



UNIVERSIDAD NACIONAL
de MAR DEL PLATA



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Proyecto/Project/Projeto:

EULA-GTEC

**Technology and Innovation Management (TIM) Master
(2017-2020)**

Background Notes on TIM

Notas Básicas sobre TIM

Anotações Básicas sobre

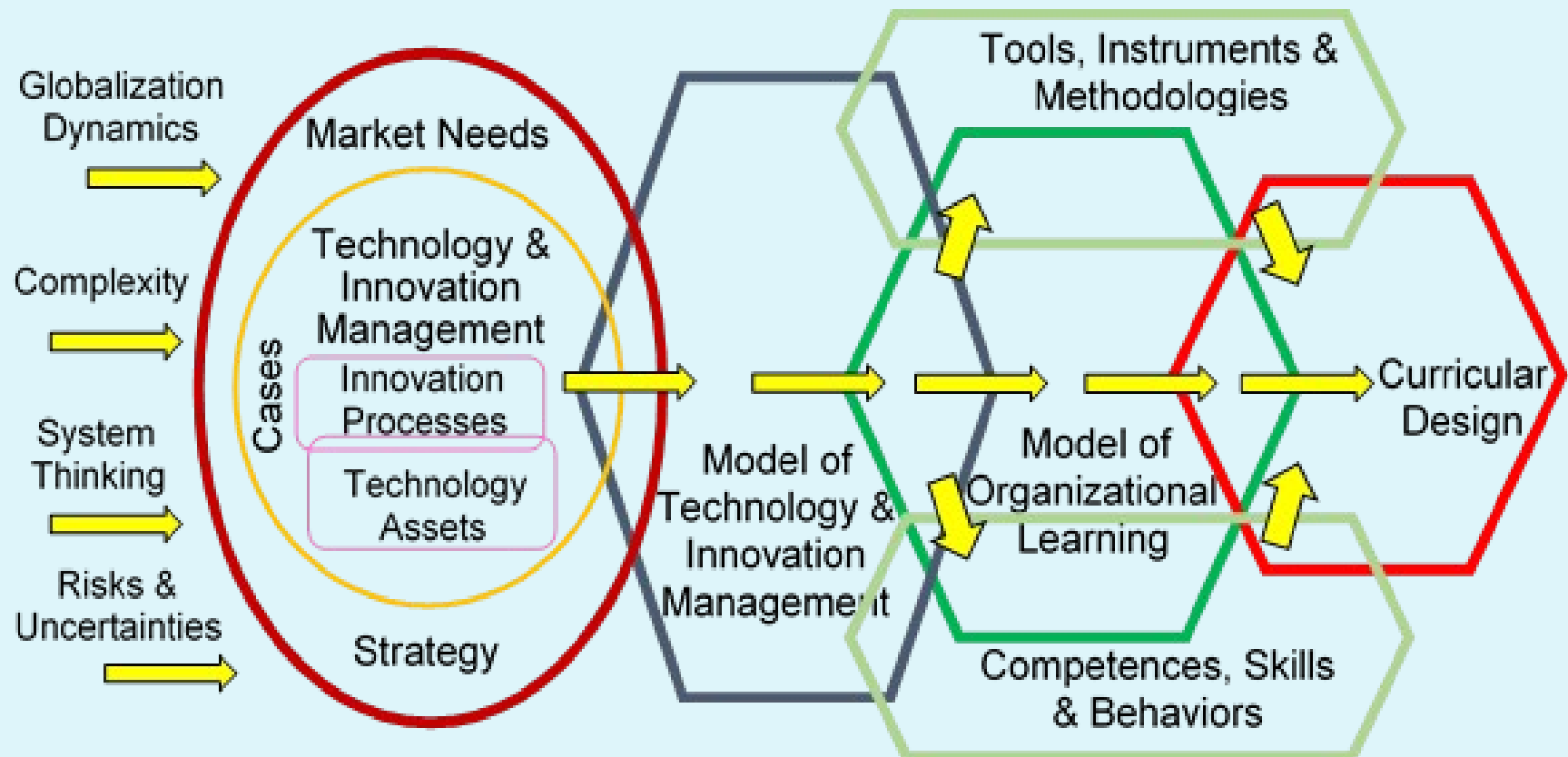
TIM

Universidad Nacional de Mar del Plata
Facultad de Ingeniería
Ciudad de Mar del Plata
Provincia de Buenos Aires - Argentina

