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Research Infrastructure Roadmapping – challenges from a strategic perspective

Prof. Dr. Dr. h.c. Barbara Haering

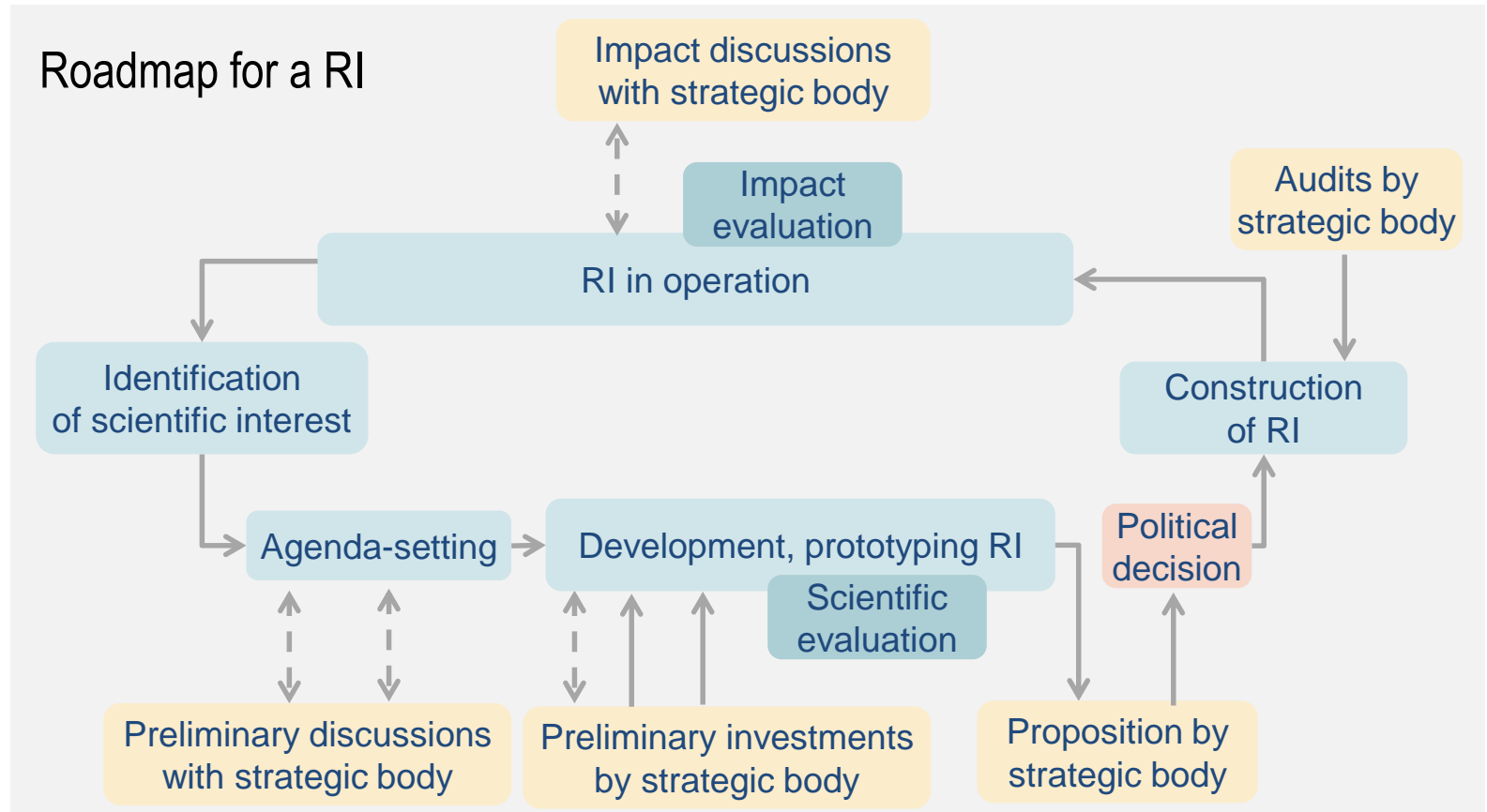
My RI roadmapping experience

- **Working at interfaces:** Research, teaching, consulting as well as strategic and political decision making.
- **Guidance at the strategic level** as member of boards:
 - President Strategy Committee of the University of Geneva
 - Member of the Board of the ETH Domain
 - Member of the Board of the TU Dresden
 - Member of the Board of Foundation of SNSF
- **Decision making at political** level as (former) member of the Swiss National Parliament, chairing the Committee on Science, Education and Culture.
- **Research** as part of the H2020 Inroad-Project.

