



COST Action  
TU I402

Quantifying the Value of Structural Health Monitoring



# Industry Innovation Days

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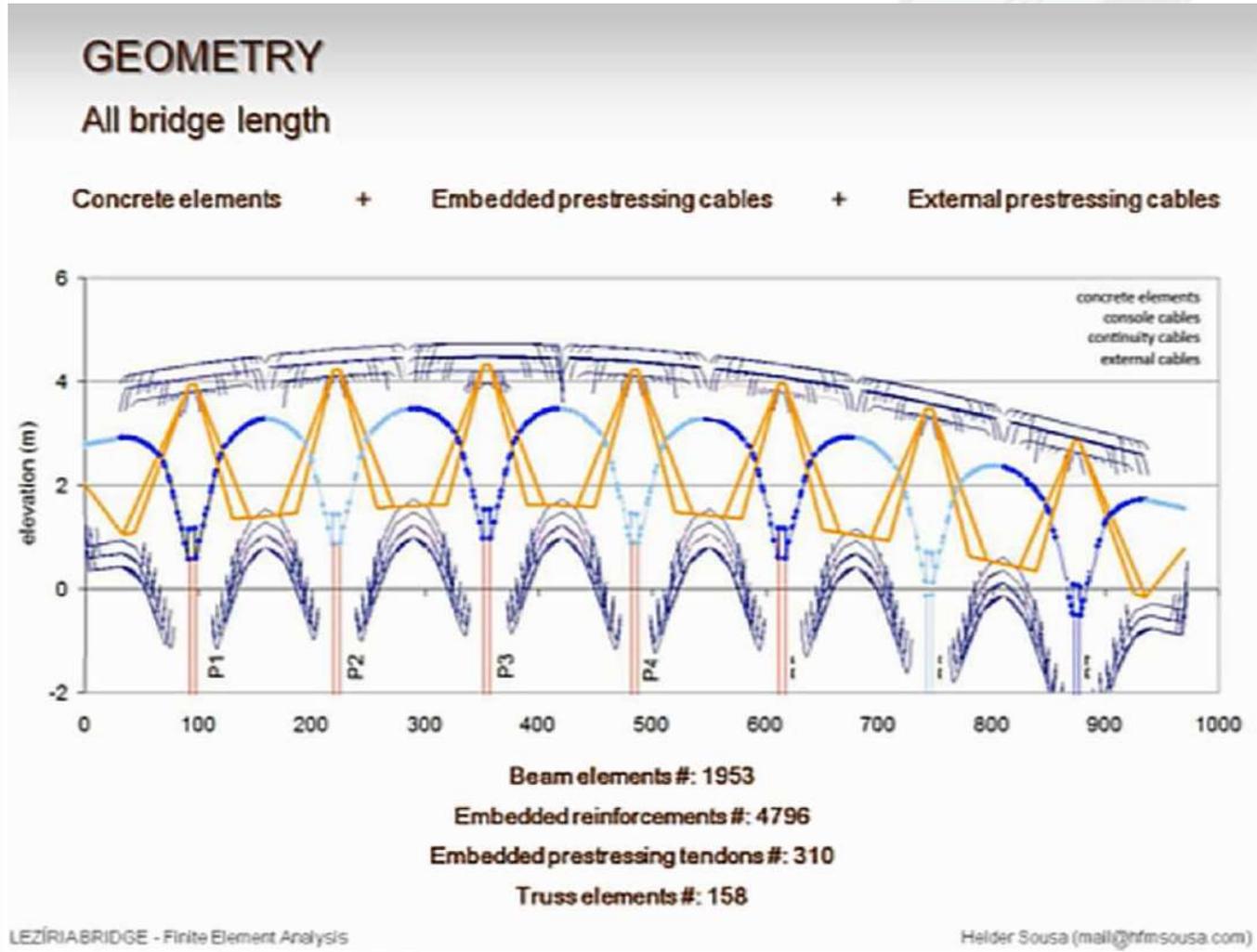
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## Objective - Bottom line



