

Rotterdam Resilient Delta City

ROTTERDAM RESILIENCE STRATEGY.

**READY FOR THE
21ST CENTURY**

CONSULTATION
DOCUMENT

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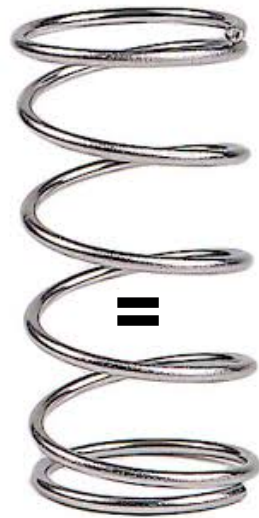
Advisor, Urban Management, City of Rotterdam

Urban Resilience

is the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt, and grow no matter what kind of chronic stresses and acute shocks they experience



Resilience



=

Veerkracht



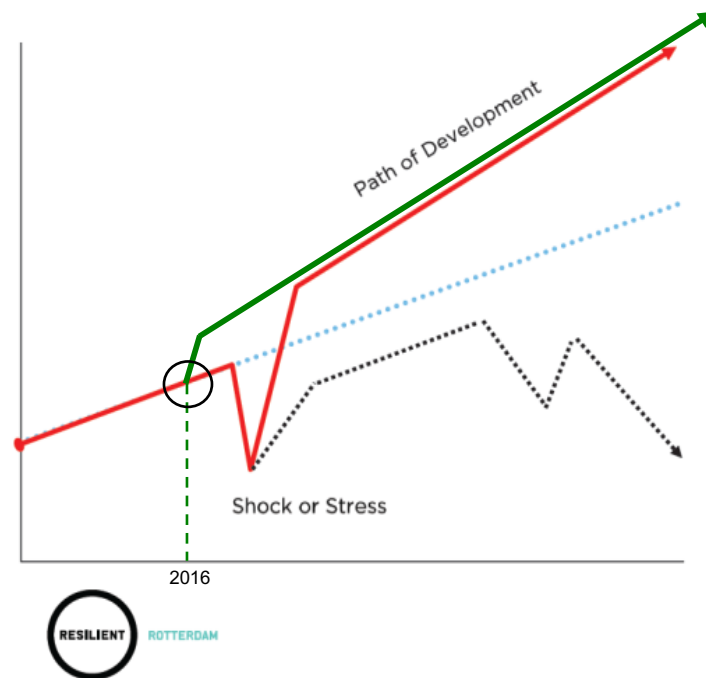
Offer resistance

Move with

Recover

Resilience ensures that you recover quickly and effectively from a crisis and even get out stronger. Resilience is even stronger when transitions are identified in a timely manner and converted into opportunities.

With a lack of resilience you recover less and you get into decline.



Shocks and stresses can bring opportunities for cities to evolve and in some circumstances transform.

100 RESILIENT CITIES

NON-RESILIENCE

Detroit: one-dimensional economic focus



Inhabitants 1950: 1,8 mln

Inhabitants 2012: 0,7 mln

78.000 buildings are empty

Budgetary deficit: € 290 mln

Debts: €15 billion



New York: black-out by Hurricane Sandy in okt. 2012

NON-RESILIENCE:
Inadequate protection of critical infrastructure

Source: Iwan Baan

Rotterdam - the transition to urban resilience

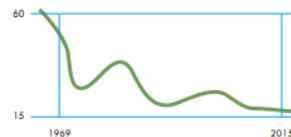
- <https://www.youtube.com/watch?v=gjOlF-iefLw>

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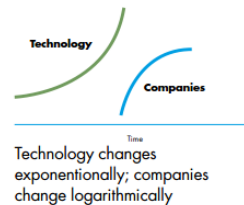
Increasing dynamics in urban environments

Cities are the point of convergence for many disruptive developments

Average lifespan of companies in the S&P Index



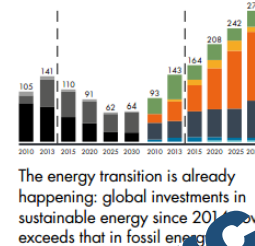
Technology changes faster than companies



Open Economy

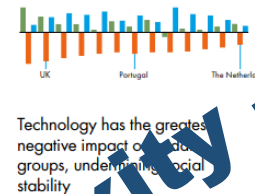


Energy Transition



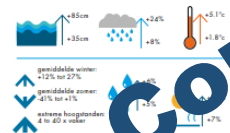
From a linear to a circular economy based on renewable energy

Employment



Technological innovation changes economical model and impacts employment (a.o. Internet of Things)

