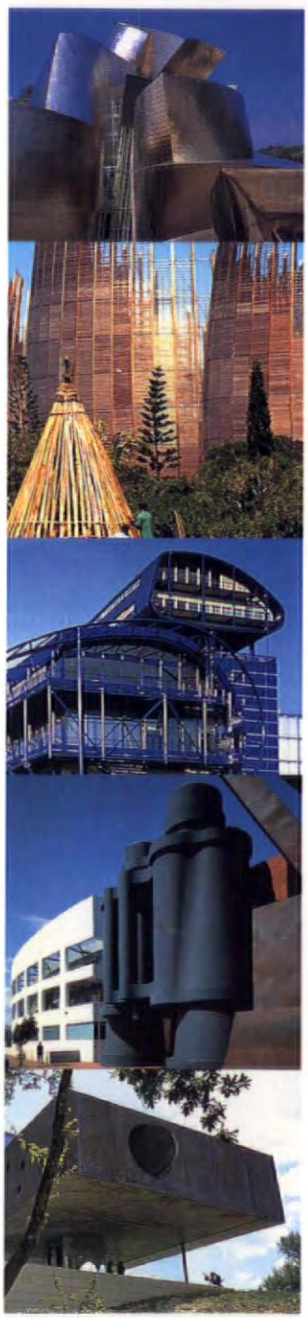

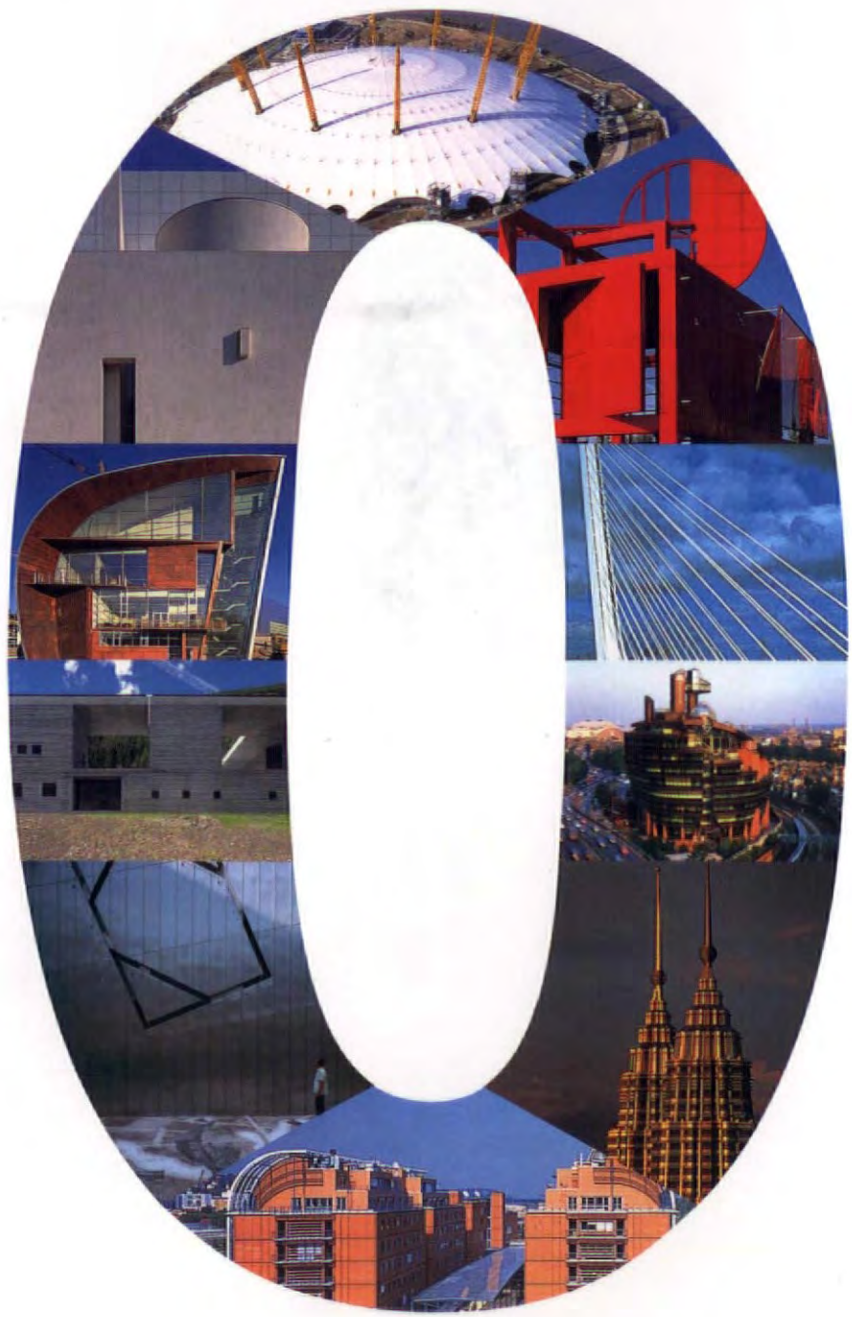

BUILDINGS THAT SHAPED THE DECADE: 1989-99

Inside: Frank Gehry, Norman Foster, Richard Meier, Christoph Ingenhoven, Henri Ciriani and many more

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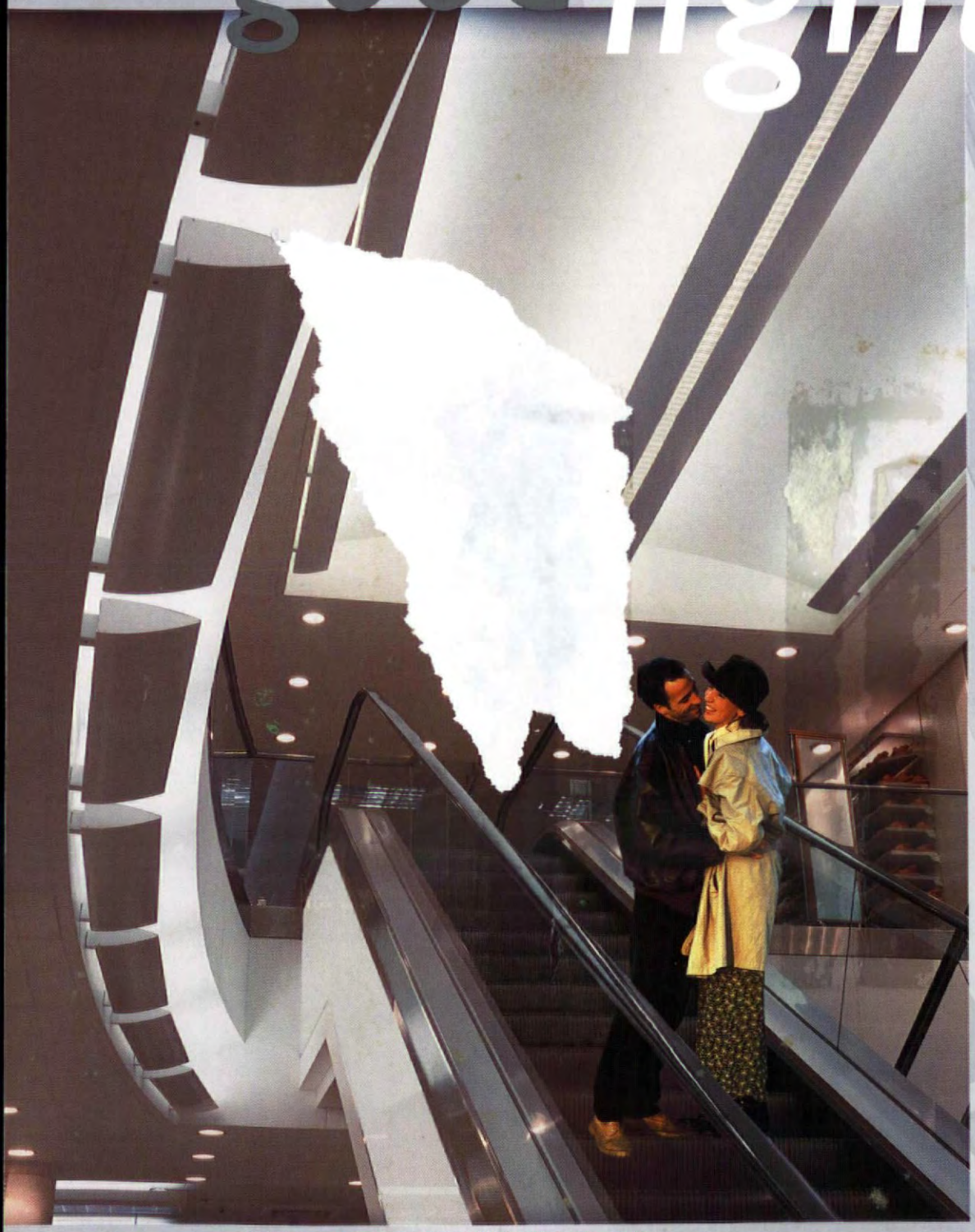

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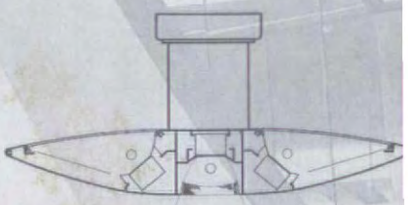

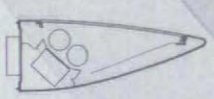

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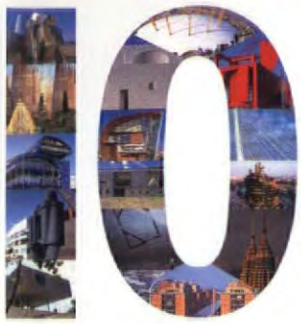


Cover

The top ten buildings of the last ten years. In the "one", from top to bottom: Frank Gehry's Guggenheim; Renzo Piano Building Workshop's Tjibaou Cultural Centre; Alsop & Störmer's Le Grand Bleu; Frank Gehry's Chiat/Day Building; and OMA/Rem Koohaas's Bordeaux House. In the "zero", clockwise from top: Richard Rogers Partnership's Millennium Dome; Bernard Tschumi's Parc de la Villette; Santiago Calatrava's Alamillo Bridge; Ralph Erskine's Ark; Cesar Pelli's Petronas Towers; Renzo Piano Building Workshop's Cité Internationale de Lyon; Daniel Libeskind's Jewish Museum; Peter Zumthor's Vals Thermal Baths; Stephen Holl's Kiasma Museum; and Richard Meier's Barcelona Museum

WORLDARCHITECTURE

Contents **Issue number 78 | July/August 1999**

Regulars

50

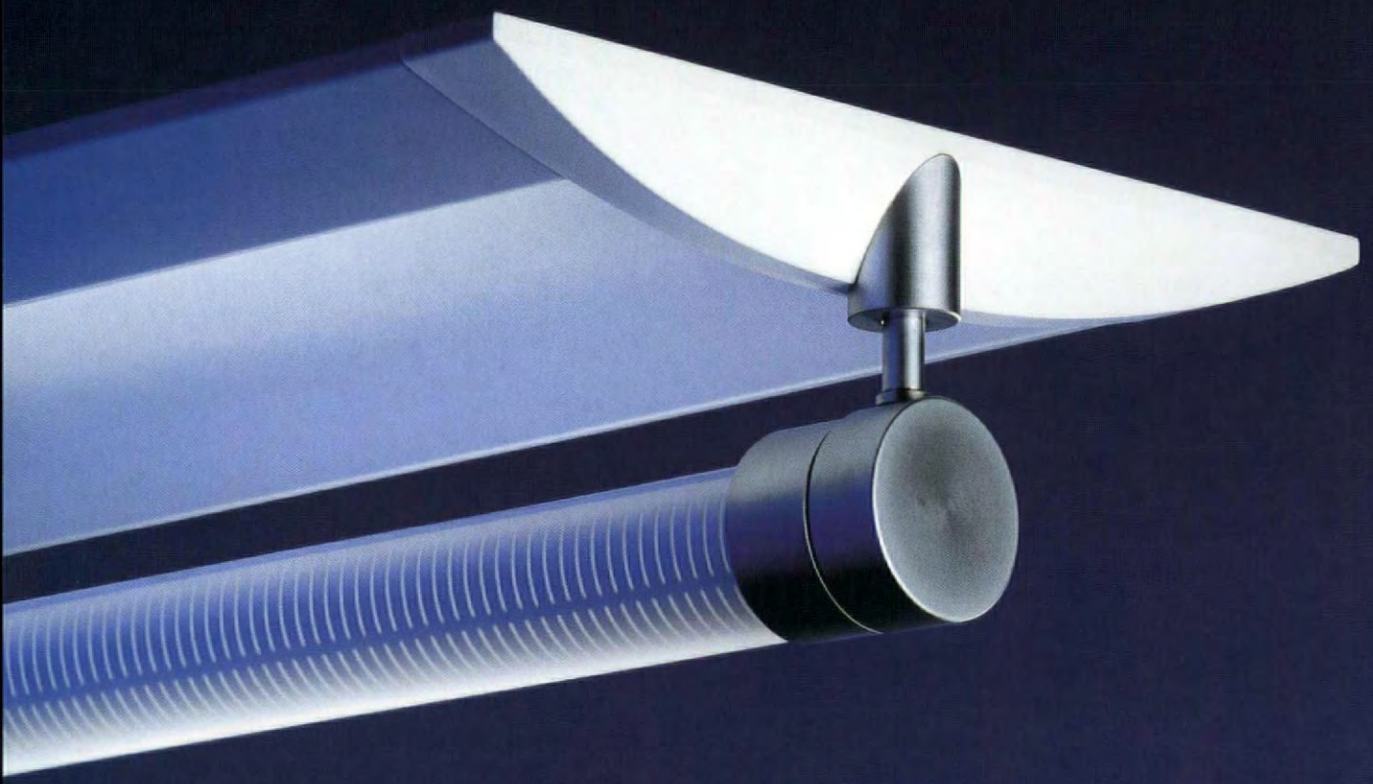
News and features

72

CELEBRATING WORLD ARCHITECTURE'S 10TH ANNIVERSARY

114

Technical – Roofing



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Seeing into the future

The biggest single influence on the architectural profession during the ten years since *World Architecture's* launch has been globalisation. Galloping developments in CAD and construction technology since 1989 have enabled buildings which previously lived in the imagination alone, such as Gehry's Guggenheim, to take centre stage in the public arena, but it is the global expansion of architectural practices – both large and small – that will distinguish this decade from the rest.

Not only are architects working in a greater number of countries, with or without satellite offices; these practices are diversifying across sectors to ensure that they become recession-proof. The 1990s have delivered many of the lessons of international practice the hard way. Europe and North America have been shrouded in recession for much of it; for others the Asian crash has destroyed confidence and confirmed fears and prejudices. But those who put down roots in countries before they became fashionable business haunts have, on the whole, remained resistant to collapse.

The key to success lies in early diagnosis and accurate forecasts. That is where *World Architecture* has left other magazines standing. Since 1995 we have monitored the development of global practice. The outbreak of commentary on globalisation throughout the media has flourished in the last year or so, but for more than five years we have recognised the importance of the powerful multi-disciplinary firms, alongside the boutique architects. In November 1997, ex-deputy editor Katherine MacInnes put the case for the defence in "The challenge of globalisation" at the São Paulo Bienale in Brazil (published in *WA*62 pages 92-93). This was followed by round-table symposiums held by the team in Toronto (*WA*70 pages 54-57) and Boston (*WA*71 pages 30-33), to discuss the moral and business issues of working overseas with 20 or so internationally practising architects. The concept of the magazine living beyond the page is central to the aims of *World Architecture* as we approach the 21st century. As Foster says in this issue (pages 106-113): the best is yet to come.

Nicola Turner, editor

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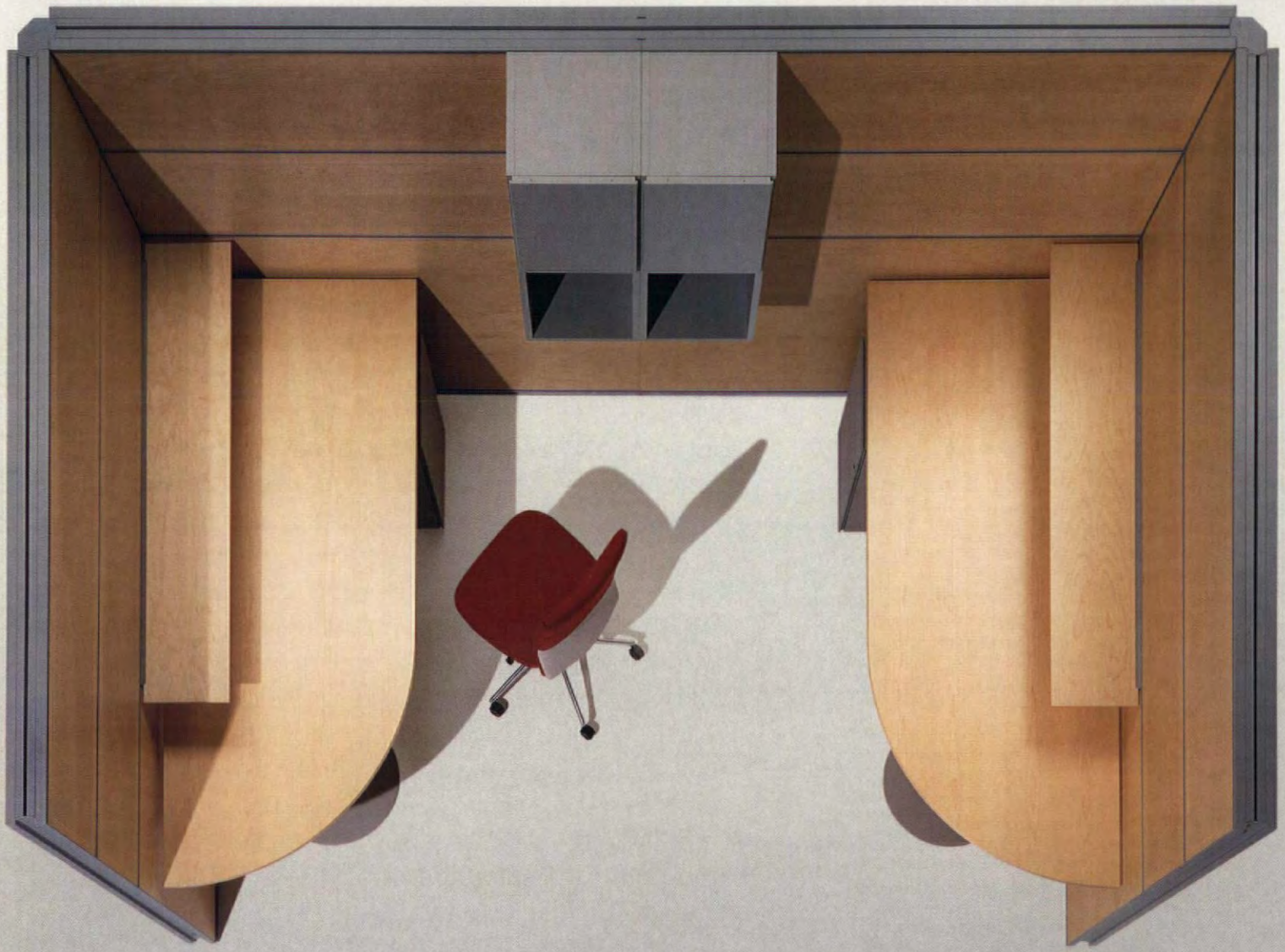

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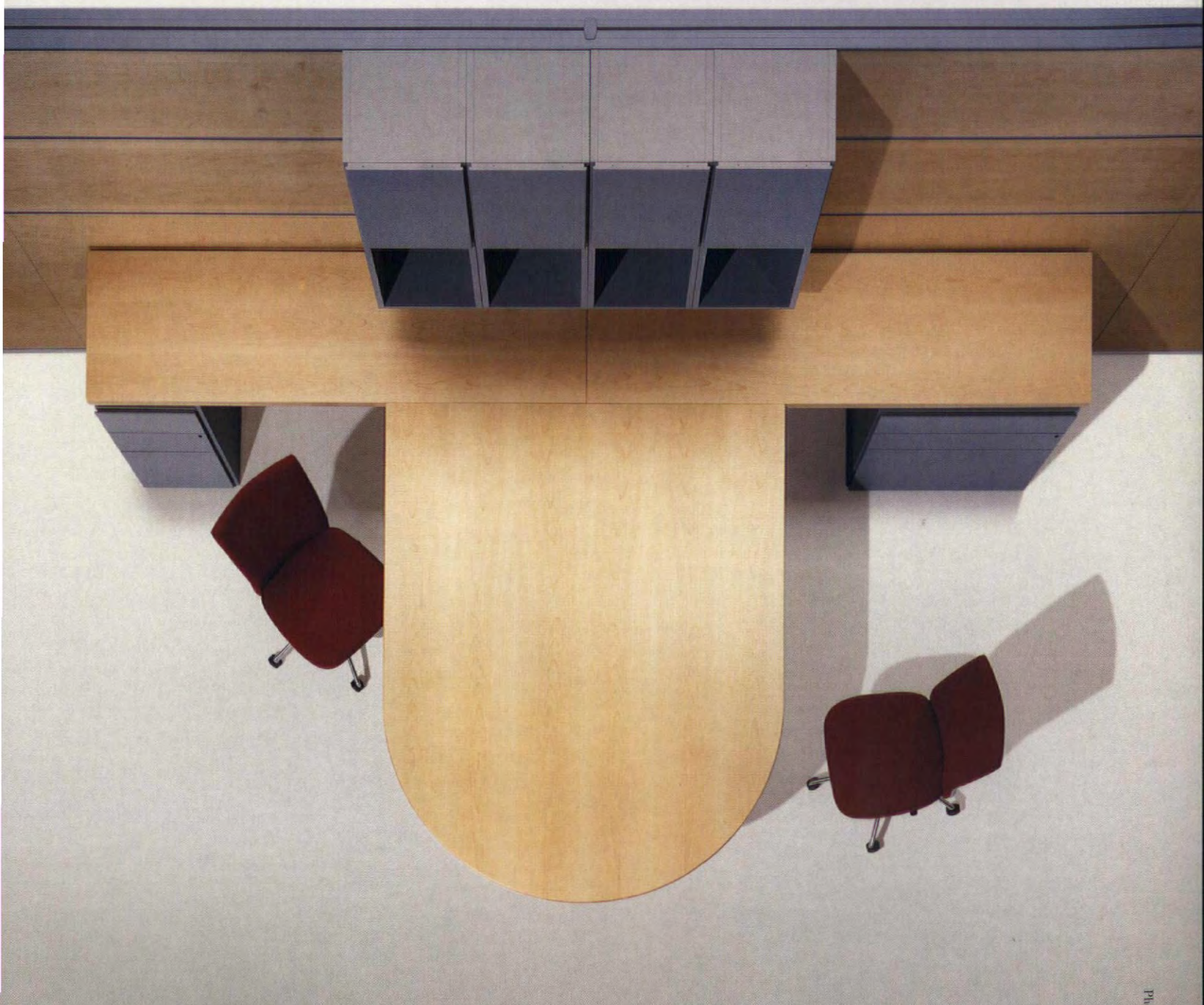

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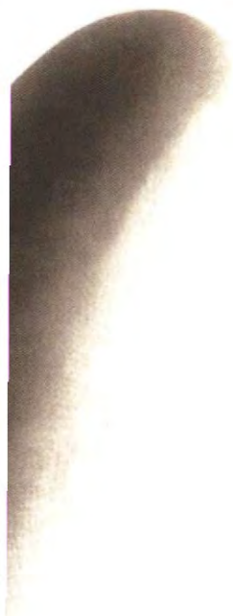

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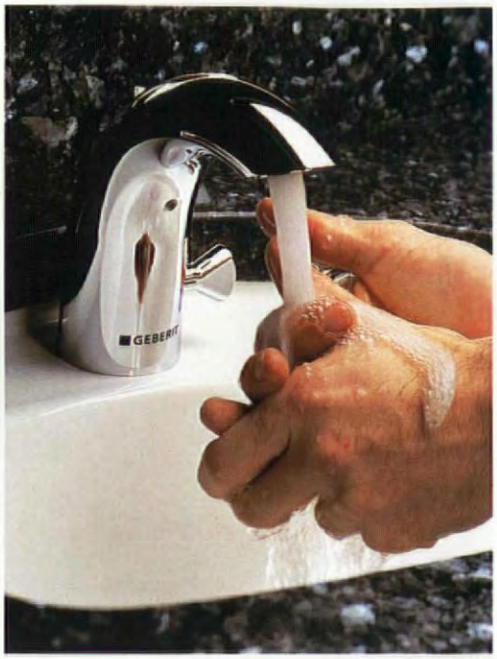

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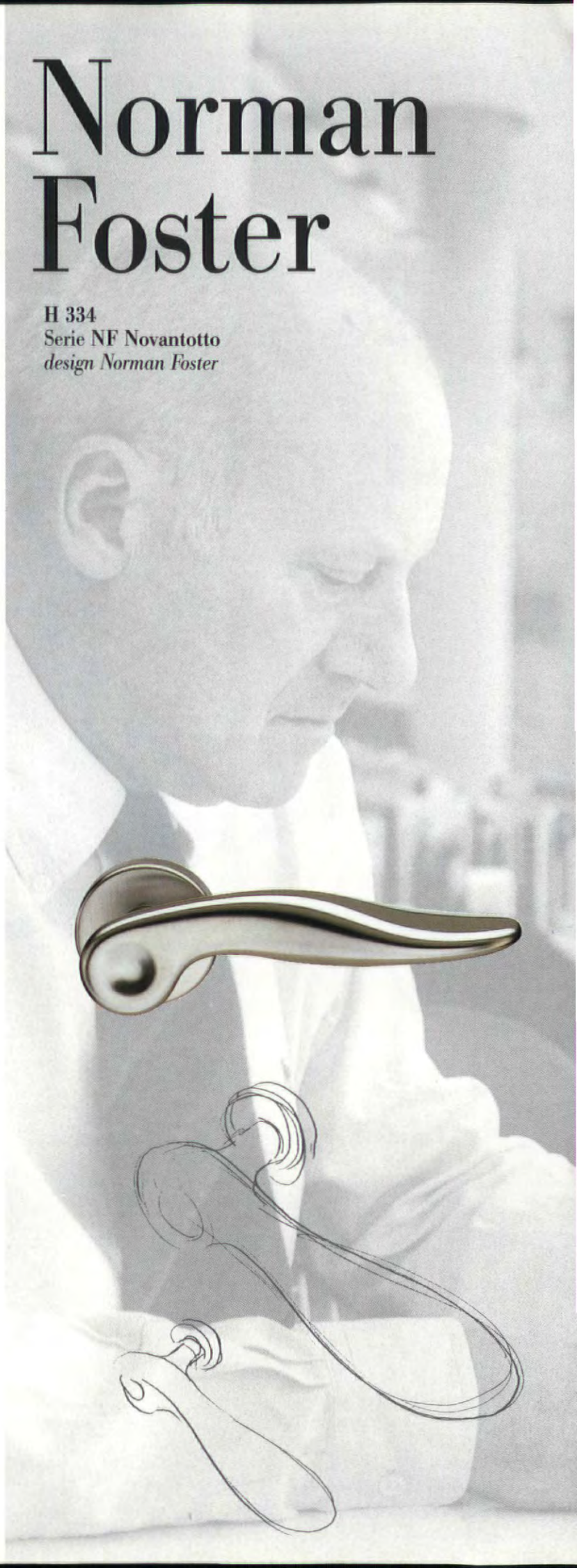

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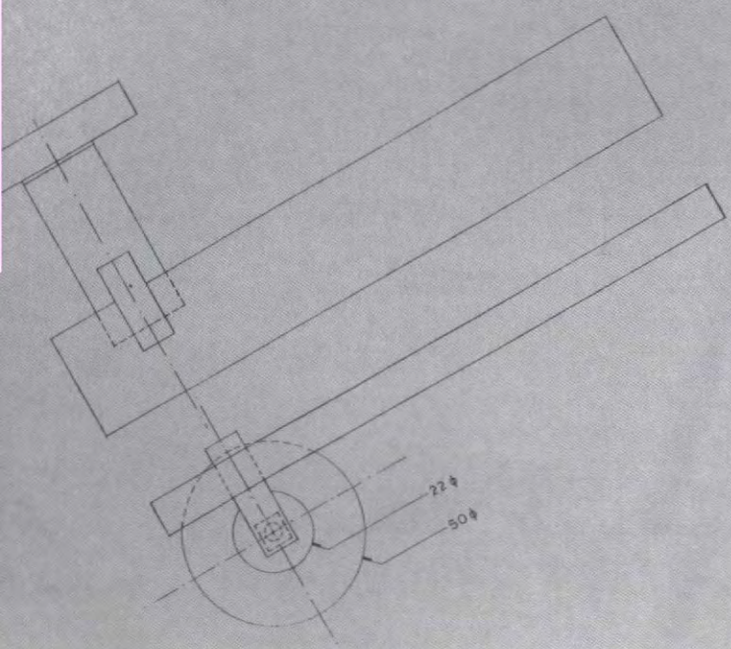

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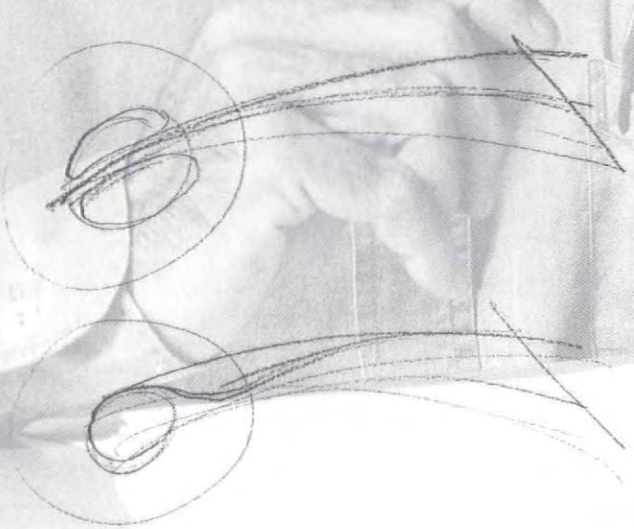

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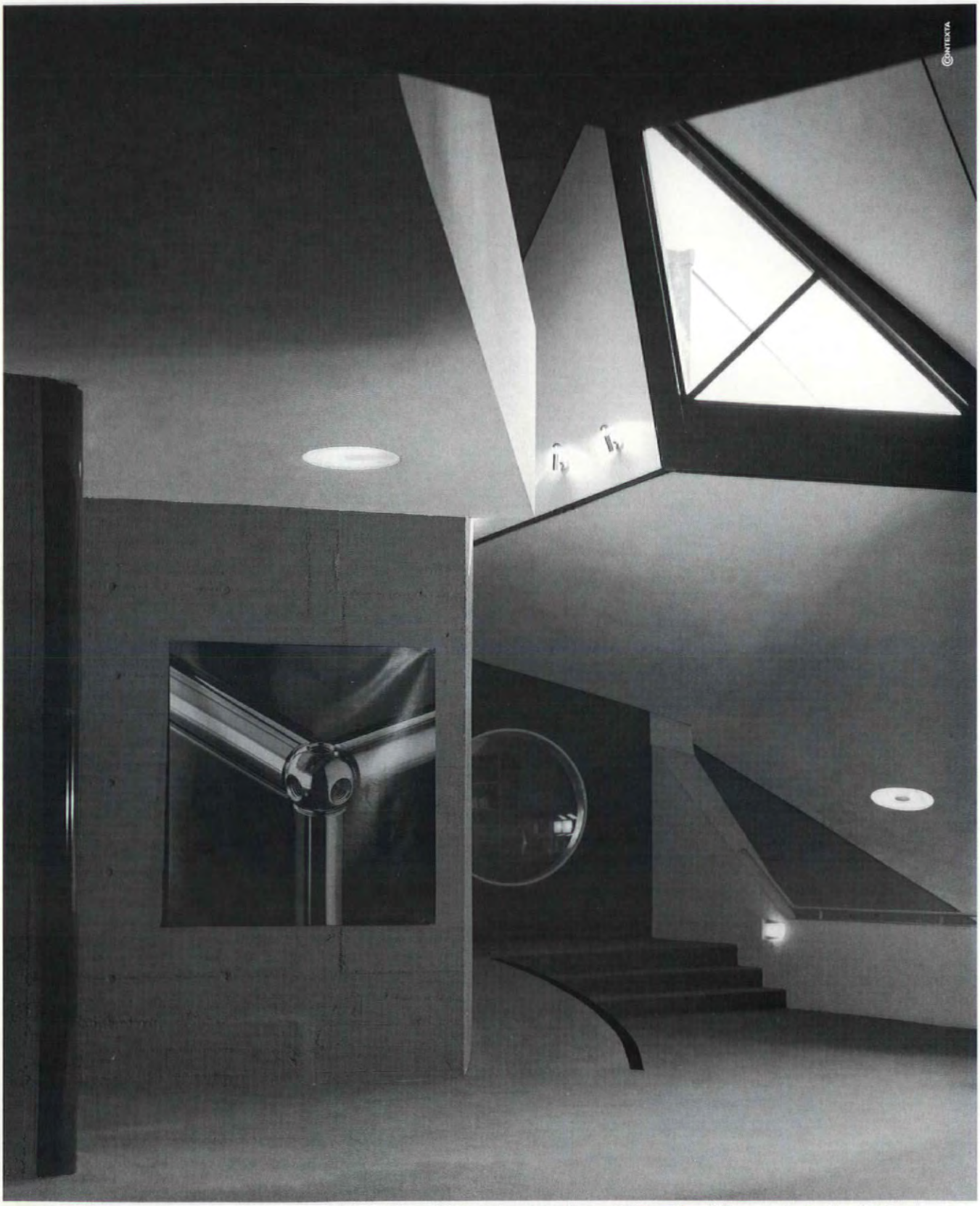

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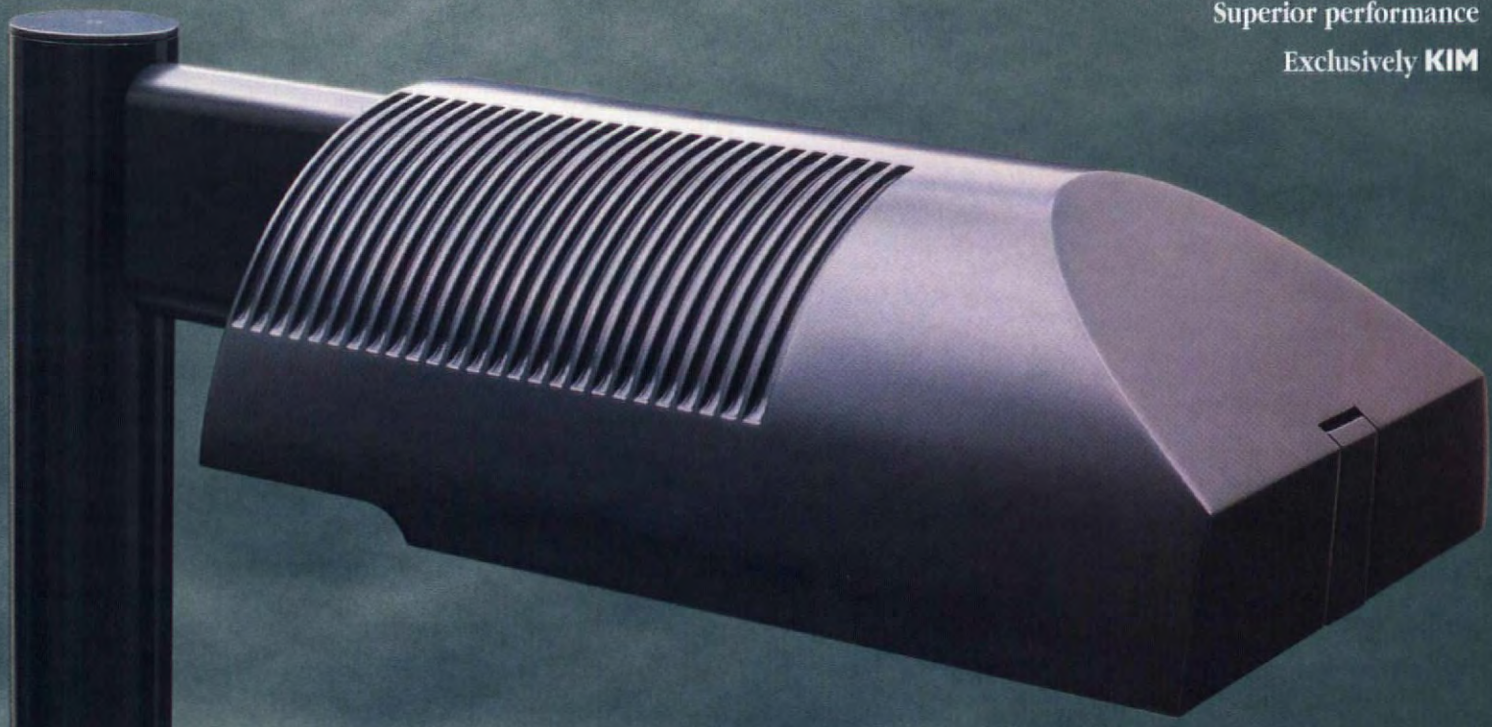

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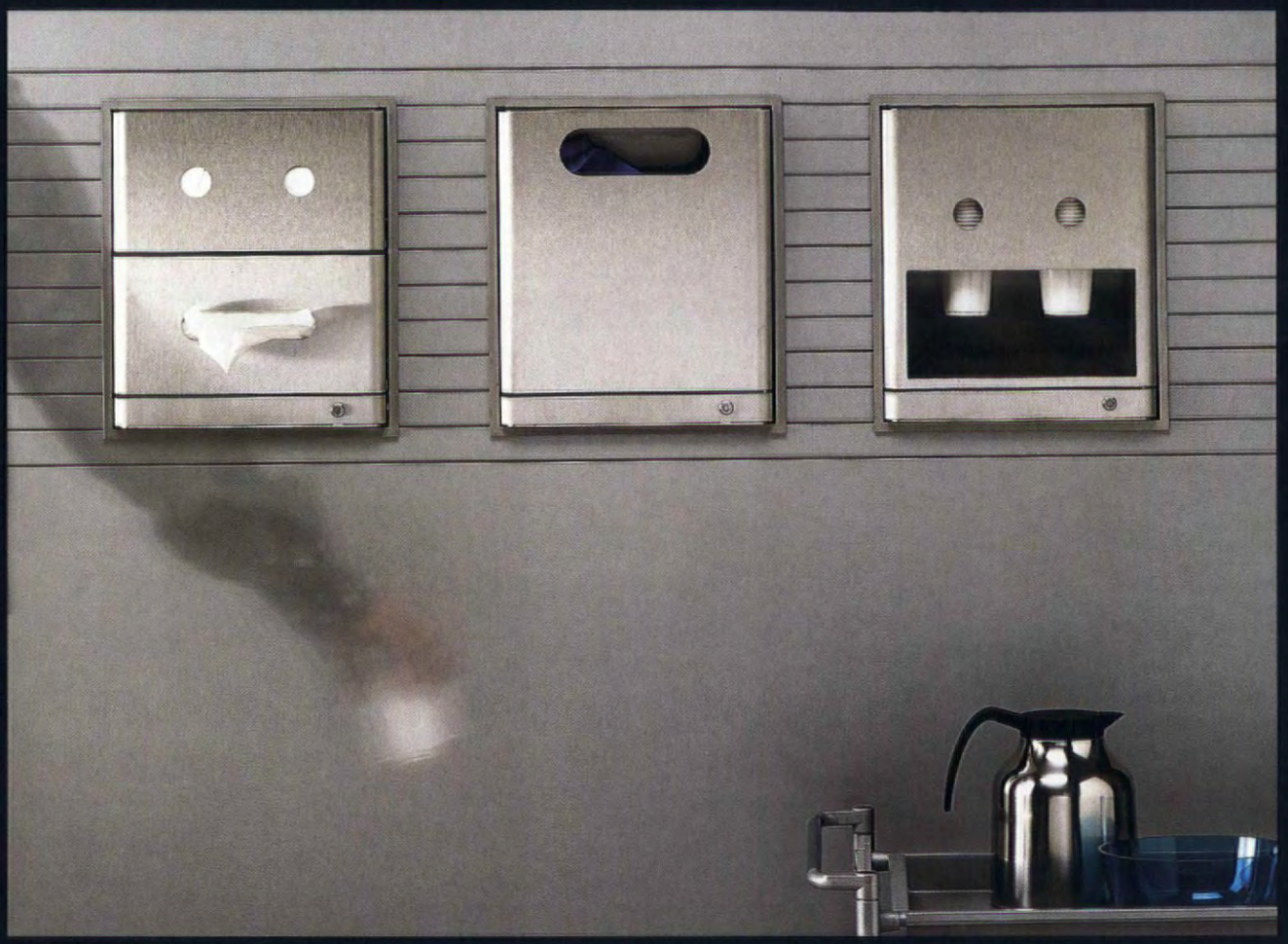

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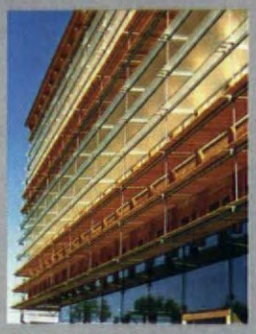

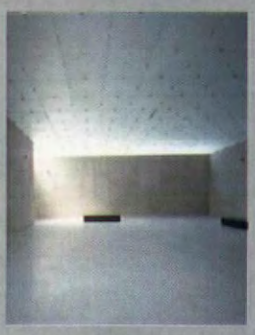

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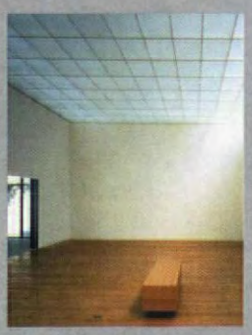

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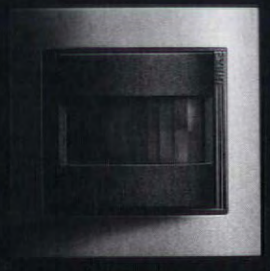

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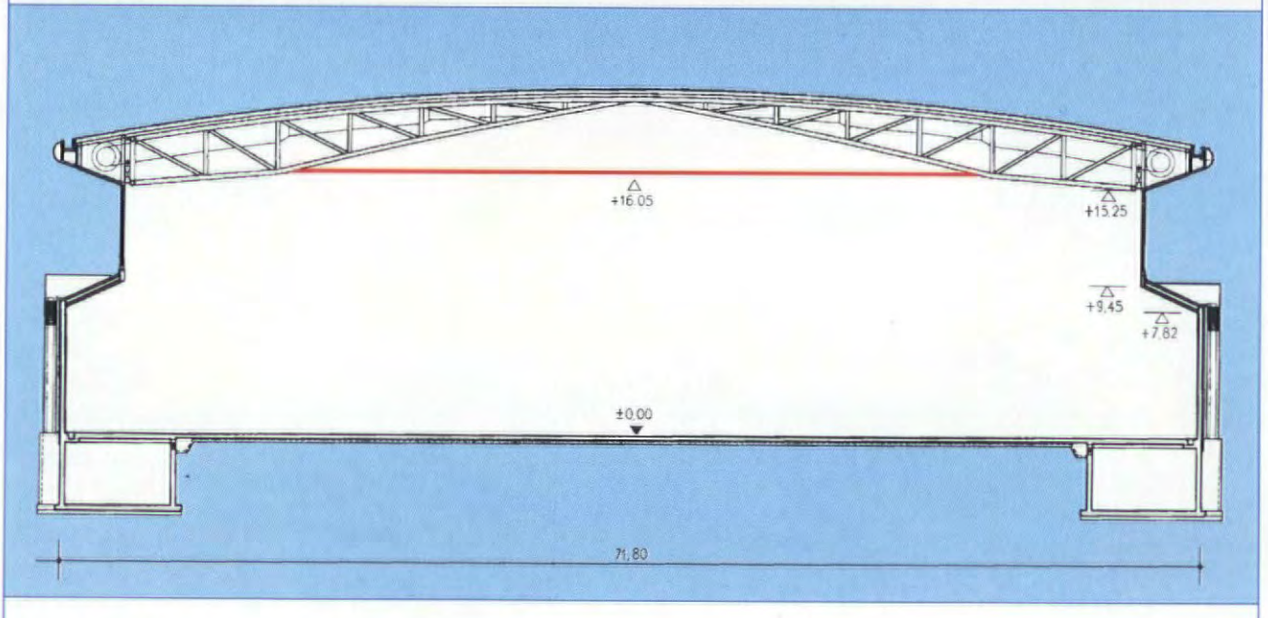

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Lolita orange,
I caught a glimpse while changing trains.

Lovely Lolita, could there be anything sweeter?
You made me linger and long to stay, putting off my journey for another day.

Design Lucci e Orlandini

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Colours: orange (photo), pale yellow, pale green, ice blue, frost white, china blue, lead grey, fluo red.

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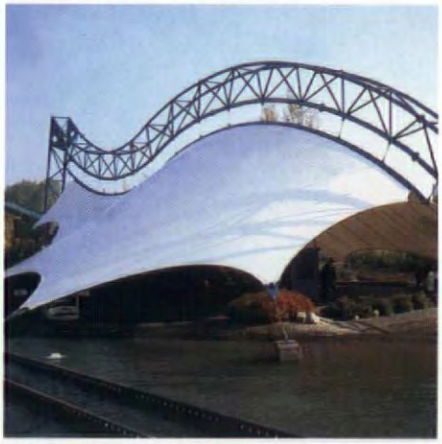

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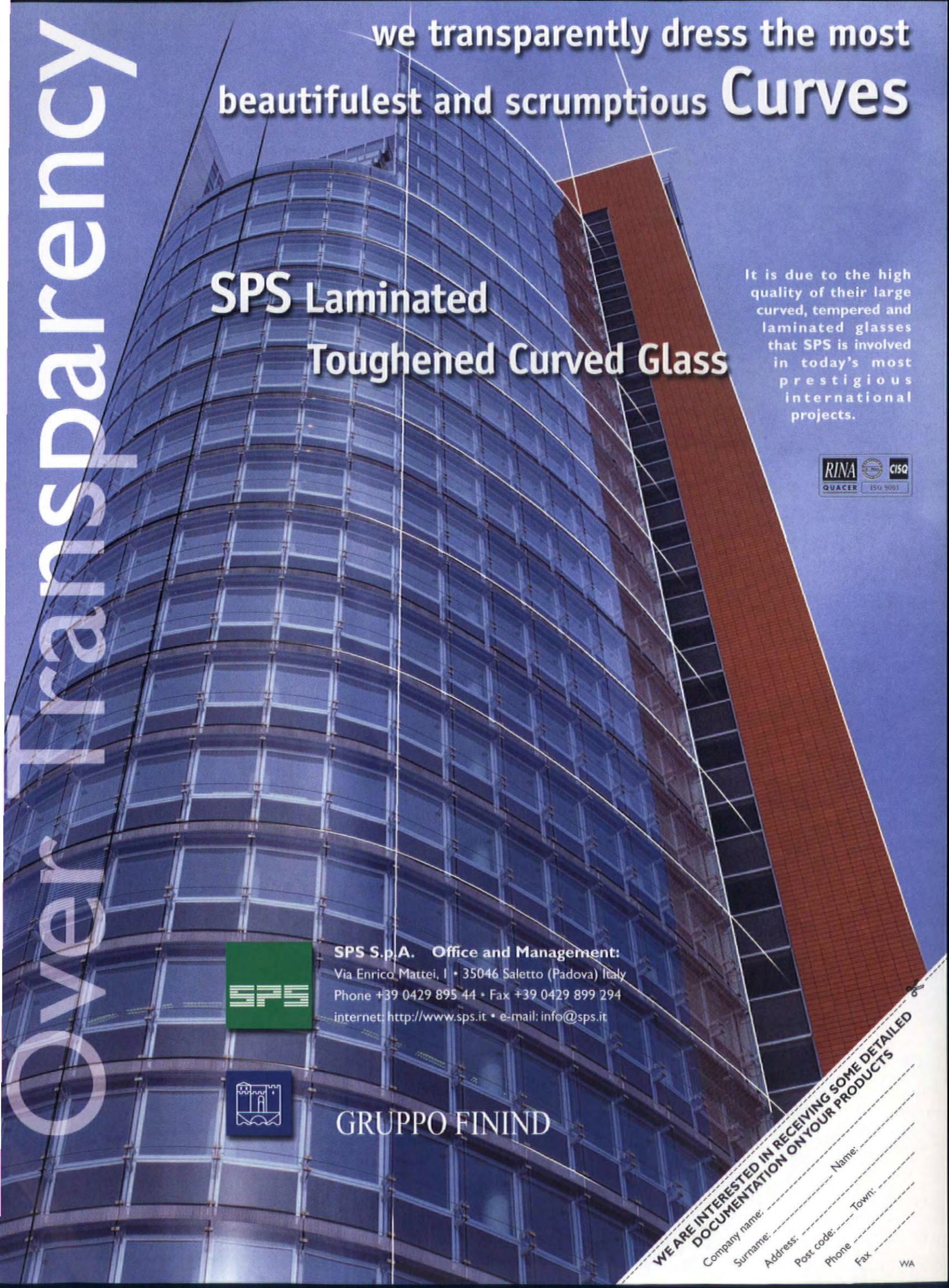
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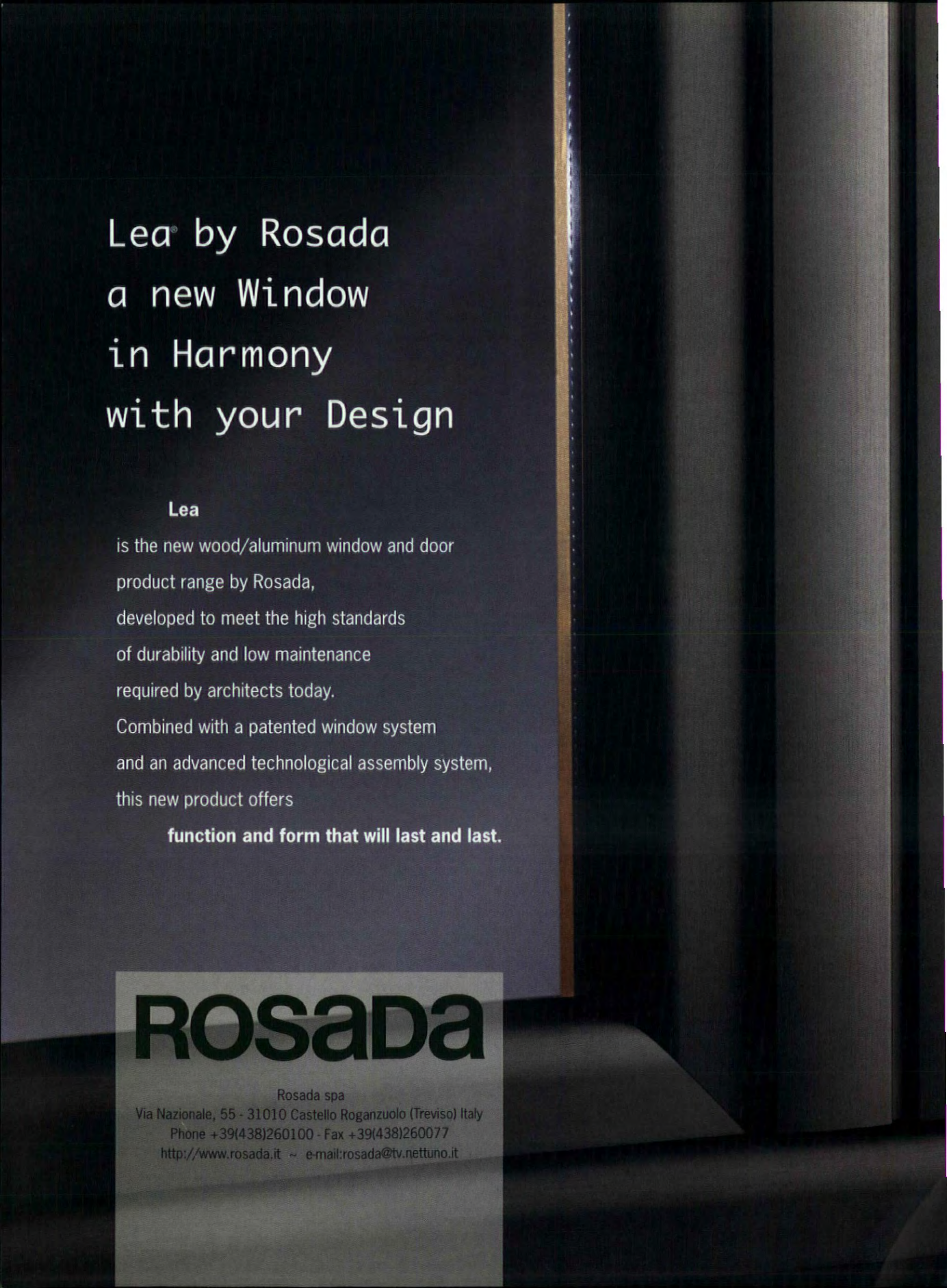

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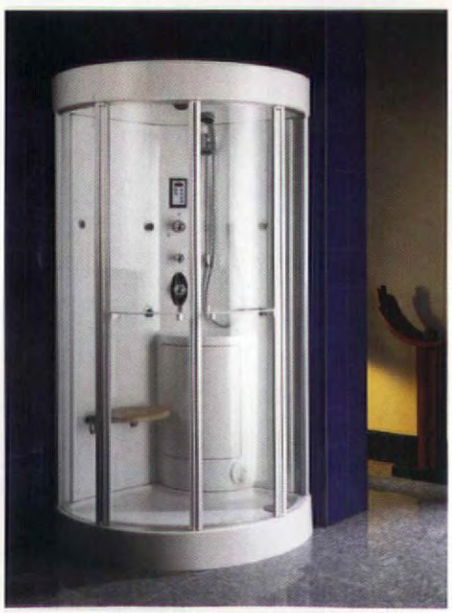

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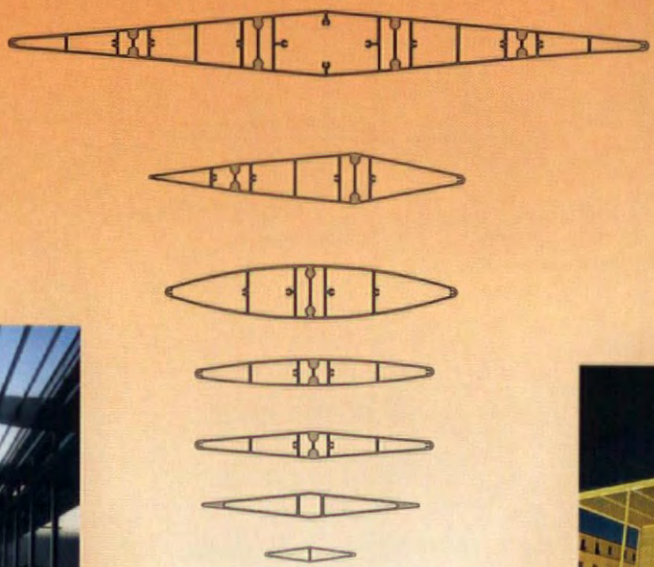

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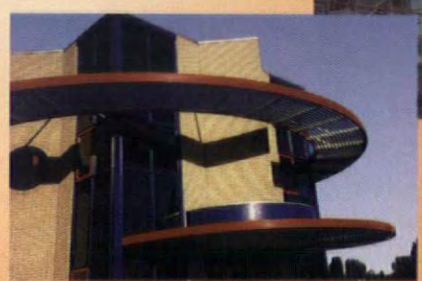

