

# Rotterdam Discovery City

## The International Advisory Board Rotterdam 2015

The International Advisory Board Rotterdam (IAB) was established in 2004 by the Municipal Executive of the city of Rotterdam. The aim of the IAB is to provide the city with a long term macro-economic perspective and practical recommendations from an international point of view that will support the Municipal Executive and the city's stakeholders in making the right choices for the ongoing economic development of Rotterdam.



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ROTTERDAM

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# Foreword

by **Jan Peter Balkenende**

Chairman of the International Advisory Board

It is my pleasure to present the findings of the ninth International Advisory Board Conference.

We are all aware of our changing environment. Current trends drive profound changes in political, economic, societal and organisational systems. The world's population is growing rapidly and massive urbanisation is tipping the balance on the way humanity has up until now inhabited this planet. The consequences of climate change are manifesting themselves. It is clear that we are in the middle of another industrial revolution, driven by these trends and by ongoing digitization and technological advances. It is also clear that our existing systems and structures are not geared towards dealing with this latest industrial revolution. This 'Next Economy' calls for 'Next Cities' and calls for governments, businesses and societal structures that are much more flexible and resilient than the rigidity of existing systems allows. Just like the rest of the world, Rotterdam faces the challenges presented to us in this next economy. However, Rotterdam also happens to be one of the best-placed and best-equipped cities to take on these challenges and turn them into opportunities, provided we move ourselves into a leading-edge position to take the most advantage.

Rotterdam has an enviable natural delta position with world-class state-of-the-art port facilities. The largest challenge for humanity in the coming decades will center around the three most important basic needs of people: food, water and energy. These three basic needs translate into major global sectors that provide these basic needs to people. Rotterdam is unique in the world in that it happens to be world-leading in these three specific sectors, supported by world-class logistics to enable distribution of products, services and the sharing of knowledge.

However, these three sectors are still for a large part producing and functioning according to the existing systems and being supported by the old structures of government, rules and regulations. Rotterdam and the Netherlands can boast many major innovations in the fields of food, water and energy, and the companies and

main actors within these sectors are very aware further innovation is needed. However, rapid progress towards making the most of opportunities provided by the next economy is imperative. Government, businesses, science and the educational sector, and citizens need to work closely together to make this happen.

Rotterdam is well underway to realising this potential, but speed and focus are needed by its key players. Rotterdam has a strong and diversified economic base well positioned for the growth and connection of the sectors food, water and energy. Rotterdam has a strong knowledge-base and a flexible and resilient attitude within its people. Rotterdam has strong networks that it needs to know, be aware of and interconnect so they can build on each others' strengths. Rotterdam has a very young and creative population: a new generation that needs to be challenged and encouraged in experimentation, inventing and entrepreneurship.

The members of the IAB were impressed by the tangible progress of all the physical changes in the city, and were particularly inspired by all the activities and initiatives they found at grass roots level in the neighbourhoods. The overall conclusion is that Rotterdam has real treasures, real dynamics and vibrancy and real sources for growth and progress available within its population. In short, Rotterdam has everything it needs to be a leading discovery city.



**Jan Peter Balkenende**  
Chairman International Advisory Board



**Rotterdam has a very young and creative population: a new generation that needs to be challenged and encouraged in experimentation, inventing and entrepreneurship.**



# Foreword

by **Ahmed Aboutaleb**  
Mayor of Rotterdam

The International Advisory Board Conference has become an excellent tradition over the years. Rotterdam's Municipal Executive find it important to hear other people's views on our city, but it is especially inspiring when those views are voiced by people from all over the world whose expertise lies in economic growth, social inclusion and cohesion and urban development. They show us what we are good at, what we excel in and where we can still find areas of improvement. It is, and always has been, Rotterdam's ambition to keep improving. I am therefore honoured, as Mayor of this great city, to welcome the esteemed members of the IAB to Rotterdam and to host this unique event.

When I look back at previous IAB conferences I can see the progress we have made on the implementation and execution of previous recommendations of the IAB. In this report you will find what the status is of the recommendations made by the IAB in the 2013 conference. This year's IAB conference presented their Call to Action to me on their last day. You will find this Call to Action in this report. To me, the Call to Action proves we are fast moving in the right direction, but it also shows where we can take more steps to move from 'good' to 'excellent'.

In the coming years I personally commit myself to see that this Call to Action is used as a starting point. In order to implement IAB's recommendations we need to cooperate. Rotterdam's success is dependent on Rotterdam's citizens, corporations, start-ups, educational and cultural institutions and inspiring minds. Together we will take this city forward.

As pointed out several times during the conference, this meeting of the IAB is part of a long-term agenda, ultimately leading to hosting the World Expo 2025 in Rotterdam. The observations of the IAB 2015 strengthen my belief that Rotterdam has a unique position to actually realise this ambition.

I wish to sincerely thank all the members of the IAB for their time and for sharing their knowledge and expertise with us and giving us their views. I wish to thank Jan Peter for chairing this IAB in his inimitable way and I thank Rotterdam Partners for the perfect organisation of this conference. And, very important, I thank all the stakeholders who participated with enthusiasm and gave their time and input during this conference.

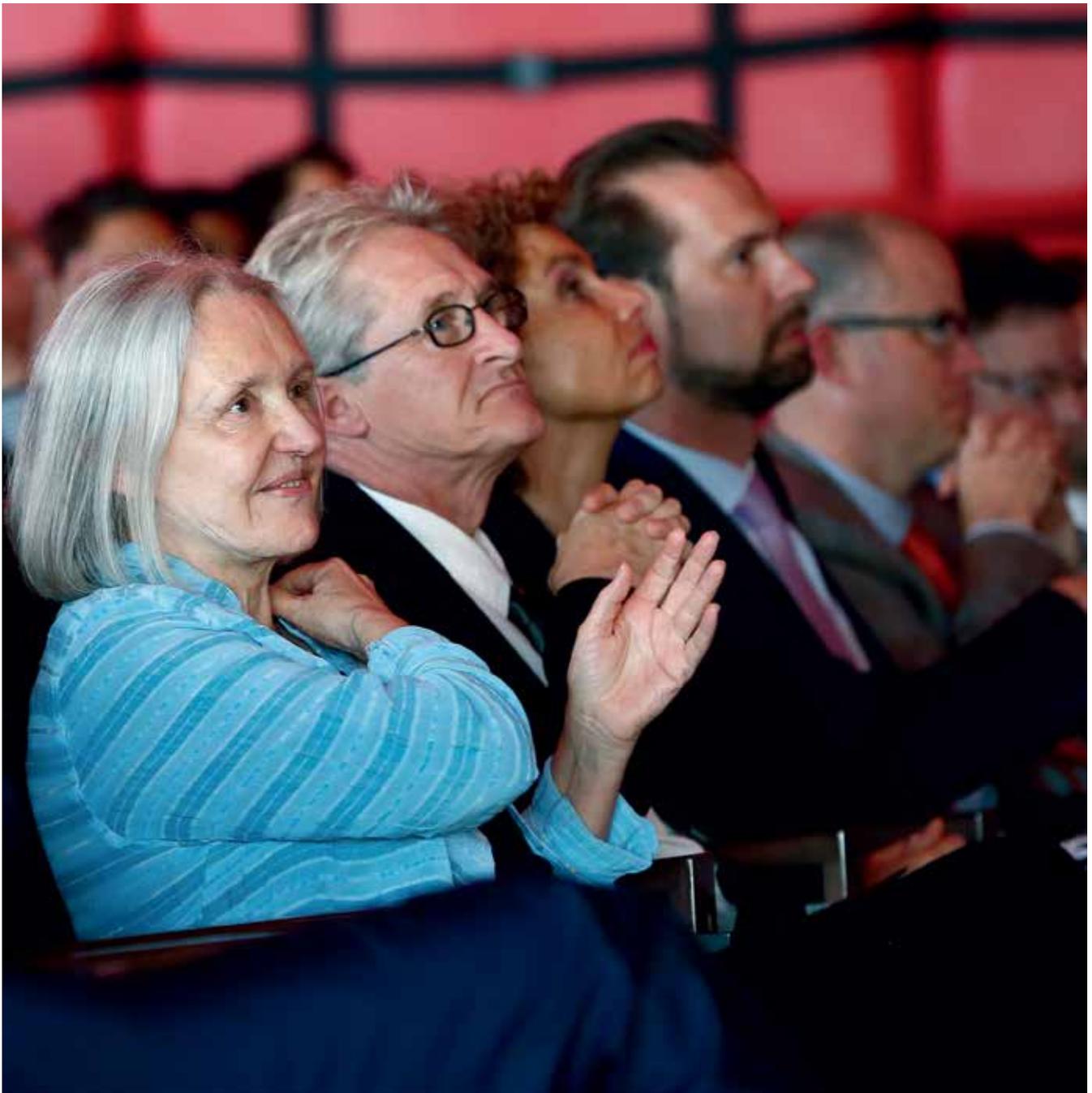


**Ahmed Aboutaleb**  
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**It is, and always has been, Rotterdam's ambition to keep improving.**



