

# **Smart specialisation strategies – from theory to practices**

Dominique Foray (EPFL)

**Seminar – European Investment Bank Institute**

**Luxemburg, October 6th 2016**

### 3 - Smart Specialisation: The Concept

*Dominique Foray<sup>15</sup>, Paul A. David<sup>16</sup> and Bronwyn Hall<sup>17</sup>*

*This brief introduces the basic concept of "Smart Specialisation" (SS) which has been a leading idea of the Knowledge for Growth expert group (K4G). The concept is spelled out in more detail in Policy Brief N° 1<sup>18</sup> in relation to globalisation. Other K4G Policy Briefs that refer to the concept are those on Catching-up Member States (N° 5) and on technology and specialisation (N° 8).*

#### ***Rationale for invigorating the R&D specialisation policy discussion***

Addressing the issue of specialisation in the R&D and innovation is particularly crucial for regions/countries that are not leaders in any of the major science or technology domains. Many would argue that these regions/countries need to increase the intensity of knowledge investments in the form of high education and vocational training, public and private R&D, and other innovation-related activities. The question is whether there is a better alternative to a policy that spreads that investment thinly across several frontier technology research fields, some in biotechnology, some in information technology, some in the several branches of nanotechnology, and, as a consequence, not making much of an impact in any one area. A more promising strategy appears to be to encourage investment in programs that will complement the country's other productive assets to create future domestic capability and interregional comparative advantage. We have termed this strategy "smart specialisation."

Smart specialisation is expected to create more diversity among regions than a regime in which each region tries to create more or less the same in an imitative manner. The latter would almost certainly result in excess correlation and duplication of R&D and educational investment programs, which in turn would diminish the potential for complementarities within the European knowledge base. It is both an idea and a tool to help regions or countries to answer this critical question about their respective (and unique) positions in the knowledge economy.

<sup>15</sup> Chair of Economics of Innovation, College of Management at EPFL – Switzerland, and Vice-Chairman of the "Knowledge for Growth" Expert Group

<sup>16</sup> Professor of Economics at Stanford University, Professeur Titulaire of Innovation & Regulation in the Digital Economy at Ecole Polytechnique and Telecom Paris Tech.

<sup>17</sup> Professor at the University of California at Berkeley and Professor of Economics of Technology and Innovation at the University of Maastricht, Netherlands.

<sup>18</sup> Reports and Policy Briefs of the K4G expert group are to be found at:  
[http://ec.europa.eu/invest-in-research/monitoring/knowledge\\_en.htm](http://ec.europa.eu/invest-in-research/monitoring/knowledge_en.htm)



# ..to implementation





- **« The idea that the government can disengage from specific policies and just focus on general framework conditions in a sector neutral way is an illusion based on the disregard for the specificity and complexity of the requisite publicly provided inputs and capabilities » Hausmann and Rodrik, 2006**

- RIS3 – identifying strategic domains to support firms and other actors to engage in collective actions to develop new activities in these domains
- Two qualifications
  - Not a substitute for standard policy but an additional option
  - Not just a high tech strategy – priorities selected are not limited to a certain part of the economy
- **Specialisation** : many benefits...
  - To form critical mass and address specific capabilities and infrastructure for innovation in the strategic domains
- ... but a delicate game!
  - Policy design matters

# On what?

- RIS3 is not about sectoral prioritisation
  - Why?
- Specialisation is on **modes of transformation of sectors and ways to establish new ones**
- Priorities are *transformative activities*



- Avoiding the Gosplan!
- The omniscient State can acquire all the required information *ex ante*
  - ‘Principal – agent Governance’
- « *What if, as I and many others assume, there are no principals...with the robust and panoramic knowledge needed for this directive role?* » (Sabel)
- ‘Self-discovery’ : the experimental dimension of industrial policy # 2
  - S3 is experimental in nature : a few bets are placed in various domains : success, failure, feedback
  - This is different from policy # 1 where the bets are safe – and the omniscient planner solution can work well
- By definition experiments imply discoveries and surprises
- Organizing the discovery process

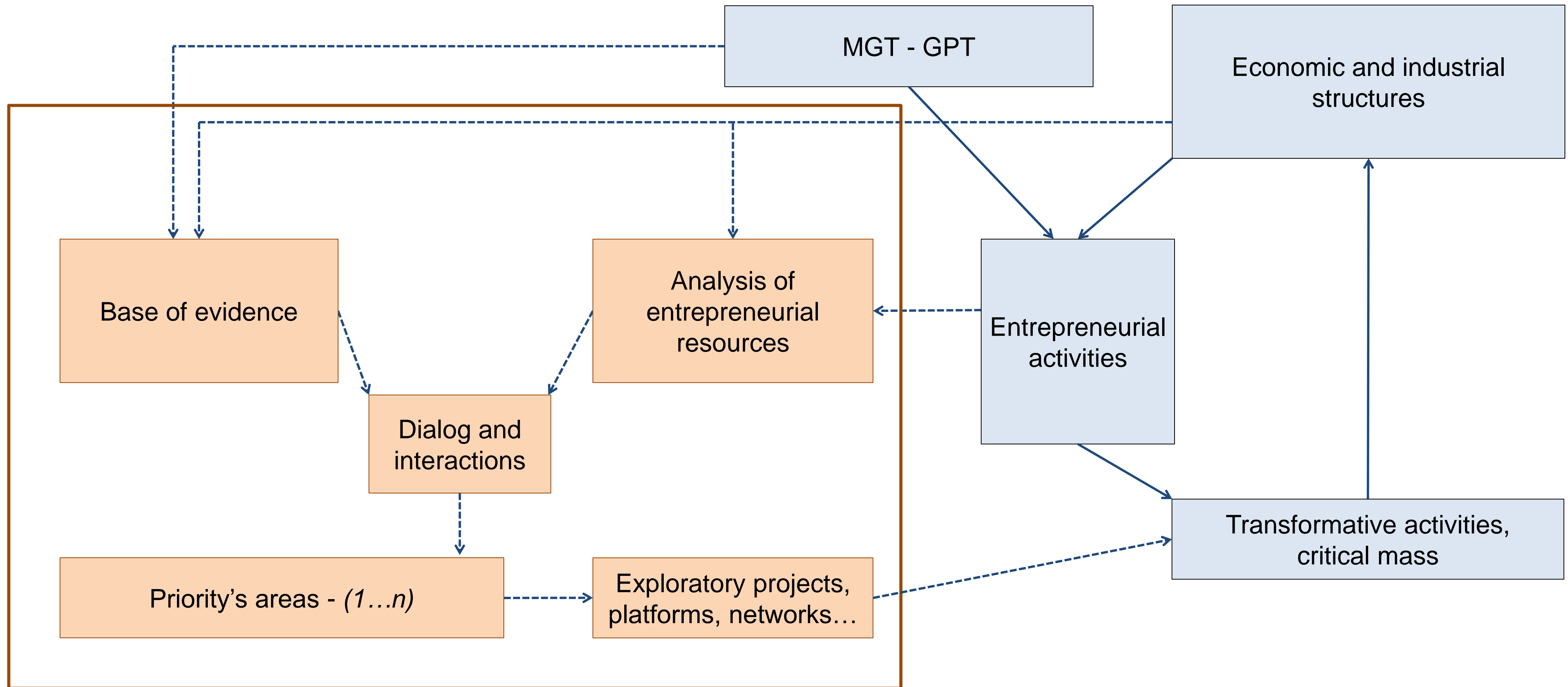
- A living document!
  - Adaptative capacities to discontinue some projects/priorities; address new opportunities
  - One simple argument : activities should exit from the S3 just because at some points there are no longer 'new' (automatic clause of exit after a certain period of time)
- Monitoring and evaluation

