DESIGNING FUTURE CITIES
FROM LOW CARBON TO HIGH FASHION

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WSP + GENIVAR COMPLETE LANDMARK MERGER

COMBINED FIRM HAS ONE OF THE STRONGEST GLOBAL PRESENCES IN THE INDUSTRY, WITH 14,500 PEOPLE ACROSS 300 OFFICES WORLDWIDE.

The combined strength and breadth of WSP and GENIVAR will enhance our ability to serve global clients, and provide a strong platform for growth in new markets and geographies.

The merger brings together WSP’s international capability and GENIVAR’s extensive Canadian operations to create a world-class professional services firm with offices on every continent.

We will also be able to cross-sell complementary areas of expertise, such as WSP’s international reputation for high-rise buildings and bridge and rail infrastructure and GENIVAR’s wealth of experience in mining, natural resources and energy.

WSP chief executive Chris Cole becomes executive chairman of the new entity, while Pierre Shoiry is president and CEO.

Announcing the completion of the merger, Shoiry said: “The combination of WSP and GENIVAR is compelling and results in a company with an extremely wide array of expertise, enabling us to pursue our joint growth strategy and broaden the range of opportunities for clients, employees and potential partners.

“Being stronger together, we look forward to developing our global international network, cross-selling our know-how and pursuing our acquisition strategy, thus optimising the benefits this merger will bring to all our stakeholders.”

SUSTAINABILITY REPORT 2011 SHOWS STRONG PROGRESS

WSP’s annual sustainability report for 2011 shows that group-wide carbon emissions were reduced by 5% compared with 2010 figures.

This was achieved by challenging our operating businesses to meet tougher internal standards, and by implementing a range of innovative measures focusing on direct and indirect emissions.

These included an improved monitoring system, which records not only emissions but other environmental impacts such as water use and waste, and the world’s first personal carbon tracking scheme, both developed in-house.

We continue to benchmark our performance against other companies, which involves submitting our emissions and strategy to the Carbon Disclosure Project for independent assessment. In 2011, we scored 71 compared with an average of 63 for FTSE 350 companies.

To read more about our progress, and our goals for 2012, download the report at wspgroup.com/sustainability.

CITY TRANSPORT WINS IN CANADA AND UK ADD TO GLOBAL SUCCESS

WSP AND GENIVAR TEAMS HAVE BEEN APPOINTED TO PROVIDE MULTIDISCIPLINARY SERVICES ON INNOVATIVE PROJECTS IN ONTARIO AND MANCHESTER.

GENIVAR has been chosen as a prime subconsultant to the company Parsons Brinckerhoff to deliver the Waterloo light rapid transit system in Ontario, a completely new network of electric trains connecting the three cities of Cambridge, Kitchener and Waterloo. GENIVAR has been appointed as general engineering consultant and owner’s representative for the design-build phase of the project, a C$2.4m (£1.5m) contract that is initially set to run for three years with the possibility of a three-year extension.

WSP will also be playing a part in delivering one of the largest public sector transport programmes in the UK, having secured a place on the consultancy framework for Transport for Greater Manchester. Our transportation teams will be delivering transport planning and engineering services, transport-related commercial strategies, and consultation research and survey activity, as well as specialist biodiversity and landscape management, and specialist rail services.

Greater Manchester’s programme includes extending the existing Metro link system, building transport interchanges, developing public transport facilities and services, and managing the highway network.

Meanwhile, two other UK transport projects are at key stages of development. Work is about to begin on the Bristol rapid transit bus network, on which WSP has been working with local planning authority West of England to develop a coordinated joint procurement strategy and ensure an integrated network across the three component schemes.

The Tram Train project in Yorkshire, for which WSP helped to develop the business case, has also received final government approval. A national pilot of Tram Train technology will begin in 2015 between Rotherham and Sheffield.

FOR FURTHER INFORMATION
jamie.witherspoon@genivar.com
mike.batheram@wspgroup.com
adrian.hames@wspgroup.com
Cities are hungry. They suck in money, people and resources – 52% of the world’s population is already living in cities and 180,000 new people move to them every day. Every city is competing for investment and for talent with others in the same country, in neighbouring countries and around the world. Their survival and success in this global market depends on being more competitive, more attractive, and being able to use limited resources more sustainably to fulfil the needs of their populations. These key challenges are the same for cities large or small, long-established or brand new, experiencing rapid expansion or undergoing urban regeneration. With Designing Future Cities, WSP’s multidisciplinary teams are working to meet them with governments, developers and local communities across the planet.
Cities thrive on competition. The world’s most successful owe their dynamism to an ongoing battle for land, resources and wealth, both within their own populations and with rival cities. But that competition is becoming ever more intense. With unprecedented urbanisation, city populations are growing rapidly, and the number of significant cities is multiplying. In 1950, there were 83 cities with a population greater than 1 million. Today there are almost 500, with 27 mega-cities of 10 million or more, and 12 “meta-cities” topping 20 million. By 2050, three quarters of a global population of 9 billion people will live in cities, most in today’s developing world.
In this global competition, a city’s identity is more important than ever before, says Mike Duff, Future Cities lead for WSP UK. “It’s no longer about countries. Cities and urban mega-regions are the most important economic units, and in a global economy, they need to differentiate themselves. Talent, jobs, money can be almost anywhere now because so many of the things we do no longer depend on being near a mine or a river or a coast – they just depend on brains sitting in front of laptops.”