# Executive Summary



The International Advisory Board convened for their ninth conference in Rotterdam on 19, 20 and 21 May, 2015. On the first day of the conference the delegates visited various different places in the city, spoke with various stakeholders and visited several projects and companies to learn about the strengths and challenges of the city and see how Rotterdam is moving into the next economy. On the second day the delegates discussed their findings and composed actions based on their findings and recommendations for the continued progress of the city. This they put into a concept 'Call to Action'. The concept was then put before key city stakeholders on the third and final day of the conference. In a co-creation session the concept 'Call to Action' was finalised and presented to the Municipal Executive.

The key findings of the 2015 IAB conference were:

Rotterdam is changing in a very positive way and is well underway in grasping the opportunities the next economy has to offer. The city is ideally placed to benefit from the growing global need for food, water and energy. Rotterdam is unique in the world in that these three sectors are main economic sectors in which Rotterdam is at the forefront of development and these three sectors are supported by a world-class port that can provide the necessary logistics and distribution services. Rotterdam has everything it needs to be a leader in a changing world and the current transitions create better opportunities to realize the civic vision.

Speed and focus are needed to continue to build on steps already taken in the main dimensions of:

- Governance
- Making city
- Social development & responsibility
- Sustainability
- Supporting the next economy and its integration with the established economy

Across these five dimensions four themes are paramount:

- Connecting networks
- Daring to experiment
- Transparency and accessibility of the system
- Storytelling and communication

The IAB has created a number of actions within these dimensions that should help Rotterdam move forward in meeting the challenges and grasping the opportunities the next economy offers the city. The IAB recognises that Rotterdam is already well underway with various programmes and projects across these five dimensions and would like to both underline the importance of these programmes and projects, as well as call for a more concerted, more focussed and speedier effort in realising these programmes and projects in combination with IAB's designed actions in order to reach the city's full potential.

## Important Themes

Across these five dimensions the following themes are important:

Governance	Making City	Social Development & Responsibility	Sustainability	Support Next Economy
<b>Connect networks</b> Rotterdam has many strong networks, but we lack connections between them and some are duplicated. The municipality has a leading role in connecting existing strong networks				
<b>Dare to experiment</b> Rotterdam has a strong tradition of daring urban experiments > capture and build on that tradition > foster experimentation				
<b>Transparency and accessibility of the system</b> It is difficult for next economy actors to find their way and/or develop within the boundaries of the existing system				
<b>Storytelling and communication</b>				

# Position Paper International Advisory Board 2015

In preparation of the ninth IAB conference the delegates received this position paper, which sets out the central themes for this edition and explains how these central themes affect our city. The position paper serves as a foundation and background information for the delegates to base their findings on.



## Introduction

Rotterdam is a highly international, highly interconnected city. It is multifaceted and multicultural. This multiculturalism is seen as a strong asset which helps sustain and grow our international trading base and offers us a very diverse skill-set to profit from. Rotterdam is also a working-class city built on what we would classify as traditional industries: the port, logistics, maritime technology, fossil fuel-based energy, heavy manufacturing and so on. However, Rotterdam does not only have traditional industries. It also has a healthy internationally traded services base, an outstanding world class healthcare sector, various niche technology sectors that are highly innovative (such as water management and civil engineering, off-shore engineering and such) and a very young average population. Although Rotterdam is not a huge city compared to international standards, it is large enough to play an important role on the global market and it is also large enough to be hugely affected by global changes facing cities everywhere: political, economical, social, technological, ecological and demographic. As our world is rapidly changing around us, Rotterdam needs to take stock and put in place measures to be ready to take the best advantage of the opportunities these changes herald, while protecting ourselves from any adverse effects these profound and rapid changes have on our city.

Rotterdam's International Advisory Board Conference 2015 will centre around three main and interrelated themes that best illustrate these profound and rapid changes: 'The Next Economy', 'The Next City' and 'Resilience', where Resilience is a theme that encompasses the other two themes. For the purposes of starting the discussion that will determine the central subjects within the main themes this paper sets forth what the city of Rotterdam believes these three themes mean for the city and serves as a starting point for thoughts, discussions and reflections on the chosen themes. It also introduces the major questions that will be addressed during the IAB conference.

We will start this paper by further exploring the three themes and how we believe they affect Rotterdam and finish by introducing the main questions as put forward to the International Advisory Board by Rotterdam's Municipal Executive.

## 1. THE NEXT ECONOMY AND ROTTERDAM

The Next Economy: one of those current catchphrases, but what exactly do we mean by it? We are all aware that markets and economies as we knew them are changing around us, but what are these changes and how will they affect us and the way we are organised? Moreover, how do these changes impact the current Rotterdam economy? We cannot know exactly what this next economy will look like, we can only look at trends and developments and work with what we do know. The Next Economy demands that we develop a deep understanding of our competitive characteristics within each of the industries upon which we depend for economic prosperity and well-being. By identifying opportunities as well as potential challenges across the entire value chain, we can act quickly to secure our future amidst a changing economic environment.

### 1.1 The Next Economy

The way we conceive, design, build, test, manufacture, market, sell and dispose of products is changing dramatically. Also, the materials and energy resources we use in these processes are changing. This means profound changes to organisational structures, working processes, labour skills, manufacturing locations, financing, governing regulations and many more aspects.

#### ≡ 1.1.A Changes in the Manufacturing Processes

The way we manufacture is changing through digitisation, additive manufacturing, and robotisation. Digital manufacturing will allow some manufacturing to return from lower wage countries to the West, as it lowers the cost of manufacturing and makes it less labour-intensive. Everything in the factories of the future will be run by smarter software. Digitisation in manufacturing will have a disruptive effect every bit as big as in other industries that have gone digital, such as office equipment, telecoms, photography, music, publishing and films. Much of what is coming will empower small and medium-sized firms and individual entrepreneurs. Launching novel products will become easier and cheaper.

Additive manufacturing – or 3D printing - is not yet good enough to make a car or an iPhone, but it is already being used to make specialist parts for airplanes, cars and medical devices, to name but a few. The technology is ideally suited to low-volume production. It also allows the mass customisation of finished parts. Millions of dental crowns and shells for hearing aids are already being made individually with 3D printers. Freed of the constraints of traditional factories, additive manufacturing allows designers to produce things that were previously considered far too complex to make economically.

This technology range is not just about printing things. It is also about simplifying the process of making products and letting people use the power of the web to share ideas. This is a personal manufacturing revolution. Just as digitisation has freed some people from working in an office, the same will happen in manufacturing. Product design and simulation can now be done on a personal computer and accessed via the cloud with devices such as smartphones. It means designers and engineers can work on a product and share ideas with others from anywhere in the world.

Conventional production equipment is becoming smarter and more flexible, too. Factories are becoming vastly more efficient, amongst others through robotisation. The days of huge factories full of lots of people are not there any more. Advanced robotisation also means factories can run 24 hours a day, 7 days a week without heating or lighting, saving costs to the point of making manufacturing cost-effective in higher-wage countries.

Many of the new production methods in this next economy will require fewer people working on the factory floor. Yet manufacturing will still need people, if not so many in the factory itself. All these automated machines require someone to service them and tell them what to do. Some machine operators will become machine minders, which often calls for a broader range of skills. And certain tasks, such as assembling components, remain too fiddly for robots to do well, which is why assembly is still often subcontracted to low-wage countries.

In some cases a “manufacture locally” revival could take root, as companies cluster their design, production and customer service units regionally to enable faster responses to new trends, demands and preferences of end-users. As production and design become increasingly integrated, off-shoring of the production process will become more difficult and lose its advantage of cost per unit for those products that rely on high customisation and new technologies.

