

# Lessons IV: Interdisciplinary research on energy and society: avenues for the future

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## 1. Presentation outline

- Introduction: HoNESt Messages
- Methodological challenges: How address?
- Theory of Change
- What did we do?
- Selected historical case studies
- Society Interaction / Engagement Findings
- Principles for Effective Engagement
- Incorporating Principles into Practice
- Interdisciplinary to Transdisciplinary
- Avenues for the Future – the Transdisciplinary



## 2. Key HoNESt Messages

### **We highlight:**

- a) The complexity of interactions between nuclear energy developments and civil society in local, national and transnational contexts
- b) Interdependency of scientific, technological and social elements in the nuclear debates
- c) Variations in engagement that reflect differences in political, social and economic structures of societies dealing with nuclear developments

HoNESt has unpicked this complexity



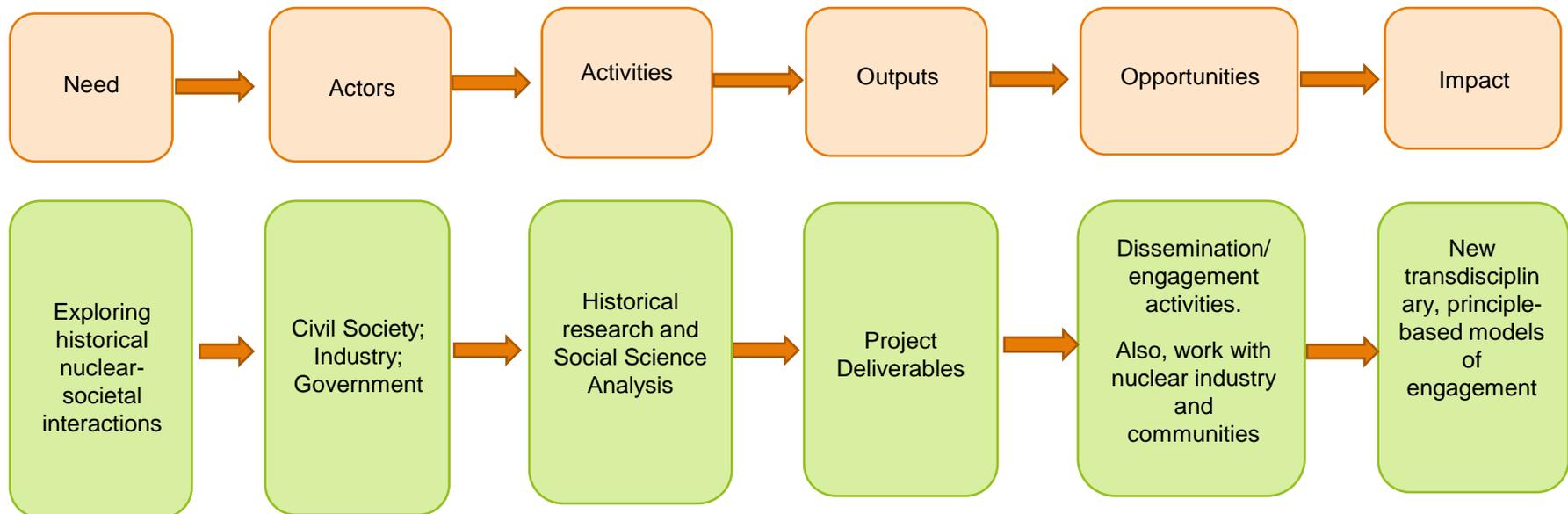
### 3. Methodological Challenges: How address?

- Greater understanding of historical nuclear engagement activities and their societal contexts.
- We propose that nuclear-related engagement can undergo change towards more collaborative, collective and effective practices
- Change translates to an opportunity for more just procedures, thus presenting the prospect for more collaborative and less contentious decision-making
- **Theory of Change:** Ambition to move “energy engagement” on – How?
- Move to transdisciplinarity



## 4. Our infrastructure: Theory of Change

Theory of Change – how can we learn from historical experiences to enhance civil-industry engagement, leading to more effective and ‘successful’ engagement?



## 5. What did we do?

- a) Research Questions - Barcelona workshop 2015
- b) How integrate history and social science ?
- c) Result – Guidance Framework
  - List of events
  - Identification of actors
  - Arguments and behaviours
  - Public interaction /engagement
- d) Short country reports based on this framework
- e) Assessment: Understanding interaction
- f) Assessment: Principles of engagement



## 6. Selected case studies

1. United Kingdom
2. Ukraine
3. Federal Republic of Germany
4. Bulgaria
5. Sweden
6. Finland
7. Spain
8. USA



## 7. Findings: Interaction / Engagement

Understand what interaction / engagement taken place

Furthered our understanding of what '**effective**' engagement is

What does 'ineffective' or a general absence of engagement lead to / creates?

