Nuclear Innovation Cooperation

*In the Low-Carbon Perspective*

NEA NI2050 Initiative

*Brainstorming and elements of ToRs for Roadmapping and Adv Panel*

NI2050 Advisory Panel October 2015
**TASK:**

Clarify the **Objectives**, the (technical and timeline) **Scope**, the **Methodology** and the (organisational) **Process** of the (top-down) Roadmapping of fission RD&D priorities (leading to innovation)
OBJECTIVES of the Roadmapping of RD&D priorities

(Nuclear) Energy Sustainability goal: nuclear in support of sustainable development but also sustainability of the nuclear sector

Timeline and Assumption: 2050 targets ETP 2DS (930 Mwe), and beyond

Level of detail: global and high level, realise the workload over 1.5 years, can be a first phase but need concrete outcomes, might be extended with more details later

Use of existing roadmaps: may require compatibility

Compatibility with Survey: to define gaps

Reach concrete outcomes: consensus on main priorities/gaps for message to MC authorities and leading to a few possible cases for cooperation in the coming years
**SCOPE (technical) of the Roadmapping:**

*Full coverage associated with sustainability and timeline:*

2015-2050-2100+: LTO, new built, burners/breeders, HLW, new energy system


See next slide for 1 to 4

**Crosscutting issues:** simulation, I&C, C&S harmonisation, licensing, materials, ISI/NDE, robotics, radiation protection, construction planning, E&T/knowledge, public involvement,…

**Programmes and Infrastructures:** sequence? Or put focus?

Think out of the box: other energy sectors, other sectors beyond energy: ICT, nanotechnologies,…
Nuclear Energy Agency

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METHODOLOGY for the Roadmapping:

Need for « strict methodology »? Ex: GIF methodology, US Innovation Workshops, US INL Fuel Cycle methodology, SNETP methodology, UK NIRAB methodology... all very time consuming... time to create own methodology...

OR

Experts brainstorming on defined « categories/topics »? How to select the categories/topics... Adv panel vs Expert Groups? Should integrate people who were engaged in roadmappings + some « visionnary » outsiders for balance, neutrality and new ideas: who?

BUT need « criteria » for setting priorities (not gaps yet – comes later after inputs from survey): to be defined by the Adv Panel, could look at criteria in existing roadmaps, research vs industry (TRL), need for new infrastructures, 2050 perspective low carbon new energy system, cost,...
**PROCESS (organisational) for the Roadmapping:**

**Timing:** have «some» priorities defined and agreed for September 2016, and «some» gaps for November 2016 - proposals for cooperation as input for step 3 and Final Workshop.

**Advisory Panel vs dedicated Expert Groups and support by the Secretariat (staff/consultants) –** Advisory Panel to select «topics» for Expert Groups (granulometry? see scope: 5?), define criteria, reassemble all pieces to come out with final priorities.

**Who? Advisory panel and Expert Groups: from Research, Industry, Regulators/TSOs, Waste Agencies – having done roadmaps + outsiders – Chairpersons – target number of participants (max 20/10)**

**Where to meet? Voluntary Contributions?**

**Number of meetings and time periods:**
ToRs for Roadmapping NI2050 and Adv Panel/Expert groups:

Explain background NI2050 – Step 2: top-down roadmapping of fission RD&D priorities – result of Launching Workshop/NDC (« mandate »)
Objectives, Scope, Methodology, Process (Adv Panel and Expert Groups)
Consensus

Adv Panel: role, selection of participants, selection chair (rotating?)
Expert Groups: role, selection of participants (by chairs?), selection chairs (Adv Panel members?)
Secretariat role, consultants
Meetings location and financing

Outcomes and reporting (to NDC) + Informing Steering Committee

Timeframe for the Adv Panel and Expert Groups – until NDC meeting mid 2017 – extendable or revised if so agreed by NDC
AOB

Next Steps and planning:
Summary Record and ToRs, SC meeting 28-30 October

Date for next Advisory Panel Meeting – Where?

China

IAEA?