



*Ministero dell'Istruzione,  
dell'Università e della Ricerca*

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# **The Role Of Public Policy In Innovation Processes**

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# Agenda

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- ✓ Brief introduction
- ✓ The Triple Helix model
- ✓ The National Research Program 2011/2013
- ✓ The National Operational Programme “Research and Competitiveness” 2007/2013

# Introduction

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- ▶ The role that intervention policies of government institutions should take to better respond to the new demands of the contemporary *knowledge-based* economy has undergone deep reflection in recent years.
- ▶ Innovation in scientific research has become the main driver and determining factor on which the capacity of a national economy to compete is based:

The ability to produce knowledge while simultaneously transforming that knowledge into economic value and then quickly producing a high-level qualitative innovation process.

- ▶ Knowledge and innovation and global characteristics of current economy dynamics play a strong intertwining role in the global scene.
  - ▶ The development of technological knowledge and the globalization of markets and economies represent mutual enablers.



# The Triple Helix Model

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- ▶ According to Vannevar Bush, scientific advisor to U.S. President Roosevelt, the creation process of innovation is a precise linear sequence, ranging from scientific discovery to experimental verification in applied science, to subsequent inventions, processes of imitation and diffusion.
- ▶ By the end of the '90s, numerous studies highlighted how innovative dynamics are much more complex than the traditional linear sequence:

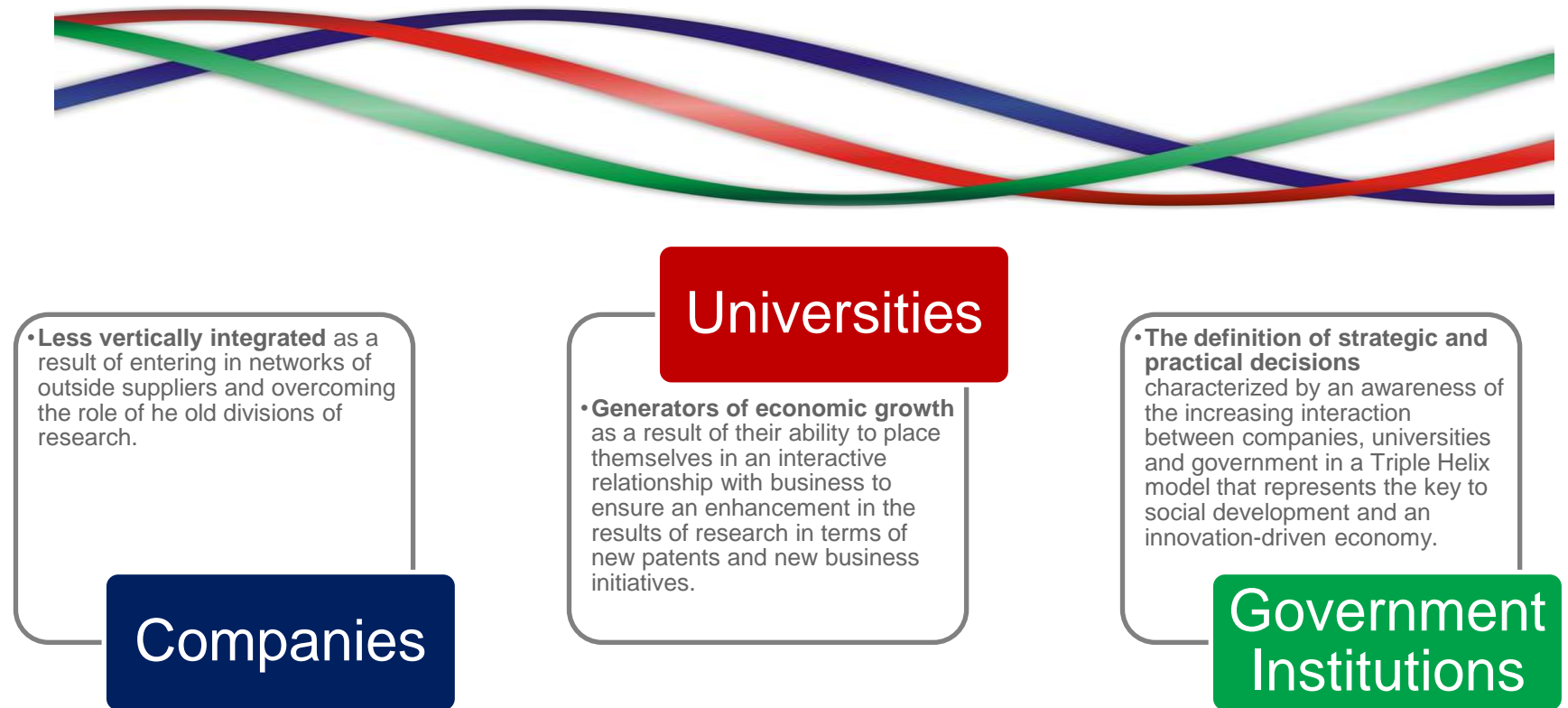
The ever-present and global nature of science and technology, together with the vortex reducing time lag between knowledge production and market entry of a new product, determine a different approach starting from the problems of the industry and society to seek solutions in science.