# Objective - Bottom line



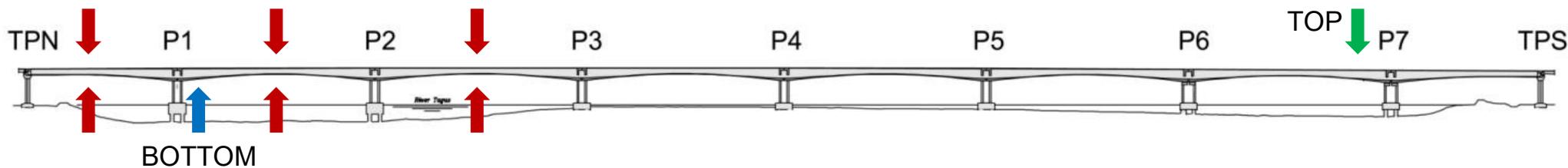
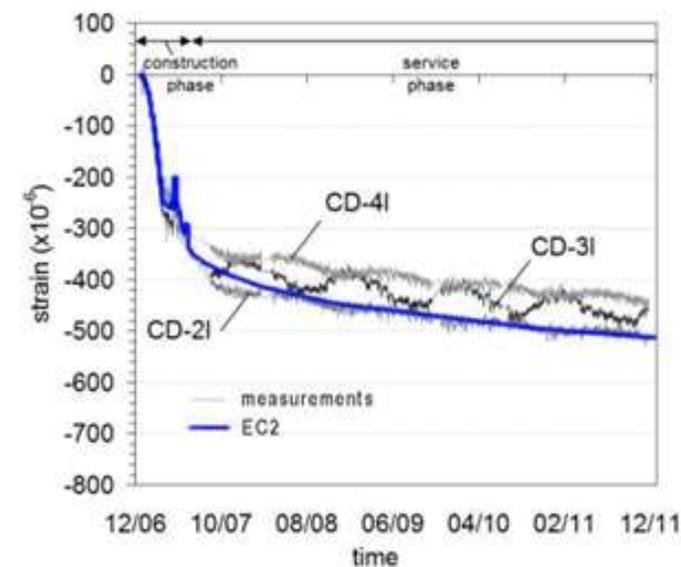
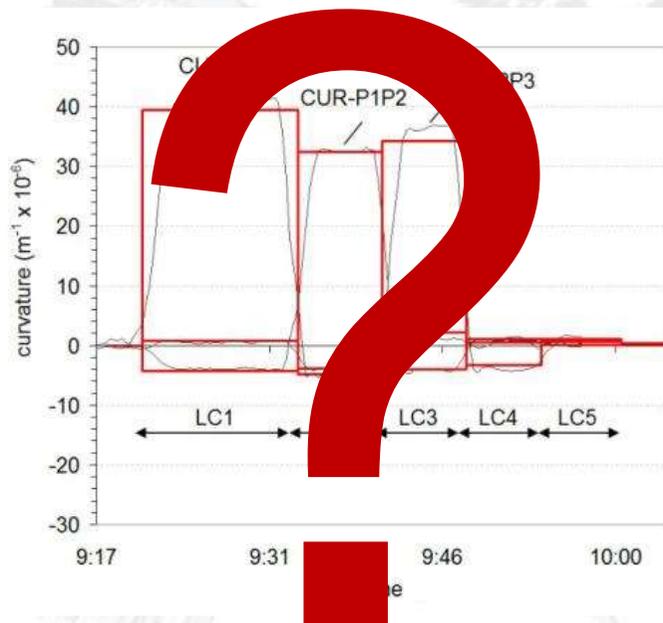
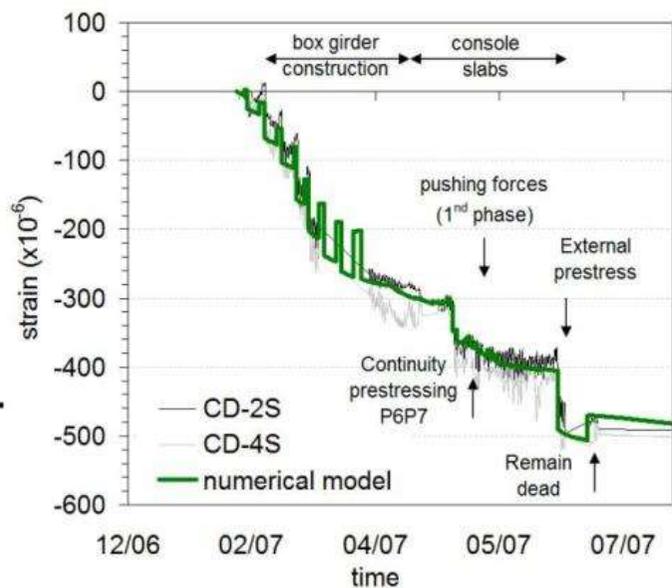
- Complexity of the geometry, materials and time-history
- Numerical simulation throughout the bridge lifetime (construction phase + operational life)
- Time-dependent effects (shrinkage & creep and thermal effects)

