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Foresight and RIS3 methods *in Tuscany*

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FEN-meeting

beFORE - Erasmus+ «Becoming Future-Oriented Entrepreneurs»

ValueDo, Via Filippo Corridoni 91 Florence (IT)

08.11.2017





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Outline

- Foresight
- Decision making and strategic planning
- RIS3 and EDP in Tuscany



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Foresight

«*attempt to **map alternative technological trajectories** and production effects for a specific sector*» (UNIDO, 2005; Calof and Smith, 2012)

«*a **systematic, participatory, future-intelligence-gathering** and medium-to-long-term **vision-building process** aimed at enabling present-day **decisions** and mobilizing **joint actions*** » (For-learn Guide)

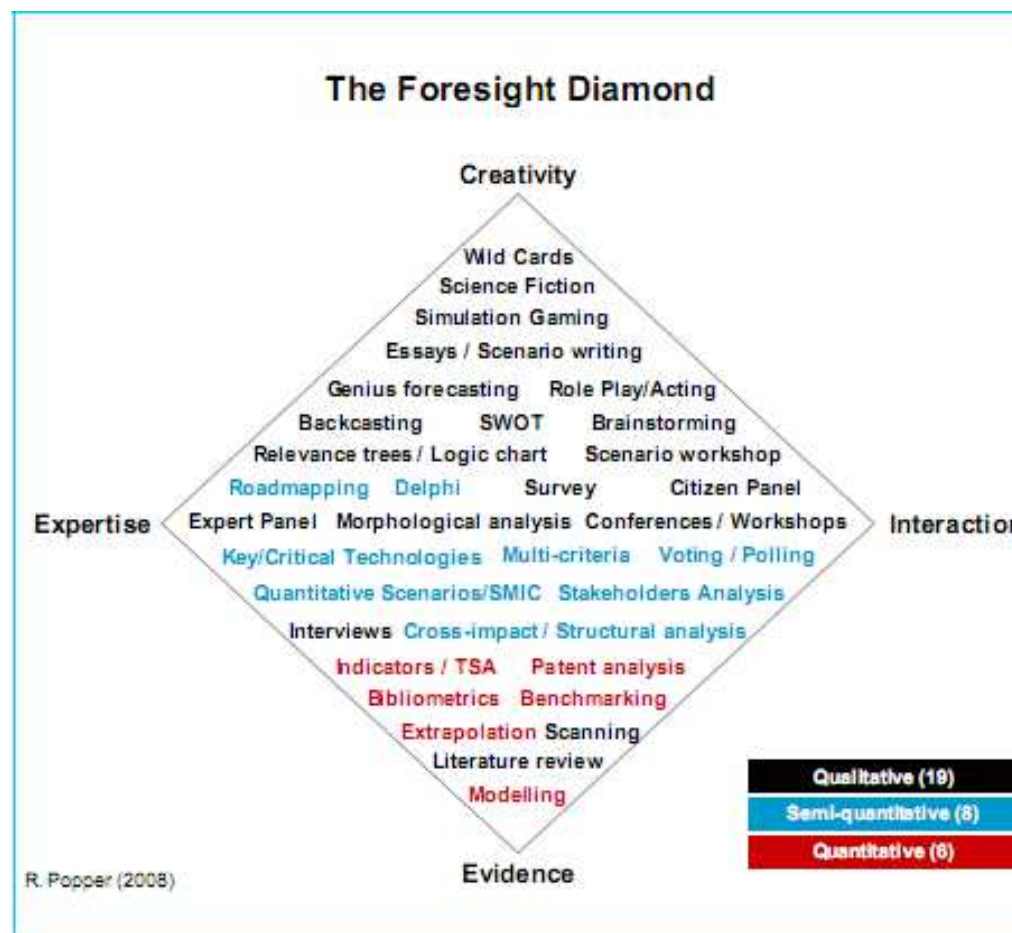
«*in the context of EU policies, regional foresight has been widely promoted to **anticipate long-term socioeconomic and technological developments and needs**, to involve a wide variety of **stakeholders**, forging new social networks and to build a **strategic vision** to be translated into present-day decisions and actions* »
(Foren – Foresight for regional development networks, 2001)



Methodologies (1/2)

With regards to the type of knowledge source, methods can be combined, according to specific needs and foresight objectives:

- Creativity-based methods;
- Expertise-based methods;
- Interaction-based methods;
- Evidence-based methods;