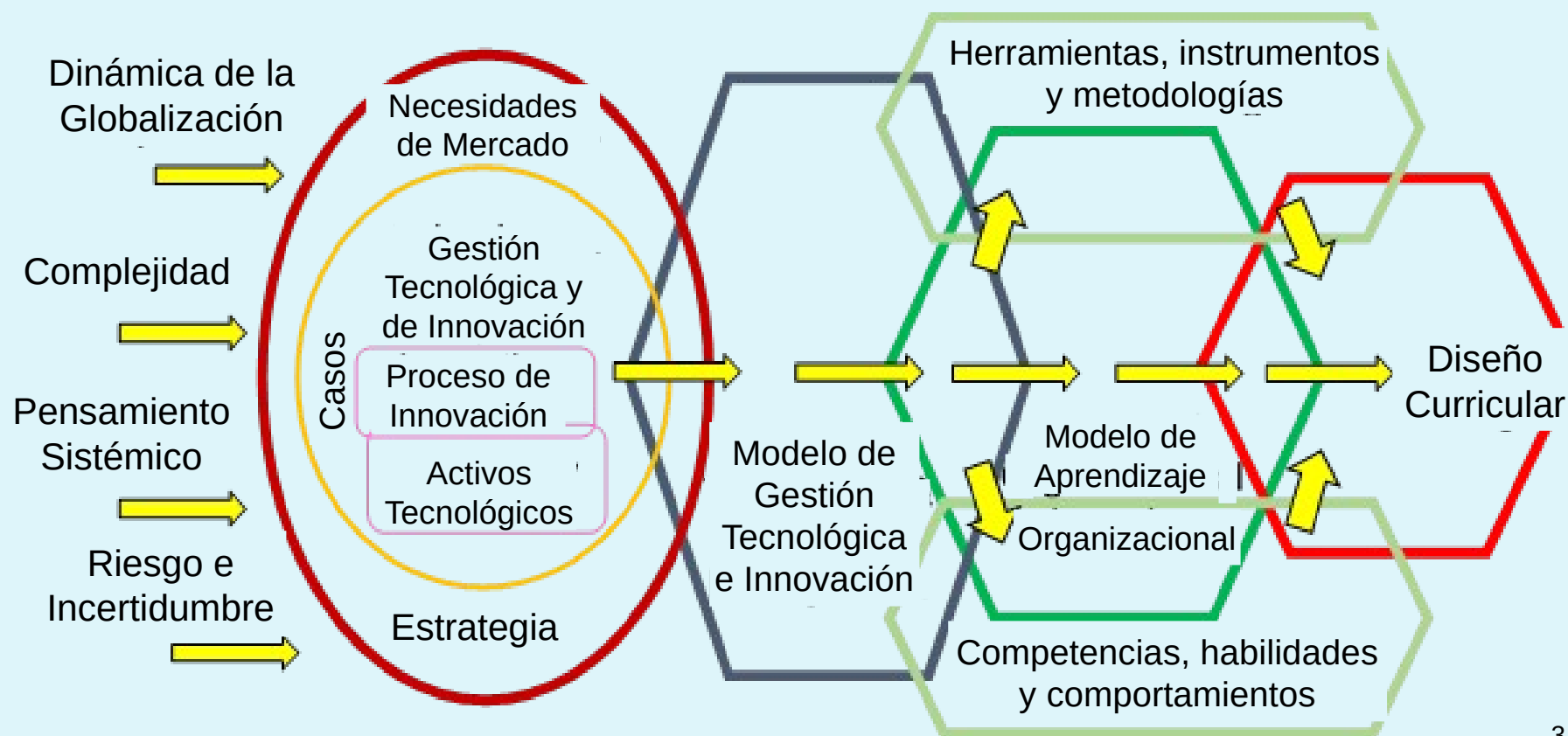
**Kick off
meeting**

26-28/03/ 2018

Where we are right now in terms of project knowledge?