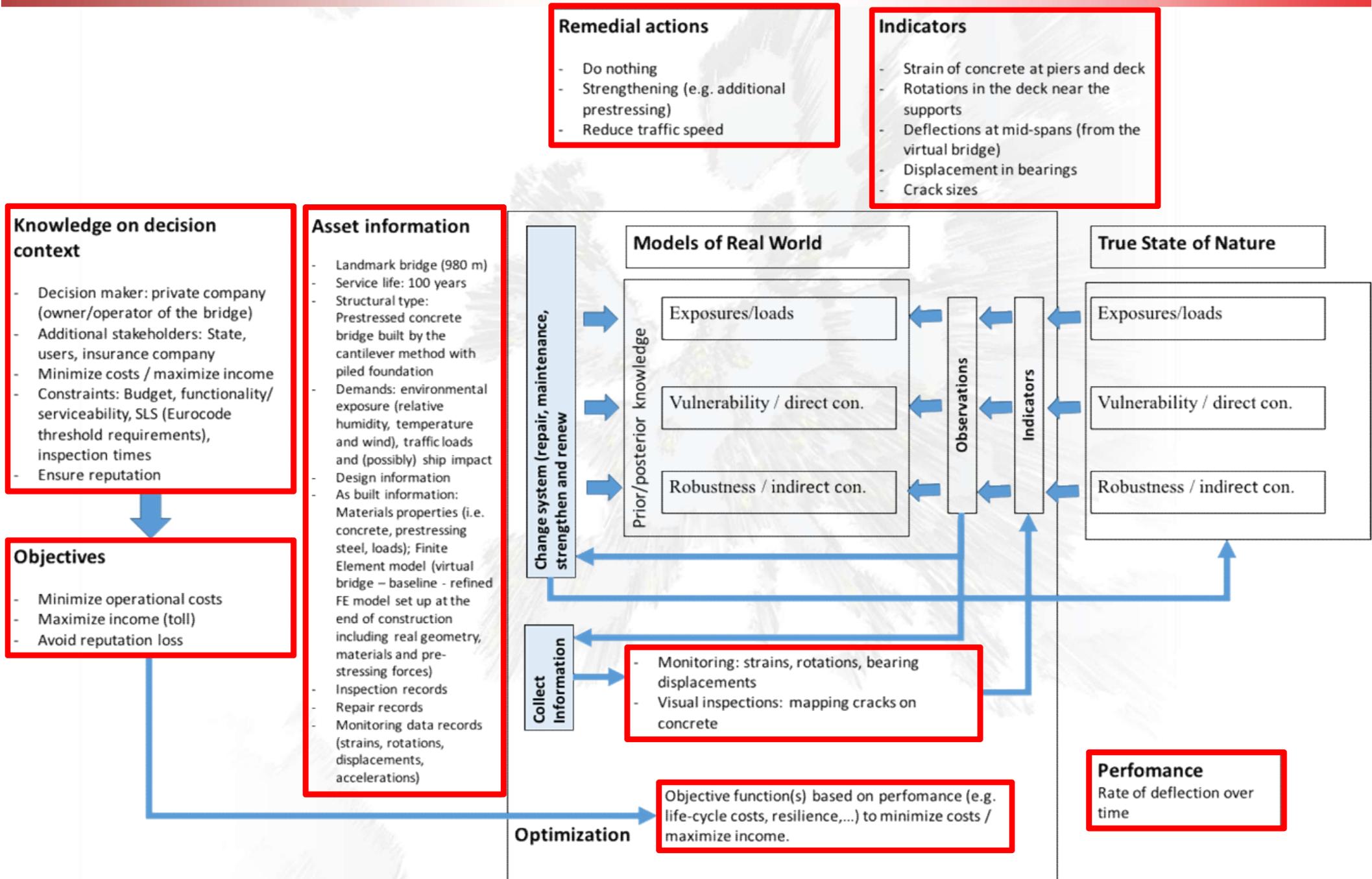
# Objective - Bottom line

CONSTRUCTION PHASE

LOAD TEST

LONG-TERM





## Objective - Bottom line

- SHM has been progressively/widely applied in Civil Engineering structures
- Understanding of the value of SHM, particularly before its implementation, remains an open issue
- A novel utilization of applied decision analysis on how to assess the value of SHM is being addressed in the COST Action TU1402 – Quantifying the Value of SHM