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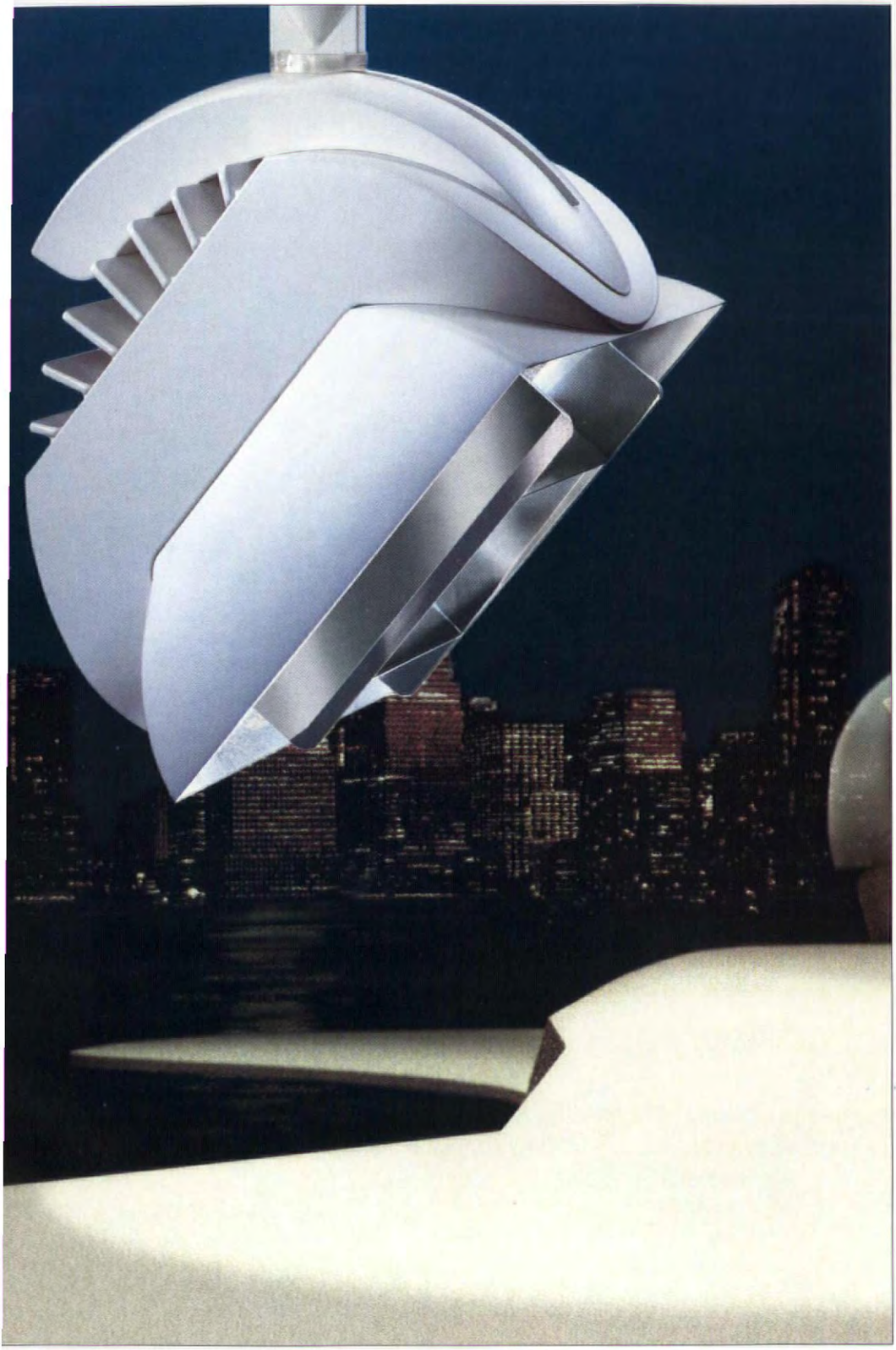

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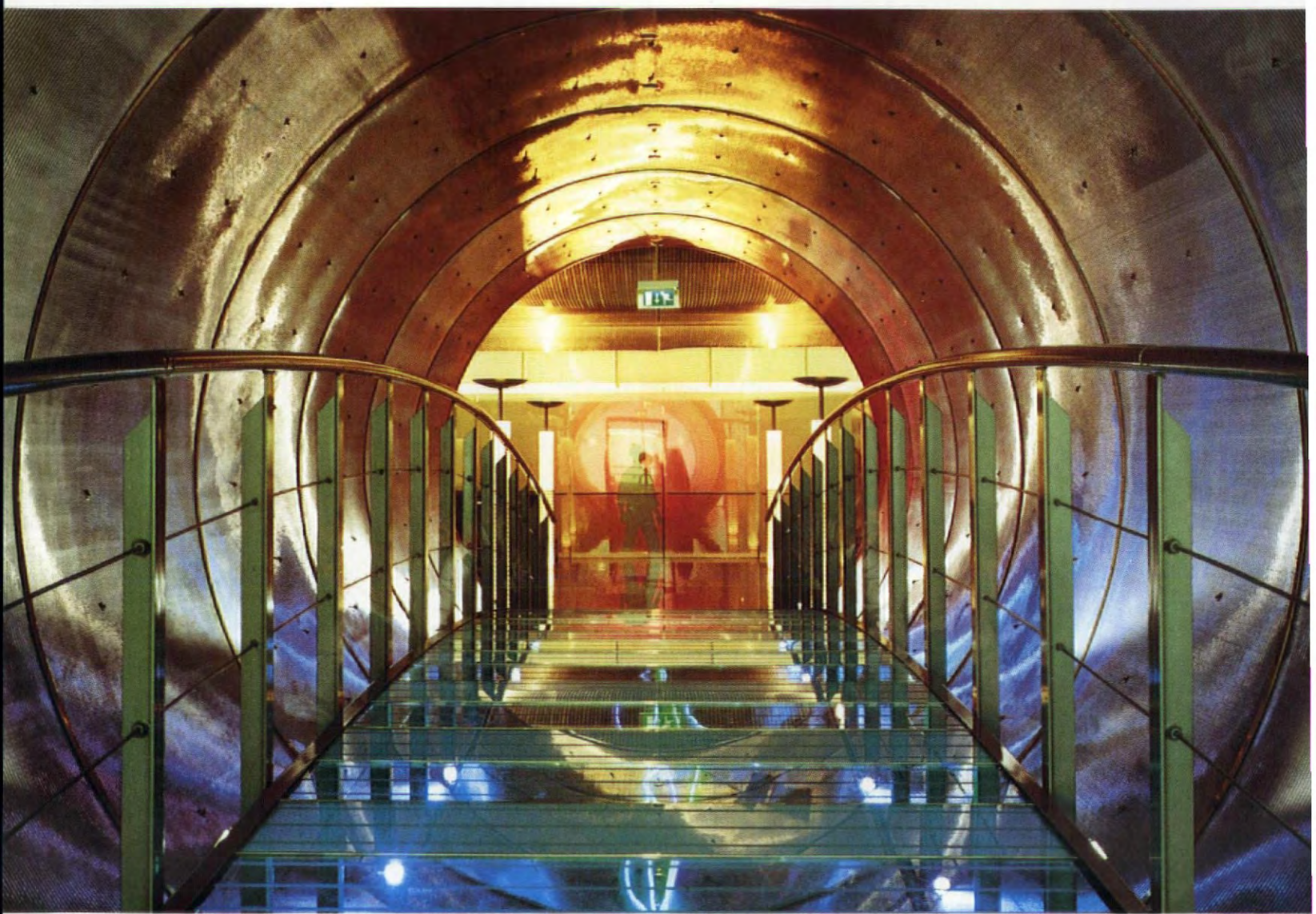

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Spanish Porcelain tiles:
high technical performances and decorative possibilities

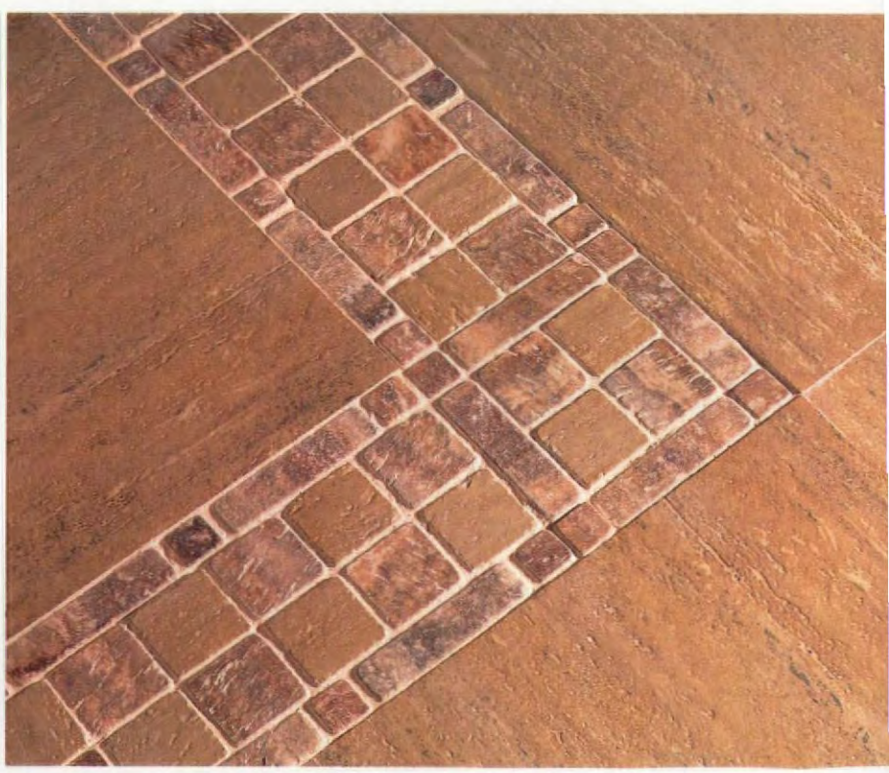
From the wide variety on offer from the Spanish Ceramic Tile Industry, the porcelain tile stands out due to its enormous development. It was introduced in the eighties as a product with high technical performances, distinguished because it reproduces nature and comes closer, more than other ceramic tile products, to the concept of rock or natural stone. These properties allow porcelain tiles to provide original combinations unknown until this time.

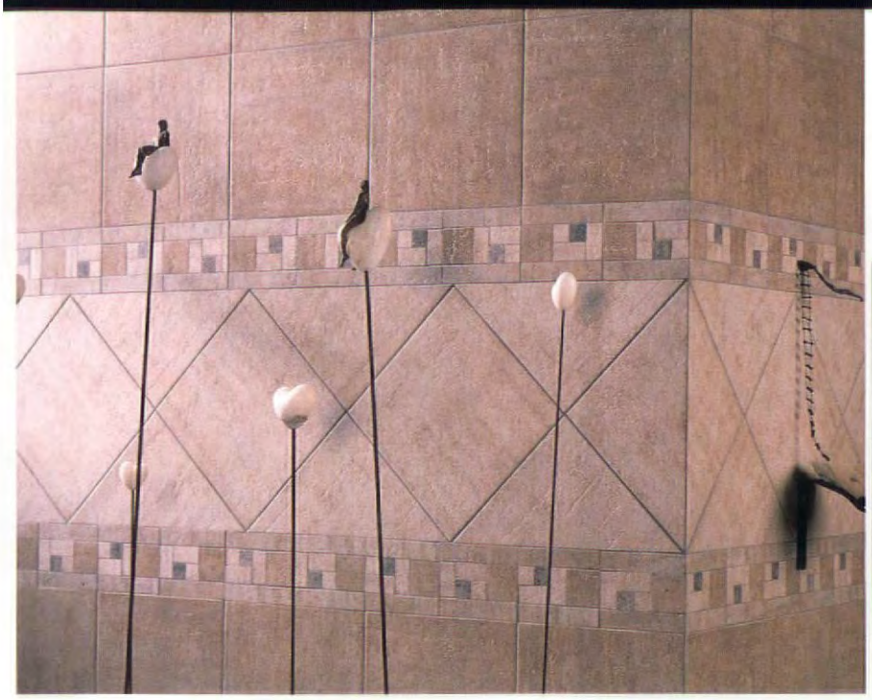
The product, with its mass vitrified and very compact, presents as a main characteristic a very low porosity level, providing this product with excellent mechanical and chemical properties and frost resistance. Therefore, porcelain tiles can be used externally, for floors and walls, in cold geographic areas.

It also presents a high resistance to chemical agents and house cleaning products. It maintains a very high resistance to abrasion and has a high modulus of rupture, this enables it to be used in areas of intensive pedestrian traffic or in industrial areas. It's an easy to clean product, making it a suitable material for paving spaces where hygiene is a fundamental consideration.

Gres Burela. Glazed porcelain tiles. Rustic look

Porcelanatto. Vento series. Natural porcelain tile. Rustic travertine marble look





Azteca Cerámica. Abadia series. Size: 33·3 cm × 33·3 cm. Glazed porcelain tiles

Todagres

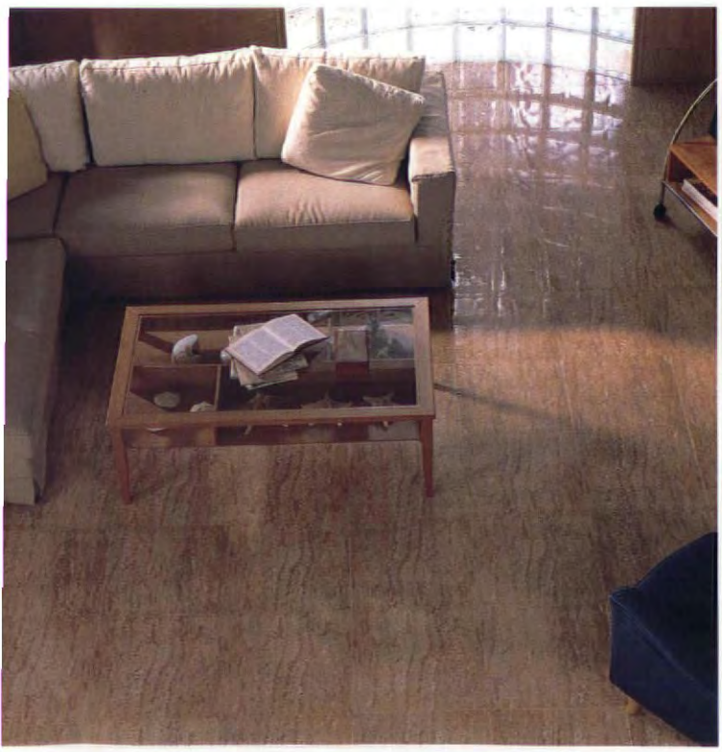
The search for new surface effects has given rise to a complete series of treatments for the final product, such as polished, allowing the development of two porcelain tile varieties: natural and polished. Natural porcelain tile or "unpolished" (it doesn't receive any treatment after its firing) provides a natural look that imitates stones present in nature, such as slates, marbles, cobbles, etc.

If the porcelain tile is polished, once the firing stage is finished, the piece acquires a tremendous brightness that simulates the surface effects of any polished marble.

Another porcelain tile treatment is rectified, which is now also being applied to other types of ceramic tiles. The rectified technique allows the modification of the tiles dimensions, and in that way we may eliminate dimensional stability problems and are able to produce products with a regular geometry.

The bevelled edge of the pieces or the elimination of the lateral joints is another important treatment available. It allows tile fixing without separating joints, getting a final aesthetic effect of high quality.

Porcelanosa. Glazed porcelain tiles. Scavos series. Size: 44·6 cm × 44·6 cm. Classic marble look



Keraben. Viking series. Size: 33 cm × 33 cm. Natural glazed porcelain tile. Rustic look

Tau Cerámica. Tau Ecologia series. Size: 40 cm × 40 cm. Natural porcelain tiles

Glazed porcelain tiles

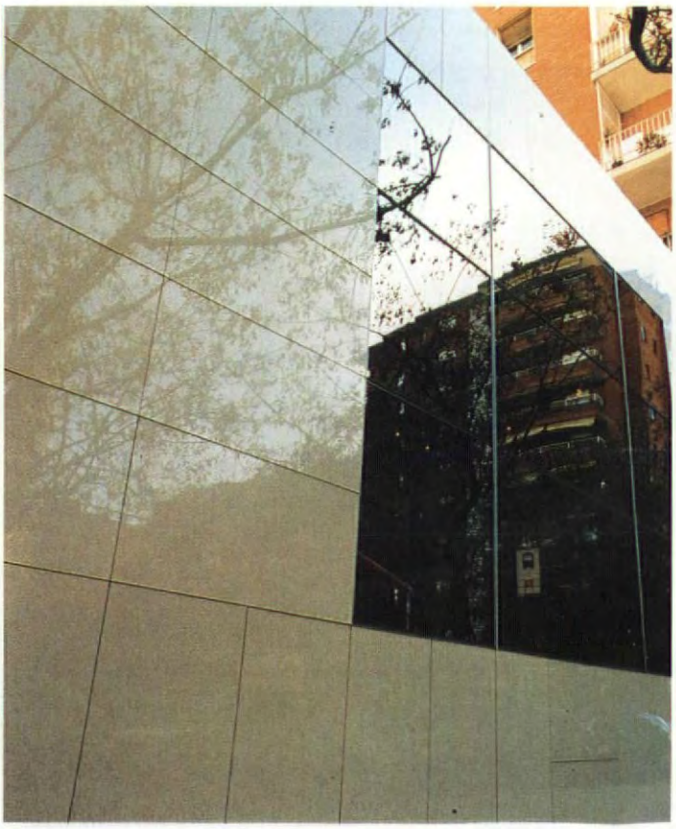
Another variety of porcelain tile that has been introduced to the international market in the last three years is the pavement with a porcelain body (to take advantage of the frost resistance and low water absorption), the common name for this is glazed porcelain tiles. This product has been introduced as an alternative to glazed ceramic tiles and it constitutes another possibility for traditional porcelain tile producers.

Its production is being extended to the international level. The single firing technology means you're able to make a product with high a technical performance. It's also possible for tiles to receive the polished, rectified, glossy and bevelled edge finishes.

Spanish porcelain tile production is developing rapidly and many factories in the industry are increasing their investments with the installation of porcelain tile plants. No doubt, part of the success of these tiles is that we've been able to equip a material with high technical performances, with higher aesthetic quality.

Navarti Cerámica. Omega series. Size: 40 cm × 40 cm. Travertine marble look

Porcellanato. Roca Stratos Magnum. 60 cm × 60 cm, 60 cm × 120 cm



Roca. Stratos Cosmos series. Size: 30 cm × 60 cm. Rustic porcelain look

Tau Cerámica. Tautec series. Sizes from 30 cm × 30 cm to 90 cm × 120 cm

Latest trends for Porcelain tiles

- Development of big formats are reaching sizes of 90cm x120 cm. These dimensions are opening new possibilities for the use of porcelain tiles, in replacement of natural stones for facades or kitchen and bathroom worktops.

- Research continues into new decorative effects, enhancing products with rustic and mosaic looks.

- Porcelain tiles may receive many surface treatments to get innovated effects such as rectified, polished, glossy.

- The complementary pieces are more and more elaborated with the development of relieves standing out.

- Modular systems are starting to be used for porcelain tiles. Creative designs for different surroundings can be achieved with very few pieces. Rosettes and borders are presented on mesh to ease fixing.

Cerámica Saloni. Perelada series. Size: 30 cm × 30 cm

Porcelain Granicer by Ceracasa

Porcelain tile profile

Denomination

It is the general denomination of very low water absorption ceramic tiles that are dry pressed, unglazed and produced by single firing.

Appearance

The body of the tile is the colour, with uniform or granular distribution. It has a fine and homogeneous grain and the non-homogeneous elements (grains, inclusions, and pores) cannot be distinguished by the naked eye. The face of the tile, which is made of the same material as the body, may be brazen, mottled, marble-like or decorated.

The surfaces and arises are regular and well-finished. Currently the predominant shape is the square, with smaller proportions of rectangles. Special pieces which are more commonly used include steps and footrails.

Use

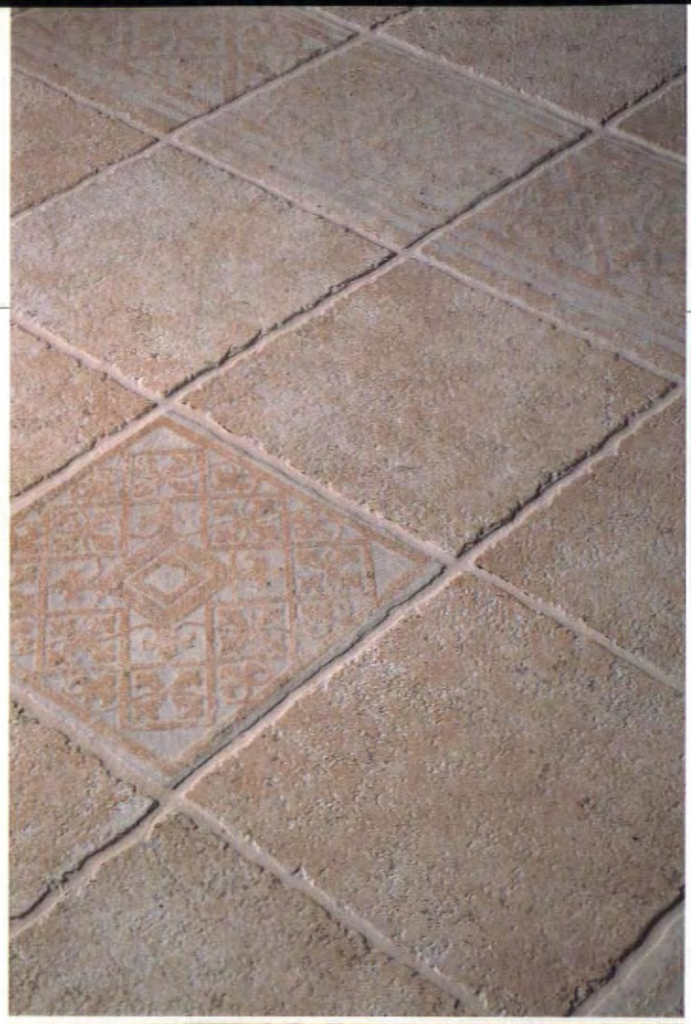
Porcelain stoneware tiles may be used as they are after firing, or their faces may be polished to make them shine and look smooth. The faces may have relieves for decorative purposes (similar to natural stone) or be non-slip (diamond tips, strias, angles,...) .

Production in Spain

Porcelain tiles are the most recent product on the market. Spanish production, initiated in 1988, has a wide variety that is increasing in accordance with demand.

Classification standard

Due to its low porosity, E < 0.5%, porcelain tiles will be included in group BIa according to standards ISO 13006 and UNE EN 67-087.



Gres Catalán. Antigua series. Size: 31 cm x 31 cm. Natural porcelain tiles. Rustic look

Alcalagres. Islas series. Size: 33 cm x 60 cm. Polish porcelain tile. Rustic look

SPAIN

For further information contact:
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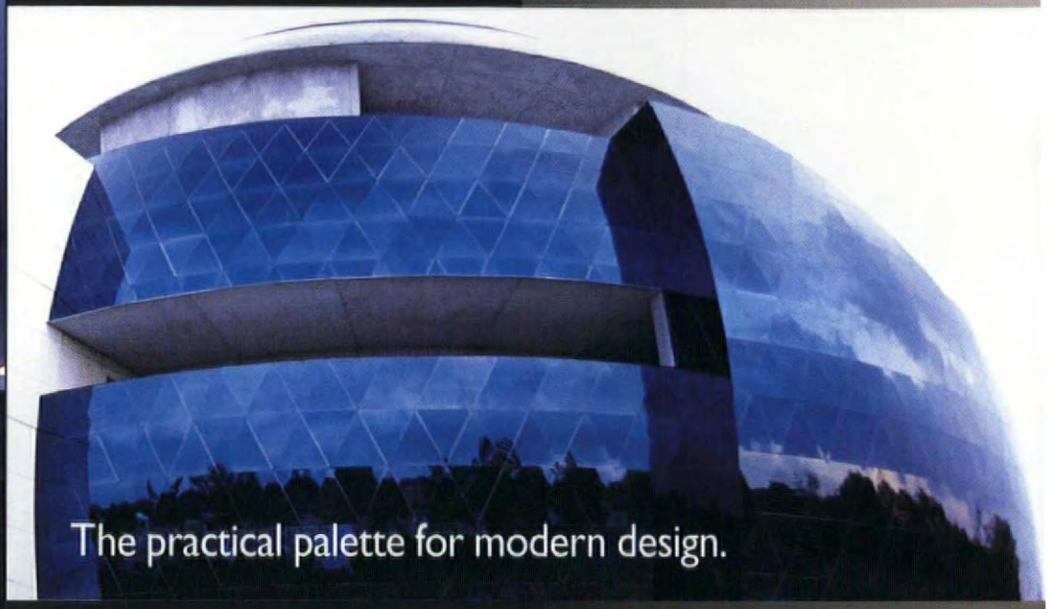

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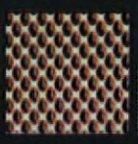
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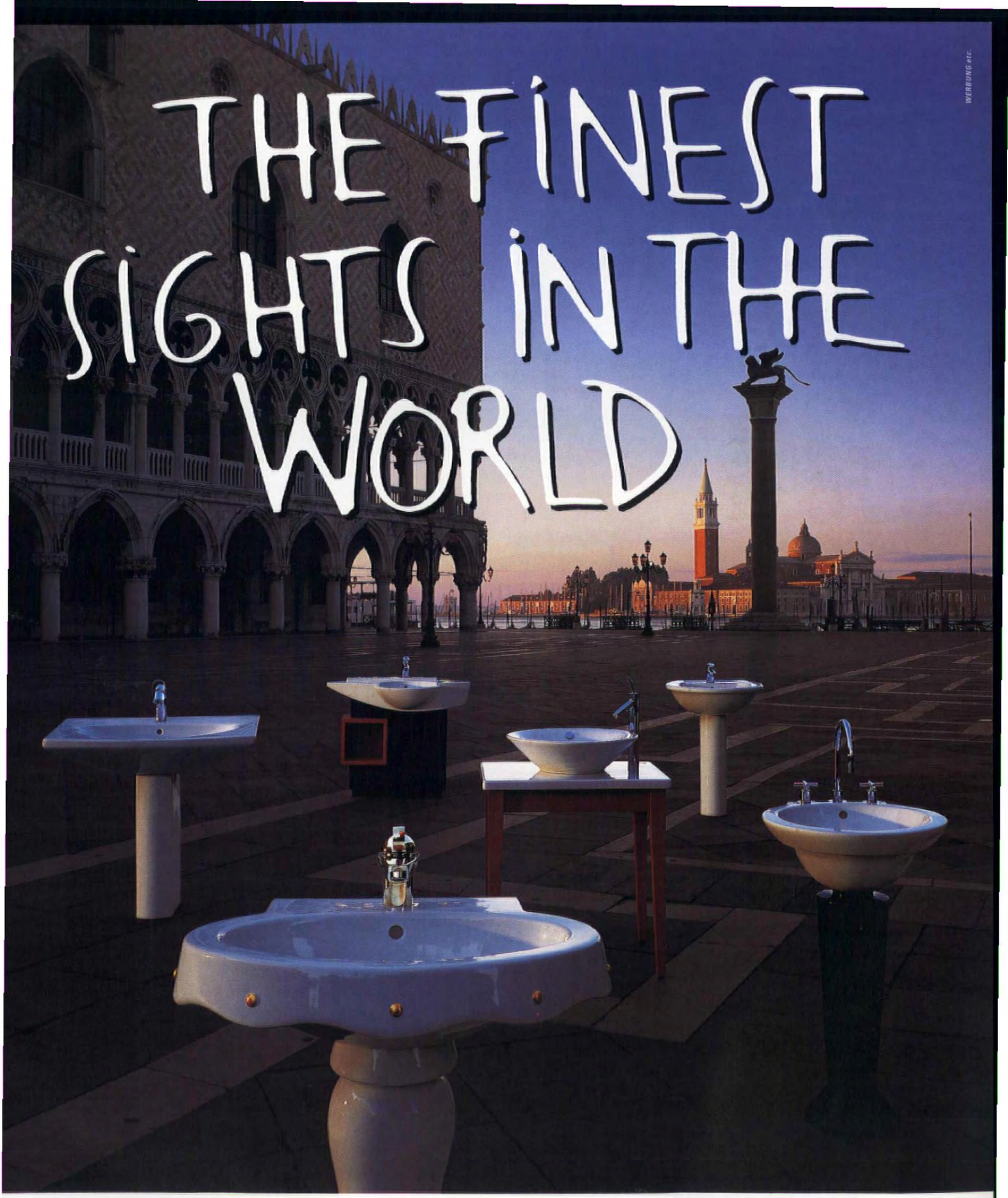

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News

The cult of tall buildings

São Paulo record breaker is the tip of the iceberg

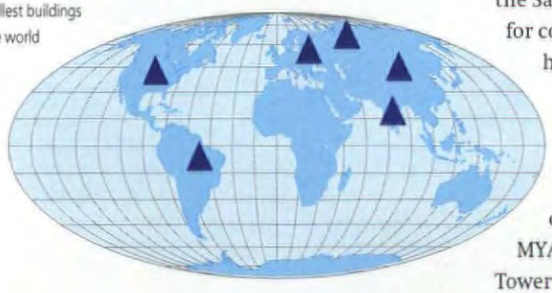
BRAZIL

Minoru Yamasaki Associates (MYA) has designed a world record-breaking 494-metre, pyramid-shaped tower for a site in central São Paulo. Unusually, both architect and client claim to have no interest in the tallest building accolade, even though the pyramid is 42 metres higher than Cesar Pelli's Petronas Towers, Kuala Lumpur, Malaysia.

The São Paulo Tower of Peace will be the Latin American headquarters of the Maharishi Mahesh Yogi Vedic University (MMYVU). The Maharishi came to prominence in the 1960s, after introducing The Beatles to the merits of transcendental meditation.

The colossal structure will go up on a huge site in the Centro district of São Paulo; an area known locally as "cracolandia", thanks to the recreational habits of resident youths.

The São Paulo project follows the March unveiling of MYA's design for the 677-metre Maharishi Tower of Peace near Jabalpur, central India (*WA*74 page 29). The Indian tower will take seven years to complete, so the São Paulo Tower of Peace (due for completion in 2004) will hold the "world's tallest" title for three years.



The Maharishi's network of towers could be the six tallest buildings in the world

Global network

Henry Guthard, director of project management at MYA says: "[The São Paulo Tower of Peace] is the South American element in our client's proposed string of pyramids across the world. There will be one in North America, maybe two in Europe and another in Asia." MYA, architect of New York's World Trade Center, is advising on the design of all six towers, which will rank among the tallest buildings the world has ever seen.

The Towers of Peace are all designed in accordance with the Vastu (natural law). Guthard continues: "Of course we are aware of the world record, but it's really a side issue. There is a requirement for 1.3 million square metres of floor space, and using figures derived from Vedic formulas [a pre-Christian form of measurement], the height had to be 1,620 feet [494 metres]."

The architect was chosen not solely for its track record in the construction of tall buildings, but also for its appreciation of the Maharishi's beliefs.

The multi-use towers will house the Marharishi's "pundits" – students of the university – whose role is to research global peace and understanding. They will house a combination of residential flats, offices, a shopping centre, a university, hotels, theatres and restaurants. Over 50,000 people are expected to use the São Paulo tower daily.

Funds

The São Paulo Tower of Peace is being funded by local company Brasilinvest and Dutch group, Maharishi Global Development Fund (MGDF).

Brasilinvest is owned by Brazilian real estate mogul Mario Garnero who fell from grace in 1985, following accusations of fraudulent dealing. Local sceptics are saying that he is using the Tower of Peace to rebuild his reputation.

Wright in pink prole threat

All-American hero was Communist sympathiser

USA

The American obsession with all things Frank Lloyd Wright has finally confirmed his posthumous reputation as a Communist.

After more than three decades of research, Federal Bureau of Investigation (FBI) agents have concluded that Wright, "had a long history of affiliation with Communist-type groups and activities".

A 335-page dossier scrutinises every aspect of the architect's life, including his adultery and views on war. Documents obtained by the *Chicago Sun-Times* show that the FBI began a flurry of paperwork on Wright in the 1920s after he was arrested in Minnesota for travelling across state lines with his then mistress, Olgivanna Hinzenberg.

More than 100 pages of the file are devoted to establishing that Wright was affiliated with the Communist Party. The FBI recorded a trip to Moscow in 1937, and noted his name in connection with organisations the bureau considered to be Communist fronts.

Wright, although dead for 40 years, never seems far from the headlines. His 50-year-old design for a bridge over San Francisco Bay hit the news in May (see *WA*76 pages 24-25), and the long-running saga of whether Fallingwater – the legendary private residence designed by Wright in 1936 – is in fact falling down, has fuelled many years of architectural debate. BB

FRANK LLOYD WRIGHT INTERNET LINKS

Frank Lloyd Wright Zone – http://adcenter.in2.com
Frank Lloyd Wright Homepage – http://www.arch.ncku.edu.tw
Archinfo Wright – http://www.archinfo.org.tw
Links for Wright – http://www.exxnet.com
Frank Lloyd Wright on the Web – http://hurder.org
Frank Lloyd Wright photography – http://www.4biz.com

The Maharishi wants a peace of the action – Model view of the Minoru Yamasaki Associates-designed, 494-metre São Paulo Tower of Peace, in the "cracolandia" district of the Brazilian city

"São Paulo is among the largest cities in the world. It deserves a landmark that proves that, and the fact that it is turning into the capital of international finance, at least in South America," says Garnero.

MGDF encourages the wealthy to, "pool their resources with other billionaires to create endowment funds for world peace". Since the early 1970s, the Endowment Fund for Perpetual World Peace has been used to "forever free the world family from the fear of terrorism, war and destruction". Only recently has the fund been applied to the built environment.

The heights and costs involved – the São Paulo tower alone is estimated at US$1.65 billion – have fuelled the fire of the many sceptics. "The Maharishi is the only person who could tell you whether the towers will or will not happen," says Dr Beedle, of the Council for Tall Buildings and the Urban Habitat.

Construction is scheduled to begin on 1 January 2000. AM

The Council for Tall Buildings and the Urban Habitat's "Third Conference on High Technology Buildings" runs from 20-21 October 1999 in Sao Paulo. Contact CTBUH: Tel: +1 610 758 3515 e-mail: inctbuh@lehigh.edu

Spanish fight for their rights

SPAIN

Spanish students of architecture and industrial engineering have taken to the streets to defend their respective interests in the new Law of Edification.

In early May, 15,000 students of industrial engineering from all over Spain met in Madrid to demonstrate in front of the Ministry of Development and the parliament. They were protesting against the law which includes provisions giving exclusive competence to architects in the design of facilities for administration, teaching, health, religion and culture.

Two weeks later, 5,000 architecture students held counter-demonstrations in Madrid, Barcelona and three other cities to defend the new law, using the slogan: "Look at your city, it's more than an industry".

Industrial engineers were the only professional body that did not participate in negotiations between architects and 15 other engineering associations in the distribution of competencies.

Negotiations are underway between architects and engineers to see if an agreement can be reached.

The law was drafted by the governing Popular Party. Only the parliament and the senate can pass such a law, but as the Popular Party has ample control of both houses, approval is thought to be a formality. DC

WA'S INTERNATIONAL CORRESPONDENTS

Berlin
Susanne Ehrlinger
susanne.ehrlinger@berlin.de

The Hague
Vera Vaughan Bowden
v.vb@inter.NL.net

Hong Kong
Ed Peters
edpeters@netvigator.com

London
Adam Mornement (news editor)
adam_mornement@tbg.focusnet.co.uk

Madrid
David Cohn
dncohn@arrakis.es

New York
Bay Brown
baybrown@compuserve.com

Rio de Janeiro
Ricardo Antonio
ricantonio@mandic.com.br

Sydney
Anne Susskind
asusskind@smh.fairfax.com.au

Tokyo
Dennis Normile
dnormile@twics.com

Toronto
Albert Warson
awarson@interlog.com

THIS MONTH

page 52
The Latvian National Library is the latest project in a developing country to be saved by UNESCO. Gunnar Birkerts, for one, is delighted by the news.

page 55
It'll cost US$1.68 billion and the masterplan architect has been announced, but will Cyberport turn Hong Kong into Asia's information hub?

page 56
Manhattan transfer – after years of watching US architects designing European landmarks, the Europeans are fighting back.

EUROPE

New contracts of the month

VERY ROGERS
BELGIUM

Richard Rogers Partnership (RRP), London, has won the intentional competition to design a US$80 million law courts complex in Antwerp. RRP will work in association with local multi-disciplinary practice **Van Kerckhove BVBA**.

VERY GLOBAL
FRANCE/UK

French architect and designer **Philippe Starck** has formed a development/design joint venture with British developer, John Hitchcox – co-founder of the Manhattan Loft Corporation. Known as Yoo, the team plans to develop a US$500 million portfolio of residential properties in cities around the globe. Locations will include London, Paris, Tokyo, New York, Rio and Buenos Aires.

VERY AMBASSADORIAL
GERMANY

The latest three Berlin embassies have been unveiled. **Budzynski Badowski and Kowalewski** has won the competition to design the Polish embassy, on Unter den Linden; **Elisabeth Ruthnik** of Berlin, will integrate the offices of the Belgian administration into an industrial building in the former East Berlin; and the Canadian embassy will be a collaborative effort between **Kuwabara, Payne, McKenna, Brumberg**, **Gagnon, Letellier, Cyr**, **Smith Carter Architects** and **Vogel Architects**, all of Canada.

VERY TOGETHER
UK

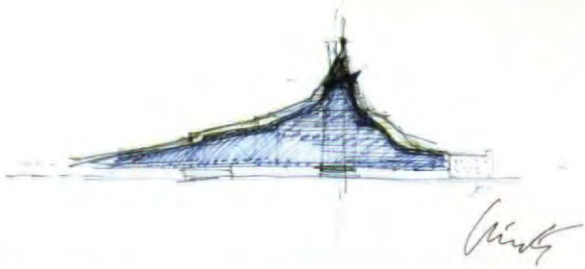
Office specialist **DEGW International** has won the US$250 million contract to design a new London headquarters for British retailer Sainsbury's. The building will consolidate all the company's staff, currently in its six London offices, under one roof.

UNESCO saves Latvian landmark

National Library on track after ten year delay

LATVIA

Plans to build Gunnar Birkert's long-stalled Latvian National Library (see sketch, right) have been revived by UNESCO.



The Paris-based guardian of the world's cultural heritage has agreed to endorse the US$100 million development, first proposed over a decade ago. "They're backing it in much the same way that they backed the new Alexandria Library," says Birkerts, speaking to *WA* from his US office.

"UNESCO cannot offer financial assistance, but it can champion the project, raise its profile and ensure that it complies with international standards," continues Birkerts.

UNESCO stepped in to save the equally protracted Alexandria Library in 1992, after confusion over funding mechanisms had threatened to derail its progress (see *WA*75 pages 58-59).

The Latvian Government has committed itself to funding 50 per cent of the US$100 million Riga library. To generate the remainder of the funds a National Library Foundation has been founded to organise a fundraising campaign. The government is also considering a new law to allow tax breaks on foreign contributions.

In a meeting at UNESCO's Paris headquarters, Karina Petersone, the Latvian Minister of Culture, stressed the importance of the cultural landmark, "for the future competitiveness of Latvia". The Baltic state is the only European nation that does not have all its books together in a single national library, its collection of 5.5 million volumes being housed in nine buildings throughout Riga.

The pyramid-shaped building will rise on the undeveloped left bank of the River Daugava. Its design was inspired by a local folk tale in which a mythical castle sank during "the bloody days of enslavement" (read, Communist era), only to rise from the depths, as a symbol of national strength, when its name was invoked by a courageous few. It will be Birkert's first building in his native land – the architect's proposal to reinvigorate Riga's Central Market remains unfulfilled.

In the US, Gunnar Birkerts Architects, in association with San Diego-based Carrier Johnson, has been chosen to design a prototype library in San Jose, California. The US$100 million structure, commissioned by the San Jose University Library and the City of San Jose, is the first joint city and university library in the US. It is intended to serve as a model for future projects.

The winning team beat Richard Meier, SOM and Hardy Holzman Pfeiffer. Construction will begin next year. AM

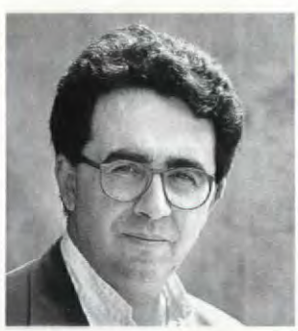
Calatrava – prize prince

SPAIN

Santiago Calatrava has become only the third architect to win the Prince of Asturias Prize in the Arts, one of Spain's highest cultural honours.

The prize is awarded annually to distinguished figures in all fields of artistic endeavour. In its 19 year history, Oscar Niemeyer (1989) and Francisco J Sáenz de Oiza (1993) are the only other architects to have picked up the honour.

The honour is normally awarded to artists for their entire careers, but in Calatrava's case comes when he is at the tender age of 48.



Santiago Calatrava – Prince of Asturias prize winner, and noted bridge builder

Calatrava is currently working on the monumental Sciences Museum and Auditorium of the Arts in Valencia, the Bilbao Airport, a museum in Milwaukee, Wisconsin, bridges in Venice and Holland, and a railway station in Liège, Belgium. DC

War-soar skyline

Confidence strong in emerging business centre

POLAND

RTKL's 42-storey Daewoo tower opens in Warsaw next month.

The immense business complex follows the opening of KPF's Warsaw Financial Centre, at the end of last year, and marks the next step in the Polish capital's quest to establish itself as the business hub of central Europe.

The proliferation of large-scale commercial developments throughout Poland reflects the confidence of investors and developers in the Polish property market.

RTKL collaborated with local architect MWH on the US$120 million development. AM

EUROPE

Opportunity docks

NETHERLANDS

A major international competition will be held in September next year for the design of Amsterdam's new city library, to be built in accordance with European Union rules. The city authorities and private developers are hoping to lure quite a number of superstar architects with the opportunity to build on the edge of Amsterdam's central core.

The announcement marks the release of the latest parcel of land in the ongoing regeneration of Amsterdam's IJburg district, a string of six artificial islands to the east of the city centre. The islands' revival started in the mid-1980s, and is approximately half-way through its 20-year phased development.

The library will be built on Oosterdok Island (also known as PTT island), a key element of the archipelago. Also planned for Oosterdok are 300 apartments; the headquarters of the Dutch Post Office; a 55,000-square-metre "Chinatown"; new premises for the Amsterdam Exchange and a multiplex theatre. The total investment is estimated at US$500 million.

Scores of international architects and urban planners have already contributed to the docklands regeneration, including Wiel Aretz and Bruno Albert (Belgium), Kolhoff (Germany), HOK's London office, Kim Nielsen of Nielsen & Nielsen (Denmark) and Diener & Diener (Switzerland).

Above: CAD view of Oosterdok Island as it will look when complete in 2010

Among the native architects who have made a contribution are: Erick van Egeraat, who is working on the Oosterdoks Island masterplan, and Peter Defeche, who is planning the Westerdoks Island. Dutch star Rem Koolhaas completed the New Metropolis Science and Technology Centre last year. Others who have been involved include Sjoerd Soeters, Jo Coenen, Adrian Geuze, Benthem & Crouwel and MVRDV.

Project Manager, Kees van Ruijven says: "Step by step, island by island, the municipality is developing the waterfront with a variety of private developers, searching for the appropriate answer for each location."

So far, almost 7,000 homes have been built in the Eastern Docklands and a further 3,300 homes, 339,000 square metres of office space and 141,000 square metres of public facilities, including consumer and retail outlets, are planned for the south Bank of the IJburg.

Amsterdam has invested around US$600 million in the South Bank area in preparing the ground for building, creating public spaces and infrastructure.

Private investment will generate an expected US$1.25 billion, with between 8,000 and 12,000 new jobs being created in the period to 2010.

Details of the competition(s) will be announced "within months". Watch this space. WB

Galician legacy

Aging president in Pharaonic gesture

SPAIN

The government of Galicia has launched a limited competition to build a "City of Culture" outside its capital, Santiago de Compostela.

A jury has selected 12 international, Spanish and local figures from a list of 54 teams to participate in the competition. The regional participants are Manuel Gallego and César Portela, with Ricardo Bofill, Juan Navarro and Santiago Calatrava the national contenders. The bulk of the list is made up of international heavyweights, including Peter Eisenman, Gijon & Guyer, Steven Holl, Rem Koolhaas, Daniel Libeskind, Jean Nouvel and Dominique Perrault.

The US$115 million complex will include a museum of Galician history, a museum of communications, an auditorium, an opera hall and a regional library.

The buildings will be arranged on a hill on a 70-hectare campus planted with native species of trees, according to the project masterplan.

In recent years, Galicia's regional government has built a number of important cultural facilities in Santiago, including the Galician Museum of Contemporary Art by Álvaro Siza, an auditorium by the late Madrid architect Julio Cano Lasso, and a congress centre by Alberto Noguerol, who works in nearby La Coruña.

Critics see this latest venture as another pharaonic gesture by the region's aging president, Manuel Fraga (once a prominent member of Franco's government) who has presided over the Galician government for many years. DC

Tower power

AUSTRIA

The tallest building in Austria was inaugurated last month.

Millennium Tower, in central Vienna, is the work of Peichl/Podrecca/Weber who formed a one-off partnership for the project.

The 202-metre tower has a total office capacity of 38,000 square metres, with a further 29,000 square metres of retail space on the lower levels.

Millennium Tower is the focus of Millennium City, Vienna's new attraction expected to attract 15,000 visitors daily. The entire complex cost a total of US$168 million. AM

Millennium Tower, designed by Peichl/Podrecca/Weber, Austria's tallest building

In brief

CZECH REPUBLIC

Prague Castle overhaul

The first phase of BRS Architects' renovation of a section of Prague Castle is under way. The Geneva-based architect won the 1997 competition to turn the Castle's Austro-Hungarian food court – including an orchard, pheasantry and pond – into a multi-purpose public space. Prague Castle Administration is developing the scheme in phases, as part of an ongoing makeover to rid the sprawling landmark of its dour, political image.

FRANCE

What an Eiffel

The Eiffel Tower is getting the Louvre treatment. Paris city officials have invited an undisclosed group of architects to propose a solution to the tower's access problems. Although it receives more visitors than any other French monument, the Eiffel Tower has remained essentially unchanged since opening in 1889. The intention is to provide somewhere sheltered for visitors to queue, and to entice them to spend more money. Work is expected to begin at the end of next year. IM Pei's makeover of the Louvre gallery, topped-off by a glass pyramid, in the early 1990s led to a huge increase in visitors and turnover.

MOROCCO

Art foundation course

The first phase of Juan Miguel Hernández León's rebuilding of the fortifications at Ceuta is complete. The Spanish architect has installed a Museum of Art in the foundations of the 18th century ramparts, built by the Portuguese on top of Arab and Byzantine walls. The second phase of the US$7 million development will be completed in 2004. Ceuta, on Morocco's north coast, is one of two remaining Spanish possessions on the North African coast.

ASIA PACIFIC

Left: The 41-storey Muromachi Mitsui Shankan Building has been designed for a Tokyo site, next to the Mitsui Mian Building **Right:** The Nakanoshima Mitsui Building will rise on Nakanoshima island in Osaka

Pelli's dual honour

In the land of the rising office buildings

JAPAN

Cesar Pelli, the king of tall buildings, has won the limited competition to design two high-rise office towers in Japan for Mitsui-Fudosan, a Japanese real estate company.

The Muromachi Mitsui Shankan Building, a 41-storey, 130,000-square-metre mixed-use office tower, will include corporate offices for the Mitsui Group, as well as trading floors. Completion is scheduled for 2007. It will be built in Tokyo next to the 1929 Mitsui Mian Building, by US practice Trow Bridge and Livingston, which was awarded Important Cultural Property status in May of this year.

The second tower, known as the Nakanoshima Mitsui Building, has been designed for a site on Nakanoshima island, central Osaka. The 31-storey, 71,000-square-metre building will be near the National Museum of Contemporary Art, also being designed by Cesar Pelli & Associates. Completion is anticipated for 2003.

Pelli beat Kohn Pedersen Fox, Skidmore Owings & Merrill and Norihiko Dan & Associates to win the dual commission.

Cesar Pelli & Associates, architect of the world's tallest buildings, Kuala Lumpur's Petronas Towers, is also working on the 609-metre-high Miglin-Beilter Tower, Chicago; Hong Kong's tallest building, the 420-metre-high Two International Finance Center (see *WA*77 page 18); as well as buildings in Buenos Aires and London's Canary Wharf. AM

New contracts of the month

VERY SECRETIVE
PERSIAN GULF

London-based **Matthew Priestman Architects** has won a US$82.5 million contract to design a dramatic hotel and water sports complex in an undisclosed state in the Persian Gulf. The scheme has received royal consent. The Desert Hotel features a curvilinear apartment block facing a hotel building built on reclaimed land. A causeway will link the two elements. The architect will work with a local associate architect, quantity surveyor and project manager.

VERY UNEXPECTED
SINGAPORE

Little-known local practice **Swan & Maclaren Architects** (SMA) has won the competition to design the National Library of Singapore. The firm beat **Michael Graves, Nikken Sekkei, Moshe Safdie** and **Mitchell Guirgola Thorp** to win the contract. Malaysian firm **TR Hamzah & Yeang** is architect of design. Ken Yeang is directly involved in SMA.

Living womb

PAKISTAN

Japanese architect, Nihon Sekkei, has completed its first project in Pakistan.

The Mother & Child Health Centre in Islamabad was developed on a grant-in-aid basis – funded by a Japanese grant for built work in emerging nations – and is the first of a series of similarly funded healthcare projects in Pakistan.

Shigeru Sakai, the project's chief architect, says that the building's curved form was inspired by the, "feeling of security of an unborn baby enclosed inside the mother's womb". AM

Guess what?

It's another Hong Kong "landmark"

PRC

A pyramidal roof in North Point is being hailed as another "landmark" example of the continuing rejuvenation of Hong Kong's shoreline.

Capping a 31-storey office tower linked to a 30-storey hotel, North Point Harbour Plaza, (above) designed by P&T Architects and Engineers, is due for completion at the end of the year.

At ground level both buildings follow a split podium design, tied together by a glass canopy over a drop-off area. A dedicated area for pedestrians runs between the two structures, increasing the ground floor area to 52,000 square metres.

The elevations of each tower are clad in a combination of silver fluorocarbon-coated aluminum panels and silver reflective laminated glass.

In June, the Cheung Kong Center, by Cesar Pelli in association with Leo A Daly, was completed (*WA*77 page 18). EP

CAD view of Wong Tung + Partners masterplan

Cyberport: great for architects

Or is it a US$1.68 billion white elephant?

PRC

A US$1.68 billion attempt to turn Hong Kong into Asia's premiere information services and technology hub has caused uproar, but the development will provide opportunities aplenty for architects.

Local practice Wong Tung + Partners is lead architectural consultant for the 200,000-square-metre project, and has been contracted to commission out individual plots over the six-year construction period (see table).

The project has received a fair amount of criticism. Focus groups have suggested that many of the Cyberport's functions are already catered for by the Internet. Competing developers have also complained that instead of handing Cyberport to developer Pacific Century on a plate, the government should have thrown the project open to competition. But attempts to block funding have proved unsuccessful. EP

Contact Wong Tung + Partners. Tel: +852 2803 9888

CYBERPORT CONSTRUCTION SCHEDULE 2001 - 2007:	
2001	
Offices	23,000 square metres
Apartments	10,000 square metres
2002	
Offices	29,000 square metres
Cyber Mall	29,000 square metres
Serviced apartments	4,500 square metres
Houses and apartments	18,000 square metres
2003	
Offices	40,000 square metres
Hotel	7,500 square metres
2004	
Houses and apartments	168,000 square metres
2005+	
Apartments	208,000 square metres

Oz considers UIA codes of practice

AUSTRALIA

Architectural competitions in Australia may be harmonised with worldwide codes of practice by the end of the year.

The council of the Royal Australian Institute of Architects (RAIA) has adopted, in principle, the Code of Ethics Guideline document of the Paris-based Union of International Architects (UIA).

RAIA chief executive, Michael Peck, says the implementation of this decision depends on two factors: whether UIA standards are acceptable to the Australian Competition and Consumer Commission, and how the principles relating to "obligations to colleagues" will be greeted by RAIA members.

The latter point will create a problem because the principles set standards which have not been maintained in recent years, says Peck. For example, members would be bound not to participate in competitions that do not have RAIA or UIA consent; not to undercut fees offered by another architect; not to attempt to supplant another architect; and not to maliciously or unfairly criticise another architect's work.

Members will vote on the revised code of professional conduct at the RAIA's national meeting in November. AS

In brief

AUSTRALIA

Tibet on it

The western world's largest Buddhist Stupa, a same-size re-creation of the Tibetan Great Stupa of Gyantse, is on site in the small gold mining town of Bendigo, Victoria. Architect, Peter Weiss, has a complex task. Whereas the Gyantse Stupa is almost completely solid, the Bendigo re-creation will be filled with rooms, storage areas and an air conditioning plant. Weiss also faces the challenge of providing elevator access to all public floors within a stepped building shape, without affecting the external appearance. The provision of natural light and ventilation in central areas will also present problems. Buddhism first arrived in Bendigo in the 1850s with Chinese gold diggers.

INDIA

Indians go on line

The Indian Institute of Architects has gone on line at www.iia-india.org The site, the principal point of contact for anyone in the architectural profession in India, brings together the *Journal of the Indian Institute of Architects*, as well as the further details on the IIA's newsletter. Your comments and suggestions are welcome on iia@vsnl.com or iaa@bom5.vsnl.net.in

PRC

Disney's Asian growth

Walt Disney Co has decided to build its second Asian theme park in Hong Kong, ending five months of talks between Disney and the Hong Kong authorities. The proposed site is on outlying Lantau Island. The Chinese cities of Shanghai and Zhuhai were also said to be in the race to become the second Asian city, after Tokyo, to house a Disney theme park. Disney is expected to use in-house architects for the project.

THE AMERICAS

In brief

BRAZIL

São Paulo shortlist

Proposals by Christian de Portzamparc, Eduardo Leira, Juan Busquets and local architect Cândido Malta, make up the competition shortlist for the re-urbanisation of a former industrial district in Santo Andre, Greater São Paulo. The revitalisation is being sponsored by the local government to try and attract new private investment to the area.

CANADA

Reichmanns' techno drive

The Reichmanns, Canada's first family of real-estate, are planning to develop a US$425 million high-tech amusement park in Montreal. The City of Montreal has reserved a 30-hectare site near the city centre for "Destination: Technodome". If all goes to plan, Abraham Reichmann, president and CEO of Toronto developer Heathmount A E Corp, says the company will develop a replica park on a site in the Queens borough of New York.

Architects' road to recovery

Motor magic opens South Amercian market

BRAZIL

International architects are cashing in on major construction opportunities in Latin America's emerging markets.

Brazil is leading the way. President Cardoso's 1994 "Real Plan", which sought to stabilise the economy and cap inflation, has succeeded in creating a credible environment for foreign investment, and is showing notable dividends in the motor industry.