¿Dónde estamos ahora en términos de conocimiento del proyecto?
¿Donde nós somos agora em termos de conhecimento dele projeto?





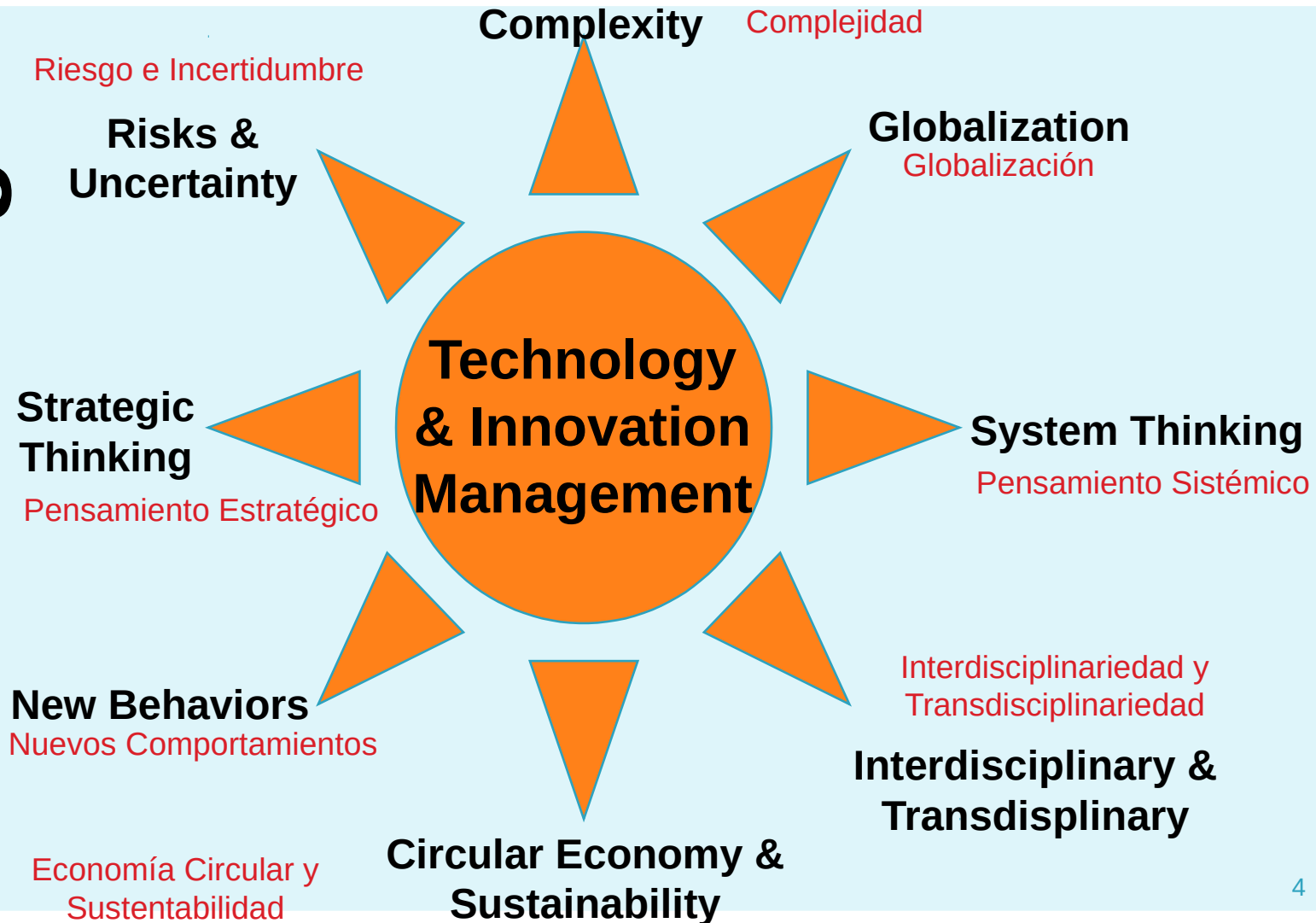
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Conditionings

