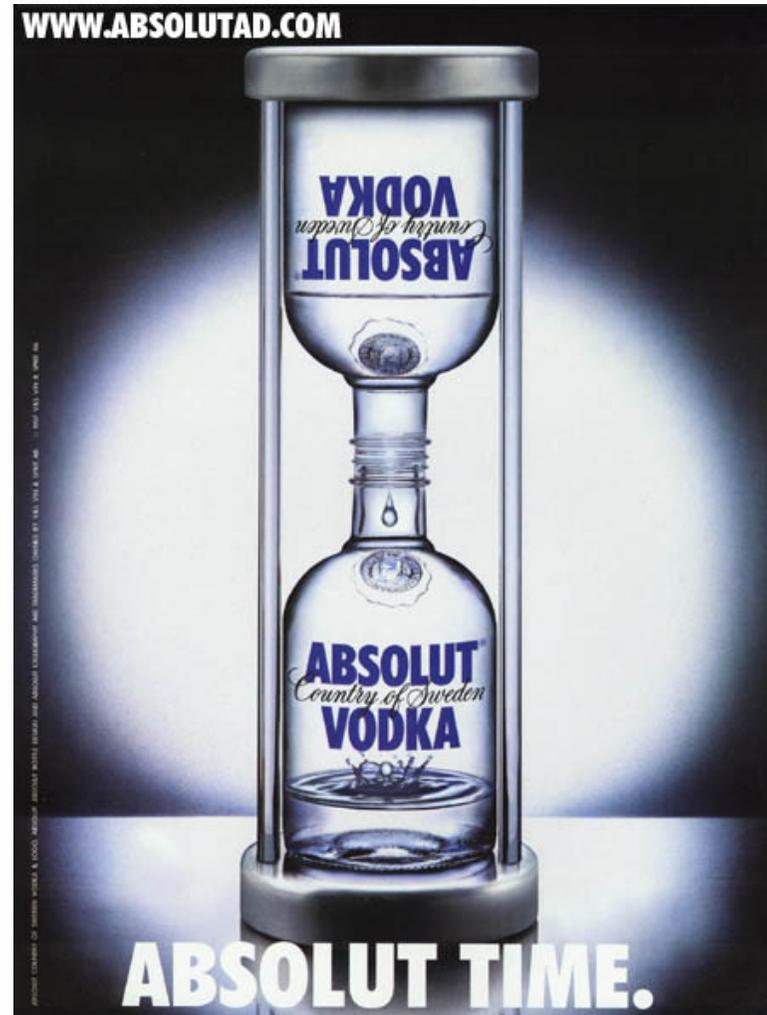


PORTUGAL
VENTURES

**Investing in Entrepreneurship
and Innovation**
Focus on Results

jose.franca@portugalventures.pt

Quiz time...



Do you know?...



“On **Oct. 1, 1891**, Stanford University opened its doors after six years of planning and building. In the early morning hours, construction workers were still preparing the Inner Quadrangle for the ceremonies. The great arch at the western end had been backed with panels of red and white cloth to form an alcove where dignitaries would sit.”

In Portugal, there is one of the oldest universities in the World



The University of Coimbra was founded on **March 1, 1290**.

Do you know?...



The magnificent North Reading Room in **Doe Library** at the UC Berkeley.

It was created in **1910**, and it is considered one of the **25 most beautiful** College Libraries of the World.

In Portugal, there is also one of the 25 most beautiful College Libraries of the World



“The library will endure; it is the universe.”

James Gleick, *The Information*

“**Biblioteca Geral da Universidade de Coimbra** highlights a **collection of rare and ancient books**, and acts as a metaphor for the illumination—both cultural and intellectual—that permeated the Age of Enlightenment.

Completed in 1728, the Joanina is a gilded testament to the financial and intellectual wealth that the Portuguese Empire enjoyed at the time.”

We carry the proud heritage of one of the world's most ancient nations



4 centuries of entrepreneurship, innovation and leadership.

Today, **Portugal** is still one of the most **entrepreneurial** countries in Europe.

The (big) challenge is to significantly **increase its technology content**.

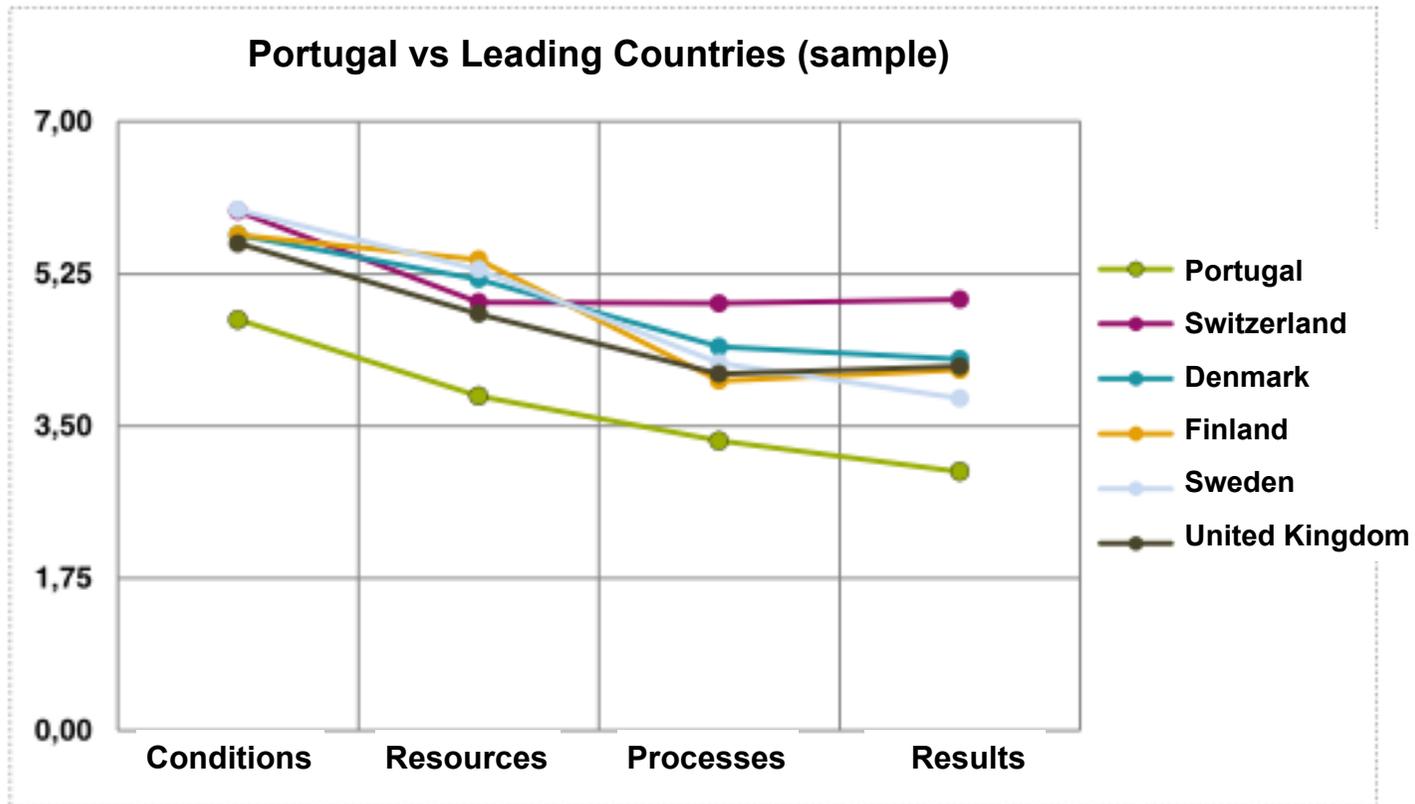
Agenda

- **Where we stand in the world of R&D and Innovation**
- **The reality behind the numbers... and lessons for change**
- **Portugal Ventures at a glance**
- **A program open to the World**