Climate change: 1990 to 2100

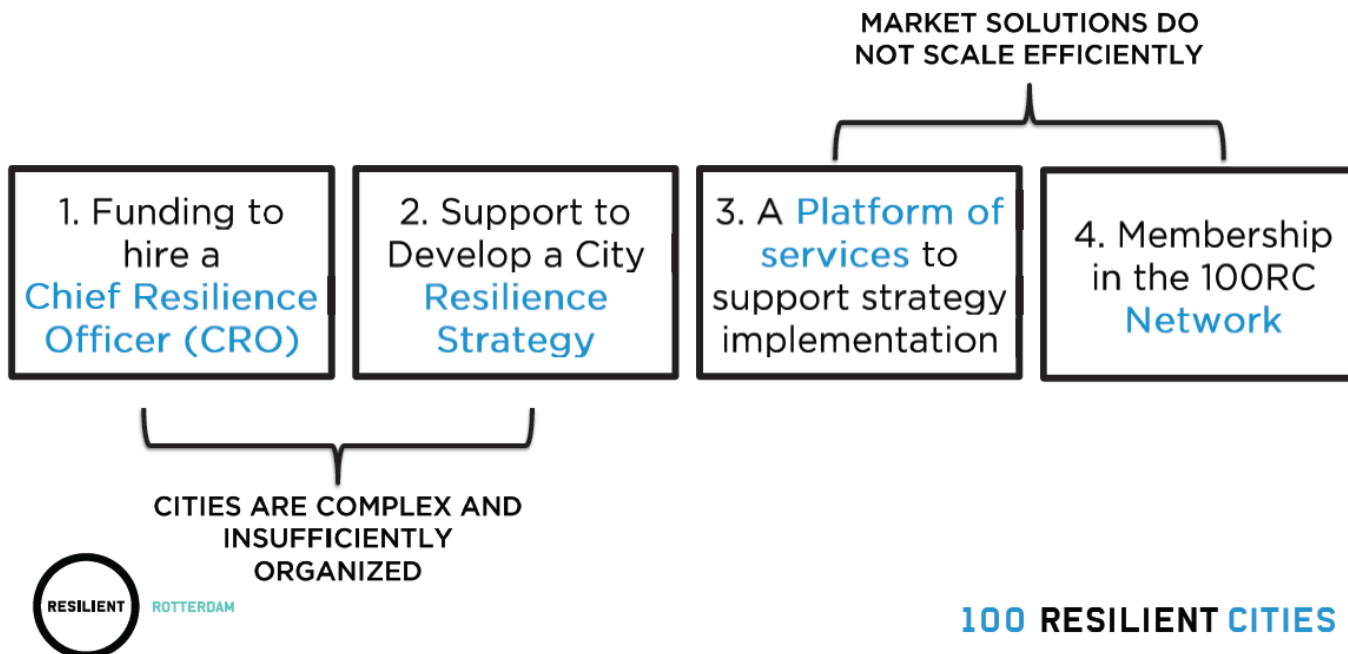


Climate change effects liveability and increases risk of disruption of city



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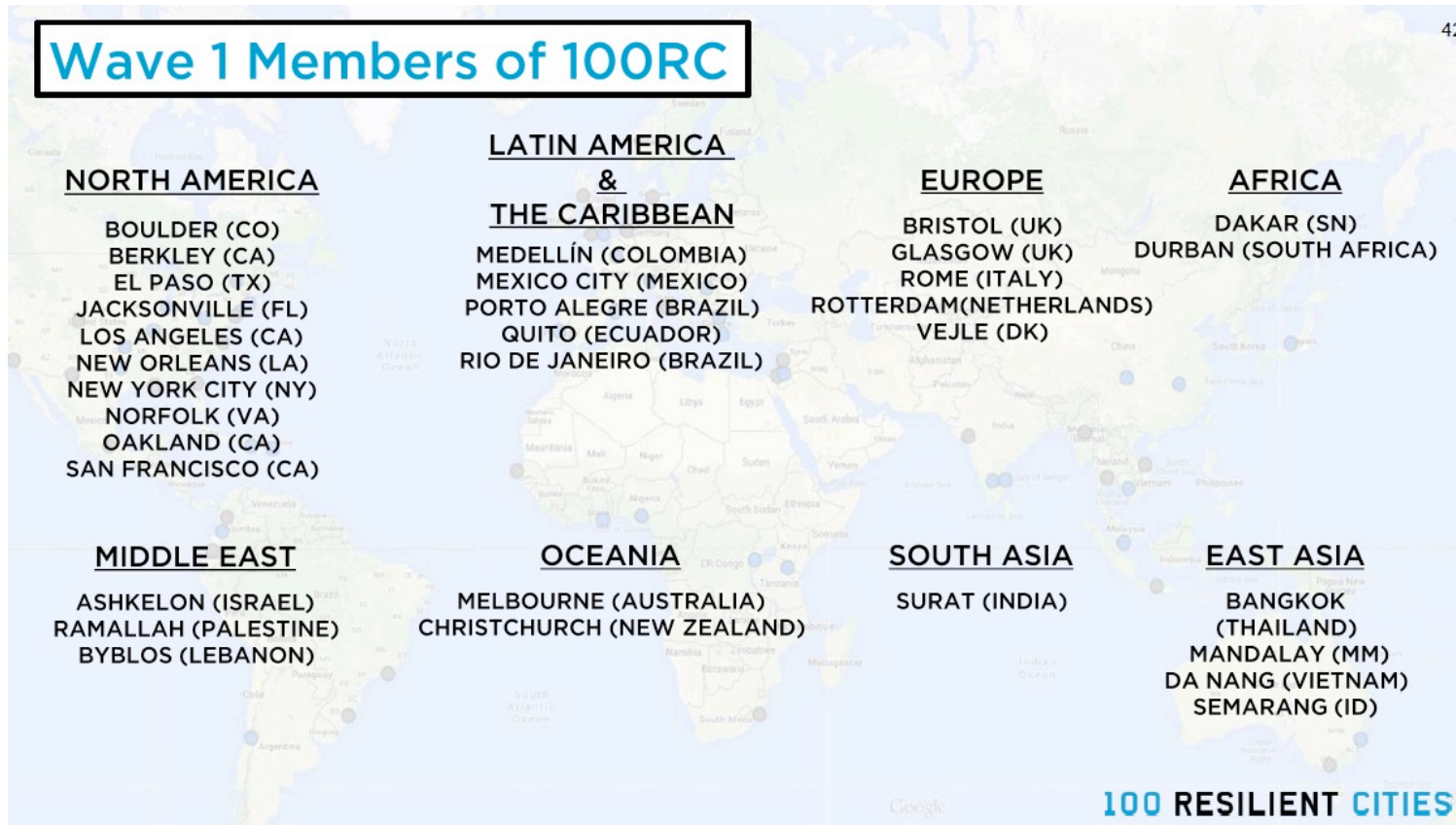
100RC provides member cities **four types of support**



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Wave 1 Members of 100RC

42



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Wave 2 - New Cities

43

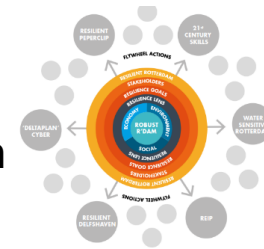


Rotterdam Resilient Delta City

OUR RESILIENCE GOALS.

- | | | | |
|---|--|---|----------------------------------|
|  | 1. Rotterdam: A balanced society | → | Social resilience |
|  | 2. World port city built on clean and reliable energy | → | Energy resilience |
|  | 3. Rotterdam Cyber Port City | → | Cyber resilience |
|  | 4. Climate resilient Rotterdam to the next level | → | Climate resilience |
|  | 5. Infrastructure ready for the 21 st century | → | Critical Infra resilience |
