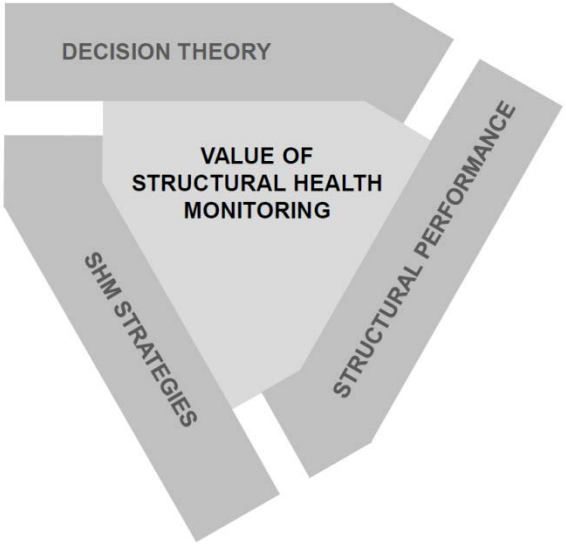
COST is supported by the
EU Framework Programme Horizon 2020

EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY



COST Action TU 1402

1st Workshop, 04.-05.05.2015, DTU, Denmark

WG 4 – Case Studies

Jochen Köhler, NTNU, Norway

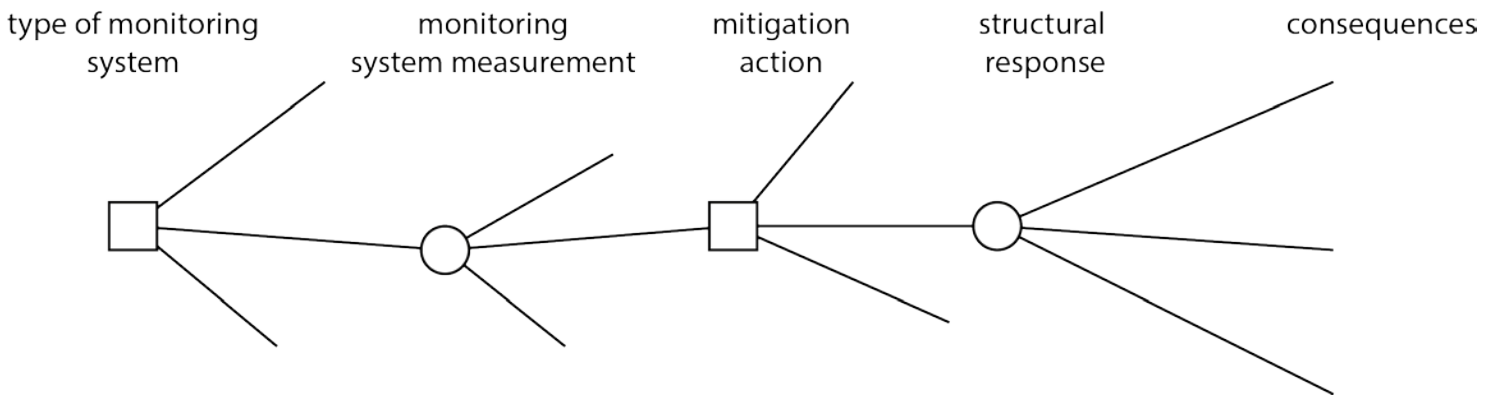
From the MoU (D.1 Scientific Focus) :

- "The scientific focus of the Action is (…)
  - the further development of the theoretical framework (…)
  - in that kind that it can be directly applied in practical situations related to SHM (…)
  - the development of efficient computational tools (…)
  - the demonstration of the applicability of the framework with case studies."

WG 4 - approach

- Select application examples from different engineering domains
- Apply and demonstrate the applicability of the VoI assessment approach (developed in WG 1-3)
- Identify typical difficulties
- Deliver data

WG 4 - Challenges



- Realistic representation of
  - the process that is monitored
  - the relation of the monitor results to that process
  - the effect of the process to structural response
  - the consequences of the structural response

WG 4 - Participation

- 28 participants from 18 countries
  - 14 from university;
  - 2 public authorities;
  - 8 consulting / industry

