

Resilient Rotterdam

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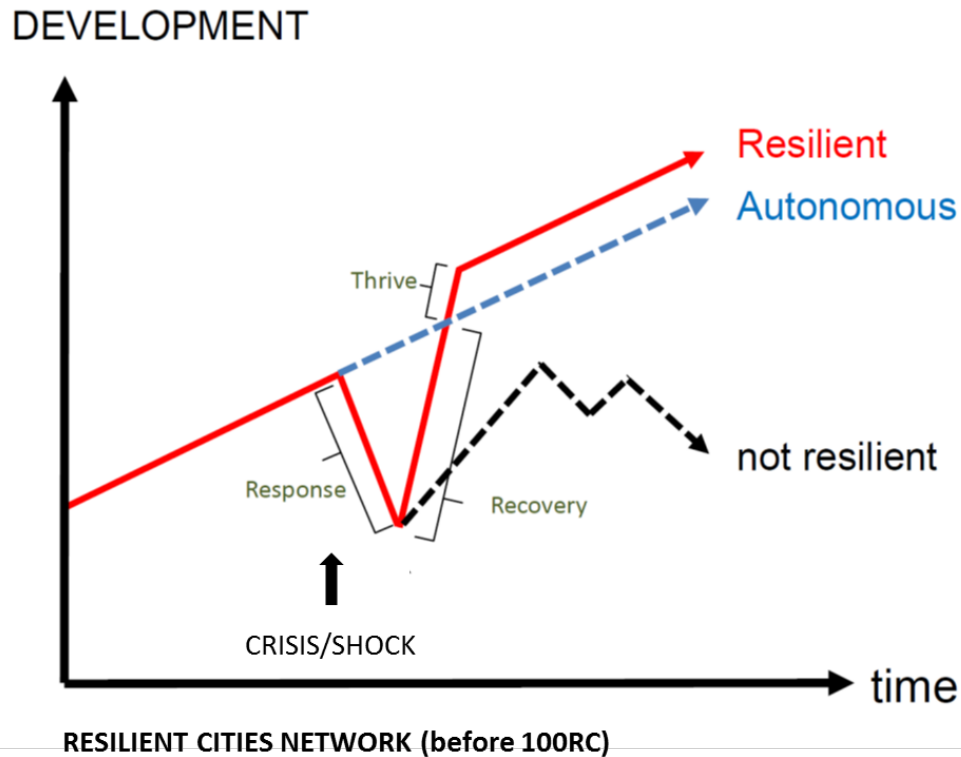
@ResilientRdam

www.resilientrotterdam.nl

RISK & RESILIENCE FESTIVAL



- ☐ **Resilience?**
- ☐ **Why urgent?**
- ☐ **The Strategy**
- ☐ **Examples resilience themes**
- ☐ **Institutionalization/embedding**
- ☐ **Resilience Ecosystem**
- ☐ **Q&A ?**



Resilience = the capacity of individuals, communities, institutions, businesses, and systems to anticipate to threats and crises, no matter what kinds of chronic stresses and acute shocks they experience, and to learn and thrive.

**4 capabilities are crucial:
capability to**

- **Prevent** (~weerbaarheid)
- **bounce back** (~veerkracht)
- **Learn** (~leervermogen)
- **Change** (~veranderkracht)

Current impact Climate Change Rotterdam



Flood in Noordereiland



Water quality



Excess stormwater on the street



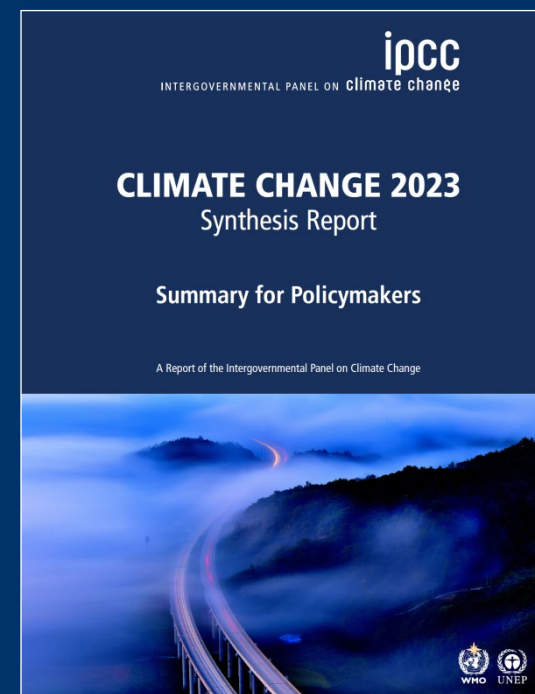
Dike subsidence



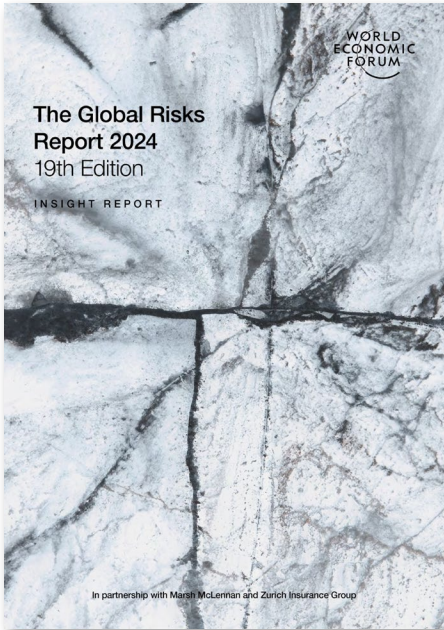
Inundated cellars



Heat and bridges



Risks and projected adverse impacts and related losses and damages from climate change escalate with every increment of global warming (very high confidence).



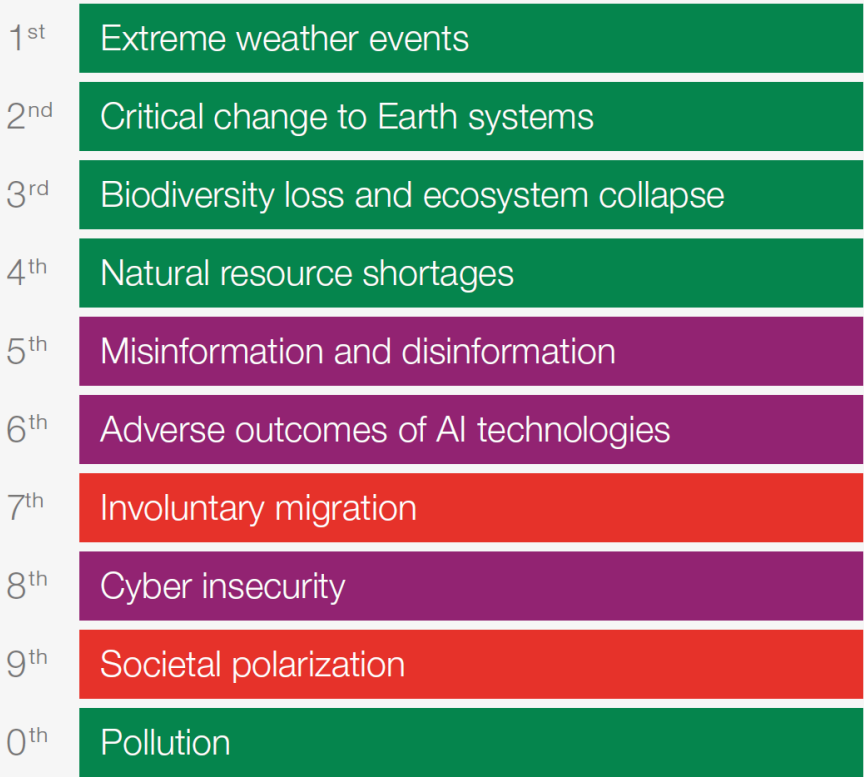
Global risks ranked by severity over the short and long term

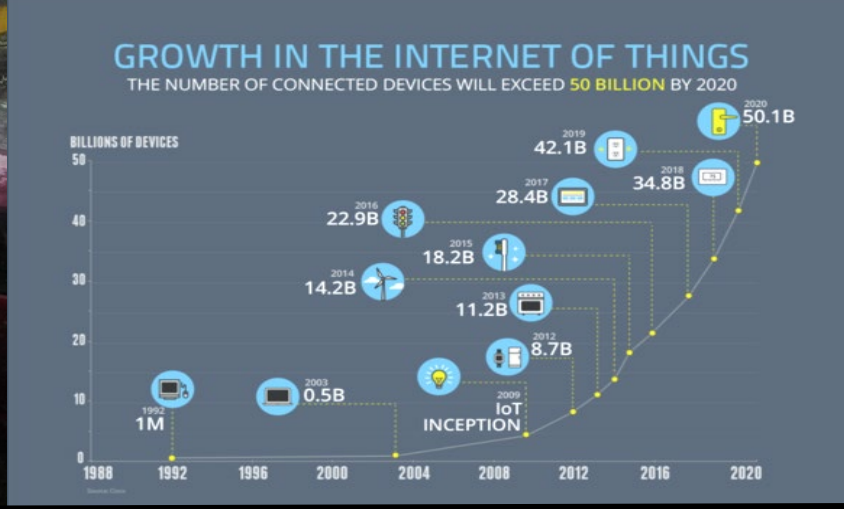
"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."