The digitisation of manufacturing will also make training easier. Companies cannot justify halting production equipment which may be running 24 hours a day so that trainees can play around with it. But computers can simulate production systems in a virtual environment, and products too. Robotisation, digitisation and new manufacturing processes make companies more efficient and flexible in their manufacturing processes, but it also means that traditional (manufacturing) jobs are disappearing and new skill sets are needed in the future. Workers may no longer be (life-long) employees but be self-employed or have a number of different employers. They will need to have a much broader skill-set, be far more flexible in the work they do and engage in life-long learning as well as work across sectors.

### ≡ 1.1.B Changes in the Use of Materials

One material that particularly interests manufacturers is carbon fibre. This is already being used to make the large fan blades at the front of some jet engines. It is flexible as a raw material, but when a carbon fibre cloth is impregnated with epoxy resin, shaped and cured, it can be as strong as steel and only half the weight. The large-scale use of carbon fibre began in aerospace. Both Airbus and Boeing aircraft use it extensively instead of aluminium. Not only is it lighter, there is also a big manufacturing advantage: large sections, like the main area of a wing, can be made in one go rather than being riveted together from lots of individual components. Also, it is the strength, lightness and potential saving on manual labour offered by carbon fibre that makes the material attractive for a variety of products.

Increasingly, product engineering will begin at the nanoscale. Nanotechnology is already used to enhance some products. Titanium dioxide, for instance, is used to produce self-cleaning glass in buildings. The research laboratories at MIT provide many more examples of future products that might use nanoparticles. They are looking at materials that are extremely water-repellent. These can be used to make super-hydrophobic coatings that would greatly improve the efficiency and durability of machines like steam turbines and desalination plants. Such coatings can, for instance, be applied to existing steam turbines, which generate most of the world's electricity.

When materials are measured at the nanoscale they often have unique properties, some of which can be used in beneficial ways. Nanotechnology makes it possible to manufacture, on a tiny scale, new therapeutic substances carrying information on their surfaces that can be used to direct them to particular cells in the body. The drugs delivered by such substances could be valuable in treating diseases like cancer. They are being made in small quantities now. The challenge will be to scale up those processes once clinical trials are completed. And that will depend on both product and manufacturing innovation working together.

### ≡ 1.1.C Global Interconnectedness

Global exchange is increasingly organised around the Internet, facilitating the enhanced integration of global markets and expanding consumer knowledge and participation. This will likely be the biggest driver in how the next economy evolves, challenging the existing economic framework, based primarily on competition, to evolve to include a more collaborative dimension. Collaborative technologies such as social media and peer-to-peer sharing are providing people with new ways of consuming, producing, selling, trading and working. Accessibility (i.e. knowledge and tools) will be key in how far the networked global economy will evolve, who will be included and who will be left out. Certainly high speed and extensive networking appears to fuel what some have termed “hyper-competition” and “hyper-specialisation.” Hyper-competition tends to create lower barriers to entry in certain industries, challenging the ability of firms to sustain competitive advantage. On the other hand, hyper-competition re-opens economic opportunity for those who can adapt quickly to shifting conditions. Hyper-specialisation involves breaking down work currently undertaken by one person into more specialized pieces spread out amongst a variety of people.

### ≡ 1.1.D Resource Scarcity and the Circular Economy

Resource scarcity is an increasingly common theme in discussions in future growth, often driven by the recognition that human activities have already moved outside the planet's capacity limits in three systems: climate change, biodiversity loss and the nitrogen cycle.

The circular economy model is based around a set of simple principles: using less and eliminating wastes; maximising value at each step in the process, managing resources in flows and deepening cooperation throughout the supply chain. While the



principle may be simple, the change that it encompasses is complex and requires more of a system transition than a series of incremental adjustments.

In our present linear economy goods are produced from raw materials, processed and used and then become waste at the end of their life-cycle. The supply chain is built on separate steps or processes that require an individual set of inputs, including energy and water. Resource depletion and pollution from waste threaten the continuity and availability of resource supply. The circular economy model replaces the linear economy's premise of 'take, make, use and waste'. The recycling and reuse of products and materials eliminates waste and reduces the use of raw materials. This is a model where companies within the supply chain have to work closely together to increase value along the supply chain, risks and benefits are shared. The risk of resource scarcity and pollution from waste decreases as waste is recycled and reused and inputs reduced to a minimum.

#### ≡ 1.1.E From Static to Smart Products

Companies are exploring how to incorporate artificial intelligence, data analytics, micro-electronics, software, sensors and telecommunications technologies to design intelligent and interconnected products and accompanying services. Smart products are able to assess the situation, location or context in which they are operating and adapt accordingly. They are also able to interact with people, other products and larger systems, which enables them to become a part of the "Internet of Things" in a product-service system that combines physical smart products with a range of services. Examples include Nike smart shoes that use sensors and an accelerometer to record distance, jump height, etc. and sync the data with accompanying Internet and phone that allow users to track their own performance. Another example includes smart grids that integrate smart meters, smart appliances and smart homes through interconnected software applications that create enhanced value for customers, firms and the general public.

## 1.2 Rotterdam and the Next Economy

It is one thing to be aware of how the economy is changing – it is quite another for a city to reconcile those changes with its current economic drivers and to develop an understanding of where the opportunities and threats will be going forward.

### Three Leading Sectors, one Common Destiny

Rotterdam has several leading economic sectors and a healthy economic diversity. However, the Municipal Executive have decided to focus their attention on three leading sectors for the coming years: Agro Food, Life Sciences & Health, and Cleantech. Together they account for some 146,000 jobs in the Rotterdam region. The municipal Executive feels that these three sectors represent the next economy best, with their high levels of innovations and an increasing amount of linkages between one another as these innovations are applied in different contexts. One example of such linkages are bio-based chemicals, which are made using naturally cultivated materials and can be either substituted for traditional petrochemicals or used in various medical applications.

### ≡ 1.2.A Food: The Local and the Global

The Netherlands is the second largest food exporter in the world, with Rotterdam's port and logistics hub playing a central role. With the largest European port and first port of call for many deep-sea lines, Rotterdam serves as the food logistics hub for Europe. The Rotterdam region is also the food production hub in the Netherlands. The agro food sector in the Rotterdam region comprises 5,800 companies and accounts for over 40,000 jobs.

The Netherlands accounts for 7% of the worldwide agricultural exports and is one of the world's three leading producers of vegetables and fruit. It is also a global market leader in machinery for food processing and holds international top positions in ingredients, enzymes, animal breeder materials and biological crop protection. Of the top 40 global food companies, twelve have a major production site and/or R&D facilities in the Netherlands



and four are Dutch companies. Nationally, the Netherlands has the second highest R&D investment rate in agro food in Europe. Its productivity is five times higher than European average due to efficient and sustainable production systems and processes.

From food producers, logistics service companies, traders to suppliers to R&D companies, Rotterdam is home to a wide range of agro-food companies that cover the whole chain from seed to customer. Some of the most well-known multinationals including Unilever, Coca Cola and Refresco have major bases of operations in Rotterdam. Other multinational and large national food companies like DSM, Friesland Campina, Verstegen, Total Produce and The Greenery also have operations in the region. The recently opened Market Hall in the city centre is the new icon for the regional food cluster to showcase world food. This first indoor market in the Netherlands has a floor space of over 12.000 m<sup>2</sup>.

The Port itself is the central hub for all refrigerated and frozen cargo in Europe. It offers a wide range of container terminals with 12,000 reefer plugs and a variety of specialised companies. Modern cold storage facilities are available with 2.5 million m<sup>3</sup> for climatized and cold storage. It has excellent multimodal hinterland connections to and from greenports. The Port of Rotterdam will strengthen its leading position with the Rotterdam Cool Port, which is currently being developed. This new state-of-the-art cluster will offer an integrated concept for all perishable cargo with room for storage, cross-docking, inspection and quality control activities.

Rotterdam is also the breeding ground for innovation in the food sector. With a high concentration of leader firms and world-class research institutions such as the Erasmus University and its medical centre Erasmus MC as well as NIZO Food Research (with Europe's largest food testing pilot plant), TNO Netherlands Organisation for Applied Scientific Research, and Wageningen University and Research Centre, the Rotterdam region is a hub of knowledge

transfer and innovation. The Erasmus MC is leading in research on the role of food in the prevention and treatment of diseases. It has a cross-disciplinary cooperation with seven other medical university centres and the Netherlands Genomics Initiative. This knowledge infrastructure is supported by presence of R&D departments of leader firms in areas such as medicine, food, chemistry and other related industries.