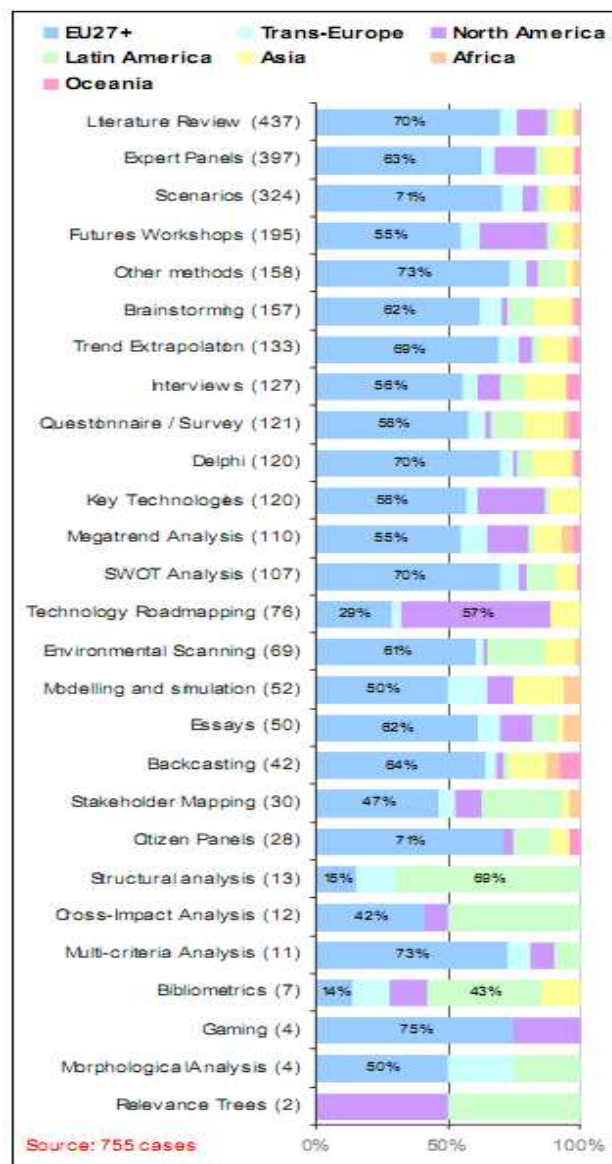
(Rif. Handbook of technological foresight. Popper 2008)



Methodologies (2/2)

Foresight methodologies applied globally (Popper 2008);

- There's no "one best" way;
- There are several methods that can be combined according to specific needs;
 - Quantitative methods;
 - Quali/quantitative methods;
 - Qualitative methods.





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Strategic planning

Policy makers, in **contexts of uncertainty**, are called upon to take **strategic decisions** on the basis of regional strengths, opportunities, threats and weaknesses.

Foresight can represent an “**interface**” between the public administrations and enterprises, research centres and other stakeholders, as well as a chance for them to discuss and contribute to regional strategic planning.

The **anticipation of the debate** on development drivers strengthens the **local governance** and establishes **critical masses** for the implementation of strategic investments.

To this extent, the **anticipatory governance** and the emergence of a **shared new knowledge** contribute positively to the **effectiveness** of public interventions.



Decision making and strategic planning

DM is a process of **cognitive selection** of beliefs and meanings among **several alternative possibilities** (Simon, 1976), the study of identifying and choosing solutions of problems/opportunities among alternatives.

Phases:

- **intelligence**, related to the phase of data collection;
- **design**, identifying alternatives;
- **choice**, final identification of the best option.

In **strategic planning**, decision making has to address problems linked to:

- **complexity** (within the process of identification of the best solution);
- **uncertainty** (within the process of problem setting).

(variables difficult to be detected, lack of information, changing rules on relations among participants, opportunism and interest conflicts...)