2 years

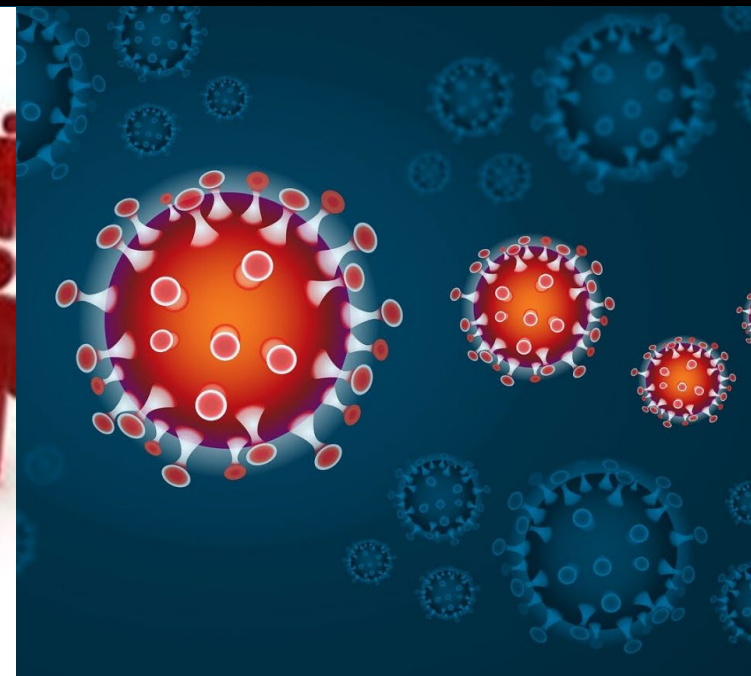


10 years





POLY CRISIS



**ERA: MANY DISRUPTIVE
TRANSITIONS AT THE
SAME TIME**

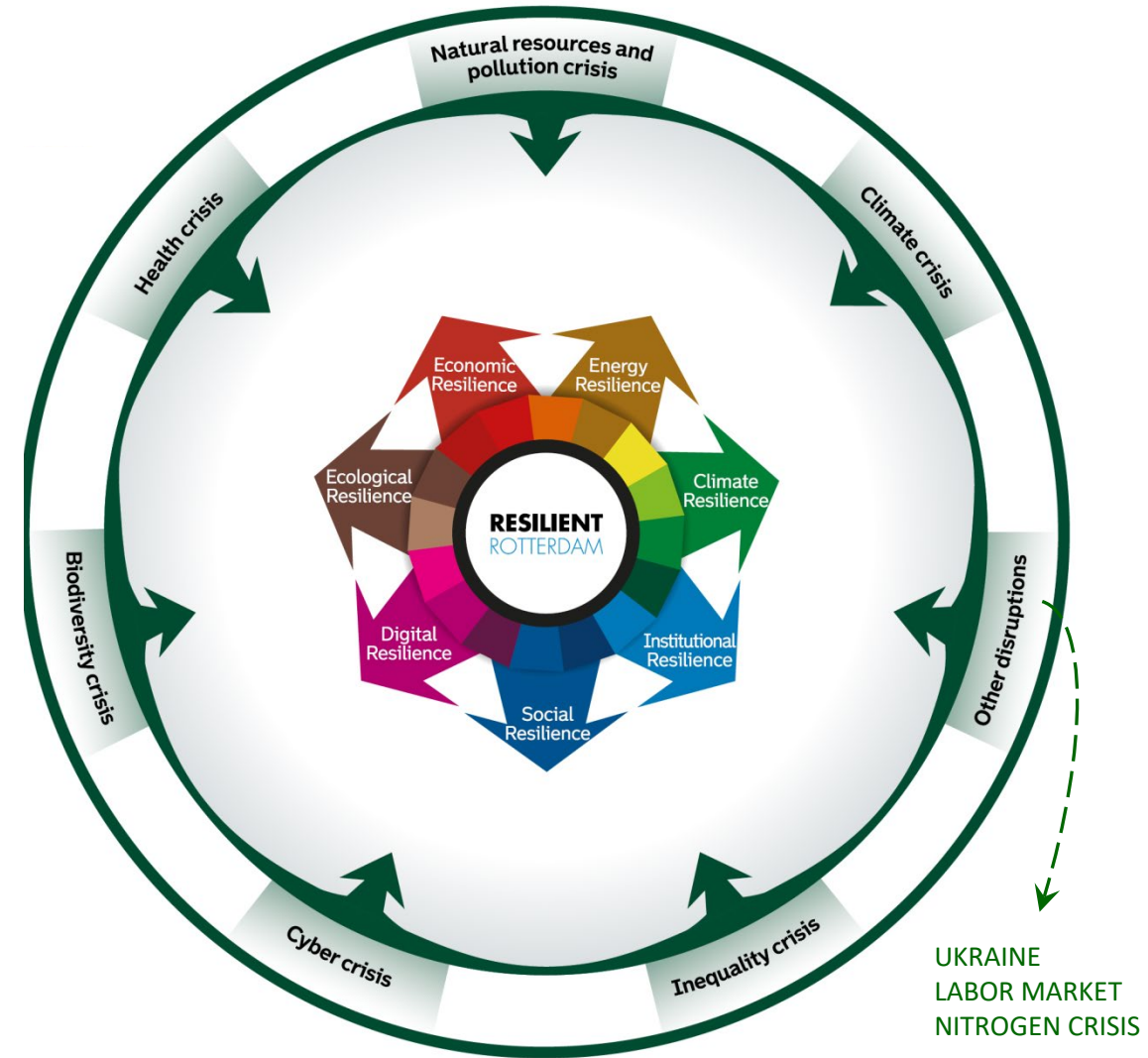
**NEED: A NEW LEVEL OF
RESILIENCE**

**ALSO: 'ENLARGE CAPACITY TO ANTICIPATE'
and 'MAKE THE CITY FUTUREPROOF'**





Challenge: to work in a structural en systemic way towards a more resilient city, residents and organization...





WATER SQUARE BENTHEMPLEIN...



WATER SQUARE BENTHEMPLEIN...