Outline

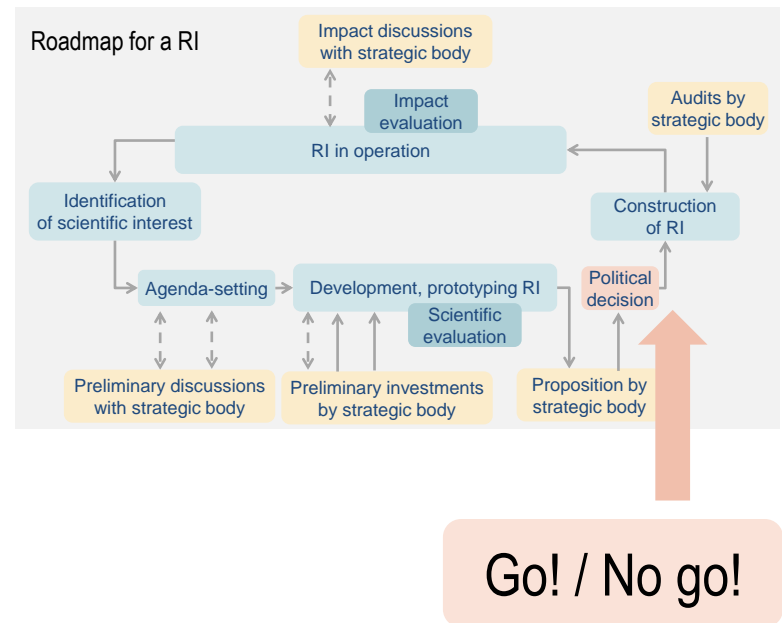
- Life cycle of a RI: Actors involved
- Complexity of national/ international RI roadmapping
- Challenges and support for strategic decision making

Research infrastructures: Life cycle and actors



RI roadmapping is a societal and cultural process!

- **Science** is clearly driving the process.
- **Strategic boards** are involved throughout the life cycle of an RI. They invest seed money at an early stage.
- **Politics** usually comes in at a late stage – after all strategic decisions have already been taken.



Different logics of actors and stakeholders

	Science	Strategy	Politics
Bodies	<ul style="list-style-type: none"> – Research/ user community – Research/construction community 	<ul style="list-style-type: none"> – Strategic boards – Funding agencies – Administrations 	<ul style="list-style-type: none"> – Government – Parliament
Interests	<ul style="list-style-type: none"> – Research interests of disciplinary specialists – Career interests – Economic interests 	<ul style="list-style-type: none"> – Interests in science and its' return on investment – Strategic guidance – Delegated responsibilities – Advocacy for science – Accountability for politics 	<ul style="list-style-type: none"> – Interests in science and its' return on investment – Responsibility for the nation R&I-system – Responsibility for public funds – Political/ electoral interests of generalists