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Integrating models in decision making

Mintzberg model

Addresses **difficulties** within the process of identification of **the best solution**. Most important decisions come out as a **combination of small choices**, repeating subsequently to each other. Many decision points, as well as possible arrests and recursive loops. Decision **processes are not linear**, and the final solution may also diverge very much from the initial assumptions. The actual **timing cannot be determined** in advance, as well no optimal solutions are guaranteed. (Mintzberg, 1973)

Carnegie model

Mainly oriented to face the presence of **large uncertainty in problem setting** and related **risks for opportunisms and ambiguities**. This model focuses on the importance of a **social and political process** of agreements construction, able to solve conflicts and identify critical masses for strategic investments. Within this model, **networks and coalitions** play an important role and the process of solution finding is often made of **negotiations**, aiming to reach satisfactory solutions. (Simon and March 1958; March and Cyert, 1963)



Integrating models in decision making

The attempt to **combine the two models** requires:

- for the Mintzberg model, the **feasibility of several decision** points with small **gradual choices** and possible recursive dynamics;
- for the Carnegie model, the possibility to engage **several networks** and facilitate the **emergence of coalitions** for contents **selection among alternatives** (Daft, 1996).



The whole decision-making process can be divided into **phases** and, within each phase, subsequent IDC activities could be planned in such a way to guarantee the **final choice** as the **result of the succession/combination of small choices**.