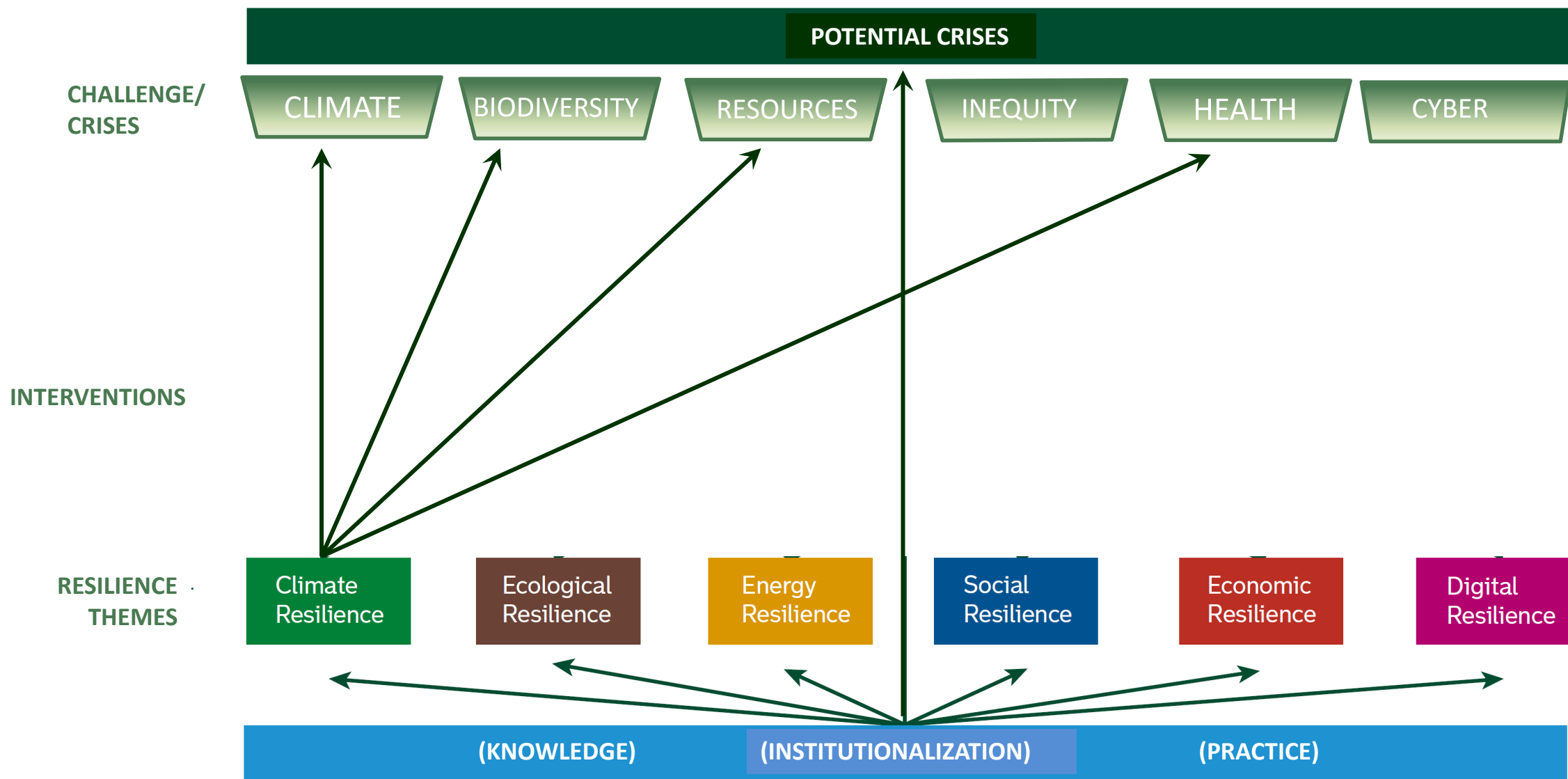


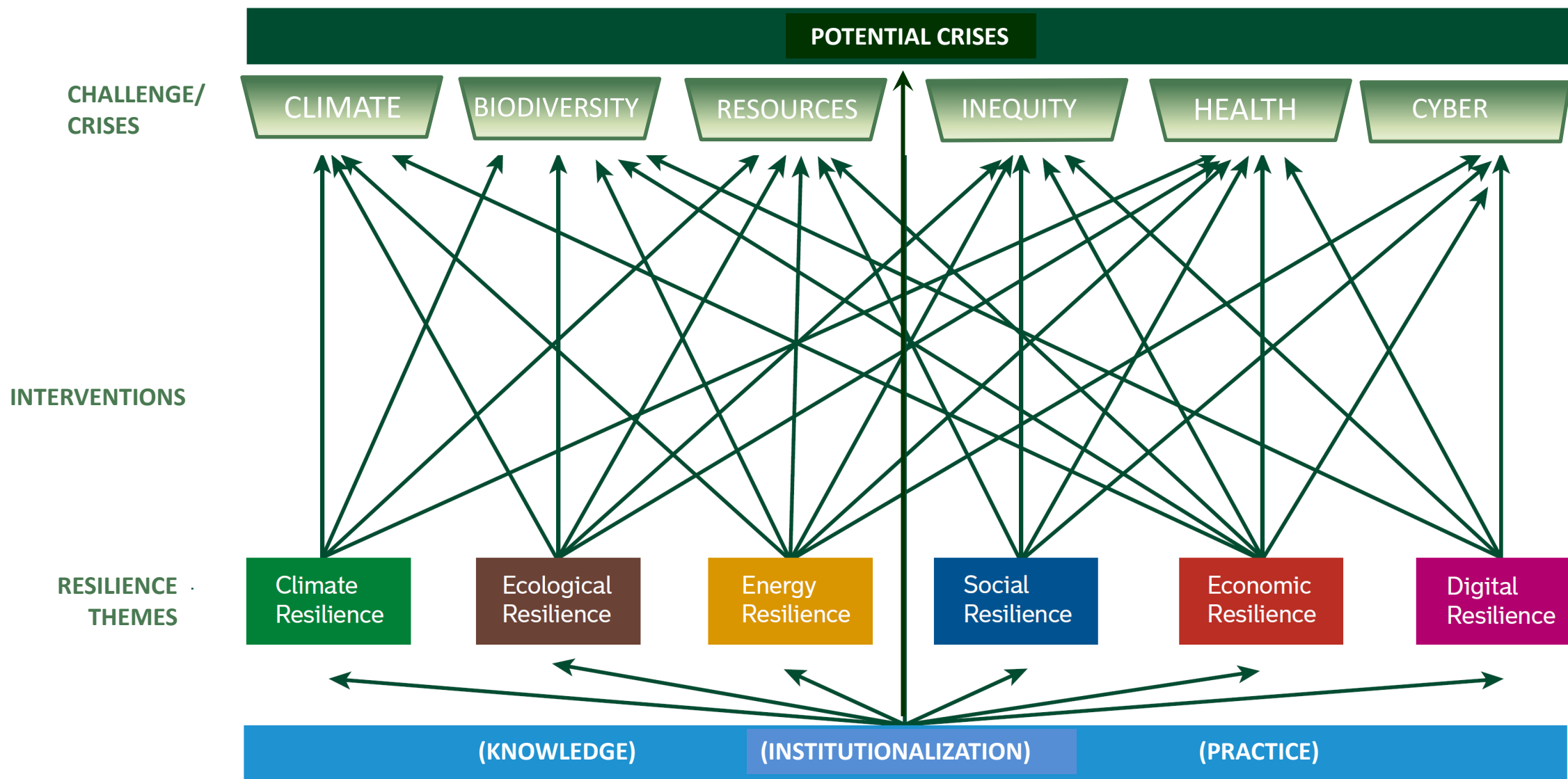


... CLIMATE RESILIENCE BY DESIGN...

Climate Resilience Approach = example

- ❑ Programmatic**
- ❑ Structural - Systemic**
- ❑ Different scales: from tile popping up to storm surge barrier**
- ❑ LT vision backcasted to strategie and ST actionplan**
- ❑ Inclusive: for > with > by residents**
- ❑ Coalitions: Wateralliance + Deltaprogram Rijnmond Drechtsteden**
- ❑ Integral: combined with other challenges**
- ❑ Multi benefit solutions**





ACCELERATED SEALEVEL RISE vs ECONOMICAL RESILIENCE

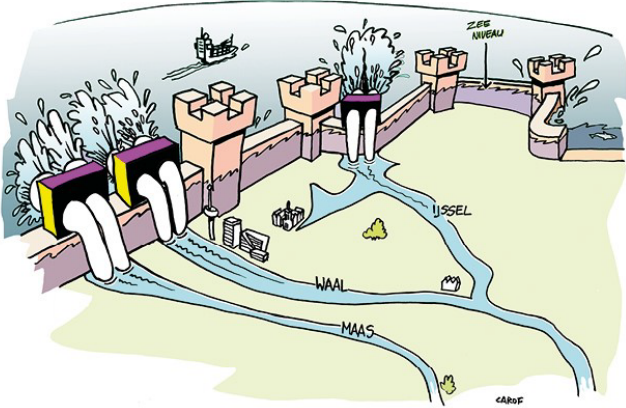


RISK PERCEPTION IS INFLUENCING 'BUSINESS CLIMATE': TRIPLE A STATUS?

