



# Reindustrialization of Tunisia: Towards equitable and sustainable development, and further democracy

Tunisia (Hammamet), 13 February 2016

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- BIBA - Bremer Institut für Produktion und Logistik GmbH
- Research Institute
- Founded in 1981 as first affiliate institute of the University of Bremen
- Scientific research institute for engineering in production and logistics
- Two departments:
  - **IPS** - Intelligent Production and Logistics Systems
  - **IKAP**: ICT applications for production
- 160 employees

Identification, conceptualization and demonstration of technology supported solutions based on **problem-oriented research.**

- **Industry**
  - playing an increasingly important role worldwide
  - considered as driver for innovation, growth, and social stability

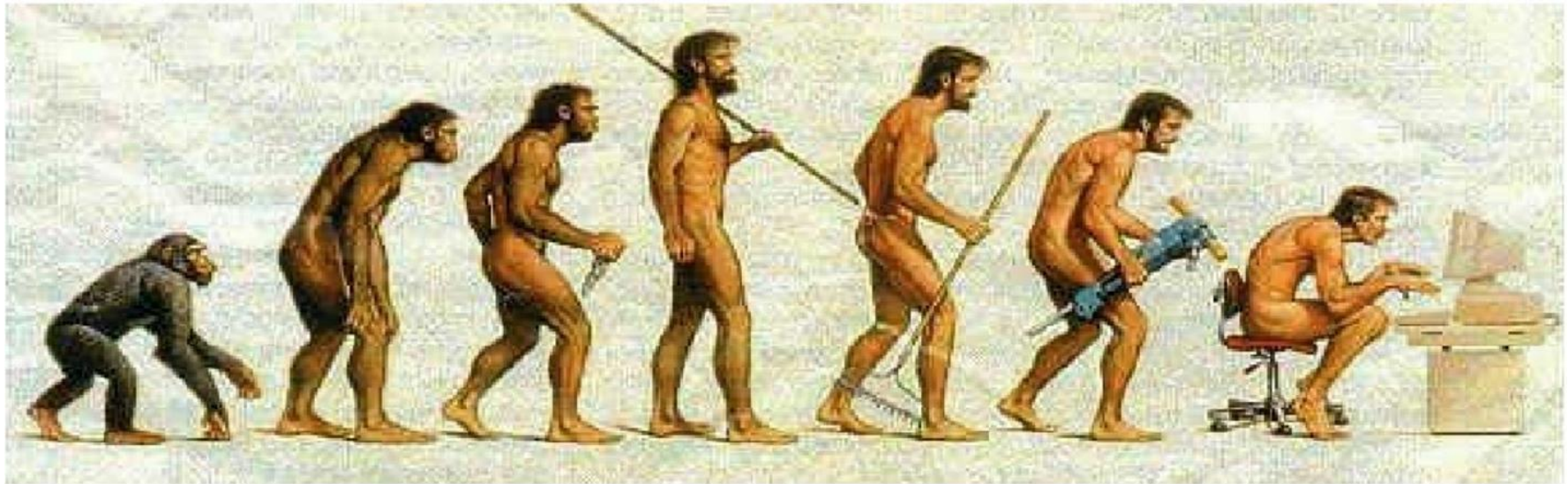
- **Challenges and drivers**



- **Goal: reduce time to market, flexible and efficient production and help industrial companies retain their competitive edge**



- Solution: merging the virtual and real production world, innovative software, automation, drive technologies and services