Much of the region's agricultural expertise centers around food science and large-scale food operations, a big part of why the sector is what it is today. At the same time, Rotterdam has also begun to tap into the global movement around local food production, with various urban agriculture initiatives popping up around the city. As consumers place a higher value on fresh and locally sourced food, and as the community benefits of urban agriculture become more apparent, can Rotterdam capitalize on its ample space and enterprising spirit in order to connect local food within the region's existing position as a global agro food leader?

With the city's competitiveness in the agro food sector currently tied significantly to the fortunes of food multinationals, local food represents one area where Rotterdam can benefit from realising increased synergies between its existing business culture and the smaller grassroots projects percolating at the start-up and neighborhood level.

### ≡ 1.2.B Healthcare's Connected Future

Rotterdam is located in the so-called Medical Delta, the largest life sciences cluster in the Netherlands. More than 18,000 people work in 600 life science companies in the region. Scientific and technological knowledge is also concentrated in the area with three outstanding universities (Delft University of Technology, Leiden University and Erasmus University Rotterdam) and two leading university medical centres (Erasmus and Leiden). About 14,000 academic students in life sciences and medical technology study

at these three universities which serves as the breeding ground for many successful spin offs.

Rotterdam itself has a sizable and mature medical sector that comprises of 2,800 businesses, 10 hospitals (five of which are specialized) and 13 healthcare institutes. The sector accounts for around 93.000 jobs in the region of which almost 60,000 jobs are in the city. This equals 19% of local employment in Rotterdam.

Rotterdam is home to the Erasmus MC, a leading university medical centre in Europe and the largest in the Netherlands with nearly 13.000 employees and 700 medical specialists. The Erasmus MC has a specialized cancer institute (Erasmus MC Daniel den Hoed), pediatrics hospital (Erasmus MC Sofia) and a Thorax centre. Its medical school with over 3,000 annual students is the best in the Netherlands according to the QS World Rankings. Times Higher Education also ranked the Erasmus MC as one of Europe's top 10 leading institutions in clinical research. The Erasmus MC has strengths in the areas of personalized medicine, nanotechnology, gen technology, biomechanics and virology. Moreover, the Erasmus MC has a cross-disciplinary cooperation with seven other medical university centres and the Netherlands Genomics Initiative. Recently, it partnered with Oracle to accelerate next-generation genomics research initiatives to advance personalized medicine and improve patient outcomes. The Erasmus MC is also one of the founding members of the Allele Frequency Community, a leading genomic data sharing network of renowned organisations.

Rotterdam's Life Sciences & Health sector may be best-positioned to capitalize on the growth drivers of the Next Economy. With leading research institutions as well as effective partnerships between the public and private sectors, Rotterdam possesses a strong foundation to capitalize on trends in health care delivery as well as the general aging of the population in the Netherlands and across Europe.

Healthcare is another area where Rotterdam can benefit from linking its energetic community of start-ups and young people with the city's established business strengths. Health IT and remote medicine are a growing trend, presenting an opportunity for innovation and new business models but also a potential threat to the 50,000 workers in Rotterdam who currently work in direct care positions. As health care demands increase along with technological capabilities, can Rotterdam find ways to build on its existing competencies in health care and life sciences, while also understanding where it may be vulnerable in the future?

### ≡ 1.2.C Cleantech and The Chemical Sector

The petrochemical cluster within the Port of Rotterdam employs more than 13,000 people. It accounts for more than 40% of the added value of the port and for 60% of land use. Moreover, Rotterdam is part of the ARRRR-cluster (Antwerp-Rotterdam-Rhine-Ruhr-Area) that is well integrated via a network of pipelines. It is one of the top 3 petrochemical clusters in the world and represents 35% of the European cracker capacity.

Rotterdam's strategic delta location has led to the establishment of a modern and diverse cluster of oil and chemical companies. The petrochemical cluster in Rotterdam comprises an extensive

combination of five crude oil refineries, six refinery terminals, 45 chemical companies, six biofuels plants, five vegetable oils refineries, four gas fired power plants and three coal and biomass fired plants. The industrial cluster has a production capacity of 54 million tonnes of oil products and 13 million tonnes of chemical products. The tank capacity is 28 million m<sup>3</sup>. The energy and utility centres produce 3,000 MW of electricity. In total it covers 2,865 hectares, representing 60% of the available land in the port, with an emphasis on raw materials processing and base chemicals manufacturing. There is also 1,500 km of pipelines interconnecting oil and chemical companies. The size of the cluster is a strength in itself offering significant economies of scale.

Cluster integration is far advanced in Rotterdam with companies that are constantly looking for new ways of creating synergies. Traditionally, the oil, gas and chemicals sectors have been tightly interlinked in terms of cooperation and infrastructure. Crude oil is processed by the refineries into naphtha and then converted by the petrochemical industry into basic chemicals, which are subsequently processed into synthetics for various processing industries. The waste products of one company often form the raw materials for another. Many companies supply raw materials and semi-manufactured products to their neighbours. The many possibilities for natural synergy have led to a highly efficient and profitable business climate for all chemical companies active in Rotterdam. Moreover, Rotterdam optimises the chemical cluster and improves use of industrial resources with co-siting and co-servicing. This mutually reinforcing cooperation has a significant impact on both investment and operating costs for companies at the port.

Outstanding petrochemical knowledge is available in the Rotterdam cluster due to the presence of leading Dutch petrochemical companies such as Shell, Akzo Nobel and DSM. In addition, many of the oil refineries and chemical plants are part of multinational leaders including ExxonMobil, BP and Lyondell Basell. The cluster is collaborating with strategic research institutions and research universities such as Erasmus University Rotterdam and Delft University of Technology to increase its competitive advantage over its global competitors and adopt sustainable practices. Plant One, the test facility for sustainable process technology is also established in the Rotterdam port area. This centre of excellence fills the gap between laboratory and full-scale production. Plant One can validate new technologies that reduce the consumption of energy and raw materials or that use clean raw materials in a quick, cost-effective way and at the pre-industrial scale. It helps the industry to accelerate the transformation to more sustainable production processes.

The Port of Rotterdam is currently attempting to solidify its position with respect to bio-based chemicals. An initiative known as Bioport aims to develop a "sustainable bio-based production cluster," viewing this and the biofuels sector as major drivers of future port activity. In an economy increasingly centered around sustainability and circular processes, how well the port and the city facilitate the growth and development of bio-based materials will play a major role in how competitive Rotterdam's chemical sector continues to be going forward.

## 2. THE NEXT CITY AND ROTTERDAM

Over half the world's population now lives in cities. By 2050 this percentage is expected to have risen to 75%. In China alone, every week one million people leave the countryside to live in cities in search of better job prospects and better living conditions. This rapid growth of cities puts a major strain on their coping capacities. Many different current trends drive major changes to how cities are used, organised and perceived. And how cities organise themselves may mean the difference between future success or becoming the next ghost town. In Rotterdam we are acutely aware of how these changes impact our city and we are in search of where and how we need to adapt to remain a success, rather than becoming the next ghost town. The Next City is a theme that comprises three sub-themes: a physical aspect, an economic aspect and a governance aspect.

### 2.1 The Physical City

Throughout the world there is a move towards more urbanisation. For the first time in history a larger percentage of the world's population live in cities than in the countryside. Most cities globally are growing in numbers of inhabitants, although some faster than others. Most of this urban growth is found in developing countries and the so-called emerging economies. In Europe, urban growth rates are on the whole reasonably steady. However, despite this, the growing urbanisation has a major impact on a city's resources: land for building on, sewage handling, fresh water sources, waste containment, ecology and sustainability, infrastructure and in the case of Rotterdam: flood defences, to name but a few. It means city planning needs to take the increasing pressure on a city's resources and structure into account and plan ahead carefully.

