

# Technological Plan

**An idea to trigger change,  
a priority agenda and  
a political commitment**

Presentation to the Advisory Council of the Technological  
Plan

19 July 2006

# A world undergoing profound change

A strategic  
pledge for  
Portugal

Five  
essential  
priorities

Innovating  
Portugal

A shared  
challenge

- The world today is facing a process of **rapid economic and social change** which raises new challenges in the context of Globalisation.
- Technological evolution has triggered swift acceleration in the transformation processes and changed the structure of **social and economic relations**.
- It is not technology itself that has caused this change, but the possibilities created by combining various technologies to **produce, communicate and collaborate** in a different way, doing away with or reducing barriers or constraints.
- This time of change is a **time of opportunity** for countries like **Portugal**, with its **ambition** to make up for its structural delays and return to the front line of progress and development.

# An opportunity for Portugal

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- To recover ground, Portugal needs to evolve towards a **new competitive model**, taking advantage of the opportunity to position itself resolutely in the front line of the technological revolution for the first time in its history.
- The Technological Plan is an idea to trigger change, a priority agenda and a political commitment which aims to **promote Portugal's development and competitiveness** through a pledge focused on knowledge, technology and innovation.
- The Government assumes the responsibility of setting the example and the Technological Plan is placed as a **priority when defining public policies**, putting structuring measures into action and creating the conditions necessary for the success of civil society's initiatives which contribute to its strategic objectives.

# Starting point and targets for 2010: The path to be followed in qualification

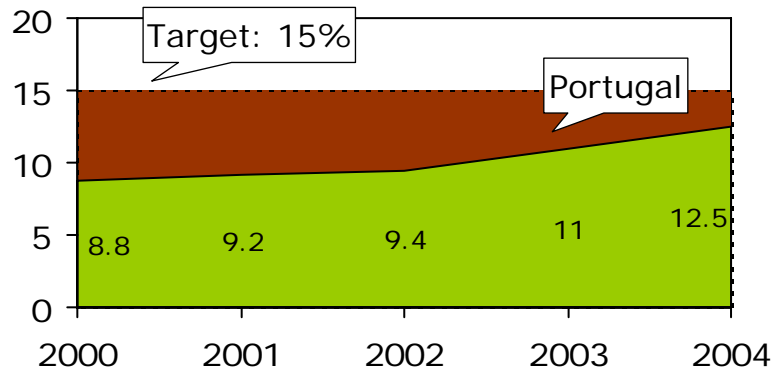
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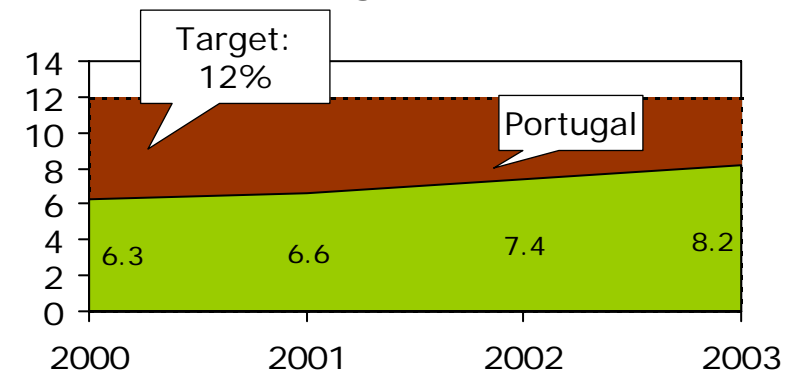
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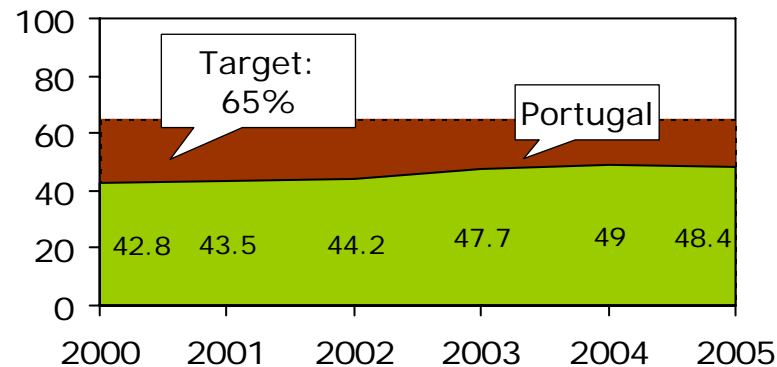
**Population with Higher Education  
(% of pop. Aged 25-64)**