But that doesn’t mean that cities can just be swaths of offices with desks and computers, he adds. Cities have to try a lot harder to attract a global workforce who can – in theory at least – work anywhere they choose. "Talented people want to do interesting things in their downtime, they want to know that the world’s best art is down the road, and they want to be proud of the place they live in. They want to live somewhere where they know that their participation in the economic life of a place isn’t having a negative knock-on effect on the environment, and where there are other people like them, with similar talents and ideals."

Indeed, there is an undeniable tension between providing a good quality of life and being both large and economically powerful. “There are certain aspects of offering a top quality of life that are incompatible with being the most economically successful city, and it’s also very difficult to have a very high population and a very high quality of life.”

This is starkly illustrated by the vast slums that have grown up in some of the developing world’s fastest growing cities. In places like Rio and Lagos, for example, millions of people now live with little shelter and varying access to basic services like potable water and sanitation, vulnerable to disease and environmental disasters. Paul Toyne, WSP group head of sustainability, believes that providing adequate housing is one the greatest challenges for the future. “It’s important that the people who keep the city functioning and provide basic services can afford to live there. The whole fabric of society can break down if people don’t have access to affordable housing of an appropriate standard. Cities have typically avoided addressing the problem, but it’s almost like a ticking bomb ready to go off. We need to find solutions for reorganising these areas so that the infrastructure is there.”

Cities follow similar patterns of development as they become more affluent

Economic competitiveness, attractiveness and sustainability are essential and interdependent parts of a successful city’s identity, but there are also unavoidable conflicts between them. For example, cities that do offer the best quality of life are rarely the most successful overall, points out Jason Brooks, global business development director at WSP. He compares two of the most popular quality-of-life rankings, compiled by the Economist and Mercer. Three cities appear in both lists – Vienna, Vancouver and Auckland – but the world’s highest profile cities are completely absent, and there are no Asian cities at all. “Few, if any, cities on the quality-of-life lists could be regarded as global economic centres, and it shows that there is much more to being a winning city than just satisfied residents.”

Elsewhere, lifting people out of poverty has brought with it new challenges for city authorities. Brooks has noticed that an important stage in urban development everywhere is the shift from a walking-based economy to a car-based one. “Cities follow similar patterns of development as they become more affluent. There is major pressure in the early days from the desire to own and use cars, but once they realise they can’t sustain that many cars, then there is a move back to mass public transport systems.”

These networks become a key component of identity, not only for the efficient movement of people and goods, but as a major contributor to attractiveness and sustainability. “It comes down to what a city wants to be famous for,” says Toyne. “Is it six-lane highways and gridlock and the fact that it takes four hours to go even a short distance, or for being a free-moving, easily navigable city, accessible to all?”

There is much more to being a winning city than just satisfied residents
WHAT MAKES A WINNING CITY?

By Jason Brooks, Group Business Development Director, WSP

Links to the Past

Cities like Rome that are able to retain their links with the past have very strong, very powerful identities. One of the best examples is Warsaw. It was decimated during the Second World War but its historic core was rebuilt in the same style, in recognition of this area’s importance in shaping the city’s overall identity.

Landmark Buildings

Cities that don’t have a long past often use landmark buildings and landmark structures like bridges to create an identity from scratch. Sydney has done this with the Opera House and the Harbour Bridge, and recently we’ve seen it in Dubai with buildings like the Burj Khalifa.

Migration

Social and cultural factors shape identity too. Most of the best cities do not have a homogenous, static culture – they are the result of successive waves of migration, which adds to their identity and creates rapid evolution again and again.

Numbers

Weight of numbers is a key component, and cities that have very small populations can really struggle to create an identity. They have to go another way to sell themselves – as naturally vibrant, or as a very green city with a good quality of environment (see Sibbesborg case study, opposite).