Figure 1 Exploration and selection dynamics in decision making

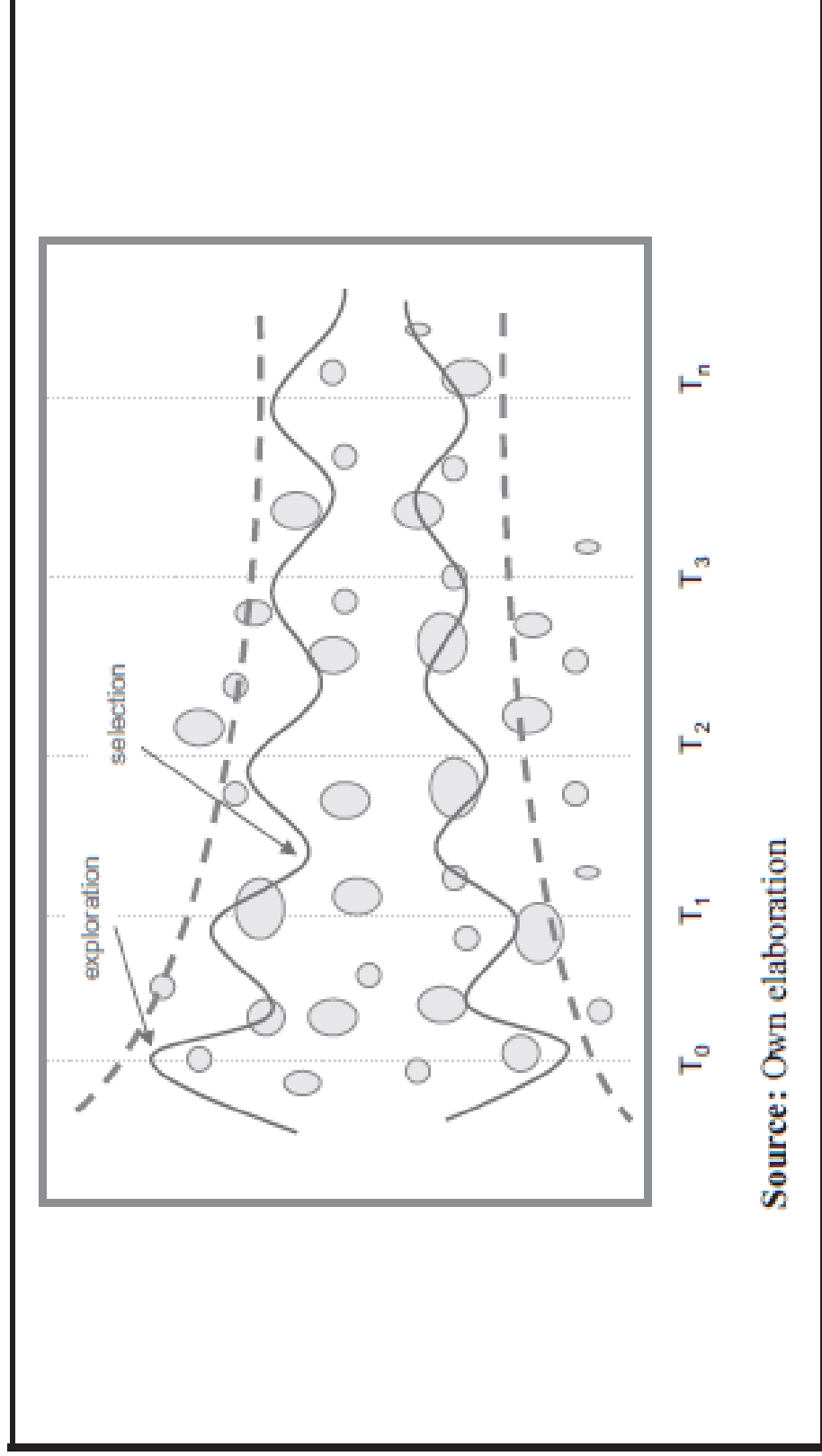
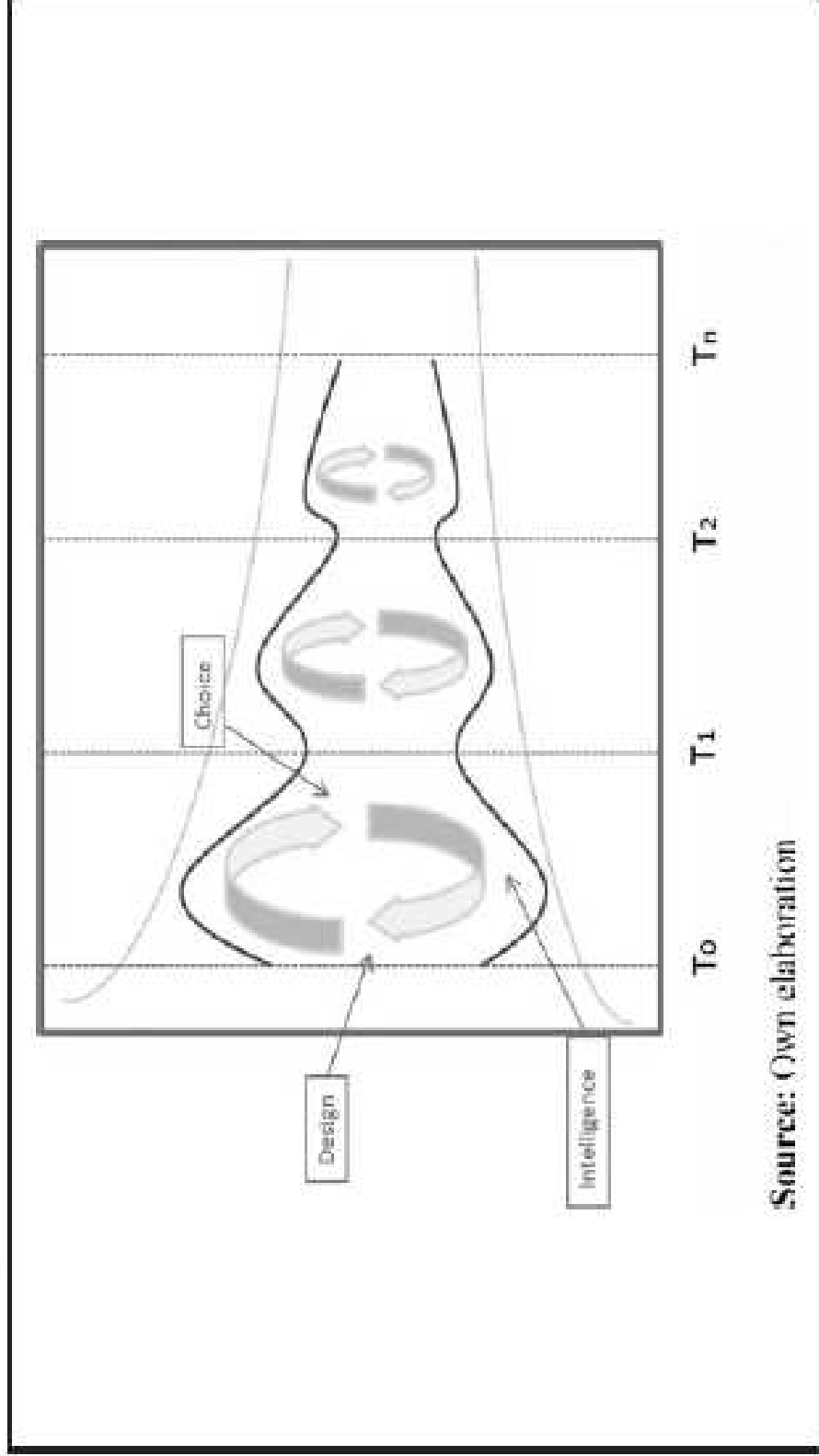




Figure 2 Decision-making and IDC dynamics



Source: Own elaboration



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Smart specialisation and EDP

The Smart Specialisation Strategy (S3) is defined as an **agenda of economic transformation** of a territory, focusing on innovation dynamics and investing on specific regional specialisations, able to exploit the growth potential of a region, primarily in terms of comparative advantage (EC, 2010)

The S3 proposes itself as a "**dynamic and entrepreneurial discovery process**" engaging key stakeholders, regional and local government authorities, companies, universities and other knowledge creation institutions. The open participation is finalized, not only to consensus building, rather to explore any opportunities for regional and local development.