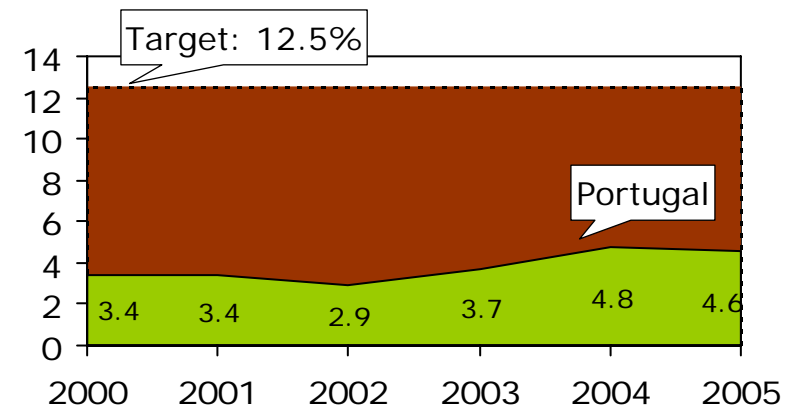
**Holders of diplomas in science and  
technology per 1000 inhab.  
between ages of 20 and 29**



**Population with Secondary  
Schooling (% of pop. Aged 20-24)**



**Life Long Training (% of pop. Aged  
25-64)**



# The path to be followed to access the Knowledge Society

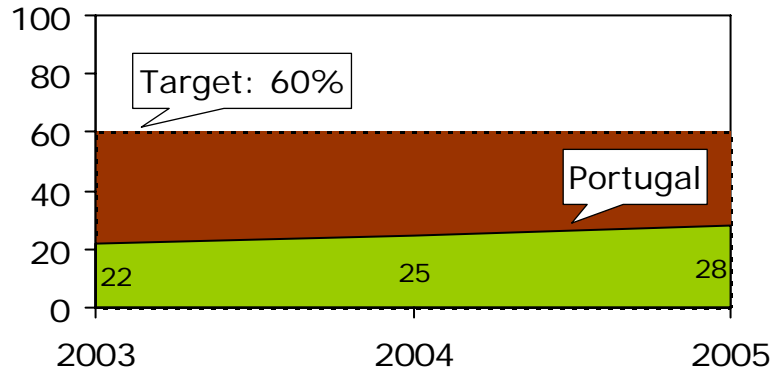
A strategic pledge for Portugal

Five essential priorities

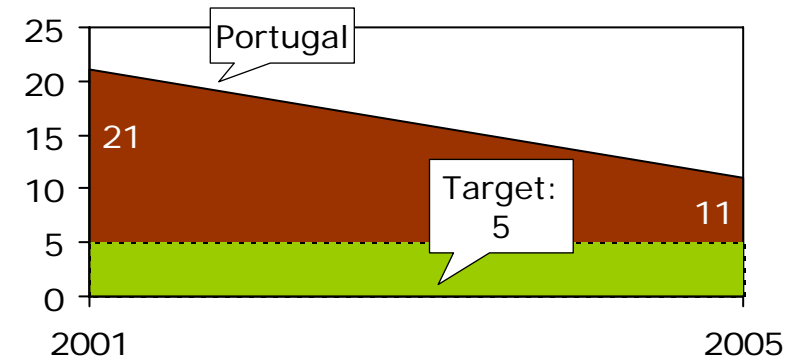
Innovating Portugal

A shared challenge

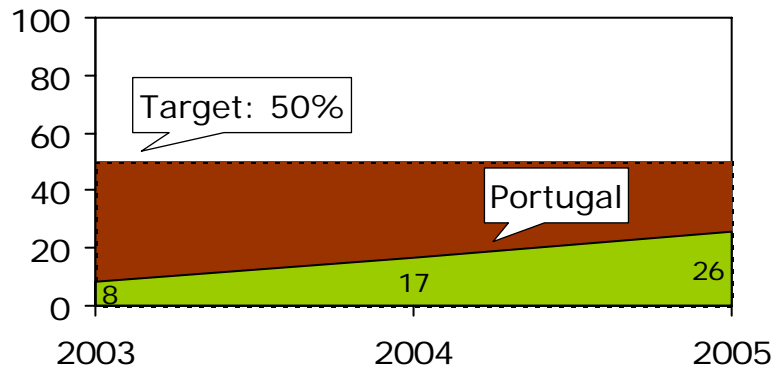
Regular use of Internet (% of population)