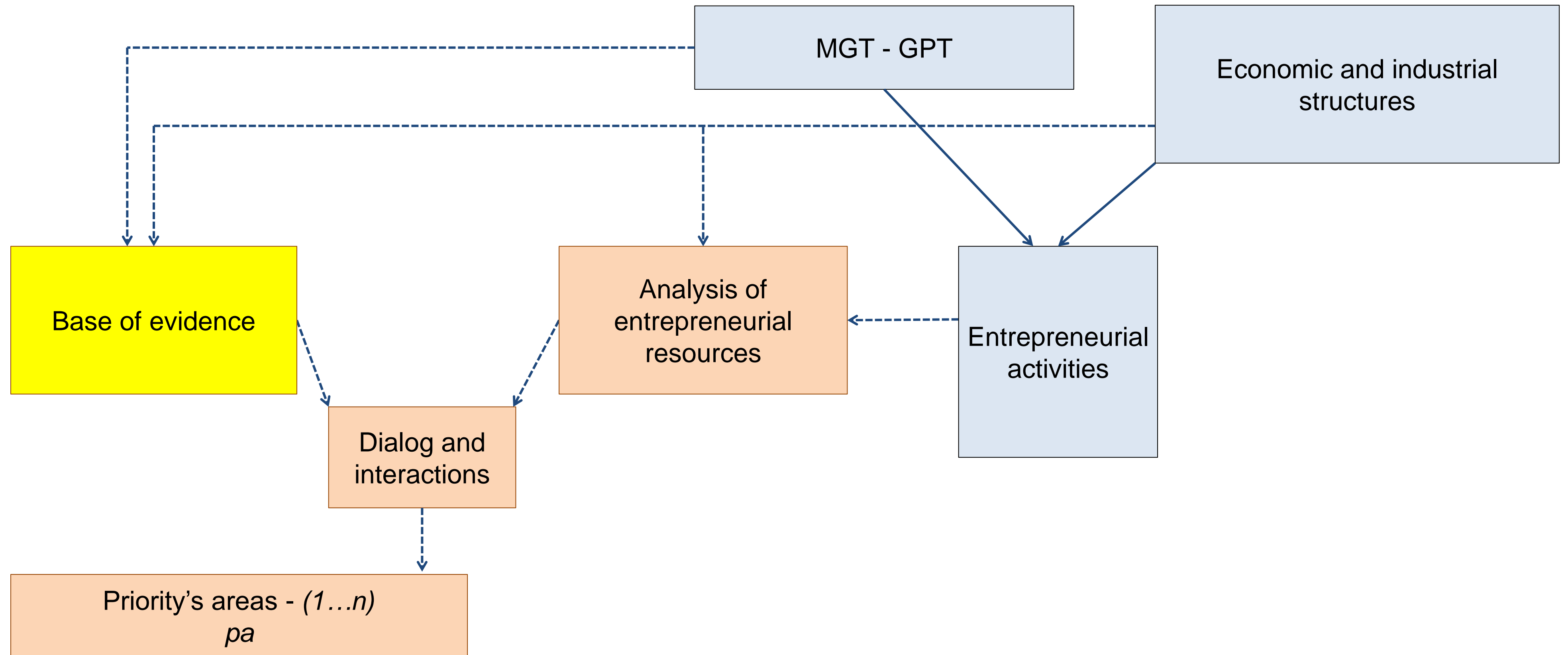


# 4 key points on RIS3

- **A)** *A policy characterized by more intentionality, centralization and prioritization – to address the formation of critical mass & agglomeration and the provision of specific capabilities and infrastructures in a few strategic domains*
- **B)** *No sectoral prioritisation but RIS3 is about modes of transformation of existing sectors or creation of new ones (transformative activities)*
- **C)** *Transformative activities are not known ex ante - EDP*
- **D)** *A living document : flexibility; monitoring and evaluation*