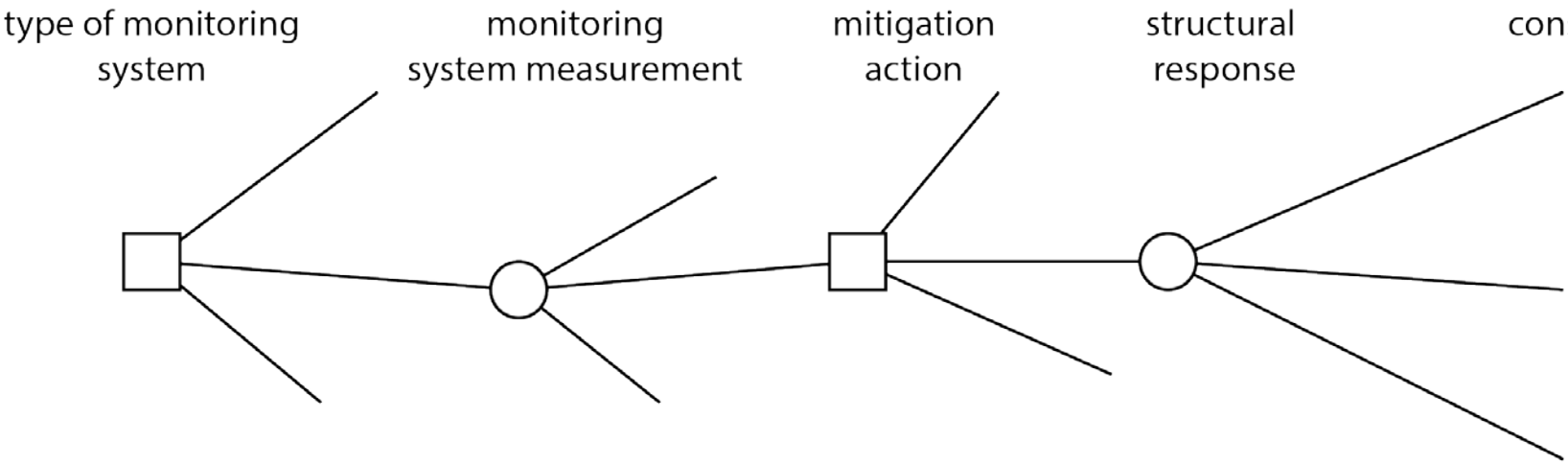
- 8 Contributions/Case study ideas
  - Paweł A. Król, Poland - MONIT project
  - Luís O. Santos, Portugal - São João Bridge
  - Wim Courage, The Netherlands – Fatigue, Steel Bridge
  - Stéphane Bonelli, France – Soil structures, dikes
  - John Leander, Sweden – Bridge monitoring, 3 cases from Sweden
  - Miroslav Sykora, Czech Republic, Cooling towers
  - Matej Kušar, Slovenia – Bridge monitoring in Slovenia
  - Peter Tanner – Monitoring of road bridges

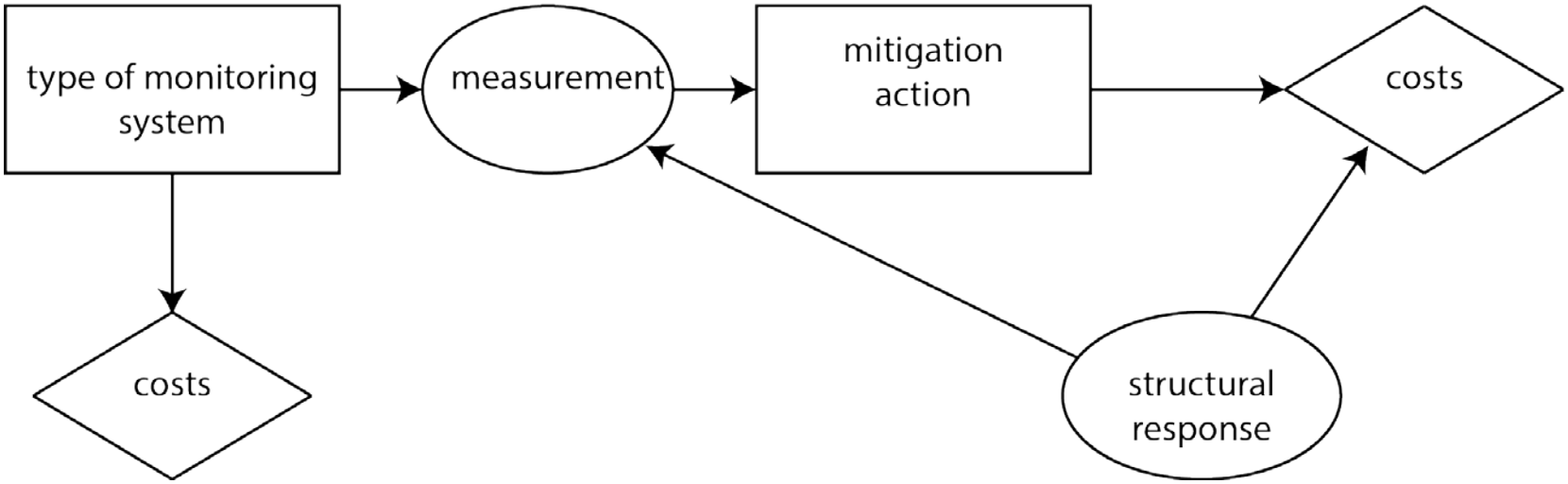
WG 4 – Interaction with other WGs

- WG1:
  - Generic classification and representation of different relevant decision situations
  - Conceptual examples and framework
- WG2:
  - Categorisation of SHM
  - Information modelling platform
- WG3:
  - Tools and Methods
- WG5:
  - Practical guideline

WG 4 – Time planning

	2015				2016				2017				2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Selection case studies					■	■	■	■								
Assessment, documentation									■	■	■	■				
Dissemination												■				


type of monitoring system
monitoring system measurement
mitigation action
structural response
consequences


type of monitoring system
measurement
mitigation action
costs
costs
structural response