Agenda

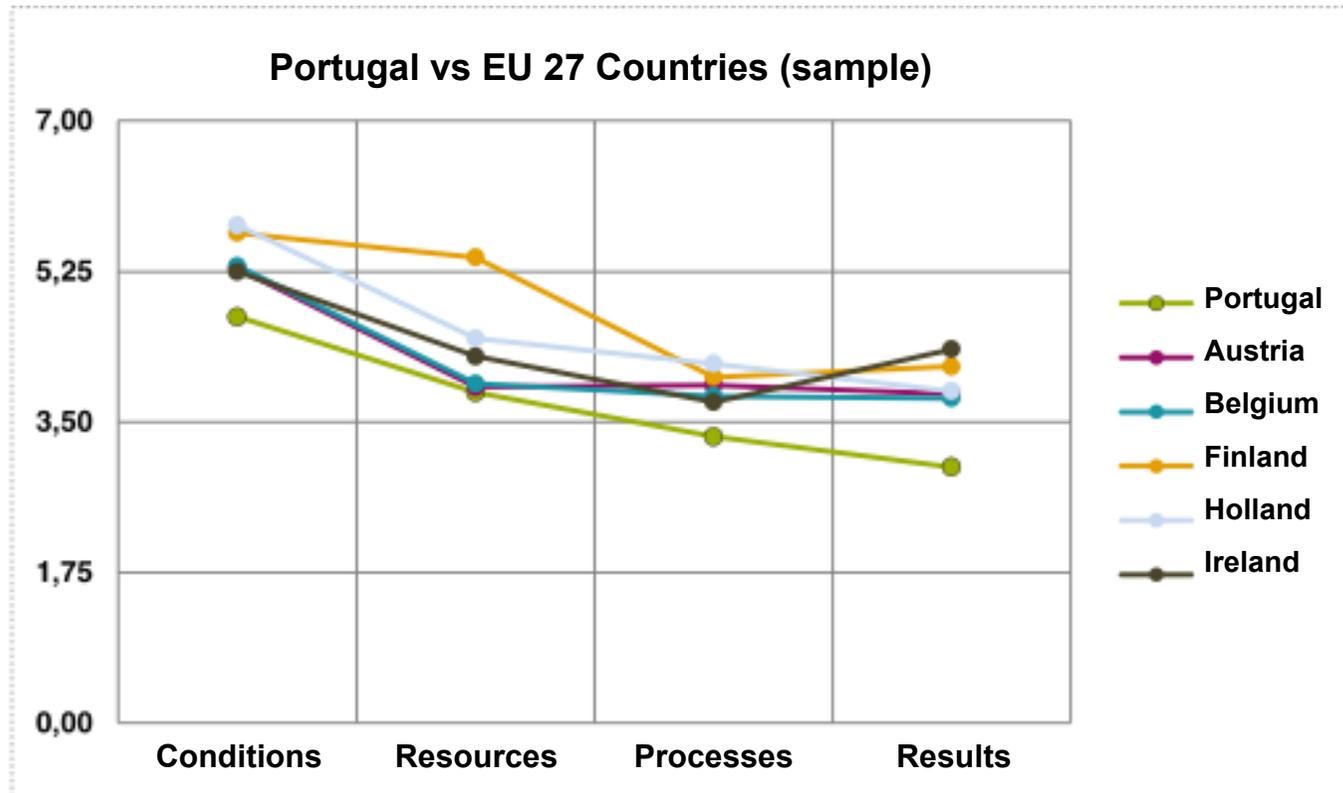
- **Where we stand in the world of R&D and Innovation**
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In all 4 dimensions, the **Gap** is **high** against Leading Countries



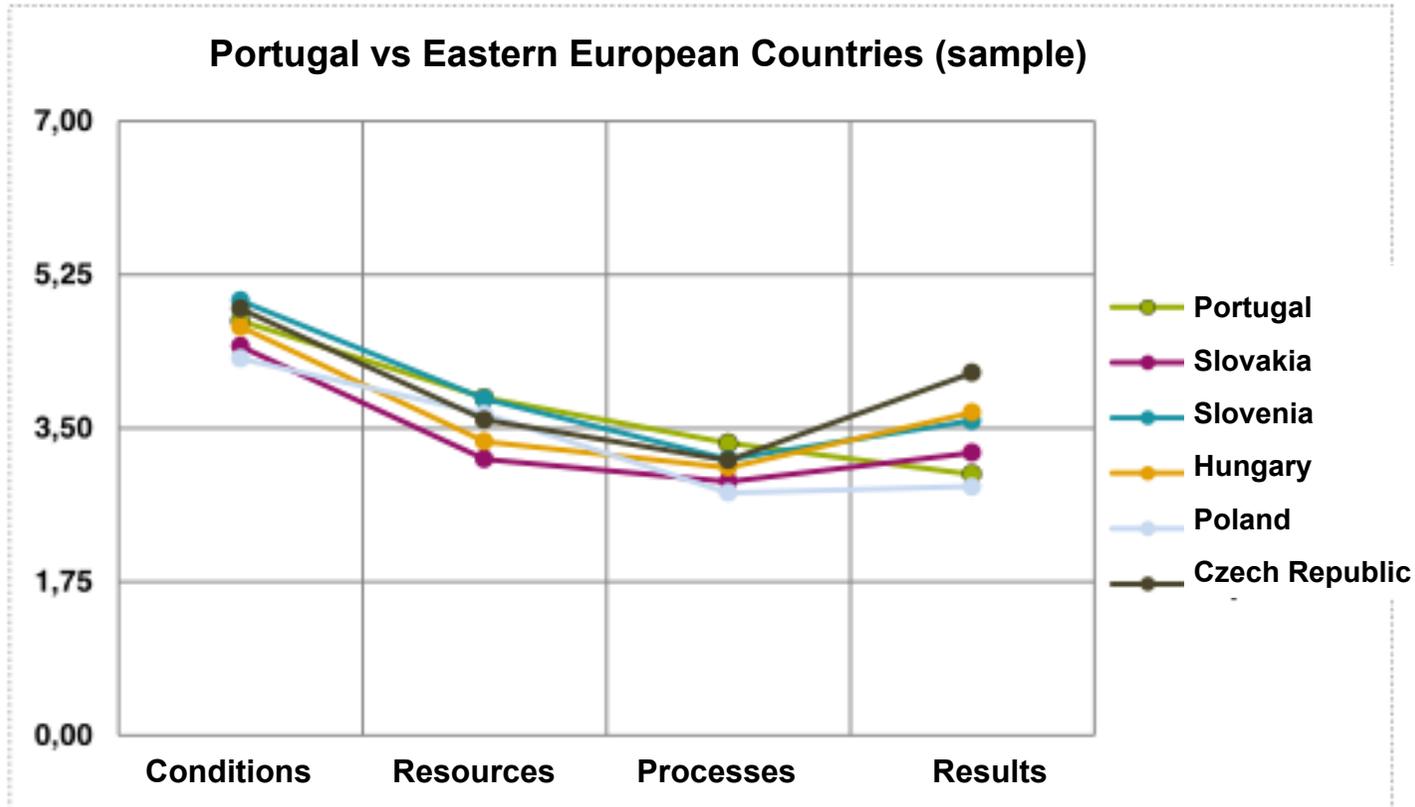
Source:
Barómetro COTEC, January 2012

The **Gap narrows down** against EU countries of similar size, with the exception of the *Results* dimension