The latest Western multinational firm to open a production plant in South America's largest and most populous nation is Mercedes-Benz, marking the first time that Mercedes cars have been produced outside their native Germany. Its just-opened

US$830 million plant, in Juiz de Fora, Minas Gerais, was designed by Albert Khan Associates from Detroit, USA, with local associate architect Minerbu Fuchs Engineering from São Paulo and in-house engineer Daimler Crysler Werk Sindelfingen from Germany.

In the last three years 12 of the world's premiere vehicle manufacturers have installed new plants in Brazil. In 1996, Japanese Group Toyota announced plans to invest US$150 million in a new São Paulo plant to produce 20,000 sedan Corollas per year. Japanese contractor, Takenaka, responsible for the conception of most of Toyota's facilities world-wide, completed construction last year.

Honda opened new headquarters in São Paulo in October 1997, bringing its total investment in the country to over US$300 million. Honda's plant was designed by the Brazilian branch of Japanese builder Shimizu, along with Honda's in-house architects/engineers.

Elsewhere in Brazil, French firm Renault has commissioned US practice WBR to develop facilities in Parana, in the south of the country. The 110,000-square-metre "Ayrton Senna" plant will cost US$650 million.

Brazilian multi-disciplinary practice PROMON is designing a US$600 million production plant for another French firm, Peugeot/Citroën, in Porto Real. And by the end of next year, Chrysler, Asia Motors, Hyundai, Iveco and Kia will also have opened new production plants in the country.

Further south, in Chile, Nissan has commissioned local practice Arquitectos Associados to design a new facility. Construction and design details have yet to be released. RA

Globo warming

BRAZIL

Brazilian media conglomerate Globo has inaugurated the first phase of its new headquarters complex, and announced the winner of the competition to design the second phase.

Globo, the world's fifth largest media conglomerate, moved into its new São Paulo studio in May.

The 18,500-square-metre building was designed by Italian-based Australian architect, Kenneth Sowerby, in association with EUROGRAFICA, a Swiss practice which specialises in projects for the graphics industry.

San Francisco practice, Kaplan/Laughlin/Diaz, has won the contract to design the US$1.5 million second phase of the development.

The brief calls for a 93,000-square-metre masterplan for a variety of print and broadcast media. The design schedule has not been announced. AM

Manhattan transfer

USA

European architects are fighting back. After a decade dominated by US practices making their presence felt in European cities, a string of New York commissions has gone to European architects.

The office of recently deceased Italian legend Aldo Rossi has designed a ten-storey office building for the Scholastic Company (pictured). Working with Gensler's New York office and Morris Abjimi, the project went on site last month.

French architect Christian de Portzamparc, working with the Hillier Group, completes the NYC headquarters of Möet Hennessy Louis Vuitton next month. The 23-storey design of stacked cubes and cylinders is clad in opalescent and transparent glass.

Another French practice, Bernard Tschumi Architects, completes its Lerner Student Center, for Columbia University, this autumn.

Frank Gehry's Bilbao Guggenheim, Steven Holl's Kiasma Museum, Helsinki, and IM Pei's glass pyramid at the Louvre, Paris, are just some of the landmarks designed by American architects in Europe in recent years. AM

Letters

Clear, but not clear enough

From Mike Davies of Richard Rogers Partnership, designer of the Millennium Dome.

Might I humbly point out – without I trust falling into the trap of self-indulgent hubris – that in your extended article on the Millennium Dome all mention of RRP as architects seems to have been expunged. Rather rum... What is more, at the risk of being a smidge irritating, the Power Tower cylinders were actually designed by both RRP and Buro Happold as a team. Given that your esteemed organ is read all over the globe, you will I hope forgive me for attempting to set the record straight. That apart, felicitations, a great article.

Our apologies for the confusion, but we must point out that while the RRP name might not be in the standfirst, within the first few paragraphs of the next page (p51), both you and RRP are mentioned by name – as you are throughout the rest of the feature.

Architect turned mayor

From Gordon G Benton OBE, Town Planner and Mayor, Jawa Barat, Indonesia.

Just a note to say how much I appreciate getting World Architecture instead of RIBA Journal. I have to say *WA* makes a lot more interesting reading, for those of us working overseas at least. As an architect who got into planning by winning a competition, I wonder if many in the architect's profession who have had to move into other, even distantly related, professions would find architects' activities, other than those purely in architecture, interesting to read about. The architectural profession is such an unpredictable one, with many ups and downs, that many of us have moved over to other jobs where our skills are perhaps better appreciated – and better rewarded. My architectural training and experience is brought into my work as mayor every day. Perhaps there is a story in that?

Sexy but sad

From Ramsay Manners Dewar, Banwang Tuburna Inc, The Philippines

The saddest architecture feature I have read for years was your article in the May issue (WA76 pages 24-25), on Frank Lloyd Wright's icon of the modern movement, entitled "Fallingwater falling down". When I was a student of architecture in the 1950s a slide projection of Fallingwater was enough to give entire classes and aesthetic thrill which was almost sexual. That engineers "shored up with beams" the concrete cantilever that supports much of the house, sounds like a typical insensitive belt and braces job. This 20th century icon must be preserved in its original form, even if it costs a fortune. America can afford to do so. America cannot afford to lose it.

Errata

On page 46 of *WA*77, a portrait accompanying a short interview with Terry Farrell was incorrectly captioned as the face of his friend, Michael Wilford. *WA* would like to apologise to both Terry Farrell and Michael Wilford for this unfortunate production error.

In "Havana's model example", *WA*76, page 74, architects Mario and Miguel Coyula should have been described as cousins, not brothers as stated. The "full model of the city and a custom designed building to house it" was designed by a collective of Havana model-makers under the leadership of M Martorell, and the pavilion by a partnership led by Texas-based architect Orestes del Castillo, overseen by Mario Coyula.

WA welcomes letters from readers. Please send them to the editor via email: Nicola_Turner@tbg.focusnet.co.uk or fax: +44 171 560 4191.

Next issue

Regional Focus – Mid-West USA

America's Mid-West is attracting some of architecture's top names – not just to Chicago, where Tadao Ando, Renzo Piano, Ricardo Legorreta, Arata Isozaki and Rem Koolhaas all have work – but also to Cincinnati, Ohio, where the University has patronised architecture from Michael Graves, Peter Eisenman, Frank Gehry and Harry Cobb. *WA* assesses the public initiatives of Mayor Daley in Chicago, and the pressure of conservatism in the city, as well as a round-up of work throughout the region. Plus building studies including Lohan Associates' Blue Cross Tower, one of the first tall buildings to be built in the home of the skyscraper in recent years, and the headquarters building for WW Grainger in Lake Forest, Illinois by AIA award-winning firm, Perkins & Will.

Left: Blue Cross Tower, Chicago, by Lohan Associates. Above: Petronas Towers, Kuala Lumpur, by Cesar Pelli & Associates

Sector Analysis – tall buildings

They're the defining building type of the 20th century, but do they have a future? Hugh Pearman, author of *Contemporary World Architecture*, brings us up to date with tall buildings. Why has the battle to build big moved to Asia? Will people ever want to live 400 metres up in the air? Or is the tall building's potential as the conqueror of urban sprawl a non-starter? Is there such a thing as the green skyscraper? Plus evidence that each time a new "tallest building" is built, an economic crisis centered in that area has followed.

Technical – CAD

This year CAD manufacturers have persevered with a bewildering number of hostile takeovers, mergers, strategic acquisitions and licensing deals. In the desperate rush to get ahead, those who are led by the issues of global information management seem to be stealing a march. The concerns of international practice, working across disciplines and borders, are being catered for in an increasingly sophisticated way, and the use of the internet as a central information bank is proving key. *WA* reports on the state of an industry which is leading the way in global practice.

Analysis

Ch-ch-ch-ch-

How has the practice of architecture changed in the ten years since World Architecture was launched? In conversation with Arthur Gensler, Nicholas Grimshaw and Ivor Daniel and Jacques Glanville of Stauch Vorster, World Architecture finds out how architects have adapted to a decade of political and economic turmoil.

"We won't do condominiums," says Arthur Gensler, chairman and chief executive officer of Gensler, the world's largest interior design firm, and winner of *WA*'s "World's Largest Architecture Practice" survey in 1996 and 1997.

It cannot be often that Gensler, a practice whose incredible success has been based on its willingness to undertake small-scale work as well as the big ones, imposes such fee-generating restrictions on itself. "Liability and lawsuits are too terrifying, and getting more terrifying. I would estimate that every Californian condo, bar maybe two, has had a suit."

The issue of architect liability really hit the headlines in 1996, when the US Department of Justice brought a suit against Ellerbe Becket for its alleged failure to provide comparable lines-of-sight for both the wheelchair bound and able-bodied spectators in six stadium and arena designs across the US. The case was settled out of court, with the architect and department clarifying lines-of-sight guidelines for compliance with the Americans with Disabilities Act (see *WA*69 page 37), but the damage was done. Legislative changes had brought the issue of architect liability into the civil realm.

So far, the problem has been pretty much confined to the US. But it's only a matter of time before the trickle-down effect of US cultural imperialism impacts elsewhere.

The British Disability Discrimination Act – to come into full effect in 2004 – will basically re-create the US system in the UK, and with European nations all posturing for EU compliance, the potential for Europe-wide bedlam is there for all to see (*WA*72 pages 52-53).

London-based Nicholas Grimshaw – architect of London's Waterloo International Terminal and whose practice has gone from strength to strength in the last ten years – sees liability in a more positive light. "I think that the growth of risk analysis is a very good thing. It gets you away from this 'blame culture'. It forces people [different members of the design team] to become more involved with each other."

Areas of responsibility

And herein lies the root of another issue that has raised architectural hackles since 1989: What are architects actually responsible for within the design team these days?

"When I was trained, the architect was the owner and was responsible for getting things done, and if architects are backing away from this, for fear of liability, lawsuits and everything, then we have a problem," says Gensler. "We're trying hard to take back the leadership role for architects," he continues. But liability isn't the only issue.

"When I was trained, the architect was the owner and was responsible for getting things done, and if architects are backing away from this, for fear of liability, lawsuits and everything, then we have a problem."

Arthur Gensler

"The role that each of the participants in the design process plays has changed, and we're not really sure where that's going to settle out. It varies in each country and each location. One of the things that's interesting in the UK is that architects have much more responsibility," continues Gensler.

South Africa is a country in which things have changed more than most over the past ten years, but does this include the architect's traditional role? "The complexity of many projects has brought a wider range of professionals into the project team, but I do not believe that this has eroded the role of the architect," says Glanville Jacques, director of Stauch Vorster, South Africa's largest practice, and the most active throughout the rest of Africa (*WA*500 World Survey *WA*72).

Of course, for Stauch Vorster, like every other established practice in South Africa, the 1990s have been dominated by the need to respond to the changing political environment. "It will be imperative in the future to have a management structure which represents the demographics of the country. Young black architects need to be brought into the practice," says director Ivor Daniel.

In the UK, architects are coming to terms with a more client-focused, team-oriented construction climate. "A non-adversarial approach, where everybody knows what everybody else is doing, gets things built better, more quickly and more cheaply," says Grimshaw. "I think quality of service is the key issue. The bigger firms are all concentrating on that, and I think the smaller firms need to follow to compete," he continues.

changes

Methods of delivery and management structure certainly do differ from country to country, and from one project type to another – design/build, roll-outs – but the fact remains that architects are only as good as their reputations.

It's not a question of there being no trust left in the profession, as some have been quick to suggest, but of proving to clients that yours is the best practice to produce their building. "Above all, clients want their buildings on time, on budget and well built. If they happen to get a landmark building into the bargain they certainly won't complain, but it's not at the top of their list," says Grimshaw.

Flexi-time

Globally active architects have had a lot to take on board during the 1990s. Military activity has rendered potential growth markets no-go areas – without their conflicts it could have been a great decade for South-East Europe, The Gulf and Indonesia.

And can any decade have witnessed such a widespread wealth of financial meltdowns? The Mexican, Thai, Malaysian, South Korean, Czech, Japanese and Russian economies have all suffered catastrophic collapses. So in this era of high-risk, boom-and-bust growth, how can an architecture practice prosper, while safeguarding itself against the huge risks associated with global expansion?

Flexibility – along with "sensitivity", surely the architectural buzzword of the 1990s – has become a fundamental requirement of the global player, not only in terms of the ubiquitous "flexible interior", but more specifically in terms of business approach and company structure.

With few exceptions, the world's most financially successful architects are American – HOK, KPF, NBBJ, Ellerbe Becket, SOM, RTKL, Gensler – and one of the common denominators between their success in the 1990s has been international expansion. As the 1980s drew to a close, and the global recession took a hold, these firms were forced abroad. The offices that they established then were intended as temporary stop-gaps, until things picked up back home. But as the 1990s come to a close, these offices have become permanent fixtures.

"Clients want their buildings on time, on budget and well built. If they happen to get a landmark building into the bargain they certainly won't complain."

Nicholas Grimshaw

Not only are they major sources of revenue, but their existence allows these firms to relocate architects without affecting staffing levels or profit margins. The recruitment of local talent also broadens the skill and knowledge base of the firm as an entity. "We learned from our experience in the US," says Gensler.

Something else that Gensler has learned is that architects have to be flexible in the type of work that they do – and are prepared to do. "You can't just expect to go for the large, more prestigious jobs. I think in that sense we've been vindicated [in our business approach]: we've proved that you don't just have to focus on the large projects, you can do both," he explains.

Grimshaw backs up the point: "You can't hang about complaining about not getting big jobs, you've just got to get on with it. Scale doesn't matter."

Looking to the future, will the centralisation of industry and growth of multi-nationals affect architects? Could there ever come a time when, for example RTKL, HOK and SOM merge to form a super-multi-national architecture practice? "Yes, I think that will happen, but that conglomerate will suffer in terms of the individual," says Gensler.

"It's not difficult to produce 'boutique designs'," says Gensler of the glamorous, one-off projects which soak up a disproportionate amount of press coverage. "But to establish a firm as a global player requires huge investment," technology and leases being just two of the major expenses. "The cost of entering the market is one of the reasons why the big will get bigger, and the small will stay where they are – hoovering up the boutique projects. We don't expect to see an awful lot of competitors."

For a global player, China (host of the UIA Congress in June) is still the great unknown, and if it's performance in the 1990s is anything to go by, it's likely to stay that way. "We don't like being told what to do, we don't particularly like being under the contractor," says Gensler of the Chinese way of business. Daniel, of Stauch Vorster, puts things more bluntly: "We do not see [China] as an immediate priority." Whether things will stay this way is anybody's guess – as we all know, ten years is a long time in architecture. WA

1989

THE WAY IT WAS

- **Post-Tiananmen China regarded with levels of suspicion usually reserved for abandoned luggage in Middle Eastern airports.**
- **Nelson Mandela – Serving the last of 27 years in prison.**
- **Berlin Wall falls – Victory for democracy. Western world enters era of global peace and understanding.**
- **Mikhail Gorbachev – Architect of Perestroika. Decriminalises democracy in Soviet Union. Wins Nobel Peace Prize.**
- **South-East Asian "tigers" snapping at Western heels.**
- **Korean peninsula – South and North ideologically divided. Technically still at war.**
- **E-mail – Something that might take off one day.**

1999

THE WAY IT IS

- **China – Widely acknowledged as "most likely to succeed".**
- **Nelson Mandela – "Man of the Decade". Arguably the only person to have built more bridges than Santiago Calatrava.**
- **War in the Balkans – Ethnic cleansing. NATO divided.**
- **Boris Yeltsin – Loose cannon. Reinvented the role of the Soviet dictator.**
- **South-East Asian "tiger" economies toothless.**
- **Korean peninsula – South and North ideologically divided. Technically still at war.**
- **E-mail – You've gotta have it.**

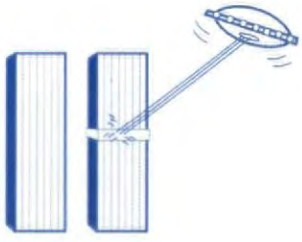
Analysis

Chicago

US architectural heavyweights, SOM and Frank Gehry, are collaborating on the long-awaited lake-front Millennium Park in Chicago, first proposed 40 years ago, and is due for completion in 2001. The US$200 million development will add over 90,000 square metres of public space to the area between Columbus Drive to the east, and Michigan Avenue to the west. Gehry will design a music pavilion and pedestrian bridge. The Pritzker family – of generous prize fame – has contributed US$15 million. Chicago is also using Y2K to remember one of the great moments in its architectural history: Daniel Burnham's Beaux Arts Grant's Park masterplan for the 1893 World's Fair, which remains a significant feature of the city, will be brought back to life.

Republic of Ireland

Two new bridges over the River Liffey will ensure that Dubliners can revel on both sides of town on millennium eve. Sanitago Calatrava has designed a US$4 million, four-lane road bridge, while local practice Howley Harrington Architects is on site with a US$2.3 million footbridge. Ian Ritchie's 120-metre stainless steel Millennium Monument (*WA*74 page 34) has hit problems – see News Review.



New York

Mirroring the millennium monument of choice for Americans across the 51 states, a US$15 million attack-proof bunker is being built into the 23rd floor of one of the World Trade Center buildings. Mayor Giuliani has attempted to draw a veil over the construction of the emergency command centre, so the architect is not known. Built to withstand nuclear attacks, the command centre will be able to house 30 of the mayor's inner circle for seven days, and accommodate 50 city agencies. The long-term prospects for the survival of the 23rd floor, should any of the floors below it be attacked by mysterious millennium forces, have not been explained. Internet sites report an explosion of home-made bunkers in private properties all over the US in the build up to 31 December. And there was the rest of the world thinking that Hollywood blockbusters in the *Armageddon*, *Independence Day* and *Men in Black* vein were light-hearted entertainment

Puerto Rico

Russia has honoured the Caribbean state with the millennial gift of a US$42 million, 660-tonne statue of Christopher Columbus. The 2,000-piece statue was designed by Zurab Tsereteli, the favoured architect of Moscow Mayor Yuri Luzhkov (see *WA*77 page 22). If Edwin Rivera, Mayor of Catano, gets his way, ten waterfront houses will be razed for erection of the statue. Opposition is provided by government officials who want nothing to do with the, "weird, off-the-wall" project.

Brazil

Y2K coincides with Brazil's 500th anniversary. To commemorate the coincidence, a monument and "Open Museum of the Discovery" are going up in Porto Seguro, on Brazil's north-east coast, where Portuguese settlers first arrived on 21 April 1500. Wilson Reis Neto, a former employee of Oscar Niemeyer, is the architect. Neto, who spent five years living with a native Indian tribe, is collaborating on the designs with an anthropologist.

Y2K – it's a date

From Bethlehem's Manger Square to a nuclear-proof bunker in the New York World Trade Center, the dawn of the third millennium is producing some weird and wonderful government initiatives. Adam Mornement reports on what's happening in your part of the world.

UK

Britain has spent more on millennium projects than any other nation. The centrepiece, Richard Rogers' US$1,250 million Millennium Dome in south-east London, is being billed by its organising committee as, "the world's most life-transforming [millennium] event". Other descriptions haven't been quite so flattering – "a thicket of masts on a patch of riverside waste-land" is how one US weekly describes it. Hampered by political controversies, shortages of funds, a lack of sponsorship and overwhelming public apathy, the structure remains set to open on 31 December 1999, and operate daily for at least a year.

Germany

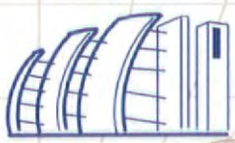
Celebrations in the European superpower will focus on Expo 2000, the international trade show in Hanover, which will double up as Germany's millennium showpiece. Teutonic efficiency has ensured that the pavilions and infrastructure will be re-used after the event. Debates raged in Germany last year about the choice of architect for the German Pavilion: up-and-coming Florian Nagler won the competition to design it, only to find that the Expo organisers had replaced him with little-known architect Josef Wund – who serves on the organising committee (see *WA*73 page 41). The Expo opens on 1 June and runs until 31 October.
(http://www.expo2000.de/)

France

The French win WA's "most creative use of the millennium" award. Starting in November, 10,000 trees will be planted along a 1,200-kilometre line stretching from the northern coast to the Spanish border. The idea is that one day next year the nation will sit down and have a picnic together. In Paris, 31 December will be marked by the Eiffel Tower laying a giant white egg filled with TV sets tuned to channels around the world. Also in the capital, much has been made of Jean-Marie Hennin & Nicolas Normier's Tour de la Terre, a 200-metre tower made out of wood (see *WA*76 page 28), but it isn't an official millennium project – in fact, it's defected to Communist Party control.

Jordan

Bethlehem is undergoing a major millennial makeover. The main focus is Manger Square, next to the alleged location of Jesus's birth. Long a congested parking lot, the site is being bulldozed to make way for a "peace centre" funded by the Swedish government. The works also include a Museum of Nativity.

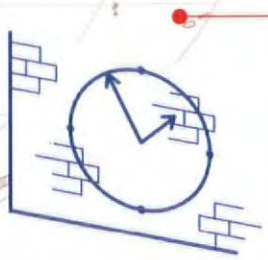


Italy

Twenty-five million Catholics will descend on Rome for the 2,000th anniversary of Christianity. Ecclesiastical extravaganzas include the restoration of the medieval Maderno Atrium of St Peter's Basilica, and the dedication of the site of Richard Meier's Church of the Year 2000. Notably, Meier is the first Jewish architect to design a Catholic cathedral. Architects Francesco Cellini and Professor Massimo d'Alessandro of Rome, and London-based Studio E Architects, were the three winners of an international competition to design bridges over the Tiber to help deal with anticipated tourist congestion.

Australia

Sydney Olympics 2000 and the Centenary of the Australian Federation (1 January 2001) have eclipsed the millennium, at least in terms of built monuments. The Olympics rebuilding programme has revitalised Sydney, and produced one of the largest buildings in Australian history – the recently opened Stadium Australia by Bligh Lobb Sports. Melbourne's new Federation Square, by LAB Architecture Studio of London, UK, is on site and on time (*WA*60 page 43). Ashton Raggatt McDougal is the architect of the extension National Museum of Australia in Canberra, the only direct millennium project.



Fiji

This South Seas island is one of several in the area claiming that it will be the first to welcome the new millennium, although the accolade actually goes to Gisborne, south-east of New Zealand. But the Fijian's aren't letting the facts get in the way of a good story: Fiji Millennium Monument is being constructed along the three-kilometre stretch where the 180-degree meridian crosses Vanua Levu island. It will include a Museum of Time and Time Walls, capable of storing up to one million personal time capsules – at US$595 a throw.

Book reviews

The architecture of oppression

blank_Architecture, Apartheid and After. Edited by Hilton Judin and Ivan Vladislavic. Netherlands Architecture Institute Publishers, Rotterdam, The Netherlands. 504pp, Illustrated colour and b&w throughout. G72.50 £25

By Glanville Jaques

The publication, blank_Architecture, Apartheid and After, comprising some 40 text and image essays arranged around a series of key positions, seeks to explore the complex relationships between politics and architecture in South Africa.

The structure of the book, however, makes it difficult for the reader to identify themes which tie the various essays together, and the overall impression is that a more rigorous editorial approach should have been adopted. Having said that, the publication offers the reader unfamiliar with the broad socio-political landscape an overview of the complexity of the South African situation.

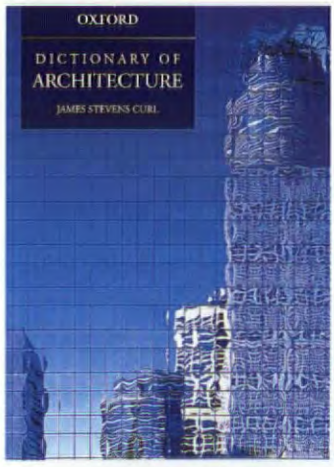
The main thrust is the impact of nationalism, modernism and regionalism on the social, political, cultural and economic development of the country. The experiments in housing and township design by the apartheid state, ostensibly in the interests of "modernisation", are shown to have supported the political strategy of keeping Africans out of the cities, and to "control" urbanisation. This has had a deep impact on the spatial structure and form of South African cities – but apart from the essays by Jenifer Robson, David Dewar and Alan Mabin, no real direction is identified for city design after apartheid.

Apart from these detailed concerns, however, it is the first time a publication on South Africa has covered such a wide range of perspectives on issues of planning, politics and architecture, and for this reason it should be welcomed.

There are architectural perspectives on, for example, the impact of the modern movement on South African architecture, and changes in the approach to social projects which involve the community more directly. There are also perspectives on the cultural richness which existed in areas like Sophiatown and District Six, and a delightful description of "street addresses" in Johannesburg.

Njabulo Ndebele says in his essay, "...there is no peace for those caught in the process of becoming". In order to face up to the issues confronting the new South Africa, we need to understand the past. This publication offers a perspective which helps this understanding.

Glanville Jacques is a director of Stauch Vorster Architects of Durban, South Africa.



Blind ambition?

Oxford Dictionary of Architecture. James Steven Curl. Oxford University Press, Oxford, UK. 848pp, illustrated throughout. £25 US$40 (hardcover)

By Dan Cruickshank

This is an immensely ambitious book and one highly vulnerable to two potential problems. The first problem is that, in a book all about facts, it is only too easy to get a lot of those facts wrong. The second problem is one of omission. This is a big subject and, in a single volume publication only 839 pages long, people and subjects have to be left out. The challenge the author faces is to make the right decisions about the length of entries and those entries which have, in the end, to be rejected.

On accuracy, Curl can hardly be faulted. His entries are eminently reliable even if they lack the kind of wit or idiosyncrasy which make Samuel Johnson's dictionary, or even some of Pevsner's early *Buildings of England* (two great examples of the dictionary genre) so memorable and amusing to read. Of course I have a few questions about Curl's text, but mostly pretty trivial. For example, Curl fails to acknowledge George Dance the Younger's influential role in the development of the fashion in England for the Ammonite capital.

On the question of inclusion and omission Curl is definitely on more difficult ground. Here the author does display an idiosyncrasy which reveals his personal preferences. For example, the interesting but not pivotal 19th-century-architect Henry Roberts – who happens to be a favourite with Curl and the subject of one of his many books – gets a whole page to himself, while the seminal architect James Gibbs gets only half a page, and ES Prior less than a third of a column!

When it comes to post-war architects and architecture Curl gets into greater difficulties over choice, and again inadvertently displays his architectural preferences and, perhaps, his blank spots. When dealing with contemporary architects Curl includes Robert Adam (whose entry is almost as long as that of Prior) as an "important figure in the 'new Classicism' [who] combines scholarship with a willingness to embrace modern materials, functions and technological developments", while Richard MacCormac – one of the most interesting of Britain's post-war architects – does not get a mention.

International contemporary architects get equally odd coverage. Most leading North Americans get a mention, but in India, for example, the coverage is limited to just the few big names such as Correa and Doshi, with no mention of Uttam C Jain or the prodigiously productive Raj Rewal.

But these are small problems inherent – indeed unavoidable – in such a book, and are by no means critical. Curl's scholarship is impressive and this admirable book has already taken an important place on my shelf of reliable and easy to use architectural reference books.

Dan Cruickshank is a London-based architectural historian and critic and editor of Sir Bannister Fletcher's A History of Architecture.

The regeneration game

Architecture Reborn – The Conversion and Reconstruction of Old Buildings. Kenneth Powell. Laurence King Publishing, London, UK. 256pp, 178 colour and 74 b&w illustrations. £45.00 US$75 (hardcover)

By Peter Wislocki

Making old buildings fit new uses is a "a matter of common-sense economics", as Kenneth Powell tells us in the introductory essay of this substantial catalogue of conversion projects. Powell's book certainly doesn't obscure the common-sense issues with excessive theory of technical detail – little is offered of the former, and scarcely any of the latter – but it does illustrate over 40 significant projects, including recent case studies in Europe, Asia and North America, spanning numerous building types.

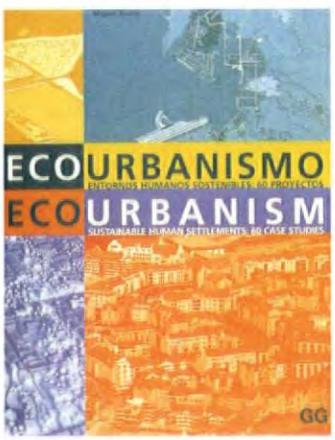
Powell's historical overview ranges from ancient Rome to Richard Rogers' very topical politics of urban renewal, acknowledging the theoretical contributions of, among other obvious authors, Ruskin, Jacobs, Venturi, Rowe, Koolhaas and Rossi, and citing seminal projects from Palladio's Basilica in Vicenza to Scarpa's Castelvecchio in Verona – in which selective demolition was legalised as a means of historical revelation. Italian architects appear to have led the world in conversion projects, Banfi, Belgiojoso, Peressutti and Rogers, Albini, Canali, Aulenti and Gardella all receiving a mention.

Powell tries hard to offer global coverage, but tends to see international projects from a British (or at least English-speaking) cultural and professional perspective. The Japanese, we are reminded, have never assigned an equivalent status to historic monuments, though "as Asian economies mature, the true value of buildings and whole cities will be appreciated".

The case studies are divided into four chapters, the first of which documents buildings for "living and working", ranging from the epic Lignotto former car factory in Turin to the Michael Graves family residence. Subsequent chapters deal with leisure and learning, museums and "the future" – which includes work in progress such as London's Tate Gallery in the former Bankside power station, as well as the already complete Reichstag in Berlin. Each project is described in a few paragraphs, illustrated with generally excellent photographs and clear, if not comprehensive, drawings. The brevity of the text allows mention of only the most strategic of design intentions – the absence of details is regrettable. The selection of projects prioritises the unique and photogenic above the technically sophisticated. If 70 per cent of US architectural commissions involve existing buildings, only a fraction of these can be directly benchmarked against Powell's case studies. There is no reference, for example, to innovative strategies for servicing old buildings, or the challenges of making a building comply with current thermal insulation standards without unacceptably altering its elevations.

In summary, an architect could use this book to show a timid client that conversions of old buildings offer vast commercial (and creative) opportunities, but those looking for technical information or theoretical discourse should seek more specialised literature.

Peter Wislocki is a London-based architect and writer for WA.



Light green reading

Ecourbanism: 60 Case Studies. By Miguel Ruano. Editorial Gustavo Gili, Barcelona, Spain. 192 pp, illustrated b&w throughout. Pta6600 £25.99 (paperback)

By J Stevan Brown

This book sets out to establish eco-urbanism as a "key concept" essential to all responsible future urban planning. With its selection of 60 case studies it attempts to structure a polyglot collection of projects, some built, some not, which are in reality rather loosely linked by concerns with ecology and energy efficiency, into a coherent case for a new discipline.

It is at once fascinating and infuriating, often visually seductive, but also frustrating because, at the very point at which your interest is really aroused, the information peters out. However, it was ever thus in journalism and the author sensibly recommends that if your appetite is really whetted, then you can contact the project authors directly, providing a comprehensive list for doing so.

Perhaps the most tantalising topic tackled is "sustainability". The author offers amongst others the definition in the DoE's "This Common Inheritance", 1990: "Sustainable development maintains the overall quality of life, guarantees continuing access to natural resources and avoids lasting environmental damage." He acknowledges that such concepts are very difficult to tie down and realise. As the content of the book itself demonstrates, each project can only go so far in realising such goals within its own geographical environment, while invariably projects and communities are ever more interdependent, and comprehensive regional or national, let alone global, structures to orchestrate and co-ordinate policies effectively are lacking.

Are Televillages, for instance, really sustainable, individually ecologically sound though they may be, dependent as they are on some other community smelting aluminium and manufacturing silicone chips and cable? Do they belong here if they create privileged, isolated ghetto communities which are the antithesis of the origins and purpose of urban life?

The fastest growing and most serious impending urban problems are to be found in the so-called Third World, and yet tellingly not one single project in this book can really be said to address its comprehensive needs. The clues may be there but not the solutions.

Space does not permit the discussion of all the subjects covered, which encompass the whole range of ecological concerns, nor to do justice to all the drawn content which is sometimes exquisite and informative – this book is also of value as a study of presentation techniques.

Suffice it to say that, though this volume raises as many questions as it answers, this does not invalidate the attempt to publicise and bring structure to a movement which is very much alive and increasingly kicking. Hopefully in the not too distant future eco-urbanism will really come of age, by which time its concepts should be synonymous with and inseparable from urbanism and architecture as a whole.

In the meantime this book is a intriguing guide to the current state of play.

J. Stevan Brown is formerly of the RIBA Journal and currently working for London-based practice YRM.

BOOKS RECEIVED

Architecture in Austria. A survey of the 20th century

Architektur Zentrum Wien. Birkhäuser, Basle, Switzerland. 344pp, 200 colour and 300 b&w illustrations. SFr 78, DM88, £30 (hardcover)

Sci-fi Architecture

Edited by Maggie Toy. John Wiley & Sons, Chichester, UK. 112pp. £18.99, US$36.50 (paperback)

Architectural Heritage of the Caribbean

Andrew Gravette. Signal Books, Oxford, UK. 288pp, colour plates and line drawings. £14.99 US$24.99 (paperback) £29.99 US$49.99 (hardcover)

Animate Form

Greg Lynn. Princeton Architectural Press, New York, USA. 204pp, 30 colour, 45 b&w illustrations plus CD-ROM. US$40.00 (hardcover)

Dictionary of Islamic Architecture

Andrew Petersen. Routledge, London, UK. 352pp, illustrated b&w throughout. £24.99 US$39.99

Events

Lectures, congresses and conferences

Austria

scope1: information vs meaning

Information technology conference focusing on 3-D visualisation for architecture and construction. At the Vienna Hilton from 30 September to 1 October. Contact Christian Dogl, virtual real-estate, Cladia Cavallar, Breite Gasses 3, A-1070 Vienna.
Tel: +43 1 526 29 67
Fax: +43 1 526 29 67 1
e-mail: cc@dc.co.at
Web: http://www.dc.co.at/

The Netherlands

9 + 1 Young Dutch Landscape Architects

Symposium on 2 November at the Netherlands Architecture Institute, accompanying its exhibition (running until 2 January 2000) on the work of young Dutch landscape practices. It will examine how new generations can contribute future Netherlands landscapes. Contact the Institute at Museumpark 25, 3015 CB Rotterdam.
Tel: +31 10 440 1200
Fax: +31 10 436 6875
e-mail: info@nai.ni

AUSTRIA: CONFERENCE

Metropolis Now! The Future of Global Cites/ Global Cities of the Future

The seventh Viennese architecture congress will cover architecture and culture in Asian cities, and assess them as a model for progress. From 5-7 November at the Architektur Zentrum Wien, Museumplatz 1, A-1070 Vienna.
Tel: +43 1 522 3115.
Fax: +43 1 522 3117
e-mail: azw@t0.or.at
Web: http://azw.t0or.at

Above: Hong Kong, an urban model for the future?

Architecture and design competitions

Finland

Paroc Fire-Proof Panels Award 2000

International award with a US$10,000 prize fund inviting designs for buildings incorporating innovative installations of fire-proof panelling. Entries can be submitted until 1 December. Contact John Brauer Lynderup, Paroc Finland , FIN-21600 Parainen, Finland.
Tel: +358 204 55 6219
Fax: +358 204 55 6523
e-mail: john.lynderup@partek.fi

France

Europandom: Constructing the town in the French tropics

International ideas competition asking architects under 45 for responses to the urban problems of four sites in the French overseas *departements* of Guadeloupe, Martinique, Reunion and French Guiana. Entrants must address the social, political and logistical problems of building in these areas. Organisers include the French Secretariat d'Etat a l'Outre-Mer, and Direction de l'Architecture et du Patrimoine. Contact Europandom, 53 Rue des Deux Commes, 93100 Montreuil.
Tel: +33 1 55 86 95 55
Fax: +33 1 42 87 59 95
e-mail: e_pandom@club-internet.fr
Web: http://www-europan.gam-sau.archi.fr

Italy

A Handle for the Third Millennium

Entrants are asked to design a door or window handle and accessories. There are separate categories for professional designers and architects, and students and institutes. Prizes of up to US$1,000 are on offer and the deadline is 29 October. Organised by Gruppo Editoriale Faenza Editrice SpA, Via Pier De Crescenzi, 44-48018 Faenza (RA).
Tel: +39 05 4666 3488
Fax: +39 05 4666 0440
e-mail: info@faenza.com
Web: www.faenza.com

Japan

Membrane Design Competition 99

Architects are invited to present designs using membrane in a new way, through drawings, CAD or model photos. First prize is US$13,000, and entries are due by 9 September. Contact: Membrane Design Competition 99 Office, Taiyo Kogyo Corporation 4-8-4, Kigawa-higashi, Yodogawa-ku, Osaka, 532-0012 Japan.
Tel: 00 81 6 6306 3154
e-mail: mh001600@mb.taiyoko-gyo.co.jp

UK

TIA Sustainable Building Competition

Competition for European architecture students to propose high-quality energy-efficient buildings, using new technologies as inspiration. The prize fund is US$25,000, and applications must be received by 30 September. Contact the secretary of the TIA Sustainable Building Competition for 2000, School of Architecture, Oxford Brookes University, Oxford OX3 OBP.
Tel: +44 1865 741111
e-mail: tia@brookes.ac.uk
Web: http://www.unif.it/project/ tia/competition

USA

Tilley Design Competition

Competition for design solutions fitting the lifestyle of the millennium traveller, from garment to building. The first prize is US$5,000, and the entry deadline is 19 November. Contact Tilley Endurables.
Tel: +1 416 216 2148
Fax: +1 416 216 2356
e-mail: programs@dx.org
Web: www.tilley.com

Times Square Tickets Booth Competition

Sponsored by the Mayor of New York, Rudolph Giuliani, the competition calls for designs for the proposed Theatre Tickets Centre in Times Square, New York City, an NYC 2000 millennium project. It is opened to designers worldwide, and submissions are due by 1 October 1999. Contact the Van Alen Institute, 30 West 22 Street, New York, NY 10010.
Tel: +1 212 924 7000
Fax: +1 212 366 5836
e-mail: vanalen@vanalen.org
//www.vanalen.org

Exhibitions

Canada

Carlo Scarpa, architect: Intervening with History

An examination of Scarpa's approach to contending with the layers of history that mark the fabric of a city, and his ability to weave new work into an urban context. Until 31 October at the Canadian Centre for Architecture, 1920 rue Baille, Montreal, Quebec, Canada H3H 2S6.
Tel: +1 514 939 7000
Fax: +1 514 939 7020
e-mail: mmeilleur@cca.qc.ca

Cuba

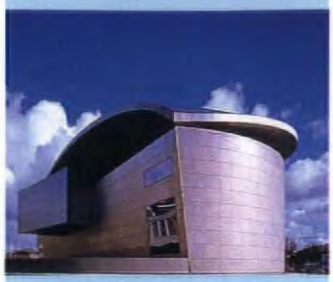
The Havana Project – Architecture Again

This exhibition of architectural solutions to Havana's social problems by internationally renowned architects, including Coop Himmelb(l)au, and Thom Mayne, has travelled the world for the last three years (see *WA*76 page 57). It will be in Havana from 27 October to 9 January 2000, at the Centro Nacional de Conservacion, Restauracion y Museologica, Convento de Santa Clara, La Habana.
Tel: +537 612 877
Fax: +537 335 797

France

singuler/pluriel – Architecture en Aquitaine 1995-1998

A selection of 57 recent innovative buildings in Aquitaine which respond to the region's changing

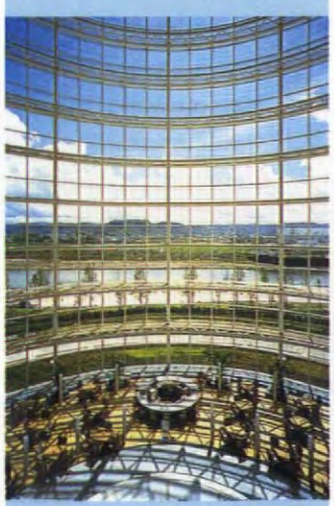


THE NETHERLANDS: EXHIBITION

Kisho Kurokawa, Architect

Retrospective of Kurokawa's work presented through models, drawings and photographs of his best-known projects, with special attention given to the Bunraku National Theatre, Osaka, the Hiroshima Museum of Contemporary Art, and the Kuala Lumpur International Airport. A wide selection of the architectural hardware through which Kurokawa communicates the traditional principles of Japanese art and culture are also on display. It takes place in the new Kurokawa-designed wing of Amsterdam's Van Gogh Museum (see WA 76 pages 46-53), until 14 November. The Van Gogh Museum can be contacted at Postbus 75366, 1070 AJ Amsterdam.
Tel: +31 20 570 52 00
Fax: +31 20 673 50 53
e-mail: info@vangoghmuseum.ne

Above: Van Gogh Museum extension, The Netherlands **Below:** Hotel Kycera, Japan



social and cultural identity. Runs from 10 June to 31 October at the arc en rêve Centre d'Architecture in Bordeaux. A round-table discussion session takes place on the opening night. Contact the arc en rêve Centre d'Architecture, Entrepot, 7 rue Ferrere, F-33000 Bordeaux.
Tel: +33 5 56 52 78 36
Fax: +33 5 56 48 45 20

UK

Homes for the Future Expo
Display of the projects making up Glasgow's Homes for the Future scheme (see *WA* 77 pages 60-61), a cocktail of affordable avant-garde housing by a team of leading British and international architects, and a flagship of the Glasgow1999 – UK City of Architecture and Design programme. This mix of private and public housing combines innovative architecture with urban renewal. Runs until 24 October 1999. Contact the offices of Glasgow 1999, Charlotte House, 78 Queen Street, Glasgow G1 3DN.
Tel: +44 141 287 7346
Fax: +44 141 248 8754
e-mail: info@glasgow1999.co.uk
Web: www.glasgow1999.co.uk

OMA Rem Koolhaas – Living
Exhibition extending beyond Koolhaas' domestic architecture to projects under development by his practice, OMA, for European cities, and new research material on Lagos, Nigeria. Until 19 September at the Institute of Contemporary Arts, The Mall, London SW1 5AH.
Tel: +44 171 930 3647
Fax: +44 171 930 9851
Web: http://www.ica.org.uk

USA

Micro Space/Global Time
A series of portfolios by architects including Neil Denari, Andrea Zittel and Coop Himmelb(l)au, focusing on teleworking – the linking of living quarters and workplace in the digital age. At the MAK Centre for Art and Architecture, 835 North Kings Road, West Hollywood, CA 90069.
Tel: +1 323 651 1510
Fax: +1 323 651 2340
e-mail: makartsociety@MAK.at
Web: http://www.MAK.at

UK: EXHIBITION

Alexander Thompson: The Unknown Genius

An exploration of Alexander "Greek" Thompson's distinctive classicism in one of the world's greatest Victorian cities. Runs until 19 September at the Lighthouse, Glasgow. For information contact the organiser of Glasgow 1999: UK City of Architecture and Design.
Tel: +44 141 287 7346
Fax: +44 141 248 8754
e-mail: info@glasgow 1999.co.uk
Web: www.glasgow1999.co.uk

Above: Alexander Thompson's Zavaroni House, Glasgow

Trade shows

Argentina

Expo-Cad 99
International CAD trade show aiming to link international exhibitors with delegates from the South American market. To be held from 29 September to 1 October at the Centro Costa Salguero, Buenos Aires. Contact Juan Ignacio, Expotrade SA, Guatemala 5885 (1245), Buenos Aires.
Tel: +54 11 778 7070
Fax: +54 11 778 7171

Italy

SAIE
The Salone Internazionale dell@Industrializzazione Edilizia (International Exhibition of Building Industrialisation) takes place in Bologna from 13-17 October 1999, covering a variety of sectors of the building and construction industry including HVAC, tools and fixing systems, steel structures and earth-moving machinery. Contact BolognaFiere, Viale della Fiera 20, Bologna.
Tel: +39 051 282 111
Fax: +39 051 282 332
Web: http://www.BolognaFiere.it

Kazakhstan

KazBuild
International building trade show expecting a combined attendance of 12,000. Runs from 7-10 September 1999 at the Atakent International Exhibition Centre, Almaty. Contact Mr Edward Strachan, International Trade and Exhibitions Group, 157 Abay Pr, Almaty 480091.
Tel: +7 3272 50 93 91
Fax: +7 3272 50 93 90

Mexico

A/E/C Systems Mexico 99
The third Mexican A/E/C Systems show. From 21-23 September at the World Trade Center, Mexico City. Contact Show Management, A/E/C Systems International, 415 Eagleview Boulevard, Suite 106, Exton, PA 19341, USA.
Tel: +1 800 451 1196
Fax: +1 610 458 7171

Singapore

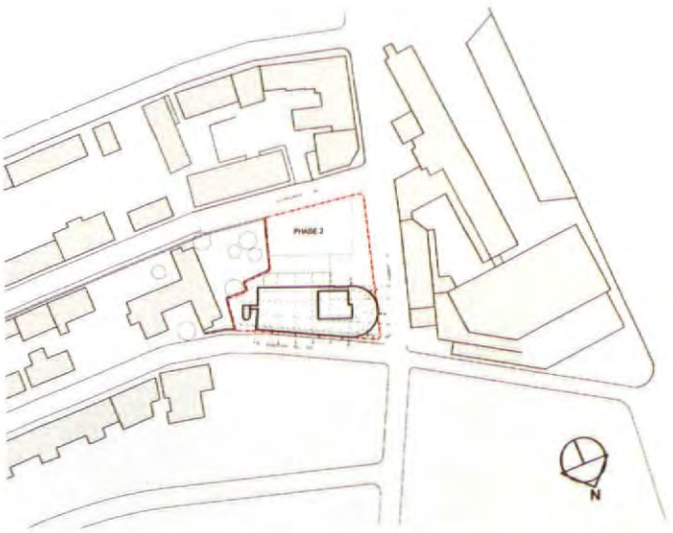
Luminaire Asia 99
Trade show and conference catering of the Asian lighting market, in which Singapore supports the most business. From 20-23 October at the Singapore International Convention and Exhibition Centre. Contact Mr Chow Wai Kuen, Luminaire Asia '99, SICEC, 1 Raffles Boulevard, Suntec City, Singapore 039593.
Tel: +65 431 2293
Fax: +65 431 2268
e-mail: ep@sicec.com

Uzbekistan

Infrastructure Uzbekistan
New trade event covering construction, telecommunications and transport. The dedicated construction section is called UzBuild 99. At the UzExpocentr, Tashkent, from 12-15 October. Details are available from Iteca, 42 Timiryazev St, 5th Floor, 480057 Almaty, Kazakhstan.
Tel: +7 3 272 509 390
Fax: +7 3 272 448 3154
e-mail: strax@online.ru

The green render was chosen to stand out against the snow, slush and grey skies of Moscow. The grey stripe marks the "docking area" where connecting doors to a potential further building next door could be knocked through

Building study



Bolshoi prima donna

Trubnaya 12 is an unfinished building with an outsized reputation, by James McAdam and Tanya Kalinina of Alsop & Störmer's Moscow office. This cool modernist building might seem unremarkable in Western Europe, but in the context of a capital riddled with Mayor Luzkhov's neo-classical pastiche, this building represents "a milestone in the development of Russian architecture". Elaine Knutt reports from Moscow. Photographs by Andrew Crowley.

In May, the Russian Academy of Architecture and Construction selected Trubnaya by Alsop & Störmer's Moscow office as the first building by a non-Russian architect to win one of its six annual "Bolshoi" medals. A month later, it was voted "best building" among those who exhibited at Moscow's annual Architecture and Design Exhibition .

The two directors of the practice (James McAdam and Tanya Kalinina) are finding it hard to repress their obvious delight about the impact the building is having. "It's created a real discussion point," says McAdam, who has also just become the first British architect to be made an honorary member of the Russian Union of Architects. "Previously, the attitude was very much 'we do it our way', but now they've decided it is possible to involve foreign architects."

"It has provoked a lot of discussion about modernist buildings," adds Kalinina, who is organising a round-table discussion forum about the building for Moscow architects. "It's really upset the status quo."

They're not exaggerating. In most other major cities, Trubnaya's bold form, colour and geometry might attract attention and admiration, but would hardly be the subject of such debate. Yet in Moscow, a city where the conservative post-Soviet architectural elite is still wedded to the columns and cornices of a "contextual" neo-classicism, the 9,000-square-metre office and retail development is genuine statement architecture.

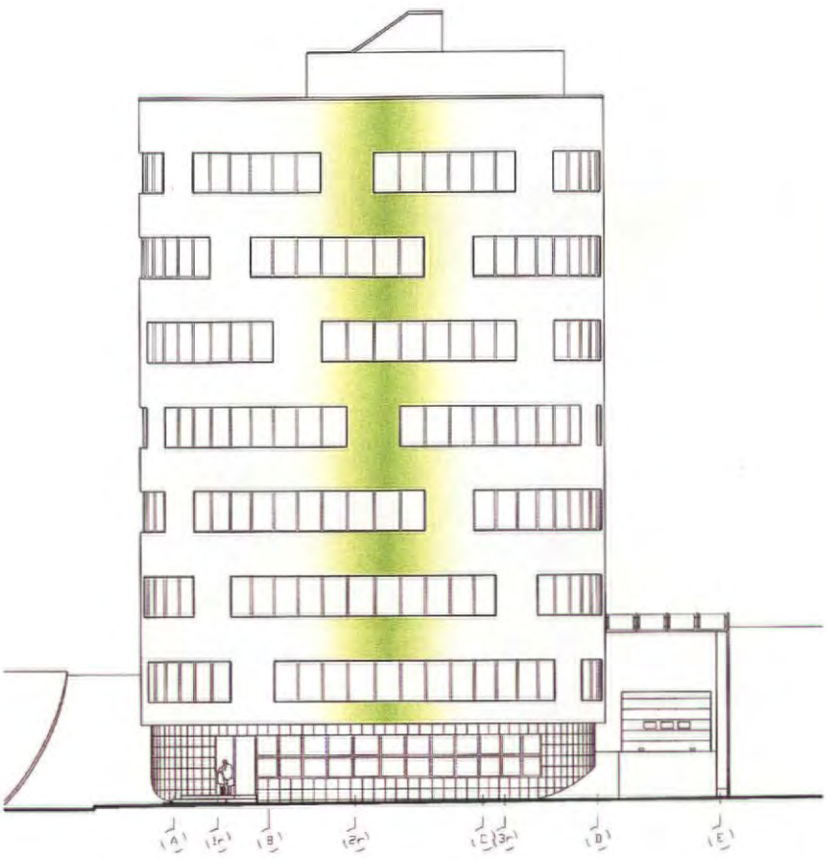
There is some doubt, though, about what that statement might be. The Moscow press, perhaps to compensate for having honoured a foreigner, has looked at its clean lines and christened it neo-constructivist. McAdam and Kalinina, however, stress that Trubnaya 12 is very much part of the European modernist tradition, rather than a backward-looking homage to the Russian architectural legacy of the 1920s.

"In Moscow, a city where the conservative post-Soviet architectural elite is still wedded to the columns and cornices of a "contextual" neo-classicism, the 9,000-square-metre office and retail development is genuine statement architecture."

UK-based practice founder Will Alsop, who was involved in preliminary design work on the project, stresses that Trubnaya is hardly at the cutting edge of the firm's worldwide work, but is still "bloody amazing within its context [of the Moscow planning process]. It's closer to what we do elsewhere, but there's still a gap". He attributes the difficulties of working in Moscow to the fact that "in a period of rapid change, people become more conservative, and cling to what they know".

The achievement of Trubnaya was assisted by several factors: a brief to be as contemporary as possible from a developer that had previously worked with and trusted the six year old ▸

East elevation



West elevation

► practice; and the opportunity to try something bold on a back street among a jumble of undistinguished neighbours, an accident of location that helped the Alsop scheme's progress through the planning process.

The involvement of Russian associate practice Ostozhenka also helped in this respect. "It had a good understanding of what we wanted to do, and is relatively influential in the city," comments McAdam. In Russia, foreign practices such as William Alsop Architects are still prohibited from operating without a licensed Russian practice to present the scheme and apply for approvals.

"Viewed from the bottom of the slope, the contrast between the black stone-clad basement floors and the bulk above gives the impression of a powerful locomotive or steamer plunging downhill."

As McAdam stresses, Trubnaya has been designed to make the most of its sloping site. Viewed from the bottom of the slope, the contrast between the black stone-clad basement floors and the bulk above gives the impression of a powerful locomotive or steamer plunging downhill. The black band corresponding to the building's two floors of underground parking is punctuated by white "porthole" windows. At the foot of the hill, the two basement floors are given over to retail.

In the six floors of office accommodation above, the distribution of the windows is Trubnaya's cleverest trick. With the number of windows building up incrementally from top floor to bottom, they create a strong diagonal following the slope of the hill and heighten the effect of a vehicle picking up speed. The window frames are a greenish grey colour, chosen to blend into the facade.

Internally, the columns are set back as far as possible from the windows, so as not to distract from the geometry of the facade. Nor are there any blinds or lighting to disturb the effect: the internal space is still entirely bare, and will remain so until tenants are found. But once completed, Trubnaya should offer some of the most up-to-date office accommodation in Moscow, with a generous 4.1 metre height from slab to slab to allow for cabling and servicing.

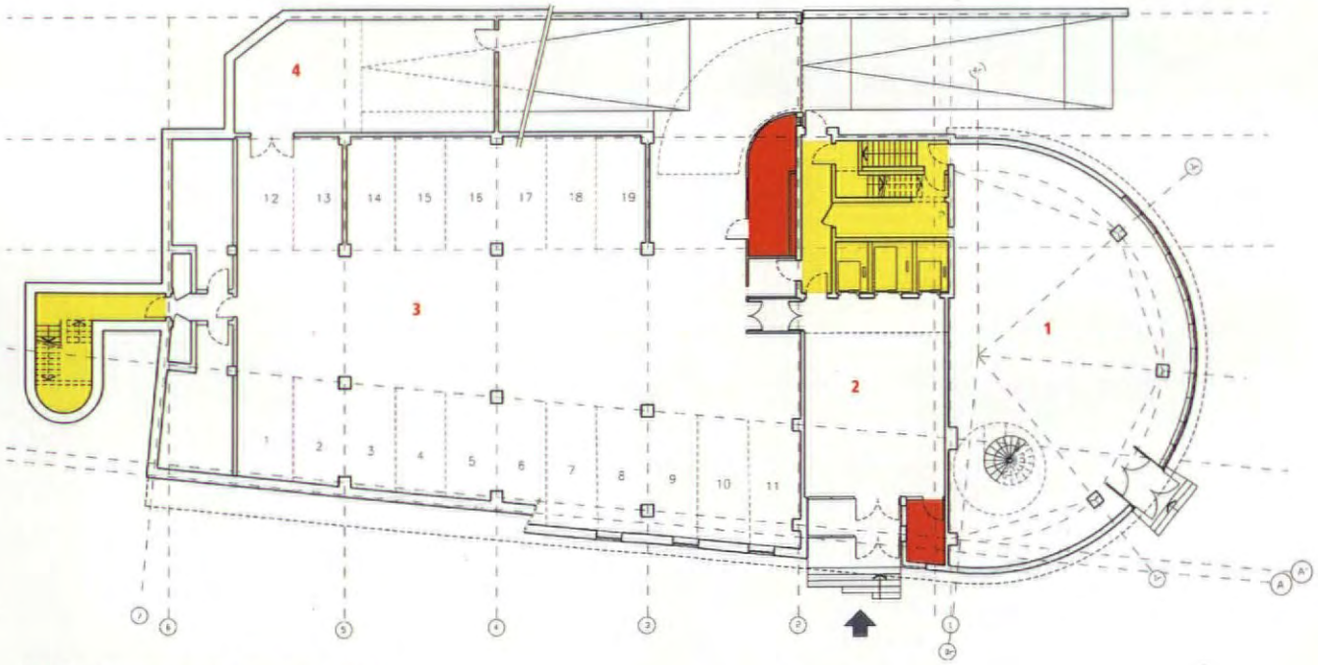
Trubnaya is very much of the city it belongs to. The green render was chosen to ensure it stands out against the snow, slush and grey skies that envelop Moscow for up to seven months of the year. "It looks best against a grey sky," says McAdam, pleased that the summer weather turned cloudy just in time for the photographer. "It doesn't look so good against ►

South elevation

North elevation

The fire-escape staircase at the rear is linked to the building at each level by covered bridges

The windows increase in number incrementally from top to bottom, creating a strong diagonal following the slope of the hill



Key to entrance level and underground parking

1 Retail
2 Foyer
3 Parking
4 Store

▸ blue sky, and turns yellow in the sun."

