

ICOS
International Cooperation
On Semiconductors

Enrico Sangiorgi
University of Bologna and Sinano institute



CONTEXT

- **Semiconductors & Semiconductor-based photonics** are pivotal technologies for almost all existing industrial sectors, as demonstrated by the recent chips shortages.
- In particular, semiconductors are essential enablers for **digital and green transitions** and for SDGs.

ICOS is a 3 years project, started 01/23, in the framework of the EU Chips Act, funded by the EC Horizon Europe with a 4M€ grant.

Coordinator



Technical co-Coordinator



PARTNERS & ADVISORY BOARDS

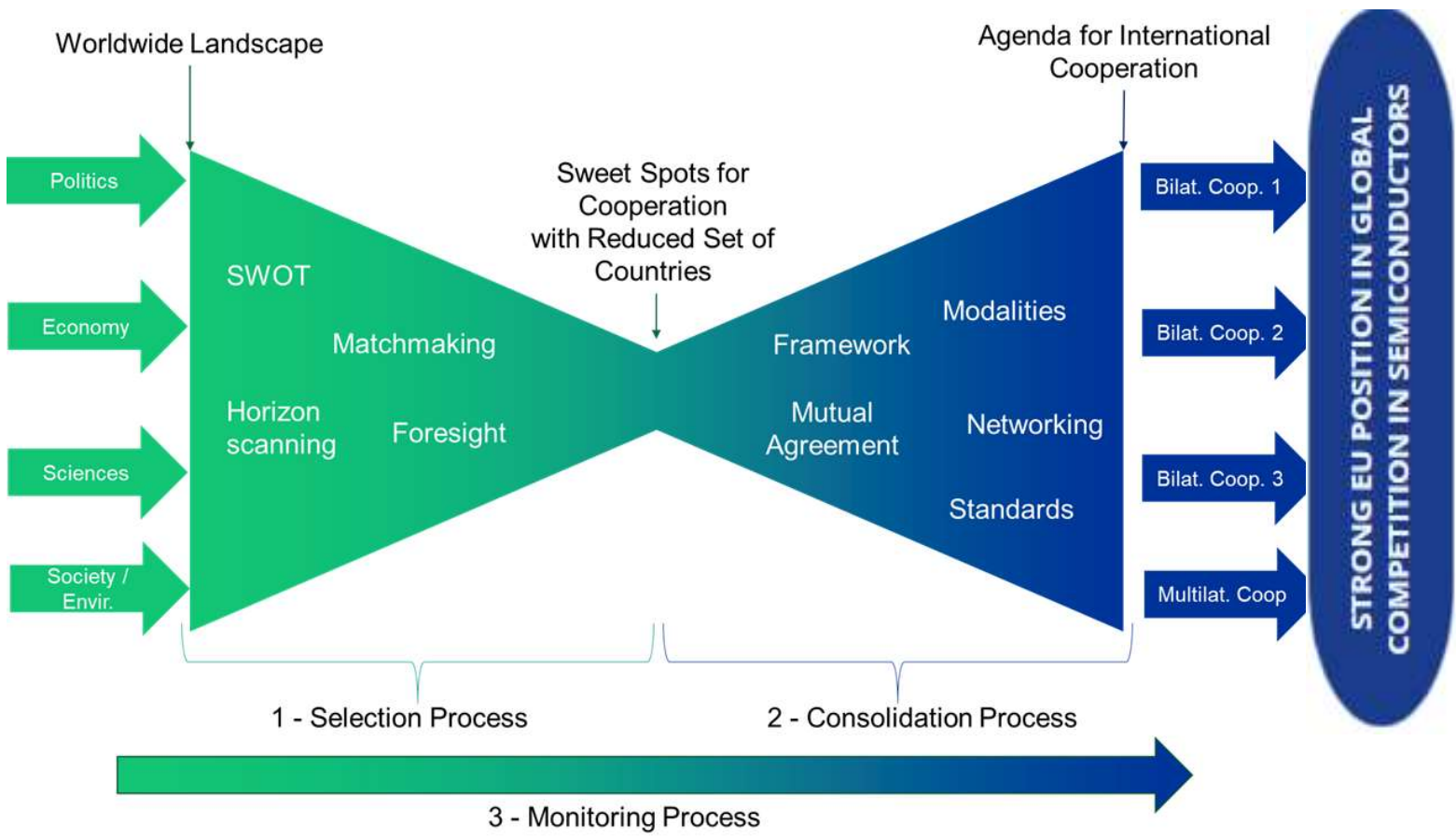
PARTNERS

ACADEMICS	RTOS	INDUSTRIAL ADVISORY BOARD
		<p>Robert Chau Director Intel Europe Research</p> <p>Paolo Azzoni Secretary General Current Coordinator of ECS-SRIA</p> <p>Laith Altimime President</p> <p>Elisabeth Steimetz Director</p> <p>Carlos Lee Director</p> <p>Colin Willcock Chairman of the Board</p> 
ASSOCIATIONS & CONSULTING COMPANIES	INDUSTRIALS	INTERNATIONAL ADVISORY BOARD
		<p>Ray, Jui-Lin Yang Head of Semiconductor Research Dep.</p> <p>Jose Pozo Chief technology officer</p> <p>Hayashi Yoshihiro Chairman</p> <p>Paolo Gargini Chairman</p> 