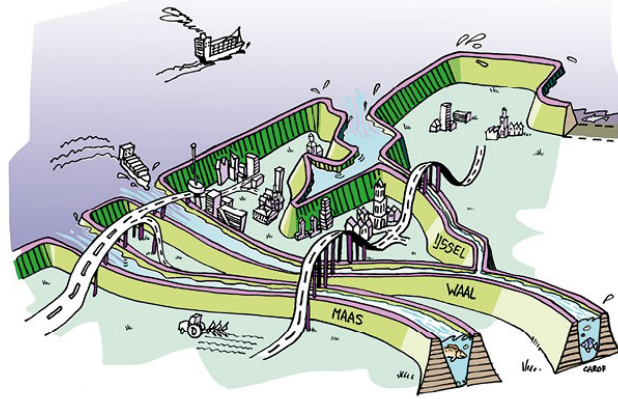
DESIGN COMPETITIONS + FUTURE SCENARIOS



Beschermen gesloten



Beschermen open



Zeewaarts

DELTARES



Meebewegen



SOURCE:
H+N+S
EO-WIJERS
COMPETITION



RANKING OF THE WORLD'S CITIES MOST EXPOSED TO COASTAL FLOODING TODAY AND IN THE FUTURE - Executive Summary

Rank	Country	Urban Agglomeration	Exposed Assets Current (\$Billion)	Exposed Assets Future (\$Billion)
1	USA	Miami	416.29	3,513.04
2	CHINA	Guangzhou	84.17	3,357.72
3	USA	New York-Newark	320.20	2,147.35
4	INDIA	Kolkata (Calcutta)	31.99	1,961.44
5	CHINA	Shanghai	72.86	1,771.17
6	INDIA	Mumbai	46.20	1,598.05
7	CHINA	Tianjin	29.62	1,231.48
8	JAPAN	Tokyo	174.29	1,207.07
9	CHINA,	Hong Kong	35.94	1,163.89
10	THAILAND	Bangkok	38.72	1,117.54
11	CHINA	Ningbo	9.26	1,073.93
12	USA	New Orleans	233.69	1,013.45
13	JAPAN	Osaka-Kobe	215.62	968.96
14	NETHERLANDS	Amsterdam	128.33	843.70
15	NETHERLANDS	Rotterdam	114.89	825.68
16	VIETNAM	Ho Chi Minh City	26.86	652.82
17	JAPAN	Nagoya	109.22	623.42
18	CHINA	Qingdao	2.72	601.59
19	USA	Virginia Beach	84.64	581.69
20	EGYPT	Alexandria	28.46	563.28

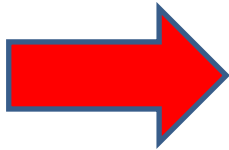


Table 2: Top 20 cities ranked in terms of assets exposed to coastal flooding in the 2070s (including both climate change and socioeconomic change) and showing present-day exposure (Source: Nicholls et al (2007), OECD, Paris)

Former Deltacommissaris: worried about Dutch AAA-status 29 maart 2021

‘Wacht niet op een volgende watersnood maar zoek het hogerop’

Kunnen we nog in de Randstad blijven wonen of moeten we naar hogere delen van het land verhuizen? ‘Het is niet verstandig om te blijven bouwen op de manier waarop we dat altijd deden’, zegt deltagommissaris Peter Glas.

Onno Havermans 15 december 2021, 11:15



CLIMATE CHANGE AND ECONOMICAL RESILIENCE OF THE ROTTERDAM REGION:

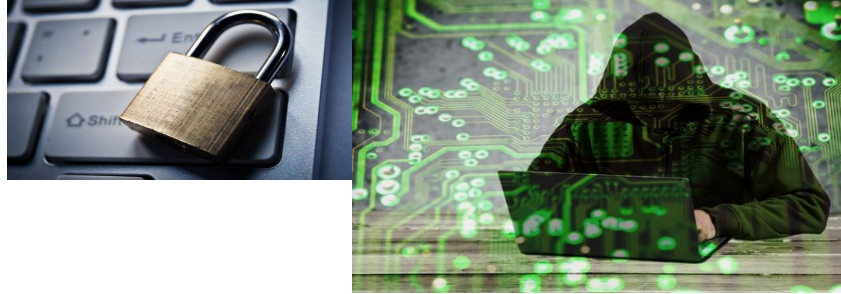
- ☐ **WHAT ARE THE CONSEQUENCES OF ALL THESE MESSAGES?**
- ☐ **ARE THERE EXAMPLES OF COMPANIES AVOIDING ROTTERDAM?**
- ☐ **IF SO, IS THERE A TREND?**
- ☐ **WHAT IS OUR NEW NARRATIVE?**
- ☐ **DO WE HAVE THE RIGHT ANSWERS AND DATA?**
- ☐ **REASEARCH NEEDED?**

**THIS MIGHT BECOME A STRESS
FOR NOW: DEVELOP A STRONG NATIONAL NARRATIVE**

The logo for 'Resilient Delta' is positioned in the bottom right corner. It features a large, light blue triangle with a gradient that transitions from a pale blue at the top to a slightly darker blue at the bottom. The words 'Resilient' and 'Delta' are written in a black, sans-serif font, stacked vertically within the triangle.

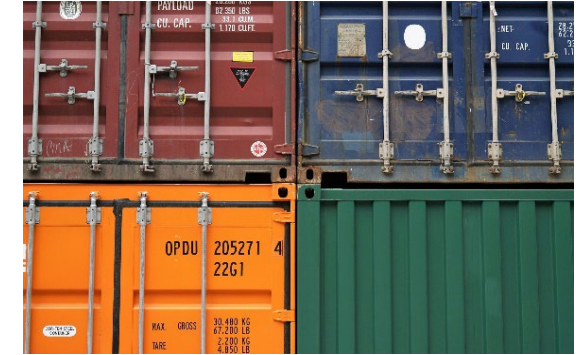
Resilient
Delta

Cybercrime schade in Europa bedroeg afgelopen jaar 23,3 miljard euro



'Aanval met ransomware op containerbedrijf haven Rotterdam'

27 jun. 2017 - Het containeroverslagbedrijf APM Terminals, dat onder meer in de haven van Rotterdam actief is, heeft te maken met een *ransomware*-aanval.