# From EDP to the growth of new activities

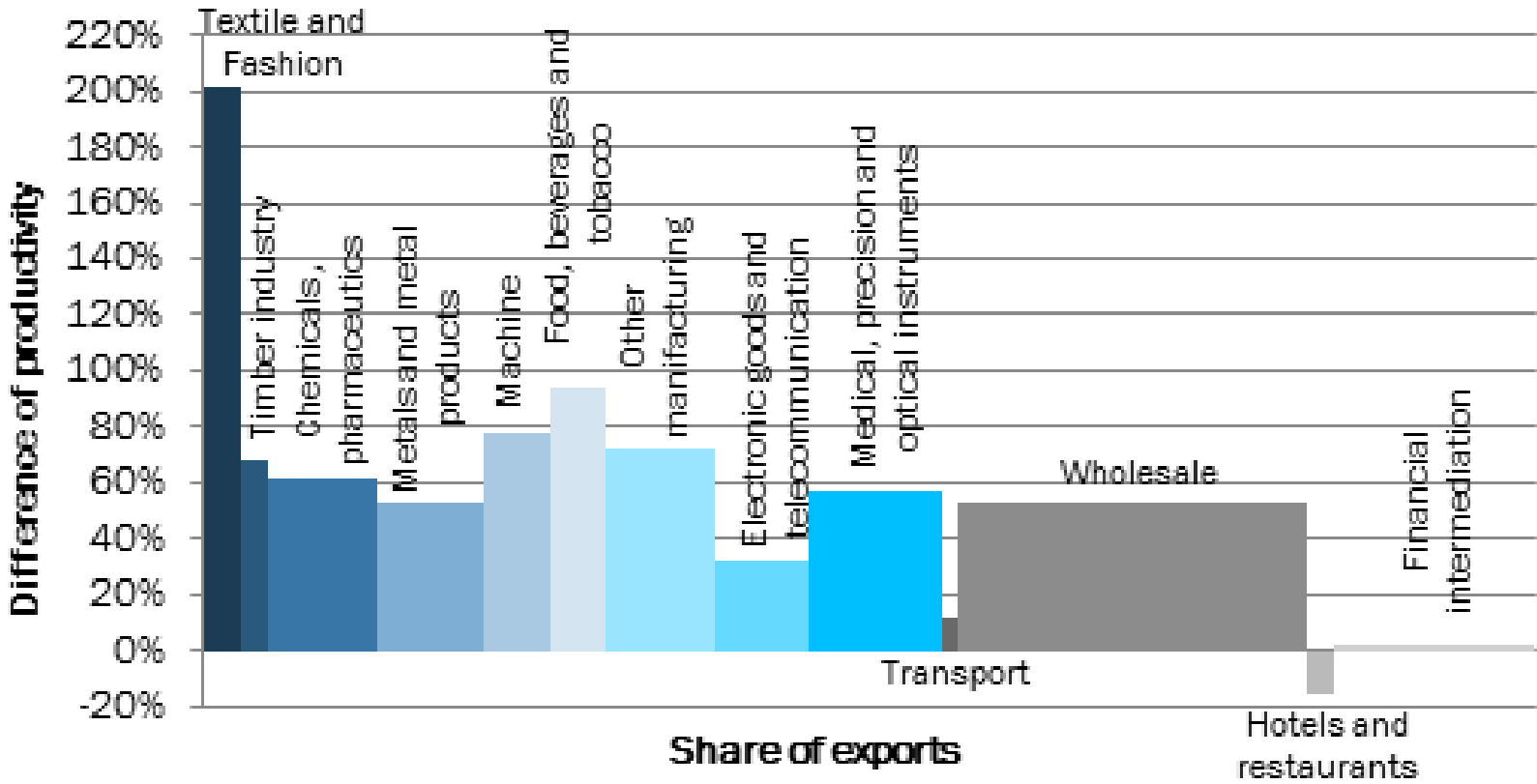




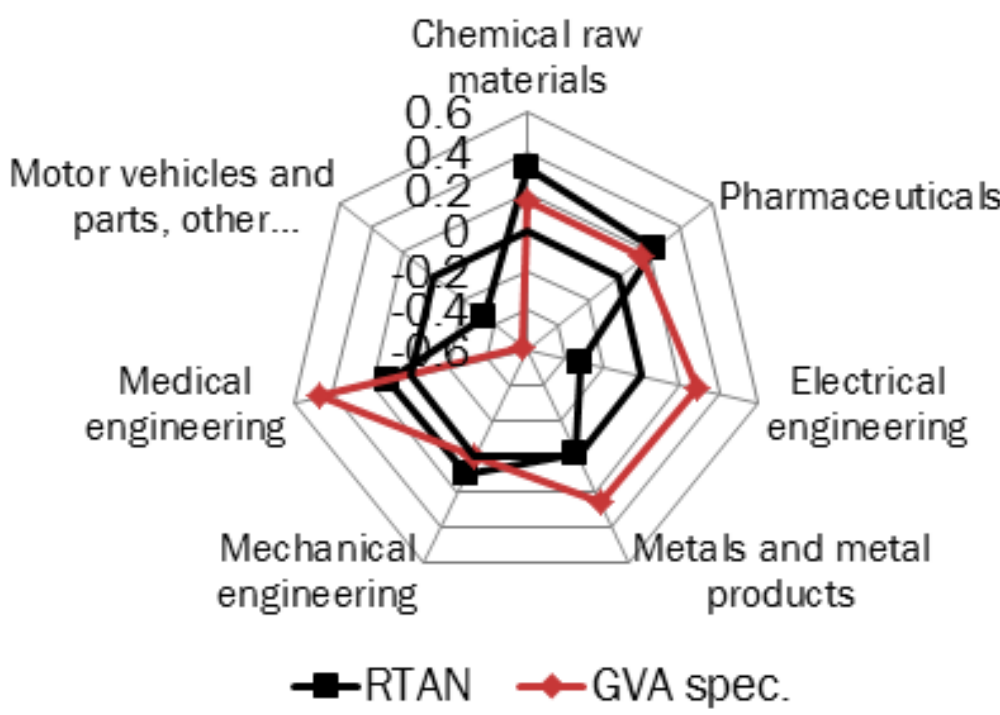


# Base of evidence : Ticino (CH)

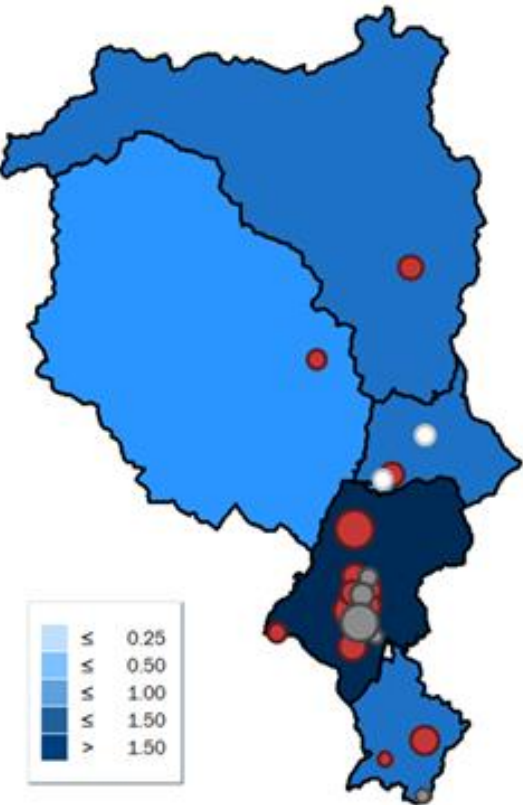
Capacity to Compete 2012: Sectoral contributions Ticino in relation to Western Europe