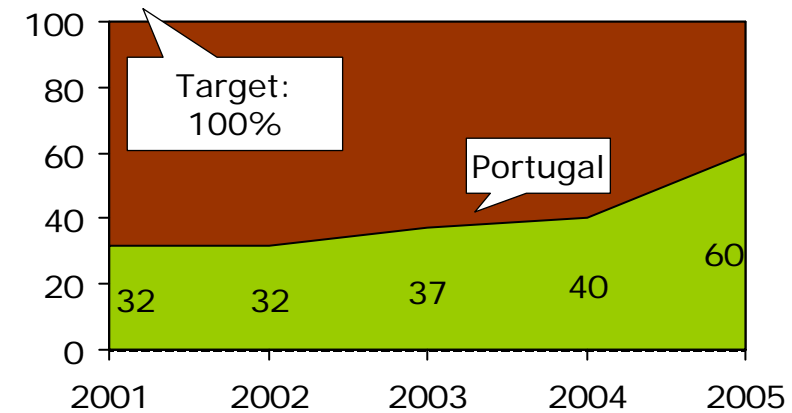
Pupils per computer at basic and secondary school



Households with broadband connection to Internet (%)



Public services totally online



# The path to be followed in research and development (1/2)

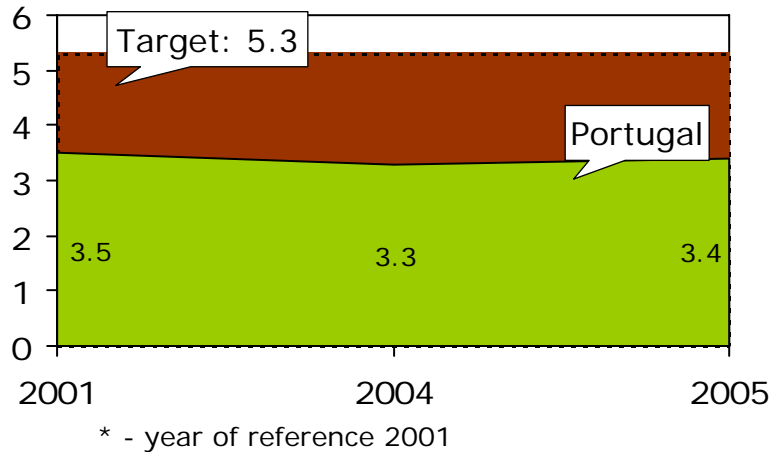
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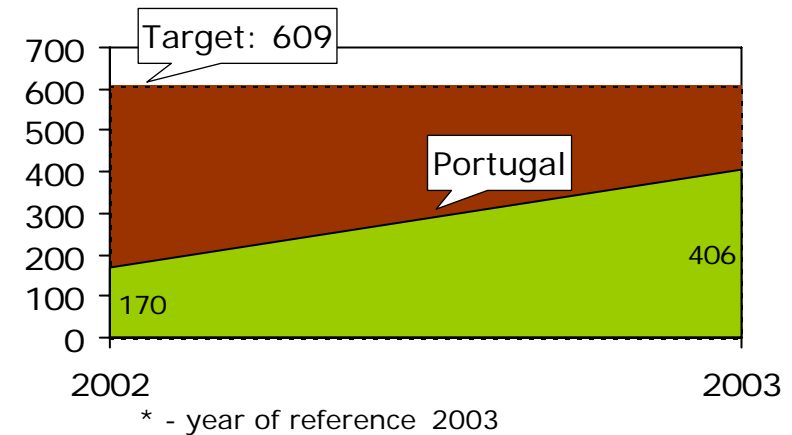
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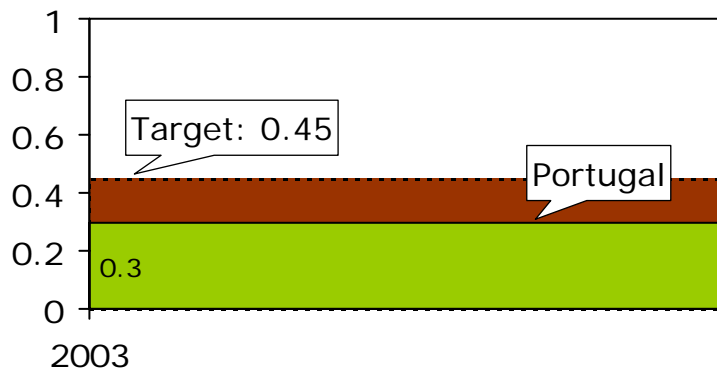
Researchers per 1000 employees