Adaptability

Cities that are the most successful don’t have rigid plans that are unable to respond to change. They tend to be very agile. For example, the centre of gravity for business in London changed with the Docklands development in the 1990s, and in New York, we see different districts constantly waxing and waning in importance. Singapore is the exception, as it often is, because its growth has been pretty much following the same plan for 40 years.

Read Jason Brooks’ blog on winning cities at wspgroupfuturecities.com

Growth and affluence can also threaten identity itself. Global communications and open markets are contributing to the homogenisation of the world’s cities, where high streets feature the same global brands, restaurants serve the same menus, and people share the same ideas of luxury. “You can go to Chicago or Riyadh or Shanghai and stay in the same hotels and eat in the same restaurants,” says Duff. “You know what’s on the menu, you can get a burger in the Middle East or Mexican food in Brussels. In the developing world, people want to provide the things they see as being desirable in affluent cities. But increasingly they are becoming similar, so there is also a need to focus on differentiating themselves.”

“Many of the world’s cities are becoming the same,” agrees Brooks. “Retail is a key factor. It used to be a key component of identity, but now you can go to different cities and walk down the high street and you could be in the same place, it’s Starbucks, McDonald’s, Benetton.” He believes there will be a reverse: “In western Europe, you can already see a move back to small-scale, independent businesses, or at least independent-looking businesses. I think that will start to come elsewhere. It’s a natural process. It’s easy for people in the developed world to be critical about this homogenisation, but you need to understand people’s aspirations.”
The challenge for those designing the cities of the future is to support their success without losing what makes each city unique. So how do you engineer identity? Mike Duff believes that decisions about what is right for a city should be based on an understanding of its essential identity—not on top-down planning or fulfilling certain criteria. “Whether you’re building new extensions to the city or adjusting pieces of it, you need to understand what a place is about or you run the risk of producing pieces of city or entire cities that are bland and don’t attract anyone. Just focusing on economic growth is not going to produce places with identity.”

“The first step is to put your pen down, and go out and interact with the people who understand the city. Speak to the people who understand its ecology, its economics, its society. Embrace that complexity. The answers to ‘what goes here’ are not in any one person’s mind, but hiding in plain sight, in the city itself.”

This is why multidisciplinary working is essential to designing future cities: “We need to collaborate across disciplines, rather than each working in specialist fields—the interesting stuff happens between disciplines.”

Designers must also take advantage of new tools, as smart technology becomes embedded into buildings and infrastructure, producing vast amounts of data on how a city works. “If cities are smart, the design process also needs to be smart. We as designers can now look at large public datasets, rather than depending on the intuition of someone who’s been doing it for 30 years. You may find that by crunching seemingly disparate pieces of urban data, solutions start to emerge that we may not have thought of instinctively, and which really are place-specific.”

“If you’re dealing with masses of data, and embracing the complex, the engineering mind is made for that. Complexity and interrelationships are key to cities, and that’s where engineers excel.”

SIBBESBORG

When WSP’s team in Finland entered a competition to masterplan a new district, they understood that it was not enough to design a sustainable community—they had to create a cultural identity to draw in new residents and convince them to adopt its sustainable vision.

Sibbesborg, in the municipality of Sipoo in south-east Finland, will be a completely new area, home to 100,000 residents and set to provide 40,000 jobs by 2050. WSP’s winning design is a cluster of urban villages, where people will live carbon-neutral lifestyles strongly connected to nature.

Though many of its residents will commute by mass transit to Helsinki, Sibbesborg will be no bland dormitory town. The area is already renowned nationally for its pristine agricultural landscape, local industries including crop growing and rearing livestock, and related services such as fishing, equestrian services and food processing. WSP’s “Nourish!” concept builds on this strength. “We envisage that development in Sibbesborg over the next 40 years will enhance its existing connection to nature and the sense of community,” says Katriina Rosengren, project manager for Sibbesborg, and an expert in sustainable urban design at WSP Finland. “These traits will be strengthened and developed into a ‘Sibbesborg brand’, instantly recognisable to the Greater Helsinki citizen. It will be the Finnish capital of local produce, and local food will be a theme that runs through every Sibbesborgian’s life from cradle to grave.”