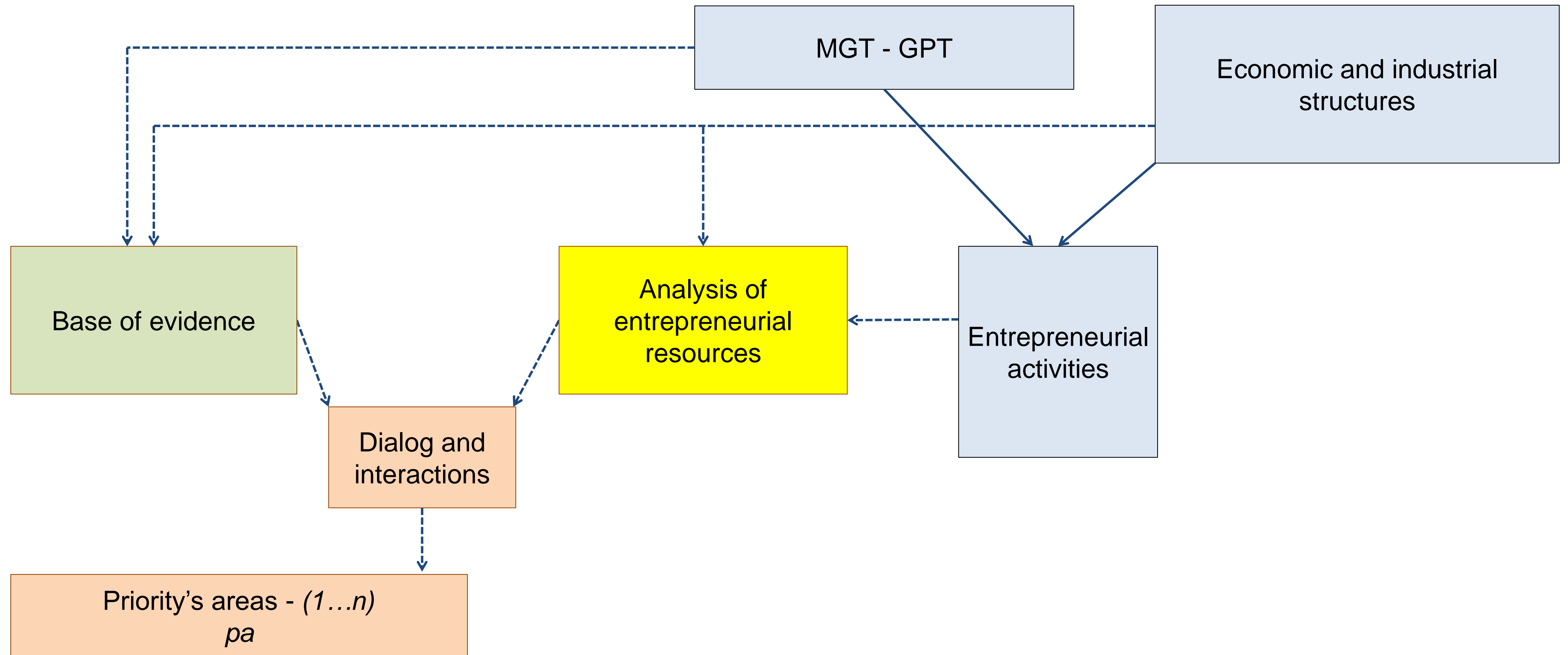
Patent- and industry specialisation in Ticino, 2012