And in the cyclical Moscow property market, where the neighbouring vacant site may or may not be developed by Trubnaya's own developer, the building has been designed as both a solo statement and one half of a double act. The grey stripe on the straight elevation marks the "docking area" where connecting doors to next door could be knocked through. Trubnaya's plainer facade would then form one wall of an internal courtyard.

Another Moscow-specific touch is the duality of purpose for the fire-escape staircase at the rear of the site, which is linked to the building at each level by covered bridges. In a city where Western companies' clean air policies have come up against a population of enthusiastic smokers, the bridges will be pressed into service as smoking areas.

In materials and construction, Trubnaya has an international feel. Foundations and concrete structure were by local contractor Mospromstroi, while Schuco supplied the windows. The cladding is common in Scandinavia: concrete panels are covered with 80 millimetre Rockwool, nylon mesh and pre-pigmented plaster. Bizarrely, the foyer is to be fitted out by an off-shoot of the Russian space agency, chosen for its ability to supply high-quality glass and steel tested to Russian standards.

"Their pride may seem out of proportion... but in the middle of Moscow's architectural politics and its 'contextual' bays, towers and cornices, Trubnaya really is a Russian revolution."

The architects are still basking in the glow of their unfinished building. McAdam and Kalinina hope that it could mark the start of a new interest in modernism in the city, and mention that architecture students are often spotted outside. Their pride may seem out of proportion to what would be seen elsewhere as a neatly executed, modernist office block. But in the middle of Moscow's architectural politics and its "contextual" bays, towers and cornices, Trubnaya really is a Russian revolution. WA

Developer/client
Kalchuga Fund
Project manager
Prodema
Structural engineer
Thorburn Colquhoun
Local architect
Ostozhenka

Pretender to the throne

British Embassy, Moscow, by Ahrends, Burton and Koralek

Trubnaya 12 will soon have a rival for the title of Moscow's leading modernist building – the New British Embassy by another UK firm, Ahrends Burton and Koralek (ABK). The US$132 million project is already a landmark on the Smolenskaya Emankment of the Moskva river, where it lies close to the seat of the Russian government. When completed at the end of the year, the building will present the public face of Britain as contemporary, stylish and forward-looking.

ABK deliberately conceived the scheme as an antidote to the heavy Stalinist blocks that dominate the Moscow skyline. The riverfront facade consists of three apartment blocks for staff and the embassy's political wing, designed as separate pavilions to avoid a monolithic effect and allow sunlight to reach the rear of the site. The rear portion contains an office block for the visa, commercial and press departments, and an amenities building with swimming pool, bar and library, all set around a landscaped residents' garden.

The embassy has been built by a joint venture between Taylor Woodrow and Skanska's Finnish division. Ove Arup and Partners is the structural engineer, and Hanscomb the cost consultant.

10 years on

TEN YEARS ON

How convenient that the International Academy of Architecture (IAA) chose to launch its quarterly magazine *World Architecture* in 1989, giving us the chance to celebrate our tenth anniversary in conjunction with a retrospective on international architecture of the 1990s. Most publishers would avoid launching a new title in the grip of a recession, but for the IAA commercial realities of publishing were less important than spreading the word and the work of its "masters". And so *World Architecture* was born, with instructions to Grosvenor Press (and later Cheerman) to publish profiles of IAA members – from Richard Rogers and Renzo Piano to Arthur Erickson and Thomas Herzog – and to "promote the social role of architecture and stimulate the progress of creativity and theory".

Editors in the early years included Jonathan Glancey, Peter Dormer, Jeremy Myerson and Dennis Sharp. The magazine was more of an academic journal, full of erudite comment and outspoken opinion pieces, not least from architect, historian and critic Pierre Vago.

During the 1990s the practice of architecture, and the aesthetics of the built environment, has evolved beyond all recognition due to advances in building techniques and information technology, the demands of clients, the reorganisation of corporations and the rebranding of towns and cities. As architecture has slowly shaken off the shackles of imposed "-isms" and adopted a freer aesthetic spirit in tandem with a leaner, meaner commercial awareness, *World Architecture* has transformed

itself as a monthly magazine, initially under the editorship of Martin Pawley (1992-1996), to become not just a commentator on the sidelines, but an active player in the game.

To celebrate our tenth anniversary (now as part of The Builder Group, and with an affiliation to the Royal Institute of British Architects) we invited each member of a jury of nine international architects, including Richard Meier and Henri Ciriani, to select the five seminal buildings of the decade, electing one of their five as the most significant. The editors, along with Pawley, now our monthly columnist, also contributed a list of five after a heated debate on both the criteria for choosing, and the results.

The following pages reveal our Top Ten buildings of the decade (1989-1999): Oscar Niemeyer's Museum of Contemporary Art, Niteroi; Richard Rogers Partnership's Millennium Dome, London; Bernard Tschumi's Parc de la Villette, Paris; Kansai Airport by Renzo Piano Building Workshop (RPBW); Terminal F, Charles de Gaulle Airport, Paris, by Paul Andreu; Peter Zumthor's Thermal Baths, Vals; Frank Gehry's Guggenheim Museum, Bilbao; The Ark, London by Ralph Erskine; Charles Correa's Permanent Mission of India to the UN, New York, and RPBW's Tjibaou Cultural Centre, New Caledonia.

Extracts from the last ten years of *World Architecture* are supplemented with retrospectives of the men of the millennium – Norman Foster, WA's consultant editor, and Frank Gehry.

The editors

10 years on

THE EARLY YEARS

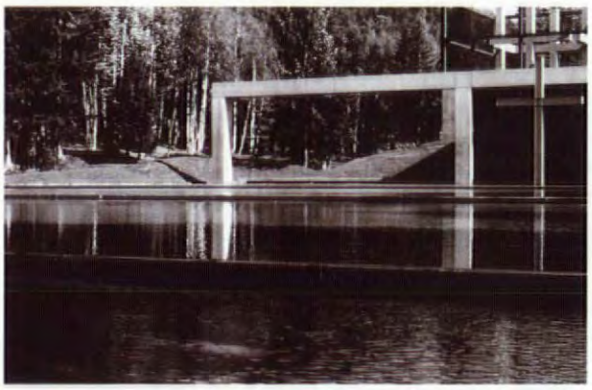
From 1989 to 1995 the work of IAA (International Academy of Architecture) masters including Jean Nouvel, was published alongside essays from academics and architects.

ON EAST AND WEST

From WA16, page 81 "Taking fright in the Far East" by Pierre Vago

"The qualifications I make about my knowledge of Japan will not be out of place when I confess a feeling of disappointment and even of disquiet. I do not understand this brutal rupture in a tradition which seemed so extremely promising. I don't understand how people of such finesse and sensitivity can produce work in which I am unable to find the virtues and distinctive qualities of Japanese art.

The explanations, the theories I read and I hear, cannot convince me, can't even make me understand the 'Metabolism' of Otaka and his friends, nor Takeyama's 'Meteorology', Ando's 'Minimalism', Isozaki's 'Maniera', Tosizaka's 'Discontinuous Unity' or Aida's 'Eternal in the here and now'.



Tadao Ando's Church on the Water, Hokkaido, Japan, 1988

Yet I believe myself to be moderately intelligent, and I certainly bring plenty of goodwill. Perhaps I just can't free myself from a western point of view..."

ON ART AND ARCHITECTURE

From WA3, page 76 "Architecture is not art" by Marc Camille Chaimowicz

"Unlike architecture, art is speculative, and the artist deliberately, necessarily, courts failure. The architect, being responsible to other people, has no right to court failure. He or she must seek resolution. Le Corbusier's chapel at Ronchamp is utterly resolved and, like all successful buildings, Ronchamp's success is largely the consequence of intelligent negotiations and real, worldly problem solving of a kind that do not often impinge upon the artist. These 'negotiations' include vital if banal matters such as drainage as well as the geology of the site, the structural possibilities of the materials and the constraints of safety and cost and the limitations of the engineers and builders. So much is, in the literal sense, out of the architect's hands and yet the architect is responsible...

Design gives us answers, Fine Art poses questions. We take meaning from Design... and give meaning to Fine Art."

Le Corbusier's Notre-Dame-du-Haut-Chapel, Ronchamp, France, 1955

Danielle Tinero

ON THE UNIVERSITY OF LIFE

From WA18, page 56 "Expo '92 – Images of a new world order"

by Martin Pawley

As the aircraft circles over the Andalusian plan, waiting its turn to land at San Pablo airport, the significance of the great new motorways, bridges, harbour works and railway tracks that punctuate the emptiness of the land surface cannot be missed. In less than five years Andalusia has been transformed from a sleepy backwater in one of the farthest corners of Europe into a vast development site waiting for the 21st century... for the immense migration of people, money and enterprise that will turn it into the Sunbelt of the European Community...

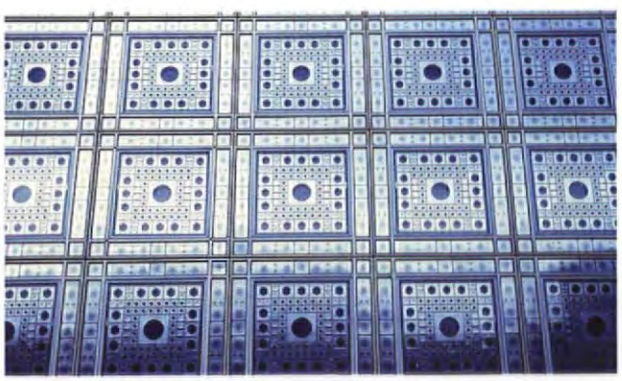
.If the idea of a World Exposition that is merely the self-financing prelude to the opening of a business park seems somehow cheap and exploitative, look at it in another way. The same ingredients also make a university of the world. A new kind of university masquerading as spectacle and entertainment. A six-month 'summer school' from which, perhaps, 18 million visitors will return having been bombarded with kaleidoscopic images and ideas whose net effect is a defeat for ignorance and prejudice, and a victory for a new world order."

Nicholas Grimshaw's British Pavilion at the Seville Expo, 1992

Reid & Peck

ON NOUVEL AND THE KILLER INSTINCT

From WA31, page 26-49 "A Method on Discourse", an essay on the work of Jean Nouvel, by Conway Lloyd Morgan



Jean Nouvel's Institute du Monde Arabe, Paris, France, 1987

"This importance given to architecture by the French is also reflected in the critical storms within the architectural profession that some of Nouvel's building have brought about. The modernists cannot forgive him his insistence on context, the historicists his insistence on the present, the academics his denial of the autonomy of architectural issues. His original and eclectic approach has, he admits, made him more enemies than friends. Radical architects risk becoming frozen into their own posturing, but Nouvel avoids this temptation by increasingly refining and redefining his own ideas, and by pursuing every opportunity to build. For Nouvel, an architect who does not build is no architect at all. He or she must also accept the social and economic dynamics of the situation in which the building is to occur, and must consider how the building is to be integrated into, and contribute to, the culture of its time. Before beginning to design, Nouvel and his colleagues think through the definition of the project, and discuss the meaning and value of the concept, as it emerges, and in the widest possible terms. This collaborative process brings in people from outside the formal ranks of architecture – the artist Daniel Burin worked on one housing project, and the stenographer Jacques El Marquee was a frequent collaborator as well, not only on theatre projects. This shared process of discourse lies at the start of all of Nouvel's buildings and projects..."

10 years on

MARTIN PAWLEY

During his time as editor (1992-96) Martin Pawley challenged the conventional art historical analysis of the built environment, and pioneered the transformation of World Architecture into "the business magazine for the global architect". He still airs his views in Polemic every issue.

ON GLOBALISATION

From Polemic WA67, page 31 "The supreme formula for progress"

"Today the admiration of the world is no longer directed at the pilots of transatlantic airliners: instead our great heroes are global architects, men as singular as Frank Gehry, Cesar Pelli, Sir Norman Foster or Rem Koolhaas. Aerospace and electronic communications have long since solved the problem of linking the five continents into a single interconnected whole: the new task is to create new identities for the patchwork of old and new cities caught up in the one-world network of the globalised future. It is no accident that Frank Gehry's Bilbao gallery has been as lavishly praised as Major Franco's flight [across the South Atlantic from La Rabida to Buenos Aires, linking by air the Hispanic countries of the old and new world for the first time], for the new identity that it conferred, like the new identity conferred by the Petronas towers and the Commerzbank, is a priceless gift.

Month by month in the pages of this magazine we see buildings from all over the world that are built according to [Spanish historian] Manuel de Siarot's supreme formula for progress. If the epic flights of the great aviation pioneers were the symbolic events of the beginning of the age of globalisation, the creations of today's global architects are the symbols of its maturity....

[Sixteen of the world's fully globalised architectural firms] bill in excess of US$100 million a year, and six of them earn more than 50 per cent of their fees outside their home markets. Although most of them maintain a strong national presence they have long since followed their multinational clients overseas, opening offices wherever prospects have appeared to justify the investment, and increasingly exploited the synergy that a global network of offices can offer for distributing the resultant workload. They have headquarters offices of course, but they also have semi-autonomous satellites, like asteroids in space, each rooted into a gravitational system of its own.

Surprisingly perhaps, at this level of globalisation there is less competition rather than more... Today competition is internalised, so that global architects appear to compete when really they are collaborating. Thus while big global firms cruise deep waters in search of monster commissions, smaller local firms, like pilot fish, try to make themselves useful. By way of collaboration and job-sharing each is rewarded. This is indeed the supreme formula for progress of which the Spanish sage spoke so many years ago."

ON THE ENEMY OF ALL STYLES

From Polemic WA47, page 41 "After post-modernism, terrorism"

"Thirty years ago the late Charles Moore, father of post-modernism in America, published an essay about the future. 'If architects are to continue to do useful work on this planet,' he wrote, 'then their proper concern must be the creation of place... To make a place is to make a domain that helps people know where they are and, by extension, who they are.'

[In some senses] post-modernism has carried out Moore's mission to the letter. A little disappointing to see a Chinese temple on top of an American skyscraper perhaps, but you can't dispute that it tells you where you are and who you are. Unfortunately what it can't tell you is that the triumph of post-modernism was by no means the Armageddon of style wars that it was cracked up to be. No sooner did the struggle between internationalism and uniqueness settle down to an uneasy compromise, than another villain lumbered on to the stage. A villain more deadly to architecture than any killjoy arrogance of modernism or decorative historicism of post-modernism had ever been. The new is another 'ism' of course, but it is not a style. Instead it is the enemy of all styles. Its name is 'terrorism', and it bids fair to put an end to architecture as we know it, once and for all.

In their day, the international style and post-modernism both dealt with changes in historic architectural elements: shape, shadow and line, fenestration, proportion, prospect and function. Where the security and adviser becomes the lead consultant, these elements do not change so much as disappear. Since the first rule of security is to make the target inconspicuous, any architectural tour de force is out of the question...

The result... [is] a styleless architecture, its buildings nondescript fortresses of serviced floorspace that will only breathe freely inside their own armoured carapace. In contemplating such structures our thoughts return to Charles Moore. Like prisons, such places will certainly help people know where they are and, by extension, who they are."

ON SURVIVAL OF THE FITTEST

From Foreword WA42, page 23 "Tomorrow is not just new yesterday"

"Sometimes it seems as though the twentieth century is setting the scene for the twenty-first by burying all building types under hectares of mixed-use development with no particular identity of its own...

The machine at the heart of this dismantling of the past is the computer, for this massively proliferating device alone is what enables us to survive without memory. Incredibly, the first commercially available computer using printed circuits, the Digital PDP-1, only appeared 30 years ago, yet since that time computer architecture has travelled at high speed through all the styles and technical evolutions traversed by real architecture in 500 years. The difference today is that where architecture is lost, in the world of computers a useful past still exists: a line of progression in terms of size, speed, power and access from which there is no turning back. In the world of computers there is only one use for outmoded equipment, and that is to access old data that cannot be retrieved in any other way. Examples of old computers are kept in commission, not because they are 'heritage artefacts', but because the information stored using their obsolete systems still has current value.

There is no such practical justification for keeping old buildings intact... Businesses in historic towns and cities all over the world are compelled to use old buildings, so they alter them...

The linking factor is obsolescence... When investment can circumnavigate the globe in fractions of a second, magnificent financial services buildings can face obsolescence in hours... When buildings are commissioned into a business environment, but fail to perform because they resist adaptation, or the market opportunities they were intended to seize have evaporated by the time they are ready, then they are obsolete. As Darwin taught us long ago, it is futile to try to protect a species because its environment is hostile. It is the species that must conform or face extinction."

10 years on

THE AMERICAN DREAM

From 1995 to 1998 World Architecture focused its profiles on the dominant US firms, which were first to catch on to the benefits of globalisation for architects.

GENSLER

"Reflecting on the early years, [Arthur] Gensler now thinks that its emphasis on interiors was an undervalued benefit to him. It was the acceptance of impermanence that characterised the sort of office fit-out work that he started doing that gave him the flexible mind-set he has today.

"'For me interior architecture, exterior architecture and all kinds of design have all really been the same thing,' he reflects. 'What helped me most about starting on interiors was having to accept that my work would only have a short life. Interior architecture is always less permanent than exterior architecture. It is always being changed. Retail design is like that, so is hospitality and transport, three of the areas we have expanded into. From the beginning I always accepted the fact that my work was going to be changed. My work was never really precious to me in any eternal sense.

'We think the reason we get hired is because we know what we are talking about. In Europe today a lot of the architects still don't care what the client wants.

But surely the downside of that approach is that Gensler runs the risk of simply doing what their clients tell them?

'Of course we don't do that. If you only listened to what your client said, you would only hear what your client already knows. If you limited yourself to that, your professional services would not be worth a great deal. What we try to do is listen to the client and then stretch the programme.'"

Marco Lorenzetti/Hedrich-Blessing

San Diego airport, USA, by Gensler, 1999

ELLERBE BECKET

Peter Aaron/ESTO

Ellerbe Becket's New York Psychiatric Institute, USA, 1999

"'As far as general problem areas are concerned, I would say the real issue in North America is the viability of the traditional construction process, which is plagued by an absence of trust,' says chief executive Bob Degenhardt.

'Architects have been trying to limit their liability for the last 20 years; as a result the work process has become extremely fragmented. More than anything, clients want to streamline the process of building. They don't want to deal with separate entities. We think a common business goal is the only answer to conflict. You can't get rid of conflict by contract. Combining architecture, engineering and construction, from strategic planning to post-occupancy, must be the best way.

'Increasingly we find that clients want a whole range of services, from calling us up because they want a building, to seeking advice on the use of facilities at any stage from strategic planning to post-occupancy. It's a big change for architects.'

Asked who its main competitors are in the consultancy field, the principals include Electronic Data Systems, IBM and several big accounting firms – a whole range of professionals from outside the construction industry capable of selling policy advice that affects demand for serviced floor space."

HELLMUTH OBATA + KASSABAUM

"Massive changes, like the switch from skyscrapers to urban stadiums, are a constant in modern American architecture, and HOK is living proof that the largest firms have to be the most nimble to be able to live with them.

HOK's St Louis County Justice Centre, USA, 1998

The big question confronting all American firms is the future of their once enormous, but now recession-hit, domestic market. Asked about the prospects for American commercial architecture, [Gyo]Obata gives a cautious reply. 'As of now we are still in recession. There are not that many major US projects coming up. The way I see it, this is partly economics, partly the massive impact of computerisation. The American corporate sector is shrinking. The big design question is becoming, "How to you make it work small when it used to work big?"'

Ryan Stevens takes up the story. It is because of [downsizing and rightsizing and an increase in the number of people making decisions] that our core activity, designing new buildings, is coming under threat. You can't go in there any more with your drawings and model and say "Here it is, this is the answer, what do you think?"'

'That's true,' Obata agrees. 'It's the biggest change in the last 20 years. That's why we have changed our whole approach to design initiatives. We need to send in our consulting groups to deal with more and more stakeholders in every project. We need to orchestrate the vision that all these people have without stepping on people's toes. I think that is the way things are going in the US. It might even be that the survival of what you call our core activity is going to depend more and more on international work.'"

KOHN PEDERSEN FOX INTERNATIONAL

"'We knew there was a certain amount of resentment in London about the number of US architects arriving in the city at that time [the early 1990s],' recollects senior partner Lee Polisano. 'So we did not want to flaunt ourselves.'

'All of our investment in London took place against the background of a falling market [adds David Leventhal]. I guess our modest choice of offices was appropriate... part of being counter-expectational...'

'We weren't used to putting in such an effort and spending so much money up front. US firms are accustomed to competition, but it is hard for them to come to terms with the European system, particularly open entry competitions with no payment for work done. Since we set up in London we have won 13 out of the 20 invited competitions we have entered, but we do not enter these open contests.'

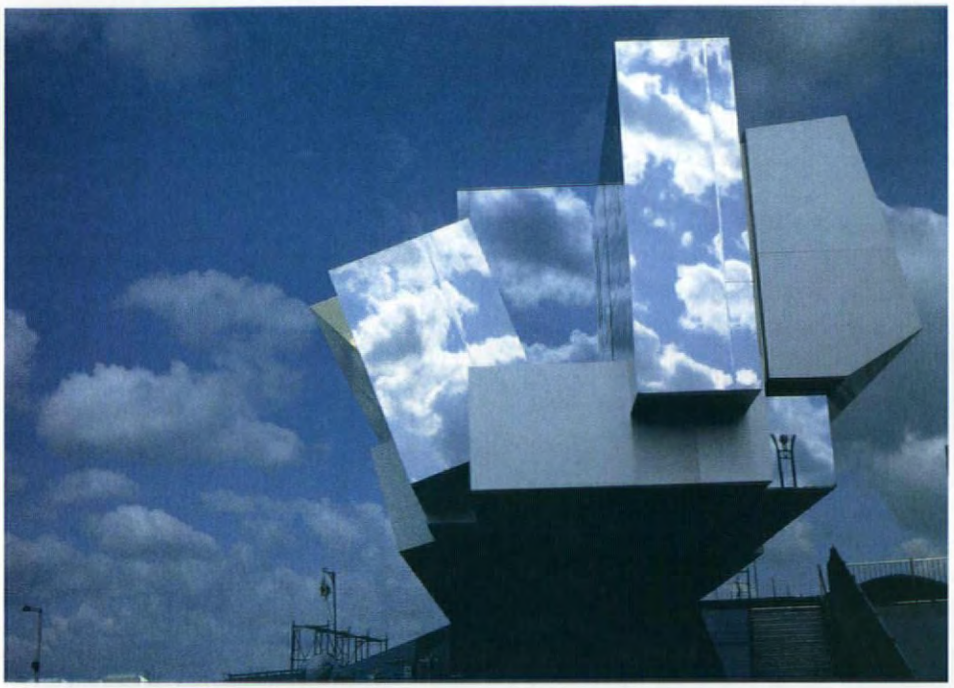
Looking back on KPF's first five years in London, Polisano admits: 'We had a lot to learn. We had to learn that working in Europe is about building relationships, not just with clients but with everybody in the whole European culture of architecture. We had to come to terms with the fact that, in future, many of our projects might tend to be smaller and more complicated... we think that the elements we have explored in our smaller projects have benefited the design of our larger urban projects too.'"

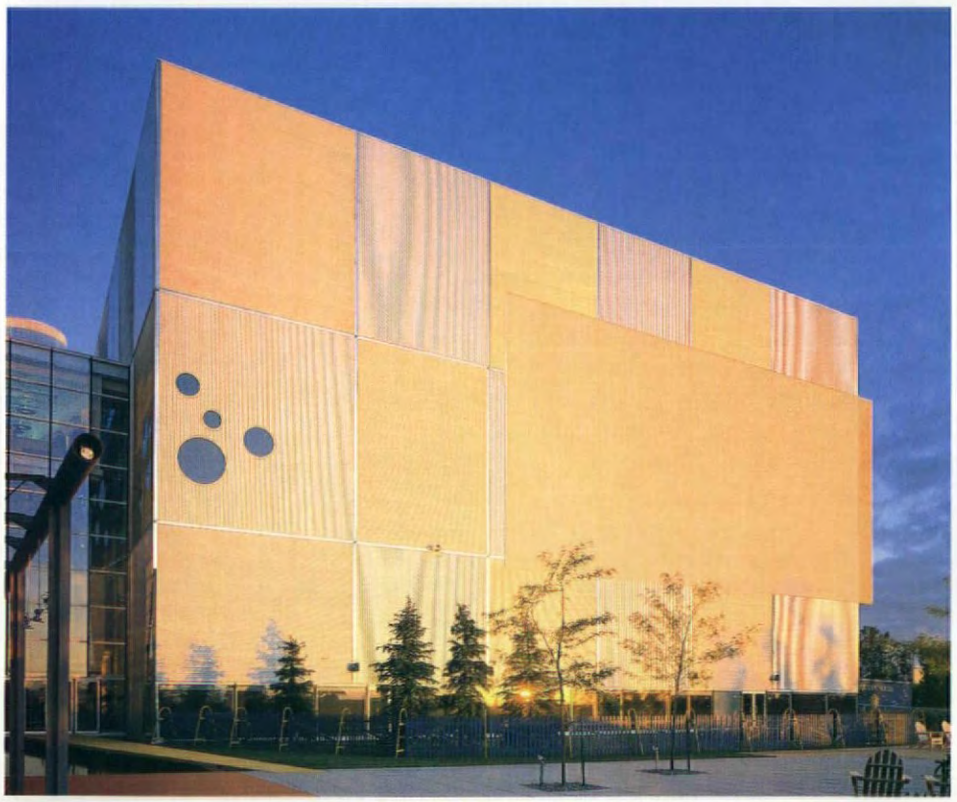
Georg Erich

Frankfurt Forum, Germany, by KPF, 1999

THE PRO-FILES

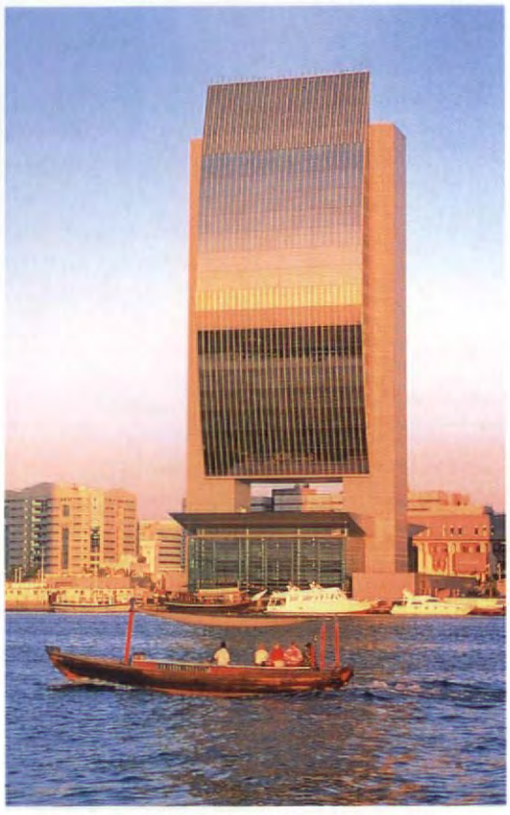
10 years on





THE BEST OF THE REST

Ten years of the best projects on the planet – that's the beauty of World Architecture...



Left column, from top: The K-Museum, Tokyo, Japan, 1996, by Makoto Sei Watanabe *WA*55 pages 124-125; Cirque de Soleil Headquarters, Montreal, Canada, 1998, by Dan Hanganu Architects *WA*70 pages 70-71; Educatorium, Utrecht, The Netherlands, 1998, by Rem Koolhaas/OMA *WA*69 pages 82-84

Centre: Suntec City, Singapore, 1997, by Tsao & McKown *WA*56 pages 52-59

Right column, from top: National Bank of Dubai, United Arab Emirates, 1998, by Norr Group/ Adel Almojil *WA*65 pages 48-51; Bundestag, Bonn, Germany, 1992, by Behnisch, Behnisch und Partner *WA*39 pages 128-131; Erasmus Bridge, Rotterdam, The Netherlands, 1996, by Arkitectuur Bureau van Berkel and Bos *WA*53 page 98

Patrick Harrison

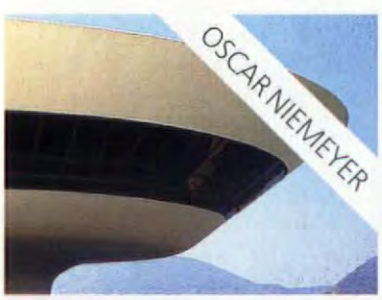
10TH ANNIVERSARY JURY

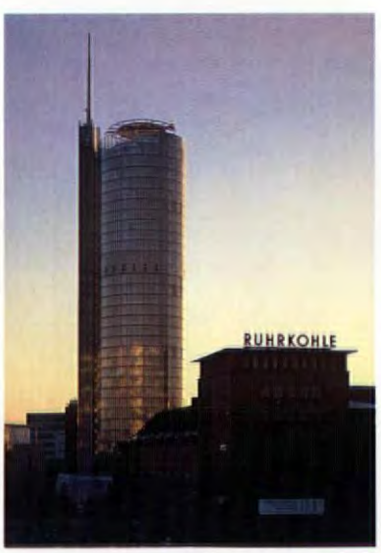
World Architecture editorial team

The *WA* choice was decided over lunch in a restaurant at the bottom of Cesar Pelli's Canary Wharf Tower, in London's Docklands. It's hard to know which was harder: choosing the buildings, or choosing the criteria around which we would choose the buildings. In the end we decided on the following:

1) Buildings that no other jury member had chosen.
2) Buildings that reflect "the best" of their type.
3) Buildings that had been visited by at least one member of the team.

Left: *WA* editorial team (from left to right) Daniel Fox, Nicola Turner, Adam Mornement, and columnist Martin Pawley, in front of Foster's station at Canary Wharf, with the Millennium Dome in the background. **Below, anti-clockwise from top left:** Museum of Contemporary Art, Niteroi, Brazil, by Oscar Niemeyer (1997); Stade de France, Paris, France, by Macary, Zublena, Regembal and Constantini (1997); Petronas Towers, Kuala Lumpur, Malaysia, by Cesar Pelli & Associates (1996); RWE AG Headquarters, Essen, Germany, by Ingenhoven Overdiek Kahlen und Partner (1996); Deutsche Bundesbahn Call Centre, Duisburg, Germany, by RKW + Partner (1998)





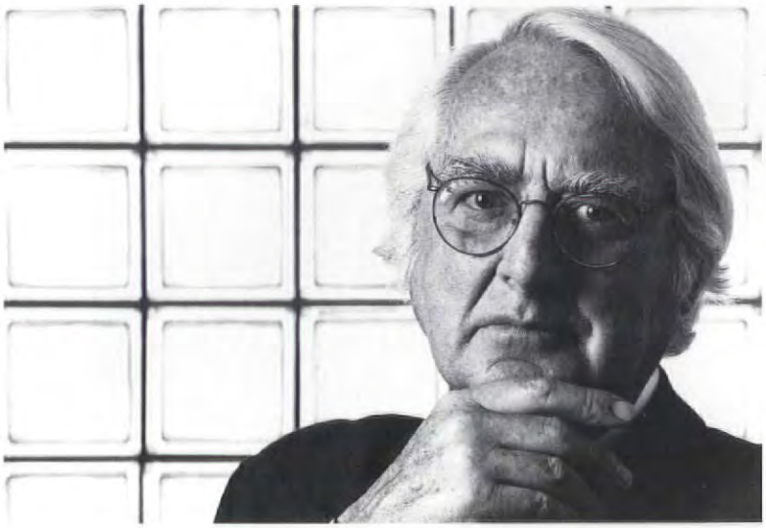
Museum of Contemporary Art. Some might say the fact that Niemeyer's still practising aged 92 is reason enough to recognise his work. That he is still defying belief (and gravity), ensures his inclusion on merit, not curiosity value. There's nothing technically ground-breaking about the Museum of Contemporary Art (*WA*59), it could have been built any time in the last 50 years, but can you think of another building that looks anything like it? His latest project, a convention centre in Rio, will be complete by the end of the year. Get the superlatives ready.

Stade de France. The venue for the 1998 soccer World Cup Final couldn't be more French. Everything about it, from allegations of xenophobia in the bidding process (*WA*54), to the cosmetic re-touching of the playing surface (*WA*63), speaks of its origins. Since its completion at the end of 1997, Le Stade has become the focal point for the regeneration of Saint-Denis, the run-down former industrial heartland of Paris. It highlights the contemporary pulling-power of sports and sporting venues, and combines national identity, beauty and the required "that's amazing" factor.

Petronas Towers. The Petronas Towers turned nowhere into somewhere. Never can there have been a clearer demonstration of what tall buildings are really all about – asserting political and economic power. Their completion marked the first time in 800 years that the world's tallest building has not been in the Western world. Nobody's ever claimed that they're beautiful, but they're there, and that's what counts.

RWE AG Headquarters. In terms of innovation in design, the 1990s has been dominated by the Holy Grail of the green skyscraper. As the 1990s comes to a close it seems clear that it may have been too much to hope for, but the RWE tower – a model of efficiency and structural imagination – got closer than most (*WA*60).

Deutsche Bundesbahn Call Centre. Call centres may well become a defining building type of the decade. The DB Call Centre, for 1,300 telephonists over 27 floors, is one of the most advanced commercial buildings anywhere in the world and a pioneer of its type.


Luca Vignelli

Richard Meier

Richard Meier & Partners

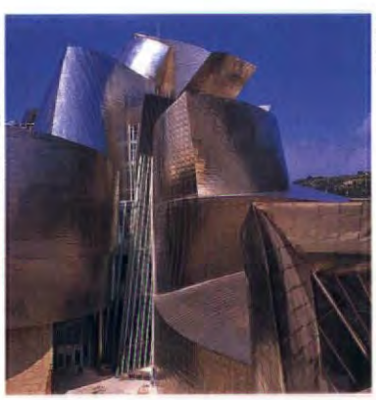
Richard Meier trained at Cornell University and established his own office in New York City in 1963. His major civic commissions include courthouses and city halls in the US and Europe, museums, corporate headquarters and private residences. He has received the highest honours in the field including the Pritzker Prize for Architecture, the Praemium Imperiale and the RIBA and AIA Gold Medals. Among his projects are the recently completed Getty Center in Los Angeles, the High Museum in Atlanta, the Frankfurt Museum for Decorative Arts in Germany and Canal Plus Television HQ in Paris. He is the architect of two Federal Courthouses now under construction in Islip, New York, and Phoenix, Arizona, as well as the Church of the Year 2000 for the Vatican in Rome.

Museums have resulted in the most interesting architecture of the 1990s, and have made us rethink the world of architecture. Each of my museum choices is very different in scale, their relation to the city and their intention. The Guggenheim and Jewish Museum are object buildings. The Getty is more a cultural campus.

MIILLENNIUM DOME, LONDON, UK, BY RICHARD ROGERS PARTNERSHIP, 1999

The size, complexity, integration of architecture and engineering, and the conception and the verve of this enormous project, make it a compelling choice for a work that expresses the scale of vision represented by the architecture of the 1990s. There is not one building that is the most significant of the decade, but Richard Rogers' Millennium Dome, in itself a kind of museum, is a great space.

QA Photos


Erika Barahona Ede ©FMGBGuggenheim Bilbao 1998

Guggenheim Museum, Bilbao, Spain, by Frank O Gehry & Associates, 1997

As with the Getty, the Guggenheim has withstood the abuse of huge numbers of visitors. The sculptural and spatial quality is remarkable, as is its tactile quality. Its urban context is a critical element in its success.


Paul Barnett

Collapse of Time, London, UK, by John Hejduk, 1989

John Hejduk's clock "Collapse of Time," constructed in London's Bedford Square, is emblematic of the possible relationship between architectural theory and practice. It shows that the high degree of specialisation and the division that too often exists can be harmonious. It further exemplifies the power of drawings and models to influence architectural discourse. In this project, as in Hejduk's previous work, the attempt is to collapse the distinction between architecture as object and theory as text.


John Edward Linden/Arcaid

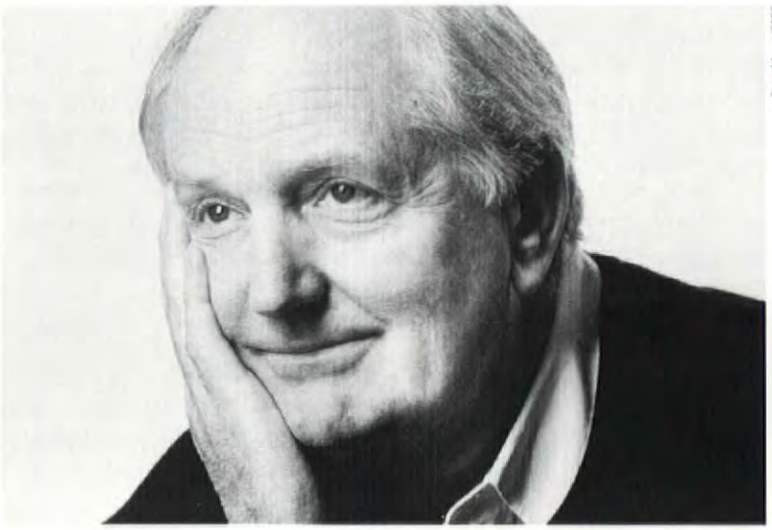
Getty Center, Los Angeles, USA, by Richard Meier, 1997

The Getty is public, both externally and internally, and more analogous to a small college complex than a museum. It is a museum, cultural centre, library, administrative building, auditorium and restaurant; a complex which has given Los Angeles the cultural credibility which it lacked before. It has given the city a focus, and made a place that the city didn't even know it needed. It's become a destination. This is something that's happened increasingly in 1990s architecture.


Bitter + Bredt Fotografie

Jewish Museum, Berlin, Germany, by Daniel Libeskind, 1998

Even the entrance of the Jewish Museum is amazing. The addition makes you aware of the original, and then ignores it. It is a *tour de force*, but its location doesn't give it the same dynamic quality that the Guggenheim has. Symbolically it is brilliant, and spatially it is a fascinating experience.



Peter Mauss/ESTO

Daryl Jackson

Daryl Jackson International

Daryl Jackson Architects has four offices in Australia. Daryl Jackson International has offices in London and Berlin for projects in the UK and Eastern Europe. Award-winning schemes include the Great Southern Stand at the Melbourne Cricket Ground and the Australian Film, Television and Radio School in Sydney. In 1990 Daryl Jackson was awarded the Order of Australia and an honorary fellowship of the AIA.

Modern architecture has now transcended the expectation of platonic renewal, the removal and rebuilding of the whole, and now describes a more thoughtful model. Evolution and revolution are ideas which attach to multiple intelligence and diverse, though universal, forms of authorship. Such a dialectical vision explores form in order to transcend, and above all signify, a regenerative, even heroic position that offers the unfamiliar and unknown as a means of attaining further knowledge.

PARC DE LA VILLETTE, PARIS, FRANCE, BERNARD TSCHUMI, 1995

The formation of an urban park in the city, composed of fragments or emblems – disconnected as objects, yet subject to the connections of the field in which they are placed– suggests sculptural renewal to architecture. Cubist figures, abstracted and removed from functional obligation possess the ground and new invitations of a city consciousness are represented.

Paul Raffety

Le Grand Bleu, Marseille, France, by Alsop & Störmer, 1995

Marseille seems to attract the heroic, and this regional government headquarters of offices and council houses is a highly tectonic, powerfully composed, enriched experience of interior and exterior volume. Both shape and colour reflect sea and sky, celebrate light and convey form. Like its Corbusian soulmate there is deliberate figurative semblance within the abstracted, emotionally wrought structure.

There are city-like journeys to be explored within the enclosure and segregated pieces of assemblage to be recognised without. The building stands like a Matisse collage, a reminder of a metropolis inhabited only by humans.

Philippe Ruault

Fondation Cartier, Paris, France, by Jean Nouvel, 1993

There is expressive power in the incomplete, though carefully studied, intellectually derived facade. Edges of planar glass abut and oppose the predictable solidarity of a Parisian street. Their transparency is an opposition or contradiction to the idea of completion endemic to the classical. Through contrasting or confronting synthesis, an ambiguous, questioning city of competing real object and virtual reference is made.

Erika Barahona Ede ©FMGBGuggenheim Bilbao 1998

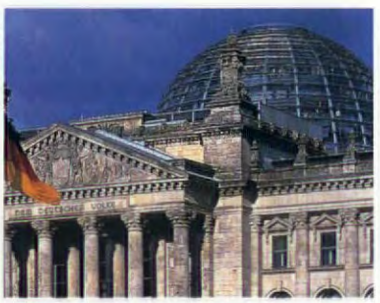
Guggenheim Museum, Bilbao, Spain, by Frank O Gehry & Associates, 1997

The idea of a whole building for art, with architecture as art in possession of a city and its surrounding hills, is not new to western civilisation.

But it is a rare occurrence and the fact that it can happen without being the largest or the tallest is testimony to this Guggenheim's gleaming expressively optimistic assault in this time. Who says art and architecture cannot co-exist? Belief in such structuring was always apparent in the past; today's shock being that it now exists in the present.

Gone are associations with function; the expression is in the surface modelling, the crash of imploding serpentine forms, the labyrinth within, and, above all, the shine without.

Dennis Gilbert/VIEW



Reichstag, Berlin, Germany, by Foster and Partners, 1999

It is reported that Bismarck had an argument with his architect, and we know that the new Reichstag has not been an uneventful encounter for Foster. But if there were debates, the angst has been worthwhile; for the result heralds tension between old and new, solid and void, static and dynamic; all brought together in a powerful and understandably symbolic assembly.

This is not the original unconstrained competition scheme; the one with an all encompassing roof floating above the classical mass, but exists as an inventive dome of high technology and environmentally inspired modernism, seen as a further spirit of intelligent enquiry.

James Burland
Arup Associates

James Burland is the Architectural Director of Arup Associates. He spent his early career with the practice, then spent four years working with Phillip Cox in Sydney on a range of work including the early stages of the Homebush Bay masterplan for the 2000 Olympics. He returned in 1990 to lead design at Arup Associates and has since been responsible for a number of major projects including the Johannesburg Athletics Stadium, a new generation of buildings at acclaimed UK business development Stockley Park, a new college for Durham University and the Manchester Commonwealth Games Stadium.

The five projects I have chosen each have an aspect to them that to me is more inspiring than their total design. I don't see a future world full of chaotic geometry or one full of overt engineering. To me each solution has been found with a very balanced design approach with an appropriate input from engineer or architect. This maturing of multi-professional design in the last ten years will, I hope, fundamentally influence the future. My favourite is Kansai.

KANSAI AIRPORT, JAPAN, BY RENZO PIANO, 1994

It's the whole idea of manufacturing a new piece of land in the middle of the sea that's so important about this project. First sight on arrival from the air is shocking. The sheer audacity against nature of the engineers is overwhelming. The edge of the island is surreal in its sharpness. The island appears to float like a flying carpet. There are no clues to its construction, no comforting giant oil rig legs, no voluminous floats, just a giant flat stamp on the sea. The terminal building appears to be the rolled up skin of the island. Inside the main hall the skeletal forms are powerful echos of the internals of a whale perhaps beached by the sudden rise of new land from under the sea. The detailing is Gothic in its transition from huge truss to balustrade. Nothing is left unexplained. But strong as the design is it feels precarious because of the ephemeral nature of the island itself. Man-made landscapes often try to disguise themselves as natural topography to create the illusion of permanence. Here this is not the case, and is the thing that makes Kansai so dramatic.

Kanji Hiwatashi

Tony Weller

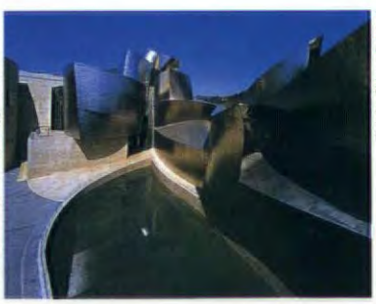
American Air Museum, Duxford, UK, by Foster and Partners, 1998

Viewing aeroplanes from the ground is not very inspiring, but the elevated perimeter path inside Duxford's new Air Museum opens up a completely different relationship between the onlooker and exhibits. The roof structure complements this simple idea with a visually clean and smooth shell, as unobstructed as the sky the planes once flew through. The volume required to house a B52 could have been enclosed with many different structural solutions, but here the engineering is wholly sympathetic with the architectural idea. This is a building that communicates beyond the notion of the architect. The building has an appropriateness, which I believe comes as much from the engineering as the architecture. While this is apparent in other buildings such as Kansai airport or the Channel Four HQ, Duxford is the best example of the indivisibility of the architecture and engineering.

Channel Four HQ, London, UK, by Richard Rogers Partnership, 1994

Of all the buildings of its type it seems to me that the Channel Four HQ is the best demonstration in the last ten years that new ways of construction can fit with the underlying pragmatism of Georgian and Victorian building patterns.

The services, lifts, frame and infill; the corner entrance, which is recessive and a generous offering to the street; and the modest alignment to the road are the modern equivalent to brick crosswalls, chimneys, porticos and (circular) corner entrances of the 18th- and 19th-century terraces. Unlike Lloyds in the City of London, which would have its iconic status debased if repeated in the same street, Channel Four HQ has the making of a building pattern for modern streetscapes.



Erika Barahona Ede ©FMGBGuggenheim Bilbao 1998

Guggenheim Museum, Bilbao, Spain, by Frank O Gehry & Associates, 1997

More than any other building this decade the Guggenheim has demonstrated the sculptural power of computer-aided design to the outside architectural world. Respect, amazement and excitement burst from every corner of the written media. The design drawings are an extraordinary example of technology overcoming the limitations of manual drafting, the barrier between an architect's imagination and construction. The Guggenheim proves that anything is possible. Gehry has opened the minds of the British public to many other architectural abstractions. Already planning permission has been granted for Libeskind's spiralling V&A extension in Knightsbridge, a bastion of conservatism. Miralles will build his Scottish Parliament Building. There have been other attempts in the previous decade, but the Guggenheim will change perceptions forever.

Christian Richters Fotograf

Rudin House, Leymen, France, by Herzog & de Meuron, 1997

My two favourite housing derivatives are the double fronted Yorkshire croft and the Australian Pole House. Both are usually found on the side of a hill. The croft is built into the ground as an extension of the dry stone walls that stretch along the contours; the pole house floats above an ever-regenerating semi-tropical landscape. Both have ease with nature; and are easily extended or altered.

The croft's walled enclosure and the pole house's raised ground floor both offer a secure outlook onto the surrounding world. The Rudin House is both types in one. Entered via a stair beneath the ground floor, which is raised on columns, the inside has all the qualities of a beautifully converted cottage. The house looks incomplete but this is exactly the quality that's so compelling about the basic croft or Pole House; its potential for conversion.


Marcela Espejo

Henri Ciriani

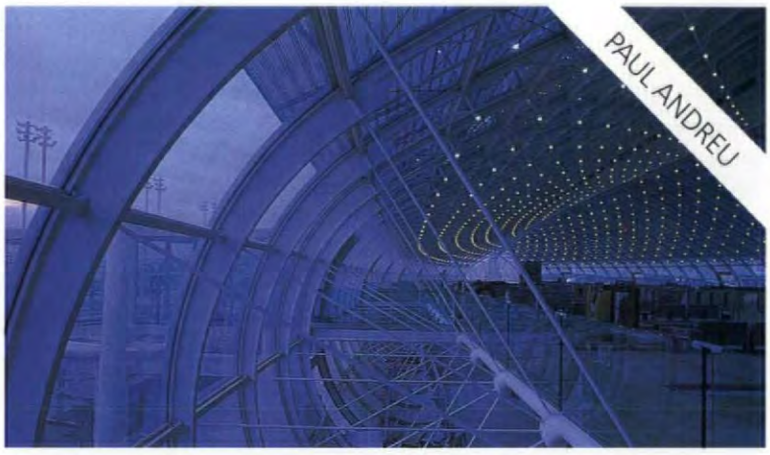
Henri Ciriani Architecte

Peruvian-born Henri Ciriani is the one of the legends of French architecture. He has practiced in Paris since 1969, and is now professor of architecture at Ecole d'Architecture de Paris Belville. He has won the National Grand Prix of Architeture (France), the Silver Medal of the Colegio de Arquitectos del Peru, and the Arnold W Brunner Prize (USA) and been nominated for the Mies van der Rohe Pavillion Award for European Architecture three times.

Architectural magazines are catering to readers turned viewers – image-orientated consumers with an appetite for freshly built buildings, looking so neatly built, so clinically perfect, lacking the restraint or the incompleteness of passion, the uneasiness of the new. With this in mind, I have concentrated my choice on two countries which have been most keen in fostering architecture during the past decade: France and Spain. These two European countries overshadow their counterparts and are also open to foreign architects. In the French projects public architecture is the important subject, while in the Spanish examples the importance is with the architects.

CHARLES DE GAULLE AIRPORT, TERMINAL F, FRANCE, BY PAUL ANDREU, 1998

I have chosen Terminal F of the Charles de Gaulle airport at Roissy as the most important of my five choices because it represents the most difficult task: that of working in a very extended area of land – over 400 hectares – during a large period of time. It all started way back with terminal 1 (which gave Paul Andreu his National Grand Prix of Architecture) astonishing to this day. The new building manages to introduce the most sophisticated techniques in favour of function, comfort, a clear reading, and most of all, making every user – namely passengers – feel enhanced by the majesty of the arrival space, the transparencies of the halls widely orientated towards the fields where you overlook the aircraft. It is not the technology which is the objective but the transparency, the logic of the place. A place which gives you a strong impression that architecture is important for, and to, society.

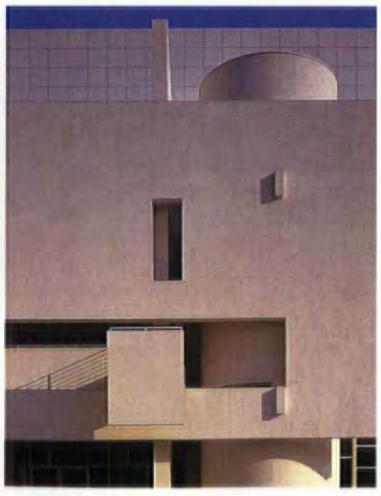


P Maurer


Richard Bryant/Arcaid

Charletty Stadium, Paris, France, by Henri and Bruno Gaudin, 1996

Henri & Bruno Gaudin's Charlety stadium and accompanying facility manages, on a very difficult site, to blend with the neighbourhood, not withstanding the importance of the programme. And by doing so, it accompanies the sportsman with a very friendly and civilised environment where, whether you are coming to play or to attend a game, it gives you unexpected feelings of dignity, for you are surrounded by care and aesthetically well mastered variety.



Barcelona Museum, Spain, by Richard Meier, 1995

The Museum of Contemporary Art in Barcelona by Richard Meier, who, in this well mastered project, is very much himself but manages to develop unprecedented sensibility in responding to very subtle contextual problems with an almost 'Look! No hands' easiness which is astonishing.


Erika Barahona Ede ©FMGBGuggenheim Bilbao 1998

Museum de Santiago de Compostella, Portugal, by Alvaro Siza, 1993

The Santiago de Compostela Museum by Alvaro Siza – the only nominated project which I haven't visited myself – shows a work of architecture seeming to blend with its historical surroundings and still looking very much its author's achievements: an exterior space affected by urban logic, while the interior is a long journey into architectural research around space, form and light.

Guggenheim Museum, Bilbao, Spain, by Frank Gehry, 1997

The Guggenheim Museum in Bilbao – which contrary to the two preceding museums does not necessarily address the issue of context but rather that of monumental presence of architecture in the city – is my fifth selected building. Very few architects – Gehry may be the only one – can make a 200m-long statement conveying their personal aesthetics with a variety of formal splendor which is breathtaking. He has managed to produce a building with little reference to architectural history but a mature architect's display of formal bravura.

Lee Polisano
Kohn Pedersen Fox

Lee Polisano is a founding partner of Kohn Pedersen Fox's London office. His projects have emphasised the civic responsibility of buildings, as well as the importance of sustainability and engineering technology in shaping architecture.

My solutions are representative of issues which I believe to be important to an architect's work – ambition, a belief in the future, craft, the use of materials and the social implications of our work.

THERMAL BATHS, VALS, SWITZERLAND, BY PETER ZUMTHOR, 1996

The Thermal Baths are an important example of Peter Zumthor's work. It is work which shows a wholesome understanding of the senses. This is characterised by three key aspects. His use of materials, specifically the structurally contemplative mass of material, which gives feeling and denotes emotion through the contrast between light and dark. His strength of craft shows an important personal relationship and affinity with the construction of buildings. This craftsmanship has had a great influence on many architects over the last few years. It is this influence which is the third key aspect of his work. The baths show how regional architecture can have an important influence upon the profession as a whole. By creating a fundamental presence within the Swiss landscape, the baths are a truly emotional and architectural experience.

Christian Richters

Michel Denance

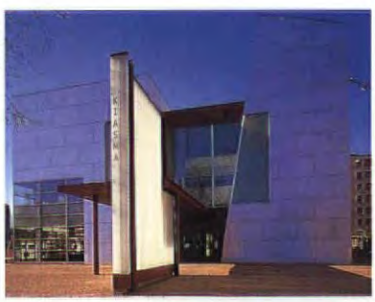
Cité Internationale de Lyon, France, by Renzo Piano Building Workshop, 1995

Renzo Piano's Cité Internationale de Lyon is a superb example of urban regeneration. Strong and unashamed, it creates a bold image of large-scale intervention. It successfully deals with the multifarious considerations of urban regeneration by addressing the problem as a whole. It is a positive, rather than timid solution which shows that not every regeneration project need be made up of smaller components. It serves to prove that sometimes bigger moves are required to bring new gravity to the urban situation.

Alamillo Bridge, Seville, Spain and others, by Santiago Calatrava, 1992

The importance of the work of Santiago Calatrava is that of inspiration. From WW II until fairly recently architects have tended to neglect infrastructure as a rich vein of inspirational projects. This was possibly due to cost cutting, but also to naivety and laziness. Prior to this period architects did not make a distinction between architecture and infrastructure. Calatrava, through his built and unbuilt bridges, has almost single-handedly brought about the rebirth of the notion of infrastructure as a civic component. His work encourages thought, and, by virtue, provides a positive impact upon society.

Paul Warchol



Kiasma, National Museum of Contemporary Art, Helsinki, Finland, by Steven Holl, 1998

The first thing that strikes the visitor to Kiasma, the new National Museum of Contemporary Art in Helsinki by Steven Holl, is the fact that it is not symmetrical. While not the first museum to do this, it is refreshing. Kiasma endeavours, and succeeds, in redefining the art gallery as an institution by demystifying the museum. He has turned the traditional gallery concept of merely a depository of artefacts into a contextually dynamic, demotic public assemblage. Holl has successfully grasped the Finnish cultural importance of expression in a reserved manner.