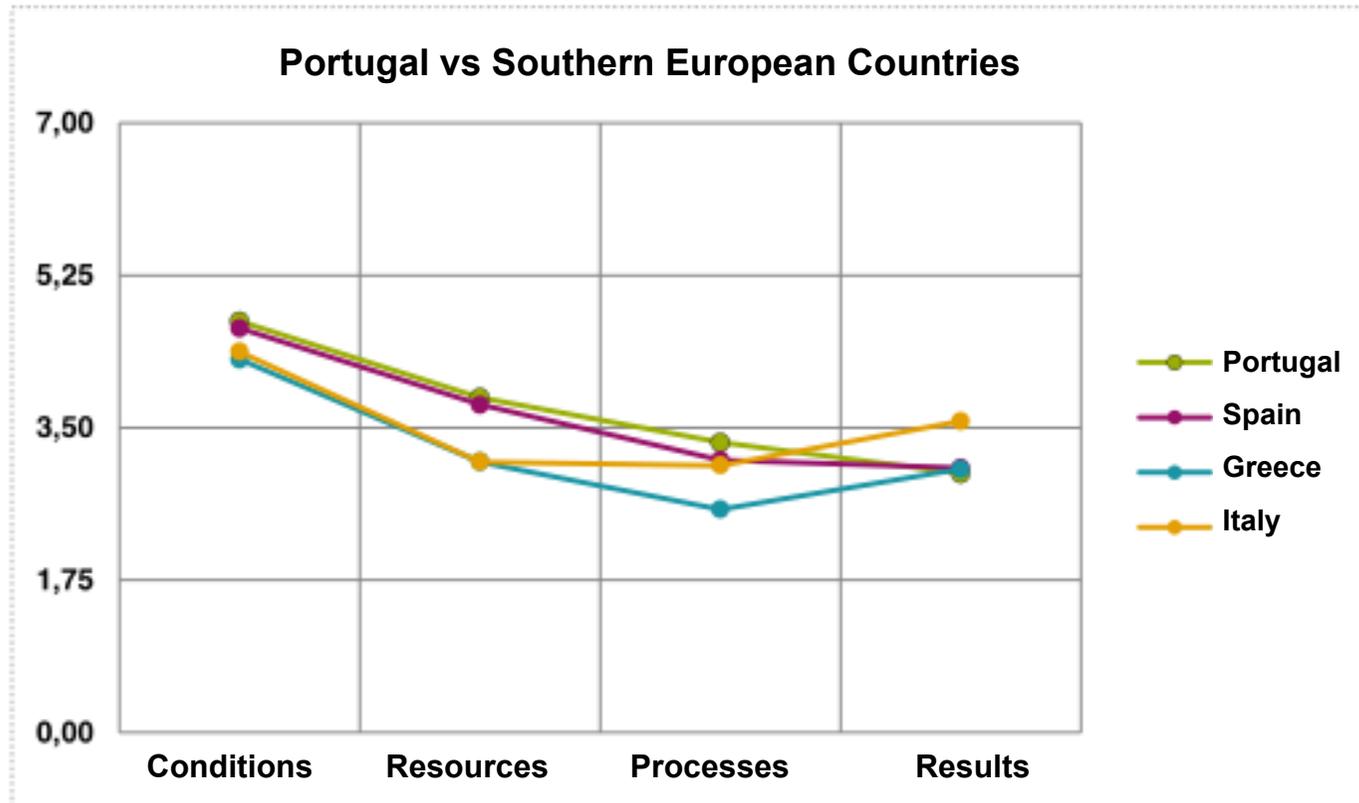
Source:
Barómetro COTEC, January 2012

Portugal performs better than Eastern European countries, still with the exception of the *Results* dimension



Source:
Barómetro COTEC, January 2012

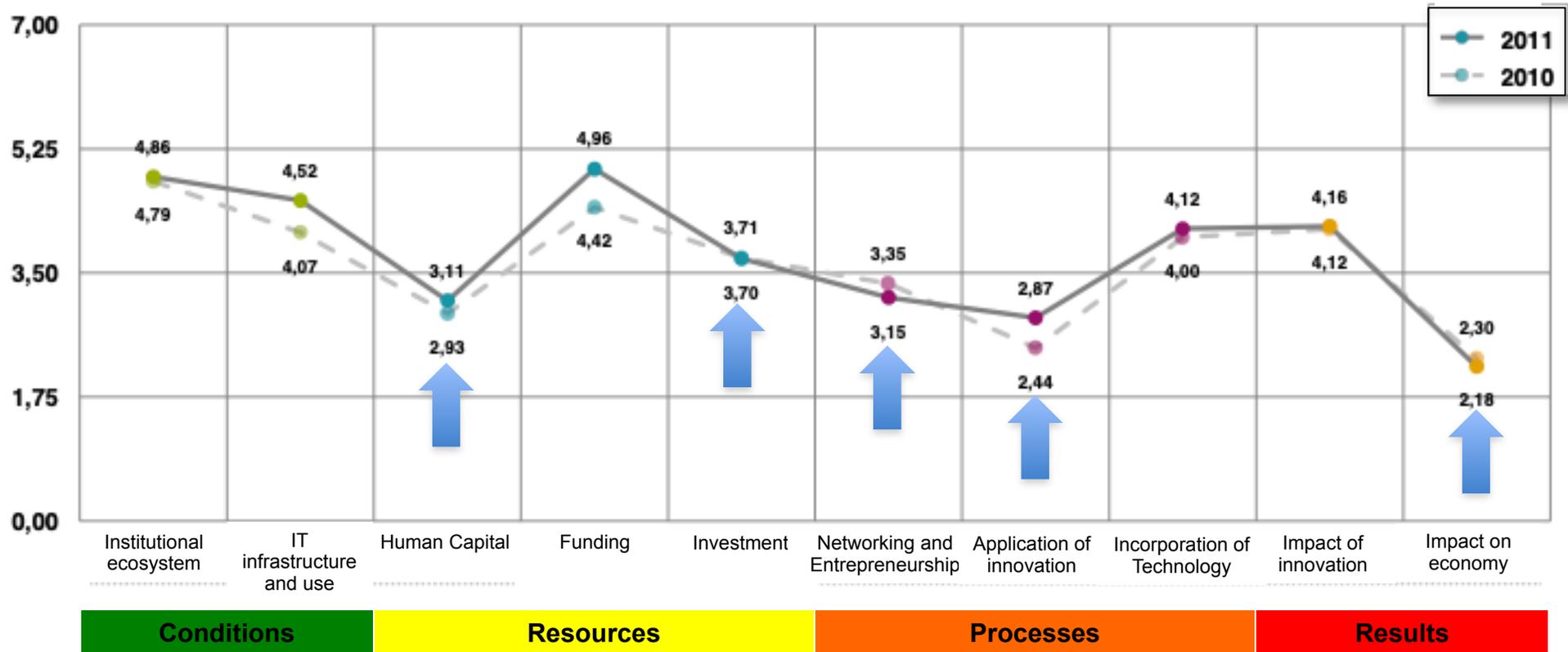
Portugal also has **better global performance** than Southern European countries, although the *Results* dimension still pulls it down



Source:
Barómetro COTEC, January 2012

Besides steady improvements, greater efforts and focus are needed to achieve meaningful **economic impact factors**

Improving the pillars of entrepreneurship and innovation



Source:
Barómetro COTEC, January 2012

Agenda

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The reality behind the numbers

- Significant investments in science and technology throughout the past 20 years have dramatically increased scientific visibility in the world. However:
 - Still the **lowest** number of patents per 1,000 habitants in Europe;
 - **Commercial exploitation** of university patents is largely **inexistent**;
 - Tech companies are mostly trapped in a **small internal market**;
 - Just a **handful** of small or medium sized companies are referenced as **world-class** in any high tech segment;
 - Few or no multinationals with established **R&D centers**;
 - Little or no **international VC investment** in Portuguese high tech companies;
 - **Fleeing** highly qualified **human capital** that is not absorbed by the economy.

What has gone wrong?

- **Scattered investments** among many different domains have prevented the build-up of critical mass.
- Entrepreneurship has been hampered by **cultural aversion to failure**.
- University system still captured by the “**preparing for a job**” view of education. Fast change to an **entrepreneurial view of education** is a national imperative.
- No real efforts to transform academic know-how into **entrepreneurial capital**.
- Lack of **international references**, both in VC and tech entrepreneurship.
- **Little effort** to attract **international venture capital** to invest in Portuguese projects.
- **Lack of focus** in competition in **international markets** – focus in domestic markets.
- Public funding to High Tech companies mostly not done through equity – **weak alignment** of interests with the success of projects.
- Public VC investment has not been followed by **qualitative support** to companies and entrepreneurs.

Is it possible to change? – Lessons from my past life as an entrepreneur



The Story in a
Nutshell



My Experience

1st life: Academic entrepreneurship at



1st Act (1986-1991): Excitement!

- Attract students.
- Develop a framework of relevant undergraduate and graduate education.
- Be scientifically active... and productive.
- Gain visibility and be recognized by your (international) peers.
- Establish stable funding channels.
- Develop international networks, both in academia and industry.

Set your mind abroad!



2nd Act (1992-1994): Frustration!