Context of civil-nuclear engagement critical

Engagement 'success' multi-dimensional and possesses varied meaning depending on perception and benchmark of success in each case

**United Kingdom and Sweden** – examples of more fair and just process, towards more democratic decision-making practices, e.g. public inquiries, national referenda, seemingly providing opportunities for public participation in technological decision-making. Relatively elaborate attempts to establish interactive engagement practices.



## 8. Findings: Interaction / Engagement

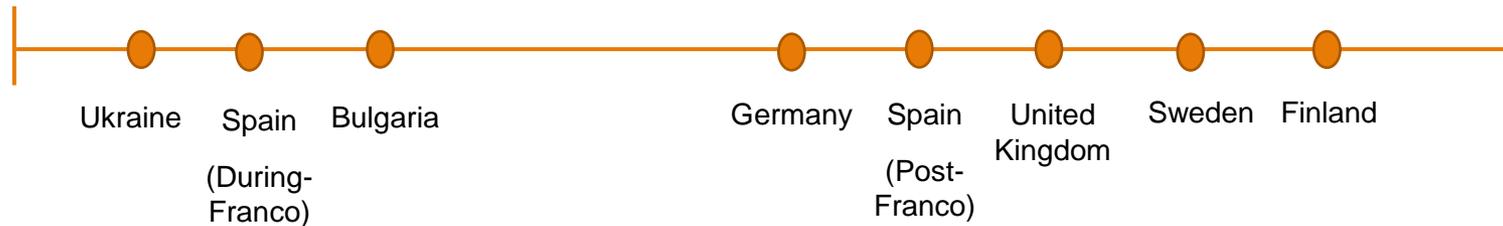
- **Spain or Germany** – ‘success’ viewed by civil society as the democratic right for citizens to protest against nuclear energy development and witness a national moratorium enacted against further nuclear expansion.
- **Spain and Ukraine** - attempts were made to cover up information in the formerly non-democratic regimes, leading to strong public opposition to nuclear energy. It was challenging to identify ‘success’ in public engagement practices.
- **Finland and Bulgaria** - general societal support for nuclear energy and lack of overt civil opposition might be viewed by the nuclear industry and national governments as a broadly successful scenario.



## 9. Findings: Interaction / Engagement

No attempts to engage

Significant efforts to engage



**Source:** Charnley-Parry and Whitton. (2017), D5.1 “Principles for Effective Engagement”



## 10. Principles for effective engagement

- Timely Engagement
- Dialogue-based Engagement
- Wide and Objective Engagement
- Open and Transparent Procedures
- Context Dependency
- Extra-political Engagement
- Procedural Justice
- Access to Engagement Processes
- Access to Information and Individuals
- Reciprocity



## 11. Incorporating HoNESt Principles for Engagement

- Nuclear Industry Council (NIC) - Industry recognition of 'principles' based approach – 2015 onwards
- Nuclear Concordat for Public Engagement; Generic Design Assessment for New Build (Whitton et al, 2016)
- Persistent local vs national interests/tension (Whitton et al, 2016)
- Learn from history; there is a need for greater focus on the needs of communities and responses to these, can impact societal support for technology
- Transdisciplinary approach – co-creation of knowledge



## 12. Inter / Multi-disciplinarity to Transdisciplinary

- Interdisciplinarity and multidisciplinary
- Two or more scientific disciplines work together to pursue a given project (HoNESt)
- Contributions from the various disciplines reveal and address different aspects of problem.
- Transdisciplinarity - disciplines mesh together to fully identify, construct, grasp and comprehend a specific object of inquiry.
- Requires perspective beyond individual scientific disciplines and even the subject of the research, so as to better grasp its scope and consequences.
- Result: Co-creation of knowledge, also by non-experts / community

Reference:

Sauvé, S. et al (2016) Environmental sciences, sustainable development and circular economy: Alternative concepts for trans-disciplinary research. *Environmental Development* 17 (2016) 48–56



## 13. Avenues for the future: Representing Transdisciplinary

**INTERNATIONAL - International Projects**

**NATIONAL - Nuclear Industry  
Bodies/Departments/Engagement**

**LOCAL - Anglesey (Energy/Nuclear Community)**

**PROJECT- HoNESt**

**New Build Projects:** Wylfa Newydd NPP

**Stakeholders:** County Council, Coleg Menai  
(Aug 2018 & Feb 2019 engagement)

**Bodies:** NNL; Nuclear Industry Council (NIC) – Nuclear Concordat

**Govt. Dept.:** BEIS

**Engagement Processes:** Generic Design Assessment (GDA) for Nuclear New Build  
(Whitton et al., 2016)

**International Engagement Projects:** EU Toolkit for Public Engagement – Finland, France, Germany (Holmes, Charnley-Parry et al., under review); Nuclear Waste Storage and Consensus Building Project - Japan

**International Nuclear Industry Associations:** NUGENIA

**International Universities:** Senshu University, Japan



# Thank you!

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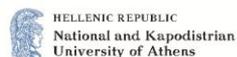
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