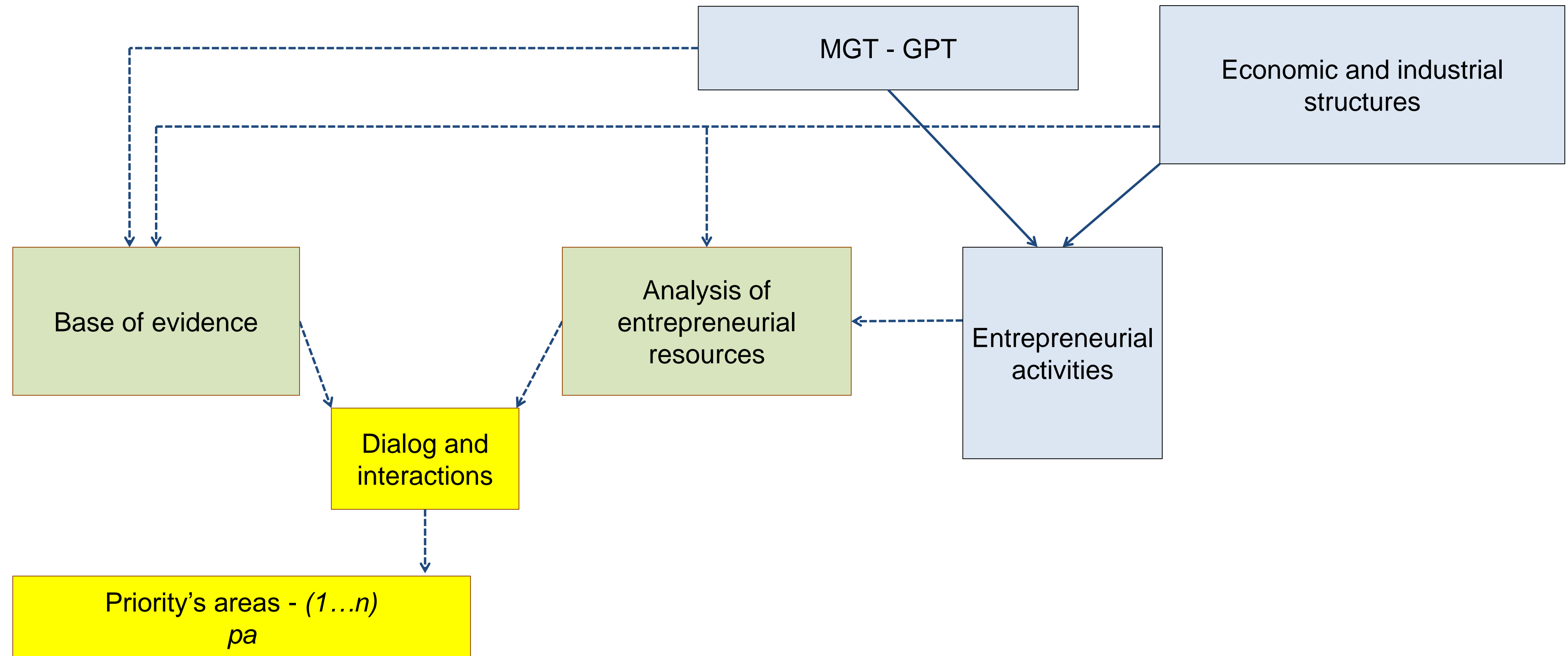


Location Quotient in Life Science Industry in Ticino, 2011

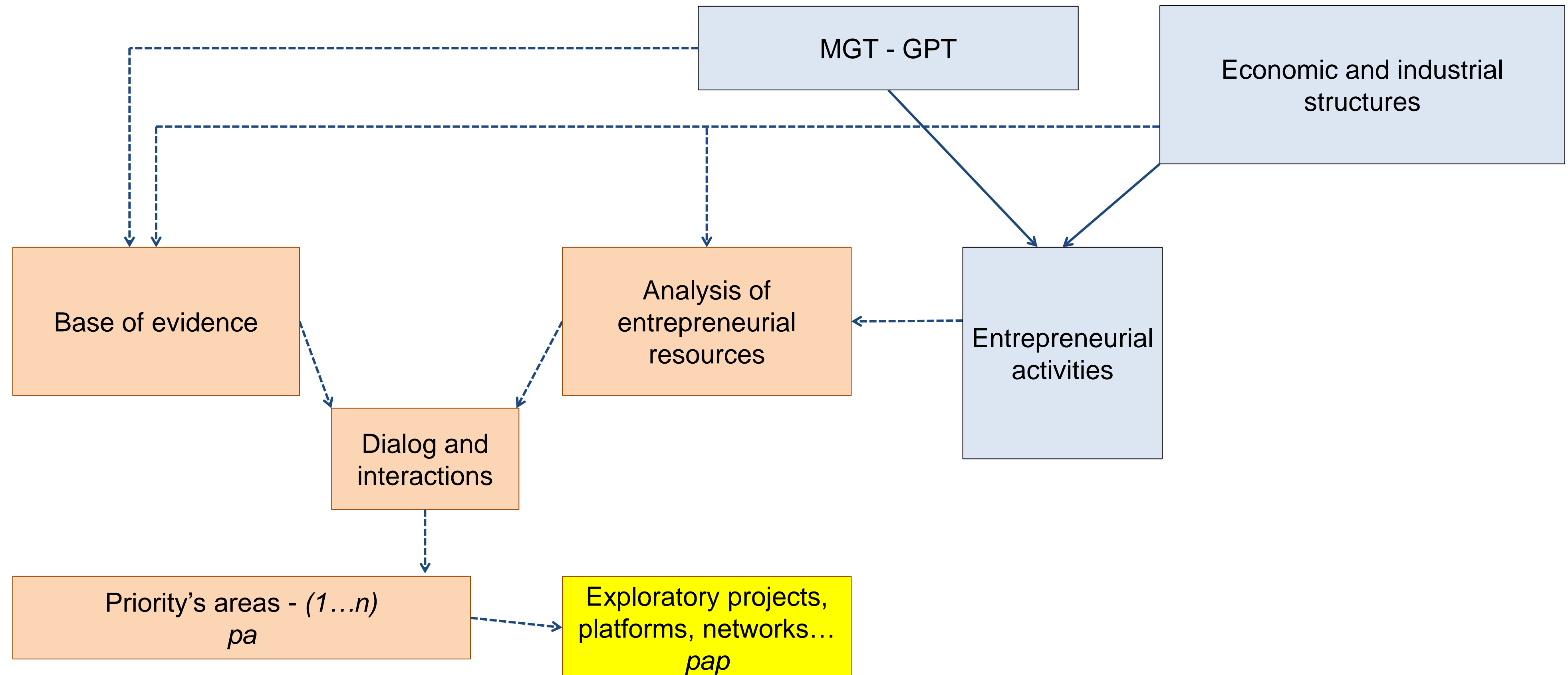