Condicionantes



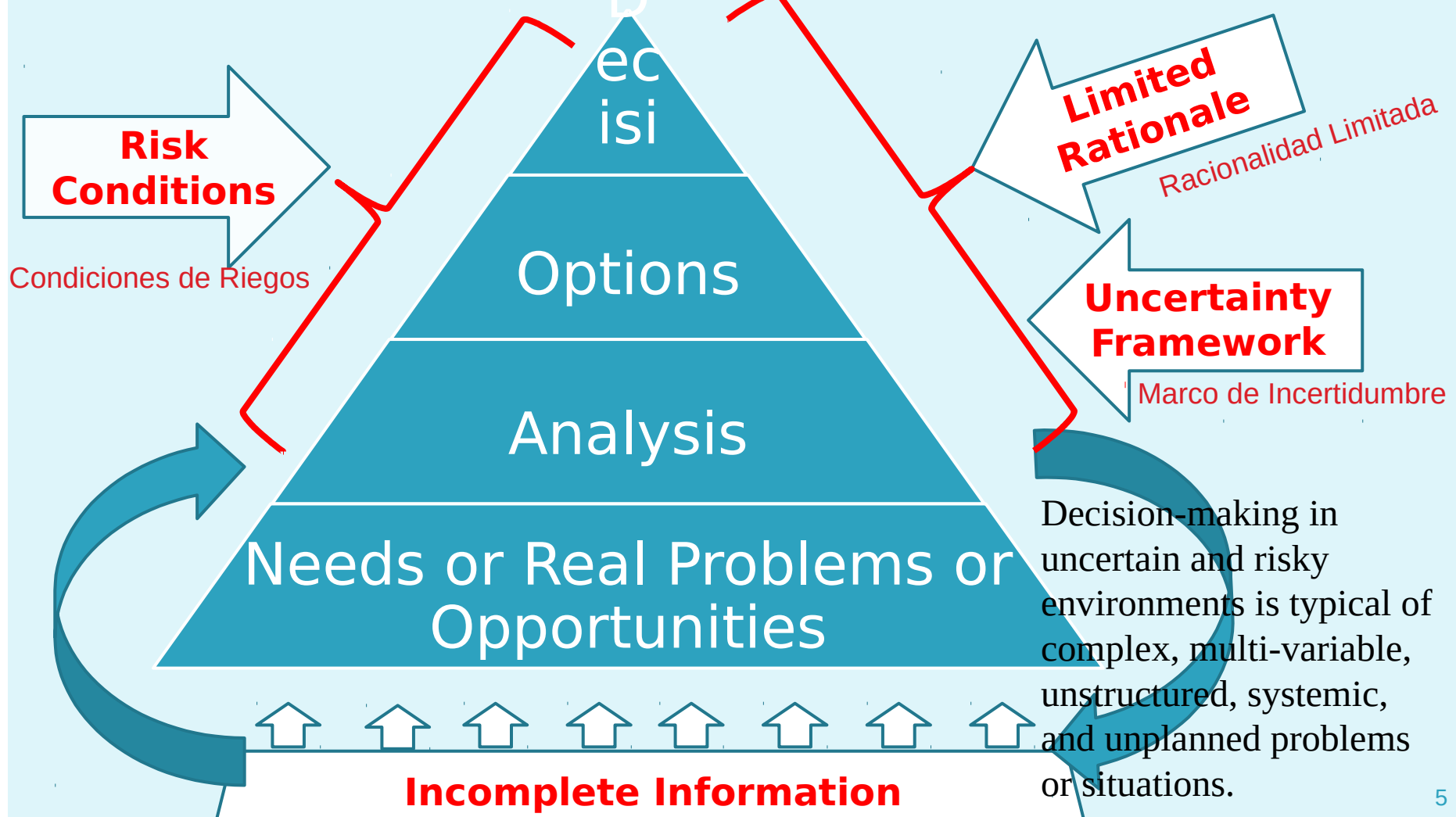


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DECISIONAL PROCESS



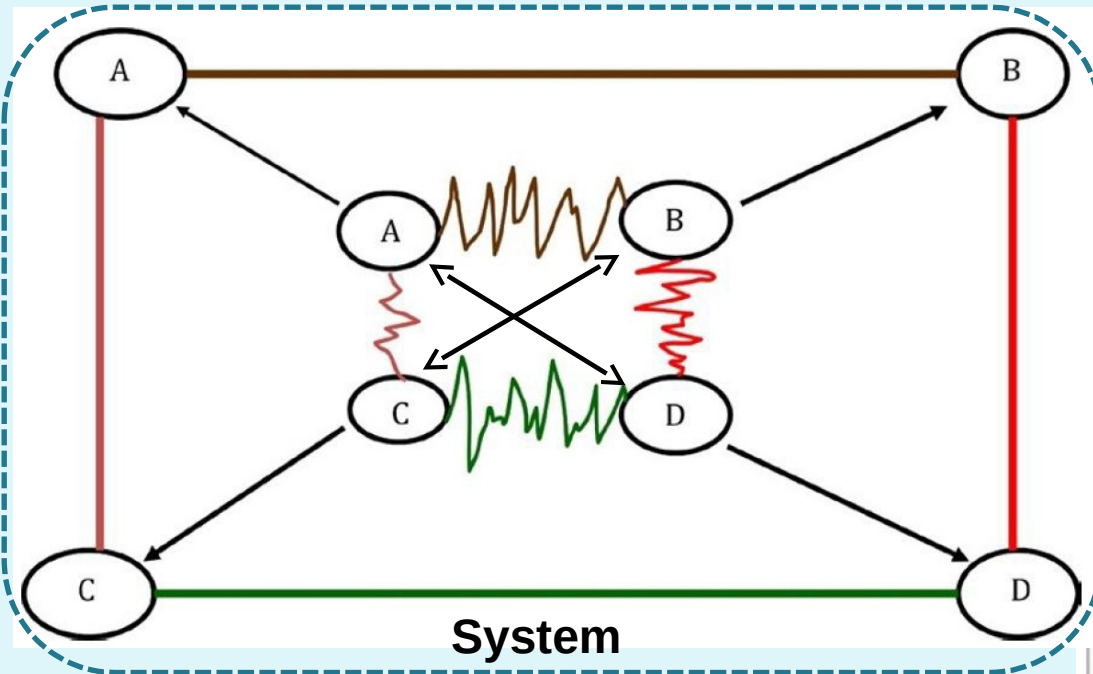


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Each **node** is considered independent from the others. That is to say, they are independent variables within the system.

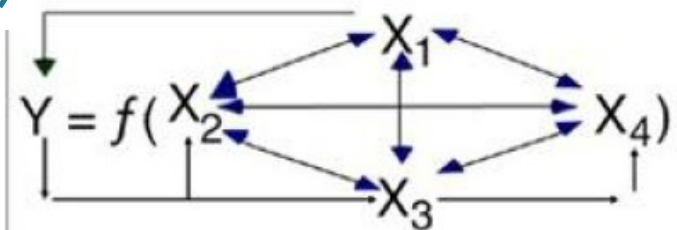


Each **node** is considered interdependent from the others. That is to say, they are interdependent variables within the system.

$$Y = F(x_1, x_2, x_3, x_4, \dots)$$

Linear Model

Complex Model



Unconsidered Conditions in Latin America for TIM design:

In Latin America, when attempting to understand TIM and technology transfer, some of the most important unconsidered conditions are the following (Santos Silva 2013:78):

- The uniqueness of each academic organization or research center.
- The regional context in which liaisons actions are deployed.
- The characteristics of the firms in relation to the innovation process.
- Information technology is crucial for management efficiency. However, it encourages but cannot deliver knowledge management and learning within organizations (McDermott 1998).
- The internal relationship between academic research agenda and entrepreneurial innovation.
- The correlation and co-evolution between the

What fields are involved in Technology and Innovation Management?

