

# **Technology Commercialization and Intellectual Asset Management in Turkish Universities and small enterprises**

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# Approach



- The Environment: Key players & producers of new knowledge
- Changing Landscape around science, technology, industry & IP issues
- Products of science, technology and how to manage them
- Concluding remarks...

# The Environment



166 Universities

- 104 Public
- 62 Private

42 in  
Istanbul  
9 Public  
33 Private



# The Environment

9 in Istanbul  
(region inc.  
Kocaeli)



## Technology Development Regions

- Established in 2001 under a specific Law
- As of Dec. 2011 43 TDR;
  - 32 operational
  - 1800 companies (%0.36 foreign investment)
  - # of R&D projects = 4979
  - Exports 544 million USD
  - # of patents 301

# The Environment



- SME s
  - 99% of all enterprises are SMEs
  - Cover 78% of employment
  - Weaknesses:
    - Lack of entrepreneurship culture and knowledge
    - inefficient economic forecasting & appropriate action
    - unskilled workforce
    - inefficiency in access to new technologies
    - lack of capital for new tech investment
    - inability to benefit from economies of scale
    - lack of knowledge in R&D, innovation and industrial property rights
    - limited awareness of brand management
    - insecure position on international JVs..

## A period of change....Turkey



- 2011 elections: 24 Grand National Assembly of Turkish Government
  - Ministry of Industry > Renounced as Ministry of Science, Industry and Technology
  - TUBITAK (The Scientific and Technological Research Council of Turkey) Management changed
- R&D: More than doubled the level of GERD as a percentage of GDP from 0.37% in 1998 to 0.85% in 2009. Target set at raising the share of GERD to 2% of GDP by 2013.
- In 2011 4.087 resident (25.75% increase), 6.154 non-resident patent applications (%21 increase)
  - Grants: 6539 (12% resident)

# Current Agenda on supporting translational research and University entrepreneurship



- BTYK Decisions and resulting TUBITAK Strategies
  - Implications on higher education & research
    - Technology Transfer offices: manage commercialization of research and IP portfolio
    - Incubation centers: to incentivise academic entrepreneurship
    - Introduction of new Indexes for ranking
      - Entrepreneurial Univ. Index
      - Innovative Univ. index
    - Redesign of academic promotion criteria to include: patents and start-up co.s by faculty members
  - Forthcoming change in Patent Law; ownership on inventions coming out of universities

# Current Agenda on strengthening SME Environment



- 2010-2013 SME Strategy and Implementation Plan
  - In alignment with EC Small Business Act
  - Defines 5 strategic areas
    - Development and support of entrepreneurship
    - Development of management and institutional skills
    - Enhancement of business and investment environment
    - Development of R&D capacity
    - Ease in access to financing



# A period of change....EC; where 30% of our research funding comes from



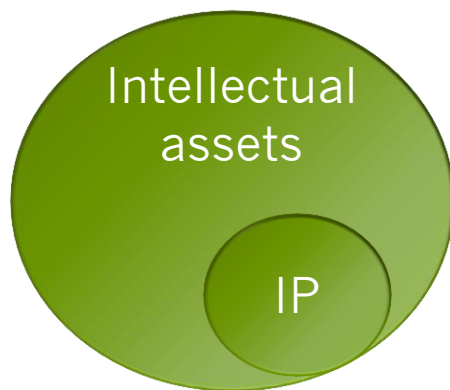
- 8<sup>th</sup> Framework Program vision: Innovation & Enterprise
- BusinessEurope; Commision's initiative to consult stakeholders for RDI > Horizon 2020
  - Innovation processes
  - Handling of IPR issues

# International Investors Association

- Protection of IPR in Turkey: Impact on Foreign Direct Investment \*
  - Strong link b/w IPR regime and the probability to shift FDI inflow from sales & marketing to production and even R&D
  - Close correlation b/w IPR protection and economic performances with respect to growth, technological transformation, export, FDI performance and employment capacities
    - 10% increase in patent rights index generates 16% rise in FDI stock
      - In Turkey: translates into a potential FDI inflow of nearly 30 billion USD
      - Additional 28.000 new jobs
      - National income would increase by 1.5% of GDP = 11.5 billion USD.



# From an asset value perspective: Products of science, technology and their management



- WIPO estimates:
  - Global market entirely constituting of intellectual assets has reached 200 Billion USD
- Shift from Production economy to Knowledge Economy
  - +70% of enterprise value is derived from intangible assets
  - IA management
    - Macro level: economic impact
    - Regional: collaborations, leveraging
    - Micro: access to low cost financing in technology commercialization (among the first 3 of investors list: IP strength)
- Not possible to determine unless identified and managed properly
  - Define and assess
  - Protect & enforce through appropriate means
  - Commercialize
  - Monitor

## Concluding Remarks: What we have done @ SU

### Difference in approach



#### IA vs. IP alone

- Law vs. business
- Desire to engage business strategy
- Interdisciplinary nature

- Proactively established a TTO (before gov. mandate)
  - Engaged in identifying the portfolio of technologies and new knowledge areas
  - Focused on fostering academic entrepreneurship
  - Identified primary incentive issues: IPR, protection, recognition
- Established a consortium of 5 Universities and LES Turkey to raise awareness on intellectual asset management as the primary driving force behind economic growth
  - National collaborations with NGOs
  - Heavy training activities on basics of IAM
  - International collaborations

*Thank you...*