Eurolille, Lille, France, by OMA/Rem Koolhass, 1994

Koolhaas's work on Eurolille embodies his concepts of maximum density and instant urban centralism. The key to this project is not the architecture as a whole but the planning and urban aspects of it. It is the intention rather that the actuality which is most important now, but it will be of far greater importance as an iconoclastic vision in ten years time. Koolhaas's work is an important benchmark, on the success of which future urban concepts, defined by new technology and transportation, will be judged.

Kathryn Findlay
Ushida Findlay Partnership

Kathryn Findlay was born in Scotland and graduated from the Architectural Association in London. She received a scholarship from the Japanese Ministry of Education for post-graduate research at the University of Tokyo and worked for Arata Isozaki and Associates before establishing the Ushida Findlay Partnership. Findlay has recently taken up a post as associate professor of architecture at Tokyo University, (the first foreign woman ever to hold such a position) and, along with Eisaku Ushida, as a visiting professor of architecture at UCLA. Recent selected competitions and awards include: 1994 NEG Glass Competition, first prize; 1996 Annual Architectural Design Commendation of the Architectural Institute of Japan; *Financial Times* Millennium Bridge Competition, shortlisted; 1998 Homes for the Future, Glasgow City of Architecture, commissioned winner; 1998 Lichfield Cultural Quarters, shortlisted.

All the buildings I have selected for the 1990s challenge the traditional notions of what architecture is. They expand boundaries and are inclusive. The "best" has to be Gehry's Guggenheim as it challenges on so many fronts. I would like to put all these architects together for an afternoon... My unbuilt favourites are Foreign Office Architects' Yokohama Pier and Greg Lynn's Korean church in New York.

GUGGENHEIM MUSEUM, BILBAO, SPAIN, BY FRANK O GEHRY & ASSOCIATES, 1997

Frank Gehry has exploded the possibilities for inclusive architecture. His is a universal language of psycho-geography. Gehry has engendered such credibility that he now designs without knowing how to build the project; then he finds out, and all the while his clients trust him. When you see how his practice operates you can see the infinite possibilities they come up with for each form. The Guggenheim demonstrates that he understands what is required for displaying art. Unlike so many art museums the connecting spaces between the exhibition halls are like expansion joints, providing inclusive spaces for the art, and shrouding the whole in the imaginative cape of the titanium sculptural form. His use of advanced technology for the building process is totally liberating. Quantities and dimensions were changed without redrawing production information (the size of the building was reduced by 1% and all information was automatically reconfigured in order to fit the site).

Erika Barahona Ede ©FMGBGuggenheim Bilbao 1998

Bordeaux house, France, by OMA/Rem Koolhaas, 1998

Here Koolhaas takes the modernist notion and returns it to its origins – an architecture which has social issues as its central concern. It gives the owner freedom, the building becoming an extension of his body. It is very humane yet generated from a mechanical philosophy. Here the natural and the artificial are completely integrated.

Kenji Kobayashi

Glass canopy at the Tokyo Forum, Japan, by Dewhurst MacFarlane, 1996

Designed by Tim MacFarlane, this tiny project is worthy of featuring in my top five because it is the realisation of something which was hitherto unimaginable. It is a first – the largest structural glass cantilever. It defies our common sense idea of gravity, and is the result of a very intuitive process. It clearly shows Tim MacFarlane's love affair with glass. It is the sublime combination of intuition and intellect. Its flying form opens the way for architects to do incredible things with glass – infinite free-form possibilities which means it can be a much more integrated landscape element. It is liberating.

Bitter + Bredt Fotografie

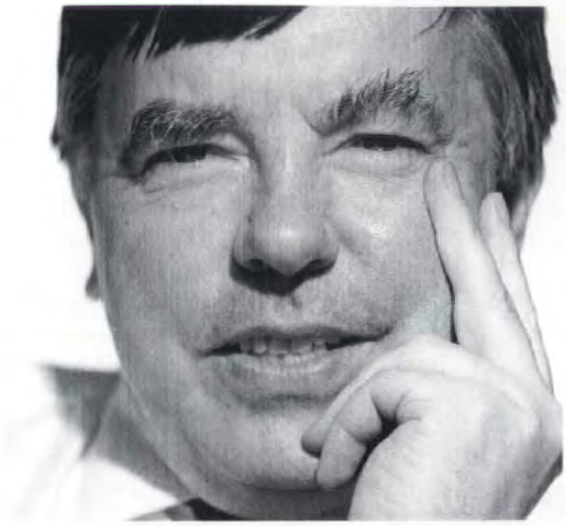
Jewish Museum, Berlin, Germany, by Daniel Libeskind, 1998

The museum expresses an emotion, a justified anger, to a sublime state. No one has built in that way before, with anger as the generating force. It speaks to the human emotions. People might not understand the building explicitly, but anyone with body sensors will feel something. It speaks to the intellect via the emotions. It is a universal architecture.

Katsuhisa Kida

Trusswall House, Tokyo, Japan, by Ushida Findlay, 1993

This is the first building where the surface has been used to remove the duality between structure and skin. It was achieved by a digitalised system. The owner of the house wanted us to use their truss-wall system. The house is an abstracted from which explores the potential of the material in a way which hadn't been exploited before. They had always made figurative objects with it. We were also asked to make a tiny space feel as large as possible, and by creating a continuous flow between exterior and interior we were able to achieve this; creating something out of nothing. The Trusswall House is a hybrid formation of architecture, structural and environmental engineering, and landscape design.



Frank Duffy

DEGW

Dr Francis Duffy founded the DEGW partnership with John Worthington and Luigi Giffone in 1974. The practice has offices in Amersfoort, Athens, Berlin, Glasgow, London, Madrid, Milan, New York, Paris and Sydney and about 200 employees. It was incorporated in 1989, with Duffy as chairman. DEGW plc is now part of the Twynstra Group. Duffy's career has been spent helping business organisations use space more effectively over time. He trained as an architect at the AA in London and was a graduate at Berkeley and Princeton. He developed his interest in organisation theory and the design of office buildings as a Harkness Fellow of the Commonwealth Fund in the US in 1967-70. He is the past president of the RIBA 1993-95.

My selection represents the huge innovations which have taken place internationally in office design over the past decade. The building type has been relatively neglected since its invention in Chicago 100 years ago, until the technological developments in construction techniques and information technology in the last few years which have resulted in the reinvention of the office. Each example is representative of a different aspect of development. Each breaks new ground, but they all share a common desire of both the client and the architect to use architecture as a way of rebranding the firm in question, and empowering the employees who work within the building.

THE ARK, HAMMERSMITH, LONDON, UK, BY RALPH ERSKINE, 1989

Urbanistically the Ark is a bit of a plonker – but it is a particularly difficult site. The real magic of the building is its interior. At first sight, it is a modest office building of almost domestic proportions, and with a definite Scandinavian feel. The atrium explodes into the amazing space and holds together all the parts. The impression is of a democratic space, full of light and air. The interior still looks immaculate today, 10 years on. I think it is the first office building of a new type, the first to change the tide.

Peter Cook/VIEW

British Airways Headquarters, Waterside, London, UK, by Niels Torp, 1998

Waterside is more ambitious than Torp's fellow Scandinavian's Ark. Here he has dealt with using architectural effects for organisational and business purposes. BA has used Torp (and Nicholas Grimshaw before him) to change its culture, moving from a tradition of opaque buildings with bland corridors to a more democratic and progressive space. The internal circulation street diminishes the hierarchy and provides an overall connecting space and meeting areas. The occupants of the building have been trained in its use, much as they would be introduced to a new computer system. They have been given the power to control their own space and time. Currently it houses 2,800 employees, but when used to full capacity could accommodate at least 1,000 more.

Boots Headquarters, Nottingham, UK, by DEGW, 1999

This is a brilliant recent example of an organisation reinventing itself by using architecture. The clients, Peter Horrix and Sarah Poddy of Boots, were as much the architects of the building as we were. The masterplan includes the refurbishment of the orignal SOM building, as well as a new pavilion and our building, and should be judged as a whole. As at Waterside the architecture creates an empowering workspace where the employees are more in charge of their time and location. It is also an elegant solution – environmentally sound, very efficient and cheap to run.

John Edward Linden

Commerzbank, Frankfurt, Germany, by Foster and Partners, 1997

Skyscrapers as efficient office buildings are on their way out, but I suppose if we have to have them the Commerzbank is one of the best. Foster was forced to think about volumetric spaces and rethink the logic of the central-core tall building. It pushes the limits of what can be done with a tall building. High buildings will never be truly "ecological" which is one of the reasons why they are unsustainable. Added to this, it is difficult to have an efficient vertical street, which makes interaction very difficult. Wonderful as the Commerzbank is, it may mark the limit of what's possible with tall buildings.

Chiat/Day Building, California, USA, by Frank O Gehry & Associates, 1991

At Chiat/Day Gehry broke all the formulaic American rules in office design. Although the Americans are progressive in office management their design is often blandly conservative. This is why Gehry is particularly interesting. This particular building comes out of the influence of Disney Imagineering. The client in this case was keen to reinvent the organisation through architecture. Conscious decisions were made to escape the orthogonal plans, open up the third dimension, introduce colour and make work fun.

Ken Yeang
TR Hamzah and Yeang

Ken Yeang is Malaysia's highest-profile architect and a world-renowned pioneer of environmentally sensitive architecture. His practice, TR Hamzah and Yeang, has offices in Malaysia, UK, China and Australia. His awards include the Aga Khan Award for Architecture, the Royal Institute of Australian Architects' International Architecture Award, and the Malaysian Institute of Architects' Architectural Award for Excellence in Design and Building.

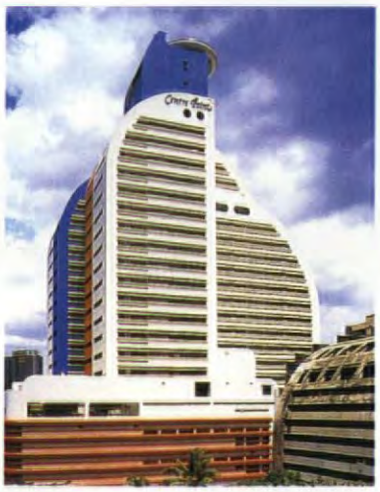
My criteria for this selection of buildings are their innovation, the pleasure they give to the public and their users, and their contributions to architectural discourse.

THE PERMANENT MISSION OF INDIA TO THE UNITED NATIONS, NEW YORK, USA, BY CHARLES CORREA, 1992

This 27-storey building is significant because it is simply incredible to find such an ethnic-style skyscraper firstly designed by an Asian architect, secondly receiving planning and building approvals in a high public-interest zone near the UN off 2nd Avenue, and thirdly actually getting the building built in New York, bearing in mind the way architects of that city aggressively protect their turf. Perhaps this is the one that got away. The skyline of the north facade of this building from 44th Street is classic Correa, with layered transitional spaces and ventilating zones working well in the temperate climate of New York. The south facade has a skycourt letting in light from the low sun and clad in reddish-brown granite from India, as if proudly "giving the fingers" to the New York architectural community. In the plan are all the features of an earlier memorable Correa building, the Kanchanjunga Apartments (Bombay, 1969-1983).

Datai Hotel, Pulau Langkawi, Malaysia, by Kerry Hill Architects, 1992

Who says that a critical regionalist architecture cannot be luxurious, commercial and pleasurable? This incredible hotel on the island of Langkawi, off Penang in Malaysia, is a clever reinterpretation of native architecture as a contemporary holiday resort hotel. It demonstrates simply an approach to hotel architecture that is not modernist, not pastiche but innovates in all aspects of rethinking the traditional Malay architecture. The architectural excellence of this genre has not yet been equalled elsewhere.



The Nation Building, Bangkok, by Sumet Jumsai, 1991

This is the skyscraper that looks like a child's computer toy, and the one, like Jumsai's earlier Robot Building, that everyone loves to hate. Its Forbidden-Planet-genre pseudo computer-circuit styling qualify it as a hi-tech building, rather than the usual aluminum/steel/structural-glass construction. On the inside it performs just as well as others that look more authentically hi-tech. This then is the irony of this building. This is one of the few occasions in which the architect thumbs his nose at the establishment and says: "So there, see if you can respond to this".

The Glass Canopy to the Consul Hotel, Berlin, Germany, by Ernst and Gruntuch, 1993

This is a minuscule project compared to the others. One is reminded, by the enormous effort that went into this small articulated structure, that architecture is not dependent upon the physical size of the project or its construction costs. I was told that both the architect and the builder-cum-supplier lost money designing and building this amazing structural-glass canopy that looks like a transparent metallic cockroach straddling the pavement of this busy Berlin street to try to peck at passing cars. This is one of the early projects of this husband-and-wife team that is struggling to do good work in a city with huge projects by big international names. If only some of those high things had some of the finesse of this little canopy.

The Tokyo Forum, Japan, by Raphael Vignoly, 1996

The building does not appear significant from the street. In fact, it looks ridiculously puny and shrivelled compared with the adjoining buildings. But what an experience as you move into the interior. The architecture of several boxes suspended from the service core shafts adjoining a ship-shape atrium is actually a bit facile, but what is special is the whale-boned structure of the ceiling of the elliptical building and the lengthy bridges that traverse that space. Its high construction cost probably makes it the last hurrah-Japan project before the economic downturn of the 1990s.

Achim Zweygarth

Christoph Ingenhoven

Ingenhoven Overdiek und Partner

Christoph Ingenhoven, born 1960, studied architecture at the RWTH Aachen and the Kunstakademie Dusseldorf. Some of Ingenhoven Overdiek und Partner's most important projects (largely won through international competition) are: the RWE AG Headquarters, Essen (1991-1997), Wan Xiang International Plaza, Shanghai (1994-2000); Stuttgart Main Station (1997-2008); the Stadtsparkasse Headquarters Dusseldorf (1997-2002); and the high rise at the Olympiapark, Munich (1998-2002). He has been in partnership with Jurgen Overdiek since 1993.

Renzo Piano's buildings show a real optimism for the future, as does the architecture of all the architects on my list. He has shown how to deal with "world architecture", and gives us hope that there are good things to come out of "globalisation".

J Gollings

TJIBAOU CULTURAL CENTRE, NOUMÉA, NEW CALEDONIA, BY RENZO PIANO, 1998

Here Piano creates a symbiotic architecture, combining a low-tech building complex with technically orientated architecture concerned with ecological and sustainable issues and vernacular architecture. It demonstrates his respect for the history of the island and the quality of its vernacular architecture. I believe that it is Piano's very best building. Along with the Pompidou Centre from the 1970s Piano has created truly great architecture. It is rare that an architect should build iconic architecture more than once. Both projects demonstrate how to build for the people; bringing culture to the public with no pretence and creating a synergy between the structural, architectural and landscape elements.

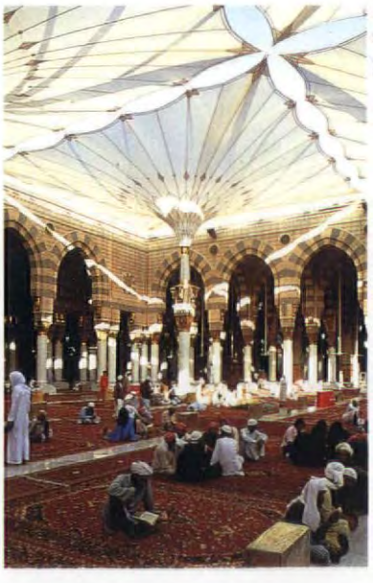
Richard Bryant

Vitra conference building, Weil am Rhein, Germany, by Tadao Ando, 1993

This is volume-orientated architecture made out of volumetric materials and light. This building shows that this kind of architecture is still alive. It represents a particular kind of minimal, yet sculptural, architecture. I would never build like this, but I can see its great quality. I don't think Herzog and de Meuron or Peter Zumthor will have the longevity of Louis Kahn, but Tadao Ando will.

Hanover Fair, Germany, by Thomas Herzog, 1995

Herzog is an expert in saving energy and using ecological materials, as shown in the Hanover Fair complex. It is interesting that he is an architect who is not very used to being in the public eye, and was older than many architects when he finally became more well known. I think his buildings are worth looking at carefully.



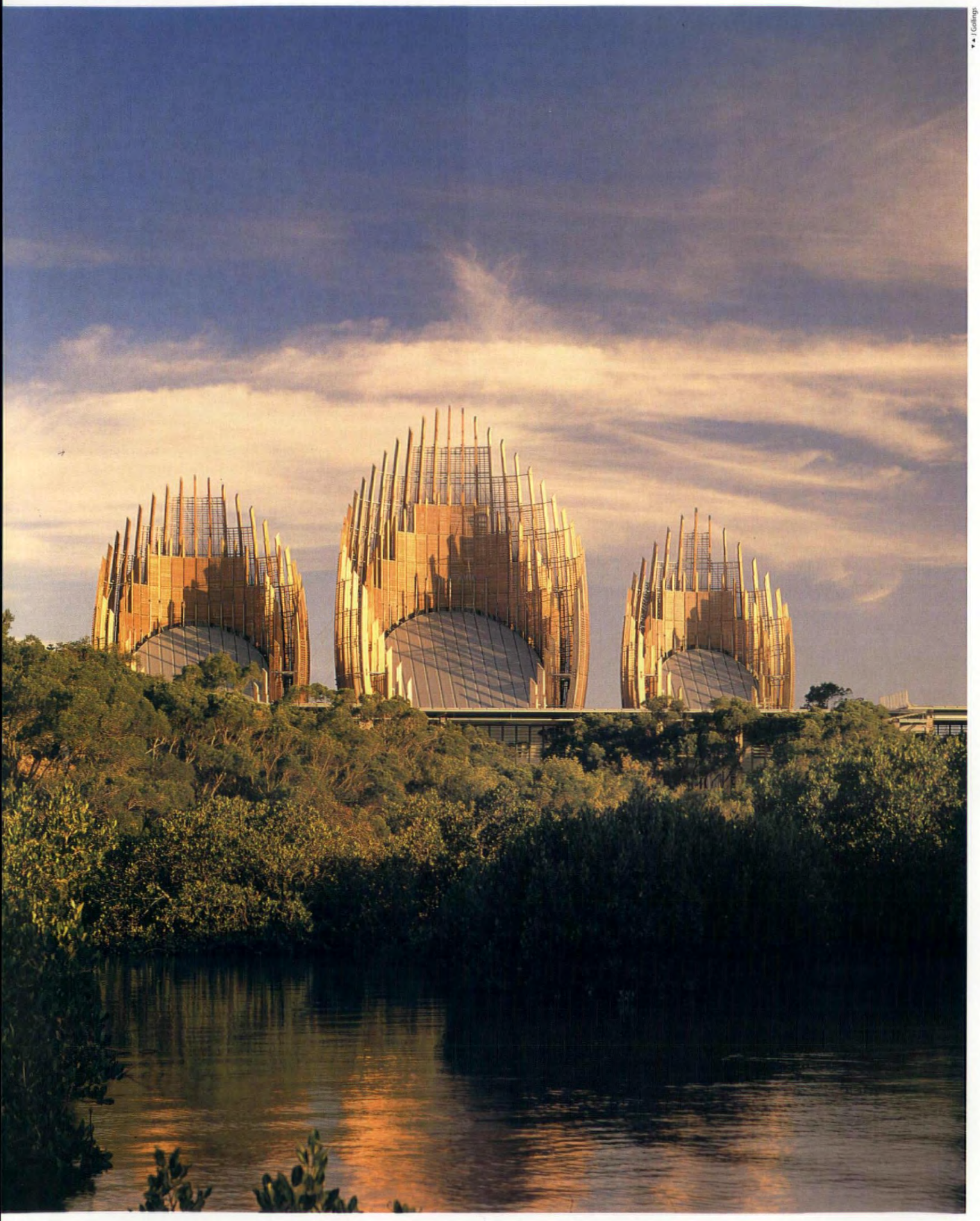
Sunshades for the courtyards of the Prophet Mosque, Medina, Saudi Arabia, by Frei Otto, 1992

This building is much smaller and stands for small-scale workmanship. It is a wonderful space, created with common materials; timber and a little steel. It represents Frei Otto's very personal way of doing things, which is entirely different to Foster and more experimental.

Richard Davies

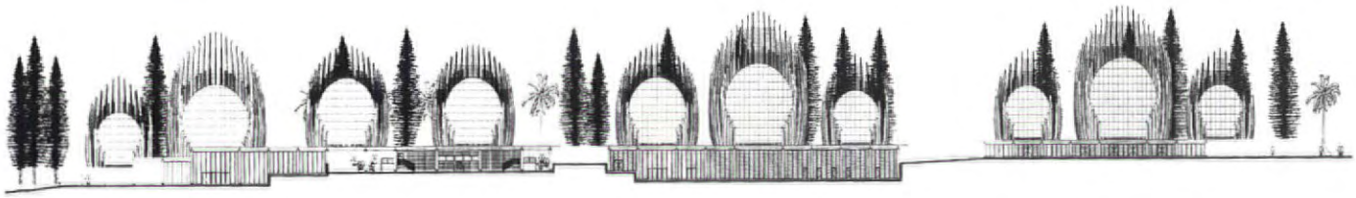
Stansted Airport, London, UK, by Foster and Partners, 1991

I have chosen this building for its efficiency – the industrialisation of the building process in a new and human airport building. In this building Foster created a new kind of "modern" building, not just high-tech. It represents the rationalisation of industrial design.



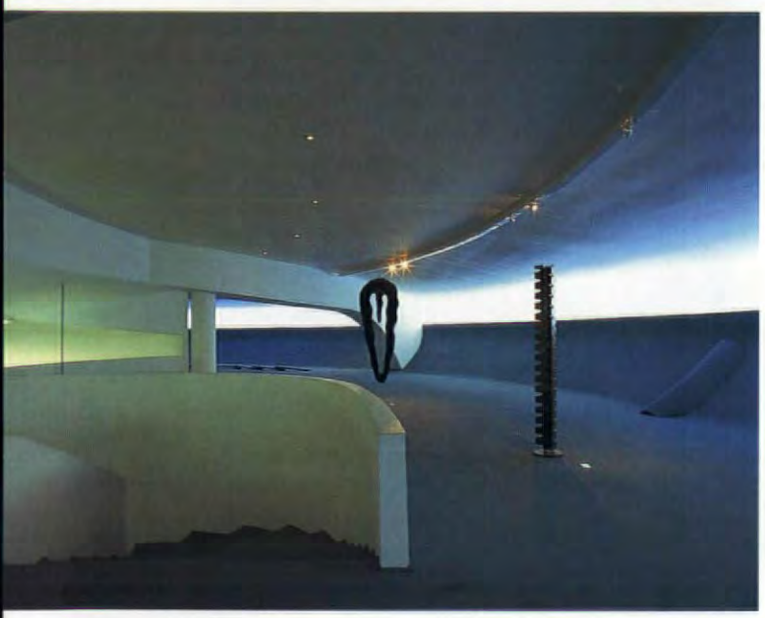
▼▲ J Gollings

Left and facing page: Jean-Marie Tjibaou Culture Centre, Nouméa, New Caledonia, South Pacific, by Renzo Piano. **Below:** North-east elevation



Between 1981 and 1995 France alone saw 400 museums created or renovated. The 1990s have witnessed the reinvention of the museum as a celebration of national culture and barometer of economic wealth, as architects from Frank Gehry and Renzo Piano to Steven Holl and Daniel Libeskind have been inspired to produce their best work. Nicola Turner reports.

Spirit of the age



"Painting and sculpture... are orphans," said Paul Valery in his 1925 essay "The Problem of Museums". "Their mother is dead, their mother, Architecture. As long as she was alive, she gave them their place, their function, their constraints."

Say what you like about the dumbing down of museums at the end of the millennium, the triumph of the tourist buck over the education ticket; there is one point on which we must all agree. Architecture has never been more alive, and painting and sculpture are its greatest benefactors, although some might argue that at the end of the 1990s mother architecture has come back to life and in the process killed her children.

As early as *WA*3 the issues facing national and private museum clients and their architects were subjected to scrutiny: "Is the museum building now more important than the art it contains? Well, yes – and sometimes this is because the art is not worthy of the buiding. More art has not meant more quality... fortunately there is much to show that is worthy of the architect's investment. Yet the architect should beware of hubris." (Foreword, page 35).

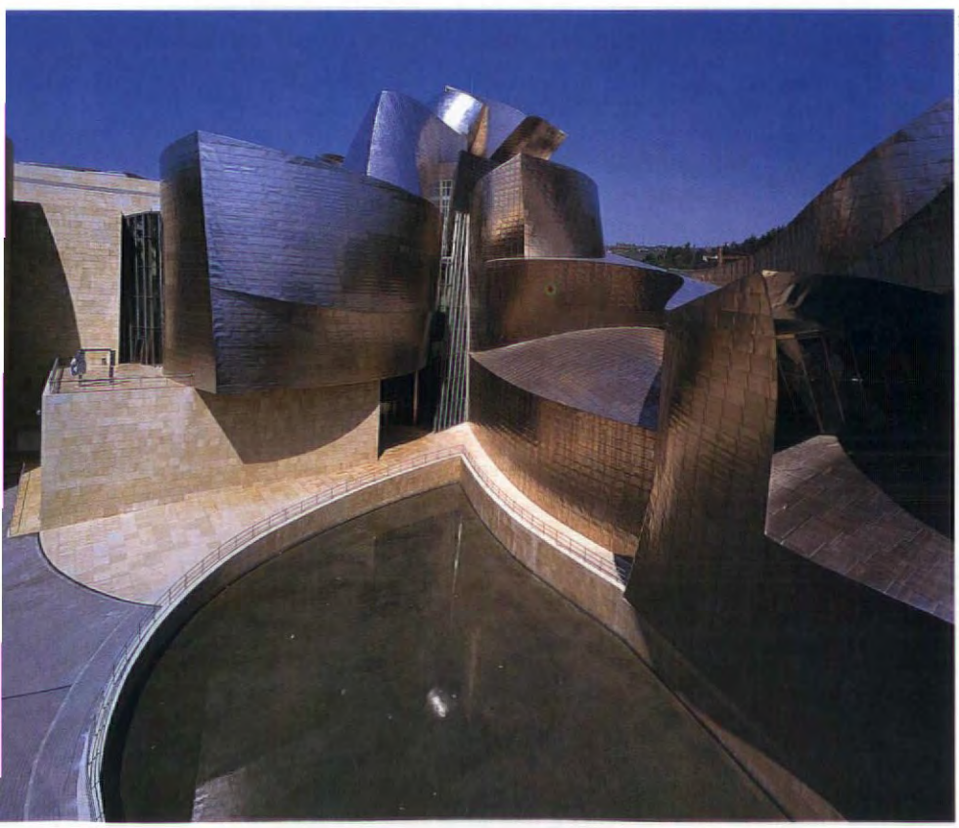
With the birth of Rem Koolhaas' Rotterdam Kunsthal, Frank Gehry's Bilbao Guggenheim and Daniel Libeskind's Jewish Museum in Berlin it would seem that architects have made dramatic strides forward and the envelope has been stretched to its outer limits, but the debates which preoccupy curators, academics and critics have remained the same.

The development in museum architecture, alongside the "museumification" of everything from art to cultural identity and music, has been a necessary move to maintain public interest. Given the short attention span of the museum-going public, and the competition for its attention in this age of multi-media, museums have had to revolutionise their approach to the built form and adjust to commercial realities in order to survive at all. That this process has resulted in a critical new chapter in the history of 20th century architecture is the happy consequence of inevitable evolution.

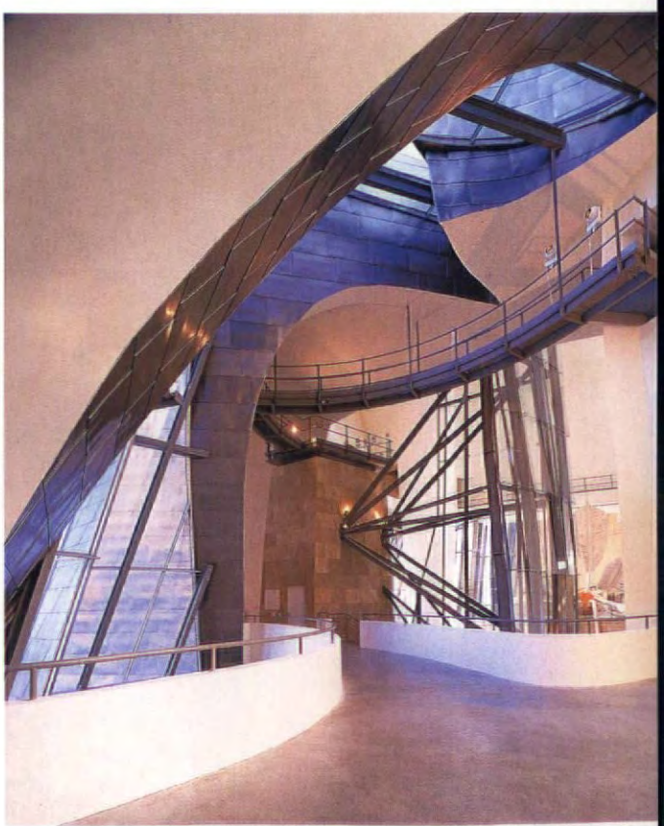
This issue of *World Architecture*, celebrating ten years of architecture, is dominated by museums, which garnered 25 per cent of the votes for the seminal buildings of the 1990s. Interviews and retrospectives of the two front runners at the end of the decade, Frank Gehry and Norman Foster, have centred on the architects' cultural designs. Richard Meier, during the anniversary jury session, asserted that "the museum is the public building experience of our time". The museum has provoked different ways of "thinking about ▸

Below: Museum of Contemporary Art, Barcelona, by Richard Meier **Bottom left and right:** The Guggenheim Museum, Bilbao, Frank O Gehry and Associates **Facing page:** Museum of Modern Art, Niteroi, Brazil, by Oscar Niemeyer

Richard Bryant/Arcaid



▶▲Erika Barahona Ede



▼▲ Bitter + Bredt Fotographie

Left, above and below: The Jewish Museum, Berlin, by Daniel Libeskind

▶ architecture. They say something about our art and make us rethink the world of architecture as a result." (See page 83).

These designers, among others, have used architecture to re-connect the container with the contained. Marc Pachter, chief counsellor to the secretary of the Smithsonian Institution in Washington DC, believes that "there is a sense that modernism can create a more universal symbol" for the complex programme of diverse museums. The crucial role of museums at the turn of the century is to "impress on society a secular notion of culture".

Politics

Six hundred new art museums have opened across the US since 1970. The role of the museum in society has gone beyond that of the 20th century cathedral, to become an alternative "spiritual" meeting place. They are now crucial magnets for commerce – in the shape of tourism – and beacons of political confidence.

Although museums have been political since the 19th century, recently the nature of the politics has changed. They are now inextricably bound to a more complex representation of national identity where minority groups are celebrated within a larger culture; the Jews in Germany, or the American Indian in the USA and Canada. Their role, says Pachter, is to provide "discourse amid discord". The identity of individual countries is still disseminated through museums, but today – not unlike tall buildings – they are built as indicators of national economic wealth and prosperity, and as a way of positioning a country or city in the context of the wider world.

The re-shaping of Europe in the last decade has played a huge part in galvanising governments into full-time building programmes. In Germany, to show international corporations that Frankfurt am Main should be considered both a competitor to London for financial supremacy but also one of Europe's dominant cultural centres, Frankfurt's local government pioneered the construction of 13 museums within ten years.

Under President Mitterand France went into cultural overdrive in advance of post-1992 Europe, as Charlotte Ellis related in 1989, also in *WA*3 (pages 56-61): "The current interest in museums [in France] has been stimulated by the prospect of post-1992 Europe, [says Germain Viatte, in overall charge of major national and state-funded museums] which has made French towns and cities ever more anxious to assert their own identities. To that end, museums are now being encouraged to seek private funding and sponsorship, for new acquisitions, special exhibitions and the like. By becoming open to the present and attracting private patrons, says Viatte, museums are

▼ ▲ John Edward Linden/Arcaid

Left, above and below: The Getty Center, Los Angeles, USA, by Richard Meier

becoming 'places of civic confluence'."

Over 400 new or renovated museums were designed in France 1981-95, for example the extensions to the Louvre – the pyramid completed in 1989 by I M Pei & Partners and the Richelieu Wing by Pei Cobb Freid & Partners in 1993.

In Italy, the world's largest living museum, the government has woken up to the fact that tourists are demanding more for their money. It has recently launched an impressive building programme which will surely reinvigorate both cultural life and architectural debate in the country. The Uffizi is to get an extension by Arata Isozaki, Gae Aulenti is refurbishing a museum near Turin, and Zaha Hadid has fought off competition from Rem Koolhaas, Steven Holl, Toyo Ito and Vittorio Gregotti to secure the commission for the Centre of Contemporary Arts in Rome.

In the special report on museums in 1997 (*WA*55 104-129) US museum consultant Arthur Rosenblat commended the British government for its "courageous and progressive attitude toward the celebration of a national culture" with its commission for Libeskind's spiral creation for the extension to London's Victoria and Albert Museum. The competition win was heralded as a break with English conservatism and a guiding light for the future.

Public space

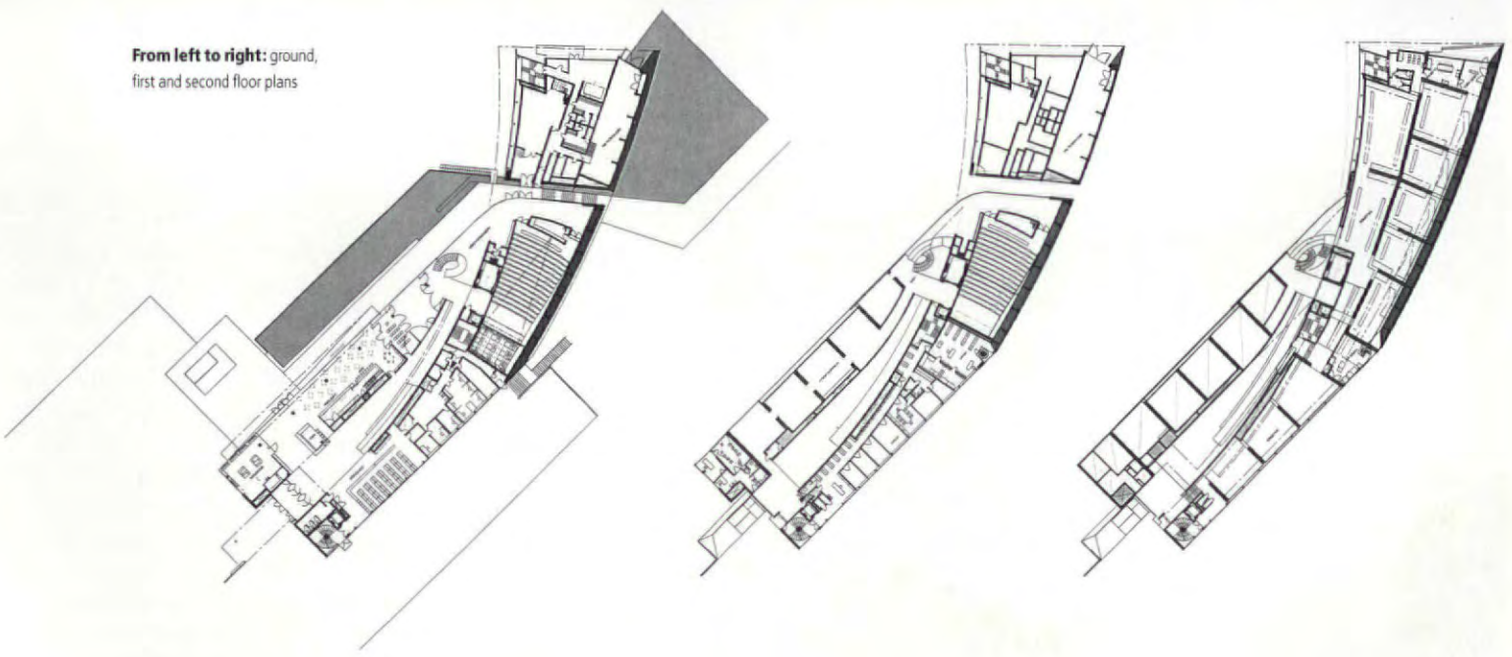
Hadid's L-shaped linear scheme for the Rome museum addresses one of the most critical issues in museum design of the future, offering what she describes as "a quasi-urban field, a 'world' to dive into rather than a building as signature object. The campus is organised and navigated on the basis of directional drifts and the distribution of densities rather than key points. [the character will be] porous, immersive a field space".

Regardless of the noble pursuit of space over object, what she and the client both know is that with a Hadid project in the bag Rome is sure to get the attention it craves. There will be many who will still regard it a "signature" building, but the project is significant as the generator for a new cultural quarter in the capital, as was Richard Meier's Museum of Contemporary Art in Barcelona and the Guggenheim in Bilbao. What architects have little or no control over is the accessibility of their museum; whether or not it is a truly public, 24-hour space. Given that the collective footprint of museums in the world's cultural capitals tends to be greater than the open space around them, one of the foremost issues in the next millennium must be how to improve accessibility.

Architects have taken on the responsibility of making museums more culturally accessible and commercially viable, with the addition of ▶

Paul Warchol

From left to right: ground, first and second floor plans



Shinkenchiku-sha

Hélène Binet

Above left: Miho Museum, Shiga, Japan, by I M Pei **Below left:** Kunsthaus Bregenz, Austria, by Peter Zumthor. **Facing page, above:** Kiasma Museum of Contemporary Art, Helsinki, Finland, by Stephen Holl Architects

► restaurants, retail outlets and entertainment facilities. Pachter asserts that "we need the grand spaces of museums, not as treasure houses of the 19th century, but as gathering places in a fractured world". He cites Richard Meier's Getty Center in Los Angeles as "truly a piazza for the city", a democratic space which has dispelled the notion of a museum or cultural centre as a place of snobbery or class. Interestingly, he claims that the only complaints have been to do with the facilities for parking and washrooms. The architecture works brilliantly as a tourist trap, but some feel it's not accessible enough. The impact of the complex would seem to have been underestimated.

Fast forward

Frances Morris, curator at London's Tate Gallery, and involved with the Herzog & de Meuron renovation at Bankside for the additional secondary gallery, sees the future of the museum not merely as an exhibition space, but as a carapace. A building which can be used inside and out, in a variety of formations, which encourages less conventional "contemporary interventions" and contributes to the community in a pro-active rigorous way.

Will museums survive the electronic age? On current form the answer must be yes. Museums of all kinds must communicate meaning implicitly, not necessarily through the objects on display. Herein lies the responsibility of the architect. The objects on display may well be accessible via the internet, television or the written word, but to register the intangible – akin to listening to a live musical performance rather than reading the score or listening to a recording – requires the physical experience of visiting the museum. Libeskind's Jewish Museum in Berlin is an extreme example of this – here the architecture *is* the programme. Even if visitors are unable to interpret the symbolism in every architectural gesture they can still be affected by the emotion they seduce. Museums provide a vital counterbalance to the electronic world.

The leap in the next decade will be in commercial initiatives, believes Marc Pachter. Museums will have to look beyond retail and entertainment – but to what, he cannot say. What he does know is that world class architecture is essential for raising the public consciousness and attracting top-dollar investment.

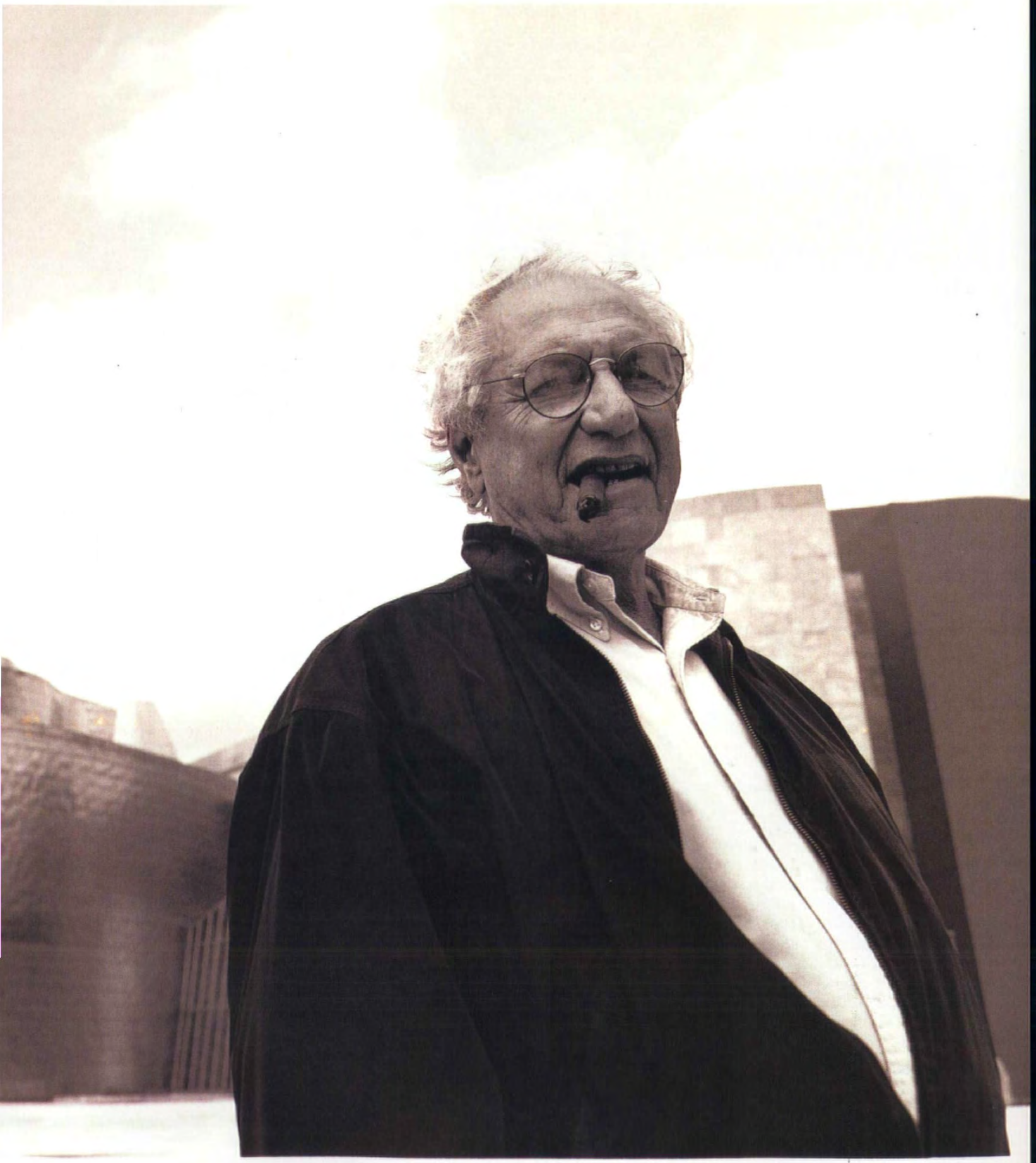
Gehry argues that "a lot of artists don't like neutral spaces for their art. They want their work to be shown in an important place, rather than a deferential one... [to build a museum which is itself a work of art] sends the message that the town must love artists". That, and the fact that the town is eager to get noticed. It's a small investment for an immeasurably huge return. WA

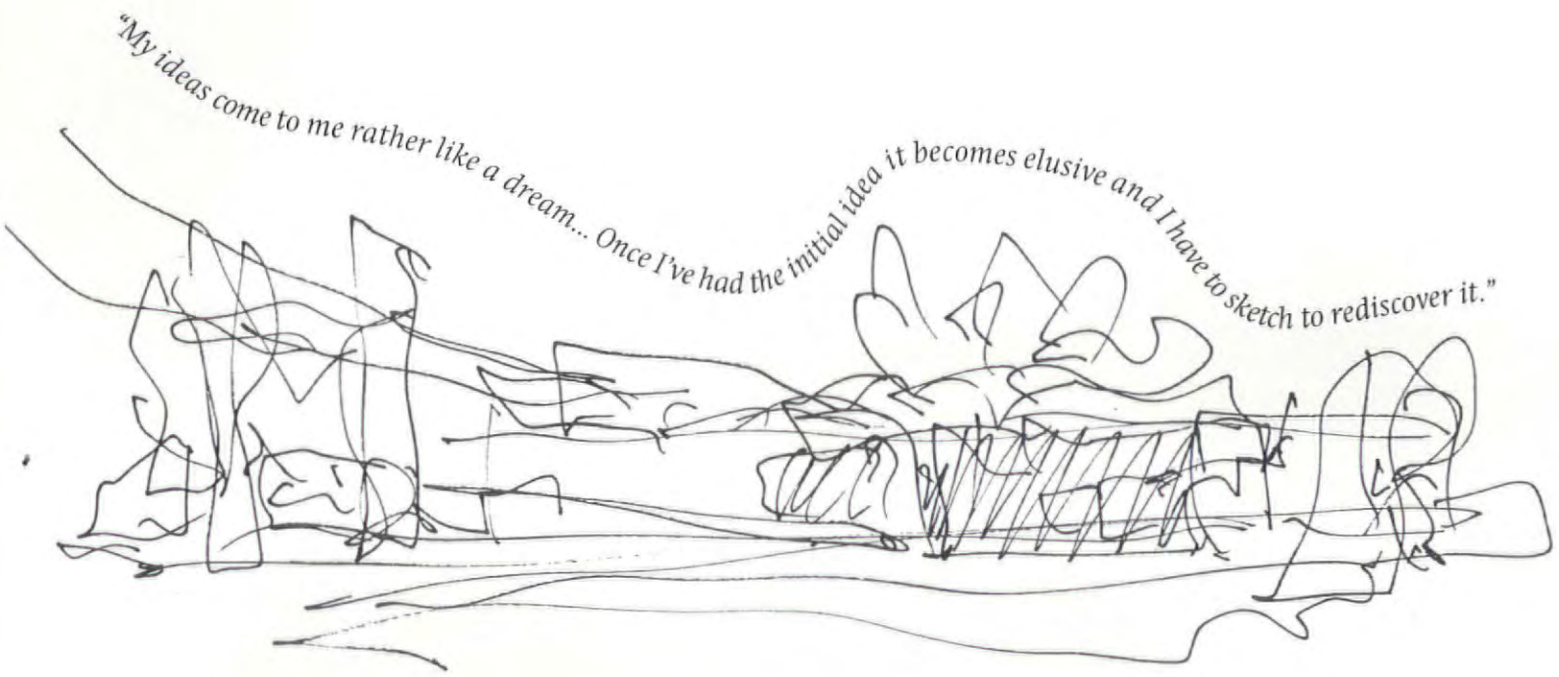
Two years after the opening of Bilbao's Guggenheim museum Frank Gehry is still architecture's hottest property, captivating critics and public alike – including WA's anniversary jury (see pages 82-91). The recipient of last year's AIA Gold Medal, and the latest American architect (since Louis Kahn) to be hailed a creative genius, Gehry has retained his engaging charm, sense of perspective and even, so he claims, a "fairly decent level of insecurity". He spoke to Nicola Turner last month.

Living his dream

Todd Eberle

Frank O Gehry in front of his world-famous Guggenheim Museum, Bilbao





While successfully pricking the bubble of pomposity commonly associated with architectural superstardom, Canadian-born Californian Frank Gehry finds it impossible to ignore accusations of "wilful egotism" in his architecture, which some describe as "thrown together like a soufflé". No, of course the buildings are not designed from the outside in, he says, contradicting an otherwise razor-sharp essay by Witold Ryczynski of the University of Pennsylvania, which accompanied an exhibition of his work at Sir John Soane's Museum in London last month. There is a sense that it is at times like these – and only times like these – that Gehry regrets not having perfected the philosophical banter to back up his work. Otherwise, he is proud to be an "art-smart" architect, and to leave the theoretical underpinning to others. Talking to Gehry is refreshing, his honesty and clarity unusual in a profession that has perfected the art of the smokescreen. His architecture might baffle on first sight, but like the coherence of the spaces within, there is nothing complicated about the theory.

Method in his madness

"[The other thing critics] talk about is a lack of detailing. I think the DG Bank in Berlin which we're working on now is every bit as good as Bilbao, and it's detailed very carefully."

He fences around the issue, wondering which angle to come from next, and adds, as if anticipating a further attack: "The building is rectilinear and has cost twice as much as Bilbao. Curves do not necessarily cost more... My ideas come to me rather like a dream. I'm lucky in that way, but once I've had the initial idea it becomes elusive and I have to sketch in order to rediscover it," he says, describing a process akin to Michelangelo releasing the slaves from a slab of marble. This kind of development, he explains, is actually harder than working out the the detailing on a building like the DG Bank. Although he protests that he wanted the Guggenheim to look like a soufflé, such apparent chaos is studied. "There is always something rational holding it together," he explained during his AIA Congress presentation in Dallas, after declaring that "if I knew what I was going to do I wouldn't do it, because it would no longer be interesting or creative". The plan is, in the words of Le Corbusier, still very much "the generator".

The procedure with which Frank O Gehry & Associates develops its projects is as well charted as the work itself: apparently random sketches; a model shop more akin to a tailor's cutting room with templates for possible solutions hanging from the walls; the working and reworking of models constructed out of tin foil and cardboard; scanning for dimensions with the state of the art CATIA computer program originally developed by Dessault Systems for the design of Mirage fighter jets – and an end result which looks... very much like the original sketch. The ground-breaking technology is employed as a means to an end, a way of realising a dream, rather than a celebration of technology itself, in the tradition of the British high-tech school. It is also a means of reining in budgets and schedules, something for which he is regularly credited. Gehry is concerned that neither method should be seen as more impressive or important than the other. The difference is in the intent. His work is rigorous, sculptural, all about form and light, space-making in the fullest sense. He is, as Rybczynski describes, not "a pre-industrial romantic like Tadao Ando or Steven Holl, who are fascinated with craft: he is a post-industrial romantic". The forms are naturalistic, but the design and construction techniques firmly of today.

Artistic literacy

Gehry is associated as much with his artistic peers as with contemporary architects. Having been ostracised by fellow architects early in his career, he was drawn to the culture of fine artists

• *Born 1929. Moved to California in 1947* • *Worked in Los Angeles and Paris before the launch of Frank O Gehry & Associates 1967* • *Easy Edges laminated-cardboard furniture first attracts press attention 1969-73* • *Santa Monica House launches his notoriety as an eccentric designer 1978* • *Gives up "commercial" work for Rouse Corporation; office shrinks* • *"Fish form" projects in their infancy with Schnabel House 1986-89 and Vitra Museum 1987-89, becoming increasingly developed and abstracted during the 1990s* • *Guggenheim Museum opens to international acclaim 1997, launching a new wave of "architecture as tourism"*

such as Robert Rauchenberg, Richard Serra and Claes Oldenberg, with whom he collaborated on the Chiat/Day "binoculars" building (1985-91). "Often what I've done has been done before – even in a sculpture or a painting," he claims, adding that some of his floorplans have been inspired by Hieronymus Bosch paintings. "It's not all new. Personal literacy about art and art form is what drives me, and most architects are not [artistically] literate."

The quality he has been yearning for, he explains, is "the immediacy of painting... you still feel it years later, even a Titian, Rembrandt or Vermeer looks as though it's just been painted. That is my personal quest. I have spent a lot of time looking at art, and very little time reading philosophy".

Gehry's conversation is splattered with artistic references, yet he is keen to retain his identity as an architect. "I love the process of working with clients. I use the energy. It keeps me from repeating myself because each client and project is different. That's the difference from artists."

Like Louis Kahn, the previous torch-bearer of 20th-century architecture, Gehry was a late starter in terms of critical acclaim. Kahn was 50 years old when he built his first important building, the Yale University Art Gallery. Gehry's coming of age was his Santa Monica house, remodelled in 1978 when he was 48 and had been in practice for 16 years. The story of how the worm turned is now legend. Despite aspirations of becoming a "liberal do-gooder" in the 1950s, Gehry abandoned his career in urban planning due to frustration. "I didn't like the fighting and the politics – nothing ever got built. If I were 30 years younger I would want to be Rem Koolhaas. I am very supportive of what he's doing. He's got everything that it takes to make the process work."

There followed a period of several years working for commercial clients, mainly the Rouse Corporation. "I had thought I wanted to do the commercial work I was involved with at the time. It was only when I built my house that I realised I couldn't do the other any more... The chairman of the board of Rouse Corporation came to dinner at my house. He said 'If you like this [the house], you don't like that [pointing to Rouse developments down town].' I replied that it wasn't that I didn't like it, it was that they're not equal. The other is a constant fight. So he said 'Why don't you stop doing it?', and we shook hands and I went to the office the next morning scared, but relieved. Sixty per cent of our work was with Rouse at the time. The office went from 35 to 3 that week in 1978." It now stands at 125, having doubled in the last couple of years.

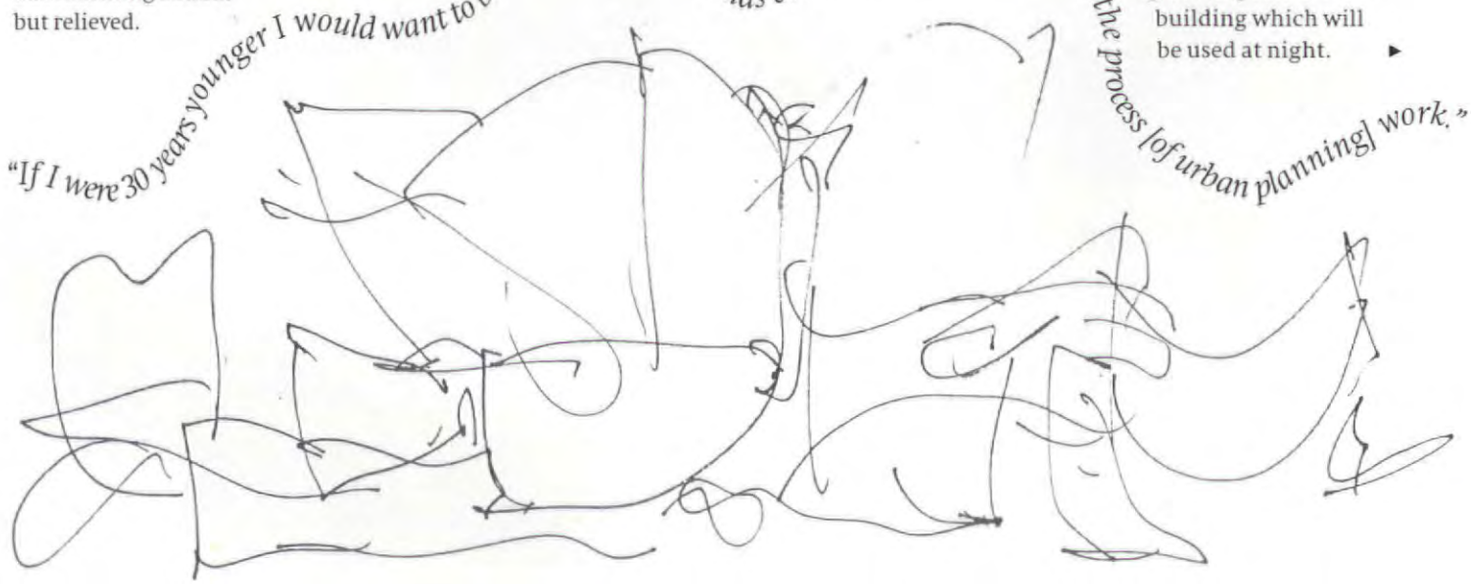
Bilbao babies

Gehry claims never to solicit work or press coverage, but still the work floods in. How does he cope with all the requests for another "Bilbao" (the client of the museum initially asked Gehry for "a Sydney Opera House")? "I've turned down a lot of people who want a quick hit, a quick fix," including a US$2 billion Casino project and a proposal for New York's "tallest new building" which "just didn't feel right". Even the curator of the Soane exhibition has had several calls from would-be clients all after the Gehry signature.