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Authors	Original Proposal	Shared Tools and Competences
Dogson (2000)	• New Product Development • R&D management • Technology Strategy • Commercialization • Technological Collaboration • Operations / Production • Organizational Learning • Creativity • Complexity • Risks	• New Product Development. • Technology and Innovation Strategy. • R&D management. • Project Management.

What fields are involved in Technology and Innovation Management?

Authors	Original Proposal	Shared Tools and Competences
Shane (2008)	• Development and Introduction of New Products. • Management and Organization of Innovation. • R&D Project Selection. • Portfolio Management. • Technology and Innovation Strategy. • Intellectual Property and Innovation. • Technology-Based Entrepreneurship. • Financing of Innovation.	• New Product Development. • Technology and Innovation Strategy. • R&D management. • Project Management.

What fields are involved in Technology and Innovation Management?

Authors	Original Proposal	Shared Tools and Competences
Adam et al. (2006)	• Inputs management. • Knowledge Management. • Innovation strategy. • Organizational culture and structure. • Portfolio management. • Project management. • Commercialization	• New Product Development. • Technology and Innovation Strategy. • R&D management. • Project Management.

What fields are involved in Technology and Innovation Management?

Authors	Original Proposal	Shared Tools and Competences
Lopez et al. (2006)	- Organizational Strategy. - Project Management. - Knowledge Management. - Product Management. - Types of Innovation. - Technological Innovation. - Open Innovation.	- New Product Development. - Technology and Innovation Strategy. - R&D management. - Project Management.
Tidd et al. (2005)	- Strategic Approach. - Strategic Learning. - Setting Effective External Linkages. - Managing Internal Process. - Creating Innovative New Firms.	

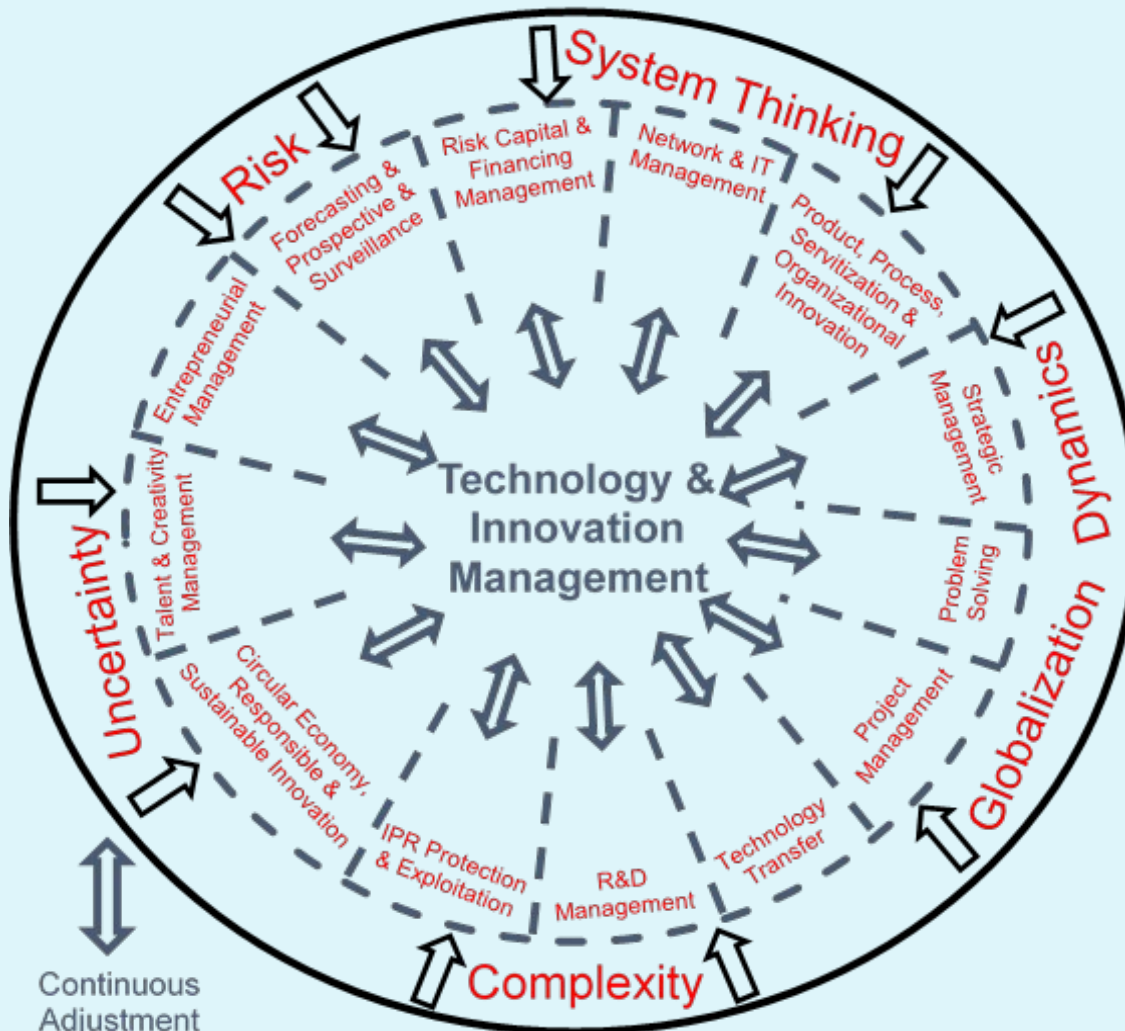
Vulnerabilities of Previous TIM Education Schemes.