What is Smart Specialisation ?

= **Evidence-based** considering all assets and problems in a region, incl. External perspective / internal / global market (critical mass? Opportunities? excellence? cooperation? Value chains?)

= No top-down decision, but **dynamic /entrepreneurial discovery process** uniting key stakeholders around shared vision

= Mobilisation of investments and synergies **across different departments and governance levels** (EU-national-regional)

= **All forms of innovation** – no only technology driven

= **Differentiation:** SWOT analysis (all types of assets), competitive advantages, potential for excellence, opportunities

= **Concentration** of resources on priorities, problems and core needs (no sprinkler principle, no picking the winners, yes to catalytic investments)

= **Place-based economic transformation:** rejuvenating traditional sectors through higher value-added activities, cross-sectoral links, new market niches by sourcing-in and disseminating new technologies rather than re-inventing the wheel; exploiting new forms of innovation



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Key steps for developing RIS3

Step 1 – Analysis of regional context/potential

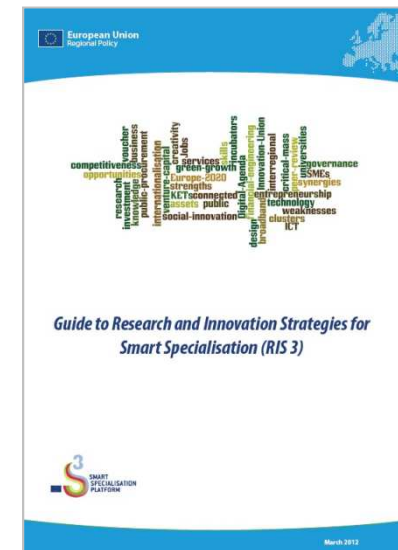
Step 2 – Governance

Step 3 – Vision for the future

Step 4 – Selection of priorities

Step 5 – Policy mix

Step 6 – Monitoring and evaluation



<http://s3platform.jrc.ec.europa.eu>



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EDP in Tuscany

RIS3 for Tuscany Region is based on:

- Unbalanced growth model;
- Innovation demand combined with technological competences;



STRONG FOCUS ON:

- R&D finalized to strategic investments;
- Leading companies;
- Large participation for selecting priorities;

EDP for Tuscany has been based on 5 step:

- 1) Analysis (Economic analysis + policy evaluations + Foresight ex. review + Innovation Poles Roadmapping);
- 2) External experts assessments;
- 3) Open thematic ws;
- 4) Rationalization and preliminary version;
- 5) Final version and institutional validation.



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Main challenges and barriers for an EDP

Main challenges:

- to enforce the governance of innovation system;
- to establish new (innovators) networks and linkages around a new common vision;
- to elicitate new R&D opportunities;
- to translate best regional opportunities into a strategic path;
- to build in proactive terms consensus building;
-

Main barriers:

- Entry barriers, lock-in, lock-out barriers;
- Raise innovation demand + strategic investments opportunities;
- Combine creativity and strategic planning (selection);
- Provide an extra-territorial perspective to EDP;
- Monitoring&Evaluation and “change management”;
-



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How to mobilize stakeholders that have potential to provide value added?

In general terms:

- Right intermediaries;
- Rules of engagement;
- Business intelligence and “open data”;
- Independent assessment;
- Open public discussion.



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How to assess the entrepreneurial knowledge?

For assessment:

- legitimation;
- responsiveness;
- technical competences;
- consistency with real economic needs.

It's unlikely to have all these competences, at the same time, within a single organisation!