Also, the way inhabitants use their cities is markedly changing. In the last two to three decades of the previous century, city dwellers were encouraged to move out of the city and into the suburbs, leaving city centres to businesses, retailers and cultural offerings such as museums. City centres became a place to visit, not a place to live. Restaurants, retailers and various services followed the residents into the suburbs so that the need to go 'into town' decreased. As a result, the way people use a city centre has changed considerably too. People feel it's cumbersome to go 'into town' either for shopping or for cultural consumption. It takes too long because of the heavy traffic and confusing one-way traffic systems that were introduced to discourage city centre traffic and parking is too expensive. And because of busy lifestyles and the advantages offered by internet developments, people prefer to shop on the internet and/or go to indoor shopping malls in the suburbs that are easy to reach and have free parking. Because of lower footfalls due to lower retail consumption in town, restaurants, café's and cultural offerings also suffer. These days city centres tend to attract more tourists and day-trippers than they attract local residents.

At the same time, a new generation of city-dwellers is emerging. People who are looking for a more dynamic city centre lifestyle do not want to live in sedate suburbs where they face a long commute to go anywhere. They want shops, restaurants and entertainment

on their doorstep and within walking distance. They want to be part of a lively 24-hour lifestyle economy. They are looking for modern, convenient, well presented and upmarket city-pads which would be suitable for raising a family eventually. Then there are the retirees that are more active in this generation than the generation before them. They also have more money to spend and are looking for a place to live that is vibrant and energetic, which they are not getting in the suburbs. Also, the younger generation of entrepreneurs are embracing the 'locally manufactured'-trend and are moving small scale industry back into city centres, using the city as an incubator by taking over disused office and retail space and breathing new life into the city centre. In Rotterdam's city centre there are several such start up incubators, not least of which are the newly arrived Cambridge Innovation Centre and the Erasmus Centre for Entrepreneurship.

These two seemingly conflicting movements (offices and retail moving away from the city centre and a new generation of industry and retail moving into the city centre) pose a dilemma: invest in city centre retail and entertainment/cultural offerings or not? Build more city centre housing and if so, what kind? Where infrastructure, accessibility, services and physical development are concerned, which choices should be made?

#### ≡ 2.1.A The Economic Aspect

Rotterdam's economy has been built on what we might now view as traditional economic sectors that are now reaching the end of their natural life cycle. Rotterdam is a working class city with most of the labour population depending on low to medium level jobs. The development into the next economy does not only mean that the traditional sectors need to move towards the next economy to survive, but it also means that the city's labour population needs to adapt to different jobs, different skills needed, different ways of working. For them this means: no more life-time employment, no more job-security but instead zero-hour contracts or self-employment and income flexibility. Life-long learning rather than once-learned skills. Individual responsibility rather than the protection of the collective. This has an enormous economic impact with a knock-on effect on home-ownership (mortgages are at the moment still based on job-security and lifetime employment), pensions (also mostly still based on lifetime employment) and therefore consumer power. Pensions will become individualised and an individual responsibility, rather than the compulsory protection of the collective that now exists. It has been proven that this resilience and flexibility needed by employees in a new economy is easier for people with a higher education than it is for lower-educated people. The labour skills needed in the next economy are also very much different from the ones that the current labour force has been taught in school. Instead of knowing mere reading, writing, arithmetic, history and other traditional subjects, employees now need so-called '21st century skills'. Employees need to be computer literate and digital savvy, they need to have networking and co-operation skills. They need language skills and possess lateral thinking and an analytical mind. They need to demonstrate creativity coupled with rationality, flexibility and adaptability and a natural curiosity to look beyond their own boundaries, to name but a few.



Also, it is maintained that every job for someone with a higher education or higher skill base will also create several jobs for lower educated people. Every city will still need cleaners, garbage collectors, restaurant and retail staff, security guards, bus and train drivers, delivery drivers, and so on. However, we also see that these particular jobs that should be taken up by people who do not have a higher education or high skills base are now being taken up by students for additional income support, or by people with a higher education who are currently unable to find a job at their appropriate level. In other words, we are experiencing displacement of jobs. How can a working-class city like Rotterdam move towards the next economy while taking their existing labour force into account and making sure that there will be jobs and income available for them in the future, as well as attracting the necessary higher educated workforce that will ensure the innovation and drive forward the existing traditional economies need?

### ≡ 2.1.B The Governance Aspect

The way our cities are governed needs to change dramatically in the coming years. On the one hand we have growing urbanisation coupled with a growing influence that cities have on the global economy. Cities are where innovation takes place and is fostered. Cities are a country's economic powerhouse and as a result cities have increasingly more power than the old nation-states. That requires a local government that can plan ahead and look beyond the city boundaries to the rest of the world and take their rightful position on the international playing field. Increasingly, cities need to deal with challenges that until recently were the exclusive prerogative of the national government, such as unemployment, education and skills, battling poverty, social security, immigration issues and social inclusiveness, healthcare and security. It requires skills from local government that they may not yet have at acceptable levels. The governance structure that supports this also needs to be put in place, as the existing structure does not necessarily capture the right priorities in the right way. What should

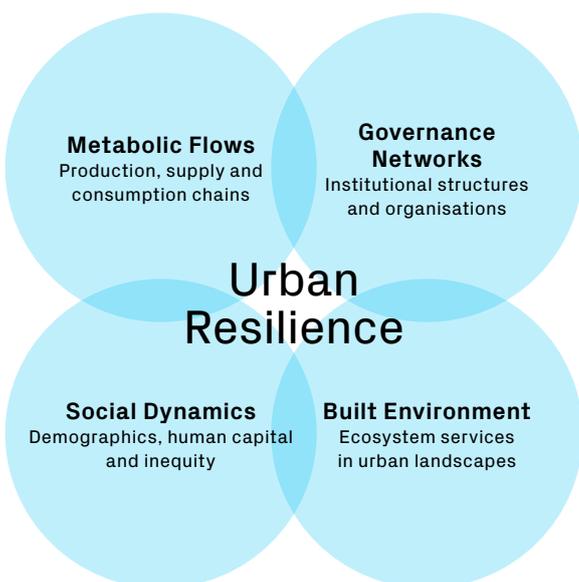
be going on between the level of city government and the national level is part of a bigger story of redistribution of power and influence between supra-national organisations (like the EU), the national level, the city level and the 'street-level' – i.e. stakeholders in the city. This necessary redistribution of power has to do with broader societal developments, such as horizontalisation of society and the failure of the old vertical institutions, like nation-state states. The redistribution of power and influence between national and city level has its necessary counterpart within the city.

At the same time, cities like Rotterdam are facing major income cuts due to national government cut-backs. Rotterdam – like all Dutch municipalities – is dependent on national funding for the majority of its municipal income and only has limited means of generating its own income, while national government now requires the municipality to govern and finance social security payments. Again, it means a major overhaul of an existing system to meet these challenges. Rotterdam has made major changes in the past five years to meet these challenges and is still working on adapting the existing governance structure to meet the needs of the city, but it is a slow and difficult process to which there is no road-map. It is difficult to find the priorities and the way forward to be able to adequately serve the city and support it in going forward. In which areas should the governing organisations lead and where should they only support and facilitate and how should this be organised?

### 3. RESILIENCE AND ROTTERDAM

weather related disasters, globalization, economic and political instability and resource scarcity mean that cities have to deal more frequently with massive and unexpected disruptions. From terrorist attacks and health hazards through viral outbreaks, to protests led by economic, social, religious and ethnic crises, globalization makes the challenges that cities have to deal with more international, more interconnected and more complex. A disaster in an area on the other side of the world (an earthquake, flood, nuclear disaster or viral outbreak) can have profound and far-reaching consequences for our own city, as our health, supplies, production capacities and trade routes may become disrupted for longer periods of time.

Cities need to be aware of the dangers that may approach them and need to be ready to cope with these major disruptions. This we call resilience. Resilience is the capacity of individuals, communities and systems to survive, adapt and grow in the face of changes, even catastrophic incidents.



Source: Resilience Alliance, 2007.  
[www.resilience.org/index.php/urban\\_resilience](http://www.resilience.org/index.php/urban_resilience)

Resilience is the complex system of governance networks, metabolic flows, social dynamics and built environment that work together to create the ability of the city to withstand and bounce back from unexpected shocks and disasters. Resilience forces us to think more strategically about how we plan, build, and govern our cities. Importantly, cities need to be aware of their unique position and their exposure to possible shocks to their system. Whether they be climate-induced, political, social, or economic, awareness should lead to readiness: how can the city avoid, mitigate, adapt or respond to these identified possible shocks to the system? How can various actors (government, private sector and private individuals) work together to make the city more resilient? Governments need to be in charge of developing and implementing the technical and policy frameworks necessary to build up the city's coping mechanisms, while encouraging and leaving space for the private sector and the city's inhabitants to engage.