- Increasingly **disconnected** from the country.
- **Knowledge** created could not flow into the **economic fabric**.
- Concerns about lack of attractive, technically stimulating **professional environment**.
- **Unacceptable waste of valuable human capital**.



Are you running with
the right pack?

Resist Resignation!

My Experience

1st life: Academic entrepreneurship



3rd Act (1995-1996): In search of Solutions...

- Find job opportunities for students... Abroad!
- Look for international investment to set-up an Engineering Center in Portugal.

**Do it Yourself... and be
Brave to start a start-up!**



Intellectual Property (IP) Business

Focus on design engineering

Analog Technology for SoC integration

Scarce resources worldwide

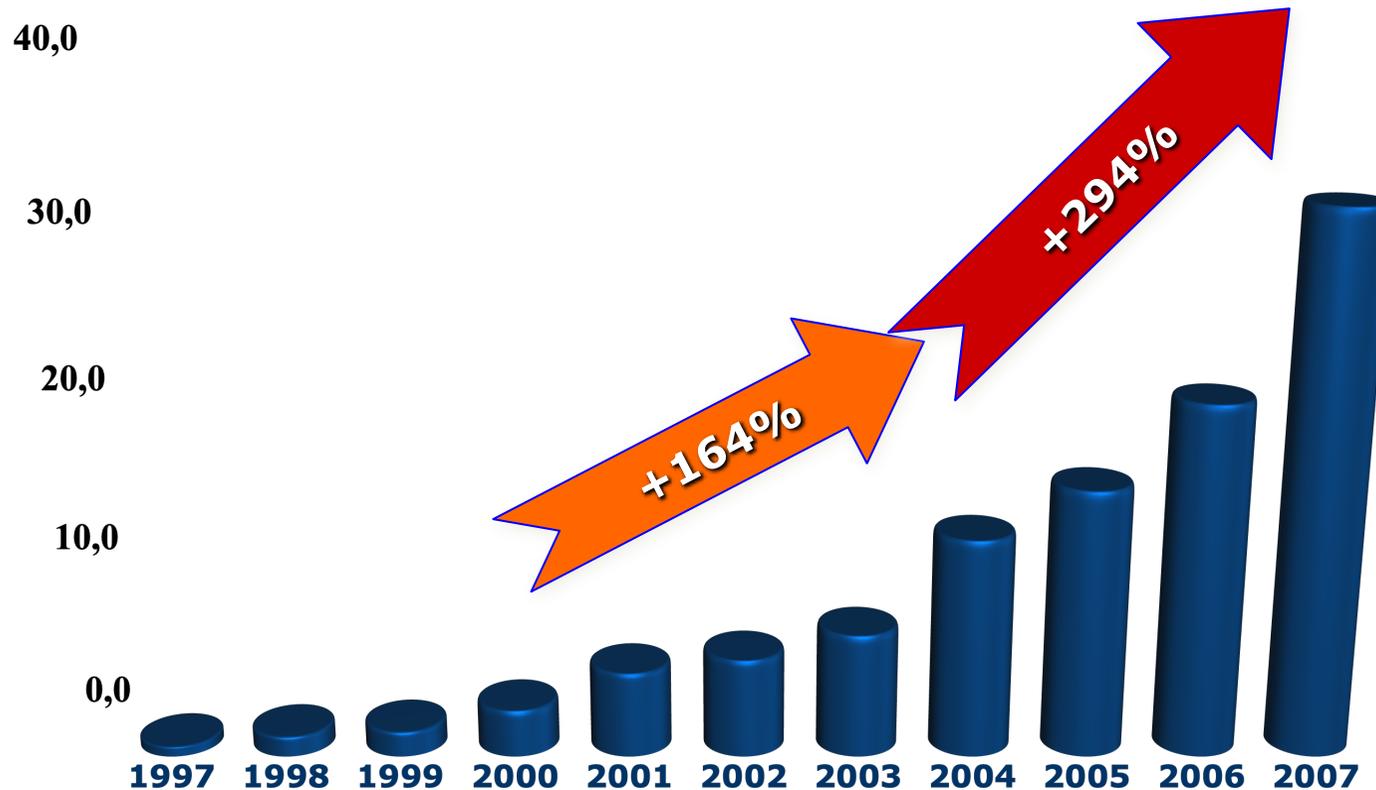
Target the Consumer Market

Growth engine

My Experience

Grow with a strong sense of urgency

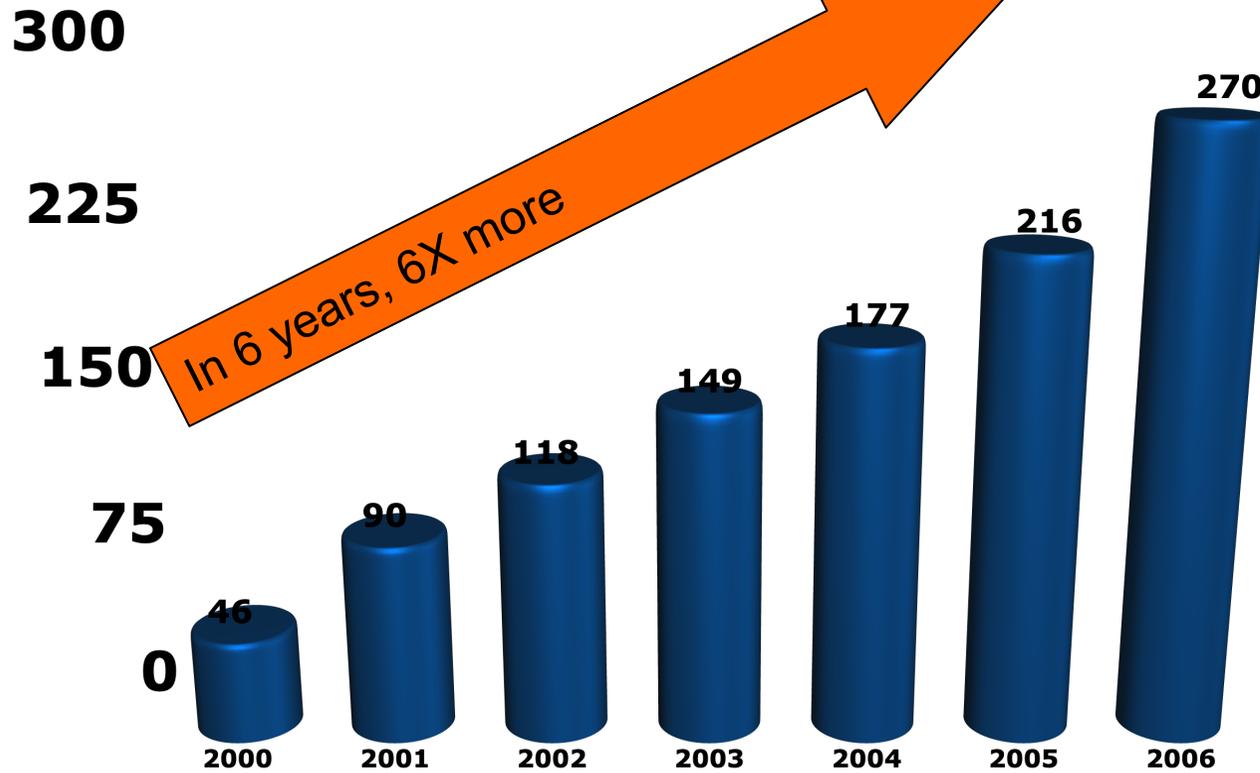
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Semiconductor Market*	-8%	18%	31%	-31%	1%	17%	23%	7%	10%	
Chipidea	100%	25%	87%	82%	16%	25%	77%	22%	31%	40%