Institutions are called upon to act as facilitators, "setting the rules of the game":

- Methodologies;
- Timing;
- External assessment;
- Stakeholders engagement;



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Rules of engagement for intermediaries (Innovation poles)

Through Foresight exercise:

- Industrial clustering dynamics;
- Human capital needs
- Technical/industrial problems;
- Innovation/industrial networks;

Each foresight exercise should stress:

- Technological improvements;
- Technological discontinuities;
- Technological enablers;
- Technological levers;

Perspectives in terms of:

- Roadmap;
- Targets;
- Policy initiatives;
- Outcomes;

Focus on:

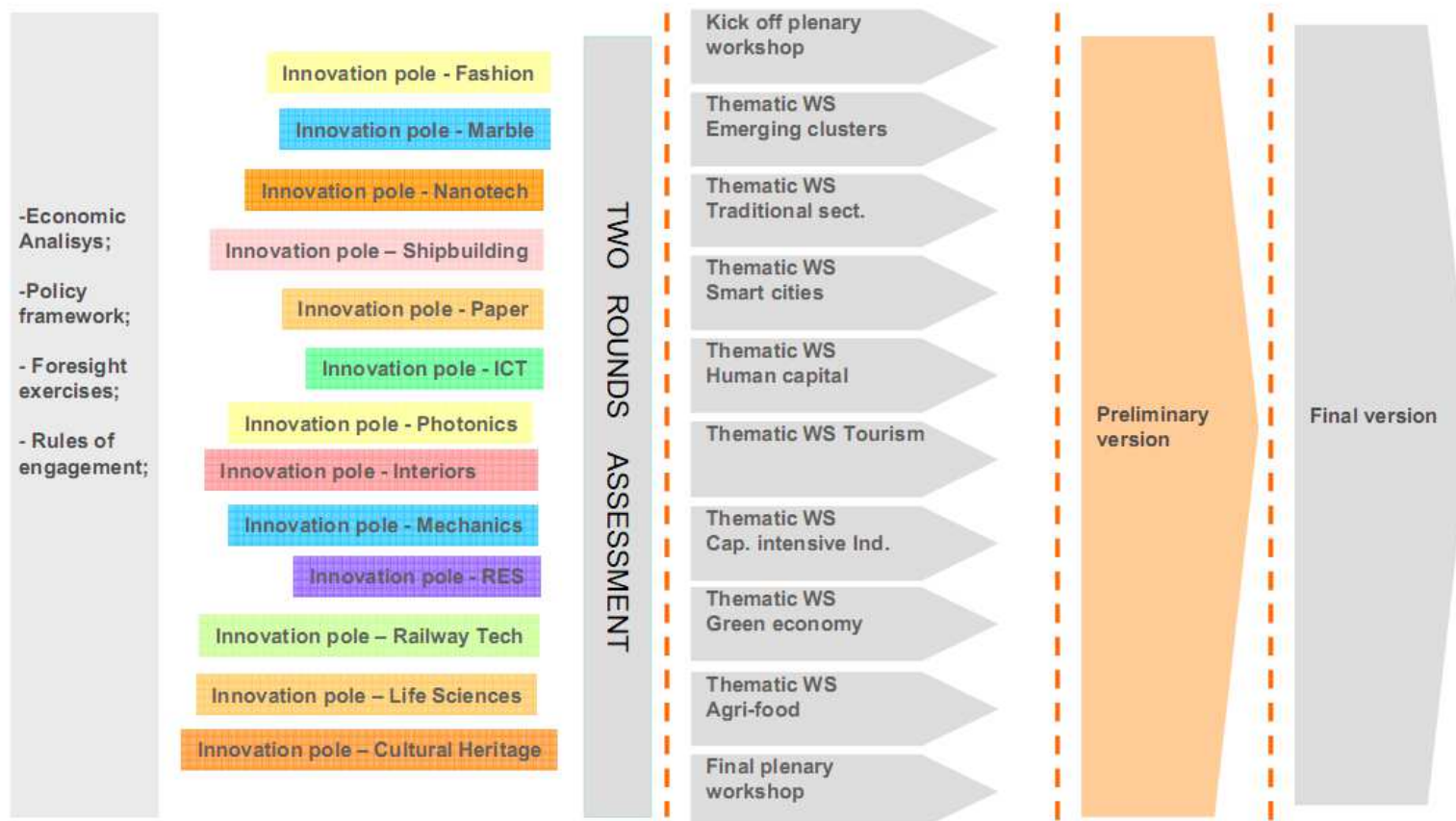
- Energy and environment;
- Smart territories;
- Smart manufacturing;
- Social innovation;
- Research and human capital;



