

Rotterdam Resilient Delta City

ROTTERDAM RESILIENCE STRATEGY.

READY FOR THE
21ST CENTURY

CONSULTATION
DOCUMENT

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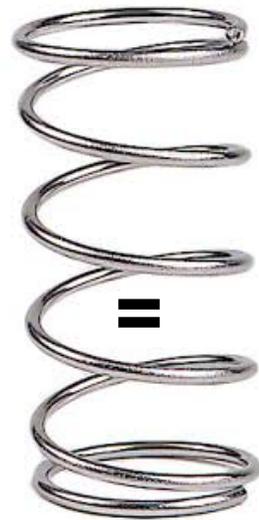
Urban Resilience

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





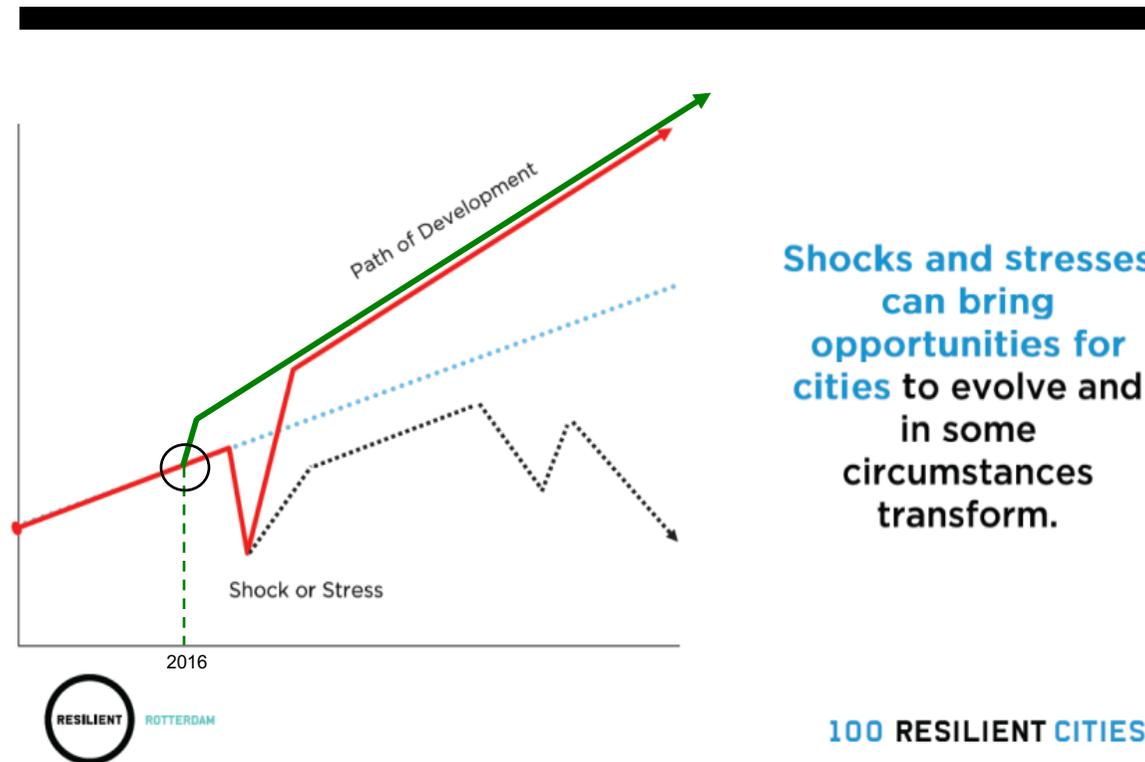
Offer resistance

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.



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

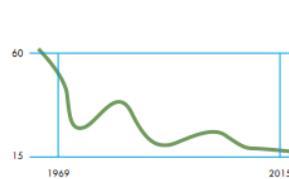
- <https://www.youtube.com/watch?v=gjOIF-iefLw>

Rotterdam Resilient Delta City

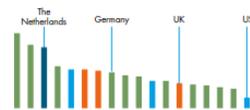
Increasing dynamics in urban environments

Cities are the point of convergence for many disruptive developments

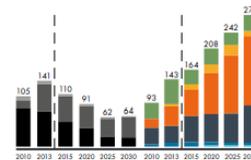
Average lifespan of companies in the S&P Index