- ▶ The two models described work together composing an interactive model of innovation where the points of origin are mutually reinforcing.

# The Triple Helix Model

## The New Role of the Actors in Innovation

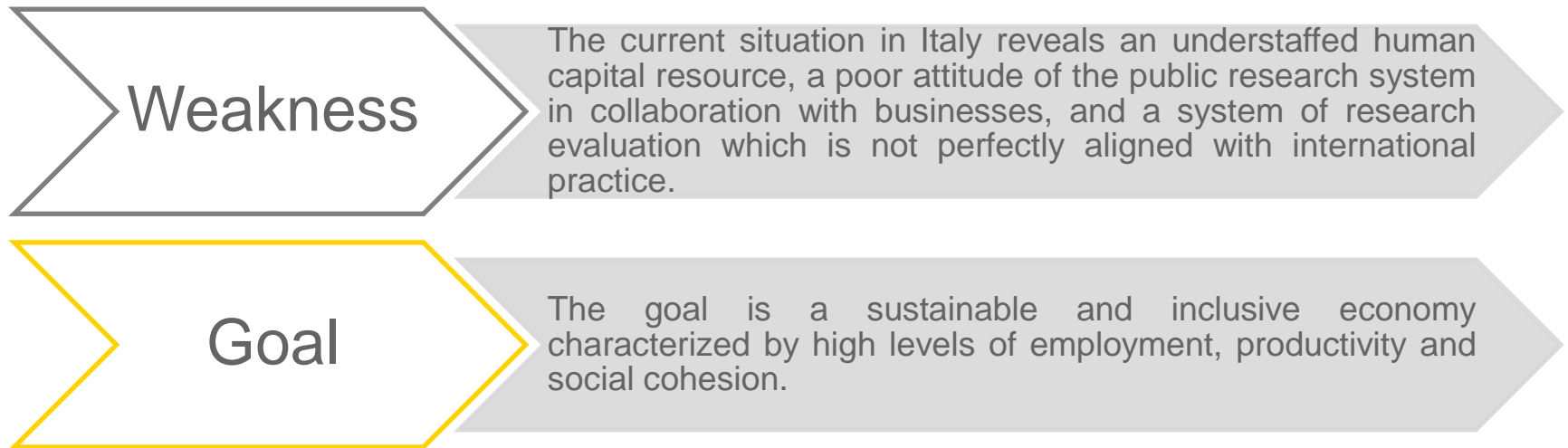
- ▶ The key to ensuring the growth of a competitive system in a knowledge-based economy becomes the deep and constant interaction between companies, universities and government institutions.



# The National Research Program 2011/2013

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- ▶ The NRP 2011/2013, approved by the Italian Government, and in line with the 2020 European Commission strategy, is an important tool to steer the country to be a player in the *Europe of Knowledge* and to promote the coordinated development of research activities.



