

**SOTE, Budapest, 2012. február 10.**



## **HORIZON 2020: A hazai felkészülés és érdekérvényesítés feladatai**

*Prof. Dr. Zoltán Cséfalvay*

# Innovation: Europe's lost decade (2000-2010)



“Innovation was left to look after itself. What were seen to matter were lower regulations, lower taxes and reduced worker entitlements – **not using the state to build the ecosystem in which innovation, experimentation and investment flourish (...)**”  
(Will Hutton)

⇒ **R&D expenditure in GDP (GERD) in Europe: 1.9%**

⇒ **Aspiration: 3.0% GERD**

⇒ **Old Members State: 95% of FP7 funding**



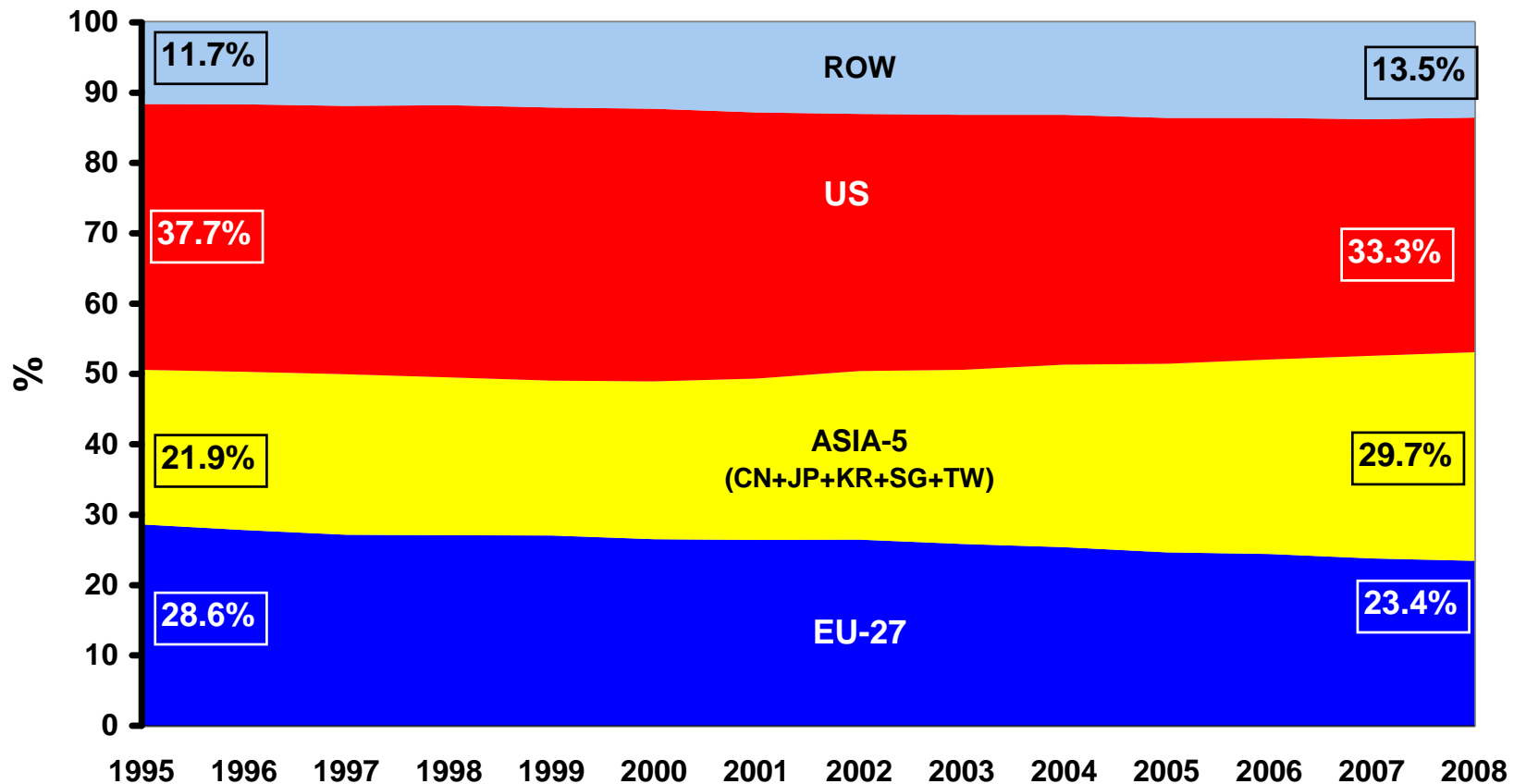
⇒ **R&D expenditure in GDP (GERD) in US 2.7%, Japan 3.4%**