In the year 2050, Sibbesborgians will not only grow much of their own food, but will have a lower carbon footprint than their neighbours, as the infrastructure of the area will make leading a carbon-neutral lifestyle easy. Rosengren hopes that this “micro-urbanism” will attract a range of families, students, elderly people and young professionals. “Sustainability goes beyond competitive carbon footprinting,” she says. “It’s also about having a sustainable economy, maintaining and enhancing the natural environment, and about social capital and a rich cultural heritage.”
Before cities can capture investment and talent, they must capture the imagination. The most successful cities are not simply those that offer the highest salaries, a better quality of life, the cleanest air – they’re the ones whose names immediately conjure sounds, sights, smells, and where people flock despite the crowds, the noise and the pollution. More and more cities are realising that their identity is their greatest bargaining chip in the global market. They are seeking iconic architecture to put them on the map – or even a complete rebrand to encourage people to look at them with new eyes.
Rebecca Price, managing Director, Lloyd Northover
Lloyd Northover specialises in place branding, and has branded places as diverse as Belfast, Plymouth, Tottenham and the Black Country.

POSITIVELY PLYMOUTH
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A city will have 1,000 different things to communicate, and it’s much easier for an audience to take them in through one central driving message and a brand that links all of these things together. That’s what branding is for: making communication clearer and more digestible. Managing things like this is probably most important for cities with a more challenging story to tell.

It is about really valuing and understanding a place, about finding its truth

Rebranding a city is about really understanding and valuing a place, about finding its truth. The importance of engaging with people can’t be underestimated, which makes these projects extremely labour-intensive. It’s probably the most complex kind of branding there is. It’s not only about communicating to the outside world and bringing people in, but about giving the people who live there a renewed sense of pride.

Rebranding Plymouth was about getting more for the city in every sense, more investment, more visitors and more residents. For two millennia, Plymouth had been a centre of exploration and discovery and all things maritime, but today its value in the world has changed. This has had an impact on its economic success. Furthermore its naval presence meant that it was decimated during the Second World War and while some of the post-war redevelopment was really imaginative, its gems are more hidden than they might be.

When we began speaking to people in the city, we discovered that though underneath there was an immense civic pride, on the surface there was a lack of confidence and people always talked about the city in the negative. They described it as a city that people always leave and a bag of bones without a beating heart. We took those negatives and replayed them as positives. So rather than a city that people always leave, it’s a city that people can’t resist returning to. Rather than a bag of bones, it’s a city of hidden treasures.

The brand became Positively Plymouth. When we unveiled it, there was enormous buy-in and the sense of pride and gratitude from the city was overwhelming. Rebranding a city is an amazing experience, because if you get it right, you hold a mirror up to the city and show it just how amazing it really is.

World-Class Africa
Dоuglass De Villiers, Group Chief Executive, Interbrand Sampson
Interbrand Sampson works throughout Africa, and has delivered destination brand solutions in many places including Kenya, Botswana and South Africa.

Everything has a brand component, but the more important consideration is what the brand is known for; not simply how widely known it is. When a place carries out a branding exercise, it’s usually to achieve a strategic objective – to enable a city to grow, for example, by attracting business investment and employment, or to boost its reputation as a tourist destination, or to galvanise its citizens to support these activities. For example, Johannesburg is branded as a world-class African city and its objective is to attract international business.

The biggest misconception about place branding is that it’s just about the logo, but this is simply an identifying mark that reflects the destination’s values and positioning. Neither is city branding about an ad campaign. Certainly, this is an important way to communicate and raise awareness of the brand, but the quicker a city moves on to making a difference and creating economic value, the better that brand will be. It’s about understanding how a place is seen and the image it needs to project to achieve its objectives.

“Ultimately, a city has to deliver on its brand promise or be found out as a fraud”

Ultimately, a city has to deliver on its brand promise or be found out as a fraud – even more so now, with social media. Before, people would just tell five people when they got home, but now they can immediately go on Twitter and the message is amplified.

This is why buildings and infrastructure are important. They are not only the physical landmarks by which people identify a destination; they are also part of the delivery of that brand promise. So to attract international business, Johannesburg needs to have a good airport, good infrastructure, good hotels. When you brand a city, you have to do the journey, because people’s experience of a place will start at the airport. If you have to spend five hours queuing in immigration before you can enter the country, if the customs officials are rude, if the airport is dirty, then perhaps the brand promise is not being delivered.

Johannesburg has always been an entry point to Africa for foreign companies, but there is increasing competition from other places, such as Lagos in Nigeria. So it can never simply rely on its brand promise. The message has to be real.
WSP’s Ahmad Rahimian says there is no standard definition for “iconic”. But celebrated buildings do share some essential characteristics. Here, two WSP experts and two architects who have worked on some of the world’s biggest icons explain what they are.

A city’s skyline is one of its most iconic features, and no city has a more distinctive one than New York. For more than 40 years, WSP Cantor Seinuk has been adding to that skyline, providing structural engineering for some of the world’s most extraordinary towers. The firm is currently working on four buildings on the World Trade Center site, including the Freedom Tower, and it can claim credit for all three of the previous record holders for New York’s tallest residential building.