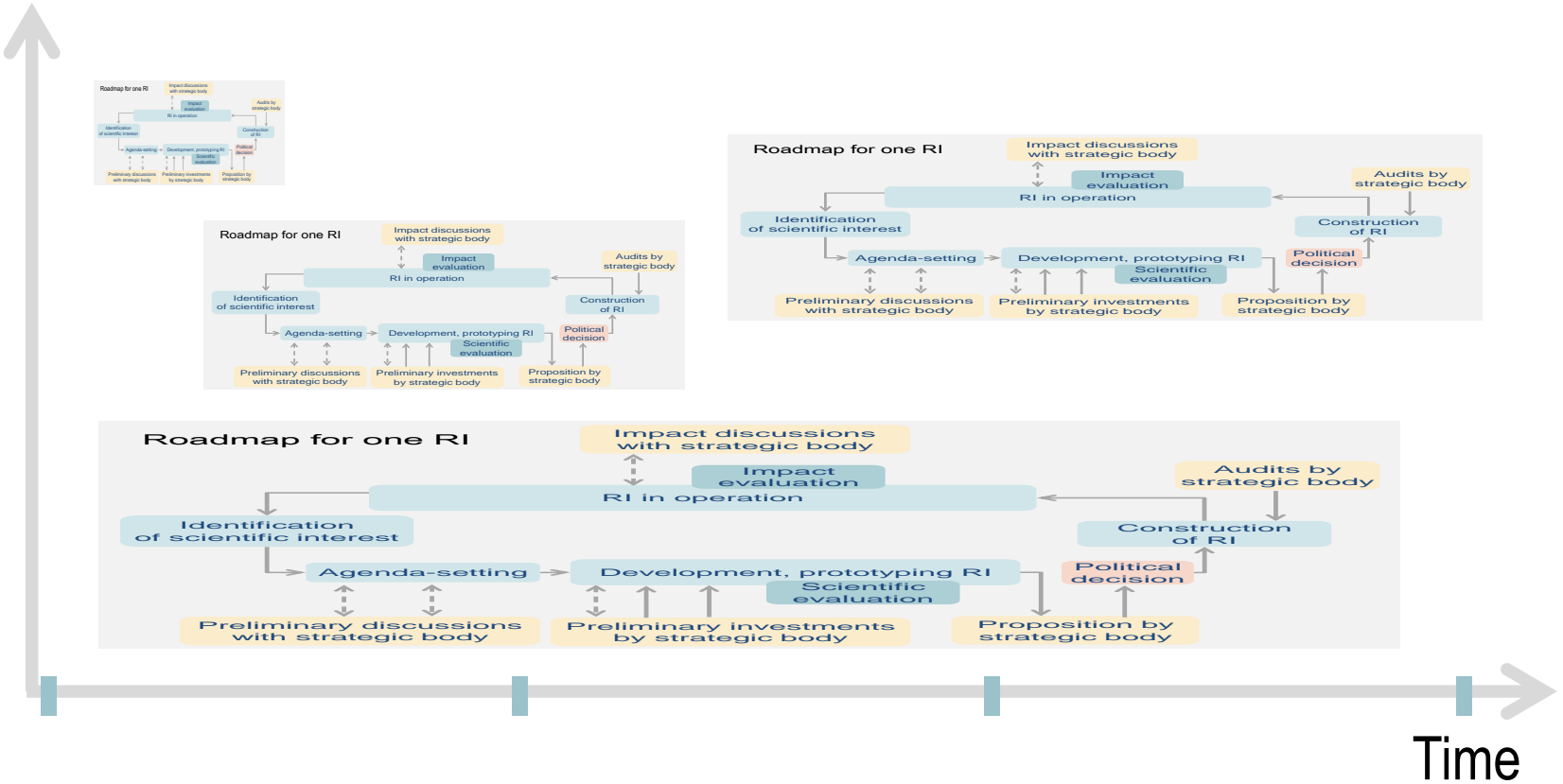


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- Life cycle of a RI: Actors involved
- Complexity of national / international RI roadmapping
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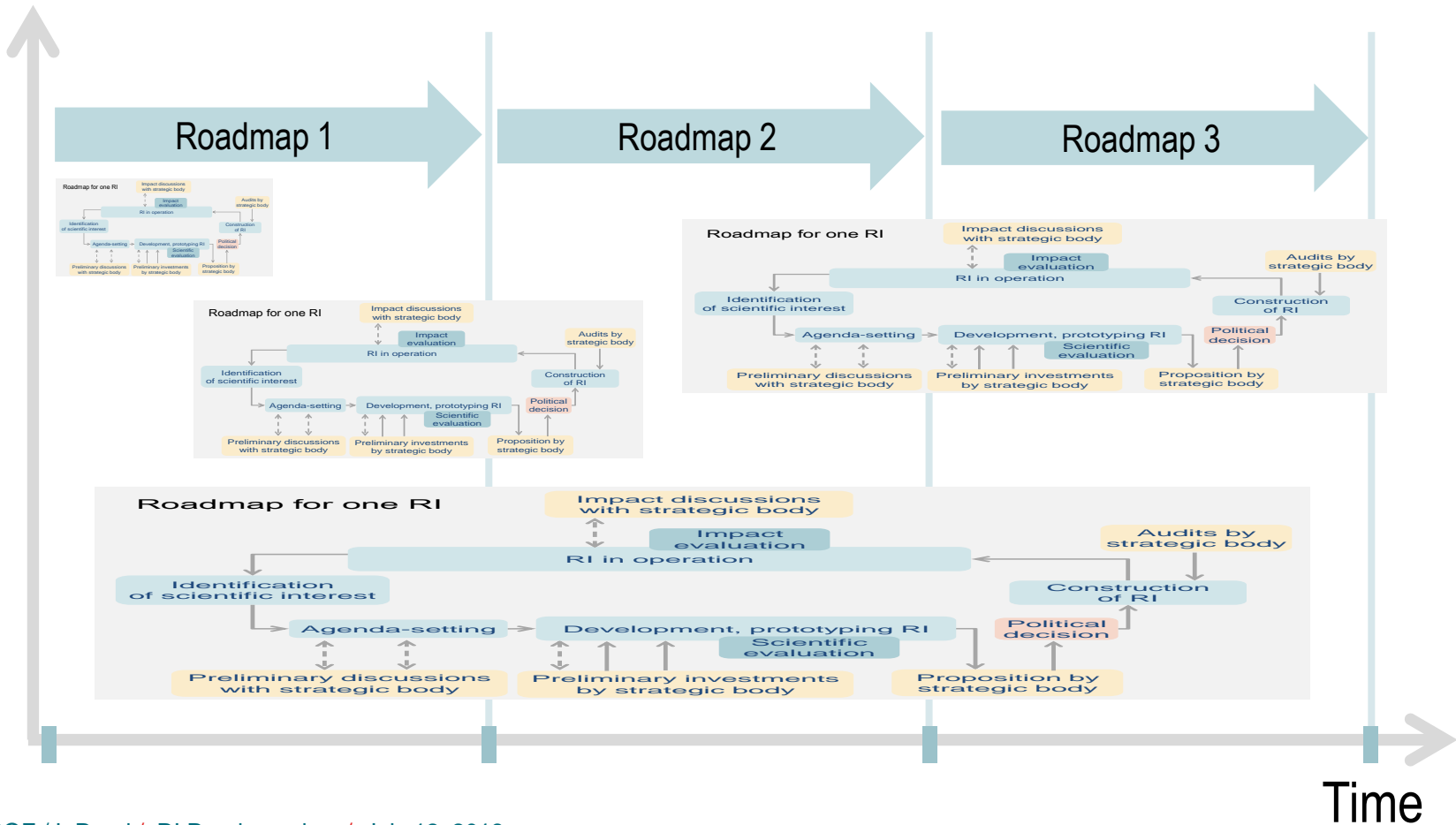
National roadmaps covering many RI