⇒ **Delivery: 1.9% GERD**

⇒ **New Member State: 5% of FP7 funding**

# Innovation: Europe's lost decade

The world share of the EU in R&D expenditure has decreased by 1/5 since 1995



⇒ Currently Europe is falling behind, based on indicators of top academic universities and **numbers of Nobel Prizes** (Since 1901 US 236 and EU 404 Nobel Laureates, since 1945 US 211 and EU 242 Nobel Laureates, Since 1990 US 97 and EU 64 Nobel Laureates)

# Innovation: key to recovery



**Joseph Schumpeter** (creative gale of destruction)

“The fundamental impulse that sets and keeps the capitalist engine in motion comes from the **new** consumers, goods, the **new** methods of production or transportation, the **new** markets, the **new** forms of industrial organization that capitalist enterprise creates.”



**Angela Merkel** (German Chancellor)

“**We can only maintain our prosperity in Europe if we belong to the most innovative regions in the world**”.



**Obama** (Sputnik momentum)

“We know what it takes to compete for jobs and industries of our time. **We need to out-innovate, out-educate and out-build the rest of the world.** That’s how our people will prosper. That’s how we will win the future.”  
(State of the Union Address, 2011)

# Innovation: key to recovery



APPLE COMPUTER GARAGE  
2066 Crist Drive, Los Altos CA  
(Steve Jobs)



## MYTHS:

that innovation is solitary, waiting for 'eureka' moment

- ⇒ **Genius in the garage:** good story to sell, e.g. Jobs, Jerry Young, Facebook (captured in the myth of Silicon Valley)
- ⇒ **High risk finance:** Venture capitalists are rational risk-takers, they manage the risks (e.g. early exit strategy)
- ⇒ **Clusters:** small world syndrome, the strengths of weak ties (e. g. Michael Porter, Mark Granovetter):

## HOWEVER:

- ⇒ **Innovation is increasingly industry-driven** (e.g. Procter and Gamble has more Ph. D. scientists than Harvard, Stanford and MIT combined (William **Baumol**))
- ⇒ **Decentralised systems** are more resilient, more able to learn, more adaptable, more flexible, more responsive to changes, more creative, more innovative.

# Innovation AND Single Market



- ⇒ **Luc Soete** (Maastricht University) calculated the **COSTS OF A NON-INNOVATIVE EUROPE**:
- ⇒ Achieving the target of spending 3 per cent of EU GDP on R+D by 2020 could create 3.7 million new jobs and increase annual GDP by close to 800 billion euro by 2025.

- ⇒ **The bigger the market is, the stronger the incentives are to invest in innovation**, because the investment is more cost effective.
- ⇒ On the other hand, **bigger markets mean fiercer competition and that is also recognized as an incentive to innovate.**
- ⇒ The Single Market is Europe's biggest competitive advantage – such a highly integrated market **is missing in China, India, and Brazil.**
- ⇒ Only a deeper, wider, and updated Single Market could help **to create more jobs** in Europe and to lead Europe to a sustainable recovery path.

# Innovation AND Single Market AND Unitary Patent

Competitiveness Council (March) under the **Hungarian Presidency of the EU** gave green light to the keenly and long awaited unitary patent system.