Open Economy

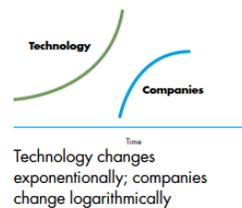


Energy Transition

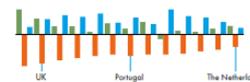


From a linear to a circular economy based on renewable energy

Technology changes faster than companies



Employment



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

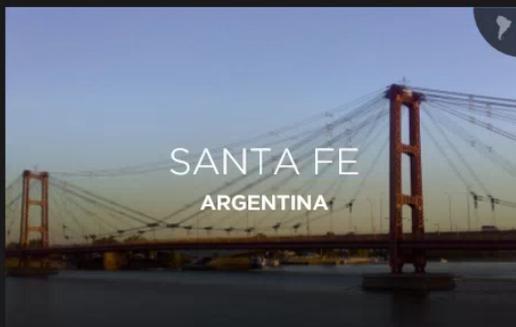
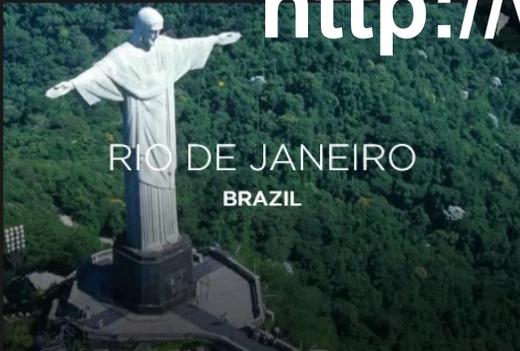
Climate change: 1990 to 2100



Climate change effects liveability and increases risk of disruption of city

Complexity - Interconnection

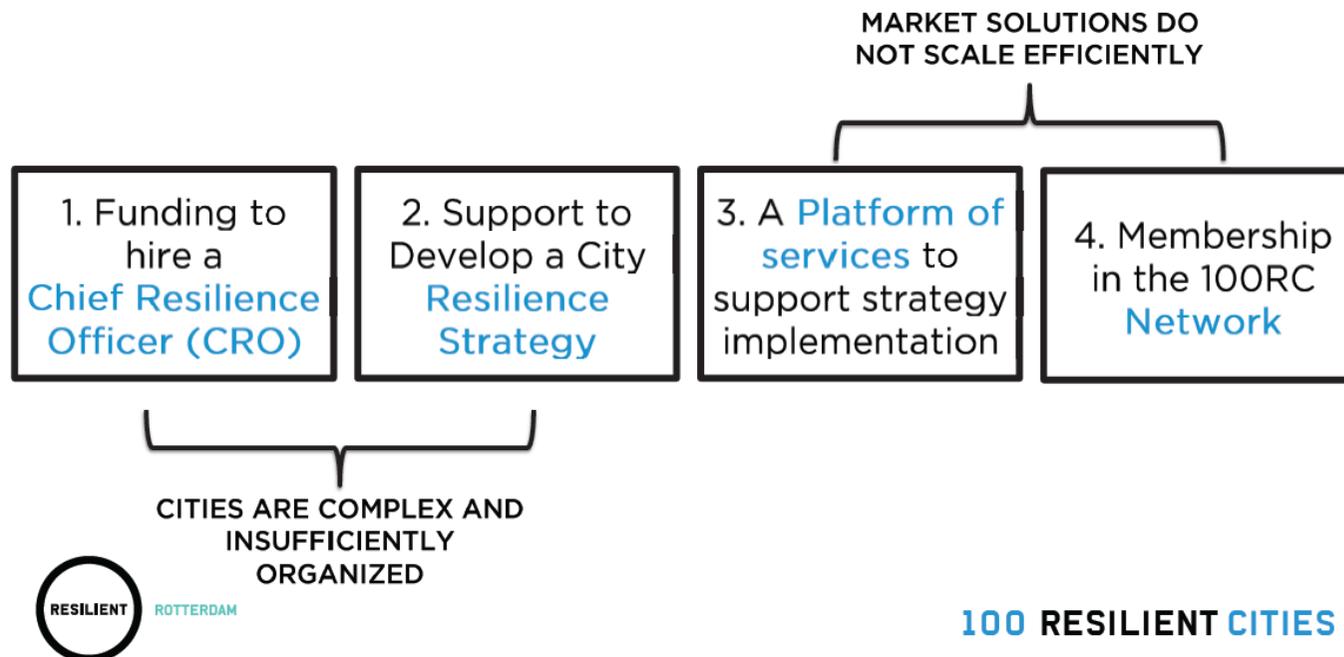
100 RESILIENT CITIES



<http://www.100resilientcities.org>

Rotterdam Resilient Delta City

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



Rotterdam Resilient Delta City

Wave 1 Members of 100RC

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NORTH AMERICA

BOULDER (CO)
BERKLEY (CA)
EL PASO (TX)
JACKSONVILLE (FL)
LOS ANGELES (CA)
NEW ORLEANS (LA)
NEW YORK CITY (NY)
NORFOLK (VA)
OAKLAND (CA)
SAN FRANCISCO (CA)

MIDDLE EAST

ASHKELON (ISRAEL)
RAMALLAH (PALESTINE)
BYBLOS (LEBANON)