|  | 6. Rotterdam Networkcity – truly our city | → | Resilient Governance |
|  | 7. Anchoring resilience in the city | | |

Holistic approach



RESILIENCE GOALS.

GOAL 1: ROTTERDAM: A BALANCED SOCIETY



FLYWHEEL ACTION

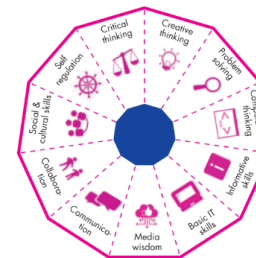
21st-century skills programme (including the Leadership Institute)

Building on the Public Health act 2016-2019

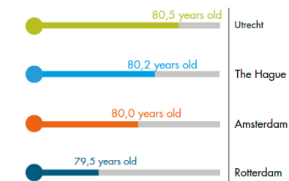
WE-Society programme

Strong Shoulders, Strong City programme

21ST CENTURY SKILLS



3D. LIFE EXPECTANCY AT BIRTH



RESILIENCE GOALS.

GOAL 2:

WORLD PORT CITY BUILT ON CLEAN AND RELIABLE ENERGY



FLYWHEEL ACTION

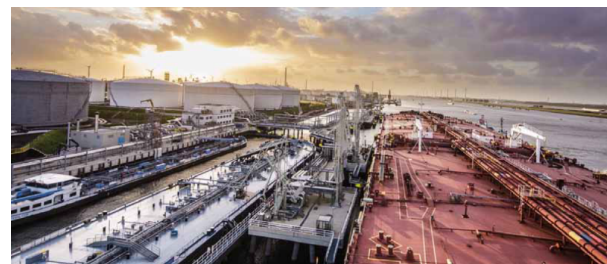
Rotterdam Energy Infrastructure Plan (REIP)

Reinforcing the Rotterdam Moerdijk Industry Cluster Action Plan

Paris Plus

Port Transition arena, focused on the bio-based economy

“Towards a flexible energy infrastructure for an efficient and sustainable energy mix in Port and City”



RESILIENCE GOALS.