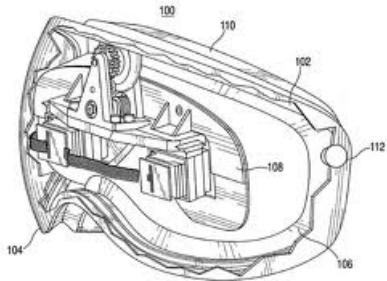


FIG. 1

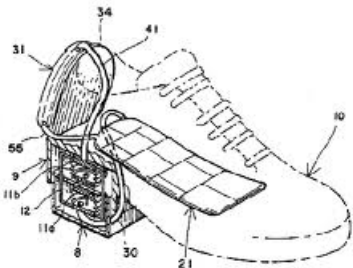
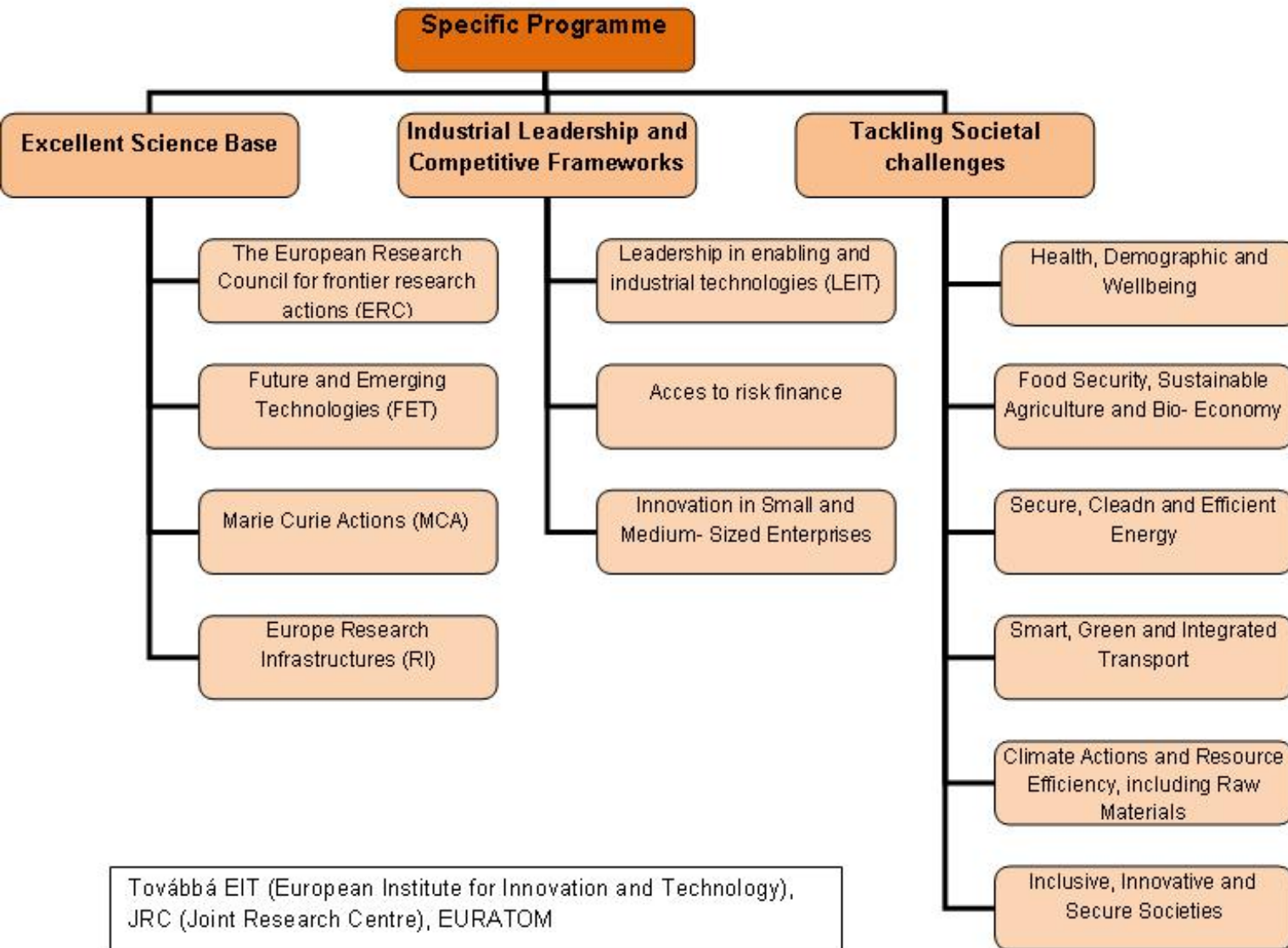