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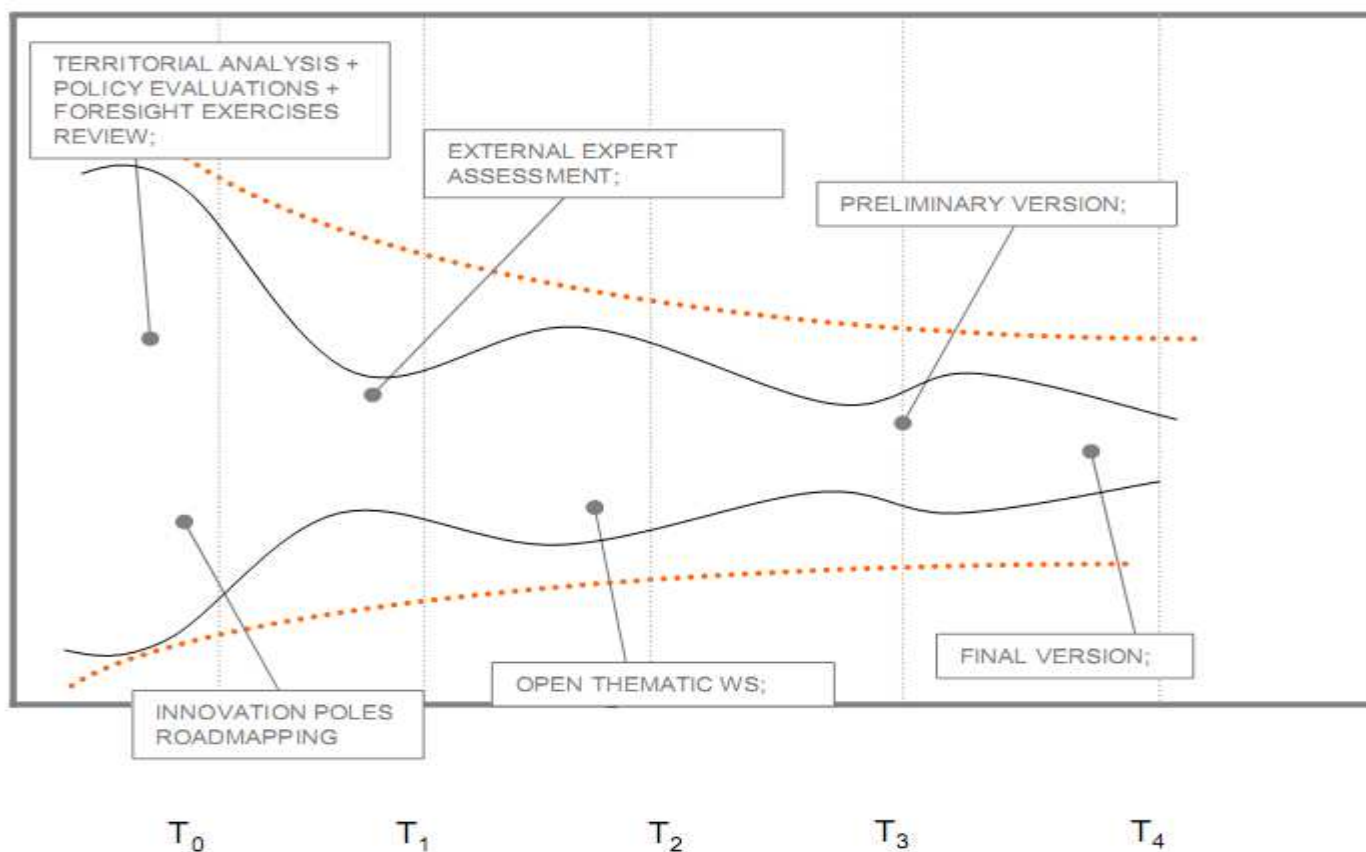


EDP in Tuscany





Intergrating decision making models in Tuscany





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Conclusive remarks

- Foresight as policy tool;
- Foresight as cohesion tool;
- Foresight as tool of business intelligence for companies (business services policy).
- Roadmapping as a method based on regional competences useful for the definition of performance indicators expected results of regional policies;
- Roadmapping as a tool of multilevel governance, policies integration and consensus building.

Ideas for debate

- How to ensure roadmapping activities as a tool for multilevel governance? (S3P)
- Time issues. How often is necessary to organise EDP? How to ensure EDP as an open process? (on going process)
- Practical hints or experiences to enhance creativity among EDP (avoid lock-in dynamics)



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Thank you for listening!

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