Quelle: BAK Basel Economics AG

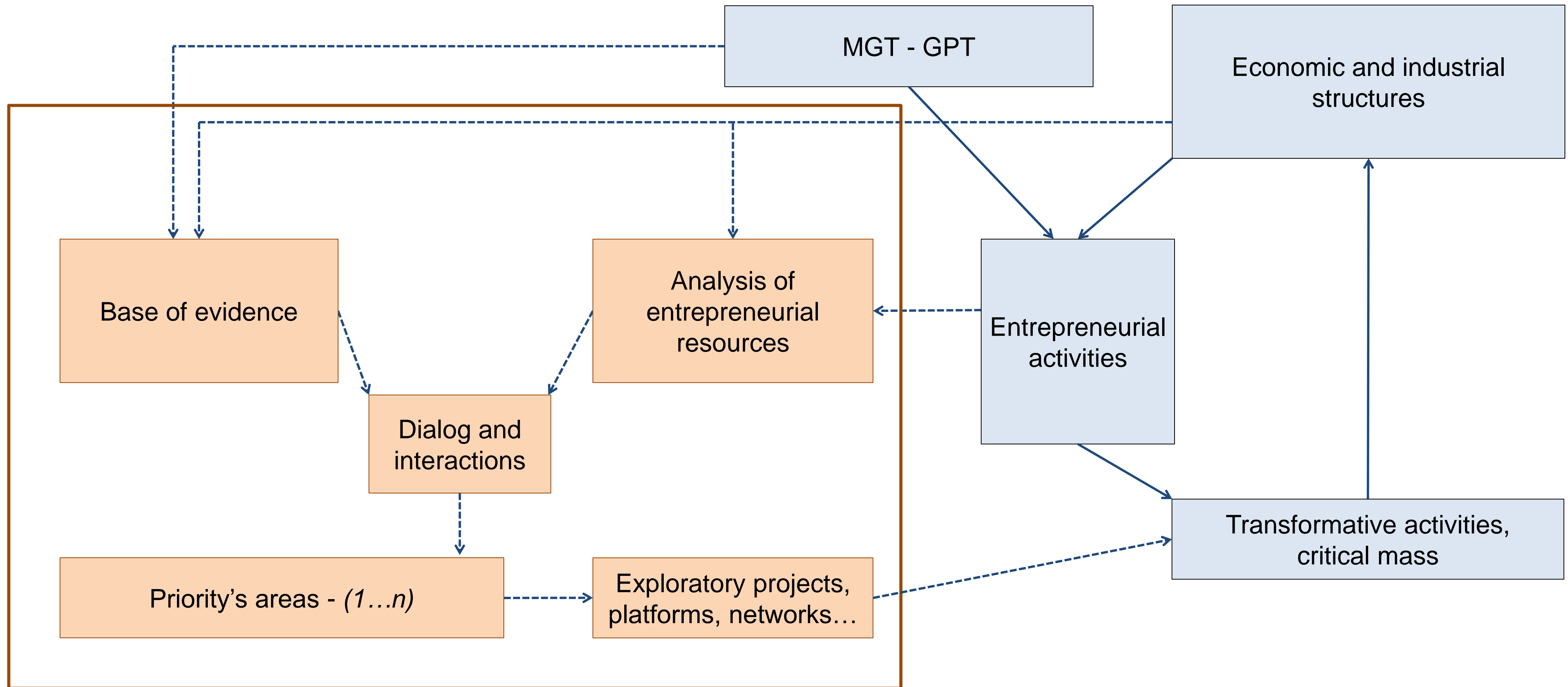


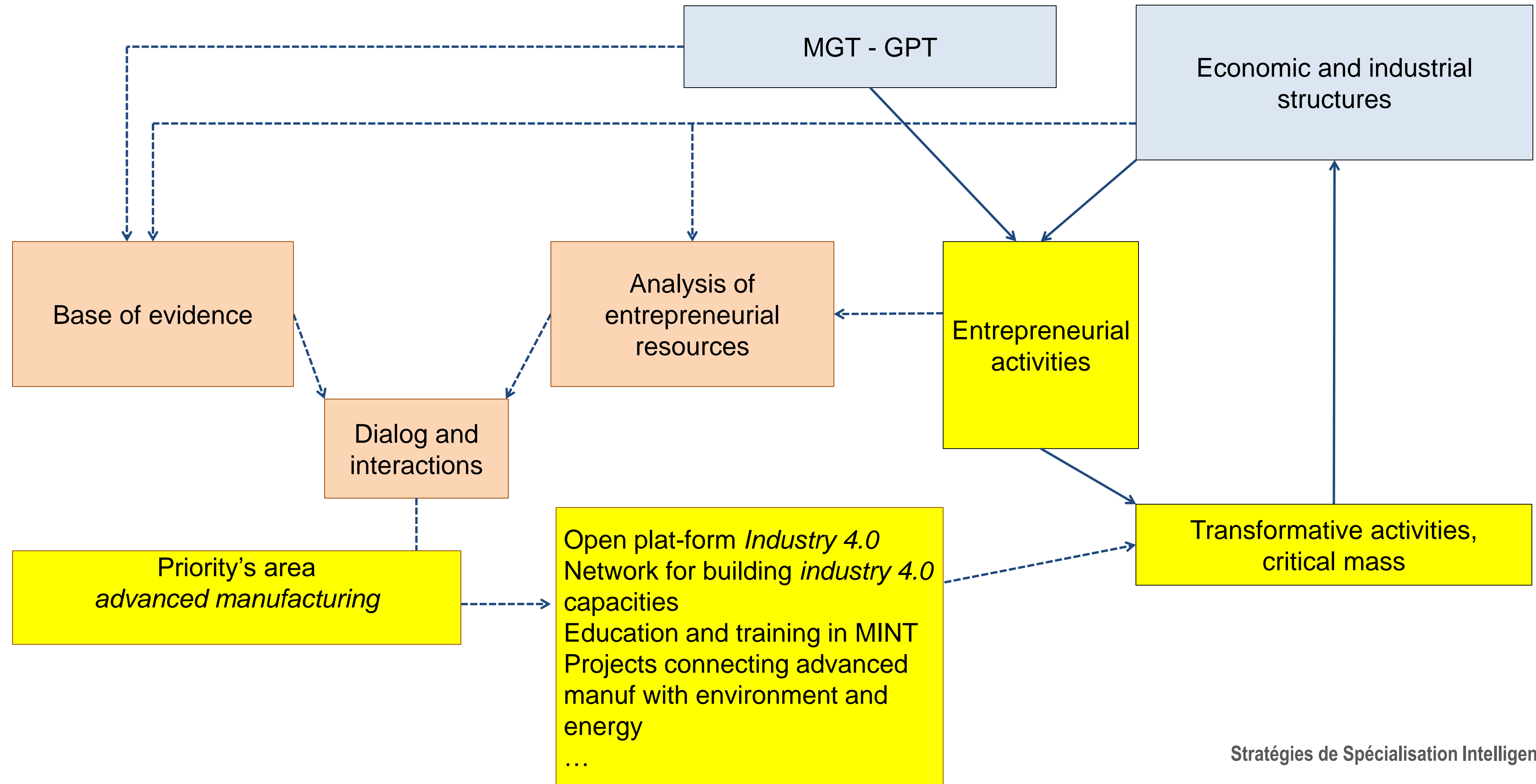