Here in Rotterdam, we like to think we have the "easy" stuff figured out. As delta cities around the world struggle with the question of how to prepare for a world with rising sea levels and more volatile weather, Rotterdam's water management capabilities are world class. In a city where the lowest point sits 7 meters (approximately 21 feet) below sea level, Rotterdam companies draw on centuries of Dutch water engineering expertise to help drive innovative solutions for successful coexistence with our rivers and sea. Rotterdam also boasts over 150,000 square meters (and counting) of green roofs, which can absorb rainwater and ease pressure on the city's sewage systems during times of inclement weather.

Considering the descriptions of vulnerability, just how vulnerable or resilient is Rotterdam? Firstly, Rotterdam is not a rapidly growing mega-city. In fact, Rotterdam's growth is expected to be very even and gentle over the coming decades, unless the city gets to deal with very large and unexpected immigration numbers. And, although Rotterdam is located in a coastal area and flood plain and mostly below sea level, it is not considered to be one of those cities most at risk from weather-related disasters compared with others around the world. This is mostly due to the fact that The Netherlands and the city of Rotterdam have spent the past decades taking massive measures to protect the city and its hinterland from major flood and storm surge damage. You might say that in this aspect the city and region is already 'resilient'. The resilience in this particular area is constantly monitored and improved.

Secondly, Rotterdam is also not considered to be in the danger zone where political, social and ethnic unrest and upheaval are concerned, compared to other cities and regions in the world. This does not mean, however, that shocks and disruptions of these natures cannot take place in Rotterdam, or that Rotterdam would be immune if they happened elsewhere in the world. They should therefore be properly monitored and prepared for.

Thirdly, the way the world operates is changing. Governmental systems, social structures, and political and religious structures are changing rapidly under pressure of technological advances in information sharing, free trade and free people movements.



Old systems and structures have failed to change with the changing environment and have become hopelessly outdated. People living and operating within these systems and structures are seizing the opportunities to revolt against them. Islamic or totalitarian regimes in the Middle East, communism and socialism in Central America and Eastern Europe, male domination and social inequality in the Catholic and Anglican churches, veiled and failing democracy in the western worlds where people no longer feel properly represented, fraud and criminal activities within international corporations and governing bodies - to name but a few - are some of the critical issues of our times.

New technology makes it possible to find and mine natural resources in places where it was not viable to do so before (for instance deep sea drilling, arctic exploration and shale gas mining) and also in geographical areas not previously explored (parts of the African and Asian continents and the Arctic regions) and putting scarce resources and ensuing power in the hands of countries that did not have them before. China's growth has brought with it an enormous and insatiable demand for (natural) resources, promoting scarcity elsewhere. Right now most conventional energy projections assume that the world will continue to use growing amounts of fossil fuels, but this could change as technological innovation and new business models in renewable energy disrupt the energy sector. What could this mean for an economy that generates many of its jobs and revenue from (support) activities for fossil fuel extraction and trade?

Rotterdam is built on the back of international trade. Good (global) economic prospects, stability and international trade are vital to Rotterdam. Any disruption in the system of global free trade, political, social or ethnic disruptions elsewhere in the world may have a profound and lasting effect on the prosperity of Rotterdam. For Rotterdam at the moment we notice a massive shift in our main trading partners (from western countries to Asia, Africa and South

America). Major supply shifts from Europe to Asia - could threaten Rotterdam's position as a trading hub, but might also lead to a possible large influx of immigrants from Asia, Africa and Eastern Europe. It may also mean a major shift in the types of goods and products that the port will handle in the future.

How will today's major economic trends impact Rotterdam and how prepared is the city to seize opportunities and neutralize threats? How insulated are we against future crises and potential economic shocks? Everyone can think of at least one example of an industrial city that time seemed to forget once the factories closed or the world economy moved on to other things. In Rotterdam's case, we owe much of our past economic growth and prosperity to carbon-intensive industries like oil and petrochemicals, and a port that established its leading position based on a world where trade was largely centered in the West. How does Rotterdam build on these historic successes in order to pivot toward a more sustainable and globalized future? Having always embraced its reputation as an industrial city, how can Rotterdam continue to develop and reinforce and economic base that is of the 21st century?

Rotterdam's aim is to achieve smart growth, become more sustainable, attract the right businesses and investors, make the whole metropolitan area an attractive place to live, move the existing economy into the next economy, make the city resilient to future economic crashes or downturns, improve the overall health of its inhabitants and improve the skills sets of the labour base. There are many possible ways to achieve this. The challenge is to find the best way forward.

# IAB 2015

## Call to Action



The central themes for this year's IAB conference were: Next Economy, Next City and Resilience, as introduced in the position paper in the previous chapter.

The International Advisory Board convened for three days, after most IAB members took part in the 2015 Urban Transformation Conference (UTC) first. The IAB conference is one of the key links in a series of activities, conferences and events that have Next Economy, Next City and Resilience as their central theme, leading up to Rotterdam hosting the World Expo 2025.

The UTC also had 'Next Economy' and 'Next City' as their central theme. IAB members Maarten Hajer and Saskia Sassen delivered key-note speeches at the UTC conference and IAB member Larry Beasley took part in the UTC conference debate.

On the first day of the IAB conference the delegates explored the city and gathered information on specific programmes and projects relevant to this year's IAB themes. On the second day they shared their findings, discussed possible actions and ways forward and drew up their concept 'Call to Action'. The concept 'Call to Action' was finalised in a co-creation session with the city's main stakeholders on the final day of the conference.

## Introduction to the Call to Action

First and foremost the IAB members were impressed by Rotterdam's progress during the last decade. Not only has the city's attractiveness changed for the better by all the spatial improvements and new iconic buildings, there is also a tangible new vibrancy and optimism within the city. Rotterdam is boasting a deserved new-found confidence. The IAB also noticed the effects of the implementation of some of the IAB's previous recommendations, such as the improved way the municipal administration supports young entrepreneurs, allows experimentation, tries to remove barriers and unnecessary regulations and provides space for experimental entrepreneurship and innovation in disused office buildings and industrial spaces that would otherwise lie empty. Rotterdam is changing in a positive way and has a leading position as a port and delta city. We cannot predict the future, but Rotterdam has everything it needs to be a leader in a changing world. The IAB realises that transitions create better opportunities to realize the civic vision and we must re-direct energies and institutions to realize this potential.

Rotterdam has taken giant steps to become a leading delta-city. Many programmes and policies are either in place or about to be implemented that will help secure Rotterdam's leading position. However, to secure Rotterdam's leadership, several more decisive next steps need to be taken in the key dimensions of:

- Governance
- Making City
- Sustainability
- Social Development & Responsibility
- Support the Next Economy and its Integration with Established Economy

Across these five dimensions the following themes are important:

### ☰ Connect networks

- Rotterdam has many strong networks, but we lack connections between them and some are duplicated. The municipality has a leading role in connecting existing strong networks to make them flourish. Rotterdam Partners is ideally positioned to coordinate this.

### ☰ Dare to experiment

- Rotterdam has a strong tradition of daring urban experiments > capture and build on that tradition > foster experimentation.

### ☰ Transparency and accessibility of the system

- It is difficult for next economy actors to find their way and/or develop within the boundaries of the existing system.
- Rules and regulations should allow for transparency, flexibility and experimentation.
- Connecting networks helps to make the system more accessible.
- Enable the inclusion of young local entrepreneurs/start-ups in tender processes.

### ☰ Storytelling and communication

- Rotterdam has an amazing story to tell, to their own citizens as well as to the wider world. Telling the story and fostering better communication will attract more businesses and start ups, facilitate innovation and investment, foster pride amongst Rotterdammers and enable new connections.