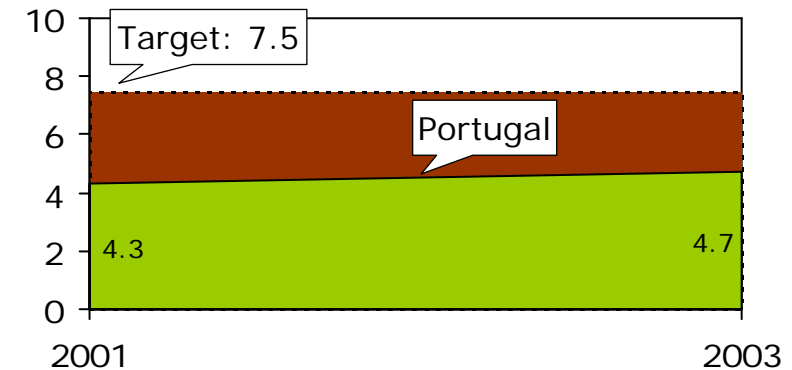
Scientific production per million inhabitants



New PhDs in Sci & Tech per 1000 inhabitants (aged 25-34)



Total Staff (ETI) in R&D (per thousand of active pop.)



# The path to be followed in research and development (2/2)

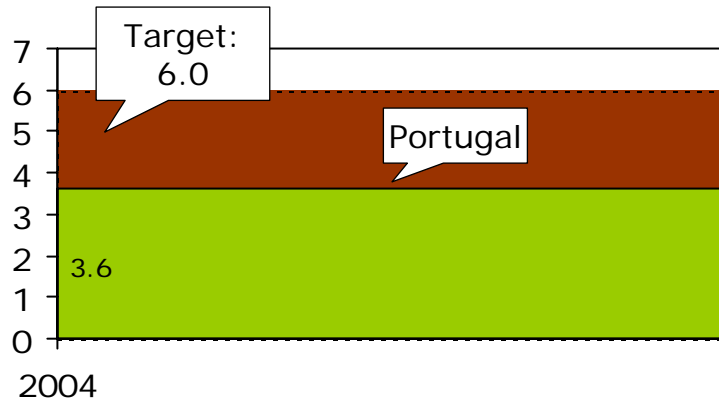
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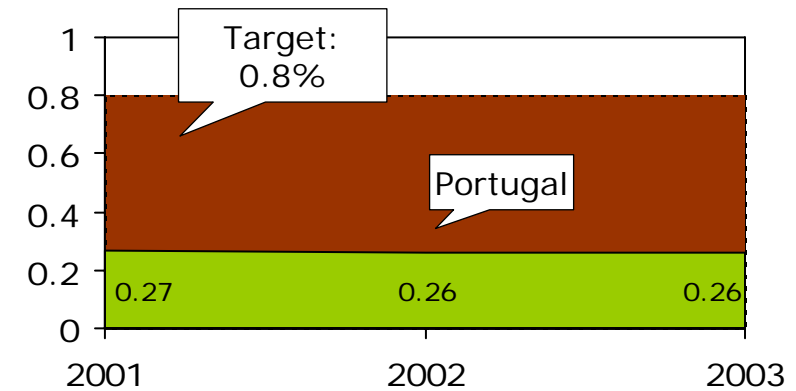
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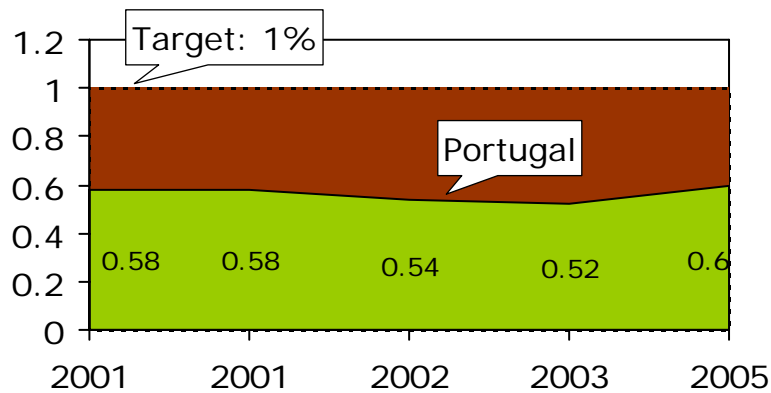
**Researchers (ETI)  
(per thousand of active pop.)**