"Without the infrastructure of a solid programme and client to support a project, it'll never work," he says, and refers to the ill-fated American Center in Paris (1988-94) which closed as a result of "failed management". What new clients have to understand is that "Bilbao fits the structure of the city. It has become part of the fabric and has a great institution behind it... we now have the situation where people are coming to see the Richard Serra show, not just the building." According to Gehry the Guggenheim has already "paid for itself". Certainly the Bilbainos are revelling in the current cultural supremacy of the Basque region. Bilbao has taken its desire to regenerate the industrial city at least as seriously as Barcelona – with a metro by Foster and Partners and a new congress centre by Federico Soriano and Dolores Palacios (see *WA*77 pages 34-41) – and is already reaping the rewards.

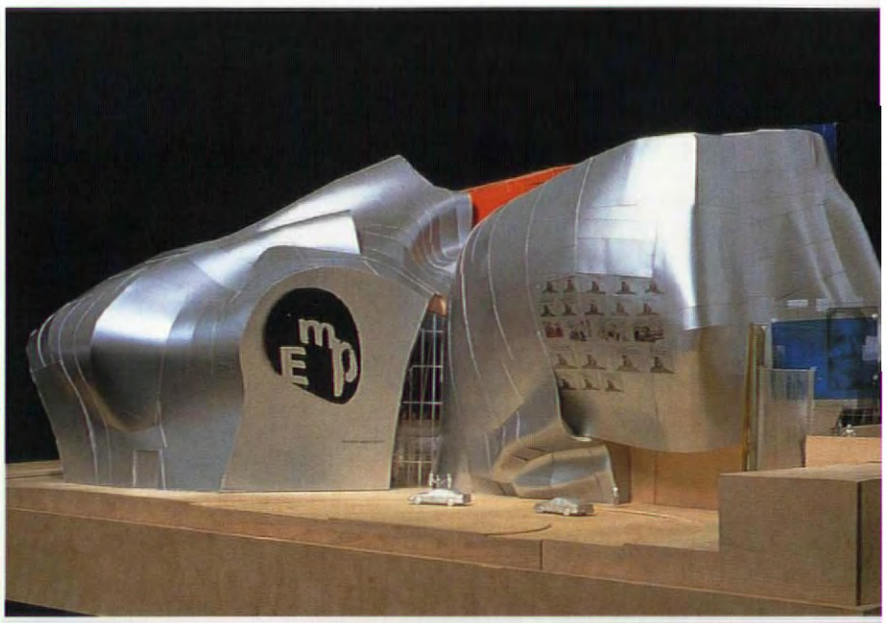
The Guggenheim has not just inspired new clients: one "old" client, humbled by the realisation that it was on to a very good thing, if only it had had the foresight to recognise it at the time, is Disney. It is now ten years since design development was begun on the Disney Concert Hall in Los Angeles. After the launch of Bilbao, Disney was keen to raise its project from the dead, with one proviso – that it be clad in Guggenheim metal.

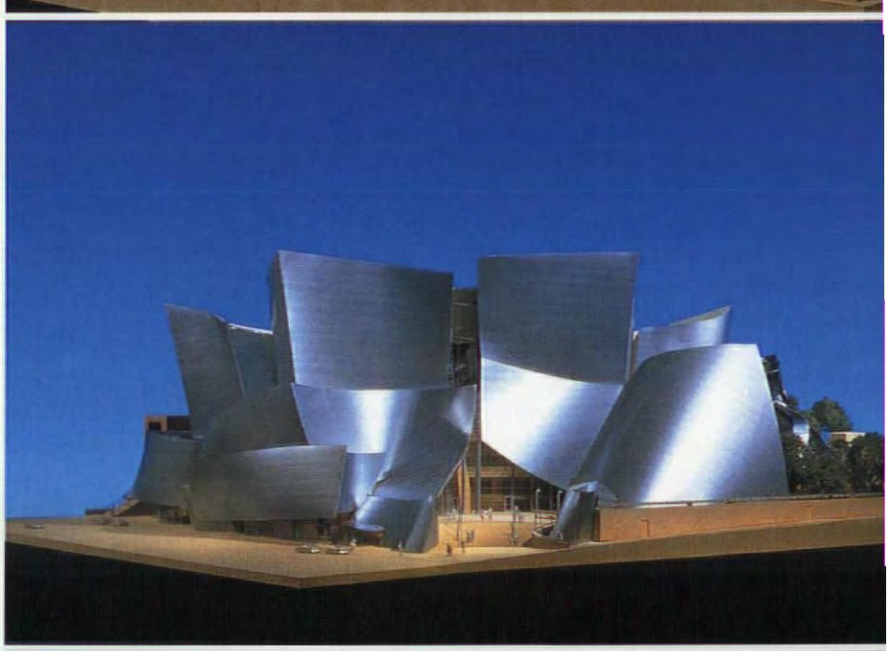
"When we left the Disney project ten years ago, because of management failure, it was to be built in stone – it's whole persona was stone. When you approach a stone building at night it has a subtle glow, important for a building which will be used at night. ▶



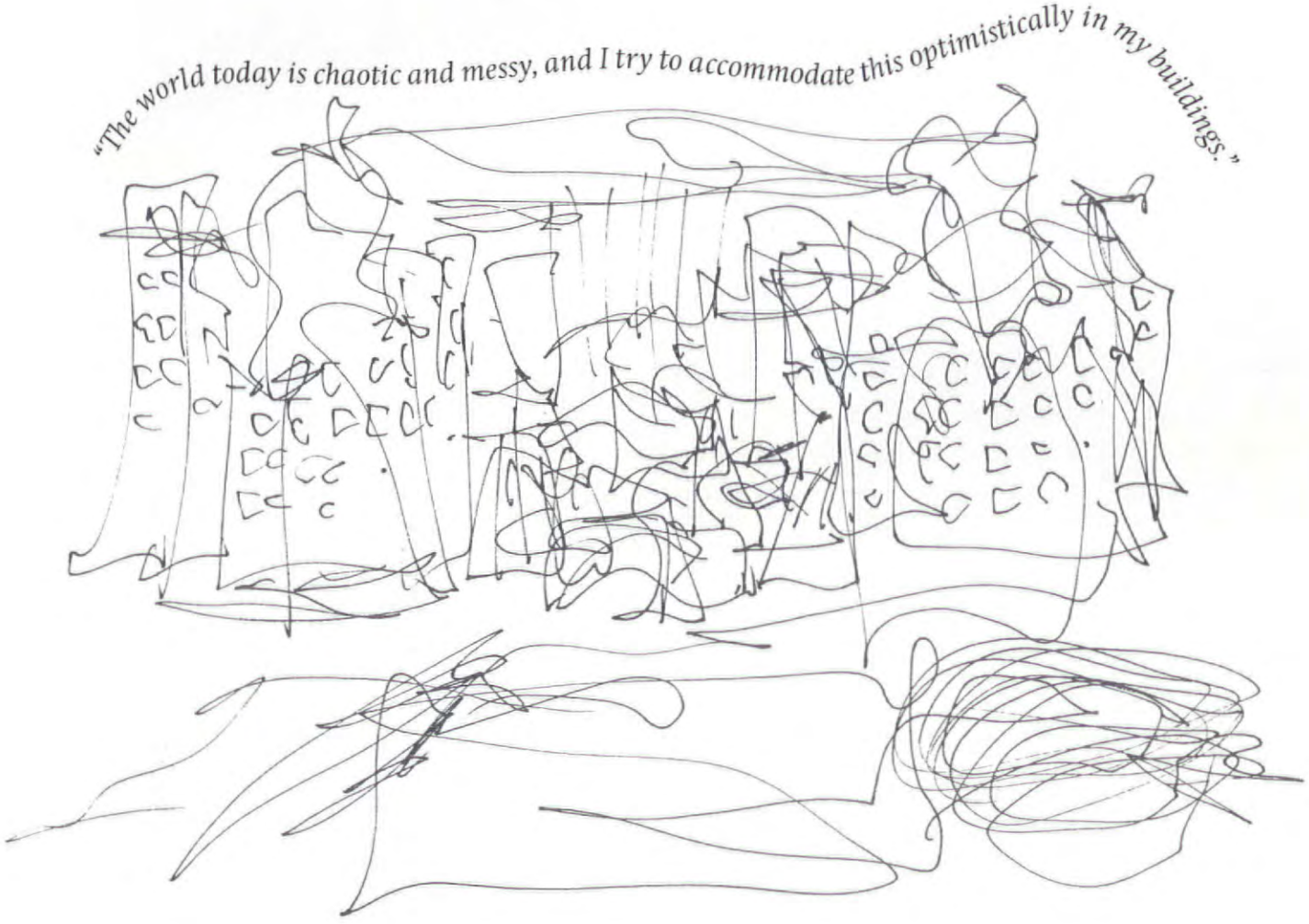
Gehry's original, creative sketches. **Facing page:** The Guggenheim Museum, Bilbao. **Below:** The Walt Disney Concert Hall.

Below, clockwise from top right: Current projects – the titanium-clad curves of the Experience Music Project; the Walt Disney Concert Hall, Los Angeles; Bard College Performing Arts Center, Annandale-on-Hudson; Der Neue Zollhof, Dusseldorf; and the highly detailed DG Bank building, Berlin, with its horse's-head conference room. **Facing page:** Initial sketch of the Stata Centre at MIT.





All photographs this page by Whit Preston except DG Bank, by Tensho Takemori



► Metal makes a building dark at night. It's hard to light and make it not look tinny. In fact, I was originally thinking of metal because it was more bangs for the buck – but I'd rejected it way back. It took a lot of persuading but finally I started playing with the model, adding metallic paper, and the thing was reborn. This gave me license to change some of the forms," he adds happily, saving US$5 million in the process, and rescuing it from being "warmed over doo-doo"! To solve the problem of the lighting he hopes to flood a stone plaza around the hall with light which will be reflected on to the metal cladding.

Building for a "messy" world

Despite Gehry's fame as a creator of cultural fantasies, he has a creative relationship with several corporate clients, including the Chiat/Day advertising agency, Nationale-Nederlanden, (Fred and Ginger building in Prague), and currently Pariser Platz 3 in Berlin, Der Neue Zollhof, Dusseldorf and the DG Bank in Berlin, whose building stands to eclipse the Guggenheim in terms of glamour and pizzaz, with its horse's-head conference room. Is there a danger that corporate clients too might be tempted to force Gehry to standardise his imaginative creations? He is dismissive of such fears, artfully dodging the question and saying: "The Guggenheim is the first time [in recent years] that the public has been interested in a building. There's nothing wrong with 10, 20 even 100 beautiful buildings around the world," as long as they are appropriate for their site. If clients want shiny buildings, he says, let them have shiny buildings. He is, after all, an architect providing a service – albeit an exclusive one.

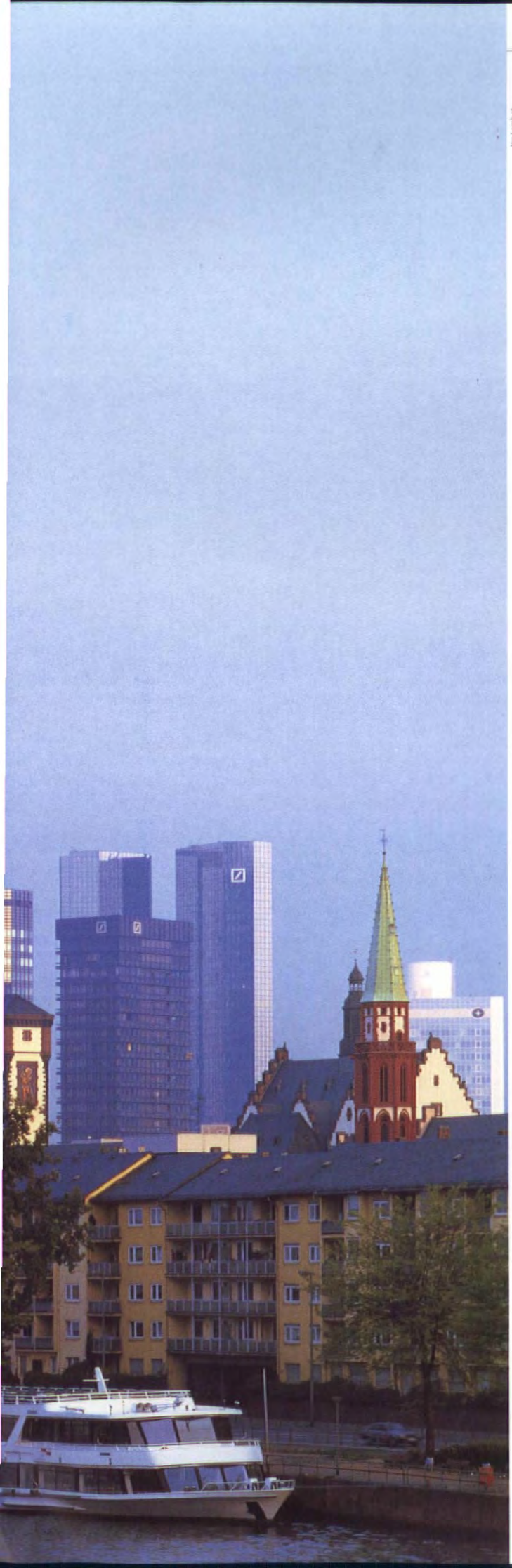
His concern is that architects who lack the prerequisite initiation in the art world will attempt pastiche work for projects which lack an adequate support structure from clients and collaborators. The Guggenheim shouldn't shoulder the blame for this, says Gehry, adding that the primary problem with architecture at the end of the 1990s is education. "Architecture should be taught in elementary schools. I taught in a school about ten years ago... that's when the kids are most impressionable."

Gehry is a product of his era. "The world today is chaotic and messy, and I try to accommodate this optimistically in my buildings." The duty of the architect, he believes, is to design for the world they inhabit, not pamper to nostalgic reflections of the past. He is "not into immortality". That, he claims, is for the artists. Incredibly, he asserted in the video to his exhibition at the Soane Museum that he would not be concerned if any of his buildings were one day razed to the ground. For the artist in Gehry, the creative process is the essence of architecture. For the "Smart Man from Hollywood", it is the knowledge that he has satisfied the client and produced an efficient, life-enhancing building.

Will the Disney Concert Hall do for Los Angeles what the Guggenheim has done for Bilbao? Probably not, since the initial impact of a bold shiny building will be less powerful, and Los Angeles has already received a recent injection of cultural life from the Getty Center. But there can be no doubt that there will be another satisfied client. How much Canada's Reichmann brothers must regret not commissioning their compatriot for his huge "lighthouse" office building at the centre of Canary Wharf. Who knows what effect the 1988 Gehry scheme might have had on a development which is only now breathing without the aid of a life-support machine. They missed the boat – it's unlikely to come past again.

Foster: "the best is yet to come"

Foster and Partners is one of the UK's most valuable exports of the 1990s. The practice broadened its horizons and moved into Hong Kong, Japan, Germany, Italy and France to combat the recession at the end of the 1980s . The latter half of this decade has seen a substantial growth in domestic work and a highly prized commission for the Museum of Fine Arts in Boston. Ken Powell reports on the power of this year's Pritzker Prize winner.



Ian Lambot

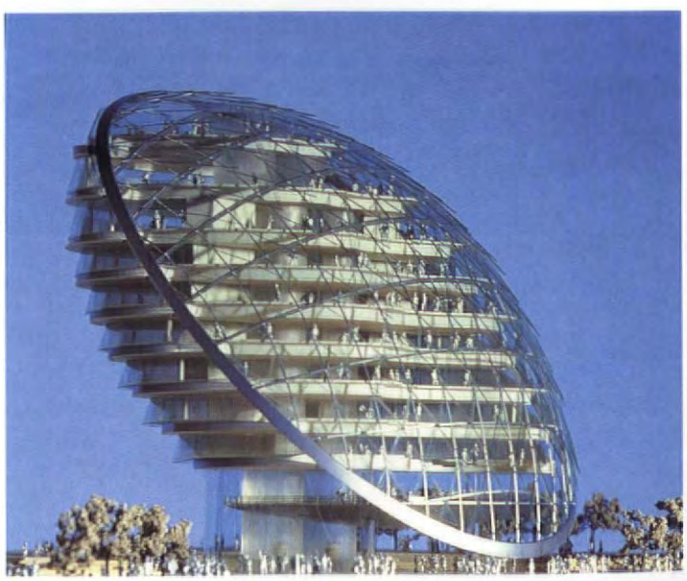
The key to the phenomenal success of Foster and Partners over the past decade is, says Norman Foster, the practice's "open-mindedness – we never do the obvious, or the preconceived". Foster predicted 30 years ago that team working would be the key to the future, but that leadership would equally be vital: "Key individuals will still play a decisive role in the field of design."

Lord Foster's personal input – he was recently created a life peer – remains as significant today as it was when he founded his practice in 1967, after the break up of Team 4. He is a media personality, featuring in colour supplements and Rolex advertisements, but is, first and foremost, a practising architect. The Foster signature is not lightly applied and his personal involvement can be critical to the outcome of a project – as with Berlin's Reichstag, a project where he made an immense personal contribution. But he also leads a formidable team.

One of Foster's partners, Spencer de Grey, says that "the strong sense of trust that exists between Norman, the partners and a number of other key members of the office" is fundamental to Foster and Partners' way of working.

"Between Ken Shuttleworth, David Nelson, myself and Norman, the central design team, there is a natural understanding as there should be. Between us, we've clocked up over a century of service to the office!"

Nelson concurs. Design, he says, is at the heart of the operation: "For us, the design process is the way we do things. It isn't just one stage along the way. It's the whole thing." As a project develops, a larger group becomes involved, working under a job captain, and some will be relatively inexperienced – the office believes in encouraging young architects to take responsibility. ▶



Nigel Young

Left: Exterior view of Commerzbank HQ, Frankfurt (1991-97). **Right**: Conceptual vision of the newly commissioned HQ for the Greater London Authority

Above: Carré d'Art, Nimes, (1984-93)

► But, says Shuttleworth, "the entire office is a single force, not split up into groups and factions" project teams can draw on the wisdom and expertise of the entire design community there. Every project is regularly reviewed by the 13 directors, whose meetings are usually chaired by Norman Foster.

Going global

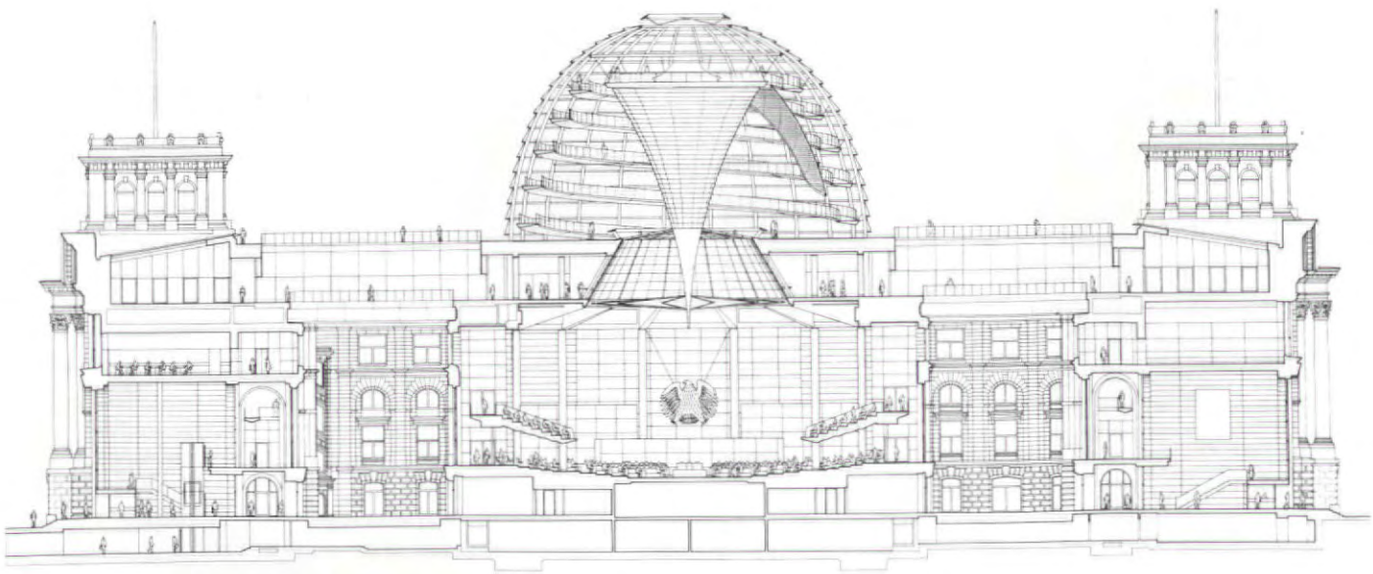
Foster's role has historically been more participatory than presidential. He has always driven the office hard, leading it during the 1980s and early 1990s into competitions in Italy, France, Germany, the USA, Japan and Mexico – where the unbuilt Televisa HQ became a source for many later projects. It went on to build, among others, the Carré d'Art in Nimes (1984-93, an expression of Foster's interest in urban design), the Barcelona Tower (1988-92), the stations for the Bilbao Metro (1988-95), a group of buildings in Duisburg (1988-97), and the Commerzbank in Frankfurt (1991-97). By 1990, the year that Foster received his knighthood, the office employed nearly 150 people with a turnover in 1990-91 of US$16.5 million (£10 million).

In the course of 1991 six important projects were completed, including three in the UK – the widely applauded terminal at Stansted (1987-91), the Sackler Galleries at London's Royal Academy, and the Crescent Wing at the Sainsbury Centre, Norwich. By 1991, however, the portents of recession in Britain had to be taken seriously. In that context, although winning the commission for a flagship station (at Canary Wharf) on London Underground's new Jubilee Line Extension was significant, international projects beckoned. In 1992 Foster won Chek Lap Kok airport (1998) and the Reichstag reconstruction (1999), which led to the establishment of offices in Hong Kong and Berlin. But London has always been the practice's powerhouse.

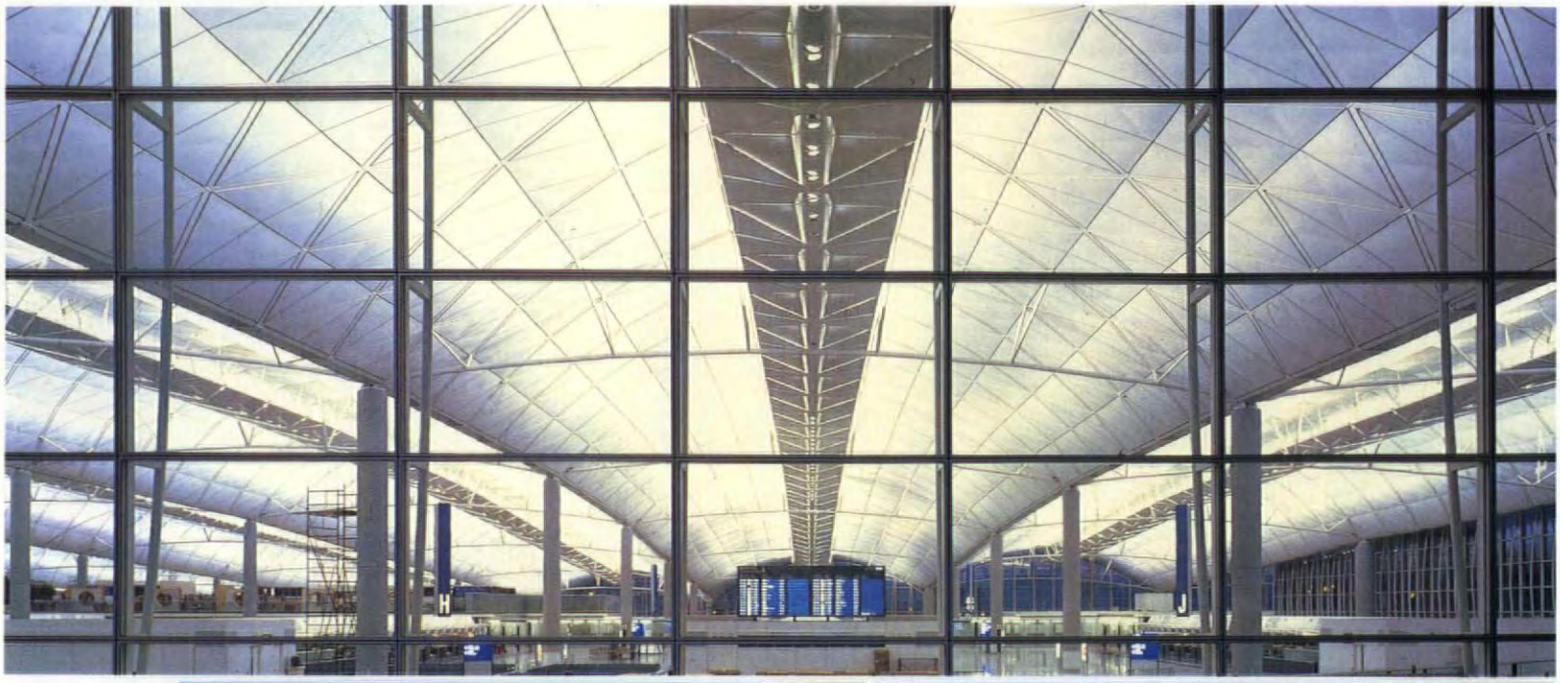
The pervasive image of Foster himself is as a technocratic superman – "Supernorm, the man of steel" was the invention of British cartoonist Louis Hellman. But, alongside the big jobs, Foster has always retained a genuine interest in small-scale projects; furniture for Tecno, shop fit-outs, street furniture, a yacht, a solar-powered vehicle, even a door handle. His "continuing process of discovery, inspiration, invention and innovation", cited by the jury of the 1999 Pritzker Prize, is based on a commitment to research.

Foster's business went global in 1986 with the completion of the Hong Kong Bank, but by the mid-1990s around a third of Foster and Partners' jobs were in the UK itself. Now the practice, with a payroll of 420, is omnipresent in London, balancing commercial work against major public commissions ►

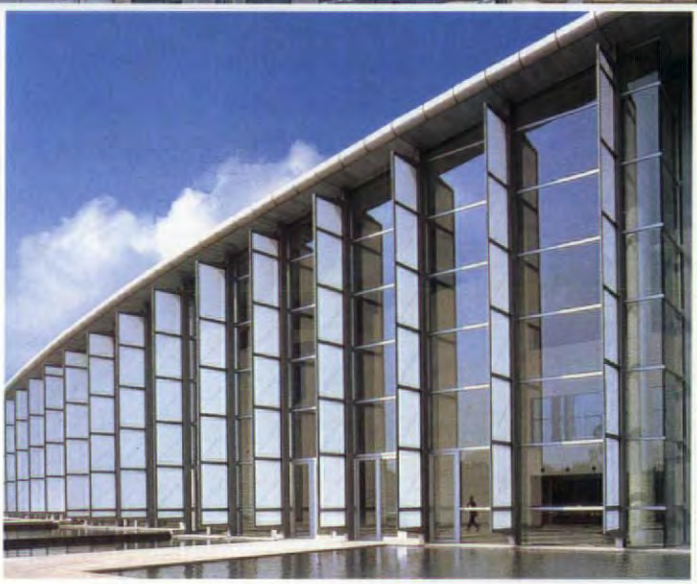
James H. Morris, Jeremy Young, Dennis Gilbert, Nigel Young



Clockwise from top left: Computer-generated image of the Millennium Bridge spanning the River Thames in London just south of St Paul's cathedral, which is now on-site; the Crescent Wing of the Sainsbury Centre for Visual Arts in Norwich, UK (1991); the MPs' lobby in the Plenary Building of the converted Reichstag in Berlin (1999); the refurbishment of the Reichstag included the building of an awe-inspiring glass dome with helical walkway from which the public can look down on their elected representatives



Dennis Gilbert



Nigel Young

Above: Hong Kong International Airport, Chek Lap Kok (1992-98)
Right: Congress Centre, Valencia (1998)
Far right: Micro Electronic Centre, Duisberg (1996)

▸ including the Millennium Bridge, the Greater London Authority building, the Great Court of the British Museum, and the World Squares initiative. Its big international workload is intriguingly diverse. The recent commission from the Museum of Fine Arts in Boston was gratifying to Foster, whose time at Yale did much to form his architectural approach. The practice is a big player in the global commercial field, as its haul of current projects in Korea, China, Australia and major European cities confirms.

Profit by design

The scale of Foster's practice, linked to solid commercial success in terms of turnover and profits – US$46 million and US$3.5 million (£28.2 million, £2.1 million) respectively in 1997-98 – has led critics to question its credibility as a source of invention. Some current projects reflect a careful analysis of practical needs expressed with real panache – but are not obviously innovative. For de Grey, "The fact that [commercial work] was disdained by good firms in the past produced much of the worst dross of the 1960s. Buildings where people work, like the Commerzbank, matter a lot. It's surely better that they're done well than badly".

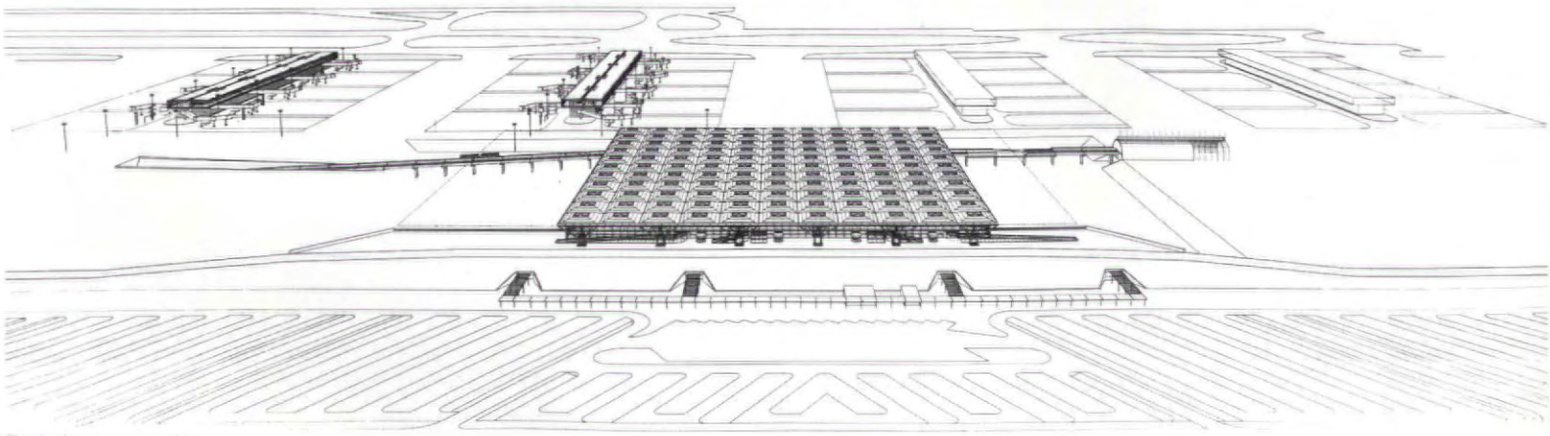
Foster's personal standing is, however, based on something more than material success. His sheer artistry won him the AIA Gold Medal in 1994, the Order of Merit in 1997 and more recently the Pritzker. (The RIBA Royal Gold Medal came as early as 1983.) His self-confidence and drive are balanced, significantly, by the ability to be self-critical, to worry about the direction of his work on occasions, and to comb his personal reservoir of knowledge and experience for the sources of advance and renewal. It is Foster who, inspired by the example of Buckminster Fuller – perhaps the greatest single influence on his work – has personally pushed the "green" environmental agenda: "It is not about fashion but about survival."

As the next century dawns, Foster revisits the inspirations of his youth – Chermayeff, Kahn and Wright – and explores his modernist roots. He also seeks the strands of continuity in his own work – from a 1960s garden house in Cornwall, to Willis Faber and Dumas in Ipswich, UK (1975) and Stansted, through to the Reichstag and the forthcoming Swiss Re tower in the City of London. Such a retrospective odyssey could be self-indulgent, but for Foster it is important. He values success, but is never content: he says his greatest buildings are yet to come, and his sights are already set on the 2000s.

Above: The passenger pick-up point at the main entrance to Stansted Airport

Stansted revisited

"London's third airport" won plaudits for its architecture and set the standards for a new generation of airports around the world, including Foster's own Chek Lap Kok.



Terminal zone perspective

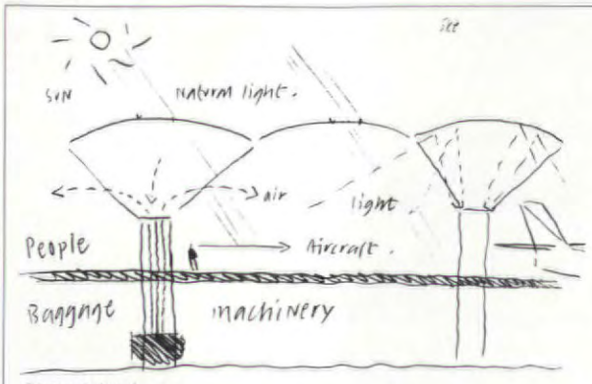
Above: The essential concept survives at Stansted airport despite a clutter of kiosks to service the growing number of passengers

When the first passenger terminal at Stansted Airport opened in 1969, the title "London Stansted" was at best optimistic, at worst a blatant misdescription – it lies halfway to Cambridge from the UK's capital.

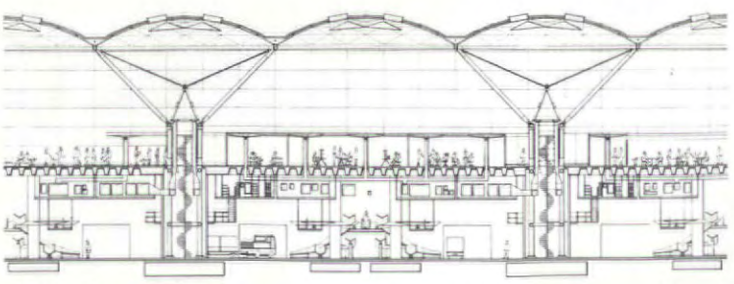
It was the opening of Norman Foster's US$175 million (£108 million) terminal in 1991, actually the first of two planned phases, that put Stansted on the map and on the road to success. After a slow start, in the midst of a recession, Stansted's passenger numbers have doubled in the past three years and it may soon overtake Manchester to become Britain's third busiest airport. The terminal building is being extended, to designs based on Foster's original masterplan, to cater for 15 million passengers a year.

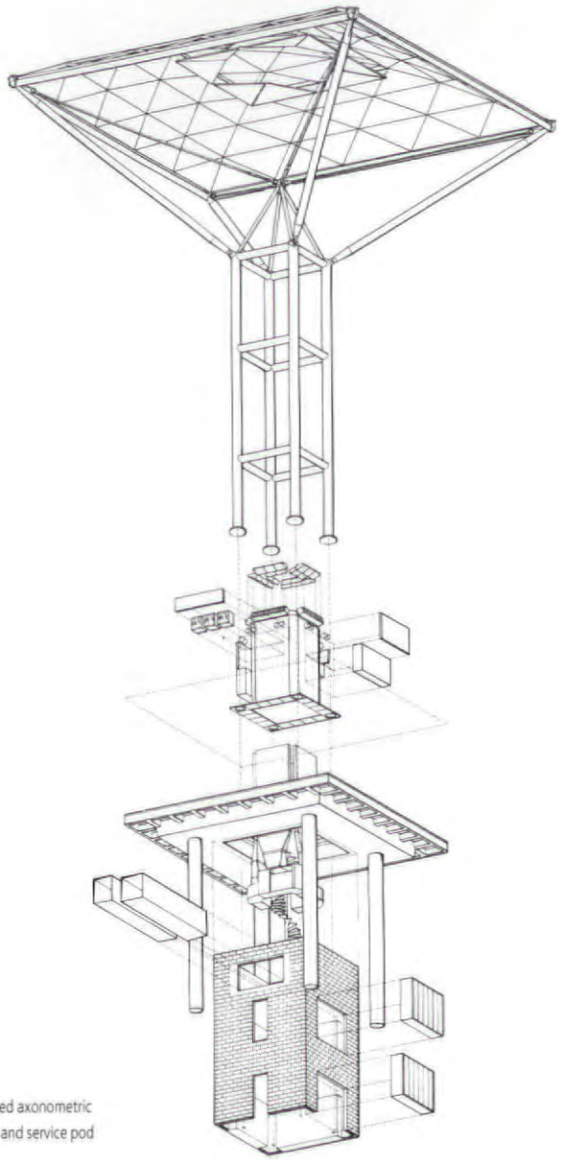
Of Foster's UK buildings over the past decade, only Stansted ranks, in terms of critical acclaim, alongside Willis Faber and Dumas in Ipswich (1975) and the Sainsbury Centre in Norwich (1991). That acclaim has been reinforced by positive responses from users: the airport's "clean, modern and efficient" image was one reason it became the hub for low-fares airline Go!

Stansted has clear roots in the long run of well-serviced

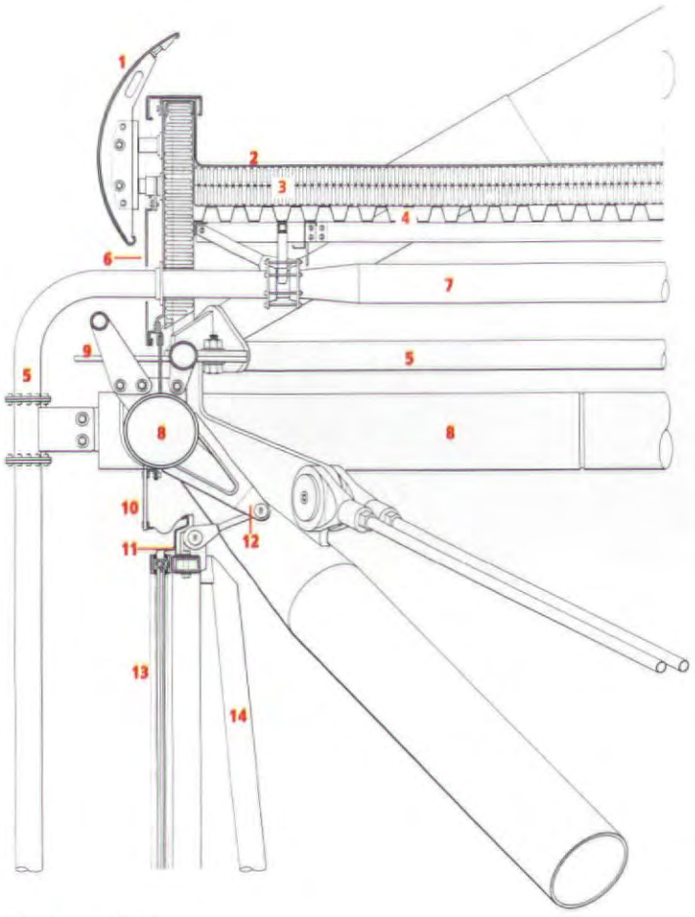


Concept sketch


Section through terminal



Exploded axonometric of tree and service pod



Key to eaves detail

1 Wind deflector
2 Roofing membrane
3 Insulation
4 Decking
5 Tubular steelwork
6 Aluminium cladding
7 Siphonic rainwater disposal system
8 Structural steelwork
9 Steelwok fixing rail
10 Glass cantilevered downstand
11 Aluminium upstand
12 Fascia connection
13 Glazing
14 Structural steel mullion

Foster sheds which began with Reliance Controls in the 1960s. Foster Associates began work on the airport in 1981, but it was 1986 before final planning consent was given. Meanwhile, the Renault Centre at Swindon, UK had been completed (1982), a clear precursor for the structural drama of Stansted.

Foster confesses that his personal passion for flying gave the project a particular flavour. The emphasis on clarity and directness, and the determination to rekindle the excitement of air travel – lost in the complex forms and spaces of most airports of the post-1945 era – were fundamental to the project. The idea of a single-level terminal was not entirely novel to Britain, but the context of Stansted, where there was space to spare, finally made it viable. Services, including baggage handling and a dedicated rail link, went into the undercroft. The passenger concourse was conceived as a lofty, light-filled space designed for economy and speed of construction as well as effect.

"It demonstrates", said Foster, "that you can take a traditionally complex building type and do something new with it that captures people's imaginations, and do that on a tight commercial budget." Disposed on a 36-metre grid, the structural "trees", supporting the pre-assembled shells of the 39,000-square-metre roof, supply heat, fresh air and power and provide a location for lighting, clocks, signage, telephones and fire-fighting equipment. The clarity of Stansted might have been compromised by the security screens, while using satellite buildings, connected by a rapid-transit system, for embarkation inevitably compromised the directness of the passenger experience. But the building was generally hailed as a model for the airports of the future, which Foster developed at the far larger Chek Lap Kok, where services and baggage handling are again at undercroft level and passengers above, in vast, top-lit spaces.

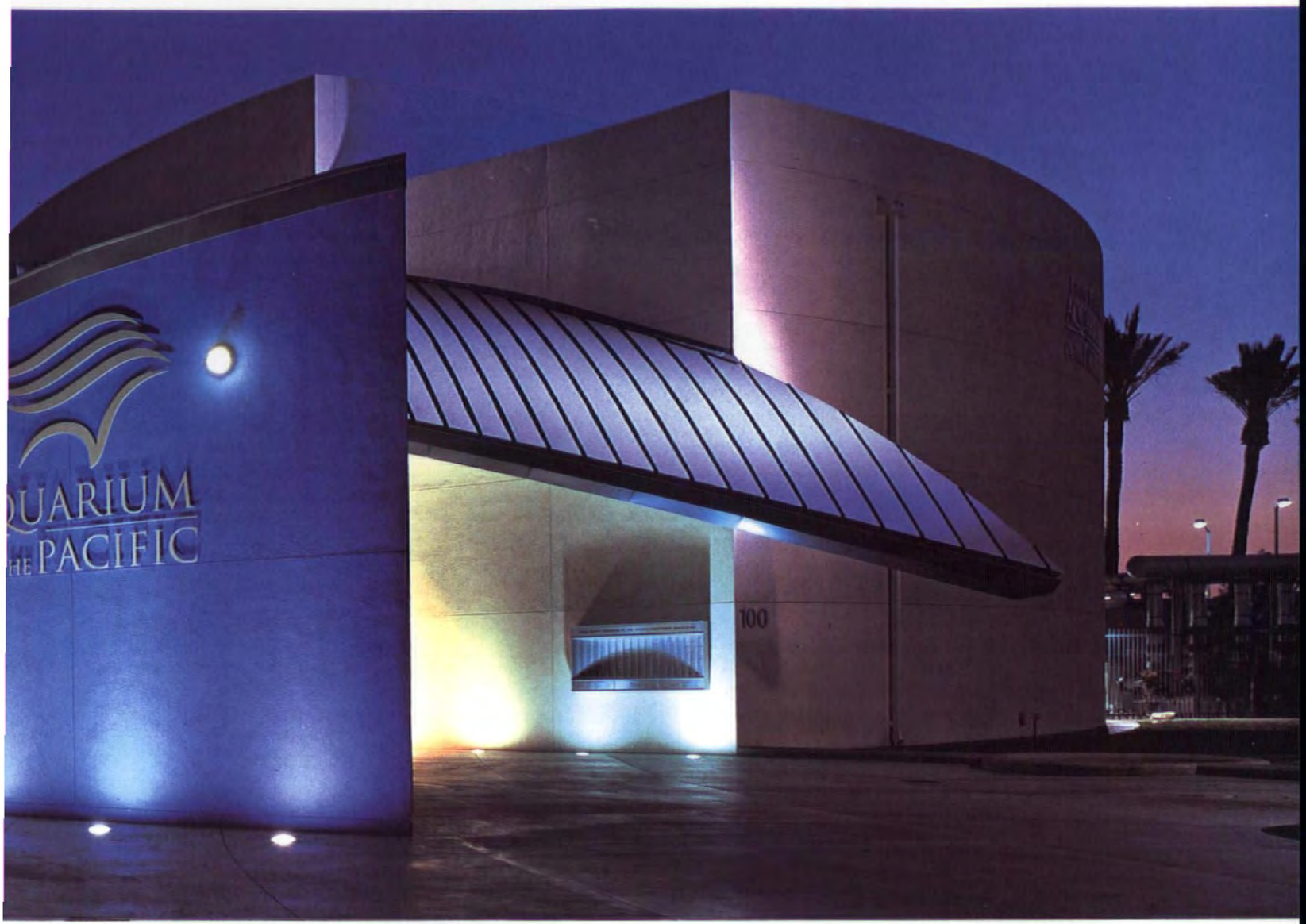
In its pristine state, the Stansted terminal was one of the most awe-inspiring British buildings of modern times. When the building opened, some critics foresaw a culture clash between the architecture and the users – then assumed to be largely downmarket. In fact, the look of the building has been popular with the tourist and business markets. Eight years after its opening, however, Stansted is more crowded, not only with people but with amenities – including take-away food stands, amusement arcades and bouncy castles.

Foster and his colleagues are, however, reluctant to criticise the changes of the last few years. Spencer de Grey, director in charge of the project, points out that they had intended the bulk of retail space to be housed in the second phase (only now being built – and not by Foster and Partners). The original brief simply did not envisage the growth of shopping. But despite the clutter, the clarity of the original concept survives. As de Grey says: "You could clear all the kiosks away in days – the architecture is uncompromised. For me, it's clear that the terminal has proved flexible, just as we intended it to be." WA

TECHNICAL

Metal hits the roof

Many of the 1990s' most acclaimed projects owe their signatures to either exotic alloys such as titanium, or mass-produced materials like aluminium and steel. With sales of metal roofing systems at 25 times their 1960 level, Dan Fox asks whether the metal roof is poised to be the next big thing, or simply a pre-millennial fashion statement.

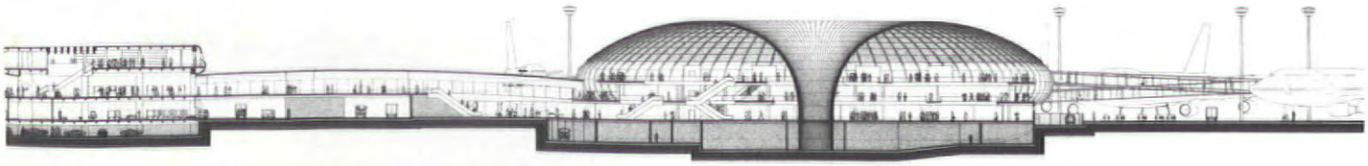


Titanium roofing has given architects of the 1990s the means to create forms and signatures which were previously unthinkable. The Guggenheim Museum, Chek Lap Kok Airport, the Helsinki Museum of Contemporary Art and the Berlin Jewish Museum are among the most recognisable buildings of the last five years – their architects achieving starkly different modes of expression through different approaches to metal roofing. The increasing use of metal on the world's agenda-setting projects has been reflected in the wider roofing market – metal systems are now cost-efficient on most commercial and public buildings, offering myriad design and performance benefits.

In the construction market, sales of metal roofing systems have risen 33 per cent since 1990 to 25 times the 1960 level. *Metal Architecture* magazine's industry survey, of both commercial and residential architecture, reports that last year in the USA 47 per cent of architects and 43 per cent of contractors said that their usage of metal roofing had increased, and 94 per cent of architects specified at least one metal roof. Metal systems are now used on 50 per cent of all new low-rise commercial and industrial buildings.

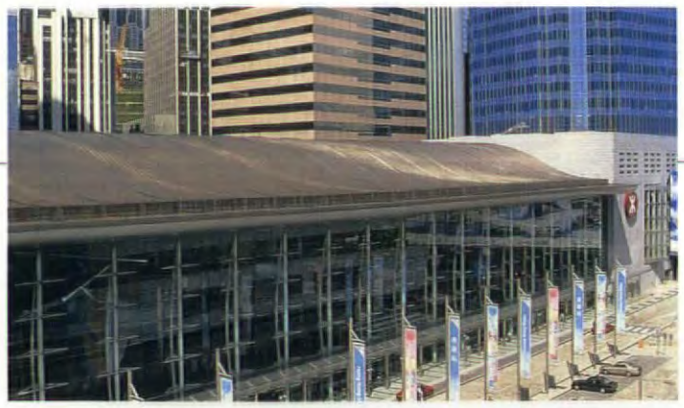
So what has tipped the scales in favour of a roofing method which has been around since long before global industry standards such as asphalt and concrete? Dave Flickinger, of the American Roofing Contractors' Association's technical office, cites streamlined production methods as a major factor in lowering costs, but draws a clear line between relatively unused materials such as titanium and monel, and mass-produced metals like carbon steel, stainless steel, aluminium, copper and lead, now sold off the peg as pre-fabricated roofing systems. He says: "The malleable 'exotic alloys' are still specified through architects' preference as a design feature and are not mainstream products. The true cost benefits of metal roofing are for run-of-the-mill commercial ►

Above: The roof of HOK's acclaimed Long Beach Aquarium. It has a rare strength of architectural expression, but was created on a tight budget
Below: The soaring glass and metal canopy roof of Aeroports de Paris' Abu Dhabi airport terminal, scheduled for completion in 2000

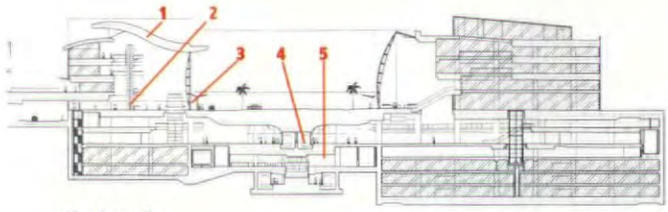


First train to the future

MRTC Station, Hong Kong, PRC
By Arup Associates 1998



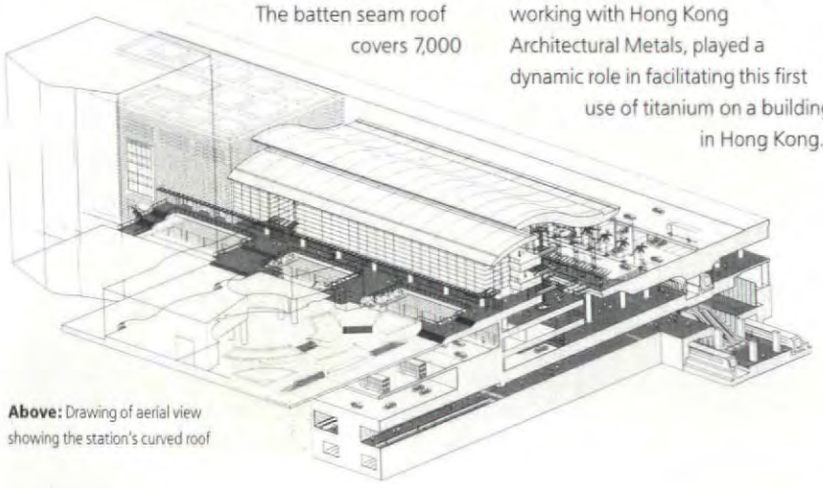
Above: MRTC Central Station's titanium roof, designed to last 100 years in one of the world's most oppressive climates **Below:** Section showing the full station complex



Key to section
1 Titanium roof **2** Main concourse **3** Entrance facade **4** Tunnels **5** Train platforms

Hong Kong Central Station is one of the Hong Kong Airport Core Projects, in which Arup's has featured heavily, with engineering and design involvement in Chek Lap Kok airport, MRTC's stations, and various cargo-handling facilities. The project's titanium-plated roof sweeping forward and down towards the main entrance facade is the building's defining exterior feature – particularly considering the number of people who look down on it from the surrounding high-rise office blocks – but its scale is somewhat lost in the immensity of the Asian CBD.

The batten seam roof covers 7,000 square metres, and comprises panels of 0.6-millimetre-guage commercially pure titanium. According to the architect, Roger Wood, the brief was to create a curved metal roof, for which he considered stainless steel to be the obvious option. It was the client (unusually), who took the lead in instigating the use of titanium. "Stainless steel is a cheaper option, even though the amount of titanium required was significantly smaller. MRTC was keen to get a long-term solution and was prepared to pay the extra for it," says Wood. Gary Nemchock, a metals expert then working with Hong Kong Architectural Metals, played a dynamic role in facilitating this first use of titanium on a building in Hong Kong.

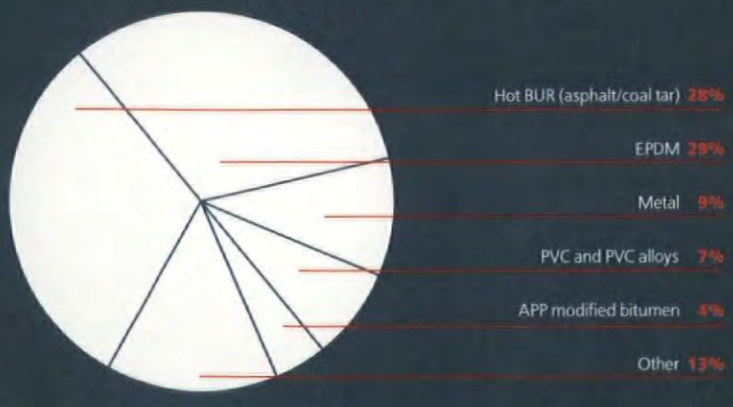


Above: Drawing of aerial view showing the station's curved roof

Later, he was the man who persuaded Gehry to use the material on the Guggenheim Museum, Bilbao. The oppressive tropical and industrial environment was key behind the choice of the metal. "I worked with MRTC researching roofing metals for its stations in 1994. I was looking at the effects of corrosion on all the standard materials – copper, aluminium, stainless steel – and also looked at titanium. Pollution is particularly severe in Hong Kong – nitrous oxides, diesel fumes and sodium oxides can corrode iron-based metals extremely quickly. This was to be MRTC's flagship station, and it had to last. I just handed them my research and let them decide."

In the end, the fact that titanium is totally non-corrosive and does not release toxins into the atmosphere, allied with the fact that its low reflectivity prevents the roof from dazzling the occupants of the surrounding high-rises, made it the most viable material. Unlike in the cases of the Guggenheim, the Van Gogh museum, and the prospective Glasgow Science Centre, the choice of titanium for the MRTC Station was entirely performance-based. It is fitting that Hong Kong is one of the most appropriate environments for titanium roofing in the world, and an indicator that this most fashionable of materials can be specified on performance-related criteria alone.

PRODUCTS INSTALLED BY ROOFING CONTRACTORS IN 1998



Source: Metal Architecture

projects and are only really accessible with manufactured pre-designed systems."

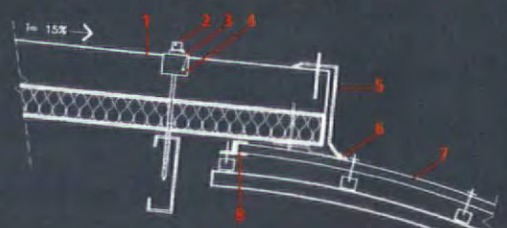
The architectural fashion accessory of the moment is titanium, with Frank Gehry's Guggenheim its supermodel. Recent built projects with fingers on the titanium pulse include Kisho Kurokawa's Van Gogh Museum extension in The Netherlands and Ove Arup Associates' MRTC Station in Hong Kong. In the pipeline are the Glasgow Science Centre, UK, by Building Design Partnership (spherical shell), Frank Gehry's Weatherhead University building, USA (disjointed, wildly curved silver roof) and Foster and Partners' Expo Station, Singapore (clean metallic canopy).