# The National Research Program 2011/2013

## Macro-objectives

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- ▶ The main goals of the NRP 2011/2013:
  - ▶ Growth in country competitiveness in important technological areas;
  - ▶ Improving quality and achieving critical mass in public and private research;
  - ▶ Consolidation and growth of the investments in research, development and innovation;
  - ▶ Enhancing human capital;
  - ▶ Closer cooperation between public research and industry and promoting the transfer of research results to the productive sector (technology transfer);
  - ▶ Support in the internationalization of innovative industries and the birth and development of new high tech industries;
  - ▶ Achievement and participation in European research infrastructures.

# The National Research Program 2011/2013

## High Tech Hubs

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- ▶ Technology hubs represent a new intervention model providing a powerful new element in regional development policy.

Technological hubs are combinations of local high-tech businesses which provide their own contributions with different configurations in different realities (public research, large enterprises, new small or already existent businesses and local authorities).

- ▶ The result of these hubs is an endogenous growth which is generated by the accumulation of expertise and an increase in competitiveness in the area which, in turn, increases the ability to attract external actors and production activities (i.e. entrepreneurs, corporations, research institutions), and, therefore, knowledge and global expertise.
- ▶ Fundamental conditions of a territory to attract external investment are:
  - ▶ Existence of widespread entrepreneurship;
  - ▶ Supply of highly qualified human resources;
  - ▶ Presence of prominent universities;
  - ▶ Support of an appropriate network infrastructure;
  - ▶ Presence of services dedicated to technology transfer;
  - ▶ A high quality of life.



# The National Operational Programme “Research and Competitiveness” 2007/2013

- ▶ The program uses Structural Funds made available by the European Union which are dedicated to investment in research and high quality innovation for the four convergence regions (Calabria, Campania, Puglia, Sicily).
  - ▶ The resources in question amount to over € 6 billion

