Nuclear Innovation Cooperation
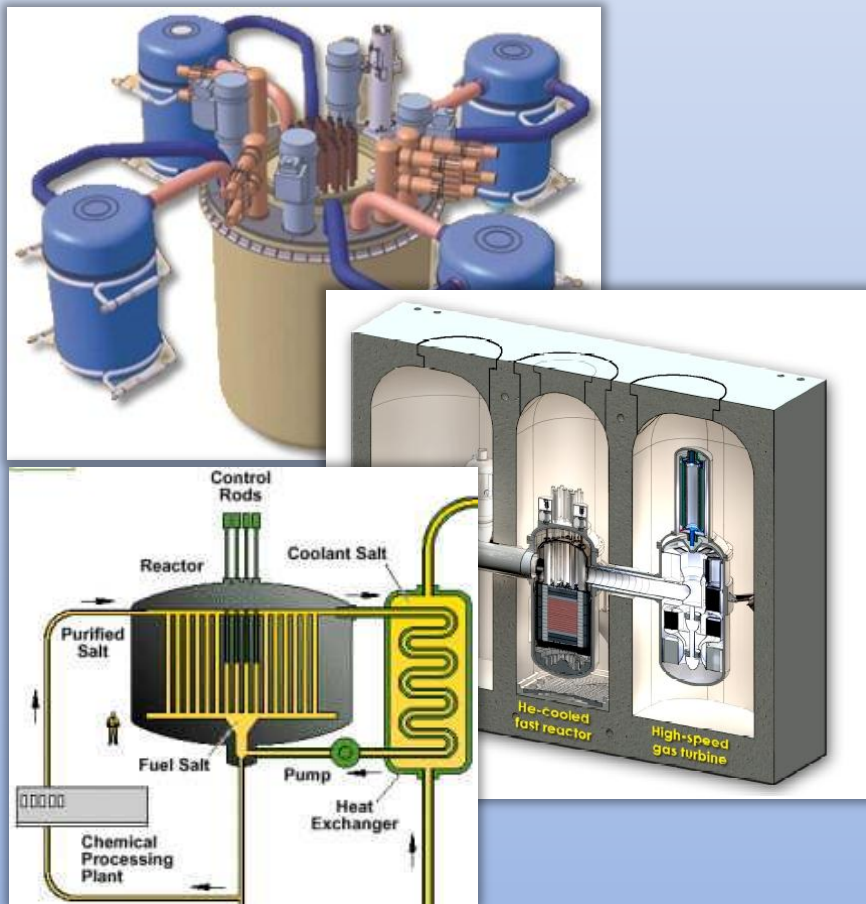## *In the Low-Carbon Perspective*

NEA NI2050 Initiative

Marc Deffrennes

NI2050 Advisory Panel October 2015

Nuclear Innovation 2050 – A Roadmap for the Future of Nuclear Fission Technology

- What technologies will be needed in the coming decades to meet growing demand and align with policy goals?

- What research and development is needed to make these technologies available?

- Is the global community doing the R&D needed to prepare for the future? What and How to do better?