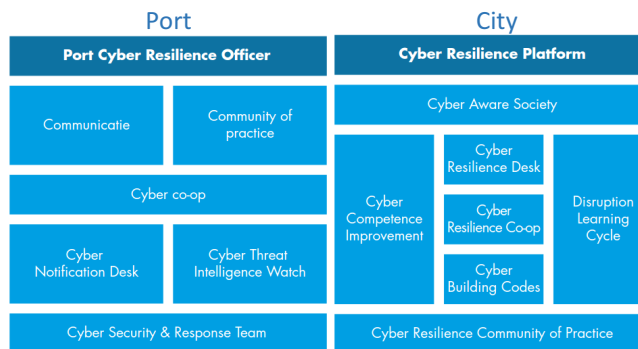
GOAL 3: ROTTERDAM CYBER PORT CITY



FLYWHEEL ACTION

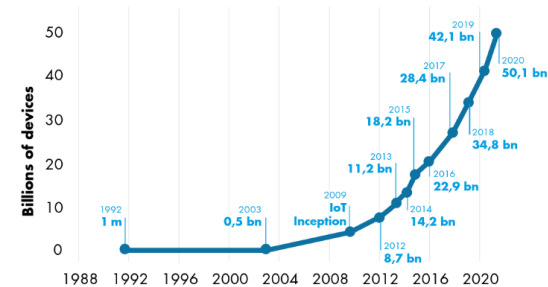
From Smart City to Cyber Resilient
(‘Deltaplan Cyber’)

Cyber Resilience Building Blocks



3T. GROWTH IN THE INTERNET OF THINGS

The number of connected devices will exceed 50 billion by 2020



RESILIENCE GOALS.

GOAL 4:

**CLIMATE ADAPTIVE ROTTERDAM
TO A NEW LEVEL**



FLYWHEEL ACTION

Water Sensitive Rotterdam

1,000,000 m² Sustainable Roofs
Landscape in the City Centre

Cyber Proof Water System: cyber
secure and robust throughout the
whole chain

Adaptive waterfront development
with added value

**1.000.000 M² SUSTAINABLE
ROOF LANDSCAPE IN
ROTTERDAM CITY CENTRE**



RESILIENCE GOALS.

GOAL 5:
**INFRASTRUCTURE READY FOR
THE 21ST CENTURY**



FLYWHEEL ACTION

Strengthen cooperation between stakeholders

Develop policies that fully integrate the subsurface level into plans and projects, and translate these policies into processes and procedures

The street of the future

“A robust and resilient underground infrastructure as a physical basis for a resilient Rotterdam”



RESILIENCE GOALS.

GOAL 6: **ROTTERDAM NETWORKCITY**



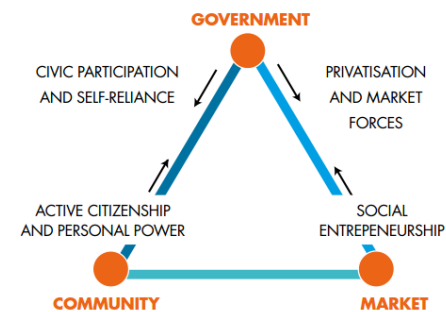
FLYWHEEL ACTION

Facilitation and experimenting with self-organization

Rotterdam Networkcity, creating networks of government, citizens, institutions, market and knowledge

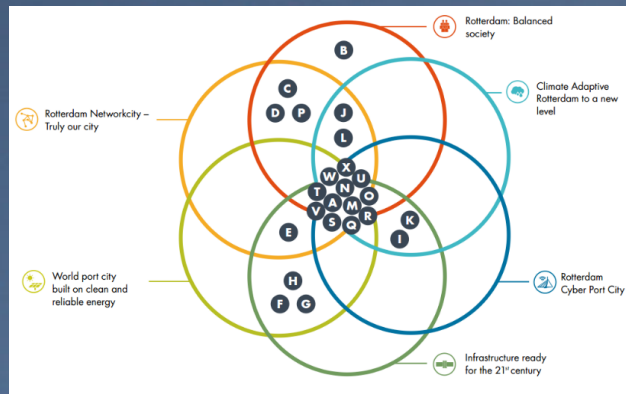
Neighbourhood oriented working programme ('wijkgericht werken')

"Residents, public and private organizations, businesses and knowledge institutions together determine the resilience of the city"



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Goal 7: Anchoring Resilience



Integrated approach

Working at different levels

Knowledge agenda



Thank you for
your attention