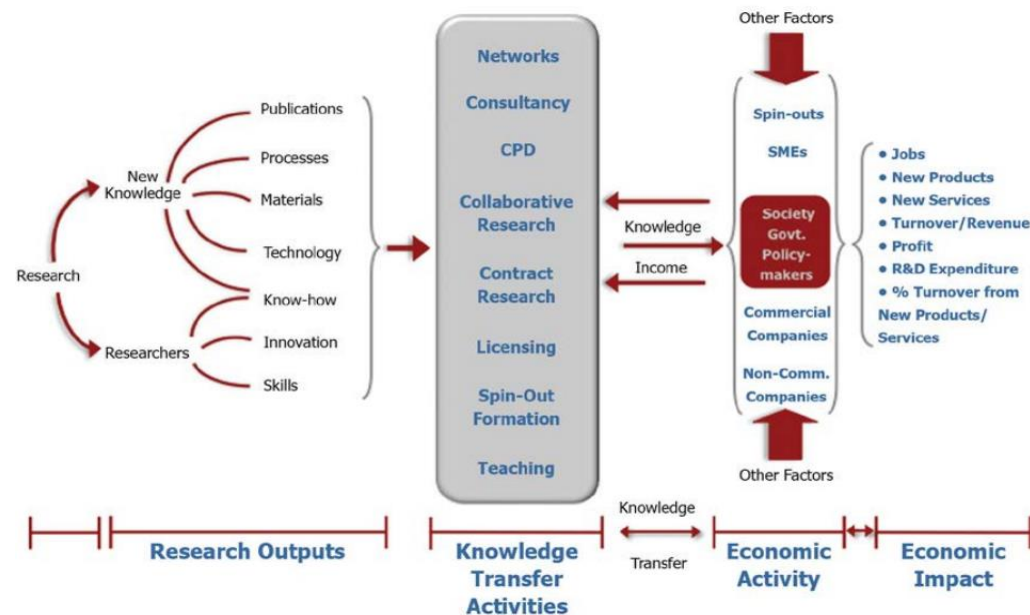


- Application of technology to a product, service or business concept creating value by making the process better, easier or cheaper for the end user

- Technologies that:
  - improve companies' capabilities to bring services and products to the market much more quickly
  - increase flexibility of companies
  - reduce costs
  - improve time to market
  - improve operational excellence
  - allow collaborative and partnering arrangements with other sectors
- Technology is an enabler for business growth, innovation and operational effectiveness
- Growth can be measured using a variety of metrics: income, profit, customer satisfaction and service quality

## Research

- Considered as a major component of innovation and a key to the development of modern societies
- Research is a process to discover new knowledge
- Different than other forms of discovering knowledge because it uses a systematic process called the Scientific Method
- Starting with a question, leading to economic impact






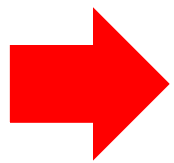
- Helps society as a whole, as well as individual firms
  - to keep options, possible scenarios and choices open (e.g. in relation with sustainable development)
  - to maintain a good capability for top-level scientific expertise
  - to develop conditions favourable to scientific and technological breakthroughs
  - to ensure training at the highest possible level
  - to guarantee access to, and free circulation of, the most valuable information
  - research may contribute to a better structural link between science and society
- Applied research deals with solving practical problems and generally employs empirical methodologies

# Research projects - Examples

- InSA: Integrated safety and security concepts in cyber-physical working environments
- KIPro: Artificial Intelligence supported platform for improving energy efficiency in production
- FITMAN: Future internet technologies for manufacturing industries
- CyPros: Cyber-Physical production systems - enhancement of productivity and flexibility by networking of intelligent systems in the factory
- ThroughLife: Development and proof of new approaches for through-life asset management based on next generation of materials and production technology

- Collaborative research projects
  - Scientific Exchange
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- Facilitate conducting research with a grander scope
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- Sharing data / ideas through
    - correspondence
    - discussions
    - by visiting each other
  - Integrating of results
  - Access to infrastructures

- 2014-2018: Federal Ministry of Education and Research (BMBF) / International Bureau (IB) funds measures and projects for the Scientific and Technological Cooperation (STC) with Tunisia
- Key areas of cooperation: health research, including biotechnology, renewable energies, energy efficiency, nutrition and agriculture, environmental technologies, climate change, climate protection, and water



Special attention is to be given to the interface between research and industry and the economy, to the education and training of specialist and junior staff oriented towards the requirements of the job market in industry, science and research, and finally to the interface between science and society.

**News Alert**  
**Brussels, 1<sup>st</sup> December 2015**

## **Tunisia joins Horizon 2020, the EU's Research and Innovation Programme**



Commissioner Moedas said: *"I am pleased to welcome Tunisia into Horizon 2020, the biggest programme for research and innovation of the world. This agreement is a historical one. It shows that through research and innovation, the EU is supporting the young Tunisian democracy and helping to invest in knowledge as a foundation of future development. Tunisia's accession also shows how a research policy open to the world can bring novel ideas and enrich our common research efforts."*

Tunisia should:

create and develop strategic & fruitful alliances with European entities to facilitate collaborative research and technology transfer

# Thank you for your attention

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