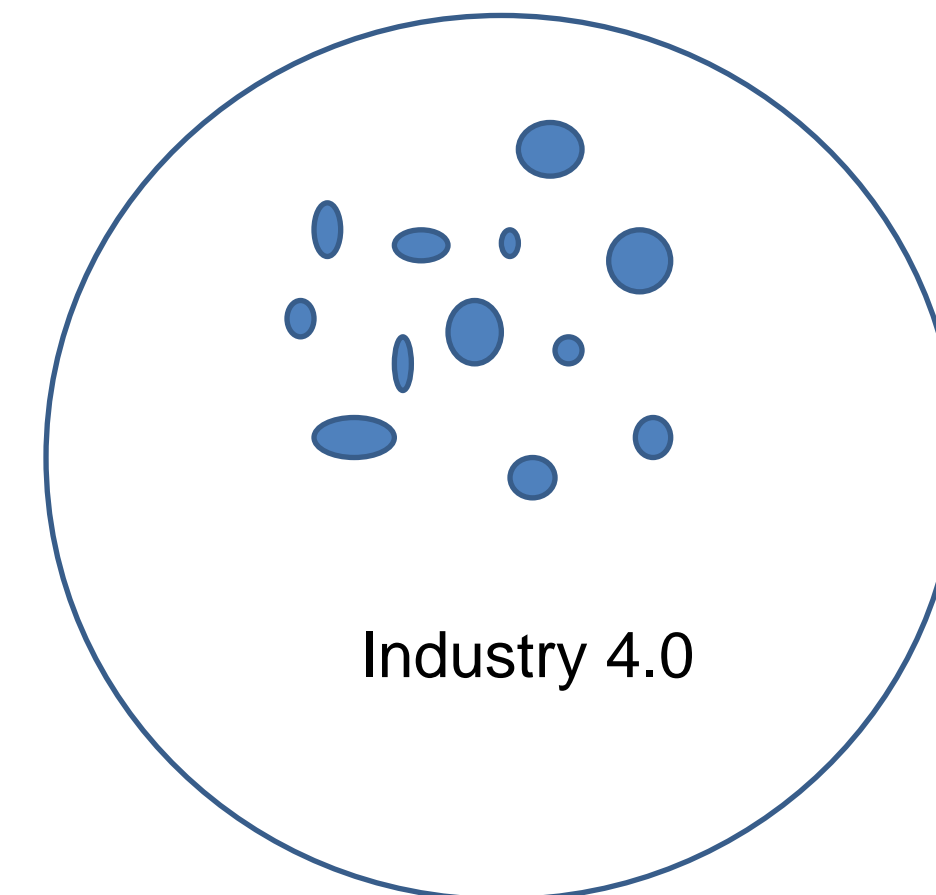
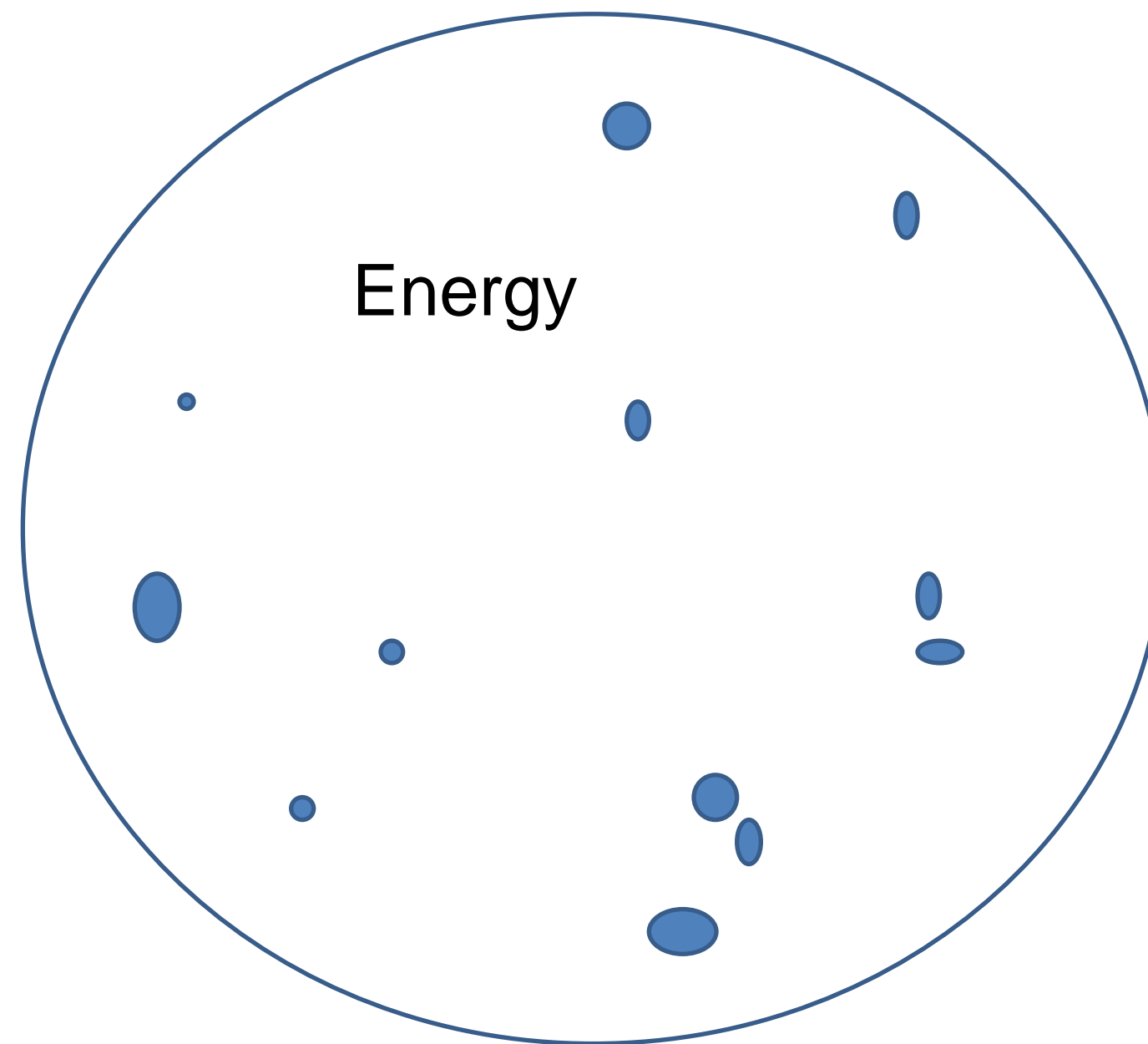
# From EDP to the growth of new activities