Content



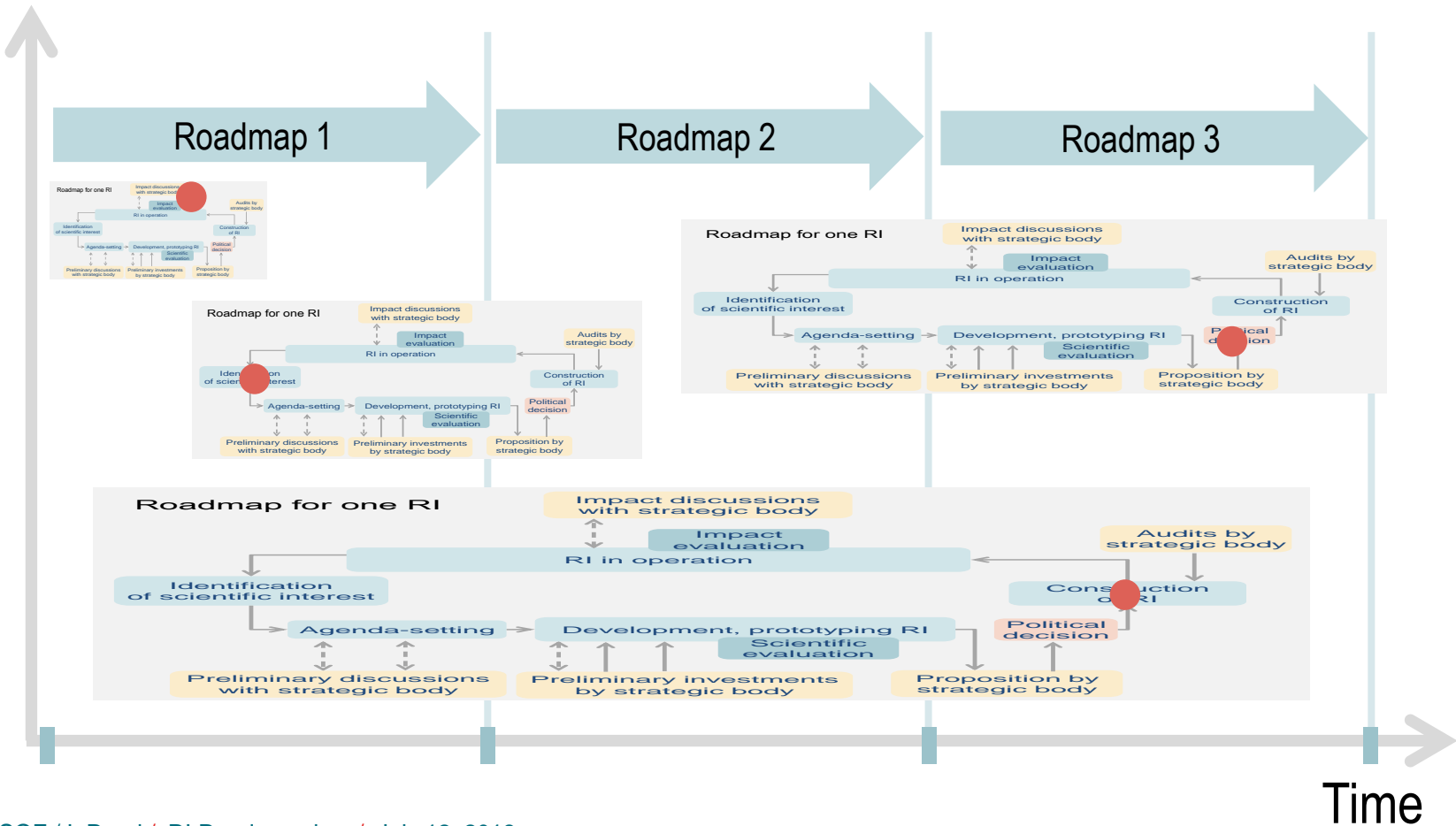
Complexity of national RI roadmapping

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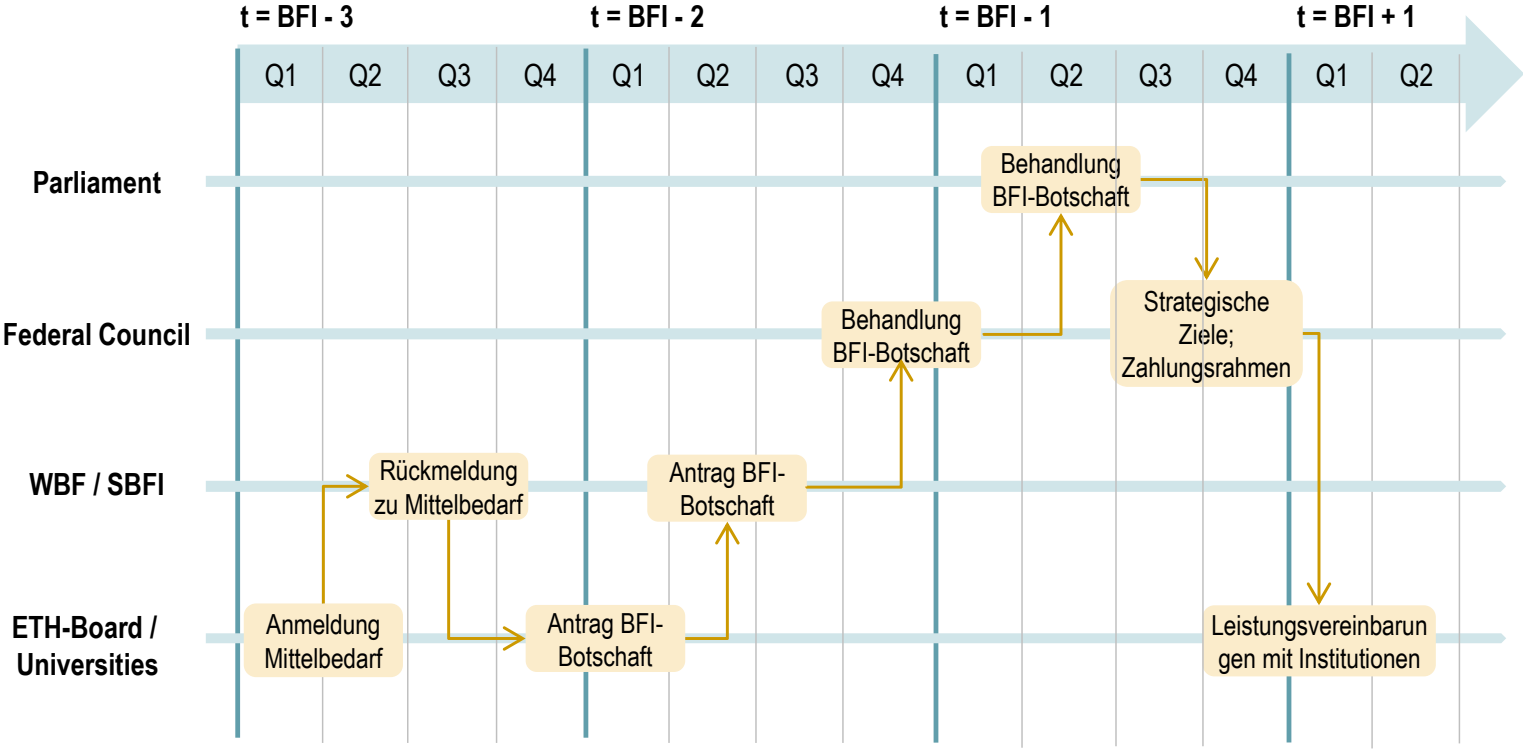


