

# ROTTERDAM RESILIENCE STRATEGY.

READY FOR THE  
21<sup>ST</sup> CENTURY

ABSTRACT



Gemeente Rotterdam

PIONEERED BY THE  
ROCKEFELLER FOUNDATION

100

RESILIENT

CITIES

**ROTTERDAM.  
MAKE IT  
HAPPEN.**

# RESILIENT ROTTERDAM

On May 19th 2016 the city of Rotterdam launched its very first Resilience strategy to make the city resilient and ready for the challenges of the 21st century. The strategy consists of three elements: 7 resilience qualities, 7 resilience goals and 68 actions and more to come. The making of the strategy was supported by 100 Resilient Cities (100 RC) - Pioneered by the Rockefeller Foundation which is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges ([www.100resilientcities.org](http://www.100resilientcities.org)).

## WHAT IS RESILIENCE?

The notion of resilience refers to the characteristic of being able to withstand shocks or setbacks. We use the definition that is developed within 100RC:

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*Resilience is the ability of people, communities, organizations, businesses and systems to survive, adapt and grow, regardless of long-term tensions and crises of all kinds and varying magnitudes.*

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## RESILIENCE IS IN OUR DNA!

Resilience doesn't need to be explained to the people of Rotterdam. Our people are well known for their vision, strength, courage and persistence. It is what makes us Rotterdammers!

From the laying of the first foundations of the city in the 12th century, the spirit of resilience has been engrained in our psyche. Along with fighting the water, we used it to our advantage, creating land, establishing a world-class port as the main gateway to Europe and a post-modern City. Our city and our people have - throughout history - overcome numerous shocks and stresses. The centre was destroyed during World War II, but we have recovered, and in 2015 our city is celebrating the nomination as best city centre in the Netherlands.

Rotterdam is a thriving cosmopolitan city, with a wealth of cultures and ethnicities and well known for its modern architecture and has a vibrant cultural scene with an eclectic variety of shops, attractions, festivals, restaurants and parks. City and port are well served by top quality internationally renowned knowledge institutions and universities.

But as we reflect on our past, we also foresee new risks and challenges in the future. The most important developments and transitions that our city is facing are: social fragmentation, the energy transition, digitization, climate change, restrictions using the subsurface and changing relationships between government and citizens and institutions (governance).

We know that we cannot become complacent and that these challenges need to be faced. The technological and societal changes of the 21st century will present new risks and opportunities but we want to fight for a sustainable, safe, united and healthy future for our city.



**'THE CITIZENS OF ROTTERDAM  
ARE THE KEY TO OUR  
RESILIENT CITY'.**

AHMED ABOUTALEB, MAYOR CITY OF ROTTERDAM

## 'RESILIENCE IS MORE THAN CLIMATE ADAPTATION'.

ARNOUD MOLENAAR, CHIEF RESILIENCE OFFICER



# 7 RESILIENCE GOALS

Rotterdam will work to embed resilience thinking into all of our city planning and delivery functions. We want to

build on our heritage and past successes to take our city resilience to the next level.



## 1. ROTTERDAM: A BALANCED SOCIETY

We seek to build and strengthen resilience at the individual and the societal level. Knowledge, skills, education, health and wellbeing and mutual understanding and respect are central pillars of a balanced society.

We want our young people to be ready to live and work in the 21st century and the so-called 'Next Economy', to

contribute to and benefit from the digital revolution and to take ownership of their own future and responsibility for fellow citizens and their communities. We are organizing dialogues between citizens and between organizations with different (cultural and ethnic) backgrounds to create mutual understanding and respect and enhance integration.



## 2. WORLD PORT CITY BUILT ON CLEAN AND RELIABLE ENERGY

Rotterdam wants to engage with the clean energy transition and supports the recent political agreements through COP21 in Paris. We are striving for a diversification of energy sources and to make the urban energy infrastructure more flexible, in order to successfully deliver this clean energy. It is about converting Rotterdam's port and industrial complex

into an area based on clean and sustainable energy sources and raw materials, in order to secure a strong competitive position for port and city in this field. Rotterdam wants to become a frontrunner city when it comes to the use of solar energy and abandoning the use of gas for heating.



### 3. ROTTERDAM CYBER PORT CITY

The digitization of society offers many opportunities (Digital Gateway Rotterdam, Smart City), but risks of disruption of essential processes for production, logistics and services also increase.

Rotterdam aims to be a cyber resilient city and port; an important condition required to attract new business and investment.

Both the port and city are taking cyber security seriously, they share experiences and have worked with Microsoft to develop comparable strategies and actions comprising 15 building blocks including a Cyber Resilience Platform, Cyber Resilience Desk, Cyber Resilience Co-op and a Port Cyber Resilience Officer. Rotterdam needs a Delta plan for Cyber Resilience.



### 4. CLIMATE ADAPTIVE CITY TO A NEW LEVEL

The approach and practice established in Rotterdam's climate adaptation strategy (2013) serves as an example to many other cities in the world. By 2025, Rotterdam will be a resilient city that is able to withstand the effects of climate change, such as extremely heavy rainfall, rising temperatures and rising water levels. Climate adaptation measures will be integrated into all phases of spatial developments and a range of aspects of our urban infrastructure. Designing with water in mind will form the basis of this approach. Participatory processes will be used to identify smart combinations of initiatives and spatial planning measures that contribute to

both climate resilience and the quality of our outdoor spaces, improve health and social cohesion, and help to safeguard property values. Citizens, businesses and institutions will work closely with the city's municipal authorities and water management organizations. Small scale water storage projects on street and building level are being implemented and need to be scaled up (Water Sensitive Rotterdam). We will also strengthen our crisis management approaches based on increased knowledge of flood risks. We are going to make our water infrastructure cyber proof and are exploring how to implement a multilayer safety strategy.