*source: Gartner Worldwide SIP Report

My Experience

Powered by people



My Experience

Grow beyond borders



2007

Caen / FRANCE

- RF IP Design

Trondheim / NORWAY

- Data Converters IP Design

2004

Leuven / BELGIUM

- Audio & Power Management System Applications

Suzhou / CHINA

- Business Development, Digital Design, RF IP Design

2002

Macau / CHINA

- IP Design: Converters, Audio and Video Codecs, Power Management

2001

Gdansk / POLAND

- IP Design : Line Transceivers

Porto / PORTUGAL

- Digital Design Center
- IP Design Connectivity Solutions

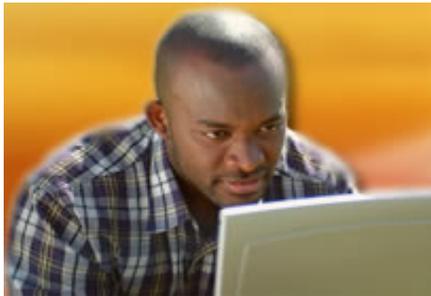
1997

Lisbon / PORTUGAL

- IP Design: Data Conversion, Audio, Power Management and Wireless IP System Solutions
- Info & Design Support Systems
- Test, Applications and Product Engineer

My Experience

Selling (only) in the world



2006

US North Region – CA, Campbell - IP Sales

Korea - IP Sales

USA - Carlsbad/CA – FAE IP

Worldwide - CA Campbell-IP Sales

2005

US West Coast Region – IP sales

BELGIUM Leuven – Audio & Power Product Marketing and IP sales

ASIA / PACIFIC - China/Taiwan - IP Sales

JAPAN/ Tokyo - Representant

Central and Northern Europe - Paris / France - IP New Business

2003

US Central Region and South California - Austin Texas - IP Sales

ASIA / PACIFIC China / Suzhou - IP Sales

2002

US Eastern Region and Canada - Newark / New Jersey - IP Sales

Southern Europe, UK, Ireland and Israel - Paris / France and Israel / Zichron - IP Sales

1997

WORLD – Portugal / Lisbon- IP

My Experience

Riding with the leaders, the Top 5 and 20 of the Top 25...

Worldwide 2006 Top 25 Semiconductor Sales Leaders (\$M)

2006 Rank	2005 Rank	Company	Headquarters	2005 Tot Semi	2006 Tot Semi	06/05 % Change
1	1	Intel	U.S.	35,395	32,268	-9%
2	2	Samsung	South Korea	17,838	19,670	10%
3	3	TI	U.S.	11,300	13,200	17%
4	5	ST	Europe	8,870	9,854	11%
5	4	Toshiba	Japan	9,045	9,782	8%
6	7	TSMC*	Taiwan	8,217	9,748	19%
7	8	Hynix	South Korea	5,599	8,009	43%
8	6	Renesas	Japan	8,266	7,900	-4%
9	9	Freescale	U.S.	5,598	6,049	8%
10	11	NXP (former Philips)	Europe	5,238	5,935	13%
11	14	Sony	Japan	4,223	5,804	37%
12	10	NEC	Japan	5,593	5,685	2%
13	16	AMD	U.S.	3,936	5,649	44%
14	12	Micron	U.S.	4,954	5,520	11%
15	21	Qimonda	Europe	3,423	5,413	58%
16	13	Infineon	Europe	4,874	5,120	5%
17	19	Qualcomm**	U.S.	3,457	4,422	28%
18	18	IBM	U.S.	3,495	3,955	13%
19	17	Fujitsu	Japan	3,500	3,858	10%
20	15	Matsushita	Japan	4,097	3,835	-6%
21	22	UMC*	Taiwan	3,259	3,670	13%
22	24	Broadcom**	U.S.	2,671	3,668	37%
23	29	Elpida	Japan	1,954	3,474	78%
24	20	Sharp	Japan	3,430	3,471	1%
25	26	Nvidia**	U.S.	2,353	2,980	27%
Top 10 Total				115,366	122,415	6%
Top 25 Total				170,585	188,939	11%

*Pure-Play Foundry

**Fabless

Source: IC Insights' Strategic Reviews Database

My Experience

Climbing to the top

IP Semiconductor, worldwide (USDm)		
	2004	2005
ARM	312.2	373.1
Rambus	144.9	157.2
Synopsys	76.2	81.2
Saifun	30.6	78.6
MIPS Technologies	56.9	58.7
Virage Logic	53.0	51.3
Mosaid Technologies	13.5	40.4
Ceva	37.7	35.6
Imagination Technoloç	28.6	29.2
Mentor Graphics	26.9	28.8
Tensilica	18.7	27.0
TTTech	17.8	25.0
	18.2	24.5
Faraday Technology	18.0	22.9
Sci-Worx	13.5	19.7
ARC International	19.8	19.0
Silicon Image	20.8	18.5
Cadence Design Syst	12.0	17.6
ZSP (LSI Logic)	16.1	17.5
Newlogic (Vipro)	18.4	15.5

Segmented statistics on a world wide basis, all in USDm

License revenue, all subcategories		
	2004	2005
ARM	146.6	180.5
Synopsys	66.6	71.2
Saifun	22.6	65.8
Virage Logic	44.6	39.8
Rambus	24.3	26.9
Mentor Graphics	21.3	25.0
MIPS Technologies	29	24.9
Ceva	26.3	23.9
Tensilica	17.4	23.5
	17.4	21.9

A/D and D/A Converters		
	2004	2005
	3.4	5.2
Cadence Design Syst	0.4	4.7
QualCore Logic	2.5	3.8
Dolphin Integration	0.8	1.8
e-vision	0.6	1.1
SliceX	0.8	1.0
Silicon Designs Intern	0.5	0.8
Sarnoff	0.5	0.8
Acco Microelectronica	0.4	0.6
Nordic / Chipidea	1.9	0.6

Wired interfaces		
	2004	2005
Synopsys	27.6	35.7
Rambus	16.2	20.3
Silicon Image	20.8	18.5
	5.2	10.6
Aware	11.7	10.2
Faraday Technology	8.9	8.8
Mentor Graphics	8.5	5.9
ARM	3.9	5.7
Cadence Design Syst	8.5	5.2
PLD Applications	4.0	4.1

Other Analog and Mixed Signal Functions		
	2004	2005
Simple Silicon	4.9	9.9
	5.7	7.6
QualCore Logic	3.0	3.6
Cadence Design Syst	0.4	3.4
SliceX	2.2	3.0
True Circuits	2.5	2.6
Snowbush Microelectr	1.4	1.7
Integrated Circuit Des	1.0	1.5
Mosaid Technologies	0.0	0.9
Memscap	0.5	0.8

