

The Dutch are famous for reclaiming marshlands and cultivating landscape to support human habitation. Winy Maas, co-founder of MVRDV, aims to harness that capacity and upscale prototypical solutions to tackle global design challenges.

Words **Rachael Bernstone** Portrait by **Peter Bennetts**

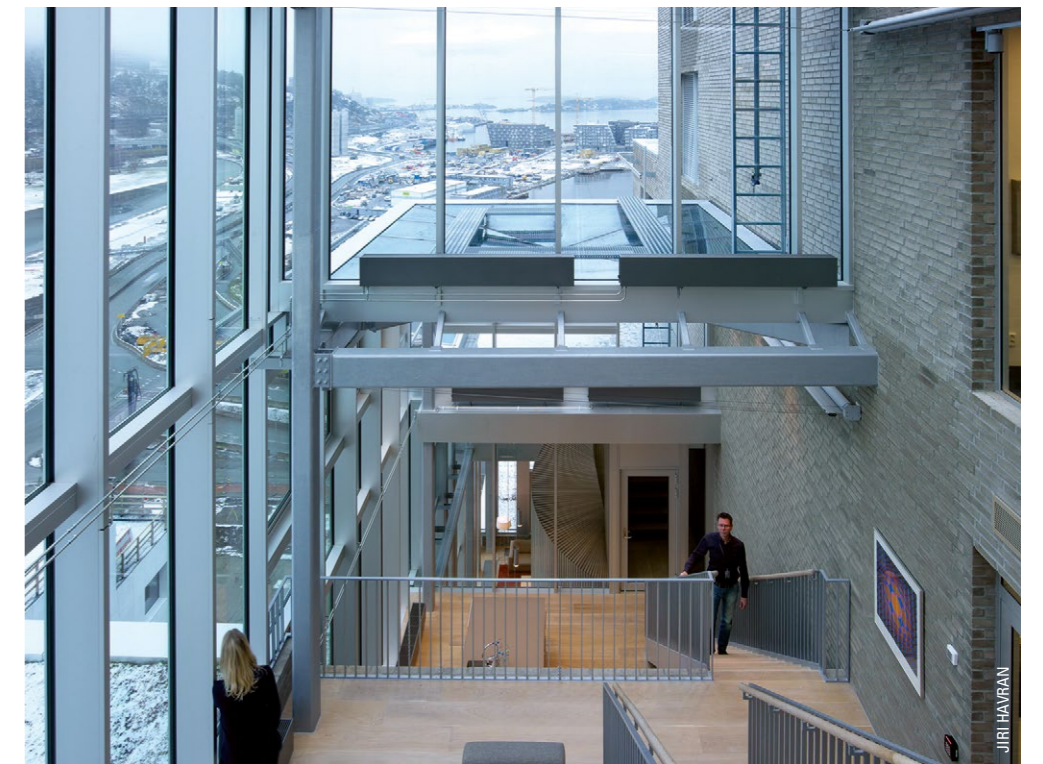


WINY MAAS

Winy Maas has been a design practitioner for more than 30 years, but his energy and drive resemble those of a 20-something student. From a young age, he seemed destined to work in landscapes in one form or another, but no-one could have predicted that instead of tending flowers or growing plants, Maas would tackle issues on a global scale, from a broad-based design perspective.

“My mother is a florist, my father is a gardener, so I was expected to take over the gardening business – my brother took over the floral business – but somehow I refused that,” he laughs. “I started with landscape architecture and went on with architecture and urbanism, because I thought that combination would be more fruitful and effective, in terms of realising heavier elements with lighter elements.”

Maas co-founded MVRDV in Rotterdam in 1993 with fellow architects Jacob van Rijs and Nathalie de Vries. In 2000, he visited Sydney when the firm undertook joint investigative project with the New South Wales Government Architect’s Office, resulting in the publication *Port Cities: Rotterdam Sydney*.



“Dutch landscape architects always did a lot to improve the make-ability of our country, so for us, design for the grander scale is in our blood”



MVRDV's DNB House project in Oslo uses steel-framed pixelated cubes to create a sense of transparency for the bank headquarters

He visited Sydney again to speak at the 2017 Australian Institute of Architects National Conference, Praxis, presenting a selection of recent MVRDV work through a lens that ranged from XXL (including the speculative Sydney project from 2000, which proposed bridges made of shipping containers to link various islands in the harbour) right down to XXS (the Glass Farm, a small museum in his home town of Schijndel).