NEA
Nuclear Energy Agency

International Energy Agency
iea
Secure ● Sustainable ● Together

Technology Roadmap

Nuclear Energy

2015 edition

Energy Technology Perspectives

2050

2045

2035

2040

Launching Workshop: Paris 7 and 8 July: NDC AND THE HEADS OF MAIN R&D ORG
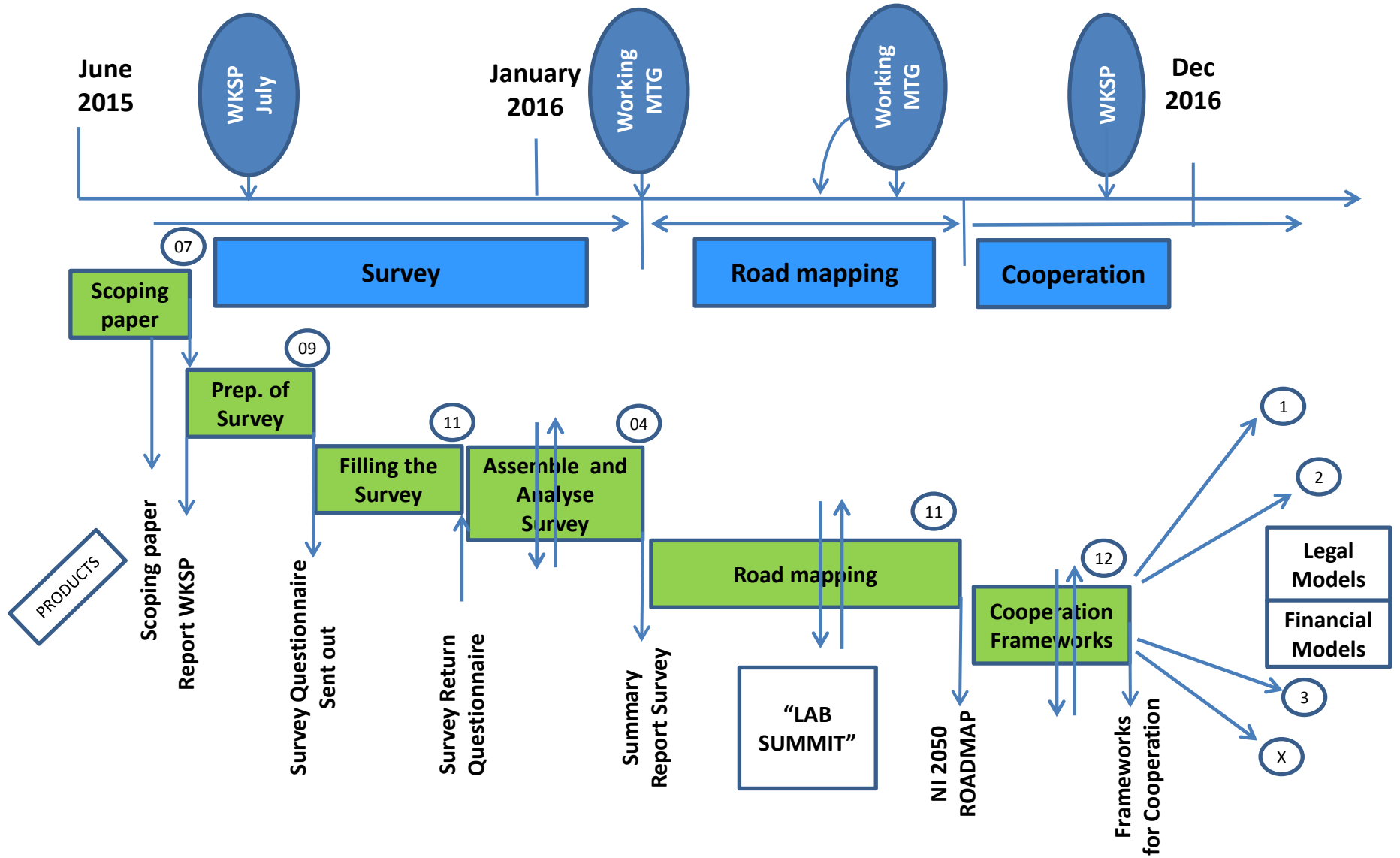
NI 2050 – Scope and Approach

Step 1: Survey – scope (Prog and Infrastructures) and budgets (*NDD PoW item 5.6*)

Step 2: Roadmap/Priorities and Analysis/Gaps

Step 3: Cooperation Frameworks as appropriate

NI 2050 Process and timeline

June 2015 · WKSP July · January 2016 · Working MTG · Working MTG · WKSP · Dec 2016

07 — Scoping paper

Survey · Road mapping · Cooperation

09 — Prep. of Survey

11 — Filling the Survey

04 — Assemble and Analyse Survey

11 — Road mapping

12 — Cooperation Frameworks

PRODUCTS

Scoping paper · Report WKSP · Survey Questionnaire Sent out · Survey Return Questionnaire · Summary Report Survey · "LAB SUMMIT" · NI 2050 ROADMAP · Frameworks for Cooperation

1 · 2 · Legal Models · Financial Models · 3 · X

Outcomes of the Launching Workshop:

- Discussion on the Survey Categories and Process:

Bottom-up step of NI2050

No return in past = focus actual situation (last 5 years) +
« Plans for future » already in pipe
Focus on technical content + budget/manpower
Few changes in proposed Categories
Single contact points in MC (via NDC)
Public + Private Financing (and Share: request IEA)

- The Survey was sent out on the 23 September – Return 16 November

Outcomes of the Launching Workshop:

- Discussion on the « roadmapping » of priorities
   Top-down step of NI2050

   Need far-reaching long term vision 2050+ associated with long term
      sustainability of nuclear energy (NTR and ETP 2DS)
   Need high level experts support + involve industry and regulators
   Set up an Advisory Panel (and possible expert groups)
   Keep Roadmapping separate from Survey and start without delay
   Integrate outcomes of Survey once priorities are defined and possible
      gaps can be indicated
   Need of ToRs (for roadmapping and Adv Panel)
   Secretariat to initiate the process

- Here we are !

