

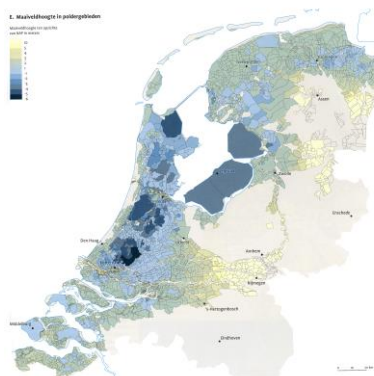
Towards multi-layer safety

Cases Amsterdam, Rotterdam and Dordrecht



Peter van Veelen
DITCC 2014
Sept 25, 2014, Rotterdam

Prevention based and publicly funded flood risk system



polders



dike rings

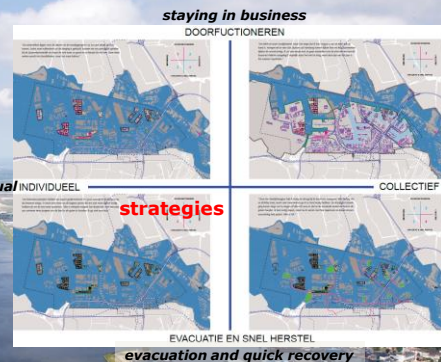
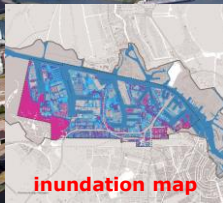
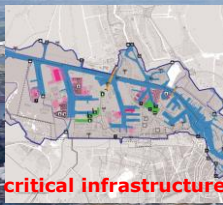
Multi Layer Safety

Disaster
management

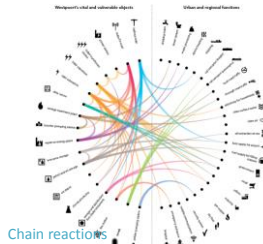
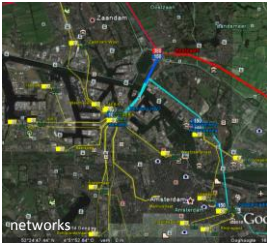
Spatial planning

Prevention

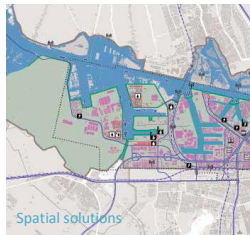
Case Westpoort



Case Westpoort



understanding
solutions



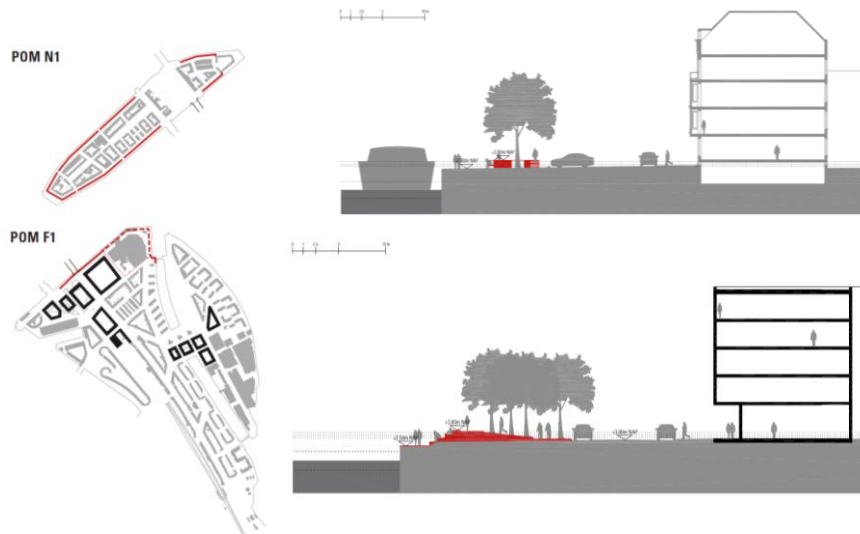
Adapted urban development - case Feijenoord



Area is prone to flooding



Local flood wall most effective



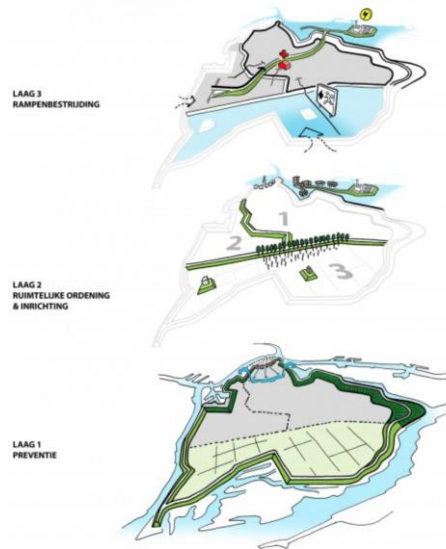
Pictures: DSA Rotterdam



Self reliant island of Dordrecht



Self-reliant island of Dordrecht



Lessons learned and challenges

Lessons:

Local flood risks can be considerably reduced by smart small-scale adaptations

MLS approach opens up opportunities to couple flood investments with other spatial developments

Raising awareness on potential risks among local stakeholders is essential

Lessons learned and challenges

Challenges:

Who is going to pay for extra investments in flood safety?

- Local authorities and stakeholders will probably need to invest in flood risk reduction measures.
- How to deal with free riders (benefit from extra safety without sharing the costs)?

How to preserve long-term continuity of a local adaptive strategy?

- local authorities lack regulatory powers to enforce stakeholders to invest in safety.