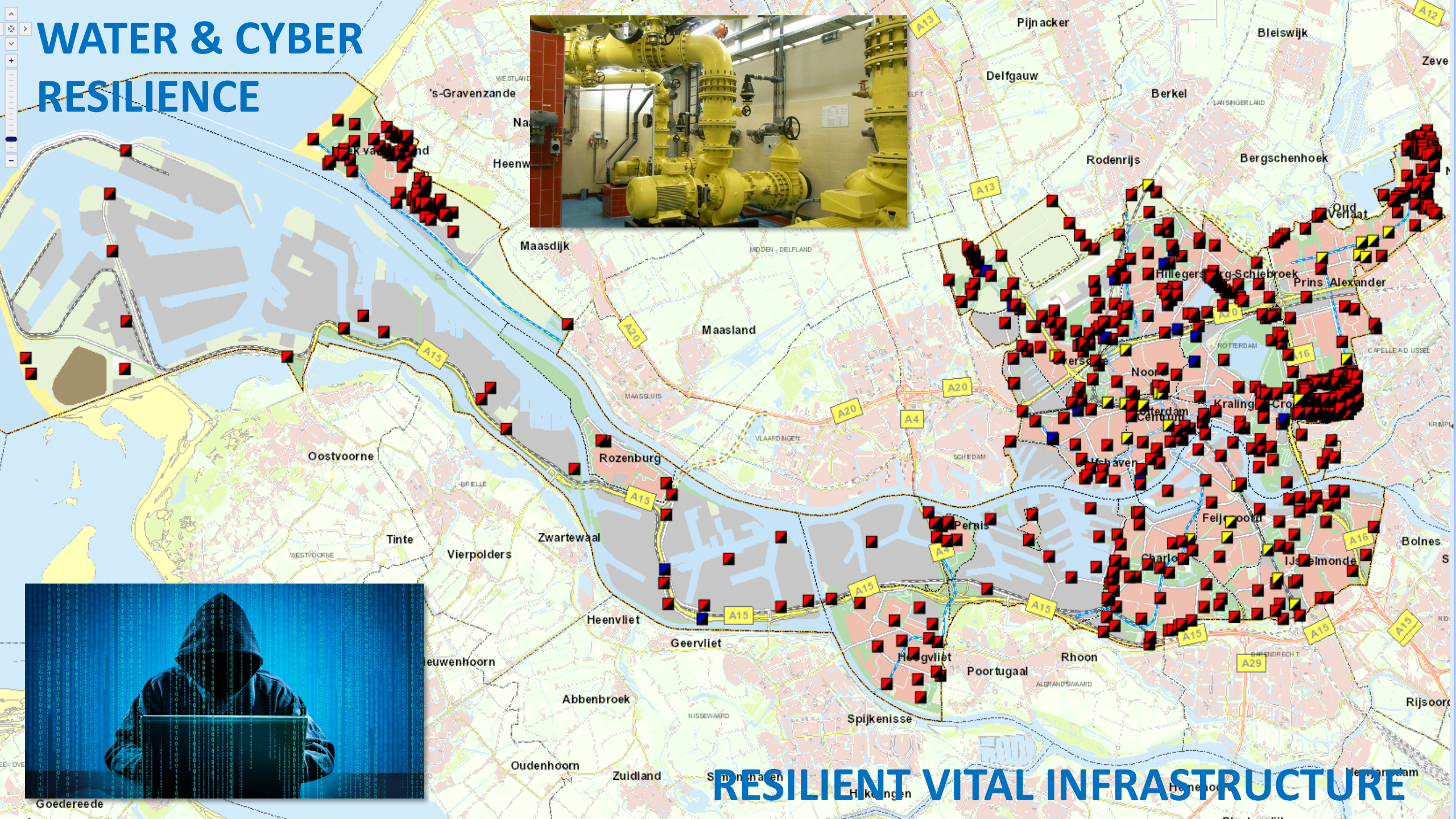
CYBER RESILIENCE

NCTV: Nederlandse Cybersecuritystrategie 2022-2028

Digitale systemen vormen het zenuwstelsel van onze samenleving. Dat biedt veel kansen, maar brengt ook risico's met zich mee. De veiligheid in de digitale wereld blijft ver achter bij die in de fysieke wereld.

De digitale dreiging is permanent en neemt fors toe. Daarom is er nu actie nodig om de digitale weerbaarheid te verhogen

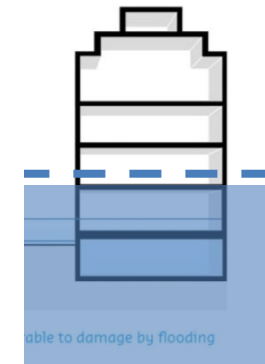
WATER & CYBER RESILIENCE



RESILIENT VITAL INFRASTRUCTURE



- ❖ HOW RESILIENT IS OUR **VITAL INFRASTRUCTURE**?
- ❖ WHAT **CASCADE EFFECTS** COULD OCCUR?
- ❖ DO WE NEED **NEW BUILDING CODES**?
- ❖ SHOULD WE INCLUDE NEED FOR **SHELTERS**?
- ❖ HOW TO INCLUDE **OTHER TRANSITIONS**?
- ❖ HOW TO DEAL WITH INCREASING **UNCERTAINTIES**?



010 Online Safe:

- **Cyber Resilience of our citizens**

- Pilot 2023
- Vulnerable groups
- Cooperation with IT-Campus, Techniek College Rotterdam, Gemeente Rotterdam

- **Added Value**

- Resilience Rotterdammers
- Involvement Students
- Scalling

- **Next**

- Upscaling through schools and district hubs
- Continue subsidy IT-Campus



Cursus Veilig online van start:
Leer in 4 korte lessen:

- ✓ hoe je kunt voorkomen dat je wordt gehackt
- ✓ hoe een DigiD werkt en wanneer je DigiD moet gebruiken
- ✓ hoe je veilig Google gebruikt
- ✓ hoe je WhatsApp-fraude e.a. vreemde berichten herkent
- ✓ hoe je veilig online winkelt

Cursus Veilig online voor het hele gezin:
in 4 korte lessen leggen we je uit:

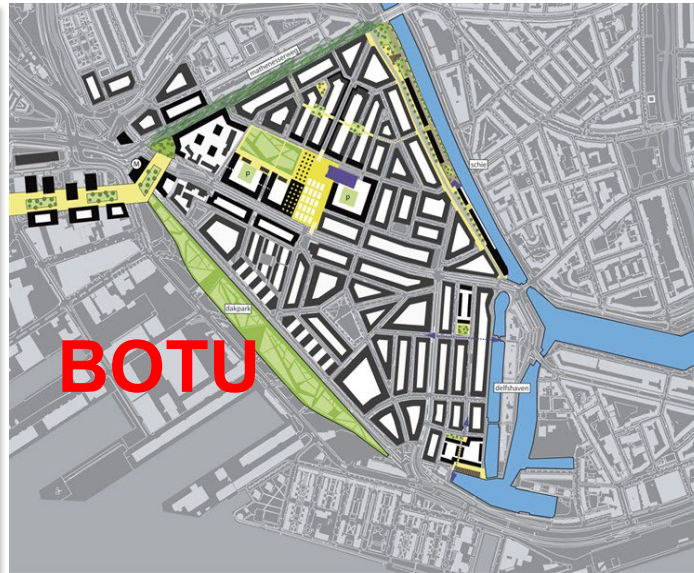
- ✓ hoe je veilig online winkelt
- ✓ wat gratis betekent voor je privacy
- ✓ hoe je voorkomt slachtoffer te worden van sextortion, geldezel-praktijken en cyberpesten
- ✓ hoe je voorkomt onbedoeld cybercrime dader te worden



010VEILIG ONLINE IS EEN INITIATIEF VAN



CLIMATE RESILIENCE + ENERGY TRANSITION AS LEVERAGE FOR A SOCIAL RESILIENT BOTU



**TOWARDS A RESILIENT
BOTU:**

**SQUARES
SCHOOLS
HOUSING**

INTEGRATED APPROACH:

**RESILIENCE THEME'S
COME TOGETHER ON
DISTRICT LEVEL**



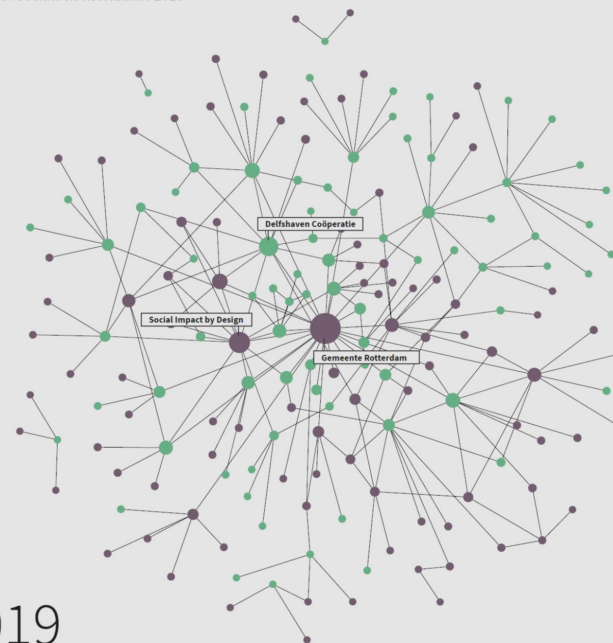
Social Resilience:

- **Community resilience**
- **Connection**
- **Community Resilience**
- **Informal networks**
- **Use talents**
- **...**