So Ahmad Rahimian, WSP Cantor Seinuk chief executive, is well placed to comment on what makes a building iconic. “There is no standard definition for an iconic structure, but some of its attributes can be expressed,” he says. “True iconic structures generally challenge the status quo and the common design philosophies prevalent at the time of their creation.”

This may lead to controversy – the Eiffel Tower was widely loathed by Parisians when it was completed in 1889, but has survived to become the world’s most visited monument. “An iconic structure will have to endure the test of time, perpetually gaining popular acceptance and admiration,” adds Rahimian. “It transcends to a greater purpose because it embodies an eloquent legacy and the aspiration for a brighter future. A structure becomes iconic because its architecture led it to a higher order, reaching beyond its technical rigours.”

WSP Cantor Seinuk has been able to deliver a series of pioneering structures by exploiting technical advances in engineering, materials science and construction, as well as increasingly complex computer modelling. But Rahimian points out that the widespread adoption of such techniques is now leading to a new orthodoxy: “It’s somewhat ironic that as a consequence of today’s culture of instant gratification, the architect is challenged to design buildings that incorporate creative twists and turns and stretch ever taller: a practice which is in effect becoming the new status quo.”

That’s something Kamran Moazami, head of structure, property & development at WSP in the UK, also feels strongly about. “There has been a trend for people to do all kinds of things just to create something that is different, but that to me is not iconic,” he says. “What makes a building iconic is how it fits into the environment, how it works with the rest of the city.”

Moazami’s team recently completed the Shard at London Bridge, and he feels it is a symbol of his generation’s contribution to the city. “It’s our gift to future generations. It shows that we’ve done something, created something. It’s not St Paul’s or Westminster Abbey, it’s something new.”

The Shard shows that our generation has created something

Great buildings become symbols not of themselves but of their setting, so their relationship with that place is crucial. “We need to think about buildings in all senses,” says Moazami. “They need to make a positive contribution to the area that they’re in, and they need to perform well throughout their life. Architecture is a piece of art, but it’s not about just creating a building that looks good from the outside, it needs to be good from the inside too.”

Achieving all of these things requires many complementary skills, and much collaboration. “When we were working on the Shard, the architect worked closely alongside us to optimise the structure, so that we could use the minimum amount of material, for example. When you’re building something like the Shard, you can’t make a mistake. It’s about creating something that is special, that is sustainable and that will stay for a long time.”
“IT'S DRIVEN BY THE DNA OF THE SITE”

JOOST MOOLHUIJZEN, RENZO PIANO BUILDING WORKSHOP

Designing a building is about much more than just fulfilling the client's needs. The most exciting projects have a wider significance for the public realm, and that’s something we always consider when we take on a project. Architecture tries to tell a story – it may be a good story or a very boring story. An iconic building expresses something, and it captures people's imaginations whether they like it or not.

If you can create a building that people engage with and take ownership of as a piece of the city, then you feel you've achieved something. In 2009, we completed the new wing of the Art Institute of Chicago and even though it was privately funded, it’s a very public building at the heart of the city. When it opened, the phrase that a lot of people used was civic pride. Cities can only work when there is that underlying feeling.

Of course, you don't start by saying you want to design a popular building. Architecture is like any art form – you try to create something that really matters. What we’ve learned over the years is how important it is to understand the locality. We don't just start a project with the meetings and brief. We go to the site; try to take it in, soak up the atmosphere. That’s why there's such diversity in our work. We try to capture the essence of a locality, so the design is driven by the DNA of the site. People may not be able to put their finger on it, but that’s why a building works and becomes part of the city.

Being iconic is about having that context. As you move around the city, you can orientate yourself by the Shard, and because it’s glass, it reflects the weather. The Shard reflects the mood of the sky and the city, you can orientate yourself by the Shard, and because it’s glass, it reflects the weather. The Shard reflects the mood of the sky and makes you aware of how London’s weather changes all the time.

These aspects trigger people's imagination. Then there’s the shape of the building itself, which fits the different uses at different levels – there are large floorplates for offices lower down, and it becomes more slender towards the top for the hotel and residential floors, finishing with the public viewing gallery at the top.

Older buildings do determine the character of a city, but it’s a continuous process and London is a city of layers. With the Shard, we’ve added a new layer. People were worried about putting a very tall building next to Southwark Cathedral, but the Dean was very happy – he felt it was putting the area back on the map again. A single building can do that – the Pompidou Centre in Paris revolutionised the Marais area in a big way in the early 70s, and I think there’s a good chance the Shard will do the same for London Bridge. You can already feel that the area is more vibrant. There were 300,000 people on the streets for the opening ceremony in July – that was an incredible experience.