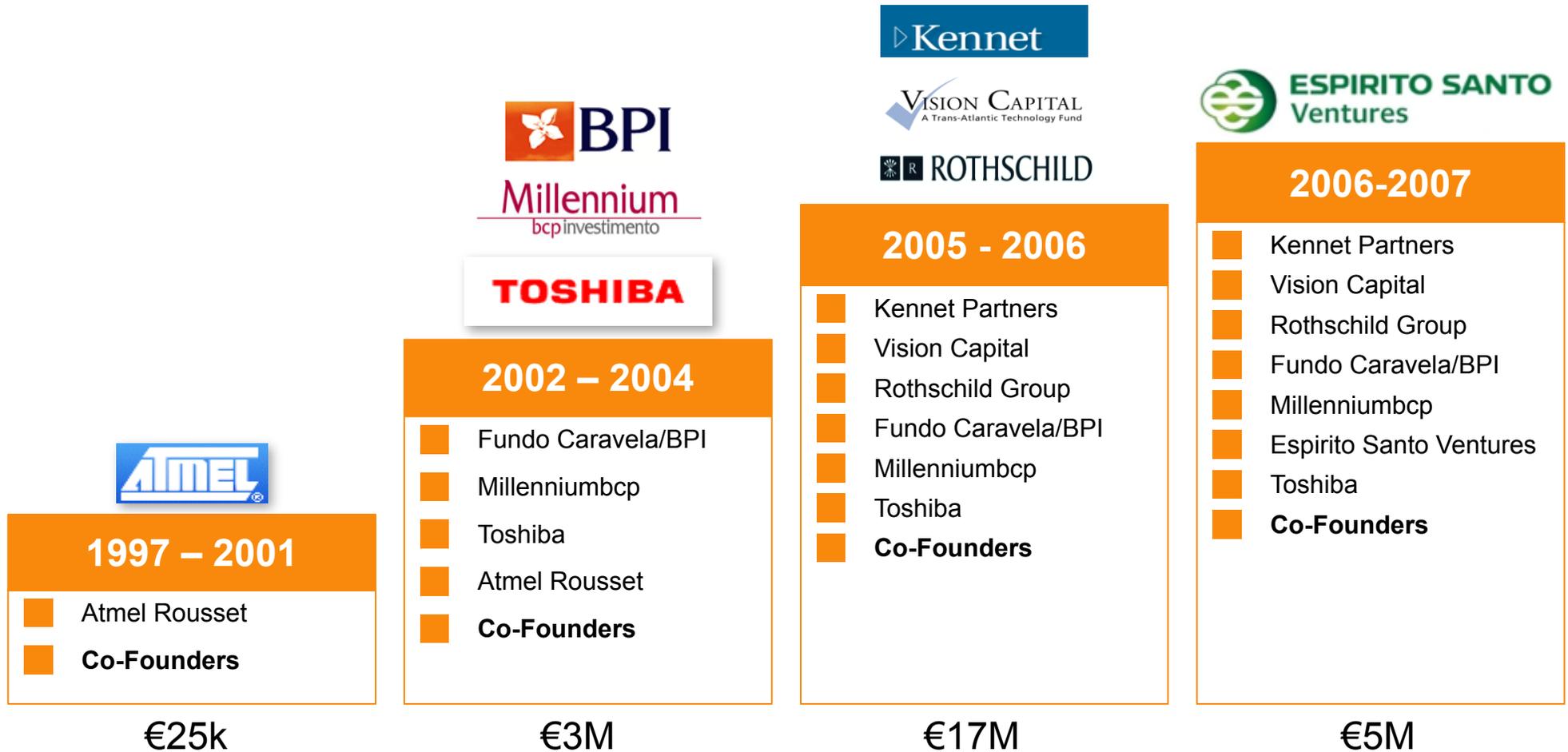
General Purpose Analog and Mixed Signal		
	2004	2005
	9.1	12.8
Simple Silicon	5.0	10.0
Cadence Design	0.8	8.1
QualCore Logic	5.4	7.4
SliceX	3.0	4.0
True Circuits	2.5	2.6
Snowbush Microelectr	1.5	1.8
Dolphin Integration	1.1	1.8
Integrated Circuit	1.0	1.5
Acco Microelectronica	0.9	1.4

USB		
	2004	2005
Synopsys	20.7	26.9
	5.2	10.6
Faraday Technology	8.2	8.3
Innovative Semicondu	3.0	3.4
Mentor Graphics	5.1	3.3
Sci-Worx	0.8	1.0
Aragio Solutions	0.2	0.9
C-Logic Semiconduct	0.5	0.6
Cast	0.1	0.4
Evatronix	0.1	0.2

Source: Gartner Dataquest (May 2006)

My Experience

Raising capital (60% from international sources)

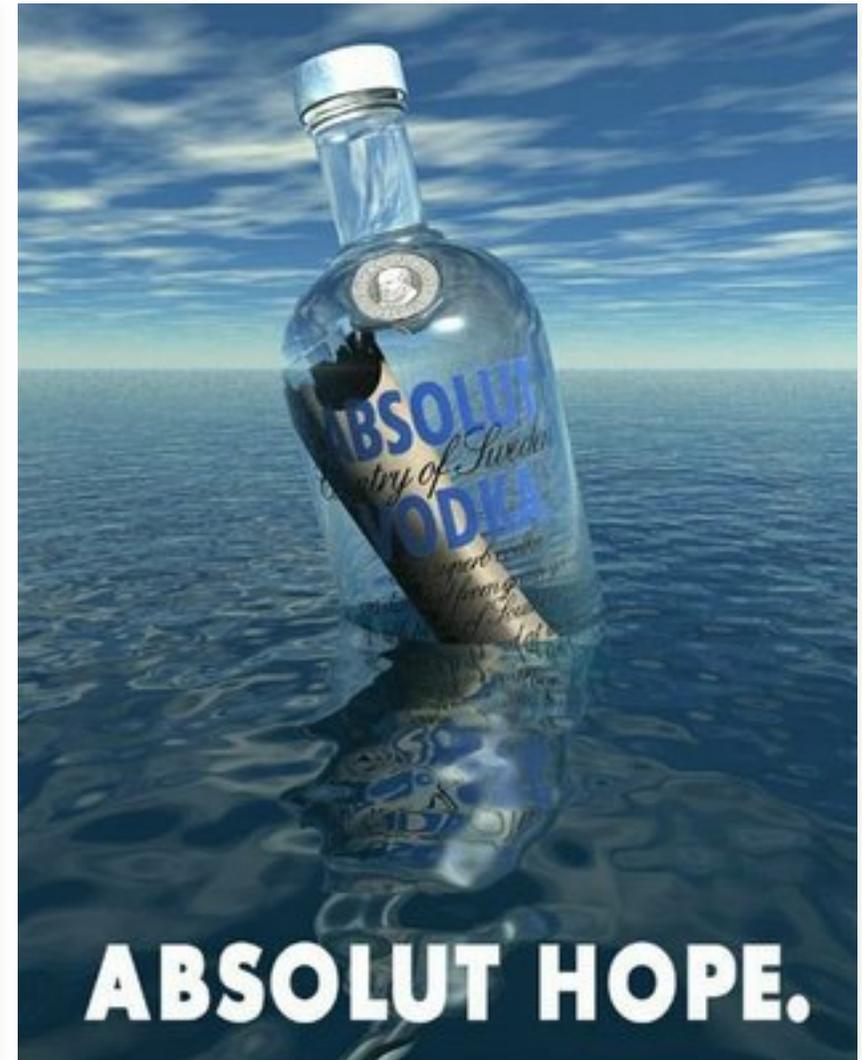


My Experience

Celebrating

By 2007:

- 32 M€ in Revenue.
- Global headcount of 340, with more than 97% graduate and post-graduate degrees (most of all in electronics engineering).
- 25 M€ of venture capital, of which 60% from international sources.
- Acquired by MIPS for 147 million USD cash, 3X returns for investors and one of the largest semiconductor exits in Europe.
- Today, part of Synopsys.
- 6 spin-offs (including in Brazil, France and China).
- 2010 Industrial Pioneer Award of the IEEE Circuits and Systems Society



Is it possible to change? – Lessons from my past life as an entrepreneur



- **Global success is possible** – there is not such thing as a “country curse”.
- **International references** and positioning in **international markets** are crucial elements for global competitiveness.
- **Quality** projects can attract international investments.
- **Global networking** is a must.
- **Our talent** can be as good as any talent in the world.
- Access to **foreign talent** is fundamental to complement local know-how and achieve critical mass.
- **Execution** and sense of **urgency** are more important than good ideas.
- **Alignment of incentives** among investors and entrepreneurs is fundamental to induce success.

Agenda

- **Where we stand in the world of R&D and Innovation**
- **The reality behind the numbers... and lessons for change**
- **Portugal Ventures at a glance**
- **A program open to the World**

Two public entities have a comprehensive set of tools to participate in the financing of the economy