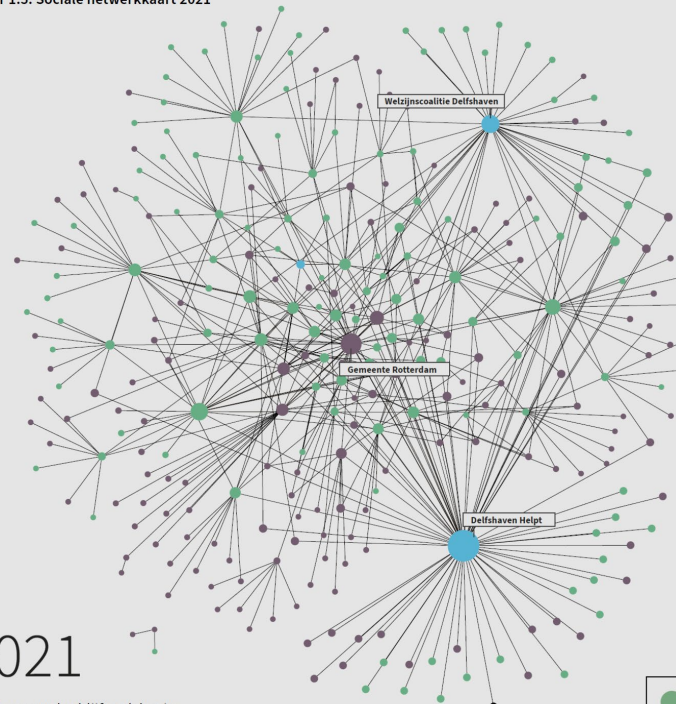


Figuur 1.3. Sociale netwerkkaart 2019



2019

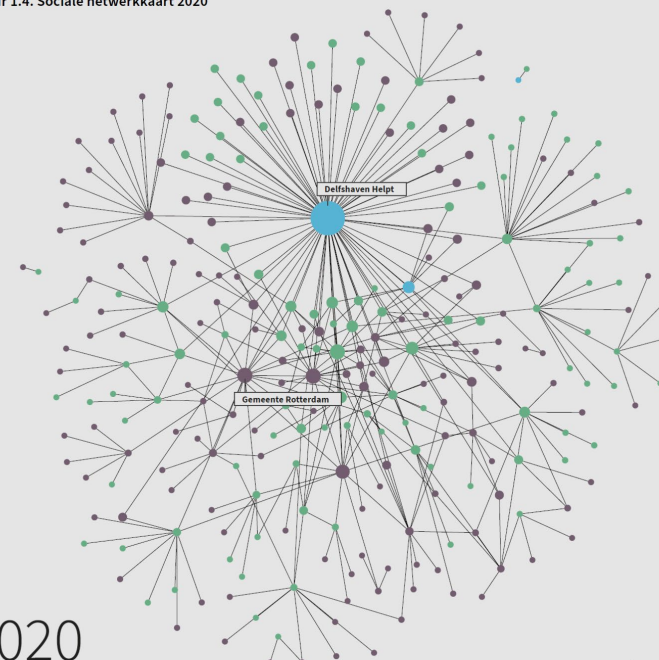
Figuur 1.5. Sociale netwerkkaart 2021



2021

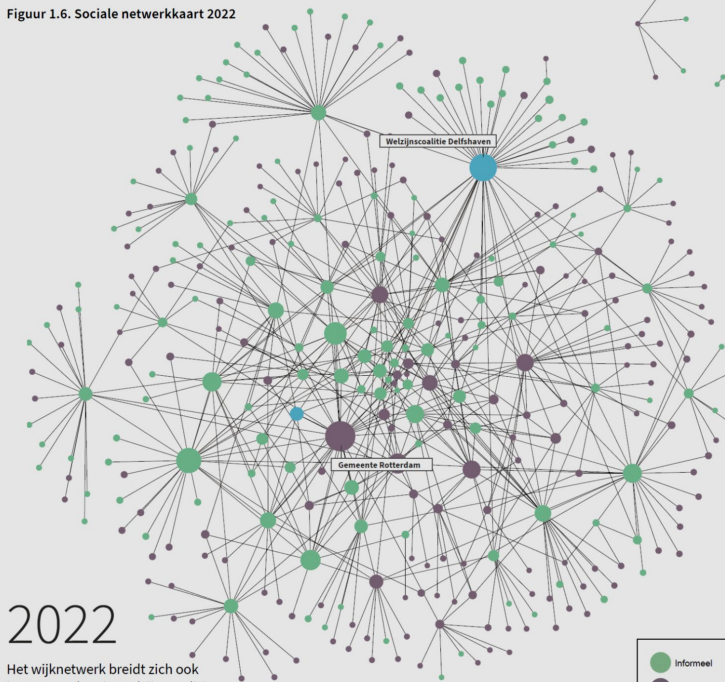
Delfshaven Helpt blijft ook begin

Figuur 1.4. Sociale netwerkkaart 2020



2020

Figuur 1.6. Sociale netwerkkaart 2022



2022

Het wijknetwerk breidt zich ook

A Resilient Rotterdam starts with Resilient Rotterdammer(t)s

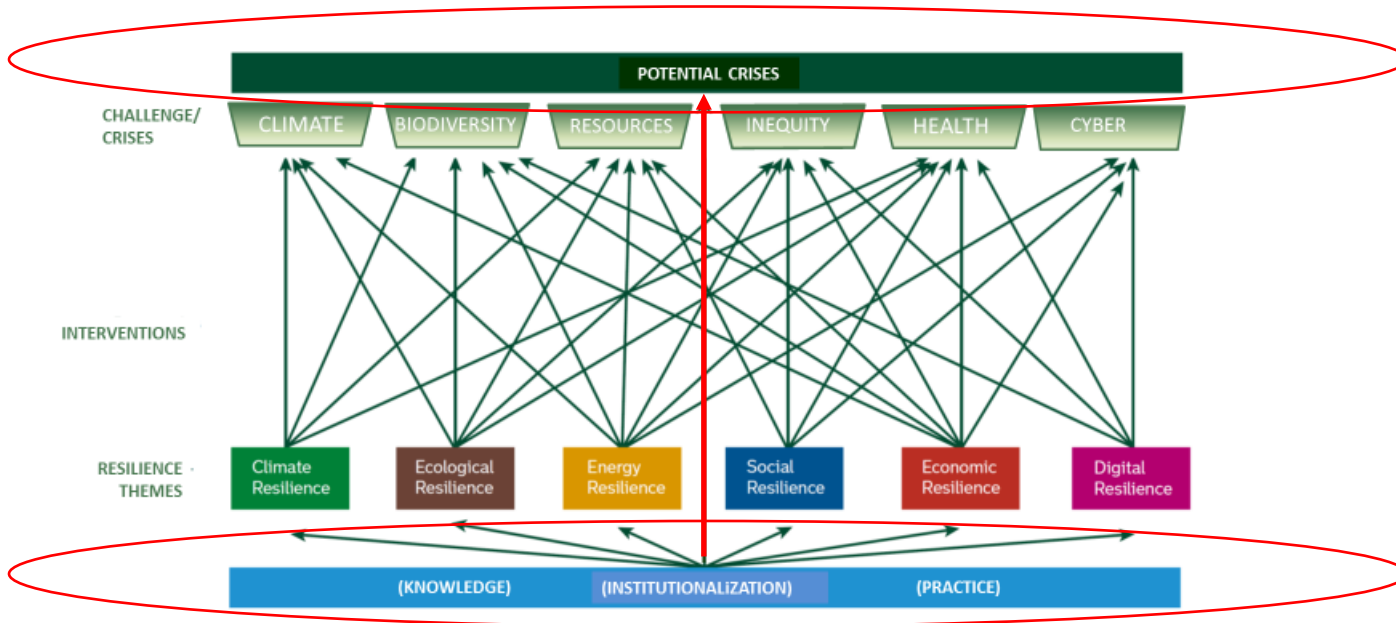
- USE DISTRICT HUBS FOR INFORMATION ABOUT HOW TO PREVENT AND HOW TO RESPOND...
- RESILIENCE TRAINING ON SCHOOLS?
- INCREASE AWARENESS ABOUT PREPPING POSSIBILITIES

Pieter-Jaap Aalbersberg, Nationaal Coördinator

Terrorismebestrijding en Veiligheid: *“Nederland is een veilig land. Tegelijkertijd moeten we onze ogen niet sluiten voor de veelheid aan ontwikkelingen om ons heen die onze veiligheid kunnen bedreigen. Overheden, bedrijven en maatschappelijke organisaties nemen samen maatregelen om ons land weerbaarder te maken. **Het is belangrijk dat mensen zelf ook voorbereidingen treffen zoals een noodpakket voor de eerste 48 uur. Zodat, bij een grootschalige uitval van bijvoorbeeld elektriciteit of stromend water, mensen zich weten te redden, want dan ligt het dagelijkse leven wel even stil.**”*



INSTITUTIONALIZATION: HOW TO EMBED THE RESILIENCE THINKING WITHIN MUNICIPALITY?