“IT MUST BE DIFFERENT TO ANYTHING THAT HAS GONE BEFORE”

KEN SHUTTLEWORTH, MAKE ARCHITECTS

All cities need to have an identity – I don’t think they should or could all be the same. Whatever city you’re in, when you open your window and look out you should immediately know you're in a different place to the one you've just left. It’s the opposite of the hotel chain approach.

The architecture of a place gives it its character, and the role of the architect is to create that difference. The quality, the power of the buildings defines a city. Bilbao has the Guggenheim, Sydney has its Opera House, London has the Gherkin and now the Shard, Paris has the Eiffel Tower, Dubai has the Burj Khalifa.

At Make, we never want to show you something you’ve seen before. It’s about making sure a project is distinctive and unique to that particular city. The idea of taking a tower out of one place and putting it in a completely different context and climate is fundamentally wrong. Buildings have to be site-specific.

In an established city, it’s about enhancing what’s there, ensuring that the new building works with existing ones, but that it pushes the agenda on. We’re always looking for the next thing, taking the history of the city and moving it on for a new generation, upping the game with the quality of the architecture.

What makes a building distinctive? It’s a lot to do with location. Sydney Opera House and the Guggenheim in Bilbao are right on the water’s edge; in New York, the Statue of Liberty is on an island. Buildings need to be in prominent locations, or incredibly tall in comparison to their surroundings so that they become a landmark. An iconic building also has to be different to anything that has ever been seen before. Can you draw the shape in one simple sketch? Boxes don’t tend to be distinctive.

Of all the buildings I’ve been involved in, the one that has changed a city’s identity most is probably the Gherkin. It redefined the skyline of London, and encouraged people to come up with something better; I think the Shard is a fantastic piece of sculpture, and a tour de force of structural engineering. It’s good for London – it was built during a recession – and I like the fact it’s on a major railway station, which helps to anchor it.

With new cities, the mistake that’s often made is just to build without any thought to the way the city will work, without a masterplan to hold things together. You end up with a scattering of iconic objects, like perfume bottles on the shelf, and no way to get from one to another.

You need to get the infrastructure right first – the transport hubs, the energy and water networks, the communications. With future cities, a lot will come down to that infrastructure, and making sure it’s sustainable. The quality of the architecture, the food, water and power networks, the transport – that’s what will make cities places where people want to be.
Facing a future of limited resources, all cities will have to use energy and water more efficiently just to survive. But others are taking it further, making sustainability a key component of their identity and using it to compete against their rivals for talent and investment. WSP is helping them do it.

Within 30 years, Lakeside is intended to be home to 45,000 people, with new houses, apartments, shops, a school, a marina and 125 acres of open space. WSP is devising a groundbreaking transport strategy to support the lifestyle proposed for Lakeside, working closely with masterplanner SOM and technology company Cisco. “The client’s vision is that this community will be designed so that neither residents nor visitors need to use their cars,” says Mike Jordanou, international director at WSP. “That lifestyle will draw people to Lakeside, because moving around and accessing services will be so easy.”

The project has already caught the imagination of potential residents worldwide, having just been voted the winner of the Sustainia Community Award for sustainable development from a shortlist of 100 projects.

Lakeside homes will come with a state-of-the-art IT system connected into the district’s smart infrastructure. Residents will be able to walk and cycle using purpose-designed facilities, and interchange seamlessly with transit services to go further afield.

Construction of the main boulevard through the site has started, and the detailed design of phase 1 is under way, a mixed-use development in the northern part of the site.

WSP continues to explore pioneering ideas for phase 2. “The client has challenged us to think really big,” explains Jordanou. “We’ve been asked to halve the time it takes to reach major destinations around the city, and to propose ideas using electric and driverless vehicles. We need to rethink the transit sales model too – why not pay-as-you-go private vehicles? You might dial a vehicle to take you where you want to go and bring you home, and be billed at the end of the month.”

They have also been completely rethinking the retail experience. “Maybe when you go shopping, you won’t walk away with anything. You have the enjoyable experience of going shopping, but whatever you purchase is delivered later, so you can spend your time by the lake shore drinking coffee with friends or family, instead of having to worry about carrying bulky items home.”
These are extremely important projects for Sydney,” says WSP principal Gavin White. “Just one of these urban renewal projects is bigger than anything we’ve seen here in the last 20 years. Environmental sustainability is a big part of each project, but even more important is the integration of social sustainability. It’s about trying to attract investment and income from a global perspective. That’s really important, both for Sydney and Australia.”