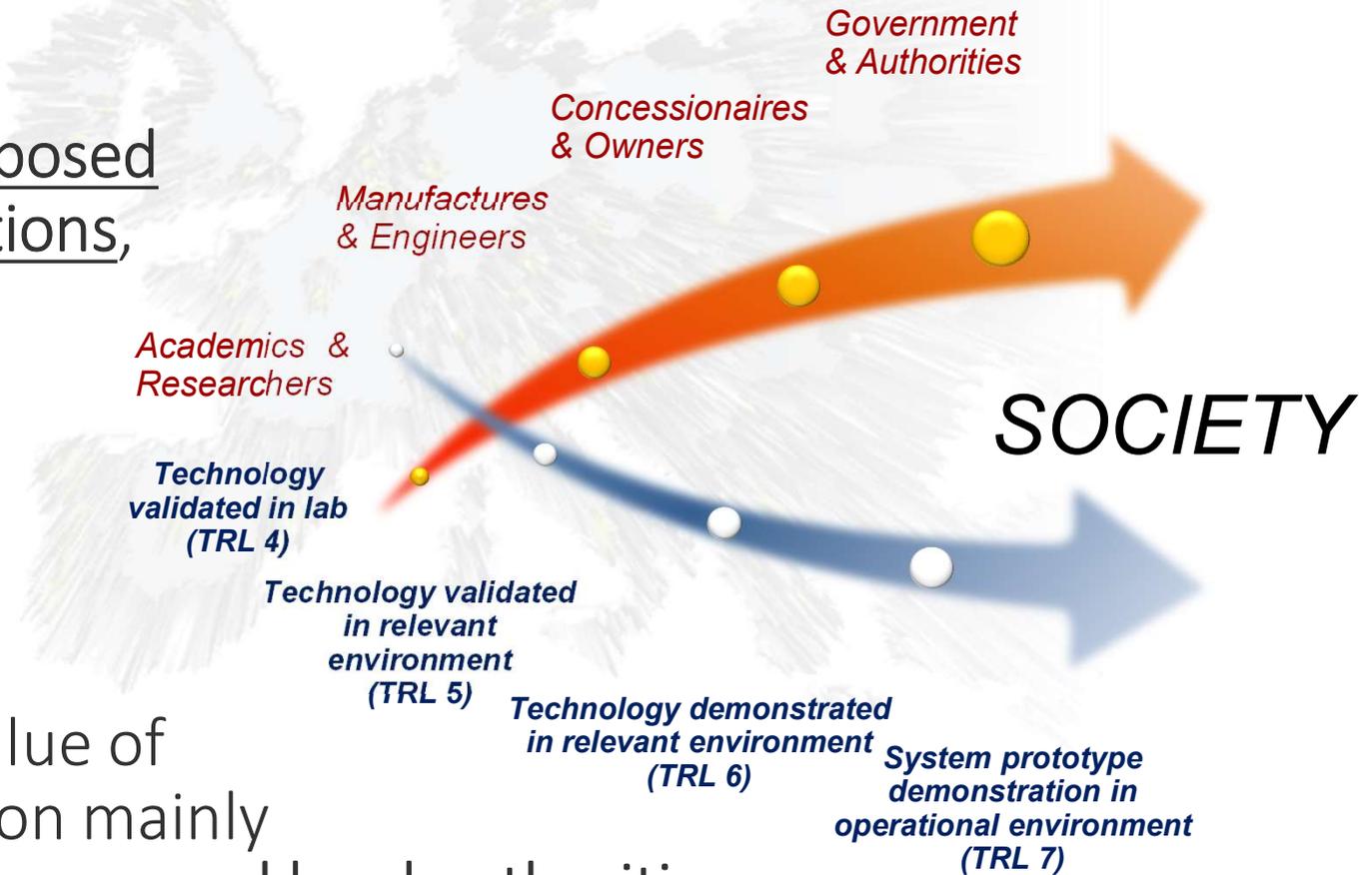


To improve decision basis for design, operation and life-cycle integrity management of structures and facilitates more cost efficient, reliable and safe strategies



# Objective – Jump our COST Action into industry

- To establish and/or strengthen the communication along this supply chain
- Showcase composed by real applications, with clear evidence of maturity degree (TRL 4 and/or above)
- To show the Value of SHM Information mainly focussing on owners and local authorities



## Concept – how to trigger this jump?

- A dedicated workshop targeting mainly the end users of the supply-chain, i.e. owners/concessionaires & governments/authorities
- Special sessions in suitable conferences that also target the industry, in addition to the research community



Translate (i.e. speak in a cost-basis language) the Value of SHM to people directly, or indirectly, responsible for management of Civil Engineering structures



## Workshop in an industrial partner

- Get feedback from industry regarding the developments made in the case studies
- This will serve as a test to the case studies presented in an industrial environment and get their reaction
- This workshop should work as a preparatory/validation work to be presented in the special sessions at suitable conferences



The concept and language used for this workshop should be practical and objective and therefore, different from the usual that has been taken place until now in the COST Action TU1402



## Conferences – special sessions in suitable conferences

- IABSE 2018, Nantes, France
- IABSE 2019, Guimarães, Portugal