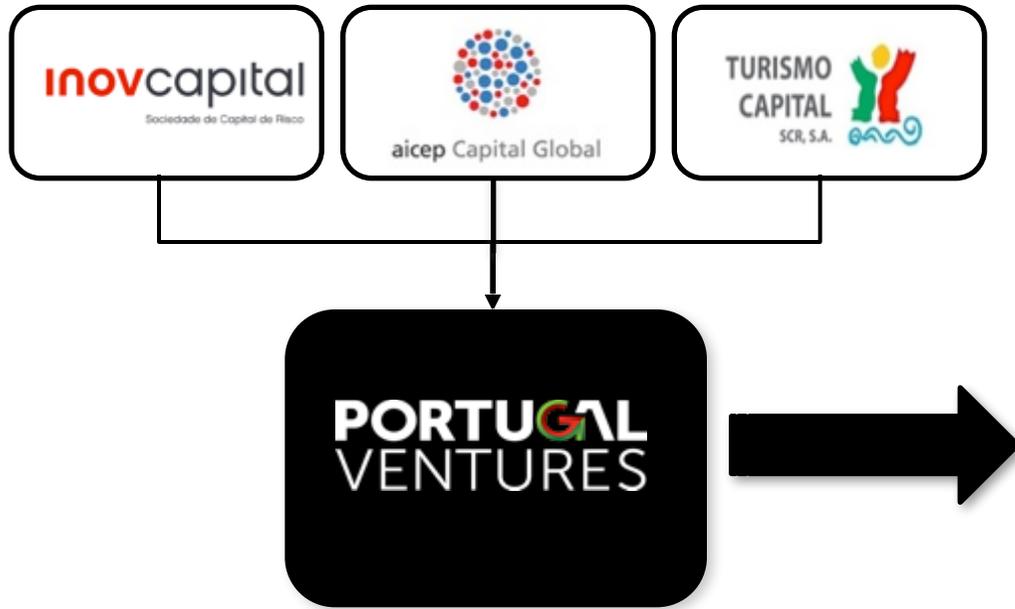


Portugal Ventures

PME Investimentos

- **Venture Capital**
 - Seed, Early-stage and Scale-up investments
 - Fostering technology-based entrepreneurship
 - **Private Equity**
 - Consolidation and restructuring of traditional sectors of the economy
 - **Capital operator focusing on relevant economic sectors and, in particular, tourism**
-
- With about **1.5 billion euros** of assets under management, it has contributed to about **12 billion euros** injected in the economy
 - In partnership with the national banking system, PME Investimentos finances **credit line facilities**
 - As a Limited Partner, its main goal is to develop the **private Venture Capital and Private Equity industry**, stimulate the emergence of new players and attract international investment
 - It can participate with **assymetric sharing of risk and profitability** with private investors

Founded in June 2012, Portugal Ventures is the result of the merger of 3 of the most representative VC and PE firms in Portugal



- AICEP Capital Global (founded in 1988)
- Inov Capital (founded in 1989)
- Turismo Capital (founded in 1991)

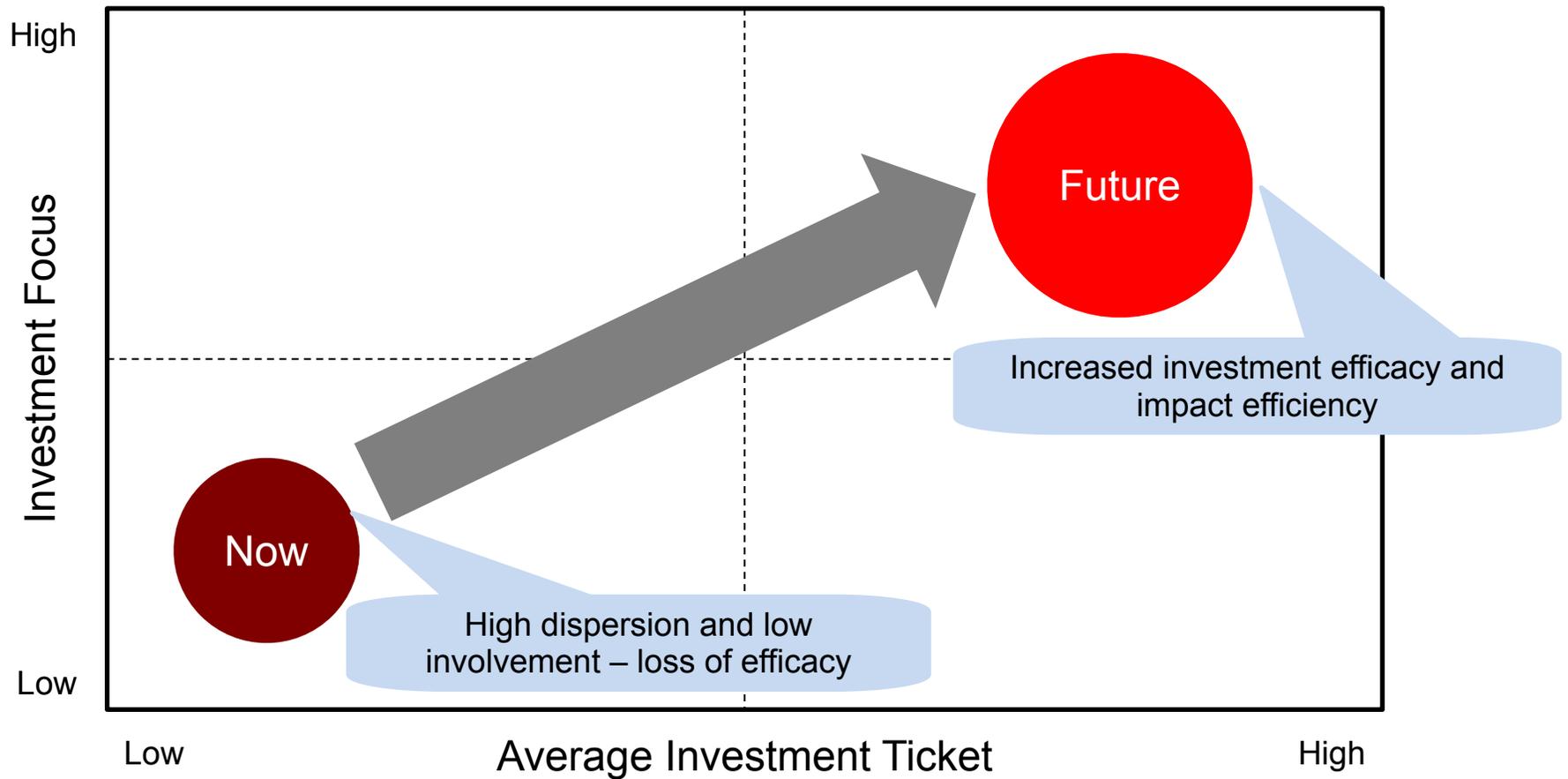
- 26 venture capital funds
- +100 portfolio companies
- (circa) EUR 600 M of assets under management

www.portugalventures.pt

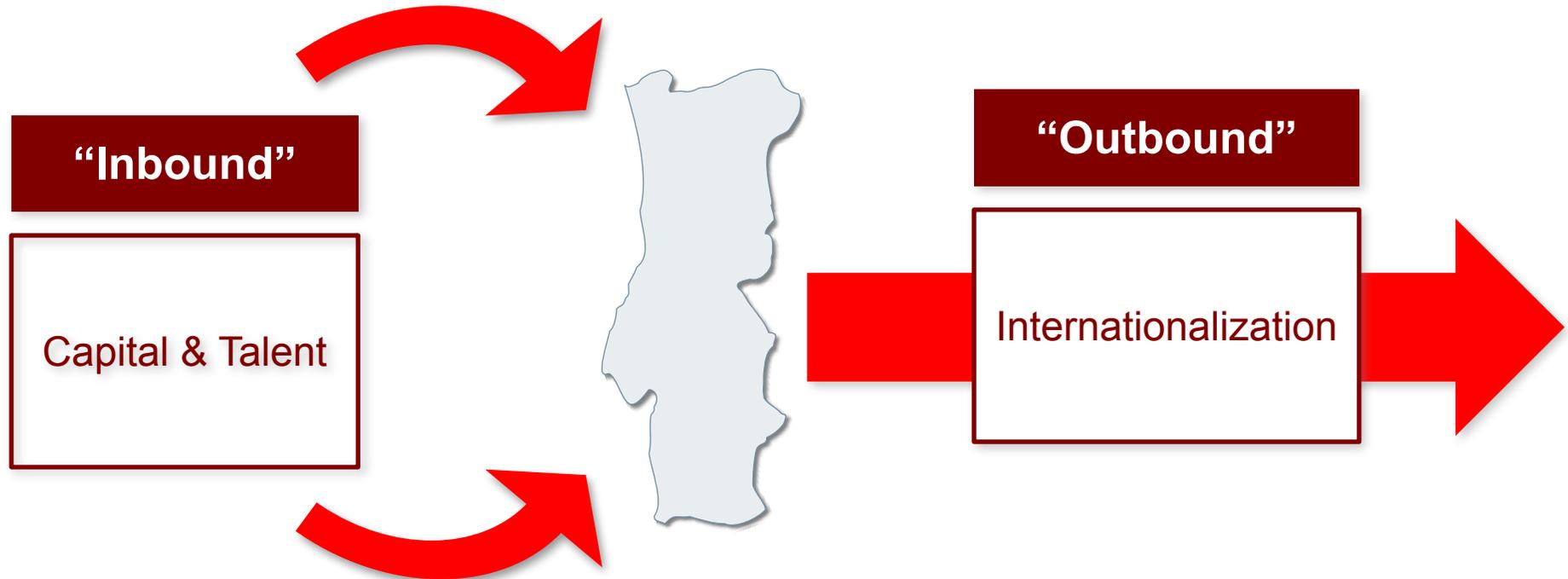
A reform made to foster private venture capital and develop entrepreneurship open to the world

- **Clarify** strategic objectives and concentrate resources for public investment.
- **Rationalize** and significantly reduce the operational cost structure.
- Act as a **catalyst** of private Venture Capital and Private Equity's activity, fostering **co-investments** from Portuguese and International players.
- Develop Portuguese **entrepreneurship** and promote the generation of **economic value** from scientific and technological knowledge.
- Create a new business landscape with **high export potential** and **global competitiveness**, well-positioned in international value chains.
- Focus on the creation of **economic impact factors** with a sustainable and long lasting foundation.