**Company expenditure on R&D  
(% of GDP)**



**Public expenditure on R&D  
(% of GDP)**



\* - last year: 2003

# The path to be followed in medium and hi-tech industries and services (1/2)

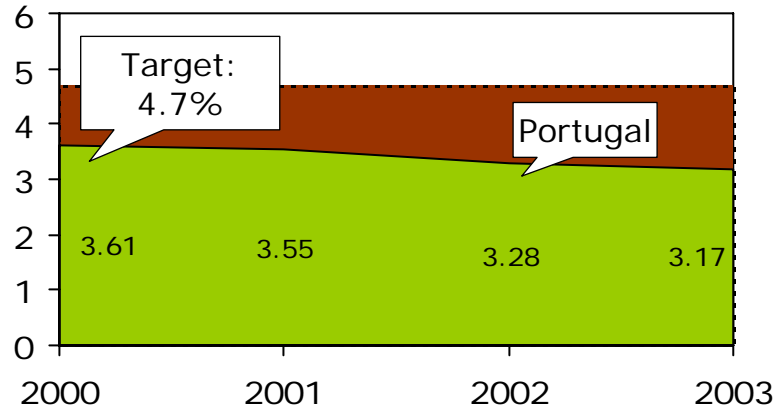
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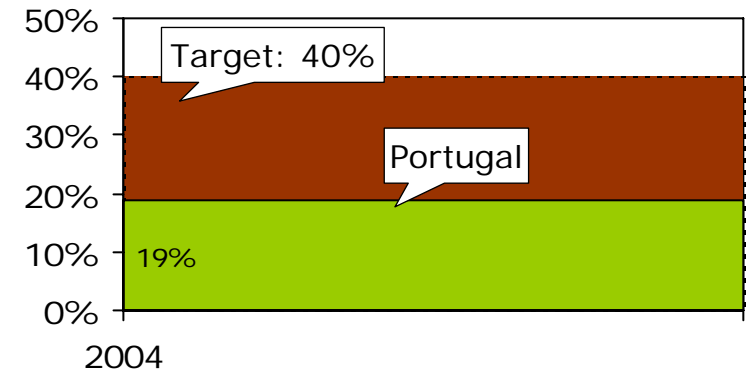
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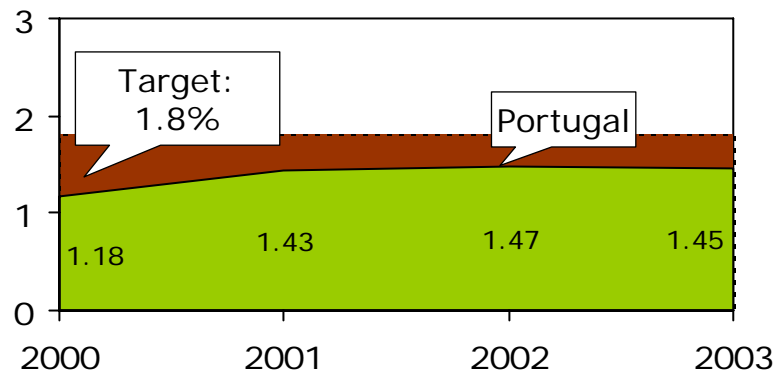
Jobs in medium or hi-tech industries



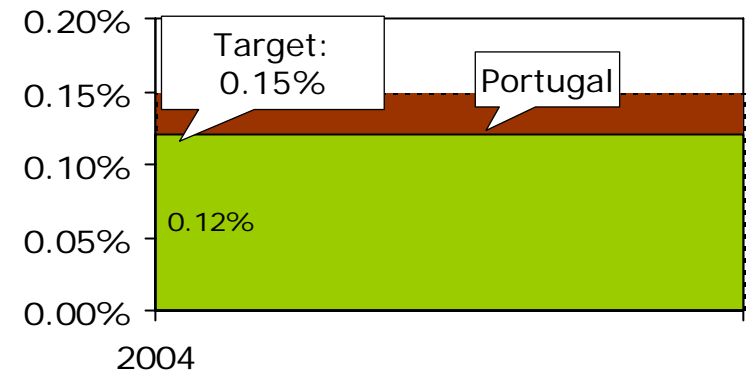
Workers using computers  
connected to Internet (%)



Jobs in High Technology Services  
(% of total jobs)



Investment in Risk Capital  
(% of GDP)