'TOOLKIT'

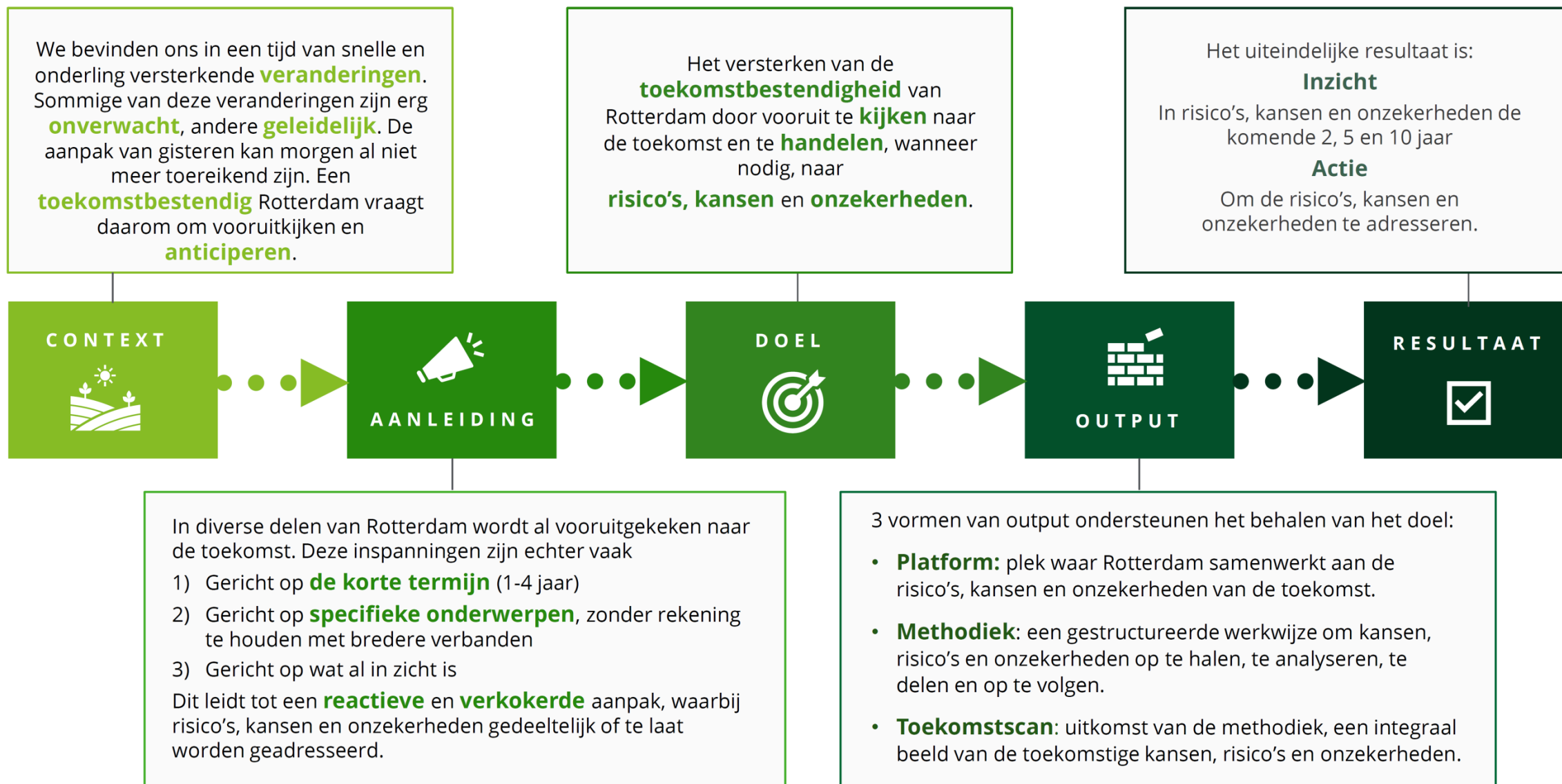
**Toekomst inzicht!!
(Future InSight)**

Vital systems

Poly crisis Atelier

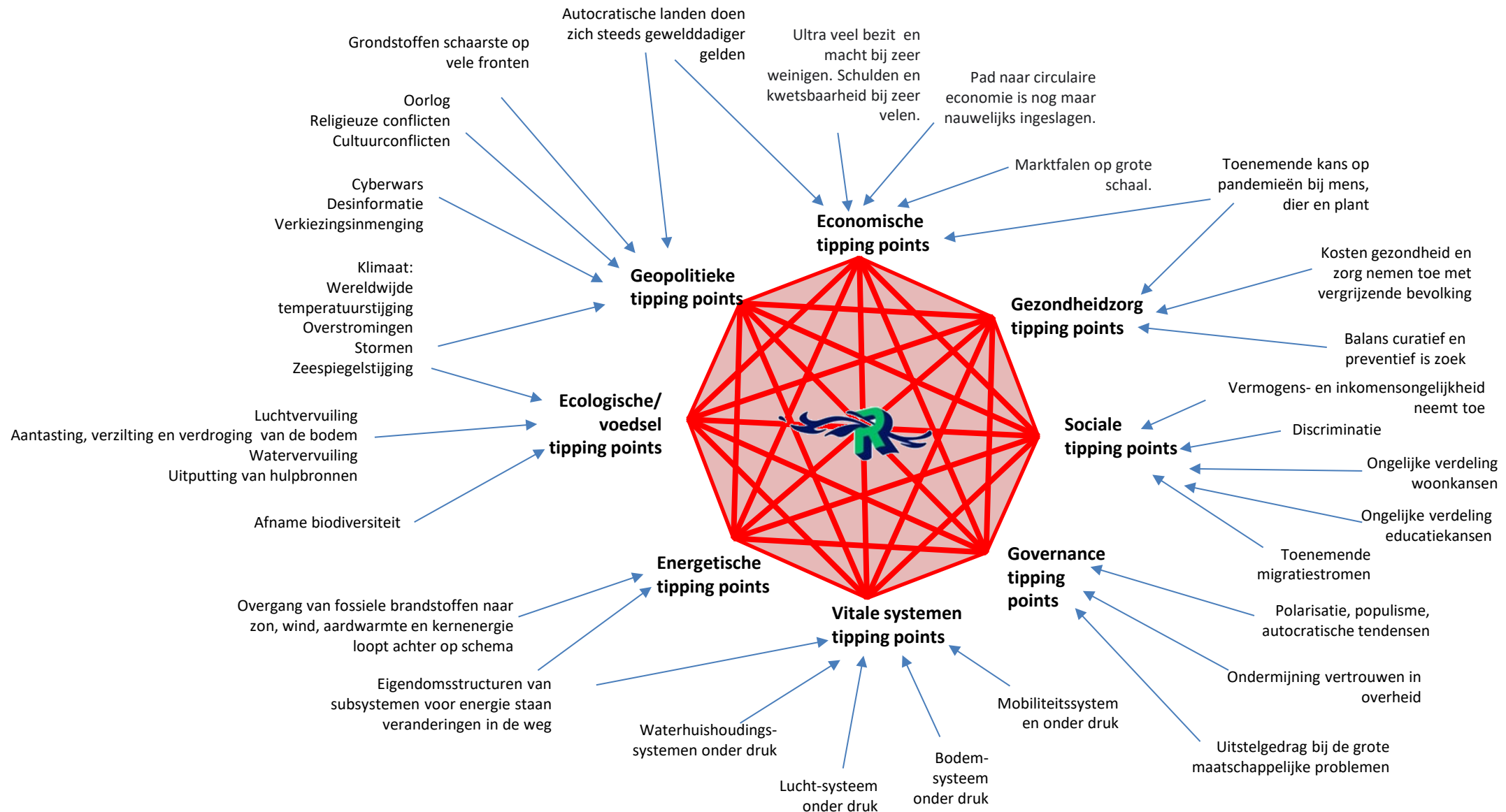
Crisis proof organization

Toekomst InZicht op 1 pagina

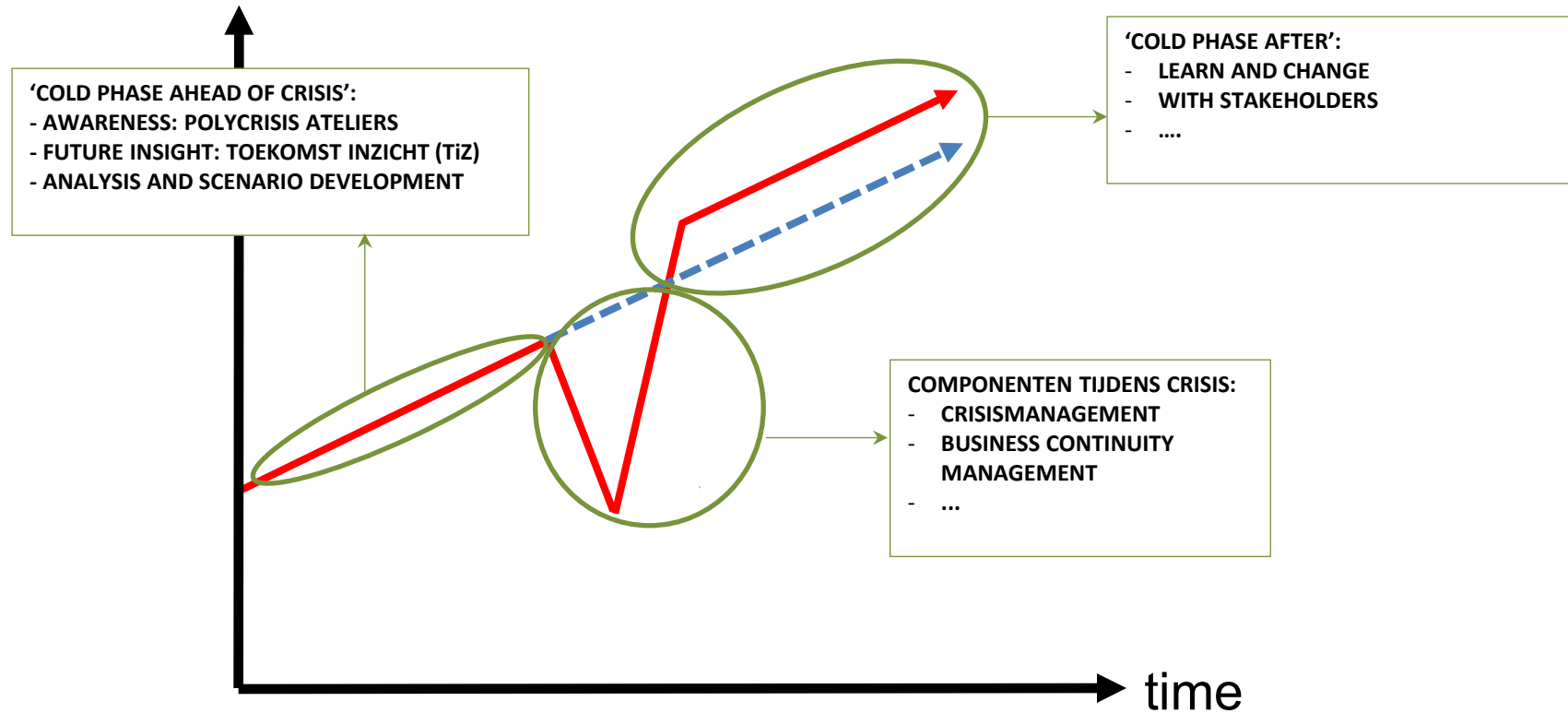


De polycrisis Atelier: create awareness

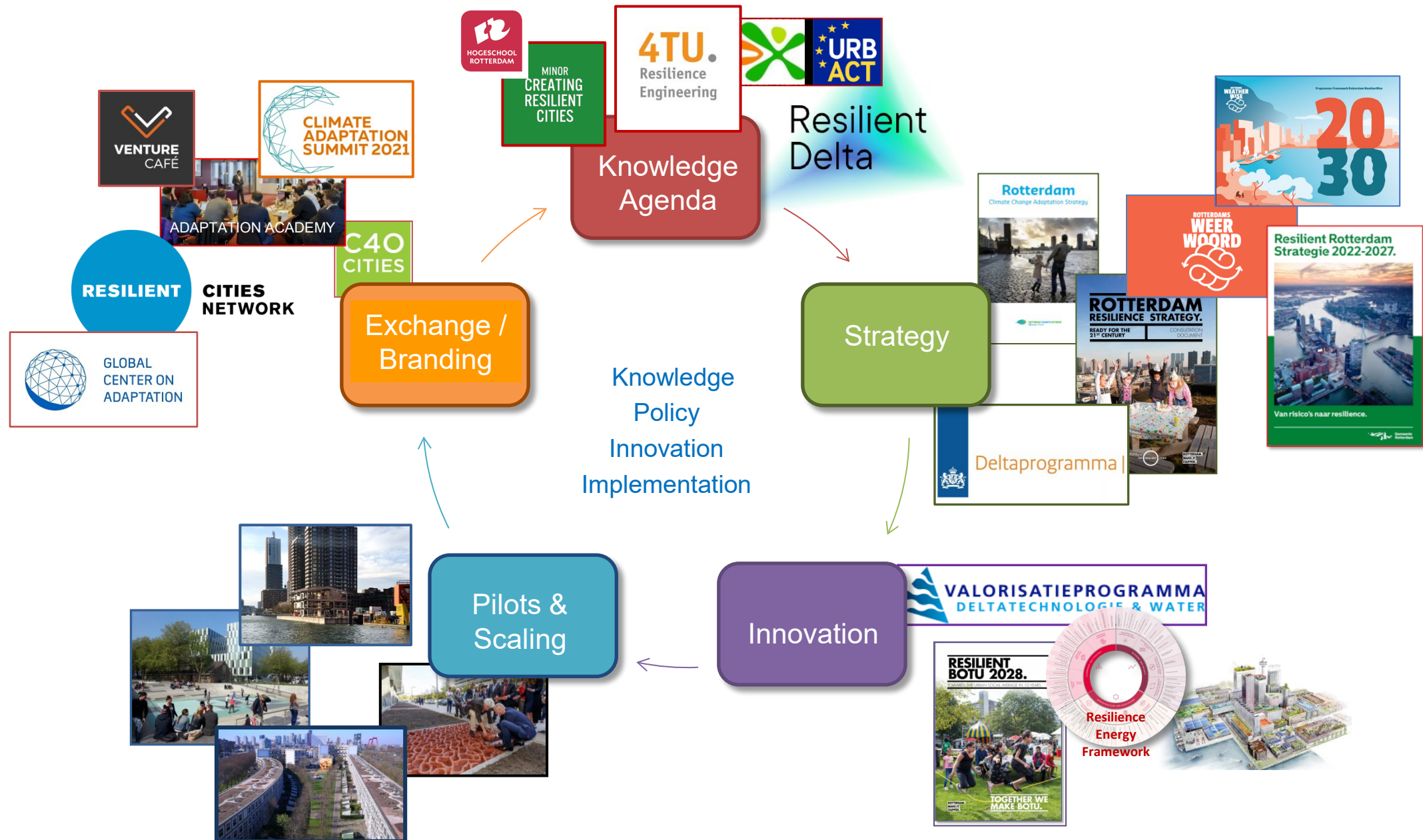
stapelning van verwaarloosde problemen & intersystemische beïnvloeding van tipping points



A RESILIENT ROTTERDAM NEEDS A *RESILIENT ORGANIZATION* THAT IS CAPABLE TO RESPOND TO CRISES



THE RESILIENT ROTTERDAM 'ECOSYSTEM'



DON'T
PANIC



BE
RESILIENT

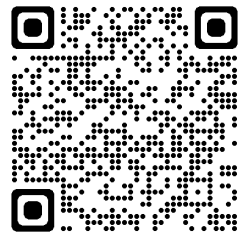
<https://community.amplifier.org/art/dont-panic-be-resilient/>



THANK YOU!

www.resilientrotterdam.nl

[Resilient Rotterdam Strategy 2022-2027](#)



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