Repositioning – greater focus and critical mass



Opening up the national ecosystem to the World



Soon, we will be setting up a base in Silicon Valley. Later in the year, we will go East!

Stages of investment follow enterprise maturity

1

*Seed
Innovation
on
Capital*

- Investment in the **Seed / Proof of Concept** phases of companies with innovative tech-based projects with high growth potential

2

*Venture
Capital*

- Investment in Tech-based companies in **early stages** of development, and then **scale-up**

3

*Private
Equity*

- **Consolidation, Internationalization** and **Turn-around** of traditional industries in tradable sectors

Promising Venture Capital portfolio companies

1) Lower-Limb pathologies and posture

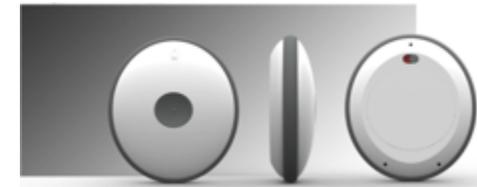
- gathers, processes, stores and transmits information wirelessly (Bluetooth)
- easy to operate and install/uninstall
- Provides enough quantified information to complement physicians visual observation
- to be used over and over in several patients and that fit all foot sizes
- **the only device in the market** that incorporates simultaneously information about:
- plantar pressure (body weight distribution on the foot sole during walking)
- activity (walking speed, distance walked, gait phases duration and variability, etc.)
- video sync



How does it work:
<http://www.youtube.com/>

2) Pressure sores and posture

- gathers, processes, stores and transmits information wirelessly (Zigbee and WiFi)
- reduces clinical errors arising from bad communication among nurses and patient care technicians
- reduced staff numbers and lack of training
- some patients reposition themselves putting pressure back onto the area at risk



movin  sense

How does it work:
<http://www.youtube.com/>

Promising Venture Capital portfolio companies



The spinit® reader & the first test (CRP) are CE marked. Short term pipeline of products includes Blood Count, Inflammation, HbA1c and Lipids panels. Medium term pipeline includes Diabetes, Cardiac, Metabolic, Coagulation, Liver, Hepatic function, Kidney check panels.

- spinit® is an automated system for POC blood testing, providing simple and precise results in 10-15 minutes from a small drop of blood (5-10 μ L)
- Integrated sample preparation in the disposable cartridge (in a CD/DVD format) with up to 30 simultaneous measurements of different parameters, and without pumps, tubs, nor reagents in the reader.
- Positive and negative control are included in the cartridge, reducing costs and user maintenance
- The spinit® reader may be connected to other devices such as printers and bar code readers and to HIS/LIS information systems.

Promising Venture Capital portfolio companies

The agile platform

End-to-end Application Development and Operations Platform

IDE

Service Studio



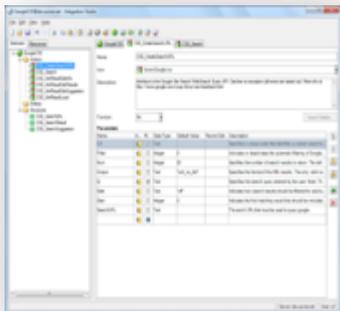
Lifecycle Console

LifeTime



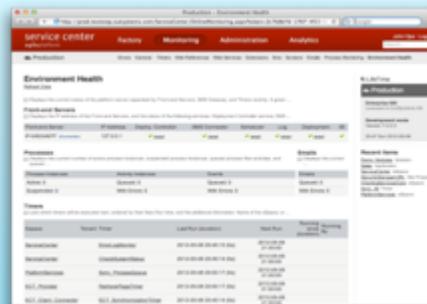
Integration Toolkit

Integration Studio

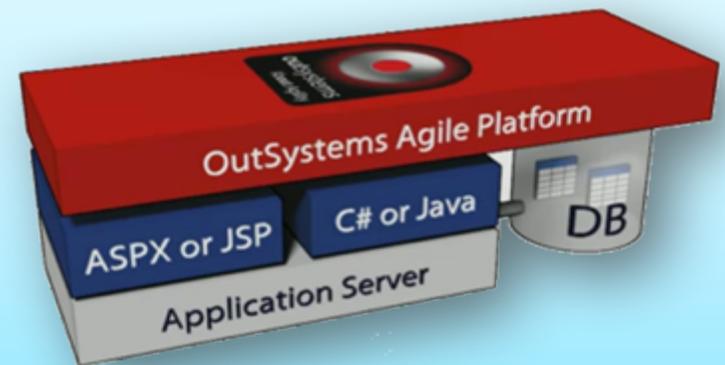


Mgmt. Console

Service Center



Cloud-Ready Platform



Promising Venture Capital portfolio companies

1980 GDS	1990 Tour Operators	2000 Online Travel Agents	2010 Digital Marketing

All-in-one hotel digital marketing.

A cloud solution that makes hotel revenue generation simple through the **synchronization** of online, mobile and social content.



Make an impression on the web and mobile

- Award-winning website design
- Automatic pages for rooms, special offers, galleries
- Optimized for Google, Bing, etc.
- Customized for smartphones



Increase revenue with online reservations

- One-click booking engine
- Optimized for smartphones, tablets
- Drive campaigns and affiliation
- Dynamic packaging of extra services



Centralize reservations and rate management

- Centralize reservations from all channels
- Centralized business insight and pricing control
- Integrate with 750+ channels



Engage guests on social media

- Fully branded facebook page
- Monitor user reviews
- Distribute content to social networks
- Proactively engage guests on facebook, twitter

Promising Venture Capital portfolio companies

Engineering and Energy



www.berd.eu



<http://youtube/i6pdp8wyQ8A>

Agenda

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1 Ignition Program – *Call for Entrepreneurship*

<http://www.portugalventures.pt/en/contents.html?hrq=146>

Objectives:

- To promote and facilitate the access to venture capital **investment** of projects in the **Seed / Proof of Concept** phases of development, with high growth potential;
- To grow the **deal flow**, both local and international, and streamline processing;
- To stimulate the creation of new, **global technology-based companies** and foster **technology entrepreneurship**;
- To promote the **economic value of science and technology** as a way to achieve **structural transformation** and **competitiveness** of the Portuguese economy;
- To **retain and attract talent**.

1 Ignition Program – *Call for Entrepreneurship*

Key Aspects:

- Total investment target of **20 M€ / year**;
- **4 Calls per year**;
- **Fast processing**: 3 months from submissions to execution of investment contracts;
- Evaluation by an **international panel**;
- Investment per project between **100 k€ and 750 k€**;
- Portugal Ventures retains a **minority stake**;
- Participation in **follow-on funding rounds**, depending on the development of the projects;
- **International networking and mentoring**;
- Facilitating access to **strategic partners** and **international investors**.

6 months after its inception, the Ignition Partners Network already has 28 members... and it is still growing



The Portuguese

We speak the language of those who visit us.

We are always eager for new discoveries, inventions and to help build a more open and united world. We are always available to undertake new adventures, to learn more and do even better

Thank you!

Portugal
Europe's
West Coast