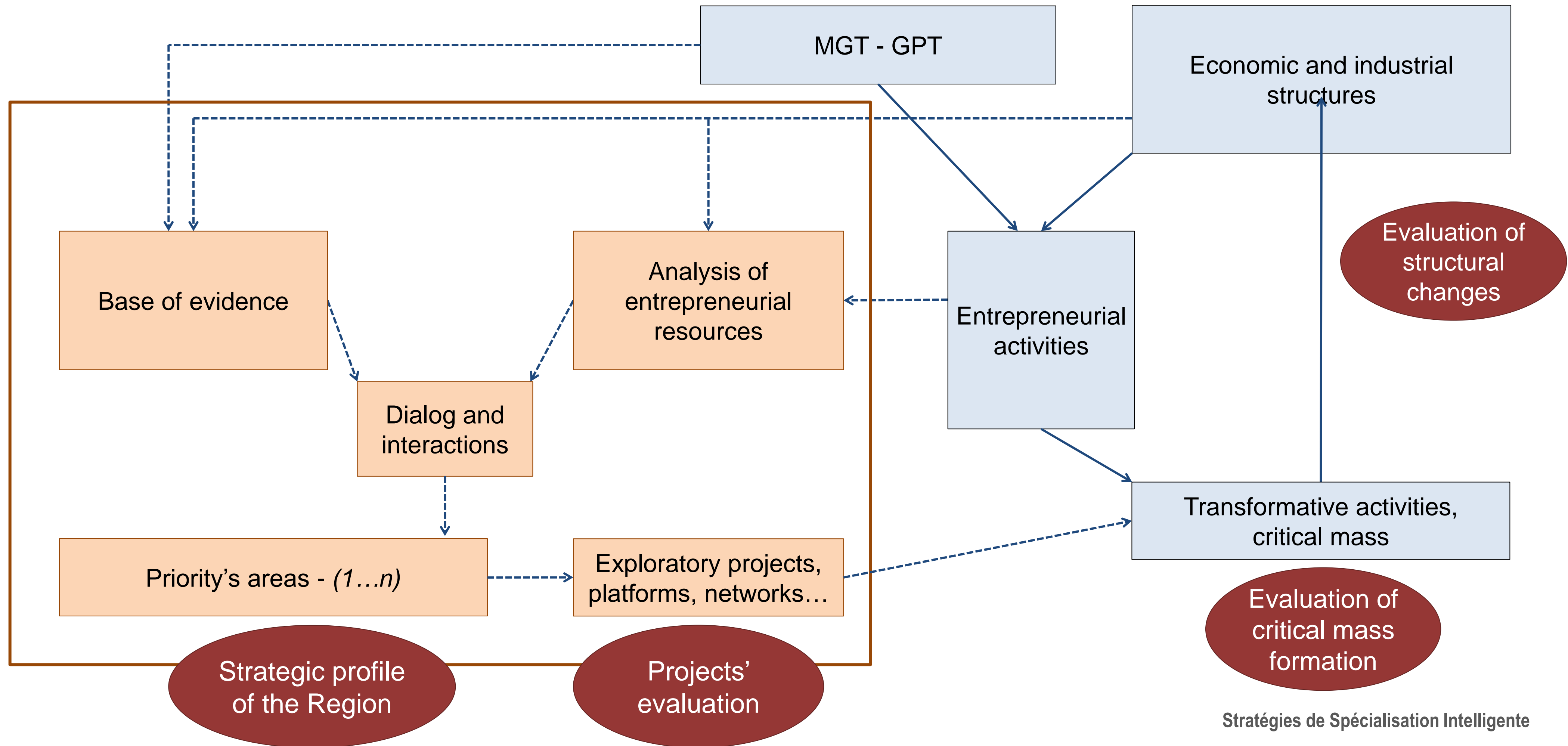




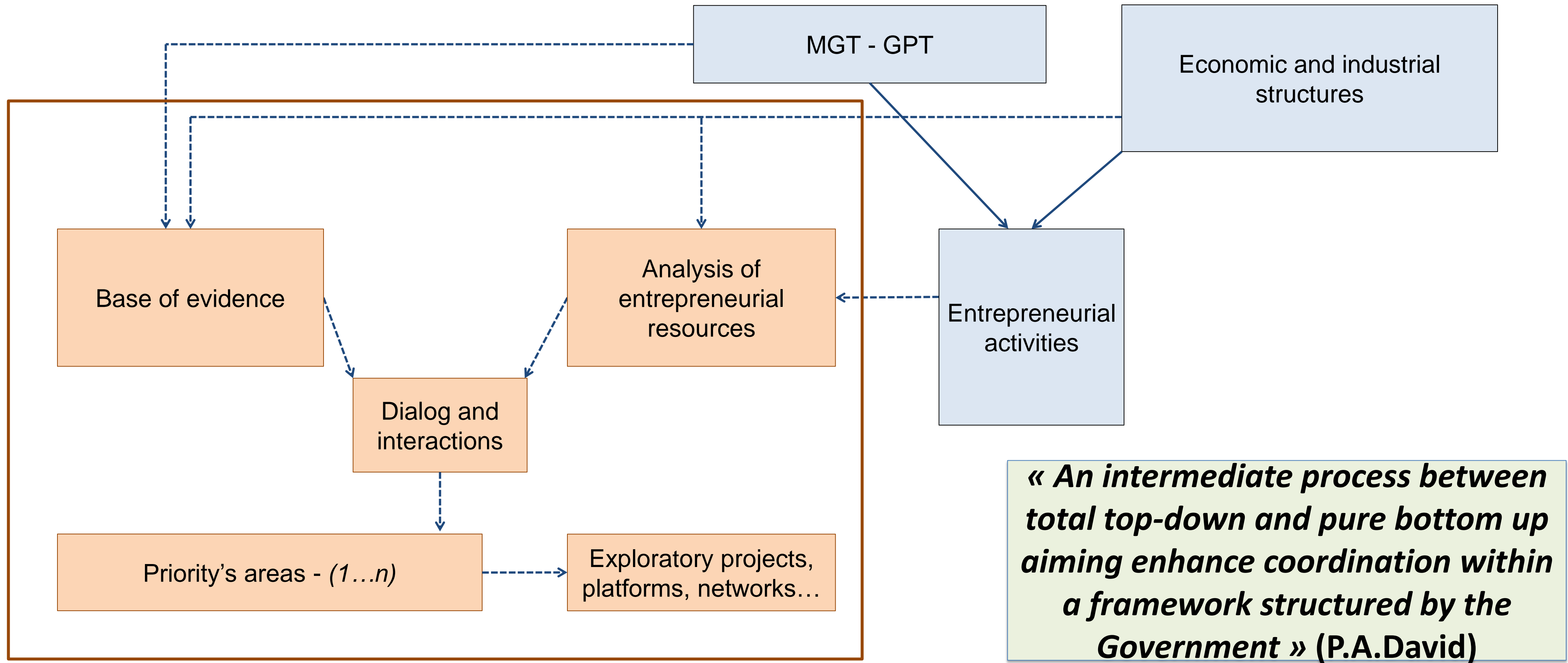
# Priority's areas should not be too broad



# Evaluation and monitoring



# Between pure *bottom up* and total *top down*!





# RIS3 = putting in place a process to..

- Analyse potentials and opportunities
- Identify priority's areas
- Stimulate projects in each area (R&D, platforms, networks, leaders)
- Help the new activities to grow
- Monitor and evaluate
- Re-start the process at any time

# Is there a RIS3 trap?

- Risk of regions being locked in trajectories of minor innovations?
- Not a risk : it is not true that in the realm of innovation there is only one game in town
- For many regions, the key point is not *inventing at the frontier* but rather generating innovational complementarities in adopting sectors
- Based on RIS3, a ‘secondary region’ becomes capable of allocating R&D and other innovative inputs in critical domains so as to lever the growth potential of the prevalent KET invented elsewhere



MOOC - Massive  
Open Online Course

# Smart Specialisation Strategies