Each of the districts has its own distinct identity, and sustainability plays a key part. Downtown, the Central Park Precinct aims to be “an icon of 21st century living”, the first in Australia to achieve a 6-star Green Star rating, combining social and environmental initiatives. Heritage buildings will be retained alongside new residential, commercial and retail space within a landscape of urban squares and parks.

WSP’s specialist environmental design practice, WSP Built Ecology, has provided an integrated service since the project’s inception. The 5.8ha precinct will be the largest urban development in Australia to use a central thermal plant in combination with on-site tri-generation for power, heating and cooling. It aims to be water neutral with no potable water used for non-potable demand.

But the sustainability initiatives aren’t restricted to the site. “We are also developing relationships outside, so the central thermal plant will supply low-carbon power, recycled water and thermal energy to its neighbours when available. It’s a real fusion of social and built sustainability that will be prevalent in more and more developments in future,” says White.

Meanwhile, at Darling Harbour’s Sydney International Convention, Exhibition and Entertainment Precinct, the New South Wales government aims to reassert the city’s dominance in the staging of international events.

Spread over a 12ha district, it will include world-class facilities built as part of a major urban renewal project, due for completion in 2016. WSP is advising Infrastructure New South Wales on the design of building services, infrastructure and sustainability across the site, preparing project design guidelines as well as evaluating them throughout construction.

WSP has also been involved since the first stages of the Barangaroo development, where 22ha of disused container wharves at the western edge of the existing CBD will become a spectacular waterfront precinct. Barangaroo is intended to be the new western face of Sydney, not only showcasing how city populations can live sustainably, but drawing A$1.5bn into the economy every year.

With a total development value of A$6bn, Barangaroo will include commercial buildings with the large floor-plates demanded by the international finance sector, as well as apartments to ensure the area is thriving 24/7 and new cultural and civic spaces with 6ha of headland park, all linked by new and extended transport systems. “Social sustainability really unlocks the value of this land by presenting it for a variety of uses,” says White. “First and foremost it’s a commercial space, but that’s counterbalanced with cultural and entertainment facilities for public use that will also generate income.”

Read more case studies at wspgroupfuturecities.com

Masthusen, Malmö – building Sweden’s first BREEAM Community from scratch

Amman – creating a public transport strategy for Jordan’s congested capital city
One of the most interesting questions for me is how you express a city’s identity in its buildings and infrastructure. At WSP, we’re designers, and buildings and infrastructure are what we do. We have recently been designing the building services engineering for phase 2 of the Cape Town International Convention Centre, probably the premier convention space in South Africa, and the face of the city for many international visitors.

The interesting thing about this project is that the client required a design which represents world’s best sustainability as a key part of the business model. To attract the long-haul convention market, Cape Town is competing not with Johannesburg and Durban, as might be expected, but with Melbourne and Vancouver, and that competition is now as important as rivalry within the nation. Melbourne has the first 6 star convention centre in the world under the Green Star rating system, while Vancouver offers zero-carbon events and its latest extension has achieved LEED Platinum. Our role is to provide a design that meets the highest global standards on sustainability – a 6-star rating – to enable it to compete with those destinations on the basis of sustainability.

Cape Town has always been identified with tourism and natural features, but we’re now seeing the city rebrand and associate itself with the concept of design, having won the status of World Design Capital 2014. Cape Town has typically distanced itself from “Africa”, in complete contrast to Johannesburg, which has proactively identified itself as an African city. Cape Town has framed its identity to compete with Australian and Canadian cities, while Johannesburg is clearly competing with Nairobi, Lagos and Cairo to be a hub of commerce in Africa. Both identities are deliberate, and the brand of each city is becoming a central theme to its socio-economic development.

A city’s brand is becoming more important than ever before. Heavy-hitters like London, New York, Milan, Tokyo and Paris have always had one, but now we’re seeing smaller places like Portland and Vancouver, as well as developing-world mega-cities like Rio or Mexico City seek to develop an identity and use it to sell themselves.

Creating an identity for new cities in the developing world is becoming an increasingly important challenge. An identity based on centuries of culture is relatively straightforward, but a competitive identity from scratch requires proactive planning and design. Curitiba in Brazil is one city to have done this very successfully, where a huge urban expansion with innovative planning and design has seen the city cited as an exemplar of new urbanism.

People are now talking about new forms of city – US academic Paul Romer has been exploring the idea of charter cities, built from scratch with private funds and based on special economic zones, with their own laws. Meanwhile, aerotropolises will be based around airports in the same way as older cities grew up around ports. South Korea is investing $35bn to build the brand-new Songdo City around Incheon International Airport.

But how will they create an identity for these new cities, and how will they interact with existing ones? This is something WSP is focusing on with our Future Cities initiative in Africa. How to craft an identity based on new urbanism, integrated infrastructure and efficient resource use is going to be one of the big global questions of the next half century.