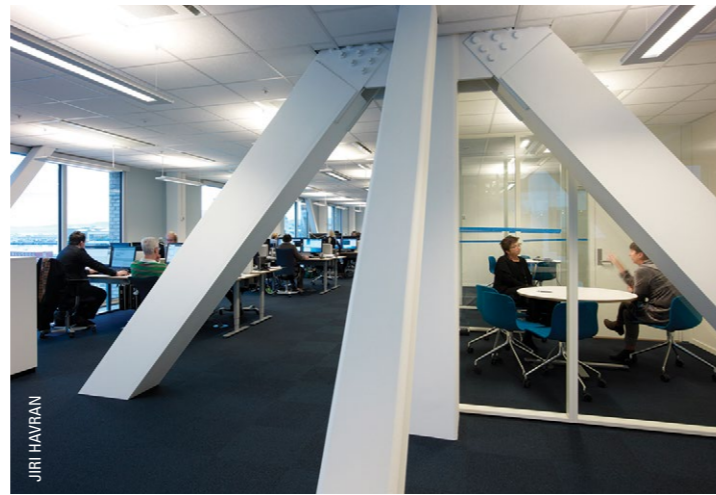
Speaking with *Steel Profile* before the conference, Maas suggested that MVRDV's projects – which can be found from The Netherlands to South Korea, and which range from private houses to master-planned new cities – share a common “biodiversity”.

“They are linked together, there is an ecology to the projects,” Maas explains. “To define it another way: they are all obsessed by directness and by communication; they are all obsessed by prototypical solutions for a grander scale and to answer somehow to a wider context. And last but not least, they are scaleless: they range from XXL to XXS, perhaps extending further than we thought about even 10 years ago.”

MVRDV is firmly focussed on problem-solving for a sustainable future and Maas says that the firm's approach has antecedents in history, particularly in the work of the 17th century Frenchman dubbed the ‘father of landscape architecture’. “After [Andre] Le Nôtre, I think that Dutch landscape architects always did a lot to improve the make-ability of our country, so for us, design for the grander scale is in our blood,” he says. “In Australia, Glenn Murcutt also produces work that combines landscape and architecture, but he concentrates mainly on the very small scale: I’ve never seen him designing an alternative for Sydney.”



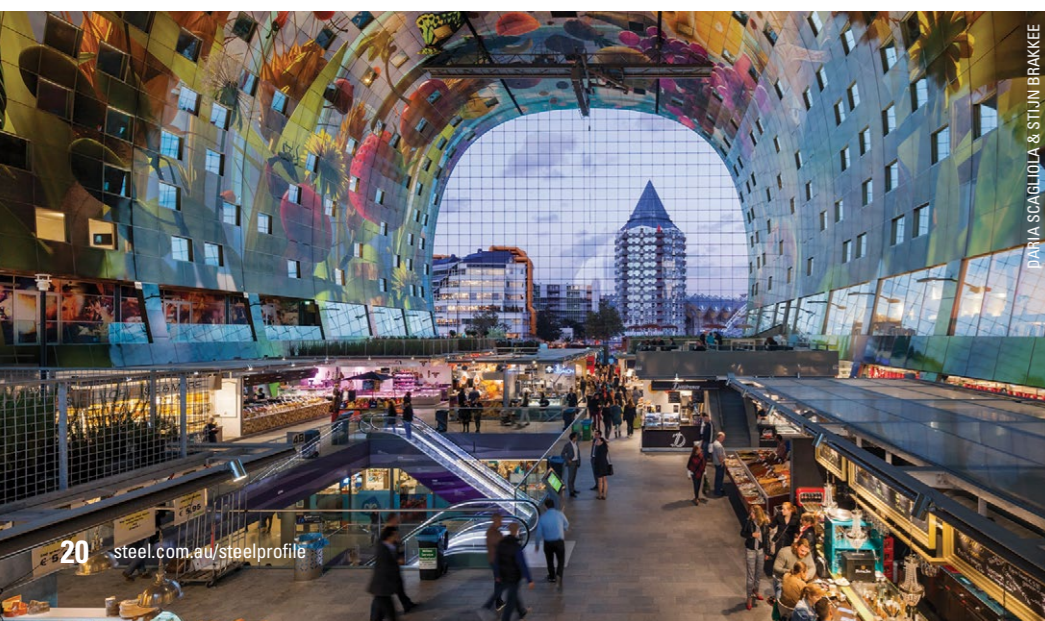
LEFT AND BELOW: Drawing on oil-platform construction techniques, the DNB House project features 1600 tonnes of structural steel, which added flexibility to the design process, Maas says



ABOVE: Located in the centre of Rotterdam, the Markthal is a unique hybrid that combines retail, public and residential uses in one iconic form

BELOW: To address the competing objectives of openness and protection from the weather, MVRDV used a flexible suspended steel and glass facade system, which provides maximum transparency with minimal structure

RIGHT: All of the apartments have windows that face inwards to the market, as well as out to the surrounding square and streets



“So that’s where we hope to fill in the gap,” he continues. “It’s not a completely Dutch approach though: there are now other countries or zones dealing with those same issues of scale. China has completely artificial cityscapes, as do other Asian cities such as Seoul in Korea. They are combining small and big to understand what they can do; looking at the two scales.”