- **Changing nature of open and collaborative innovation in the Internet era (i.e. combinatorial innovation, servitization, innovation beyond a product or service perspective),**
- **Lack of enough consideration of uncertainty, the appropriate addressing of globalization impacts on innovation.**
- **Ever increasing rate of technology development.**
- **Appearance of new ways of financing (i.e. crowdsourcing, new risk capital tools).**
- **Combination of new disciplines (i.e. nanotechnology, biotechnology, IT).**
- **Lack of system thinking, and an increasing complexity.**
- **Focus on big firms forgetting SMEs.**
- **Fast evolution of industry and service environments.**



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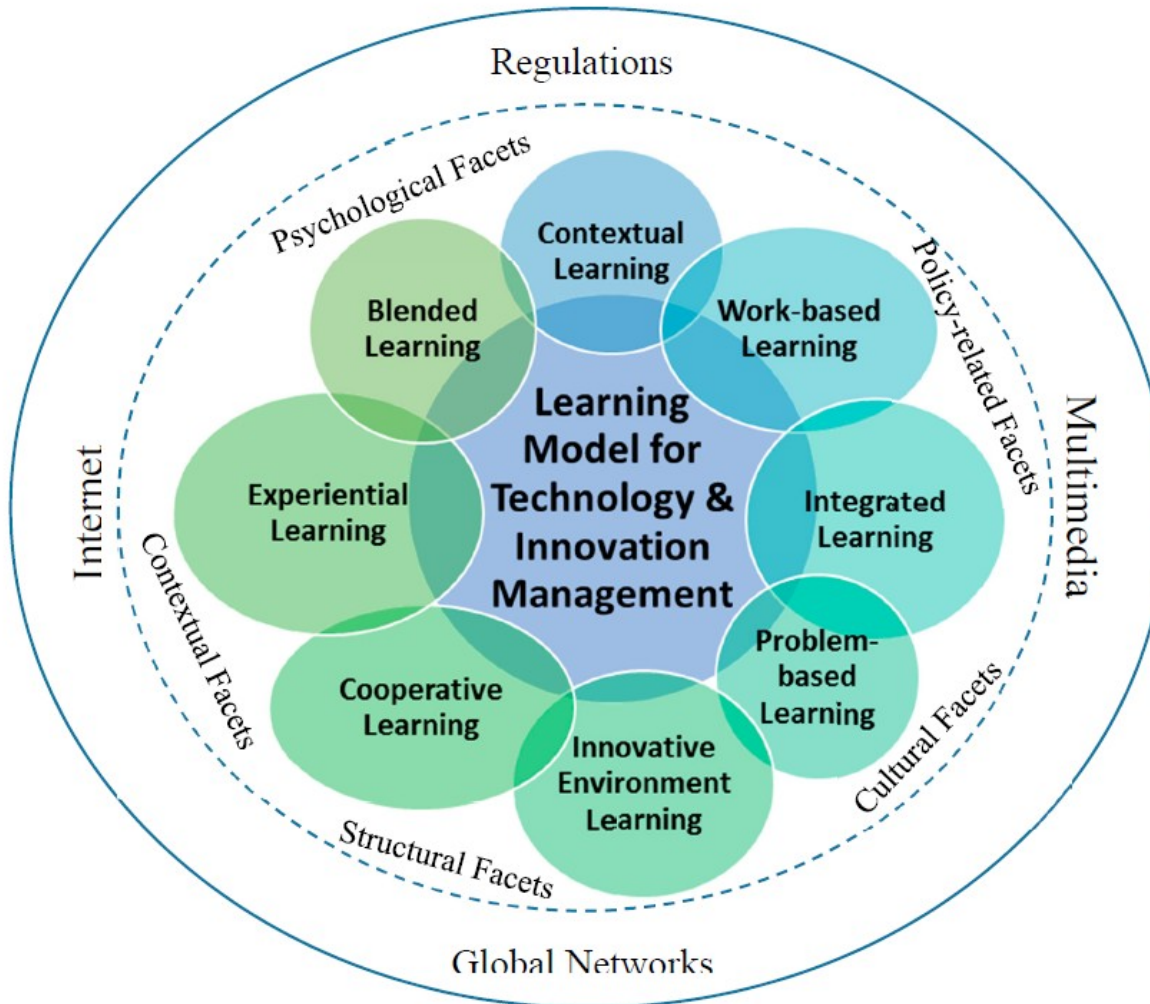


**Model of
Technology and
Innovation
Management, with
competences,
tools and behavior,
suggested for
discussion.**



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**Learning Model,
with different
“avenues”,
suggested for
discussion.**

What are the Challenges of any Learning Model in TIM field? (1)

- How to identify competence requirements for technology and innovation management at the firm level, particularly SMEs?
- What are the innovation challenges related to product opportunities emerging from traditional and new fields (e.g. nanotech, biotech and ICT)?
- What are the most effective methods for coping with risky and uncertainty conditions, and what abilities are necessary?
- Which demands for solving the environmental and sustainability problems linked to technology and innovation management?
- How can new competencies be learned for transforming them into an innovation project?