## Important Themes

Across these five dimensions the following themes are important:

Governance	Making City	Social Development & Responsibility	Sustainability	Support Next Economy
<b>Connect networks</b> Rotterdam has many strong networks, but we lack connections between them and some are duplicated. The municipality has a leading role in connecting existing strong networks				
<b>Dare to experiment</b> Rotterdam has a strong tradition of daring urban experiments > capture and build on that tradition > foster experimentation				
<b>Transparency and accessibility of the system</b> It is difficult for next economy actors to find their way and/or develop within the boundaries of the existing system				
<b>Storytelling and communication</b>				

The IAB identified specific actions within the five dimensions identified by them. The aforementioned four main themes are relevant and important for all the actions identified by the IAB. The actions are as follows:

# 1

## **Governance**

- Good governance is crucial for supporting competitive business today and essential to create positive urban futures.
- Government needs to find its role as a pro-active partner > this does not mean doing less, but doing things differently.
- The future of government is to deliberate, enable, reinforce and frame future actions for the city.
- Urban economies are complex and dynamic; there is a need for more discretionary powers to make the city prosper.
- To make the next economy work for the city, rules should allow for flexibility, transparency and experimentation.
- Citizens are crucial to make the next economy work; we do it together.

# 2

## **Making City**

This is a tradition and a strength of Rotterdam

- Strengthen and engage neighbourhood perspectives to doing, planning and management through a neighbourhood framework of inclusive methodology.
- Extend & intensify 'the City Lounge' programme to enhance place making.
- Work on creating and importing new funding sources/new funding systems for improving city quality (IAB members can help provide examples).
- Design is important as an approach/process, as well as a lens through which to transform the city to achieve quality and attraction.

# 3

## **Sustainability**

Rotterdam is a leader in sustainability and climate resilience. This is not at odds with the present large petro-chemical and fossil fuel cluster. Companies in these sectors work closely together with each other and with government to make the necessary transitions. This co-creation toward transition needs to continue and needs new public-private partnerships as a means of funding and driving sustainability initiatives forward. Rotterdam needs to openly debate, engage and pioneer new solutions.

- Rotterdam is regarded to be in the forefront of the sustainability debate: it should now be bold in setting ambitious targets to show its continued commitment to lead.
- Rotterdam is uniquely positioned to overcome the adversarial debate on the energy transition and should actively enlist current petrochemical companies and refineries as active partners.
- To achieve this the IAB recommends:
  - Actively pioneer the discovery of new ways to make the transition to a clean economy into economic business.
  - Position Rotterdam as pathfinder city for sustainable port development, sustainable food production, sustainable manufacturing, etc. > focus on food, water, energy.
  - Further partnerships of governing, education and business to enhance the port city as a maritime knowledge economy.
- Partner private ventures and government on innovation start-ups that push sustainability.

# 4

## **Social Development & Responsibility**

Rotterdam has captured the loyalty of its people and the people of Rotterdam are the most important asset for the city to make a difference in being a leading city in the next economy.

- Develop a Rotterdam social contract to declare a social ethic for the emerging economy.
- Affordable housing and mixed-use buildings and places are a big advantage for drawing and hosting the new economy and its workers - engage housing corporations to deliver the inclusive city.
- Rotterdam should become the hub for innovative social start-ups that specifically provide employment opportunities for lower skilled employees.
- Create an inclusive advisory panel in each neighbourhood to set social development agenda: 'open source the neighbourhood'.
- Put arts and culture in the mix of developing the emerging economy.

# 5

## Support the Next Economy and its Integration with Established Economy

### ≡ 5a. Space

- Intensify the existing effort to connect and foster innovative concepts, people and funding.
- Support the creation of (more) Maker Spaces and creative quarters, both physical and virtual.
- Be flexible about changing the function of buildings and spaces, large empty office spaces are a legacy of the old economy; speculation on empty buildings should not be tolerated.
- The city should actively promote the transformation of empty office space into functions that are useful to the city.
- Put culture and arts in the mix.

### ≡ 5b. Connect

- Ensure facilities like superfast broadband and city-wide WiFi are in place to support the foundations of innovative activities.
- Found your own bank to support small-scale initiatives and start-ups.
- Organise one-to-one mentoring of start-ups and SME's.
- Appoint a small number of champions to drive the benefits from convening established and emerging actors.

### ≡ 5c. Skills

- Engage universities and secondary schools to further develop and prioritise a curriculum that fosters a flexible skill set and ethic necessary in the transition to the next economy.
- Push institutions of higher education to be more active partners in transitions to the next economy.
- Use the possibilities of the next economy to create life-long learning and (re-)skilling opportunities for unemployed where they can retain their benefits while being (re-)educated/(re-)skilled.
- Use fast-track boot camp methods for fast skills development and mobility/flexibility.

### ≡ 5d. Telling the Story

- Open branding/telling the stories
  - marketing: top down identity formation
  - social networking: bottom-up identity formation> sophisticated branding.
- Publish Rotterdam examples of great practices and (next economy) successes.
  - Rotterdam Partners is to take the lead in externalising these stories.



## Ebami Tom, Entrepreneur in Made In 4Havens:

'Having the IAB members visit us here on location was a great experience. It was particularly great because you expect to have to go to them, not for them to come to you. They were very enthusiastic about what we're doing here and listened attentively to our presentation. So that's very positive. But it is hard to provide an in-depth and detailed explanation of my business in such a short amount of time, so I'm afraid some aspects might still be a bit unclear to them. They made a critical comment about our buildings not yet being green. That is actually attributable in large part to the development phase we are in. But I think their recommendation for us to join forces and approach the community together was spot on. No matter how you look at it, it is hugely beneficial to have an external group of this standing visit us on location to give advice on how to make our city better. It's simply a fact of life that as a city and as entrepreneurs you live in a bubble and believe your world is the only world. The IAB shakes things up, paints a bigger picture and provides critical feedback.'



## Saskia Sassen, on Rotterdam:

'I've visited lots of cities around the world. And when I'm visiting a city, I always like to ask the locals: "Who does this city belong to?" And what I have discovered is that the more cultures live in a city, the more locals answer by saying: "I don't know who this city belongs to, but not to me." In contrast, Rotterdam has succeeded in gaining the loyalty of the people who live here. Everyone I have talked to during my short time here has answered my question with: "This city belongs to us." That's amazing. And the city has the potential to leverage the strength and diversity of its own population to achieve even more. For example, each neighbourhood has its own distinctive knowledge. And we're not just talking about high-skilled workers here. The knowledge of mothers who live and raise their children in these neighbourhoods is just as valuable. It's important to take this knowledge seriously and open source the neighbourhoods.'

## Benjamin Barber on M4H (Merwe-Vierhavens):

'You can see and feel the transition being made from the traditional to the new economy in this dynamic neighbourhood. It's clear that businesses here are taking a new and innovative approach to enterprise. I was, however, a bit surprised that these young entrepreneurs didn't know each other at all even though they are all working in such close proximity. It took three visitors from abroad to bring them together. This is remarkable when you consider that they should be working together and forming their own community. It's all about strength through unity and sharing knowledge and experience. I was also struck by the fact that they do not actively get the local community, which is comprised largely of immigrants, young unemployed people and less skilled workers, engaged with their activities. Some of the entrepreneurs had tried to bring about this engagement in the past. The same creativity these young entrepreneurs harnessed to start their own businesses should now be applied to finding ways to get less skilled locals involved in these projects.'

## Siemen Cox, Entrepreneur in RotterZwam:

'Participating in the IAB was an extremely valuable experience for me as an entrepreneur. It gave me the unique opportunity to be part of a network of the highest calibre and to come into contact with people you wouldn't normally meet. Seeing how professionals at that level hold strategic discussions on key issues facing the city was truly fascinating. I could really relate to Larry Beasley who said we shouldn't just talk, but also get out and see what is going on because Rotterdam is buzzing with activity. That's why I thought it was wonderful that the IAB members visited concrete projects like RotterZwam. But I do wish the IAB had referred more to these existing projects in its Call to Action. I think some of the recommendations are still too general. In the field of sustainability, the IAB could have recommended that "the city should replace fifty percent of the meat fried finger foods at receptions with vegetarian bites made by local businesses because it's better for the environment, the local economy and employment".'



# Follow up

In the coming months there will be several meetings between the IAB chairman and the Mayor on follow up. Also, the Rotterdam Economic Council and city stakeholder conference on 30 June 2015 will be the first larger meeting where stakeholders will take first steps in the implementation of the actions proposed by the IAB.

For the coming years, Rotterdam Partners supports and monitors the implementation of the proposed actions from the IAB's 2015 'Call to Action'. Rotterdam Partners acts as the linking pin between IAB (2015), the International Architecture Biennale (IABR) 2016, the IAB 2017 and several other linked city-wide events that will continue to have 'Next Economy', 'Next City' and 'Resilience' as their central themes. In each of these city-wide events and conferences IAB actions will be carried forward and their implementation monitored. The five dimensions as identified by the IAB will be used as the basis for this. Eventually the concerted efforts will lead to Rotterdam being the city to host the WorldExpo2025.