• Titanium's properties are ideally suited to construction. It has the longest lifespan of any metal, due largely to its total immunity to corrosion provided by its extremely stable oxide film which protects it from atmospheric or physical interference. This also means it does not release any toxins into the environment. Its strength is comparable to that of steel, but is just 60 per cent as dense, and twice as flexible. Thermal expansion, which can cause stress in many building metals, is also

The next big thing...

If titanium is the high-end, must-have roofing material of today, what will take its place when someone reacts against the notion that anything silver and metallic represents the future? The PVC membranes used for tensioned roof structures such as the Millennium Dome and the Stade de France may be a good indicator – global development of synthetic plastics has been rapid, and a new architectural vocabulary has evolved alongside it.

Thermoplastic glazing is a fast-developing product finding its way from greenhouses to major projects. Polycarbonate sheeting, for example, has superior UV protection, durability and flexibility to glass, and can be 200 times as strong. Nelson Dupré's São Paulo Concert Hall re-roof successfully employs this high-tech plastic in a starkly traditional context. Glass was specified, but was too heavy. The alveolar polycarbonate material used is light enough to compensate for the huge weight of the building's moveable acoustic-control ceiling. The building's roof also features new isothermic aluminium panels, and their contribution to the building's thermal performance significantly reduces the amount of HVAC plant required. In the news in the USA earlier this year was thermoplastic polyolefin, a newly developed sheet membrane which considerably outperforms PVC. However, its controversial low level of fire-resistance means that specifiers are advised, for now, to be cautious about its application. The quality and life-span of architectural polycarbonates is increasing rapidly – its novelty and design flexibility should ally it to the adventurous architect.



Key to roof drawing, São Paulo Concert Hall

1 Isothermic aluminium tile
2 Bolt
3 Neoprene washer
4 Gouge washer
5 Dripping-pan
6 Neutral silicone
7 Alveolar polycarbonate
8 "Chair" profile

Top left: Nelson Dupré's Sao Paulo Concert Hall, interior detail of the roof structure **Top right:** Exterior of roof, showing isothermic aluminium (green) and alveolar polycarbonate (opaque) sections

extremely low. As well as being virtually indestructible, titanium is 100 per cent recyclable, so can be melted down at the end of its lifespan (or more likely the lifespan of the building it protects) and re-used. This can lead to interesting fluctuations in its price, as became apparent in 1992 when the market was flooded with high-grade titanium recycled from Russian submarines in the wake of arms decommissioning.

In Japan, the unusually saline air has caused roofing lead to degrade faster than elsewhere, meaning that experimentation with new metals is several years ahead of the rest of the world. In Holland, a building law has been passed outlawing the use of corrosive materials such as lead and copper. The resulting advances in titanium use in both countries is exemplified by Kurokawa's Van Gogh museum extension, a world-class titanium roof structure designed by a Japanese architect for the Dutch capital. Anne de Jong of Bureau Bouwkunde, engineers on the project, enthusiastically describes the practical advantages titanium gives the building. "We could have used aluminium or zinc, which would have been cheaper, but the panels would have needed replacing after 20 years. This shell will last for 200." So the architect's decision to use titanium was a forward-thinking cost-conscious move? "No," says de Jong, "Kurokawa uses titanium because he likes the way it looks..."

The pattern is repeated with Building Design Partnership's Glasgow Science Centre, currently under construction. Project director Colin Allen is keen for the GSC to be the first titanium-clad building in the UK. "As far as we know it will be the first. The shell is going up early next year. Hopefully no-one will build a titanium public toilet in Wolverhampton in the meantime..." He was inspired to use the metal by a pre-Guggenheim Frank Gehry lecture, and was awestruck by the finished article. "The GSC is not influenced by the Guggenheim's form, but the finish will certainly refer to it." Allen also takes pleasure from the fact that titanium is equally malleable as copper, an oft-used roofing material in Scotland, so he will be able to employ the traditional skills of the local workforce.

In the case of both the GSC and the Van Gogh, the architects chose titanium for its aesthetic merits, and the clients for its performance benefits. ►

Cost comparisons

Standard SSR on commercial building
Approximate cost per square metre

Aluminium	US$45
Copper	US$50
Lead	US$45
Stainless steel	US$35
Terne	US$35
Titanium	US$55

Approximate cost per kg

Aluminium	US$1.29
Copper	US$1.38
Lead	US$0.48
Stainless steel	US$1.32
Terne	US$1.12
Titanium	US$1.54

Industrial theatre

The Scottish Exhibition and Conference Centre, Glasgow, UK
By Foster and Partners 1998

The new Scottish Exhibition and Conference Centre by Foster and Partners was nicknamed the Armadillo before the last roofing panel was set in place. This arresting aluminium-plated building on an infill site in Queen's Dock, a regenerated area of Glasgow, sits well with the area's history of ship building and industrial heritage.

Robin Partington, project manager at Foster and Partners, says that the building was planned on an unusually tight budget. "We started with the original brief with a budget of US$40.7 million. Buildability was a key issue, as was making the best use of the material." Foster and Partners adopted a panel-forming technique that can be likened to "using a cookie cutter to make a jam tart", Partington explains. Information from the CAD model of the building was fed directly into the cutting machinery, "as if the human hand had never touched it".

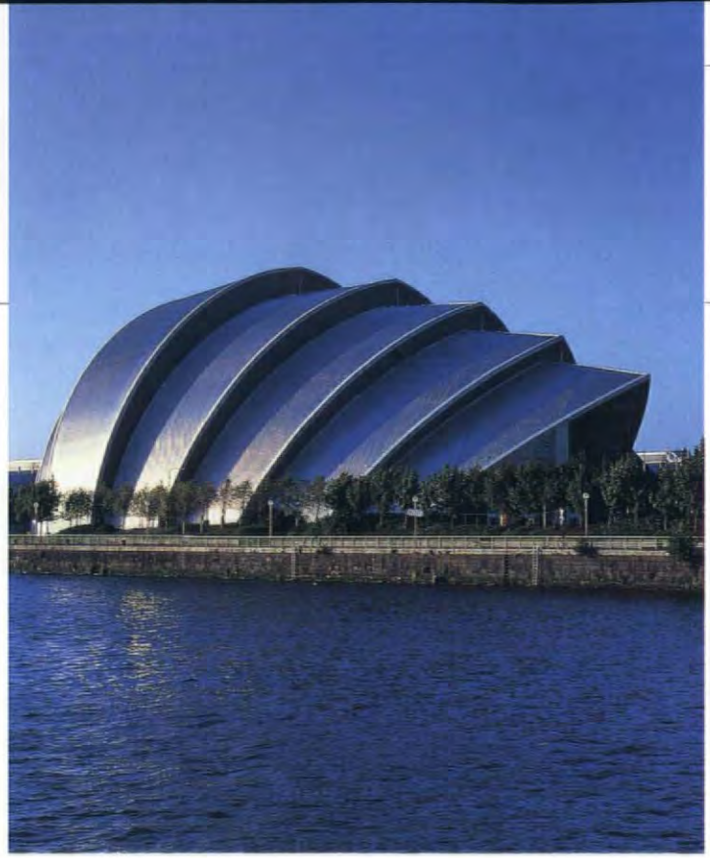
Partington continues: "The 38-metre radius is the tightest radius to which the 0.9mm-guage standing seam material would naturally flop. Each shell has the same radius but each one is cut from a different part of the cylinder. They are rotated on plan. The result is a series of shells that appear to telescope from within each other." The building's "armadillo" form came from this practical solution and a desire to "shrink-wrap" the internal spaces required in the brief. The building includes a vast stage with fly tower, to which the structure of the shells to the front and rear is bolted. The thick concrete walls provide stability.

The aluminium roofing system, manufactured and customised by the German firm Hoogovens, was welded on site. The sheets were

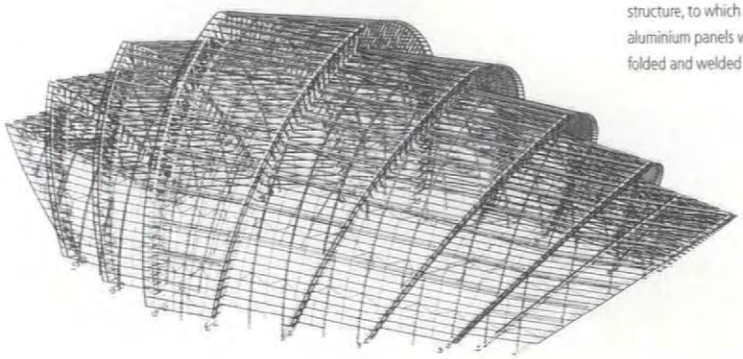
► Dave Flickinger suspects this is no isolated phenomenon, saying: "Architects' first concerns when specifying these new, more expensive, metals are always aesthetic. They sell them to the client as much as the manufacturer does."

• Aluminium roofing is also booming. It is the most abundant metallic element on earth – 300 years' supply has been identified, and 70% of all aluminium is recycled at the end of product life (most building sheet is melted down for use in motor vehicle components). To match the strength of steel, aluminium has to be about twice as thick, but even then it is only a third of the weight. It can be curved, welded or tapered to the most demanding of geometries, and, as with other synthetic metals, has a thin oxide film making it resistant to atmospheric attack. Inert and hard, it protects the underlying metal, reforming immediately when interfered with. The oxide layer thickens slowly with age and can darken the metal over time in heavy pollution, but common industrial pollutants such as ammonia, carbon monoxide and carbon dioxide have very little effect. One less well-known advantage is that in a serious fire, an aluminium roof

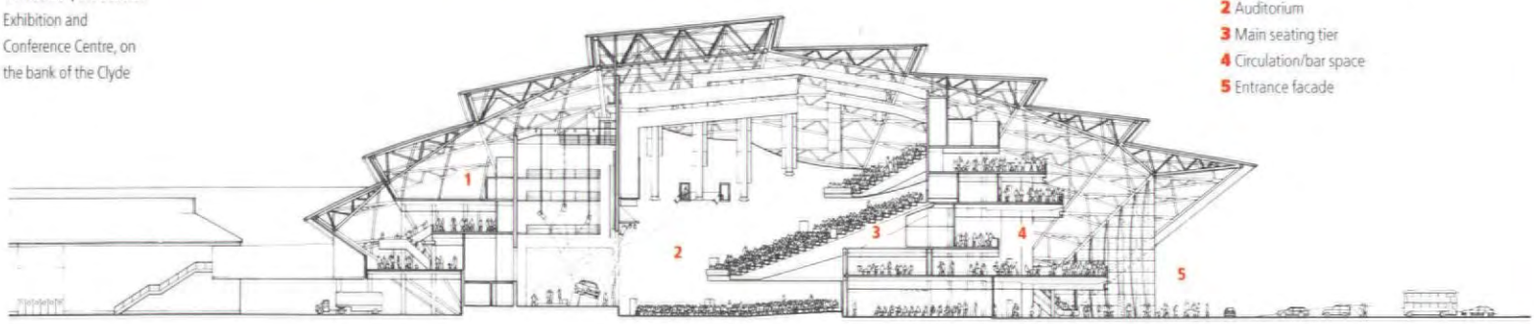
Jean Marie Charpentier et Associés' Shanghai Opera House is a flagship for aluminium roofing in the South-East Asia. The region's construction industry is one of the world's major users of the metal



Above: The "Armadillo"; the Scottish Exhibition and Conference Centre, on the bank of the Clyde



Left: The steel roof structure, to which aluminium panels were folded and welded



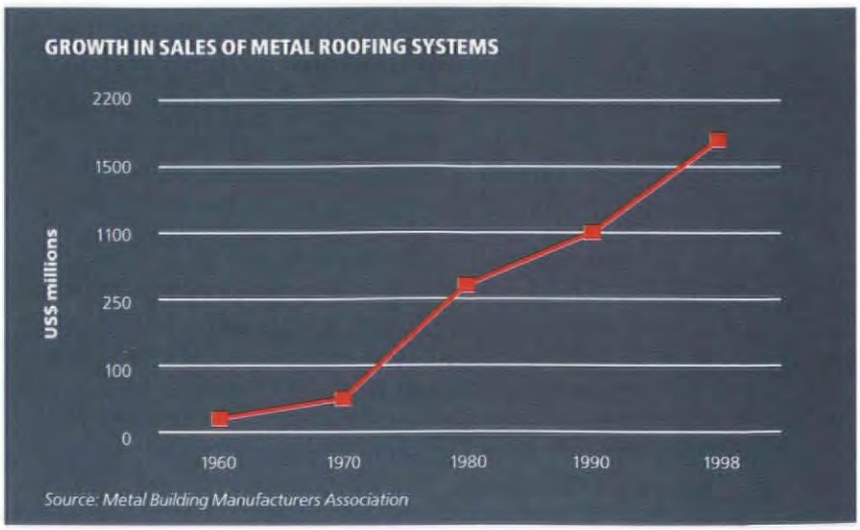
Key to section of the auditorium
1 Backstage areas
2 Auditorium
3 Main seating tier
4 Circulation/bar space
5 Entrance facade

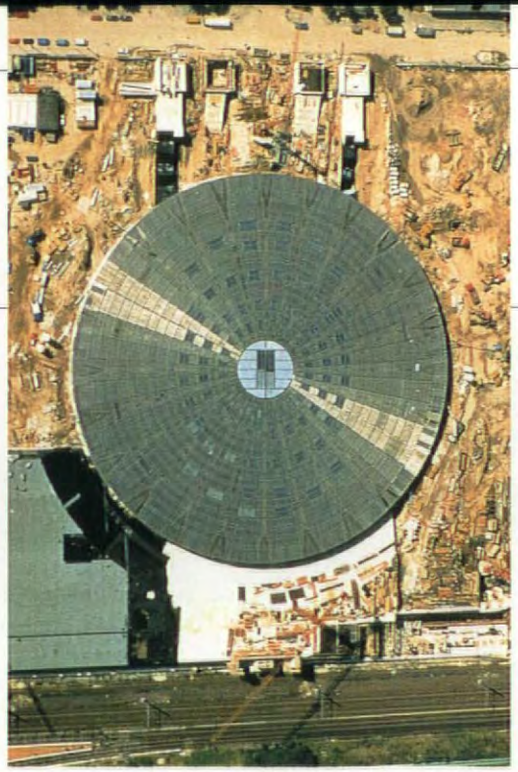
made of KalAlloy, Hoogovens' stucco-embossed clad aluminium alloy. The sheets have a predicted lifespan of 40 years, but have been installed in such a way that they could be replaced with glass if the money became available and the client wished. In all, 3.9 kilometres of the material was installed. The 305-millimetre-wide outer sheets were installed on Hoogovens' patented "secret fix" clips on low-profile galvanized steel top-hat sub-purlins. The roof build-up also comprises rockwool insulation material, a vapour-control layer, and 0.7-millimetre galvanized steel liner sheets. Slots between the roof panels are linked vertically with a combination of panels, louvres and glazed units. The outer edges of each roof shell are capped with three-millimetre-guage bullnose flashing (coated metallic silver) which conceals the guttering. The building's geometry posed practical problems for the installers and on-site welders, and a complex scaffolding system with mechanical platforms and cradles was required to give sufficient access to the structure.

will usually melt and fall on to the source, smothering the flames. This "venting" process is possible due to the metal's low melting point, and has been known to save a building's structural frame.

The South-East Asia and Japan accounted for a large part of aluminium consumption in construction until the financial crisis slowed building down. The sheer volume of large-scale building made it the ideal material – abundance, flexibility and comparative value were the prime requirements for contractors working on a stable of large scale projects simultaneously. The Shanghai Opera House, by Jean Marie Charpentier et Associés, is a flagship example of the trend, its suspended aluminium roof decked in Alucore panels, a lightweight all-aluminium honeycomb material.

The curved aluminium roof of the Long Beach Aquarium, US, by HOK – which opened this year to critical acclaim – shows how far development of metal roofing has come. The painted standing-seam aluminium ebbs and flows across the building in three curved sections, powerfully evoking the waves of the sea. What makes it special, though, is the extremely tight ►





Far left: The edge of the swimming pool roof, showing the mesh used to give building its unique texture
Left: Aerial view of the velodrome roof
Facing page below: Interior detail showing the steel support structure for the velodrome roof meshing

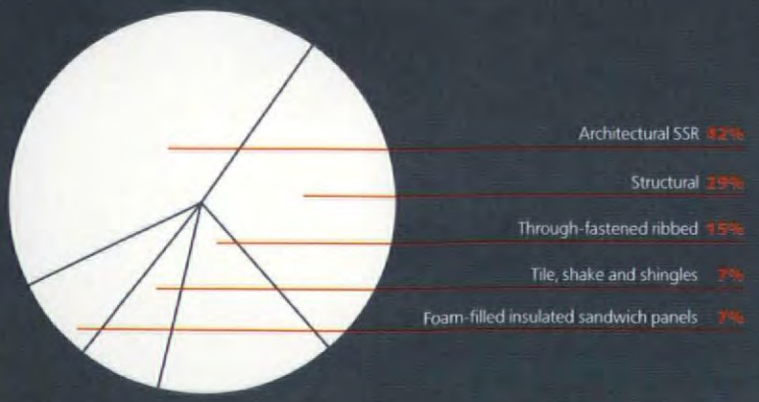
Meshy business

Velodrome and Swimming Pool, Berlin, Germany
By Dominique Perrault 1998

Dominique Perrault's Olympic Cycling Arena and Swimming Pools in Berlin are sunk into the ground, leaving the suspended roofs of both stadiums their only visible external features. Perrault's unconventional metallic steel mesh roof brings a new, textured style to stainless steel. He says of his design: "The roofs give the impression that they are suspended in an orchard of apple trees with none of them rising more than one metre above the ground." The building was originally put out for tender for the Olympic Games in 2000, with the brief for an amphitheatre-type setting in an urban park landscape. The meshing used was originally created for, and used, in the interior of the Bibliothèque National de France, and is now an established product line from supplier GKD. It has since been specified for Rene Prevost's Stade de France in Paris, Ron Arad Associates' Louisiana Museum of Modern Art in Copenhagen and Alfredo Arribas' Eurotower redesign in Frankfurt. Perrault says: "We are only at the beginnings of our investigations in this area."

The mesh panels were custom-produced and supplied cut to measure. They are placed on a stainless steel substructure, and the combined weight of the array is sufficient to hold them in place. The elements are connected through tension-sprung clamps, which can be unclipped and used to secure rolled-up panels when they are moved for cleaning. Passages built into the structure allow staff to reach the roof windows, even though the mesh is strong enough to be walked on, and will not deform under stress. There are generally two types of steel used for architectural mesh: the basic material is chrome nickel steel, which has a high corrosion resistance, but Perrault uses the higher-spec chrome nickel molybdenum steel, designed for use in industrial atmospheric conditions containing chlorides or sulphuric acid. The maintenance levels are low, as it can be cleaned using brushes or pressure equipment.

MOST WIDELY SPECIFIED TYPES OF METAL ROOF SYSTEMS



Source: RSI State of the Industry Report

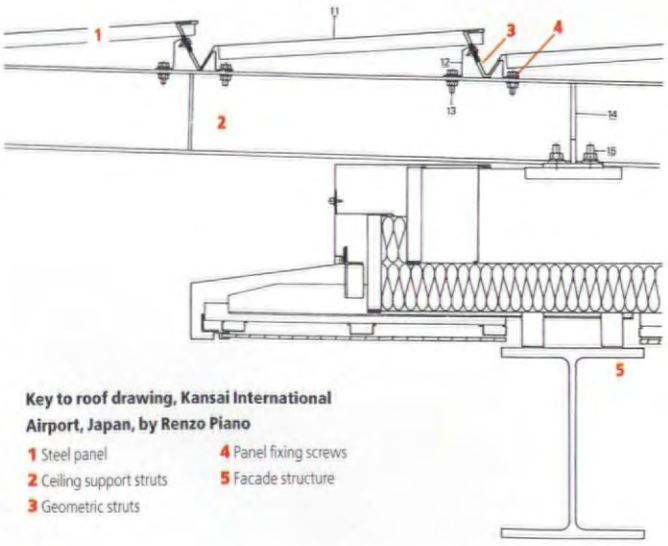
► budget for the building. Project architect Tom Nelson says: "We laid out the aluminium in plan and cut out the shapes using the 'cookie cutter idea', then obtained the structural elements off the peg. The client was happy with the result and we met the budget of US$117 million." That HOK was able to design a bespoke aluminium roof and build it relatively cheaply shows how far the manufacture and supply of the metal has evolved.

• Stainless steel is the standard for metal roofing. It is strong, readily available and versatile, and used across the construction industry. Research by Swedish supplier Avesta Sheffield found that maintenance on standard panels will be required every 25 years, and this seems typical. Perhaps the most recognisable metal roof erected anywhere in recent years is made of steel: Renzo Piano's Kansai Airport. Eighty-two thousand identical panels of stainless steel comprise the winged canopy, which, according to Piano, "spreads over the island like a glider, the archetypal flying machine, the missing link between ground and airplane". The roof is one of the largest ever constructed, and without mass-produced and standardised steel components would have exceeded budget considerably.

Comparative properties of architectural metals

	TCS	Terne	Copper	Lead coat copper	Aluminium	Galv steel	Titanium
Standard thickness	.015 (+coating)	.015	.0217	.0217 (+coating)	.025	.0217	.016
Weight per square ft (lbs)	.71	.65	1.00	1.15	.356	.908	.403
Core metal	Stainless steel	Copper bearing carbon steel	None	Copper	None	Carbon steel	None
Coating	Terne alloy	Terne alloy	None	Lead/tin	None	Zinc	None
Yield strength, 1000 psi	42	30	11	11	10	40	40
Tensile strength, 1000 psi	80	45	35	35	25	52	50
Expansion	8	5	8	8	10	5	3

This is what Perrault refers to as "haute couture" architecture: "The light from the sky is reflected on large flat surfaces resembling the water in a lake during the day. At night, various light emanates from them, creating a magical effect." Stainless steel is such a standard in metal roofing that it is rare to see architects attempting to create dynamic forms of expression with it. There is an undoubted skill in Perrault's approach, which pleases occupants, critics, and most importantly, the client.



Key to roof drawing, Kansai International Airport, Japan, by Renzo Piano

1 Steel panel
2 Ceiling support struts
3 Geometric struts
4 Panel fixing screws
5 Facade structure

The idea is developed further on Aeroports de Paris' Abu Dhabi Airport terminal's mushrooming steel roof, graduating to fritted glass and then clear glass towards the bottom, representing an artificial sky from inside. The panels, although of various material, are all standard and mass-produced, making a spectacular, affordable building. Terne, another traditional roofing alloy, has fallen out of favour because of its lead content which can release toxins into the environment. US-manufacturer Follansbee Steel has come up with an alternative, however – Terne II, a "diet" version which replaces the lead with tin. This smart green alternative is already proving popular in the US.

Titanium is top of most architects' wish lists at the moment, but Colin Allen does not think it will become a standard because steel and aluminium are so far ahead in terms of manufacture and supply. "It will probably replace copper and lead, but I don't think it will take over," he says. The one certain outcome, though, is more design options, better roof performance and cheaper buildings: good news for architects, even better news for clients.

Architects' anniversary showcase

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1: *Asian Hospital and Medical Center, Muntinlupa City, Philippines*
2: *Hunts House, King's College London, London, England*
3: *New Main Hospital, Santa Clara Valley Medical Center San Jose, California*

ANSHEN +ALLEN

Offices:

Anshen+Allen
901 Market Street
San Francisco, CA 94103
USA
Phone: +1 415 882 9500
Fax: +1 415 882 9523

Anshen+Allen
250 West Pratt Street, Suite 1000
Baltimore, Maryland 21201
USA
Phone: +1 410 528 7700
Fax: +1 410 528 8456

Anshen+Allen, Los Angeles
5055 Wilshire Boulevard
Los Angeles, California 90036
USA
Phone: +1 323 525 0500
Fax: +1 323 525 0955

Anshen Dyer
131 Great Titchfield Street
London W1P 8AE
England, UK
Phone: +44 207 663 2800
Fax: +44 207 663 2801

Key Personnel/Contacts:

Derek Parker, FAIA, RIBA
Ken Schwarz, AIA
Roger Swanson, AIA
Gavin Beveridge
Greg Blackburn, AIA
Felecia Borkovi, AIA
Tom Chessum, AIA
Annie Coull, AIA
Sarah Dennison, AIA
Scott Kelsey, AIA
Gary Marshall, AIA
Dennis McFadden, AIA
John McNulty
Anthony Moretti, AIA
Bruce Nepp, AIA
Don Sadler, AIA
Peter Stazicker, AIA, RIBA
Stephen Yundt, AIA
Paul Zajfen, AIA

Size of Practice:

183

Areas of Specialization:

Healthcare, Laboratories, Academic Research and Teaching Facilities, Advanced Technology, Commercial.

Recent Clients:

Asian Hospital, Inc.
Catholic Healthcare West
City of Hope/Beckman Research Institute
Great Ormond Street Children's Hospital
Kaiser Permanente
King's College London
MESA Housing Industries
Meyer Pediatrics Hospital
Norwich Health Authority
Oregon Health Sciences University
Royal Alexandra Hospital
Royal Infirmary of Edinburgh
Salk Institute for Biological Studies
Sandia National Laboratories
Shanghai Jiao Tong University
Stanford University
UCSF Medical Center
University of California
University of Edinburgh Medical School
University of Oxford
University of Sydney
University of York

Firm Profile:

Anshen+Allen is a multi-disciplinary international architecture firm with an award winning reputation for design excellence and client service. Comprised of interlinked offices in San Francisco, Los Angeles, Baltimore, and London, as well as regional affiliates throughout the world, the firm offers a full range of coordinated architectural services to clients worldwide. Founded in 1940, Anshen+Allen has established itself as a recognized leader in the design and planning of healthcare, academic, advanced technology, commercial, civic, and institutional facilities.

As a firm with expertise in the development of design and planning strategies that respond to rapidly changing healthcare technologies and delivery systems, Anshen+Allen has established model design standards, practices, and guidelines for healthcare systems throughout North America, Asia, Europe, Australia, and the Middle East.

The firm has also developed a specialization in the design of state-of-the-art teaching and research buildings, including biology, biomedical, pharmacology, engineering, agriculture, computer sciences, chemistry, physics, earth sciences, and industrial technologies facilities for university, government and research-based institutions. In the last decade alone, the firm has provided master planning and design services on more than 45 academic projects, including administrative, classroom, research laboratory, arts centers, business schools and conference centers.

BLFP

Prof.Bremmer Lorenz Frielinghaus Planungsgesellschaft mbH Architekten BDA

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1: *Christian-Wirth-Secondary School in Usingen*
2: *Community Centre in Bad Vilbel-Dortelweil*
3: *Headoffices of the OVAG (Hessian Board of Energy)*

Main Office, contact information

Strassheimer Strasse 7
61169 Friedberg
Tel. 0049 - (0) 6031-6002-0
Fax. 0049 - (0) 6031-600222
Branches in Berlin, Frankfurt, Leipzig, Weimar

Key Personnel/contacts

Prof. Gerhard Bremmer (director)
Bernhard Lorenz (managing director)
Michael Frielinghaus (managing director)
Karlheinz Burk (Groupleader)
Thomas Fickar (Groupleader)
Torsten Heidt (Groupleader)
Volkmar Trittin (Groupleader)
Olaf Fritz (Controller)

Size of Practice

82

Areas of specialisation

Master-Planning, Urban Planning
Architectural Project Development
Administration, Industrial Buildings,
Sports and Recreational Facilities
School Buildings and Educational Facilities
Community Centres
Residential Buildings

Recent Clients

Deutsche Bundesbank, Frankfurt
Landessportbund Hessen e.V., Frankfurt
FAG (Flughafen Frankfurt/M. AG), Frankfurt
VW (Volkswagen AG), Wolfsburg
Deutsche Lufthansa AG, Frankfurt
FAZ (Frankfurter Allgemeine Zeitung), Frankfurt
REWE Center Management und Verwaltungs GmbH, Köln
GEG Grundstücksentwicklungsgesellschaft
H.H. Göttsch KG, Köln
Trammell Crow Nederland
DBImm (Deutsche Bahn Immobiliengesellschaft mbH), Nürnberg
Deutsche Bahn AG
DeTe Immobilien (Deutsche Telekom)
Bilfinger + Berger AG
Philipp Holzmann AG
KG Bayerische Hausbau GmbH & Co, München
Rosco GmbH & Co. KG
Stadt Berlin
Stadt Rüsselsheim
Stadt Wiesbaden
Stadt Frankfurt/M.
Stadt Bad Nauheim/Stadt Friedberg
Main-Taunus-Kreis, Hofheim
Rheingau-Taunus-Kreis, Bad Schwalbach
Wetteraukreis

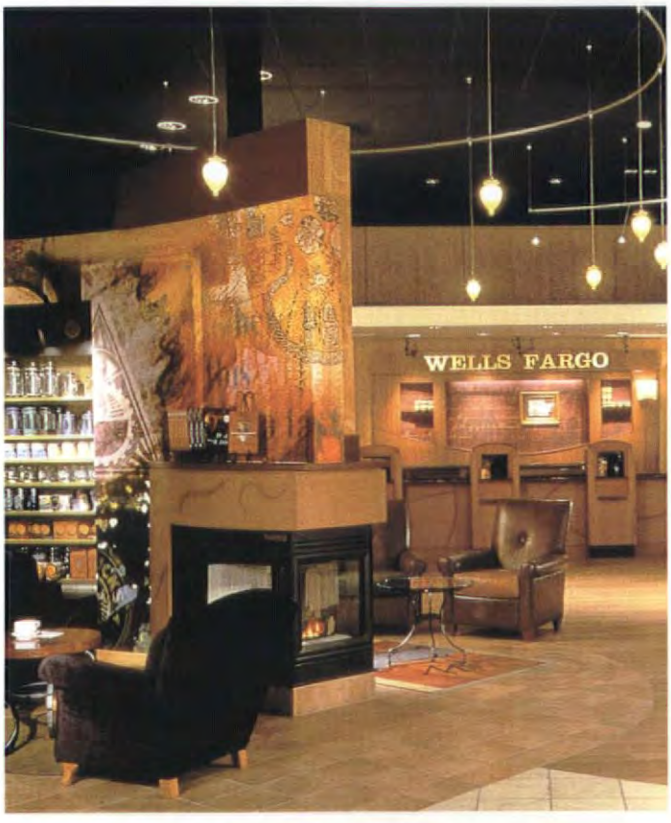
Practice Profile

BLFP was founded 65 years ago and started its company history with several won competitions on office buildings and communal buildings. Within this time the number of employees augmented continuously as well as the areas of specialisation, including such as urban planning, legal procedure, interior design, civil engineering, etc. Today our work covers the whole spectrum of planning and building. Together with the client BLFP develops the most adequate solution for the different projects concerning design, function and economy. Throughout BLFP's long planning tradition certain concentrations have been crystallised. The company is particularly experienced in all types of educational buildings (e.g. Training Centre of the German National Bank in Eltville). In the last decade a main focus was put on sports- and recreation facilities such as Landessportbund Hessen in Frankfurt, Recreation Centre Bad Langensalza, Sports- and Recreation Centre in Frankfurt/M.-Kalbach. Recently BLFP is also emphasising on the development and planning of mixed use office- and administration buildings like the Rosenheimer Platz in Munich, the Frankfurter Allee Arcade in Berlin and the Maxtorhof in Nürnberg.

Through the advantage of having covered the whole planning procedure from urban planning to construction in one hand BLFP is developing a new focus on setting up projects by putting together authorities, developers and others involved in the building sector. Therefore BLFP has enlarged its range to feasibility studi es, reports and architectural project development.

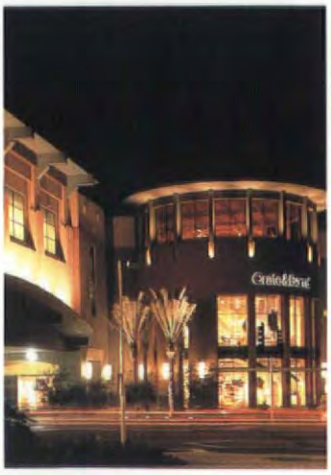
Since 1998 BLFP is certified after the regulations of the DIN EN ISO 9001, which assures a high quality standard concerning the management, planning procedure, and construction of a project.

Microsoft World Headquarters, Redmond, Washington



Wells Fargo+Starbucks Prototype, Multiple locations in California
1998 ISP/VM+SD International Store Design Award Honourable Mention

Bank of China Branch Headquarters
Shanghai, China



Scottsdale Fashion Square
Scottsdale, Arizona
First Place, 1999 SADI Award

Callison

Profile of firm

Callison was founded in 1975 and quickly established itself by creating projects that influence the way people live, work and play, all around the globe. Renowned as a specialist in helping clients give shape to business strategy, today Callison is one of the largest design firms in the United States.

Intelligent design. Callison creates distinctive design by studying and listening to the community we are entering — its demographics, cultural customs, motivations, likes and dislikes. With this information and our industry knowledge as the framework, we create relevant architecture that connects to its users and its community. Callison designs facilities that are more than just shopping centers or hotels or office buildings: We create places people want to be.

Powerful ideas. The spirit of innovation lies at the core of our culture. It infuses our attitude, our research, our solutions and implementation methods. To be a true design leader in the retail, hospitality, corporate and healthcare markets, Callison must not only be on top of new trends and issues — we must also be able to apply implications of these trends to design. By staying well-versed in changing industry trends, we don't just solve problems but fulfill vision.

Worldwide access to experts. Callison contends that project success depends on design talent, management and communication strategies — not on a global network of expensive branch offices. Callison has built an international practice based on this simple philosophy: put our people and resources where our clients need them, at the time they need them most. Our success working with clients around the world has underscored our conviction that creativity and innovation comes from the cross-pollination of industry experts.

Main offices, contact information

1420 Fifth Avenue, Suite 2400
Seattle, Washington 98101
Tel: 206-623-4646
Fax: 206-623-4625
Email: info@callison.com

Key personnel/contacts

William B. Karst, AIA (Chief Executive Officer)
Robert J. Tindall, AIA (President)

Size of Practice

416

Areas of specialisation

Retail-based urban mixed-use developments
Department stores, shopping centers and specialty stores
Theaters and entertainment facilities
Hotels, resorts and golf communities
Corporate offices and campus planning
Multi-family residential projects
Health care facilities, assisted living and senior housing
Image Design
Corporate Facility Consulting

Recent clients

Aekyung Department Store (Korea)
Ayala Land (Philippines)
Becton/Coles Myer
The Boeing Company
Eddie Bauer
Hang Lung Development Co. Ltd.
Hewlett-Packard Company
L.L. Bean
Lotte Department Store (Korea)
Majid Al Futtaim Group of Companies (UAE)
Majid Al Ghurair Group
Microsoft Corporation
Nike, Inc.
Nordstrom, Inc.
Queensland Investment Corp.
Radisson Hotels
Reichmann International
Seibu Department Stores Ltd. (Japan)
Simon Property Group
Sisters of Providence Hospitals
Starbucks Coffee Company
Starwood Hotels and Resorts Worldwide, Inc.
Sun Microsystems
Taubman
TrizecHahn
Washington Mutual
Westcor Partners
Westin Hotels and Resorts

Architekturbüro

Prof Dipl-Ing Harald Deilmann

Architects & Stadtplanes

Provinzialversicherung, Münster

Fachklinik, Engelskirchen

Spielbank, Hohensyburg

Head Office

Prinzipalmarkt 13
48143 Münster
Tel: +49 (0) 251 4188-0
Fax: +49 (0) 251 4188-188

Other Offices

Cecilienallee 13
40474 Dusseldorf
Tel: +49 (0) 211 45/1810
Fax: +49 (0) 211 4543154

Karl-Liebknecht-Str 21
14482 Potsdam
Tel: +49 (0) 331 7481611
Fax: +49 (0) 331 7482031

Key Personnel

Principal: Harald Deilmann

Management Team:
Thomas Deilmann
Peter Junglas
Heinz Leyer
Peter Tormin

Size of Firm

40 employees

Recent Clients

Westd Landesbank
Deutsche Bank
Commerzbank
Provinzialversicherung AG
ECE Projektentwicklung
Karstadt AG
LVA Rheinprovinz
Philipp Holzmann AG
LVA Brandenburg
Rhein Sparkassen & Giroverband
LVA Sachsen
Finanzminister Sachsen Anhalt
Bundesbauministerium
Bauminsterium NRW
Stadt Essen
Stadt Düsseldorf
Dresdner Bank
RWI/WestLB
Stadt Münster
Allianz Vers AG
Westd Spielbanken GmbH
Nordwestlotto
Finanzministerlum Brandenburg

Practice Profile

The practice was established in 1955, and the Düsseldorf and Potsdam offices were opened in 1973 and 1991 respectively. All three offices maintain high architectural standards, offering full services from project development through to completion and guaranteeing optimum results. Project teams are established and directed by qualified, experienced staff.

Areas of Specialisation

The firm offers overall planning for a wide range of architectural tasks and commissions, including project management, cost control and quantity surveying. The firm specialises in masterplanning, urban design and renewal, and interior design.

Additional Information

The practice works in close cooperation with specialist engineers and experts in the fields of structural engineering, climate control, acoustics, and landscape architecture.

As the principal is a university professor of building design and town planning, the firm is constantly in touch with innovative research and technology.

Hellmuth, Obata + Kassabaum, Inc.

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1: *Stadium Australia is Australia's first world-class stadium and is the largest facility in the history of the modern Olympic Games.*
2: *Japanese American National Museum entry level plaza.*
3: *The exterior of 40 Grosvenor Place is a high performance facade of natural limestone and glass.*
4: *The Long Beach Aquarium roof features undulating curves echoing the movement of the ocean waves.*

Head Office

211 North Broadway
Suite 600
St. Louis, Missouri USA
Telephone: 314-421-2000
Fax: 314-621-0944
e-mail: contact@hok.com

Additional offices

Atlanta
Berlin
Brisbane, Australia
Chicago
Dallas
Greenville, South Caroline
Hong Kong
Houston
Kansas City
London
Los Angeles
Mexico City
Moscow
New York
Newport Beach, California
Orlando
Ottawa
Prague, Czech Republic
San Francisco
Seattle
Tampa
Tokyo
Toronto
Warsaw, Poland
Washington, D.C.

Key Personnel Contacts

Gyo Obata, FAIA, Co-Founder and Co-Chairman
Jerome J. Sincoff, FAIA, President and CEO
Larry D. Self, FAIA Executive Vice President
Patrick E. MacLeamy, Executive Vice President

Size of Practice

1,800

Areas of Specialisation

Aviation
Conservation and Preservation
Convention Centers
Corporate
Education
Health Care
Hospitality
Justice
Military
Mixed-Use
Public and Institutional
Retail and Entertainment
Science and Technology
Senior Living
Sports Facilities
Urban Planning

Recent Clients

Grosvenor Estates
Half Century More Co., Ltd
Microsoft
Mobil
Northwestern Memorial Hospital
Nortel Networks
Sun Microsystems
Reliance Industries

Profile of Firm

Hellmuth, Obata + Kassabaum (HOK), Inc. is a global provider of architectural, engineering, planning, interior, graphics and consulting services for the built environment. With offices in 26 cities worldwide, HOK is one of the world's most influential design firms. HOK is committed to delivering design excellence and quality service that enables clients to achieve their goals and enrich their lives.

HOK manages the total planning, design and construction process for projects of any size and scope, anywhere in the world. Our regional offices are linked with specialty design groups, allowing us to meet the growing client demand for specialized expertise in specific facility types.

HOK's core belief of integrating design excellence with client needs is based on the philosophy that built environments must go beyond pure function to enhance the quality of life for those who live and work in them. Each HOK project is approached individually, without preconceptions and designed to serve the particular needs of the clients, always with the goal of achieving design excellence.

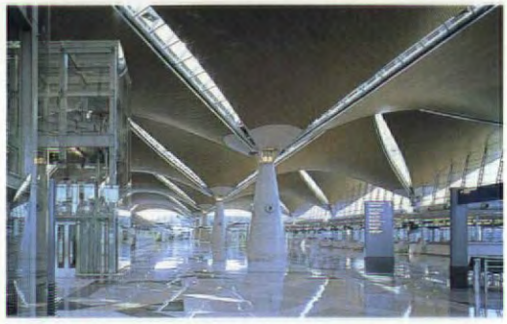
Softopia Japan Center

New Wing of Vincent Van Gogh Museum

Kuala Lumpur International Airport

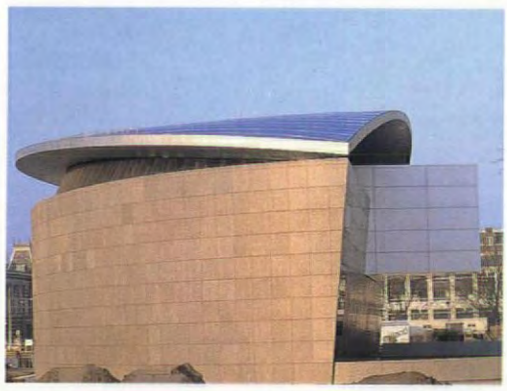
Softopia Japan Center

New Wing of Vicent Van Gogh Museum



Kuala Lumpur International Airport

New Wing of Vincent Van Gogh Museum



New Wing of the Vincent Van Gogh Museum

Kuala Lumpur International Airport

Kuala Lumpur International Airport

Softopia Japan Center

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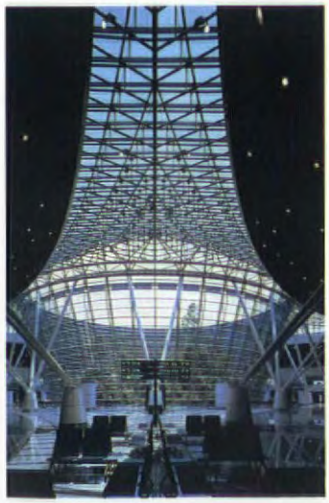
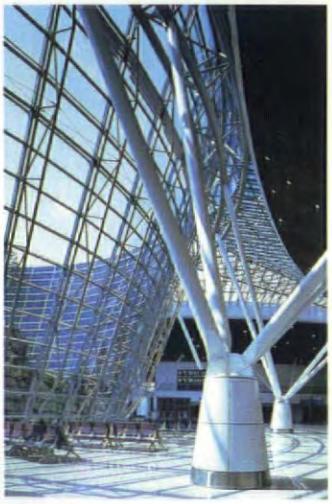
Kuala Lumpur International Airport

New Wing of Vincent Van Gogh Museum



Kuala Lumpur International Airport



Kuala Lumpur International Airport

KISHO KUROKAWA
architect and associates

Head Office

Aoyama Building 11th floor
1-2-3 Kita Aoyama, Minato-ku
Tokyo 107-0061
Tel: +81 3-3404-3481/8
Fax: +81 3-34-4-6222

KKAA Europe:
66, Rue Cantagrelle, 75013 Paris
France
Tel: +33 1.47.72.62.79
Fax: +33 1.47.72.58.23

Key Personnel

President	Kisho Kurokawa
Executive MD.	Tadao Shibata
Managing Director	Hank Cheriex
Managing Director	Naotake Ueki
Director	Yoshiyuki Umebayashi
Director	Masahiro Kamei
Managing Director	Ichiro Tanaka
Auditor	Wataru Honda
Advisor	Iwao Miura

Size of practice:

205

Areas of Specialisation:

Architecture:

- Government buildings
- Museums
- Theatres and cultural centres
- Educational buildings
- Skyscrapers
- Event Halls
- Office building
- Banks
- Retail development
- Hotels
- Recreational centres
- Sporting facilities
- Research institutes
- Hospitals
- Welfare facilities
- Religious buildings
- Airport
- Expo-Pavillions
- Residences
- Urban planning
- Regional development

Landscape
Interior, Art Work & Furniture

Profile of firm:

Kisho Kurokawa architect & associates (KKAA) executes each project with three basic characteristics.

The first characteristic is the atelier-like creative atmosphere, with Kisho Kurokawa as the core architect.

The second characteristic, an antithesis of the first, is the large scale and efficient engineering-oriented atmosphere.

The two elements above are kept in good harmony by the talent of the architect Kisho Kurokawa, and the dedication of its staff.

The third characteristic is the introduction of in-house computer, or Computer Aided Design System (CAD System). Developing a sophisticated design with high technology continuously updated, the multipurpose adaptability of the architecture is encouraged and the rationalisation of the design itself is considered.

On the basis of the tree elements mentioned above, the scope of services KKAA provides general services to the construction management, and other services that are deemed necessary to fulfill the particular requests from a client.

KKAA has syndicates all over the world, and provides international services actively.

Recent Clients:

The Government of Malaysia
Van Gogh Museum, The Netherlands
Shenzhen City, China
Fukui Prefecture, Japan
Osaka Prefecture, Japan
Oita Prefecture, Japan
Toyota City, Japan
Malaysia Resources Company Berhad Malaysia
FACB, Malaysia
Kyocera Co, Ltd, Japan
Kyocera Realty Development Co, Ltd, Japan
Kinta Kellas Public Limited Company, Malaysia
Fractal Design and Construction Company, Germany

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Kohn Pedersen Fox Associates (International) PA

Architects and Planning Consultants

KPF (London) is an internationally recognised practice, undertaking a range of projects, from corporate headquarters, commercial offices, educational, governmental and residential facilities to transportation and urban regeneration projects.

The practice emphasises the civic responsibility of buildings, as well as the importance of engineering technology and sustainability, in shaping the built environment.

KPF (London) has received many awards, which recognise a diverse range of design and technical accomplishments, the most recent being the 1999 British Council for Offices Award for National Best Urban Workplace for Thames Court in the City of London.

Other recently completed projects include the Provinciehuis Headquarters for the Ministry of South Holland. Projects currently under construction, and in design include, the redevelopment and extension of the World Trade Centre in Amsterdam, the masterplan development of Hoofddorp in the Netherlands, The Rothermere American Institute at Oxford University, The new Cyprus Houses of Parliament, AIG Europe Headquarters London and the Headquarters for the Abu Dhabi Investment Authority.

Scope of Services

Architecture
Urban Planning
Space Planning
Programming
Building Analysis
Interior Design
Graphic Design

Practice Size

101

Address

13 Langley Street
London WC2H 9JG
England
Telephone + 44 171 836 6668
Fax + 44 171 497 1175
www.kpf.com

Partners

Lee Polisano FAIA RIBA
David Leventhal AIA

Senior Associates

Ron Bakker
Kieran Breen RIBA
Karen A Cook AIA
J William Davis BArch
Kevin P Flanagan AIA
Fred Pilbrow RIBA

Associates

John Bushell BA DipArch(Cantab)
Lars Hesselgren RIBA
Steve King RIBA
David M Long RIBA
Marjorie Rodney
Bernard Tulkens

1: *Thames Court, Rabobank HQ, London UK Photo: Paul Tyagi*
2: *Provinciehuis, Ministry of South Holland, Den Haag, The Netherlands Photo: Christian Richters*
3: *AIG Europe HQ, London, UK Photo: Eamonn O'Mahony*

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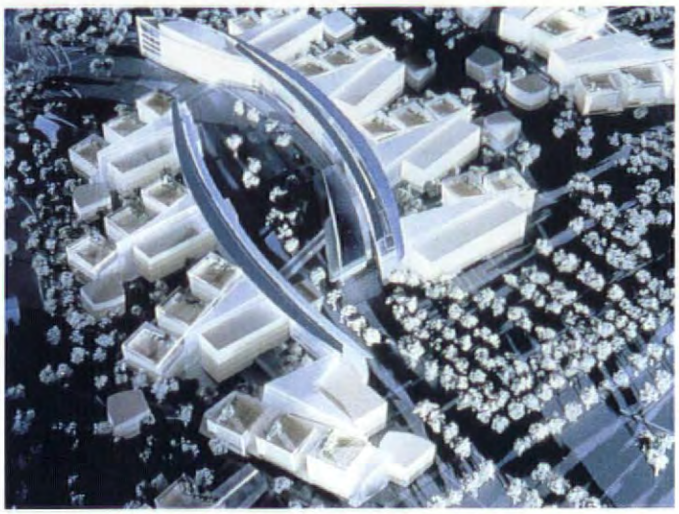

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NBBJ

Offices locations

Seattle, Washington
Columbus, Ohio
San Francisco, California
New York, New York
Los Angeles, California
Research Triangle Park, NC
Taipei, Taiwan
Tokyo, Japan
Oslo, Norway

For more information, please visit www.nbbj.com

Key personnel

Neil Anderson (partner)
William Bain (partner)
Freidl Bohm (partner)
Richard Buckley (partner)
Dennis Forsyth (partner)
Lawrence Helman (partner)
James Jonassen (partner)
Susan Jones (partner)
John Pangrazio (partner)
Scott Wyatt (partner)
David Zimmerman (partner)

Size of practice

800

Areas of specialization

Architecture
Planning
Urban Design
Interior Design
Space Planning
Graphic and Environmental Design
Economic and Financial Feasibility

Project types

Health Care
Corporate Design
Commercial Architecture
Sports & Entertainment
Airports
Higher Education
Justice
Research & Advanced Technology
Retail Concepts
Senior Living Design
Urban Design & Planning

Firm profile

NBBJ is the world's fifth largest architecture firm with a staff of 800 and projects located throughout North America, South America, Asia, and Europe. Rigorously design-focused, the firm practices in twenty-one studios spread among six U.S. offices. Each studio is strongly committed to serving its clients and society through a balance of design, technology, process, and communication. No building or interior designed by the firm reflects a single firm-defining style, but all are informed by the same set of complex deeply held principles. NBBJ is recognized for its innovative design solutions in health care, sports and entertainment, corporate office buildings and a wide range of other building types.

Recent clients

Telenor
Reebok International Ltd.
Adobe Systems Inc.
Teledesic
Vulcan Northwest
Microsoft
Novartis
Starbucks Coffee Company
City of Hope Medical Center
Koo Foundation
Swedish Medical Center
Huntington Bank
Ralph Lauren Polo
Starwood Lodging

1: *Telenor World Headquarters, Oslo, Norway*
2: *Model, Telenor World Headquarters*
3: *Swedish Medical Center, Seattle Washington*
4: *Staples Center, Los Angeles, California*
5: *Hall of Still Thought, Taichung, Taiwan*

1. *DB Cargo Client Service Centre, Duisburg*

2. *Galeria Ventuno Urban Entertainment Centre, Stuttgart*

3. *ARAG Headquarters, Düsseldorf (joint venture with Foster & Partners)*

4. *DB Cargo Headquarters, Mainz*

5. *Space Park, Bremen (joint venture with Architectura Vancouver)*

6. *CentrO Shopping and Leisure Centre, Oberhausen*

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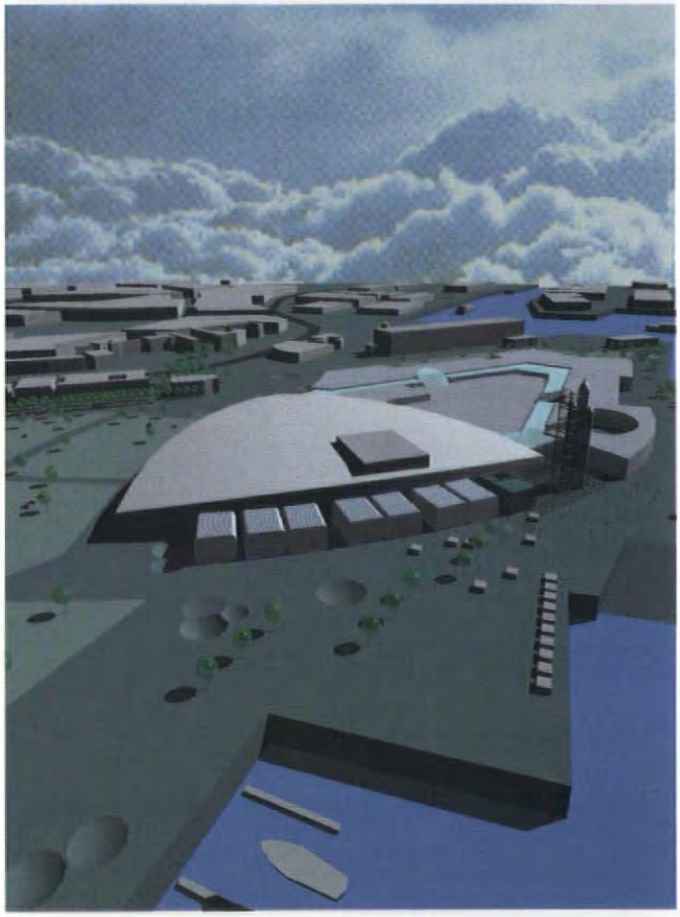

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RKW
Rhode Kellermann Wawrowsky

Architektur + Städtebau

Düsseldorf
Berlin
Frankfurt M.
Leipzig
Oberhausen

Main office

Tersteegenstraße 30
D 40474 Düsseldorf

Tel: +49 (0)211-4367-0
Fax: +49 (0)211-4367-111

Email: sekretariat.d@rkw-as.de
Internet http://www.rkw-as.de

Directors

Friedel Kellermann BDA, AIV
Hans-Günter Wawrowsky BDA, DASL
Jürgen Weimer
Wojtek Grabianowski
Dieter Schmoll BDA
Johannes Ringel BDA

Size pf Practice

350

Areas of specialisation

Shopping centres, department stores and business structures, administration and commercial buildings, banks, leisure centres, urban entertainment centres, cinemas, hotels, railway stations, housing, rehabilitation and building in an existing context, refurbishment and revitalization, outline urban planning.

Recent Clients

ARAG
Deutsche Bahn AG
Douglas Holding
Philipp Holzman AG
Horten AG
Karstadt AG
Köllmann GmbH
Marks & Spencer
Mediconsult AG
Peek & Cloppenburg
P&O
Stadium Group
UCI GmbH
UFA GmbH
Warner Brothers
Westdeutsche Immobilien Bank
WestProject & Consult GmbH
Woolworth GmbH

Profile

RKW - Architecture and Urban Planning

As one of the major architectural practices in Germany that is successful on a national scale, RKW can look back on more than 40-years development. The RKW partnership - Rhode Kellermann Wawrowsky - was founded in 1971 from the nucleus of Helmut Rhode's office. In the meantime, further partners have joined the practice, and RKW today employs more then 350 assistants in its offices in Düsseldorf, Berlin, Frankfurt-on-Main, Leipzig and Oberhausen.

In addition to traditional areas of architecture, such as housing, administration and commercial developments, for many years now department and shopping centres have formed an important focus of the work of the office.

RKW is also one of the most innovative practices working in the field of shopping malls and urban entertainment centres today. The latest projects realized by the office - as well as those still in the planning stage - reveal the influence of new approaches to urban development and new structures in commercial life. The CentrO in Oberhausen, built for the Stadium Group and P&O, can be seen as a pioneering scheme for future shopping centres. The combination of mall and urban entertainment centre planned for Stuttgart, the Galeria Ventuno, is a pilot scheme that forms part of the inner-city extension programme "Stuttgart 21".

The competence and authority the architects have required over the years through their continuous planning work in all realms of construction, together with their successful participation in competitions, are evident not only in the numerous large-scale projects they have realized, but in the recognition RKW has received in the form of national and international prizes and awards for the quality of its work.

An unavoidable aspect of the design work of the practice is the search for innovative technical developments in the field of constructional, service and facade technology. In this way, RKW seeks to meet ever increasing ecological demands with state-of-the -art solutions. With its glazed ventilation stacks incorporated in the two layer facade, the ARAG tower in Düsseldorf, which is under construction at present, is one of the most interesting developments in this field.