**Italian High-Tech Hubs: 34**

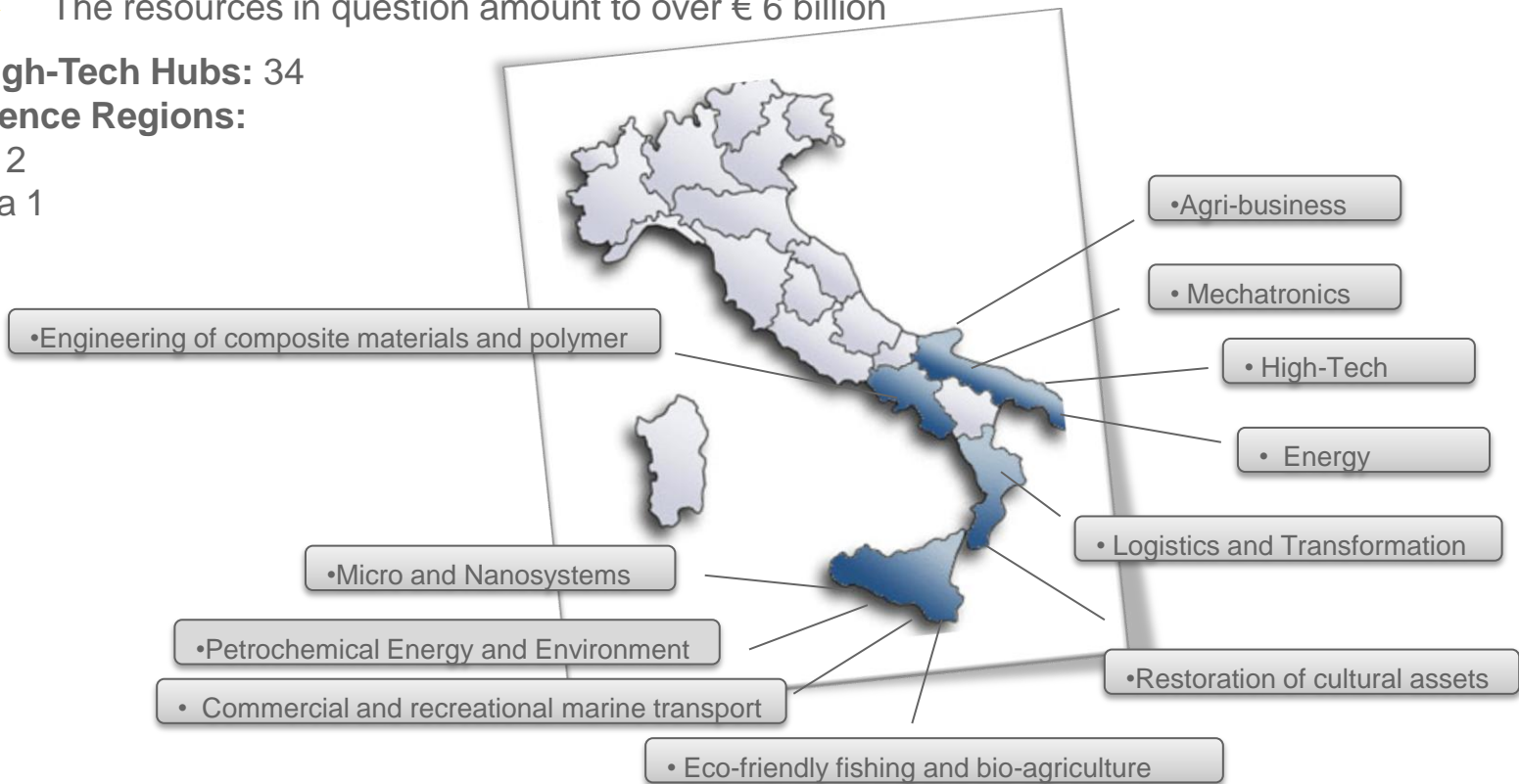
**Convergence Regions:**

Calabria 2

Campania 1

Puglia 4

Sicily 4



# The National Operational Programme “Research and Competitiveness” 2007/2013

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- ▶ The aim is to concentrate resources on a few large projects which interact with public and private entities, not just southern, in order to work together on shared goals of technological development characterized by:
  - ▶ High quality science at international level;
  - ▶ Medium-long time horizon;
  - ▶ Reliable and verifiable ability to create industrial value, encouraging the growth and development of an innovative industry and strong ability to compete;
  - ▶ Consistent ability to employ the best available human resources, aiming to generate employment of high-profile professionals.
- ▶ The active intervention focuses on three main objectives:

## Interventions

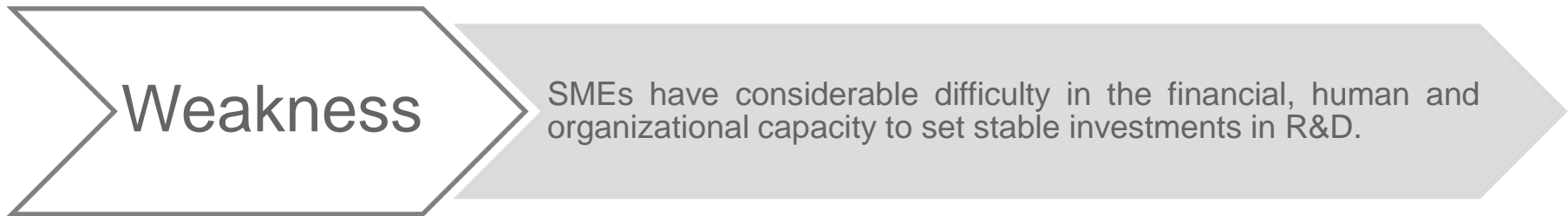
- To support industrial innovation through support of major research projects;
- To strengthen the public research structure in the world, represented by universities;
- To support the development and enhancement of high tech hubs and public-private laboratories.

# The National Operational Programme “Research and Competitiveness” 2007/2013

## The Role of SMEs

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- ▶ SMEs are the first to suffer the negative repercussions of competition in global markets.



- ▶ To support the activities of SMEs, the Ministry understands the need to reaffirm the importance of national policies for growth, encouraging actions and deep spread of technology transfer, along with interventions in terms of taxation (i.e. tax relief), and simplification of bureaucratic mechanisms to access public resources.