# The path to be followed in medium and hi-tech industries and services (2/2)

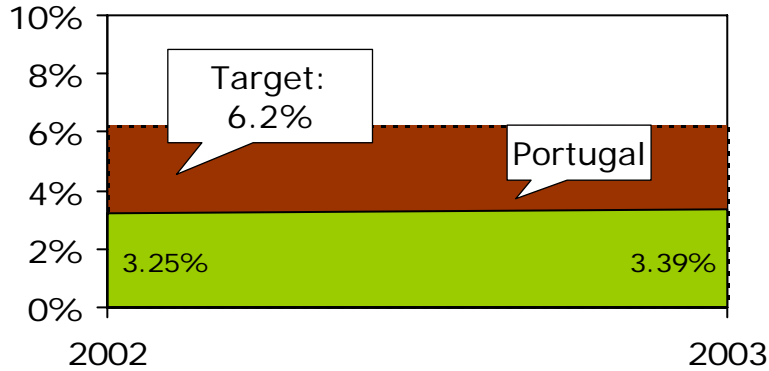
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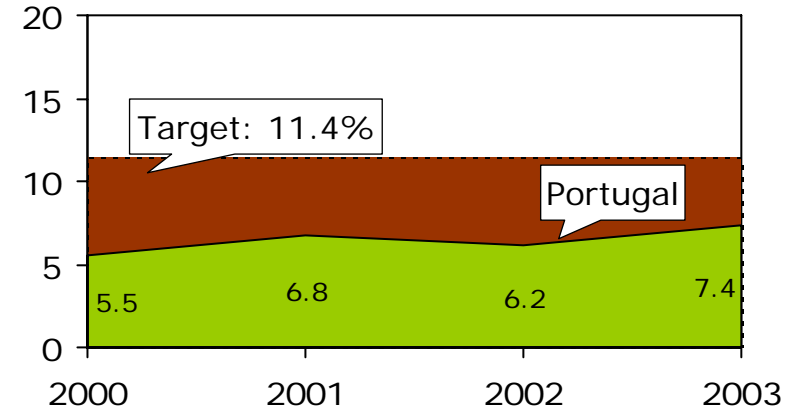
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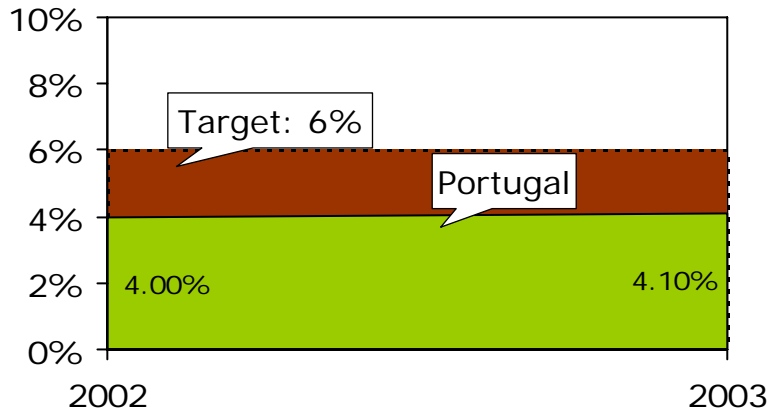
**Added value in medium and hi-tech sectors in industry**



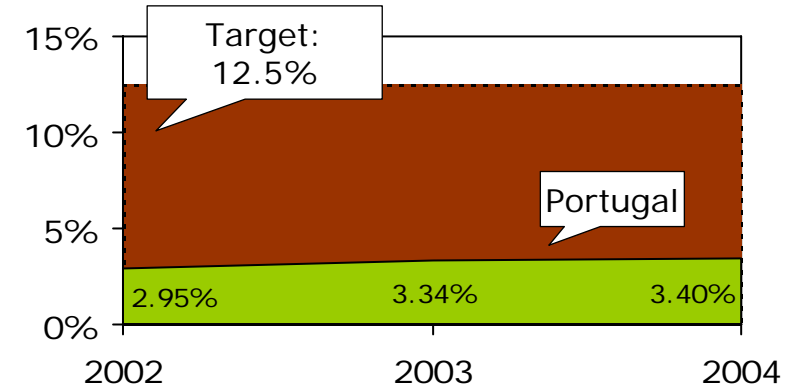
**Export of hi-tech products**



**Added value in hi-tech services**



**Start-up of medium and hi-tech enterprises as % of total**



# The path to be followed in registering patents and community brands

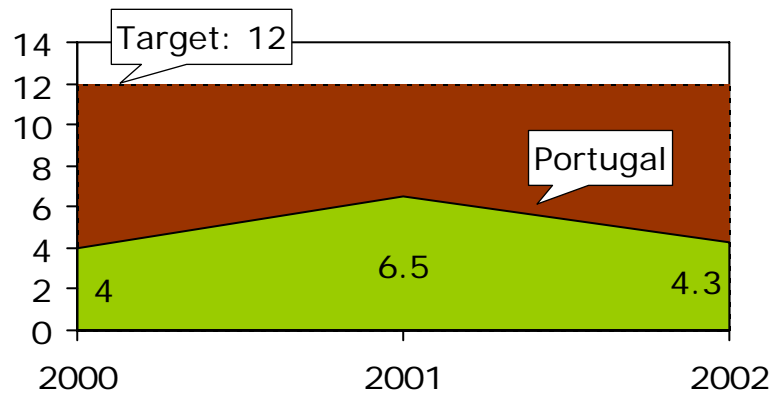
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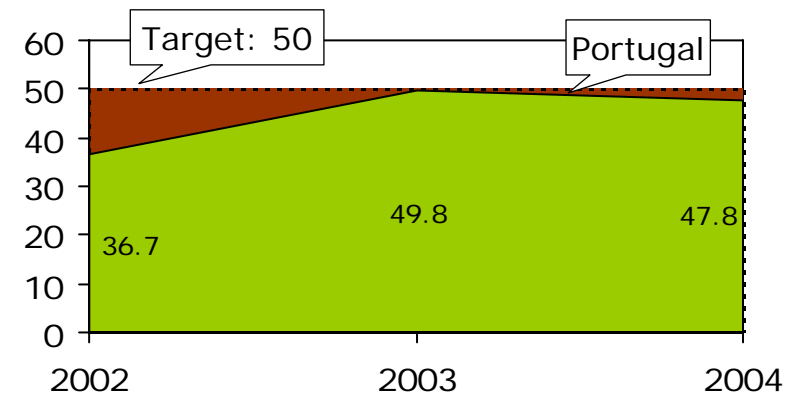
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New EPO Patents per million  
inhabitants