Rotterdam Partners will collaborate with the city directors and senior civil servants, the IABR, R'damse Nieuwe, Rotterdam Economic Council, the regional chapter of VNO-NCW, Deltalinqs, Port Authority Rotterdam, regional universities and universities of applied science and secondary education institutes, and representatives from the arts and cultural sectors.

Rotterdam Partners will coordinate all efforts between stakeholders and will – wherever and whenever possible - involve individual IAB members throughout the year. Rotterdam Partners will send a monitoring report to the IAB members at least once a year and IAB members have committed to responding to these.



# Reviewing the previous IAB conference: **Summary and Status of the Findings of the International Advisory Board 2013**

The International Advisory Board Conferences are designed to advise the Municipal Executive on long-term macro-economic perspectives and as such are not stand-alone events. As IAB recommendations span several years, the conferences are connected in their central themes and main findings and the members of the IAB stay involved in tracking progress made on the implementation of recommendations made on previous occasions. Each new conference picks up on the previous conference and where necessary re-visits previous themes. IAB members also stay abreast of progress made on their recommendations and are, where possible, involved in specific follow-up actions. For that reason we are including a summary of the key findings of the 2013 IAB conference and the ensuing follow up actions.

The 8th IAB Conference 2013 took place on 29, 30, 31 May 2013. In order to track the progress of recommendations by the IAB for the city, we are including in this report a short overview of the recommendations made by the IAB in 2013, as well as the steps taken by the Municipal Executive to implement these recommendations. For the full recommendations of 2013, please see the IAB report 2013.

Based on progress made since the IAB recommendations of 2011, the members of the International Advisory Board came together with a very clear task of not looking into what needs to be done but most importantly how the IAB and local stakeholders can further support the local government in executing and implementing previously formed visions and strategies.

The members of the IAB find that most of what is needed to reach the goal of creating and maintaining an attractive city exists within the fabric of the city already, but it needs to be expressed, externalised, accelerated, supported and connected in such a way that it becomes the clearly identifiable, recognisable part of the everyday identity of the city. They made the following five recommendations to support this goal.

## ≡ 1. Changing the Mind-Set

The local government needs to take on more and more tasks, while having less and less funding available for the delivery of these tasks. The changing environment, the increasing complexity of societal needs and the scarcity of funds and other resources mean that the local government needs support from local citizens and businesses to deliver products and services. In other words, the local government needs to share responsibility, while ensuring and maintaining the high quality delivery of services.

The existing structures and business models that the government uses no longer suffice in supporting such a new way of working with the public, rather than just working for the public. This means a fundamentally different way of working, which requires a change in attitude and mind-set. The success of sharing responsibility is completely dependent on the willingness of existing government authorities to also share the authority that is coupled with sharing responsibility. The government authorities need to embrace local and private initiatives and actions and have an active attitude in supporting these. This does not necessarily mean financial support. Most often it means smoothing the way, connecting partners, facilitating execution and simply letting experiments happen. It means giving tools and space, rather than commanding actions from external parties.

## ≡ 2. Marketing for the City

Marketing for the city is decidedly different from marketing of the city. Marketing for the city focuses on Rotterdam's own citizens. The IAB wants to stress the importance of better marketing for the city and better promotion of their activities on behalf of the citizens. This includes the importance of storytelling. Neighbourhood-based stories will add up to a new fresh story of all of Rotterdam, thus creating the 'Big Story'.

### ≡ 3. Corporatization

In order to alleviate the increasing financial and other resource pressures on local government, in order to stimulate new and creative methods of funding and cooperation, and in order to improve the flexibility of movement for the local government, it is important for the government to corporatize/externalise those tasks which they can, while maintaining the direction on overall strategy.

### ≡ 4. New Resources

No recommendations can come to fruition unless we have the resources available to realise them. Funding is getting more and more difficult via the old methods (funding from national government, earnings from land exploitation, subsidies). Funding is available, it just needs to come from new sources and be tapped into in new ways.

### ≡ 5. Integrated Care as a Business Model

An attractive city is a healthy and vital city. Health and vitality is not just a matter of medical health. It is also a matter of social care, social support, good living conditions, future prospects, localised improvements, housing, and an integrated approach to delivering healthcare. The essence of change that will take place everywhere in the coming decades is a development towards self-management by every citizen regarding his or her own health. Better care must be realised, but we also need to deliver cheaper care. To make care cheaper, while at the same time improving the quality and delivery radical changes are needed. The decentralization of public health from the national level to the local level can –in this respect- be seen as an enormous opportunity to change the system and foster self-management.

## Response from the Municipal Executive

### ≡ Preparation

The basis for the preparation for the 2013 IAB conference was the alignment of the various Municipal Programmes with the recommendations of the IAB. The previous Municipal Executive's Manifesto and the Implementation Strategy (Uitvoeringsstrategie) were therefore taken as the starting point for the IAB Conference 2013. The goal was to make sure that the IAB recommendations would both align with the existing programmes and be implementable.

### ≡ Evaluation of the Recommendations

The recommendations on changing the mind set (new governance) (1), corporatization (3) and new resources (4) were incorporated in different sections of the Implementation Strategy (Uitvoeringsstrategie), the Local Memorandum (Lokaal Memorandum) the new Municipal Executive's Manifesto and the Coalition Agreement. The recommendation on marketing for the city (2) was placed in the care of Rotterdam Partners and is part of their

policy plan under 'joint marketing'.

Relevant quotes from the Municipal Executive's Manifesto concerning recommendations 1, 3 and 4:

- More say and self-governance for Rotterdammers, experimental lab for the Netherlands, experiment and innovate (decentralise), feasibility study into making four municipal departments independent from the municipal administration.
- The neighbourhood works together on organising neighbourhood security.
- Innovation of the democratic system.
- More space for entrepreneurs, removing barriers, improving service levels to entrepreneurs, fewer rules and lower levies
- Financial leveraging, invitation to large and small investors to participate, faster procedures and more active involvement of residents.
- More space for the creative industry, Rotterdam as lab for cultural, social, economic and spatial innovation, entrepreneurship in sports and the cultural sector.
- City administration: smart and innovative organisation and client-oriented service. The organisation facilitates and enables and is no larger than strictly necessary, quick response to the needs and dynamic of the city as a basis for the new organisational vision (R'dammergericht), 1%-provision to support city initiatives and innovation as part of all agendas.
- Broader cooperation with and within education and related domains, made-to-measure solutions for schools.

Relevant quotes from the Municipal Executive's Manifesto on recommendation (5) Integrated Care:

- Preventing the early disadvantage of children, prevention of the need for more expensive care by early intervention, stay-at-home longer programmes, prevention and health improvement schemes.

Specific steps on creating a new business model have not yet been taken, except for (by PG&Z & EDBR support):

- pilot on care of specific chronic illnesses (together with the Dutch Diabetes Fund and health insurance organisations) in the neighbourhood of Feijenoord. ('expeditie duurzame zorg').
- Development of the app Healthy010.
- empowerment through the programmes 'Healthy Weight' 'Healthy Mind'.
- Several pilots on the integration of care and well-being together with health insurers VGZ en Achmea.

The Municipal Executive concludes that the IAB recommendations have supported both the realisation of municipal policies via alignment and confirmation of the chosen routes, as well as the marketing strategy for Rotterdam Partners and the understanding of organisation of care after the decentralisations that were being implemented in 2013.

# Members of the International Advisory Board 2015



## **Benjamin Barber – USA**

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- Senior Research Scholar at The Center on Philanthropy and Civil Society of The Graduate Center, The City University of New York
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- Author of various publications, including 'If Mayors Ruled the World'



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- Formerly CEO and Chairman of the Executive Committee of British Telecommunications, Plc.



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**Special Guest of the International Advisory Board 2015**



**Henk Ovink - The Netherlands**

- Special Envoy for International Water Affairs for the Kingdom of the Netherlands
- Senior Advisor to the American Federal Government and the former Hurricane Sandy Rebuilding Taskforce
- Former Deputy Director General Spatial Planning and Water Affairs, - Ministry for Infrastructure & the Environment, The Netherlands
- Co-Curator 5th International Architecture Biennale Rotterdam

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# Acknowledgements & Colophon

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