RI at different stages of their life cycle

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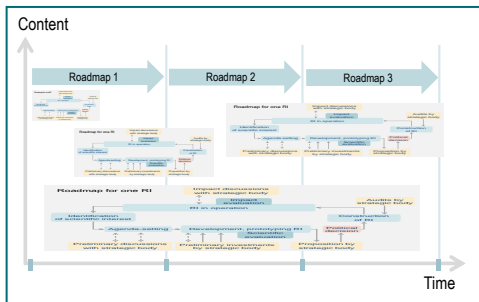
National Roadmapping Process Switzerland



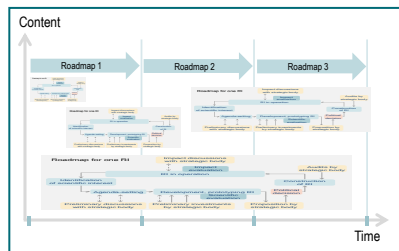
ESFRI: Alignment at a level of high complexity

Content

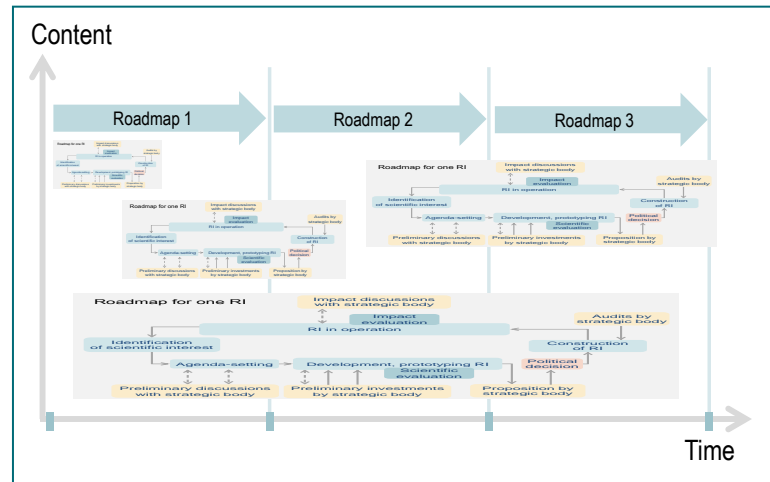
National Roadmap 1



National Roadmap 2



National Roadmap 3



Time

Outline

- Life cycle of a RI: Actors involved
- Complexity of national / international RI roadmapping
- International RI roadmapping
- Challenges and support for strategic decision making

Challenges at the strategic level

- **Bridging the gap** between demand from research and funding by politics:
 - Different logics, requirements and expectations
 - Different kind of expertise: specialists <-> generalists
 - Different time lines: long term (RI) <-> short-term (politics)
- **Need for comprehensive bases** to support decisions:
 - Overview regarding planning and implementation processes
 - Comprehensive national strategies regarding R&I, including explicit ambitions regarding its' international competitiveness
- **Need for independent evaluations** of RI based
 - Transparent and harmonized criteria
 - Best practice regarding methodologies
 - Adressing the whole life cycle of a RI

Key factors for successful RI roadmapping

- Roadmapping supports a competitive and sustainable RI landscape if it
 - is embedded in comprehensive R&I strategies at national / European level addressing all scientific fields and defining national ambition regarding international competitiveness
 - includes business plans regarding the whole life cycle of RI and assures sustainable RI-funding,
 - uses harmonized definitions, methodologies and SMART indicators,
 - allows stakeholder impact at appropriate stages.
- RI roadmapping shall address a broad notion of science - reflecting Europe's successful tradition of enlightenment and cooperation.