Richard Palmer is lead sustainability consultant at WSP Green by Design in South Africa.
**PROJECT WINS**

**PROPERTY**

WSP has been appointed to design a major new acute care, diagnostic and treatment centre for Viborg hospital in Denmark, as part of a consortium with Sweco Architects, AART architects and Midtconsult. The centre, first in the region to have an emergency reception, will cost DKK530m (£55m), and is due to be complete by spring 2016. Together, the consortium members offer international experience in healthcare as well as a strong presence in Denmark’s central region. Their design for the 20,000m² building is divided into two separate public and private areas, with many terraces, roof gardens and courtyards to make the most of its unique location overlooking the Sønder lake.

WSP has been appointed by developer Kingfish on a 275,000m² office and hotel complex located in the Jiangning district of Nanjing, China. WSP will be responsible for the schematic design of building services for the Kingfish Phoenix Commercial Project, as well as detailed design, review of the construction drawings prepared by a local designer and coordination during the construction phase.

WSP South Africa is providing building design and sustainability consultancy on a major R1.3bn (£92.6m) retail and business development in downtown Johannesburg, Newtown Junction.

**INDUSTRY, ENERGY AND ENVIRONMENT**

GENIVAR. Colombia has been awarded one of the country’s largest ever mining consultancy contracts, following a successful bid that combined the efforts of corporate, energy, environment, industrial and mining teams in Colombia and Canada. We will be working with Colombian firm HMV Engineers, as part of the HGC Consortium, to provide services in one of the country’s fastest growing sectors. The contract, worth over COP$141bn (C$80m, £51m), was awarded by the Colombian government fund for development projects, the Colombian Ministry of Mines and Energy and the Colombian Geological Service, and involves the evaluation of more than 4,500 mining permits across 16 departments.

**TRANSPORTATION AND INFRASTRUCTURE**

GENIVAR’s transportation unit in Montreal has been appointed to construct a temporary bridge/causeway connecting Montreal and Nun’s Island. The six-lane bridge will also connect Montreal Island to Champlain Bridge, Canada’s busiest, carrying around 60 million vehicles per year, as the first phase of a major redevelopment plan for the Champlain Bridge corridor. The structure is expected to open to traffic in 2015 and be in service for around 10 years, until the new bridge is built. GENIVAR will be providing multidisciplinary advisory services, including environmental assessments and preparatory studies, and will also be in charge of the design and drawings, specifications and tender-related documents prior to the award of the construction contract.

WSP Sells will carry out the biennial 2013-14 inspection of the Gowanus Expressway Viaduct in Brooklyn, New York, a critical component of New York City’s highway system carrying more than 175,000 vehicles per day. The project is valued at $4.3m (£2.7m), and involves monthly inspections of more than 2 million ft² of bridge deck, including the mainline viaduct and ramps for about 830 spans, which will be carried out by three inspection teams. WSP Sells has been providing inspection, interim repairs and design improvement for the 3.8-mile elevated viaduct since 1983.

**WSP SELLs**

WSP Finland director Pekka Pulkinnen has been named Civil Engineer of the Year for 2012, by the Finnish Association of Civil Engineers (RIL). Pulkinnen has overseen many demanding bridge projects around the world, including the Swietokrzyski bridge in Warsaw, Poland, and the 1.3km-long Binh Bridge in Vietnam, and is currently designing a railway bridge through the Kashmir Mountains.
WSP’s Designing Future Cities campaign brings together the many facets of our work in urban areas in a unique and striking way – by inviting the fashion designers who shape the culture of those future cities to create clothing inspired by the challenges that they face.

Seven up-and-coming designers from around the world were asked to interpret nine critical issues affecting cities: urban development, mobility, regeneration, social sustainability, energy, water, waste, property and climate adaptation. Over the coming months, their stunning creations will be displayed in a series of international catwalk events.

“We know that Future Cities is a key strategic area for our clients and partners, and we thought this would be an innovative way to highlight the work WSP is doing around the world,” explains Elizabeth Yesil, group content manager at WSP. “We spoke to the designers about the nine critical issues, but we didn’t give them any steer on the designs themselves. It was really exciting to see how enthusiastic they were about the project, and the opportunity to do something completely different. It was quite a cutting-edge idea and it might have seemed a bit off the wall to start with, but we’ve had a really good response from our clients.”

To find out more about our designers and to see their creations please visit www.wspgroupfuturecities.com

Read more about the challenges facing our urban areas in our Designing Future Cities brochure: www.wspgroup.com/Read-DesigningFutureCities