Robert Gregg

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Courtesy Nikko Hotels

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Tim Griffith/Esto

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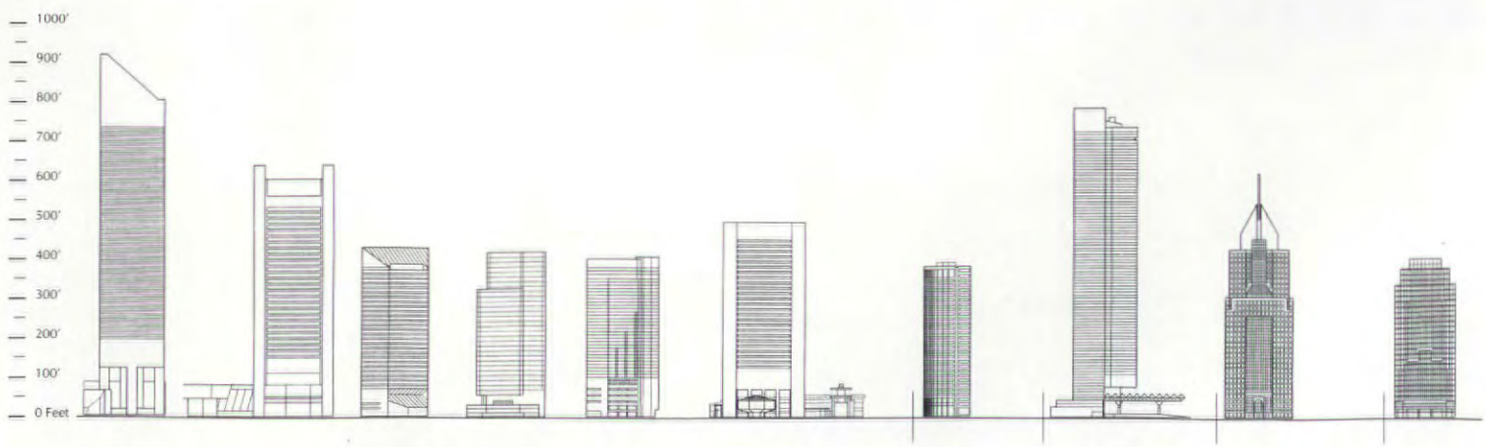
1: Venetian Casino Resort

2: Landmark Tower
Yokohama, Japan

3: Chancery Building
US Embassy, Singapore

Below: From Citicorp Center to Landmark Tower; 25 years of high rise buildings



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TEL: (617) 491-6450
FAX: (617) 491-7104
WWW.TSA-ARCH.COM

Size of practice

90

Key Personnel

Richard Green, FAIA
W. Easley Hamner, FAIA
Scott Simpson, FAIA
C. Ronald Ostberg, AIA
James E. Beyer, AIA
William A. McGee, AIA
Philip T. Seibert, IIDA
Michael J. Kraus, AIA

Areas of Specialisation

Architecture
Interior Design
Landscape Design
Planning

Citicorp Center, New York

Practice Profile

Established in 1949, The Stubbins Associates (TSA) has successfully completed an unusually broad range of projects both nationally and internationally. Professional services include feasibility studies; programming and master planning; architectural, interior and landscape design; and technical services including construction documentation and construction administration. The firm utilizes the most advanced CAD technology, including 3-D modeling, on all projects.

Directed by eight principals, the firm's highly qualified and experienced professional staff take pride in their teamwork with client, consultants, and contractors. The size and structure of the firm are designed for active, hands-on participation by a principal-in-charge, who is assisted by a project manager and project designer to ensure a high degree of communication, coordination, and continuity for each and every project.

TSA is one of the few firms to have been awarded the prestigious "Architectural Firm Award" by the American Institute of Architects, placing it at the highest echelon of the professional. In addition, TSA's projects have won more than 160 awards for design excellence, both nationally and internationally. Some of its better known projects include Citicorp Center in New York, the Federal Reserve Bank of Boston, the Ronald Reagan Presidential Library in California, Congress Hall in Berlin, and the Landmark Tower in Yokohama - the tallest building in Japan.

Recent Clients

Amgen
Bally's Park Place Casino Hotel
Boston Design Center
Boston University
Bristol-Myers Squibb Company
Carleton College
Citibank
Commission of Foreign Trade, Anhui Province
Coopers & Lybrand
Cornell University
The Cousteau Society
Development Bank of Singapore
Doubletree Hotels Corporation
Duke University
Federal Reserve Bank of Boston
Fidelity Capital Corporation
Harcourt General, Inc.
Harrah's Marina Hotel Casino
Harvard University
Houghton Mifflin Company
Indiana Historical Society
JMB/Urban Development Company
Kuwait Ministry of Planning & Public Works
Lotus Development Corporation
Maersk Inc.
Marriott Corporation
Massachusetts General Hospital
The MITRE Corporation
Mitsubishi Estate Co., Ltd.
Motorola
North Carolina State University
The Prudential Insurance Co. of America
Ronald Reagan Presidential Library Foundation
The University of Chicago
U.S. Department of State
U.S. General Services Administration
University of Massachusetts
Vanderbilt University
Venetian Casino Resort
Westinghouse Furniture Systems

TSA previously featured in the November 1997 issue of World Architecture.

Renovation of the Haiger Municipal Hall

2250m² of stainless steel strip provides impermeability that lasts

Klaus B. Maier

On the A45 autobahn, south of Siegen, is the exit to Haiger-Burbach. Less than 60 minutes drive from the big cities of the Rhine-Main and Rhine-Ruhr areas, located in the geographical centre of the old Federal Republic of Germany, is the old town of Haiger, which is typical for its framework construction.

The 1,200 year-old town has a colourful history. One of its principal attractions is the Church of Haiger. Built in 1408, the church is notable for the magnificent paintings in its choir hall. Next to the church is a three-storey building, a lovingly restored framework construction. Today it houses the museum of local history (above).

The seventies-style town hall and municipal hall, as well as the activities of the 19,000 inhabitants demonstrate the cultural diversity of Haiger.

The renovation work

The municipal hall of Haiger was inaugurated on 10 January, 1974. The exterior (picture 1) is a strictly delineated construction, broken up by glass windows and faced with natural stone. The building has a flat roof, which is poorly insulated. When exposed to extreme conditions over a number of years - such as the presence of 600 people - the concentrations of vapour produced, as opposed to the periods in-between functions when humidity remains normal, causes the roof to leak. The NIROSTA® Metal Roof System by ASSC - based in nearby Siegen - was chosen as the most appropriate solution to the problem given that the existing roof could be conserved and used as the substructure. The only requirement was the removal of the old gravel layer.

Once cleared the roof was ready for the laying of a sloping insulation covering - the slope was achieved by laying insulation slabs of different thicknesses. Walk-on type rock wool insulating slabs were overlaid (picture 2). Contractors, Kentzler made the decision to utilise this slope solution in order to enable swift rain removal via round drains of 100 millimetre in diameter (picture 3). Due to the existing parapet walls, the use of gutters was superfluous (picture 4). The roll seam welding of the stainless steel ensures that the stainless steel roofing system is absolutely water-tight, even on 0-degree roofs.

The handling

Stainless steel strips are usually supplied with a width of 625 millimetres x 0.4 millimetres in thickness, on coils of approximately 200kg. For Haiger municipal hall renovation 1,200 millimetre wide coils were used (pictures 5/6). The roll-seam welded sheets has to be loaded with gravel, which counteract wind suction loads, thus bypassing the need to use cleats. In order to protect the roof cover from wind-action, prior to the application of the gravel, barrels of water were distributed at premeditated intervals on the roof (picture 7).

On site, the coils were cut to the required sheet lengths and the long seam edges were folded vertically to a depth of 28 millimetres. In the folds, approximately 18 millimetres from the surface, the two sheets were joined using special roll seam welding machines. By the subsequent unilateral folding down of the welded seem through 180° minor welding distortions are compensated and a heavy duty lock seam is created - this procedure does not contribute to the water tightness of the roof cover.

Testing

ASSC is the owner of the quality seal for the NIROSTA® Metal Roof System. The seal comes with a 10-year guarantee - to a maximum of DM2,000,000. If between the eleventh and thirtieth year, after installation, damage is caused by the corrosion of material, re-installation is provided free of charge. This warranty extends beyond the existence of the original installing company. Membership of the Association of Quality Seal is obligatory for all installation companies, in the interests of the client.

On completion of the renovation work at Haiger Municipal Hall a water-tightness check was carried out by the TW (Technical Checking Organisation), Nordrheim-Westfalen. This test involved flushing-out the stainless steel roof installation, from below, with helium (pictures 8 - 11). The helium will pass through any unsealed joint due to its low density. For this procedure the TW have developed a U-shaped plexiglas probe, which fits over the joint. In this instance the tests proved satisfactory, despite the numerous complicated claddings of air shafts, water drains and light domes (pictures 12 and 13).

Conclusion

The highly corrosion-resistant stainless steel, combined with roll seam welding, provides a roof of almost unlimited life expectancy. Even entirely flat roofs can become entirely waterproof using this system. The NIROSTA® metal roof system requires no modification to the existing structure. The existing roof construction, with the exception of the gravel, can be preserved in its entirety, thereby avoiding the problem of waste disposal.

Both ASSC and Kentzler believe that the renovated roof of Haiger Municipal Hall is now watertight and will survive the ravages of time.

Klaus B. Maier,
General Manager
ASSC GmbH,
Köhlerweg 27
d-57250 Netphen, Germany
Tel: +49 2738 6943 - 0
Fax: +49 2738 6943 - 26

Project data:	
Client	The town of Haiger
Constructor	Kentzler, D - 44145, Dortmund, Germany
Roof surface to be redeveloped	2250 square metres
Sub-structure	Single sheet flat roof with heat insulation

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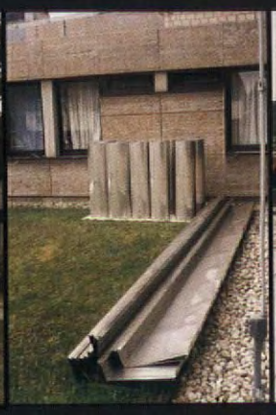

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12

Opposite page

Haiger Church, built 1408. The town museum can be seen in the foreground

This page

1 *The Municipal Hall, built 1973*

2 *For the swift drainage of water polystyrene sheets were applied to the faulty flat roof. Walk-on rock-wool insulation sheets were overlaid*

3 *Rainwater is quickly drained by circular drainage pipes, 100 mm in diameter*

4 *The parapet walls limit the roof surface,meaning that gutters cannot be installed. Also shown are the stainless steel strips that replaced the gravel*

5 *Partial view of the municipal hall with hoist*

6 *1200mm wide coils supplied to the site. Pictured in the foreground are folded cleats for the cladding of the parapet walls*

7 *The stainless steel sheets are held down by 50 litre water barrels. A layer of gravel will provide storm protection at a later date*

8 *Preparations for the Nordrheim-Westfalischen test*

9 *The stainless steel roof surface flushed from below with helium*

10 *The TUV test equipment with its sniffing probe*

11 *The true tightness of the folds can be established with the aid of special devices*

12 *Special care was necessary to realise the expert cladding of the elements that penetrated the roof*

13 *Light domes, air shafts and water inlets projecting from the existing roof structure*

13

1

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Left: The World Trade Center in Santiago, Chile; **Middle:** Cairo, Egypt's amusement park, Dreamland; **Bottom:** The United Arab Emirates, The Lamcy Plaza

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GranitiFiandre praises itself to have installed its products in many well-known places worldwide, like the White House (USA), the NASA Center (USA), Kennedy Airport (USA), Heathrow Airport (UK), Ferrari and Maserati Industries (Italy), and then in airports, stations, shopping centres, hotels, restaurants, banks, façades, offices and private homes in almost every country of the planet.

2

3

1: *Centre Mall - Provo - Utah - USA*
collection: Graniti Reali
products: Bianco Montorfano, Indian Red, Black Galaxy
finish: semi-matte
2: *Heathrow Express Train Terminal - London - UK*
collection: Graniti
products: Apricena, Absolute
special finish
3: *Private Home - Lille - France*
collections: Pietre Preziose, Pietre Naturali
products: Victoria, Lasa
finish: polished and matte

Contact details:
GranitiFiandre SpA
Via Radici in Piano, 112
42014 Castellarano (RE)
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Clockwise from top left, 1&2: ST282 Stainless & Teak Stacking Lounge Chair; 3&4: Regent Jakarta Hotel Project, Jakarta, Indonesia; 5: ST281 Stainless & Teak Stacking Dining Chair; 6: ST288 Stainless & Teak Occasional table

Thoughts of Monterey, California, inevitably bring to mind visions of the spectacular coastline at Big Sur, where the Pacific Ocean beats ineffectually against timeless mountain slopes. It's an apt metaphor for Summit Furniture: the overwhelming impression it conveys is one of solidity and resistance to the elements.

This idea is reinforced by the material in which it is made: solid Tectona Grandis, a particularly robust variety of teak. Grown in Indonesia on certified plantations developed by the Dutch back in the 1800s, it's an extremely dense and durable wood, traditionally used for building ships. Unfinished, it develops a rich grey patina as it is exposed to weather but is otherwise unaffected. Given minimal maintenance it will last for generations.

This point has been well taken by specifiers of luxury contract furniture for the most demanding outdoor conditions: witness Summit's numerous installations on super-yachts, as well as in fine homes, spas, resorts and luxury hotels around the world.

Summit Furniture, Inc. was founded in 1979, initially to manufacture the designs of American designer Kipp Stewart, whose simple classic forms have won numerous international design awards. Amongst these are three first place ASID "Best in Category" awards for the First Cabin and Picket Collections and a Roscoe award for the Aperture Collection.

Working from its headquarters on the Monterey peninsula, Summit has received further international acclaim, with widespread installations from London's Swiss Bank and Hawaii's Four Seasons Wailea to The Inn at Spanish Bay at Pebble Beach, California.

All Summit furniture is first designed for comfort,

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The Caneel Bay Resort, Virgin Islands • Carmel Valley

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Summit Furniture (Europe) Ltd.
198 Ebury Street, Orange Sq., London SW1W 8UN
Telephone: + 44 (0) 207 259 9244 Facsimilie : + 44 (0) 207 259 9246

Summit Furniture, Inc.
5 Harris Court, Monterey,CA 93940
Telephone : 1 831 375 78 11 Facsimile : 1 831 375 0940

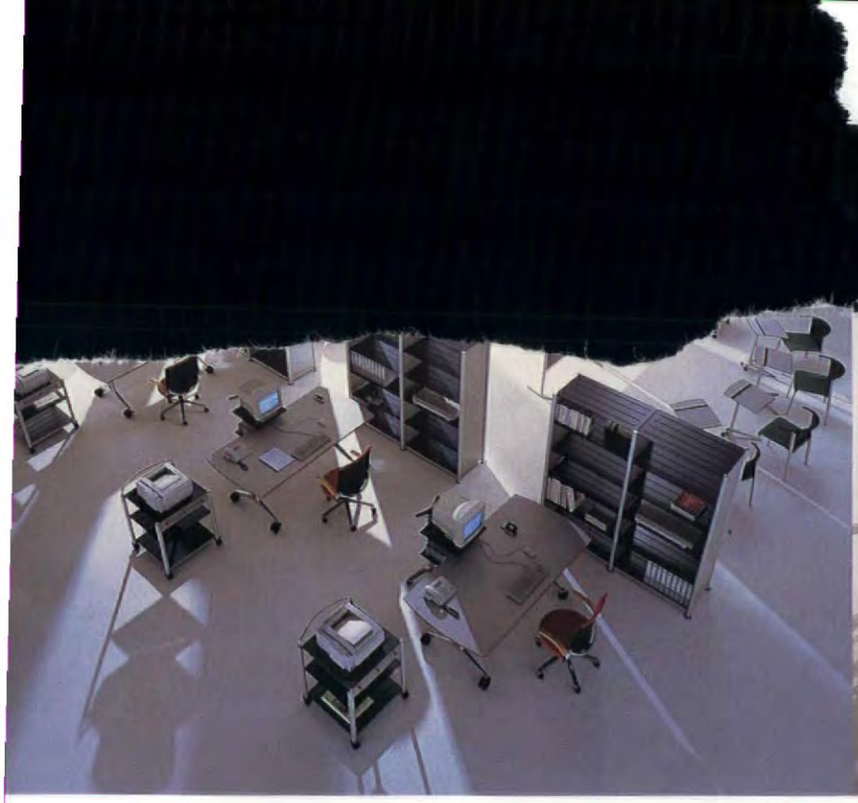
with curved backs, contoured seats and generous proportions. When cushions are required, the finest fabrics and quality construction add an additional level of luxury in keeping with each piece's design integrity.

A key feature is that the designer is freed from the constraints of standard wood dimensions. Hand-assembled at Summit's factory in Indonesia with marine glues and solid brass or stainless hardware, each piece of Summit furniture makes a worthy heirloom.

The Summit line includes six collections by Kipp Stewart: First Cabin, Bistro, Sources, Aperture, Picket and the new Stainless & Teak Collections. In addition, the Sun Deck Collection and the Turnberry Collection have been introduced over the past four years, designed by British designers John Munford and Charles Verey.

The Stainless and Teak Collection combines polished stainless steel with plantation-grown teak in stackable designs for indoor and outdoor use. The initial range includes a stacking dining armchair, a stacking lounge chair and an occasional table inspired by the super-yacht industry. Further additions to the range will be announced later in the year.

William Sieberts, Summit's founder and director of design, points out that the company's reputation has always been essentially design driven: "This is why we have our world-wide reputation for excellence. The new Stewart designs incorporating polished stainless steel with plantation teak continue the Summit commitment to design leadership. Our use of only the finest materials, careful engineering and hand-assembled construction means that Summit Furniture will still be vital generations from now."



How can dynamic corporate processes be reflected in space planning?

The impact of modern communication on office interior design

The working environment is subject to rapid change. Markets are ruled by globalization and specialization. In the final analysis it is innovative strength and speed which determine competitiveness. Companies and their staff are, therefore, constantly facing new challenges which demand mental flexibility, creativity, openness and desire to learn. On the other hand, it is necessary to show continuity in order to make one's mark quite clearly and to stand out against competitors.

The right balance between continuity and change in companies is inextricably linked to communication. But what is more important is the fact that it is the real pivot of business success, as this is where the roots of identity and community, differentiation and innovation are to be found.

In the following, some furnishing areas which are particularly relevant to communication are focused on and presented in the complex interplay of motives, forms of organization, methods and the characteristics of certain types of verbal communication. They show how very different communication tasks can be reflected in space planning and interior design, and how communication processes can be promoted.

For example: transit areas, customer service areas, foyers

A communication culture, which is to embrace the entire company, starts in the entrance area – a company's visiting card. But it does not rest there: the foyer is the first place in the building where people meet. It is a place for welcoming people and saying goodbye, a place for informal exchange of ideas and for providing specific information.

The varying levels of communication, such as reception procedure, personal orientation at a reception counter, dealing with customers and conversations amongst staff, require different amounts of time to be spent on them, and an appropriate location and furnishing solutions. There should, if possible, be a distinct focal point for orientation purposes and personal welcome. Should a longer waiting period be necessary, it could be linked to areas providing information and located on the periphery. Information boards or self-service terminals in transit areas, together with a place to write at, are a useful incentive to independent interaction.

The furnishing of partitioned off areas should provide a minimum degree of privacy to convey to partners the feeling of really being a guest, even in the entrance area, and not being merely dealt with at the door.

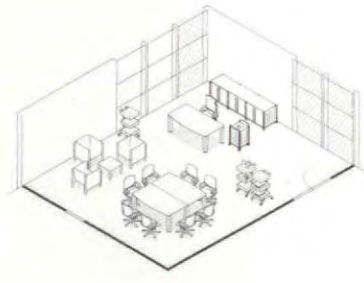
In services industries, the foyer is not only the visiting card and reception area of a company, but it is the pivot of direct business with customers. Planning such areas requires particular sensitivity, as very different and often contradictory requirements have to be merged:

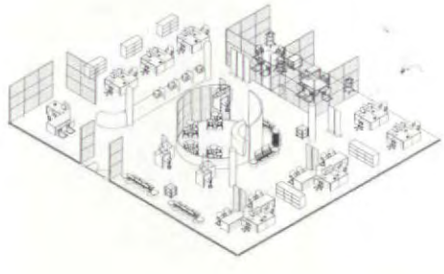
- Counters for dealing with routine daily business should offer speedy service. At the same time customers should be encouraged to stay there longer and should be confronted with information on interesting and lucrative offers.
- Customers should be able to obtain general information, or even deal with individual stages of transactions themselves by means of self-service, interactive media. This should not be at the expense of personal contact. It is such contact which, in the final analysis, helps to gain customers in a competitive market.
- Interior design must provide a feeling of openness, clear arrangement and transparency to dissipate the fear of entering unfamiliar places on the one hand, but on the other hand it should offer a degree of privacy by means of partitioned off areas for intensive consultation.
- Last, but not least, waiting periods should not be regarded as an arbitrary imposition, although they are not only unavoidable but, in some cases, even necessary to ensure optimal utilization of staff capacity.

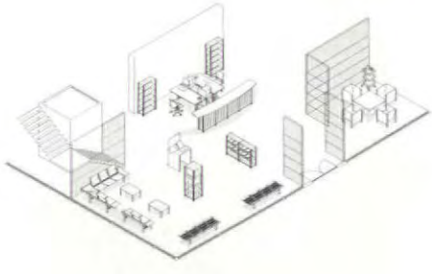
Particularly for such complex requirements, it is highly advisable to carry out the planning of interiors and workflow on the basis of a communications analysis.

Customer-led processing steps, general information provided by the service sector company and customer advisory activities are the key issues which define and, with clever arrangement and design, can determine the time people spend and the direction in which they move.

It is no coincidence that traditional







counter areas are being transformed to an ever increasing degree into customer-oriented meeting places, centres of communication bearing a resemblance to the ancient principle of a market place.

For example: front office and meeting rooms

Employees have direct, personal contact at their workplaces to customers in many areas within the company. Work, meeting and consultation areas are, as it were, public areas. Furnishing must, therefore, function efficiently and be convincingly prestigious. Coherent design creates a customer-oriented appearance throughout, which underlines Corporate Identity both externally and internally. Design, itself, becomes an integral part of company communication.

For many companies in the service sector the quality of personal customer service is what distinguishes them from others, and is thus the key to success. The workplace of customer service staff should, therefore, be aimed at steering the conversation with the customer in such a way that it results in a transaction. In order to create a discreet, yet open atmosphere for such a purpose, the discussion between a member of customer service staff and the customer should not take place at a personal desk, but in private consulting rooms which may be occupied as required.

This has additional advantages, namely that space planning may be based on more economic considerations, as one room may be used by various customer service staff, and better data protection is guaranteed as no documents from other customers are lying around on the table.

It is psychologically extremely important for separate consulting rooms to ensure protection of service areas from visual and acoustic distractions.

The interior should be more neutral than aggressive to focus better on the customer, but it should not appear bare and unfriendly.

It is ideal if the customer and customer service staff sit facing each other on equal terms. It is, therefore, recommended to select tables which do not indicate a fixed seating position, but which create an environment with a conference character.

For example: conference and seminar areas

It is particularly the innovation speed of IT systems, with increasingly shorter product life cycles, which today requires us to "keep our eye on the ball" at all times to be able to remain competitive. The continual need for further qualification entails the management level, as well as clerical and customer service staff.

The saying "I have finished my apprenticeship" has long become an anachronism in view of the rapid development of markets and knowledge.

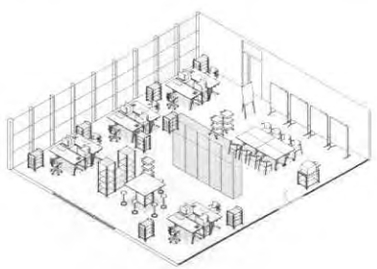
Personnel and management development has, therefore, become one of the key factors for safeguarding companies in the future. For this reason, furnishing conference and training environments requires particular care and a great deal of thought. Using flexible partitioning, variable table systems and stackable conference chairs, interiors for different groups of people and applications may be easily re-configured and perfectly coordinated to achieve an optimal setting for successful learning.

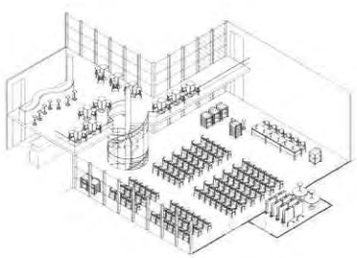
Considerable care is required in the planning and design stage to achieve a balance between prestige and functionality. The most important parameters for furnishing interiors are to ensure the well-being of the individual, to have a seating and table configuration which is conducive to discussion and to underline representational duties both internally and externally. The individual furnishing elements used for such interiors, as well as the level of prestige desired, both have optimization potential.

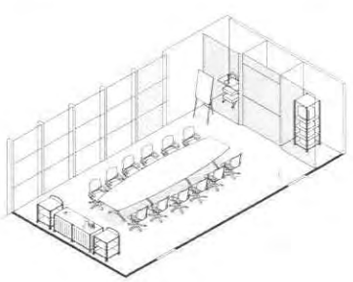
If these interiors are to project the special "spirit" of a company, furnishing must be coordinated with the general self image of the company - its identity and culture. Today installations planning should integrate modern media support, for example using media walls and an efficient power supply system integrated in the floor, to guarantee access to information and communication technology in various application layouts.

For example: group and project work

Re-direction in various sectors makes great demands on the entire organization. The sooner information is selected and







evaluated by individual departments, and the sooner all those involved in the process chain network their knowledge, the faster and more efficiently developments and improvement processes take place. This may not mean that costly dead ends can be completely avoided, but it can have the lasting effect of reducing time wasted on them. The more aware all employees are of situations depending on and resulting from their individual behaviour, the sooner shortcomings can be recognized and frictional losses avoided.

This does, however, also mean that decision-making and areas of competence will be shifted more and more to lower levels within the company. Organizational structures also change almost automatically with communication structures. New process-oriented forms of work, such as group and project work, inevitably replace traditional organizational structures based on division of work. Such intensive networking does, however, require much more exchange of ideas and information and agreement than before. Communication is an integral part of the daily work process and must be reflected in office architecture.

With "new forms of work", individual work must completely merge with teamwork. Every optimization of processes and every new project may affect the size and composition of work groups, and therefore change the structure of workplaces.

Modern interior concepts therefore focus on the flexibility of room divisions and layout. Rooms with large empty spaces are best suited to this purpose to allow the desired division and layout of the room to be determined by the furniture itself, independently and with maximum variability. The overriding planning principle should be the aim of promoting the interplay of work groups.

As more than eighty per cent of our ideas grow out of personal communication, teamwork is obviously rooted in creative professions. The organizational models of such businesses should be applied to almost all corporate areas today, as it is creativity and speed, in particular, which are the decisive factors with regard to differentiation in image and a company's earnings.

For example: manager's offices

Efficient management work is a fine art. Excellent specialized knowledge, discipline and patronage used to be sufficient to qualify a manager; nowadays it is also necessary to have coordination talent, creativity, communication competence and ability to work in a team.

The tightrope walk between management requirements and codetermination, trust and control, freedom and obligation, requires equally delicate coordination of interiors. It is, after all, the particular ambience which influences the working and communication environment. An interior, which can absorb such impulses, should be free of awe-inspiring flaunting of power. Openness, transparency and team orientation are the order of the day, instead of aloofness and intimidation - but without leaving employees any doubt as to the rules of the game within given organizational structures.

The greatly increased amount of time which managers and staff spend on meetings and conferences indicates that the conference area at the workplace is becoming increasingly important in its communication function, regardless of image and social prestige. Parallel to this, the focus of office work is changing: from individual work at the desk to open conversation and discussion at a communal table.

It is, therefore, perhaps the prime task for people with a vision to make models and visions really visible and to communicate daily. Corporate culture will then lead to enduring business success.

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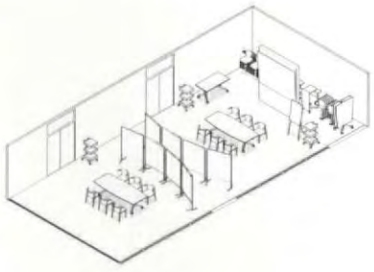

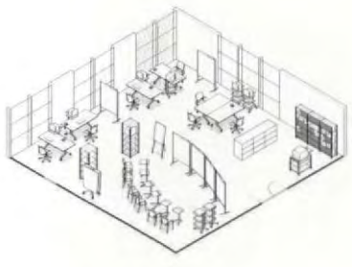

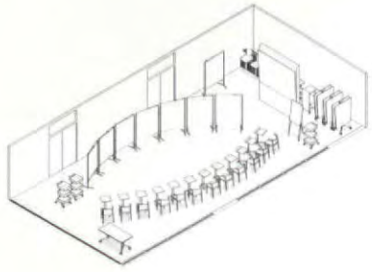

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p.138

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p.136-137

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p.39

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p.25

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p.141

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p.140

Legal and practice

PROCUREMENT CODES MADE EASY

International procurement methods are bewildering. Igor Rukuts advises architects to take hold of the situation.

Architects embarking on international projects inevitably find that national and cultural influences affect the design and planning of buildings. Often, steep learning curves are necessary to ascertain and interpret the codes and standards in each country, before design activities start in detail.

Another labyrinth to negotiate is the myriad contractual arrangements and contract forms in the international arena. Choose the wrong procurement type and misinterpret the contract terms, and project delivery and client satisfaction could be wrecked.

There may be a vista of contract forms to choose from, depending on project location, but the generic types of procurement arrangements are considerably more limited. These remain worldwide as:

- Lump sum (fixed price) contracts
- Design and construct contracts
- Fee-based contracts, such as management, construction management, prime cost contracts.

The involvement of European, American and Japanese companies, contractors and funders on a global scale, has further spread procurement diversity, adding to the already complex procurement jungle which needs to be negotiated.

Cross-cultural

So, can design be aided with procurement strategies not common where a project is being designed?

Getting the best design possible, without exposing the client to time and cost over-runs, is a trick mastered by an elite group of international architects. Generally, good design stems from a combination of innovative ideas by architects and engineers, with access to good contractors and expert specialist trade contractors who can crystallise these ideas into solutions, at a price the client is willing to pay.

Traditional fixed price lump-sum contracts, which bring the greatest comfort to clients, need early finalisation of design. Such contracts also restrict the opportunities for design development with specialist trade contractors (unless specific contractual provisions are made).

It is often difficult in such arrangements to get design input from specialists without the contractor claiming for delays and disruption.

Design and construct contracts are also difficult to deal with. These pass the liabilities for the development, co-ordination and integration of design with construction to contractors. This is at the expense of the client-appointed architects, who lose control of detailed design. Specific measures, such as the novation of architects to the contractor, are necessary for clients to maintain control over design development.

Otherwise, access to specialist trade contractors only occurs in the contractor's best interest – often to reduce construction costs and improve the contractor's profit

"SORRY, WE'VE GOT TO LET YOU GO"

How can you terminate an employee's contract with more compassion and less trauma? Thomas H Shea, of US specialist Right Management Consultants, explains.

It is a familiar scenario: an architectural firm staffs up during prosperous times, only to be forced to scale down again when the market turns soft. But as common as this situation is, asking someone to leave the firm is always difficult – for both the employee and the messenger.

The legalities involved in dismissing an employee are varied and complex. Moreover, there are strategic and human issues to be considered – especially the sensitivities of the employees who remain. The approach adopted should include, at a minimum, the following:

- A clear statement of the reason for the separation.
- A review of legal issues involved and potential risks.
- An outline of separation benefits to be provided.
- Arrangements for the return of the firm's property.
- A letter of separation including a referral to an outplacement professional.

"Be prepared to repeat yourself several times – disbelief is a common reaction."

Hard to handle

Once these issues have been addressed it is time to plan the separation meeting. Remember that no matter how business-like and impersonal you try to be, for the separated associate, the experience will be

STRUCTURAL EUROCODES

Professor Haig Gulvanessian outlines a timetable for the introduction of the new European design codes.

The complete suite of the CEN Structural Eurocodes, will be converted to full European norm)by 2004; those relating to the design of common buildings by 2002. Following five years of co-existence between the Eurocodes and the present, the Eurocodes will become the set of codes to apply for all EU member states. To be competitive, and take the opportunities offered, construction professionals need to know the following:

Objectives of the Eurocodes

The EC's objective is, "to establish a set of common technical rules for the design of buildings and civil engineering works which will ultimately replace the differing rules in the various member states".

They are intended to serve as reference documents recognised by authorities of the member states for the following purposes:

- As a means of complying with the essential requirements.
- As a basis for specifying public work contracts.
- As a framework for harmonised technical specifications .

Eurocodes are also expected to:

- Improve the functioning of the single market.
- Improve the competitiveness of the European construction industry in countries outside the EU.

Use of Eurocodes

Style

Each Eurocode is in separate parts, covering the technical aspects of the structural and fire design of buildings

Published in association with the international section of the Practice Department of the Royal Institute of British Architecture. Keith Snook. Tel: +44 171 307 367. e-mail: Keith.Snook@member.riba.org

Country/region	Common procurement arrangements	Country/region	Common procurement arrangements
Europe		**Far East**	
France	Lump sum	China	Lump sum
Germany	Lump sum/remeasurement contracts	Hong Kong	Lump sum
Italy	Lump sum	Indonesia	Lump sum
Portugal	Lump sum/cost plus	Japan	Design and construct
Spain	Lump sum	Malaysia	Lump sum/design and construct
UK	Lump sum/design and build/Management Contracts/ Construction management	Singapore	Lump sum/design and construct
		Thailand	Lump sum
Australia	Lump sum/construction management/cost plus fee	**USA**	Lump sum/construction management/management fee

margins, which inevitably affects project quality and aesthetics.

The best design generally comes when architects have controlled access to specialist trade contractors, possible through fee-based contracts. Clients employ organisations to manage the construction process and provide essential construction advice, but with contractual provisions which allow the architect direct access to those specialists to assist with the development of design.

Construction management (with roots in the USA) and management contracting (from the UK) have been the preferred routes of many architects on international projects.

Unlike lump sum and design and construct contracts however, clients have no final agreed prices for projects using fee-based contracts until the last trade contracts are agreed. Clients rely on cost managers' budgets and project out-turn cost forecasts during construction.

Many clients also appreciate that the lowest price following lump sum tenders is not necessarily the final or indeed best price for their projects.

The best advice to architects is to recommend procurement strategies which they feel comfortable with, adapted to suit cultural or traditional systems operating in each country.

Igor Rukuts is managing director of Northcroft Cost Consultant and Project Manager, International Construction Consultant

intensely personal. The following five-step approach can help you to address the human side of the situation:

- Select an appropriate time, away from any work deadlines, and a place which is neutral and private, to help the employee take in the news.
- Be friendly, but business-like. Cultural differences will dictate the standards, but in general, you should try to relax and start the meeting as you would any other. If you begin to race into your speech too quickly, the employee will pick up on your anxiety.
- State the situation clearly, with the separation letter clearly visible to the employee. Solid pacing and clarity are essential. Be prepared to repeat yourself several times – disbelief is a common reaction. Above all, the employee must understand that the decision has been thought out clearly, and that there is no opportunity for further discussion.
- Rehearse for individual reactions, even if you're a seasoned veteran. Role-playing can help you prepare for a variety of scenarios.
- Review the outplacement assistance, who the employee should ideally meet on site immediately after the meeting, before he or she talks to family members or other employees. The sooner the employee can begin focusing on the future the better. Point out that because your firm cares about his or her future, you have made provisions for him or her to consult with a career professional.
- Remember that the remaining employees often face as great a burden as the person who was separated. All eyes will be on you as you handle this situation – and most people will be wondering how they would be treated if it happened to them.

Thomas H Shea is managing principal – Florida/Caribbean, for Right Management Consultants, a human resources consulting firm.

and civil engineering structures, and are a harmonised set of documents which have to be used together. For example, the design of a concrete structure will require EN 1990, parts of EN 1991, EN 1992 (Concrete) and EN 1997 (Foundations).

Format

All Eurocodes are designated principles intended to be those bases of structural performance which must be observed or achieved. To encourage innovation, it is permissible to use alternative design rules, if it can be shown that they accord with the principles and have equivalent resistance, serviceability and durability as would be achieved using the Eurocode.

Current situation

The ENV Eurocodes may be used for design purposes, in conjunction with the National Application Document (NAD) valid in the member state where the structures are to be.

Development to EN

Development of the Eurocodes from the ENV stage to Normative EN is being limited to:

- National comment.
- Feedback from users.
- Co-ordination conditions.
- Format and editorial consistency.

EN Eurocodes will not have NADs but National Annexes. For the Eurocodes to be implemented as fully as possible in the member states, National Annexes will be limited only to exceptional matters of safety.

Professor Haig Gulvanessian is director of the Construction Division at the BRE and visiting professor at Imperial College of Science, Technology and Medicine, London.

RIBA BRIEFING

Client Forum update

Higher Education: general forum, information and conference report "The Development of Learning Resource Centres for the Future" on the HEFCE website www.hefce.ac.uk/estates; the forum is developing a post-occupancy study framework – a conference later this year will reveal and compare case studies; development frameworks for university estates are under discussion.

Health: Symposium, Therapeutic Environments for Mental Health, held earlier this year, proceedings available from Clients Advisory Service – also reports on Designing for Intermediate Care and Future Premises for Primary Health.

Housing: Launched the Quality Homes Initiative, using case studies to demonstrate added value through use of an architect. Regional workshops this year on housebuilders, housing associations and local authorities, and the private developers.

Further Education: Recent conference on the impact of IT on buildings. Research into briefing process, procurement guidelines and changing accommodation needs.

Participating Sports: Meetings focusing on upgrading of facilities, education buildings for community use, client guidelines for practice selection.

Spectator Sports: Aims include maximising Lottery revenue for building projects, better standards for stadia, provision for the disabled.

Schools: Producing a guide for governors, contributing to the compendium of the work of the Architects and Buildings Branch.

Lottery: Early stage of development, will be looking at all aspects of improving design quality of Lottery bids.

The best of both worlds

RIBA Client Forums are replacing "us and them" – with "us"

How do architects find out what clients really want? And how can the profession persuade clients that design quality adds value? The answer in both cases is for architects and clients to get together in order to shape the commissioning process.

This is the driving force behind the RIBA's current programme of Client Forums. Set up by the Clients Advisory Service, each of the eight forums is dedicated to a separate market sector – higher education, health, housing, further education, participating sports, spectator sports, schools and Lottery projects.

With a constituency of roughly three quarters clients to one quarter architects, each forum steering group is chaired by a client, has an architect convenor and is supported by key client bodies. The health forum, for example, is endorsed by NHS Estates, and the schools forum is supported by the DfEE. In addition to setting procurement standards for contemporary client-architect relationships, the forums are increasingly looking towards the future, and at how social, institutional and technological change will affect sectors in the early 21st century.

In particular, the forums are focusing on the following areas:

- client trends
- user needs
- emerging building types
- post-occupancy evaluation
- best practice guidance

Client Forum co-ordinator Gurinder Purewall said: "As the forums mature, they are setting their own agenda for each sector. This is significant, because it allows them to respond in a very targeted way to the unique demands and characteristics of the field they're working in. The Schools Forum, for example, is working on a user-friendly guide to the government's New Deal for Schools, aimed at governors, few of whom will have had direct experience of the procurement process."

Another example of innovative and targeted research is the conference being planned for November by the Higher Education Client Forum, which aims to develop a framework for post-occupancy evaluation. Pilot studies are already underway, and the findings will be analysed and discussed at the conference.

For further information on the work of Client Forums, contact Gurinder Purewall at the CAS, on +44 (0)171 307 3670, fax +44 (0)171 436 9112, client.forums@inst.riba.org

How the Welsh were reassembled

What does an RIBA President do? More than you'd think, apparently. As outgoing president David Rock hands over to Marco Goldschmied, he also leaves a fascinating behind-the-scenes account of his own two years at the helm.

The report, *The Continuum of Change*, sets out the issues and campaigns which dominated his presidency. These include: the Library Collections, Education and the Stansfield Smith Review, ARB, administrative reorganisation and the management of change, communications with the membership, urban design, procurement systems and the client-consumer relationship, cultural affairs, small practices, and membership development.

Among the ad hoc interventions made by the president was his crucial involvement in the procurement of a new building for the Welsh Assembly. Given the occasional anxiety about erosion of RIBA influence, it is comforting to report that when Lord Callaghan was appointed chairman of the jury, the first thing he did, he said, was to ring the president of the RIBA to ask for advice.

"Within a day he got my advice – that the Welsh Office's competition proposals were naïve, project manager-driven (in the worst sense) and would not produce either good architects or a good building. The proposals were withdrawn and rewritten, the RIBA Competitions Office appointed, two good architects (Robin Nicholson and Ian Ritchie) appointed to the jury, and a mature process instituted, leading to a successful competition result."

What's on RIBANet...

In Architectural Practice, exchanges have illuminated some unique problems for the architect involved in contractor-led deals. If you've worked up a scheme, but you're not novated, what is a fair rate to charge for supplying drawings to the architects who are taking over? And what is the liability of an architect who agrees a Bid Placing Report confirming the appointment of a sub-contractor under a management contract? "Consult your insurers ASAP," is the advice.

If a local authority planning department is unreasonably rejecting deposited plans, exercise your right to 'further and better particulars' suggests one member in Planning & Urban Design. In Energy and Environment, notes are compared on how the new SAP ratings will impact on design, and whether VAT relief on energy-saving materials is having any effect. In a new twist on the old theme of renaming the RIBA, one member suggests the Royal Institute for the Built Environment and Architecture.

Postings to Legal give the low-down on final certificates, and the importance of disclaimers on any widely distributed e-mail; members worried about Y2K compliance are directed to 15 minutes' free consultation in Practice Management. There are comprehensive listings of events in CPD, as well as a discussion of members' obligations to non-RIBA staff.

Despatches in World of Architecture include a newsletter from eastern Germany and a briefing on EU design and construction news from Brussels. A steady stream of year-out jobs in Study of Architecture, and overseas vacancies appear in RIBA Appointments & Jobs.

Ribanet is free to members – 2,000 are now online – fax +44 (0)171 307 3786 e-mail RIBANet@inst.riba.org

Net gains for members

A new property database – and plans to create practice web sites

With the RIBA's revamped web site at www.riba.net now offering 40 self-contained mini-sites, each of which can be maintained individually, the search is on for a technical solution that can extend this idea to all RIBA registered practices.

RIBA director-general Alex Reid hopes to see a facility in place by the end of the year. "We already list both practices and members worldwide on the Internet, but this has to be through a database search. The great limitation of this, of course, is that people can't edit their own entries," he said.

"Our aim is to provide an updatable web site for every practice, which costs them nothing and is really searchable." This is now the technical challenge facing the RIBA Services Committee, which has been carrying out options appraisals.

The speed with which the Internet is developing, however, means that is a far from simple task. One option that had been explored as a member benefit was the provision of free Internet access, but this has already exploded onto the Internet scene in recent months.

Meanwhile, the workings of the commercial property world are about to become an open book, or rather an open web site, for RIBA members. The institute has negotiated an unprecedented subscription deal that gives every member free access to *Estates Gazette Interactive* – the premier UK property site.

With an individual subscription to EGi normally costing £350 (US$575), the RIBA regards the deal as a major coup for members. "Much of the information on the Internet is soft and poor quality, but some services are extremely high quality – among these is EGi which has 30 staff working on it full-time," said Reid. "The economics of the Internet are such that the RIBA can seize the opportunity to buy into such services on behalf of members on very favourable terms."

EGi offers a host of property-related resources, including a news service and a database that expands by 250 new property deals every week – the total currently stands at 27,000. An extensive database of contacts, for instance, covers all major property-related companies, and doubles as a press cuttings service. Subscribers can quickly research all of the deals, news and background articles about any property company active in the UK.

Pressing on

A big media push for regional architecture has been signalled by the appointment of a regional press officer at Portland Place.

Hilary Clarke, who joins the Institute's team from Architectural Dialogue/ Open House where she has worked for two years, will be responsible for getting stories about regional architecture and architects in the regional and national press: "I will be getting out to all the regions in due course to see what they are up to. "

The appointment marks a first for the RIBA: an "elected" staff member. "Members were asked to vote on whether they thought it was a good idea to have a press officer responsible for promoting regional architecture," she said. "They decided it was."

Number crunching

The sheer size of the RIBA's global operations can be something of a revelation when set out in numerical terms. The institute is currently developing systematic methods of measuring the services provided to its members, to clients, and to the public in order to benchmark and improve performance.

The figures themselves are staggering. Approximate numbers for key outputs (per annum) are as follows.

E-mail bulletins: 330,000	Electronic visits to Ribanet website: 60,000
Copies of RIBA Journal & World Architecture: 300,000	Phone calls to Library Information Lines: 50,000
Publications sold through RIBA Bookshops: 250,000	Press releases sent out: 40,000
Electronic visits to Ribanet Conference: 100,000	Events leaflets sent out: 40,000
Regional newsletters sent out: 100,000	Attendance at CPD Events: 25,000
Visits to 66 Portland Place: 100,000	Client enquiries to Clients Advisory Service: 5,000
	Enquiries to panel of Specialist Advisors: 2,500

Polemic

Will it be the past or the future for Dublin?

When it comes to economic miracles, size doesn't count. For years Germany was Europe's wunderland, but only until reunification, when its size increased by a third. The same happened in East Asia, where Japan held the lead until the 1990s crash, when it turned out that little Taiwan had been the winner all along. But being an economic miracle anywhere is not without its difficulties, especially in old countries with ancient towns and cities and a great affection for both. A case in point – twice the size of Taiwan but with only a seventh of the population – is Ireland.

The turning point for Ireland was entry into the EC. An impoverished agricultural mini-state, Ireland soon benefited from a whole raft of European grants. Today, gaining population rather than losing it, with an education system second to none and the most youthful population in the EC, Ireland is the source of 40 per cent of the world's software. It is big in every aspect of computer technology, pharmaceuticals and biotechnology, and is growing fast in financial services.

Much of this activity is focused on Dublin, and there's the rub, for Dublin is an overpopulated half-Georgian city overrun with traffic and drowning in the side effects of its own success. Universally admired for its grand 18th century public buildings, little is ever said about its intractability as a metropolis for the new millennium. No mention of its difficult 180 degree hinterland, its inaccessible airport and its maze of run-down and congested suburbs – until Ireland's biggest ever planning application landed on the mat at the Dublin City Planning Office, that is.

Spencer Dock is a huge docklands development project with an uniquely Irish genesis. In part it is a scheme to build – without the expenditure of a penny of public money – a US$248 million (£150m) world-class National Convention Centre by the distinguished Irish-American Kevin Roche. But in part too it is a blank cheque for a new 20 hectare urban quarter with 600,000 square metres of offices, hotels, university buildings, apartments, railway stations, open space and parking for 7,000 cars. For the rents from all this development are to cover not only the cost of building the convention centre, but the annual loss it is expected to make.

The Dublin Docklands Development Corporation, Dublin City Council, and the Irish government are not inclined to pay for a desirable but loss-making convention centre but, on the other hand, nor are they eager to be seen to be handing over the keys to the city to a firm of commercial developers. Nonetheless, without planning permission no convention centre. Without convention centre no planning permission.

Into this impasse, which is expected to end with the adjudication of an almost certain public inquiry at the end of this year, the whole question of the modernisation of Dublin has been drawn. While efforts are being made by conservationists to dismiss Spencer Dock on grounds of "visual intrusion", "inappropriateness" and other art historical offences, the expansion of the city is remorselessly focusing attention in the opposite direction. Spencer Dock not only opens the gateway to a new scale of development in Dublin, it raises the prospect of a high-speed rail link to the airport, a technology centre for Trinity College, and Canary Wharf-style benefits for surrounding districts.

All of this speaks of the Dublin of the future. It is to be hoped that the planners will concentrate on this aspect, rather than retreat into the protectionism of the past.

Martin Pawley

"Universally admired for its grand 18th century public buildings, little is ever said about Dublin's intractability as a metropolis for the new millennium."

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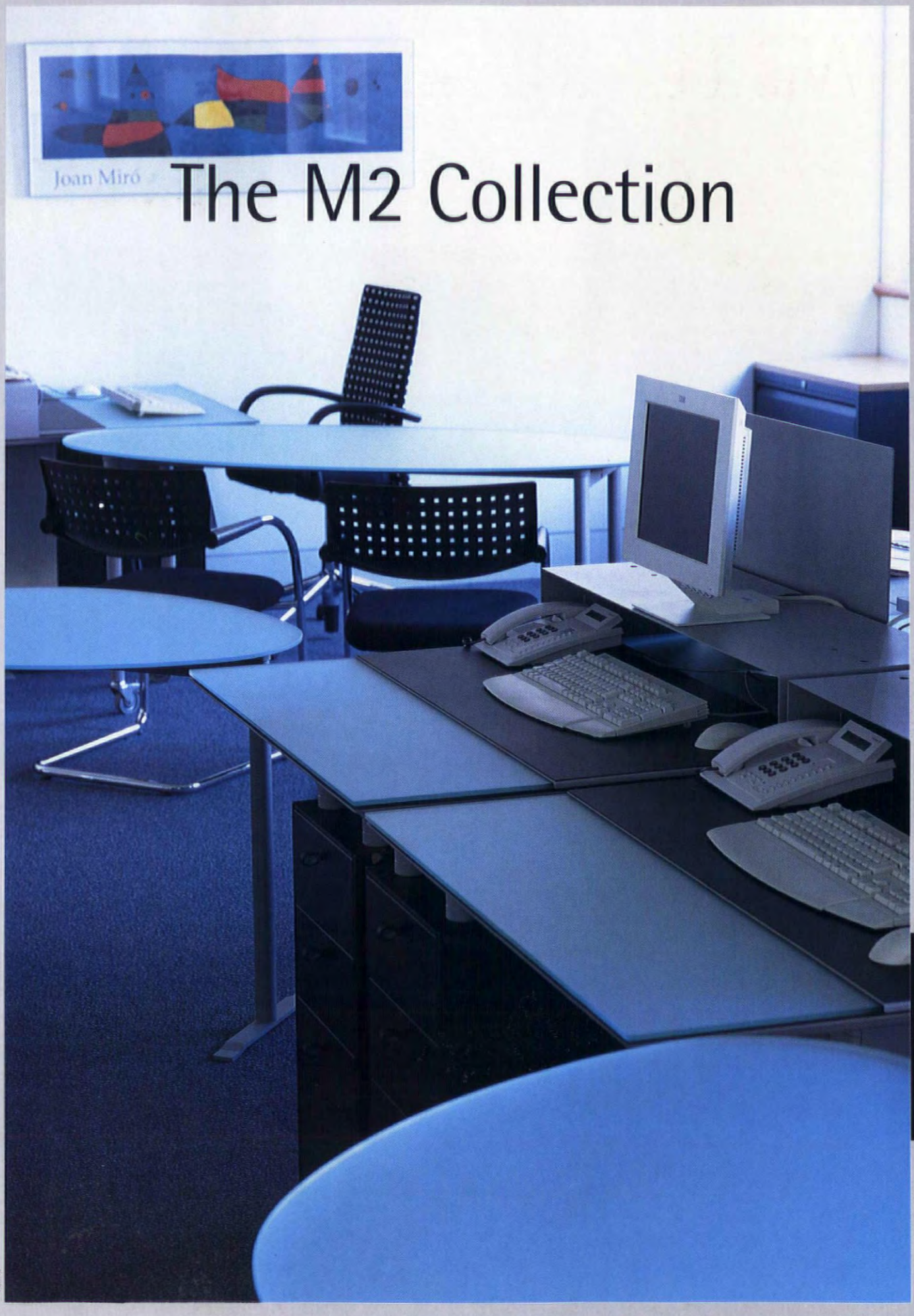

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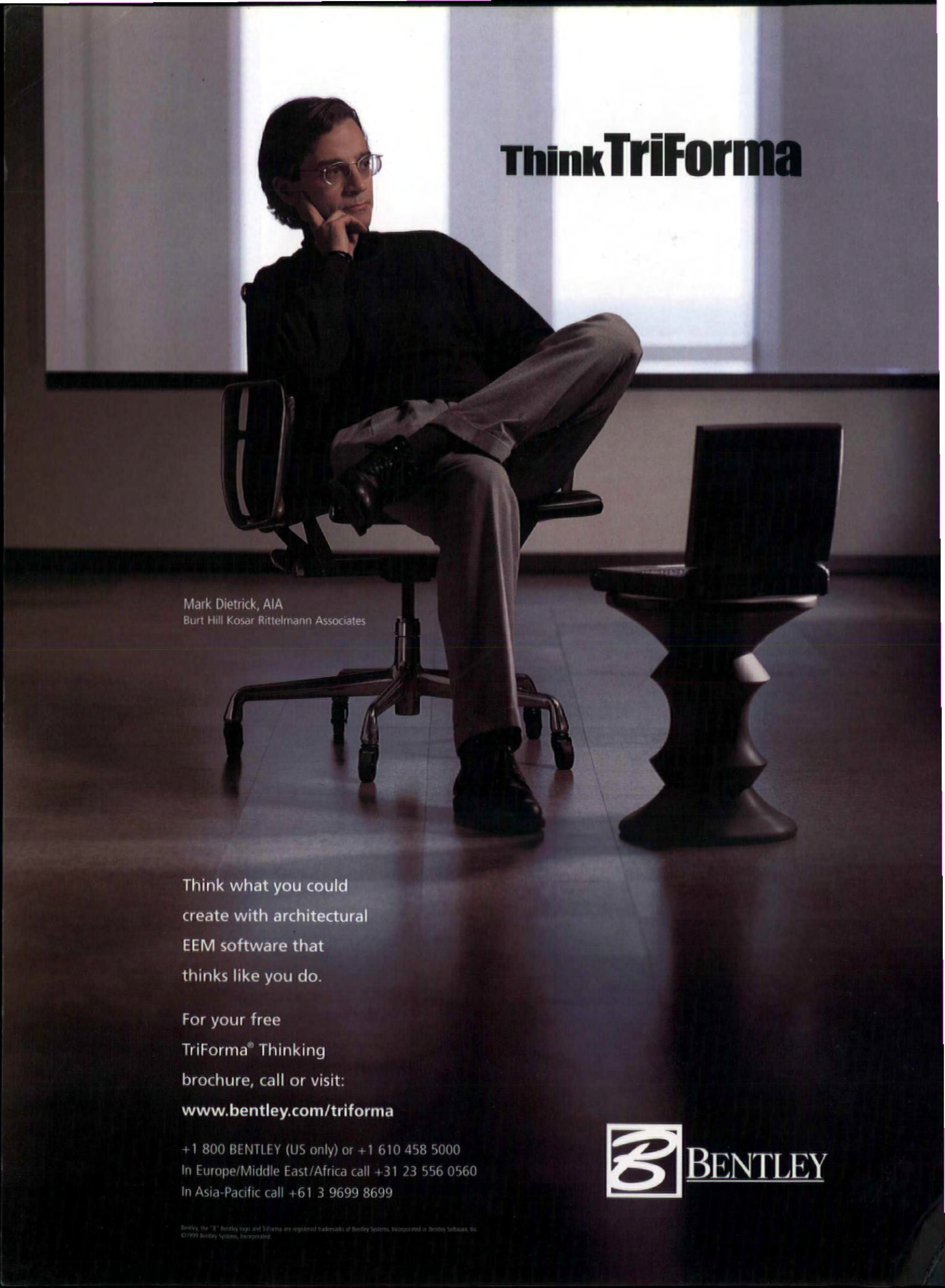

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