LATIN AMERICA

&

THE CARIBBEAN

MEDELLÍN (COLOMBIA)
MEXICO CITY (MEXICO)
PORTO ALEGRE (BRAZIL)
QUITO (ECUADOR)
RIO DE JANEIRO (BRAZIL)

OCEANIA

MELBOURNE (AUSTRALIA)
CHRISTCHURCH (NEW ZEALAND)

EUROPE

BRISTOL (UK)
GLASGOW (UK)
ROME (ITALY)
ROTTERDAM (NETHERLANDS)
VEJLE (DK)

SOUTH ASIA

SURAT (INDIA)

AFRICA

DAKAR (SN)
DURBAN (SOUTH AFRICA)

EAST ASIA

BANGKOK (THAILAND)
MANDALAY (MM)
DA NANG (VIETNAM)
SEMARANG (ID)

100 RESILIENT CITIES

Rotterdam Resilient Delta City

Wave 2 - New Cities

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RESILIENCE GOALS.

GOAL 1:
ROTTERDAM: A BALANCED SOCIETY



FLYWHEEL ACTION

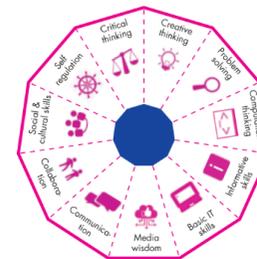
21st-century skills programme (including the Leadership Institute)

Building on the Public Health act 2016-2019

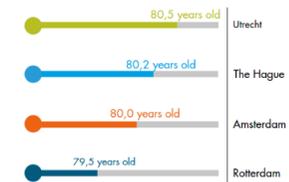
WE-Society programme

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.

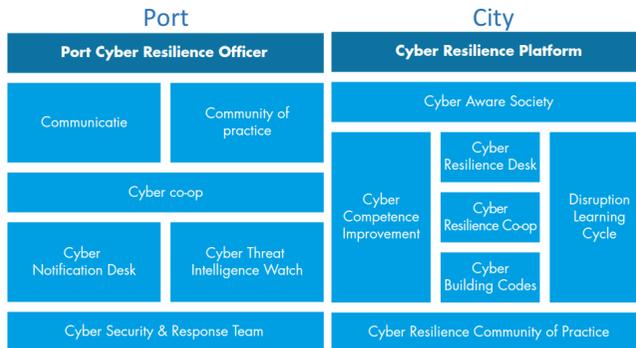
GOAL 3:
ROTTERDAM CYBER PORT CITY



FLYWHEEL ACTION

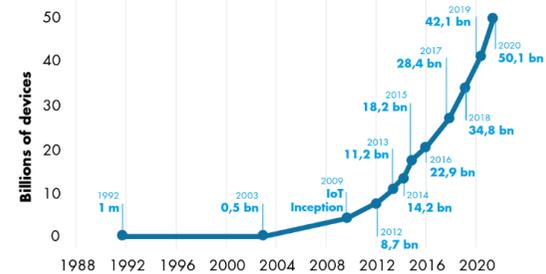
From Smart City to Cyber Resilient
 ('Deltaplan Cyber')

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



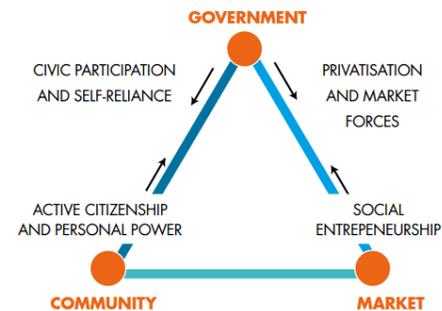
FLYWHEEL ACTION

Facilitation and experimenting with self-organization

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

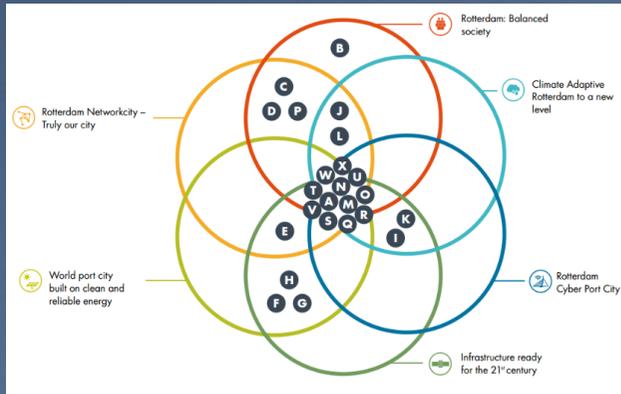
Neighbourhood oriented working programme ('wijkgericht werken')

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



Rotterdam Resilient Delta City

Goal 7: Anchoring Resilience



Integrated approach

Working at different levels

Knowledge agenda



Thank you for
your attention