### 5. INFRASTRUCTURE READY FOR THE 21ST CENTURY

Rotterdam has one of the world's best infrastructures. In order to maintain this position we want to increase resilience by enhancing the awareness of risk and developing a policy for more robust decision making;

more integrated planning practice both underground and over ground, relating to infrastructural interventions. A robust and resilient underground infrastructure is the physical basis for a resilient Rotterdam.



**'ROTTERDAM IS WELL POSITIONED TO CONTINUE LEADING THE GLOBAL URBAN RESILIENCE REVOLUTION'**  
MICHAEL BERKOWITZ PRESIDENT 100 RESILIENT CITIES - PIONEERED BY THE ROCKEFELLER FOUNDATION



## 6. ROTTERDAM NETWORK – TRULY OUR CITY

Our society is well organized. We are aware that the city is being created by the Rotterdammers, therefore it is “truly our city”. Our resilience increases as more alternative organisations arise. The resilience strategy will focus on increasing government flexibility and will facilitate connecting several networks of locals, individuals and businesses, as a catalyst for more bottom-up community and business initiatives, to share knowledge

and experiences to the advantage of Rotterdam’s people and businesses. The government and non government institutions encourage the selforganizing capacity of the community and small businesses. Our future government will handle new ideas better and work to harness and augment the energy that derives from our communities and will accept more redundancy providing more alternatives during outing of services and operations.



## 7. ANCHORING RESILIENCE IN THE CITY

We will develop an innovation and integration agenda on the back of this resilience strategy. We want to identify and work on co-benefits and synergies on different levels:

1. Building (example: Resilient Peperclip)
2. Neighbourhood (example: Resilient Delfshaven)
3. City (example: National Programme Rotterdam Zuid)
4. Metropolitan Area (example: Roadmap Next economy together with The Hague)
5. National (example: Citydeal Climate Adaptation)

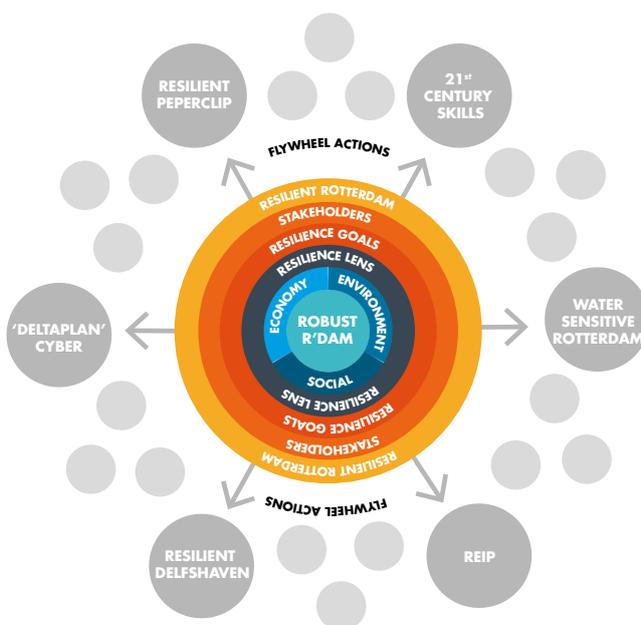
6. European (example: Resilient Europe, URBACT)

7. Worldwide (example: 100 Resilient Cities)

Innovation will also be encouraged through comprehensive integrated research with public and private stakeholders at different scales. This includes knowledge development and knowledge exchange between 100 Resilient Cities cities, like the Rotterdam hosted exchange in October 2015.

And Rotterdam agreed with the International Architecture Biënnale that the editions of 2018 and 2020 will focus on resilient cities.

## RESILIENCE COMPASS



### THE RESILIENCE LENS:

The first part of our strategy is to implement a resilient way of working and thinking using the seven qualities of the Resilience Lens at the personal level, but also on the level of projects, problem definition and design.

## SEVEN QUALITIES OF RESILIENCE



### REFLECTIVE

using past experience to inform future decisions



### RESOURCEFUL

recognizing alternative ways to use resources



### ROBUST

well-conceived, constructed, and managed systems



### REDUNDANT

spare capacity purposefully created to accommodate disruption



### FLEXIBLE

willingness and ability to adopt alternative strategies in response to changing circumstances



### INCLUSIVE

prioritize broad consultation to create a sense of shared ownership in decision making



### INTEGRATED

bring together a range of distinct systems and institutions

## IMPLEMENTATION: JOIN IN!

The development of the Rotterdam Resilience Strategy has benefitted greatly from the executive support of Mayor Aboutaleb and the city has made a top level commitment to continue work to implement its resilience strategy in an integrated way up to 2020 at least.

It is recognised that delivering the Rotterdam Resilience Strategy will need to be a collaborative effort between the City of Rotterdam, businesses, citizens and other organizations. The city government has a key role to facilitate and initiate projects, and has to provide leadership and the necessary strategic framework. The city will organize an intensive communication and

consultation process in order to involve as many citizens and organizations as possible.

Internationally Rotterdam wants to invest in the 100 Resilient Cities network to learn from other cities and to share our knowledge and experiences in order to help other cities to become more resilient. So please let's join to make our world more resilient!

## MORE INFORMATION

Website: [resilientrotterdam.nl](http://resilientrotterdam.nl)

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Twitter: [@resilientrdam](https://twitter.com/resilientrdam)



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