Conferences targeting also practical perspectives of management of Civil Engineering structures

- EWSHM 2018, Manchester, UK
- IABMAS 2018, Melbourne Australia

Some marginal contribution from these as well



## Conferences – Special session in IABSE 2018, Nante, France

### Why invest in SHM of Civil Engineering infrastructures?

- Show evidence, mainly from an owner/authority perspective, of the benefit of applying SHM systems in Civil Engineering structures supported by the Value of SHM Information theory.
- Authors willing to submit a piece of work to this session need to keep in mind the **targeted audience - owners/authorities**
- Applications on full scale structures are welcome, with a meaningful message, i.e. if there is a benefit or not in using this type of systems supported by the Value of SHM Information theory.
- Formal joint collaborations between both academia & industry, either in the manuscript and/or the oral presentation is a plus.

Submission deadline  
(abstract):

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## Deliverables

- Official video of the Industry Innovation Days – COST Action TU1402 with the purpose of disseminating the successful case studies (up to 3/5min maximum)
- Dissemination by means of official channels of the European Commission (e.g. European Industry Day 2018? or 2019?)
- Technical recommendation, at the European level, to support owners and concessionaires in the renegotiation of the contract terms with local authorities related to the asset management of Civil Engineering structures



Thank you for your attention

<http://www.cost-tu1402.eu/>