FIG. 2

- ⇒ The EU-wide patent would not only be **cheaper and simpler** (current costs of patent granted in 13 EU Member States are 18,000 euro, in the US 2,000 Euro),
- ⇒ But it would **abolish the present fragmented market**, on which inventors have to deal with 27 different legal systems, and hence it would induce further investment into R&D.
- ⇒ Because it is cheaper, simpler and legally more secure it is conducive to innovation and to **attract funding from private investors**.
- ⇒ It enhances the competitiveness of Europe as whole on global stage, but it maintains competition among researches, institutions, and countries

# HORIZON 2020 (2014-2020)

Responding to the economic crisis – Addressing peoples' concerns  
Strengthening the EU's global position



## What's new?

- ⇒ **A single programme**
- ⇒ **Coupling research to innovation**
- ⇒ **Focusing in societal challenges**
- ⇒ **Simplified access**



# HORIZON 2020 (2014-2020)

**TOTAL HORIZON 2020: 79 271 EUR million**

## **I Excellent science, *of which: 24 598***

1. The European Research Council 13 268
2. Future and Emerging Technologies 3100
3. Marie Curie actions on skills, training and career development 5752
4. European research infrastructures 2478

## **II Industrial leadership, *of which: 17 938***

1. Leadership in enabling and industrial technologies
2. Access to risk finance
3. Innovation in SMEs

## **III Societal challenges, *of which 31 748***

1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture, marine and maritime research and the bio- economy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, resource efficiency and raw materials
6. Inclusive, innovative and secure societies

# Challenge: Widening participation

## Cohesion countries in the 7th Framework Program (2007-2010)

Country	Applicants in eligible proposals from country	EC financial contribution in eligible proposals to applicants from country (euro)	Number of Applicants in retained proposals from country	EC financial contribution in retained proposals to applicants from country (euro)	Applicants from country	EC financial contribution to applicants from country (1)
BG	2 865	588 087 645	491	64 320 537	17,14%	10,94%
CY	1 649	371 525 288	280	42 913 482	16,98%	11,55%
CZ	4 249	931 290 171	869	155 467 454	20,45%	16,69%
EE	1 485	313 698 261	331	51 947 634	22,29%	16,56%
<b>HU</b>	<b>4 922</b>	<b>1 098 340 011</b>	<b>1 008</b>	<b>159 798 624</b>	<b>20,48%</b>	<b>14,55%</b>
LT	1 331	223 330 382	270	33 445 083	20,29%	14,98%
LV	874	175 202 352	193	21 704 727	22,08%	12,39%
MT	612	98 039 244	119	11 167 462	19,44%	11,39%
PL	7 515	1 889 953 215	1 451	264 936 746	19,31%	14,02%
RO	4 604	1 015 645 294	671	93 065 519	14,57%	9,16%
SI	3 416	796 592 778	555	92 163 276	16,25%	11,57%
SK	1 660	346 536 719	324	43 115 618	19,52%	12,44%
<b>Sum of NMS</b>	<b>35 182</b>	<b>7 848 241 360</b>	<b>6 562</b>	<b>1 034 046 162</b>	<b>18,65%</b>	<b>13,18%</b>

# Challenge: Widening participation

## FP7 támogatás régiók szerint (2007-2010)

	<b>Nyertes pályázók száma</b>	<b>Elnyert FP7 támogatás (€)</b>	<b>Pályázói arány (EU 100%)</b>	<b>Támogatási arány (EU 100%)</b>
<b>EU 27</b>	67 008	20 673 819 318	100%	100%
<b>EU 15</b>	60 446	19 639 773 156	90,2%	95,0%
<b>EU 12</b>	6 562	1 034 046 162	9,8%	5,0%
<b>V4</b>	3 652	623 318 442	5,4%	3,0%
<b>Magyarország</b>	<b>1 008</b>	<b>159 798 624</b>	<b>1,50%</b>	<b>0,77%</b>

Forrás: eCorda (External COmmon Research Data Warehouse)