What are the Challenges of any Learning Model in TIM field? (2)

- Which types of practical knowledge should be provided in entrepreneurship training to innovative participants?
- Which types of expertise are necessary to finance new creative or innovative opportunities?
- How can we learn to interact in a manner that promotes solving environmental problems with new tools and rationales?
- What competencies are crucial for knowledge intensive entrepreneurship and business?
- How can learning promote geographical ecosystems of innovation?
- How is the human learning process changing with the evolution of technology?

Approaches for solution to complex problem of organizational & academic learning? (1)

- System thinking based on an interdisciplinary scientific method for approaching learning issues, that also considering different paths for learning.
- A hands-on approach to the learning process.
- A focus on developing complex and interrelated competences.
- An eclectic approach comprised of top-down, bottom-up, and networked rationales.

Approaches for solution to complex problem of organizational & academic learning? (2)

- Skills, tools, and attitudes for managing uncertainty and risk taking when evaluating any kind of innovative situation.
- Inter-sectorial experiences (e.g., public, private, different socio-economic sectors) for enriching and validating tools and methods.
- Cross-cultural and multi-stakeholder participation and collaboration for ensuring diversity as a pre-requisite of innovation.
- An emphasis on how to transform knowledge into concrete marketable products and services.

¡GRACIAS !

Thank You !

Obrigado !

Mercy Beaucoup!

Tante Grazzie!

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