



## **Joint Fact Finding A Collaborative Multi Stakeholder Approach to Climate Ready Infrastructure**

Overview:

Threat: Flooding (case)

Phase: Prevention

Focus: Analyzing measures

Perspective: Collective

Framework: Qualitative

Approach: Adaptive/collaborative



### **Joint Fact Finding in Practise**

*A Collaborative Multi-Stakeholder Approach to Climate-Ready Infrastructure*

Ruben Vogel, TNO Strategy & Policy for Environmental Planning

- › Paper for European Journal of Transport and Infrastructure Research (EJTIR)
- › Co-authors: Todd Schenk, Nienke Maas, Lori Tavasszy



## Problem Definition

- › *How can you deal with the uncertainty and complexity that is related to including climate adaptation of infrastructure networks in decision making processes?*



## Technical Effects on Infrastructures

- › Physical Vulnerabilities
- › Common Cause failure
- › (Inter)dependencies





## Governance Challenges

- › Climate Information Usability Gap
- › Interdependencies &  
Siloed Institutions
- › Institutional Stickiness



## The Key Issue

- › Our framework tries to overcome these governance challenges in the decision making processes of infrastructures.
- › *F.A. Hayek*



*“The character of the problem is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exist in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess.”*

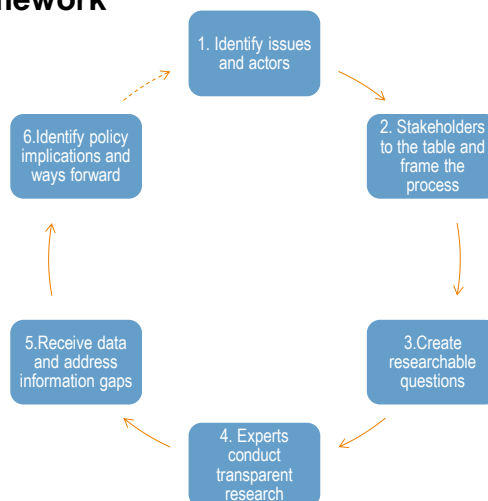


## Joint Fact Finding

- › A collaborative multi-stakeholder decision making support tool
- › Integrating climate adaptation into infrastructure planning
- › Need for robust information
- › JFF helps to create consensus over the information that will be used in the decision making process

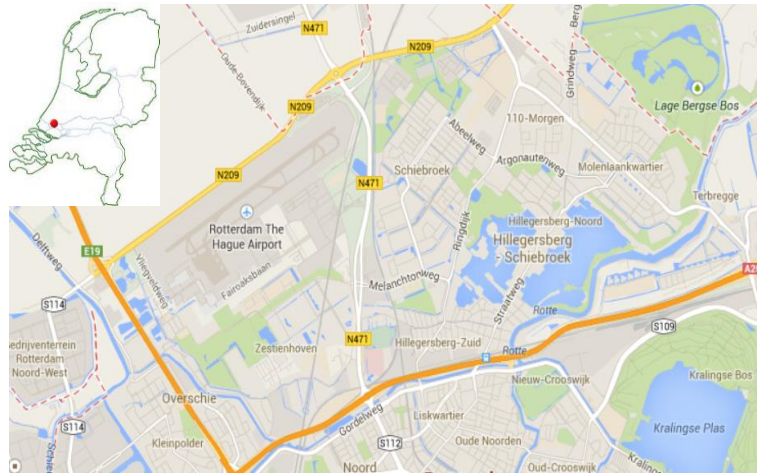


## The Framework

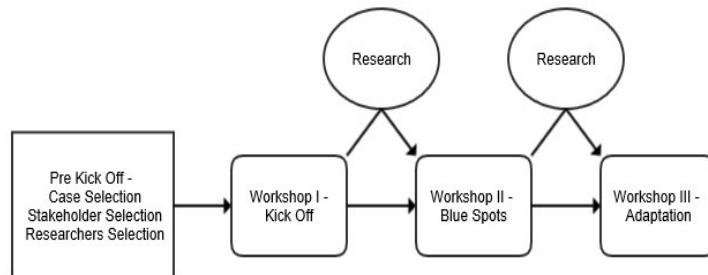




## Case Study Rotterdam North



## Process Overview Case Study





## Lessons from the Case

- › Overall Process
  - Time consuming
- › Information Usability Gap
  - Balancing act between information supply and demand
  - Check between theory and practice
- › Siloed Institutions
  - Awareness of interdependencies
  - Low threshold to share information
- › Institutional Stickiness
  - Participating in the process as a positive result



## JFF Integrating in Common Practice

- › When do parties join a JFF process?
  - Expected costs against expected benefits
  - Integrated in common planning processes
  - Willingness to share information
  - Sense of urgency to use non-traditional methods



## Final Thought

- › JFF is not a silver bullet, but a valuable tool in the toolbox of methods to improve decision making processes