# A Nemzeti Innovációs Stratégia javasolt célkitűzései (Nemzeti Reformprogram)

## 2012-2020: "What is measured can be managed":

- ⇒ a K+F ráfordítások GDP-hez viszonyított arányának (GERD/GDP) a 2010-es 1,14%-ról értékről 2020-ra a 1,8% értékre való növelése. (Jelenleg az uniós átlag 1,9%, a 2020-as cél 3,0%.)
- ⇒ a vállalati ráfordítások (BERD) aránya érje el az összes K+F ráfordítás kétharmadát, vagyis a vállalati ráfordítások GDP arányosan (BERD/GDP) 1,2%-ra emelkedjenek 2020-ig.
- ⇒ a hazai kutatás-fejlesztési és innovációs rendszert képessé kell tenni arra, hogy a **minél több külső forrást tudjon bevonni a 2014-2020-as uniós tervezési szakaszban.**

# A Nemzeti Innovációs Stratégia javasolt célkitűzései (Nemzeti Reformprogram)

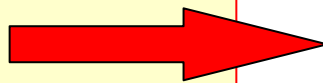
## 2012-2020: "What is measured can be managed":

- ⇒ a hazai – különösen a vállalati - K+F bázis jelentősen megerősítése, ezen belül **a K+F munkahelyek számának a jelenlegihez képest, további 15.000 új K+F munkahellyel történő bővítése 2020-ig.**
- ⇒ **mintegy 300 fiatal, gyorsan növekvő, K+F-fel foglalkozó kis- és középvállalkozás (gazellas – David Birch ) jelenjen meg Magyarországon 2020-ig.**
- ⇒ **legalább 10, a világ élvonalába tartozó és nemzetközi együttműködésben aktív tudományos műhely megerősítése**

# A K+F+I politika célrendszere és területei, 2012

## CÉLOK

- ⇒ **Horizon 2020** részesedés növelése
- ⇒ **Nagyvállalatok és KKV-k** kutatói munkahelyteremtése
- ⇒ **Gazellák** támogatása
- ⇒ Stratégiai **ágazatok**
- ⇒ **Likviditás** a gazdasági növekedés beindításához (Növekedési Terv)
- ⇒ Stratégiai **K+F együttműködések**
- ⇒ **Területi kiegyensúlyozás**



## TÁMOGATÁSI TERÜLETEK

- ⇒ **Nemzetközi K+F** programok (közvetlen felkészülés a Horizon 2020 keretprogramra)
- ⇒ **K+F projektek** és vállalatok támogatása
- ⇒ **Vállalati technológiai** fejlesztés
- ⇒ **K+F+I együttműködés** (vállalatok, egyetemek, kutató intézetek)

## Átfogó célok

- ⇒ Hatékony **IPR**-védelem és az **Adminisztratív terhek** csökkentése

## K+F+I vállalati pályázati források, 2012

<b>Támogatási területek</b>	<b>Pályázati keret (milliárd Ft)</b>
1. <b>Nemzetközi K+F</b> programok (közvetlen felkészülés a Horizon 2020 keretprogramra)	<b>5,5</b>
2. <b>K+F projektek és vállalatok</b> támogatása	<b>28,3</b>
3. <b>Vállalati technológiai</b> fejlesztés	<b>23,3</b>
4. <b>K+F+I együttműködés</b> (vállalatok, egyetemek, kutatóintézetek)	<b>17,5</b>
<b>ÖSSZESEN</b>	<b>74,6</b>
<b>Strukturális Alapok</b>	<b>38,6</b>
<b>Kutatási, Tudományos és Innovációs Alap</b>	<b>36,0</b>

# HORIZON 2020: Changes and Challenges



*“Innovation was left to look after itself. What were seen to matter were lower regulations, lower taxes and reduced worker entitlements – **not using the state to build the ECOSYSTEM in which innovation, experimentation and investment flourish (...)**”*

**Will Hutton**



⇒ *„**Basically a society’s entrepreneurs get channeled by the government’s policies to either productive or unproductive areas.***

⇒ ***Productive areas** means private-sector entrepreneurship, where people create wealth, goods and services that people value.*

⇒ ***Unproductive entrepreneurship** is when people in a society spend their time and talents simply trying to capture government grants, government favors, or pursue lawsuits against other individuals that transfer money around without creating new wealth.”*

**William Baumol**



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**KÖSZÖNÖM A FIGYELMET!**

*Prof. Dr. Zoltán Cséfalvay*