OBJECTIVES

- **International cooperation** is key for speeding up technological innovation (e.g. ITRS/IRDS, Optica)
- To build **balanced semiconductor partnerships** with like-minded countries
- To set out cooperative framework on *initiatives of mutual interest*
- To identify and support the establishment of the **most promising scientific international collaborations**
- To support the growth of the European Semiconductor industry through **focused research alliances** based on awareness of advanced research activities
- To strengthen **Europe's position** in global value chains in this area

CONCEPT



ICOS OVERVIEW

IMPLEMENTATION

IMPLEMENTATION

EXHAUSTIVE ANALYSIS OF SEMICONDUCTORS' VALUE CHAINS, FOR ELECTRONICS & PHOTONICS

Identification of:

- EU's economic and industrial strengths & weaknesses
- Strategic dependencies
- Market and cooperation opportunities

IDENTIFICATION OF RESEARCH AREAS FOR INTERNATIONAL COOPERATION

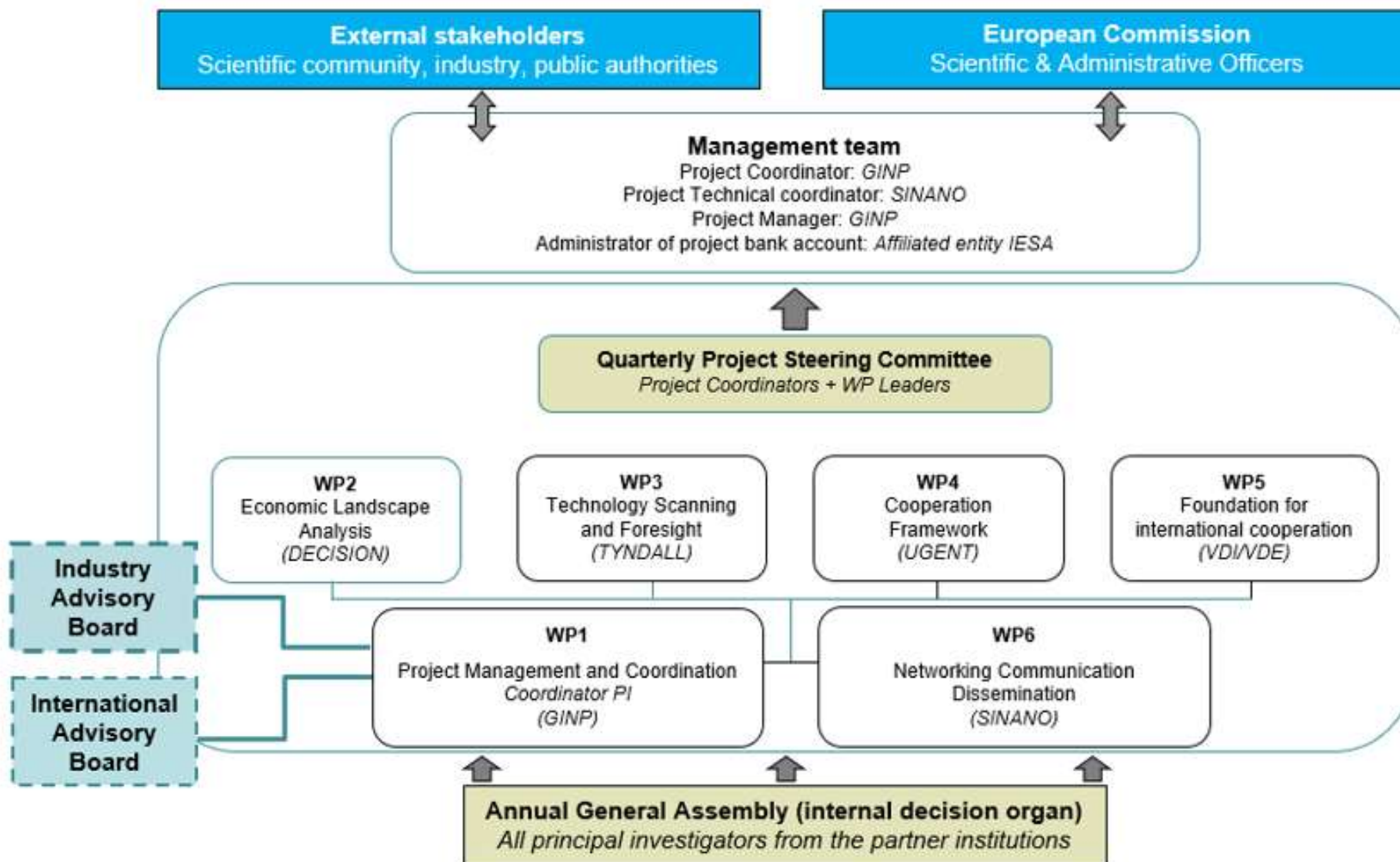
Identification of next generation & emerging technologies, especially in advanced computation and functionalities.

DETERMINATION OF MOST INTERESTING COUNTRIES FOR INTERNATIONAL COOPERATION

Identification of challenges for which international cooperation is critically important.

AGENDA FOR AND INITIATION OF INTERNATIONAL COOPERATIONS

- Dialogue with actors of existing cooperation
- International collaboration with non-EU national authorities
- Define standardisation needs and activities
- Support the European Commission



Structure of ICOS project & stakeholders

Thank you for your attention

Enrico Sangiorgi

University of Bologna – Sinano Institute