Outcomes of the Launching Workshop:

- Discussion on Cooperation

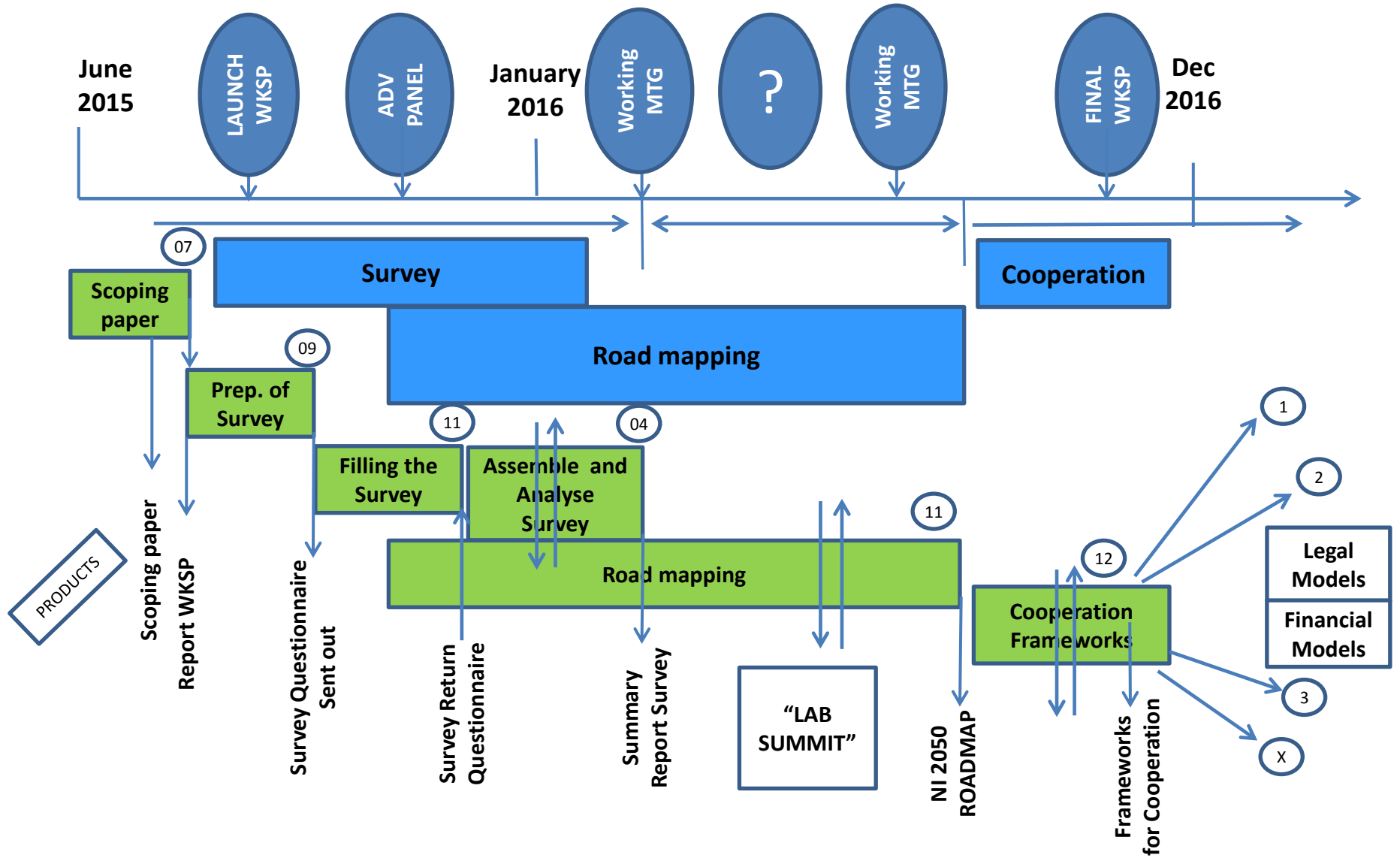**Last step (and concrete oucome of) of NI2050 first year and a half**

No objection to flag « cooperation » as a possible result/followup of the roadmapping

But can only be as an initiation of dialogue among stakeholders and NEA serving as a facilitation framework if appropriate

Could focus on 2 or 3 concrete cases (gaps in infrastructures?)

Objective of this Meeting:

Define Objectives, Scope, Methodology, Process of the NI2050 Roadmapping (Top-Down Step 2) – inputs for ToRs

Agenda of this Meeting:

- International and National Roadmaps as examples

  GIF; SNETP (Nugenia, ESNII, NC2I)

  US Innovation Workshops (+ 2 topics)

  Other national presentations (JP)

  UK NIRAB

- Brainstorming on Obj, Scope, Method, Process

- Elements for ToRs (for Roadmapping and Adv Panel)