This careful balance of macro- to micro-scale – and everything in between – could help to mitigate some of the common fears faced by communities around the world, Maas says. These include concerns about the negative effects of increasing populations on housing, transport and existing amenity in cities; the resulting global strain on resources; and the loss of natural habitats.

“We are fascinated by density, it’s one of the key drivers for saving the planet,” Maas explains. “We want to work out how to make the kinds of environments that you would like to live in.”

Several recent MVRDV projects have explored the qualities of transparency and porosity, which Maas claims are essential elements in liveable cities of the future. “Transparency [in design] is a way of giving a wider perspective,” he explains. “So we like to link interiors more with exteriors which makes it possible to make our cities more open; to combine density with openness. It’s one of our tools to make cities more survivable with greater density.”

A ground-breaking example of MVRDV’s exploration of the notion of transparency can be seen in the DNB House project in Oslo. On a waterfront site, the firm designed a staggered, pixelated office tower – using 1,600 tonnes of steel in the form of 6x6 metre steel-framed cubes – that makes a bold statement about the bank it houses.

“After the Global Financial Crisis [in 2008], there was a general distrust in the banking industry, and DNB wanted to create a system that would allow it to be more transparent, and to build up its internal controls,” Maas says. “They wanted to avoid the risks internally that led to the GFC, so we developed a ‘cockpit’ system, whereby each pixel is occupied by two people, who don’t know each other.

“Each pixel has windows on two sides, and they are connected in different ways,” Maas adds. “We kicked out some by using glass pixels internally to create two vertical streets that run in opposite directions around the building.”

The use of structural steel to construct the pixels was essential for two main reasons, Maas says. “One is that the Norwegians are extremely good with steel – we used an oil-platform builder to build this office building – and the second is that it made the process very flexible. During construction we could easily shift and rearrange the pixels, which, given the financial constraints and the speed of construction, was very useful.”

Concentrating more than 20 facilities into one site, DNB House accommodates 2000 flexible work spaces over 17 levels, with a panoramic canteen on the top level, and a trading room for 250 people. All of these functions are connected by the two vertical streets that meander upwards from reception via a series of stairs and bridges.

Communal areas located off the streets boast a domestic feel with pantries, informal meeting areas, reading-rooms, lounges and even fireplaces.

The streets provide access to outdoor terraces and roof gardens and offer views to the surroundings, as well as transparency into the building from outside. In recognition of the building’s innovative use of steel – across environmental, economic and design criteria – DNB House won the Norwegian Steel Construction Prize and the European Steel Design Award of Merit in 2015.

MVRDV also advocates making buildings in cities more porous, which offers advantages in terms of social engagement and environmental performance, Maas says. “The towers of the city as we know them are Introverted monsters,” he asserts. “They are completely a-social because they don’t want to ‘talk’ to the city, which is absurd.”

MVRDV’s projects go beyond the concept of green walls and roofs to achieve porosity by weaving landscape into, through and around buildings. Doing so breaks down their bulk and mass, thereby increasing density while maintaining active connections with the outside world and surrounding landscapes.

Maas calls this solution “the biggest tennis rackets in the world, to keep the storms out”. It comprises 26 vertical and 22 horizontal cables that are pre-stressed between strong steel boxes embedded and cast into the building’s walls. A single detail – a cast steel node – manages the intersection of the cables and holds each pane of glass in place.

“This type of glass facade was first done on a smaller scale, but this is new in terms of its sheer size,” Maas says. “The glazed wall can move inwards and outwards by 1.5 metres in the wind, and the glazing is screwed on with a clip, so the steel joints are very important, especially in the middle part, which has to be post-tensioned every five years.”

With its striking visual appearance – both inside and out – the Markthal presents a prototype for sustainable mixed-use development: one where food retailing, all-day hospitality and residences co-mingle harmoniously. It’s the sort of blue-sky design thinking that is required to tackle some of the most challenging problems of the modern era, globally.

Even though MVRDV has participated in several design competitions for projects located in Sydney over the past 15 years, it has so far been unsuccessful

“The steel joints are very important, especially in the middle part, which has to be post-tensioned every five years”

An MVRDV project that used steel to great effect to achieve transparency and porosity is the Markthal project in Rotterdam, a unique hybrid in the city centre that combines retail, public and residential uses in one iconic form.

Shaped like “a bent skyscraper that goes down to the ground”, the Markthal needed to be both open – to attract visitors to its stalls, restaurants and cafes – and protected from the elements. To achieve these opposing objectives, MVRDV employed a flexible suspended steel and glass facade system that provides maximum transparency with minimal structure.

in bringing its unusual blend of Dutch heritage and forward-focussed ingenuity to Australia. But as our main cities grapple with predicted population growth over coming decades, MVRDV’s approach – which places equal emphasis on landscape, architecture and urbanism to increase densities – may find more favour with planners and developers, especially if Australian communities begin to demand better amenities and improved connections to nature as a trade-off for such density increases. **SP**