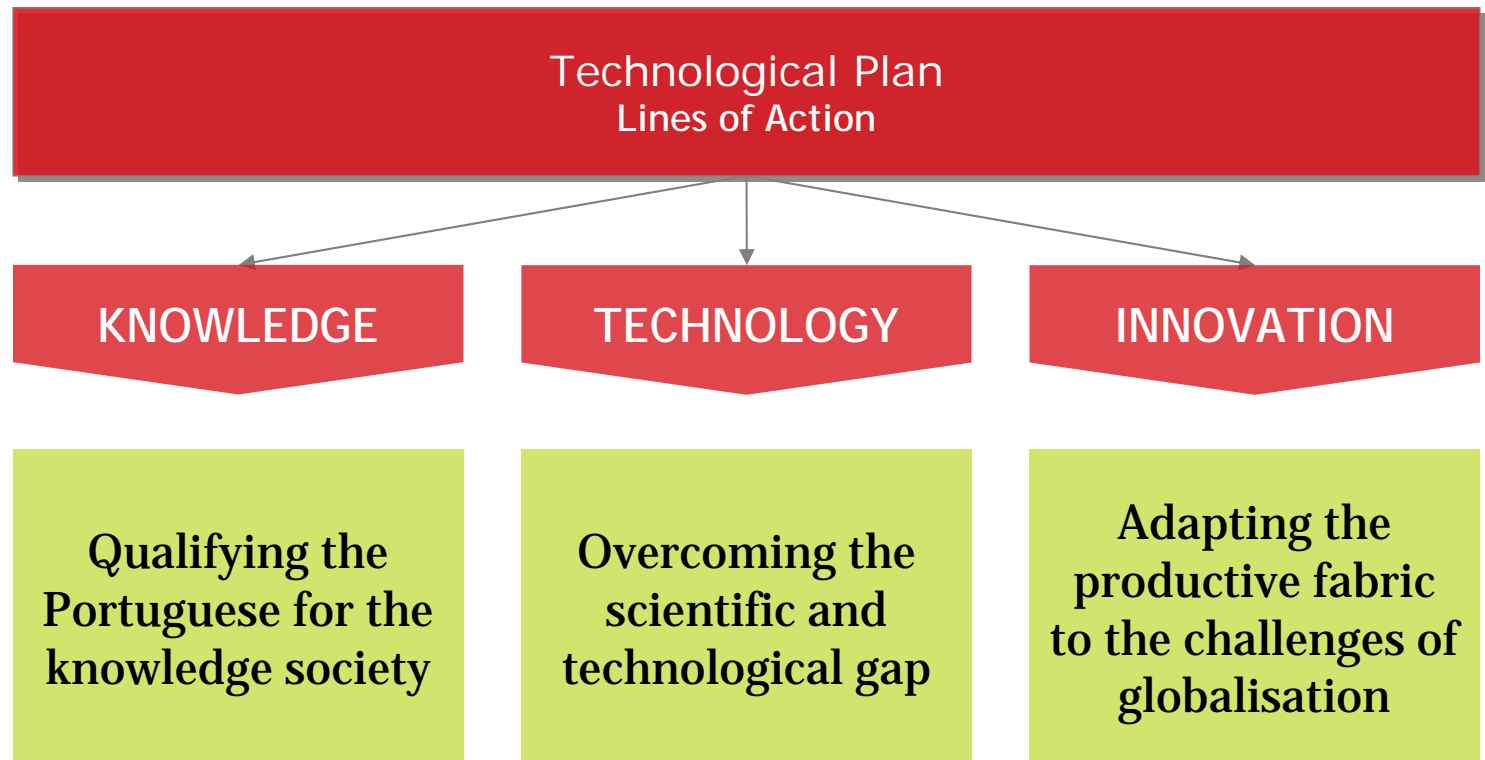


Registered community brands per  
million inhabitants



# The Technological Plan sets out a clear path to reach the desired targets

The Technological Plan is an **agenda for the mobilisation of the whole Portuguese society**, indicating a development and competitiveness strategy based on three lines:



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Five essential priorities

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# The Technological Plan is put into practice through an agenda of concrete measures

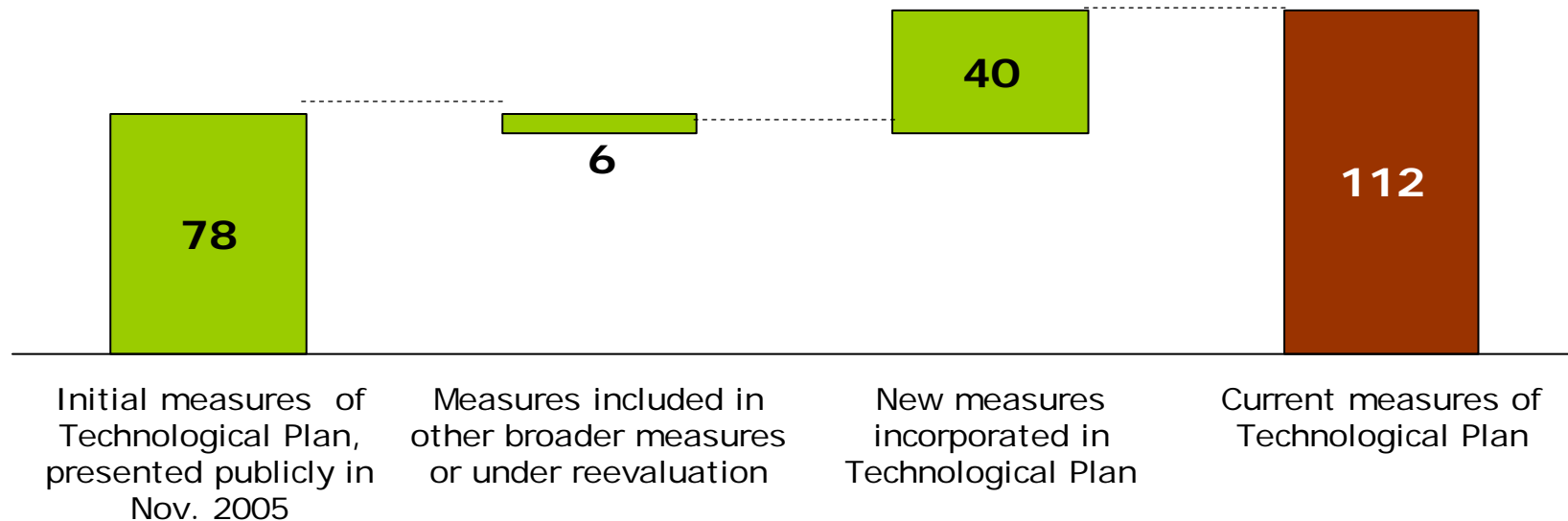
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- In order to achieve its objectives and targets, the Technological Plan includes a set of measures which correspond to a **Government commitment** and a **priority agenda** for Portuguese society.
- Since its public presentation, the Technological Plan has been **monitored, revised and improved** and the 112 now being implemented are considered the basis for its success:



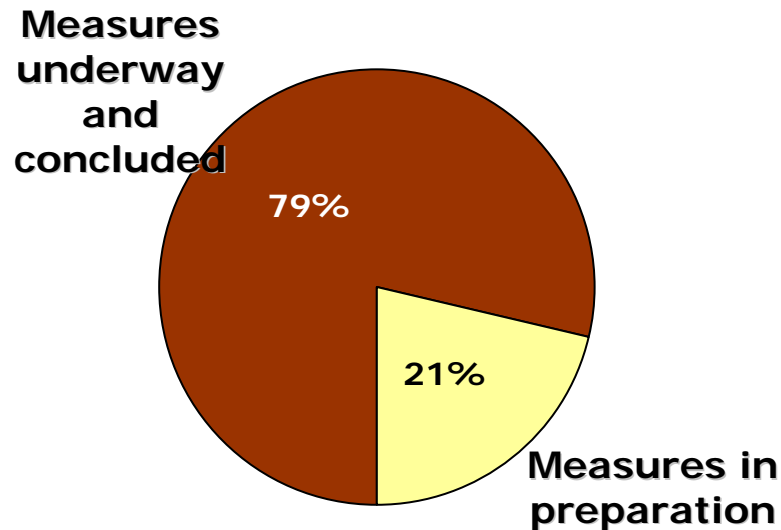
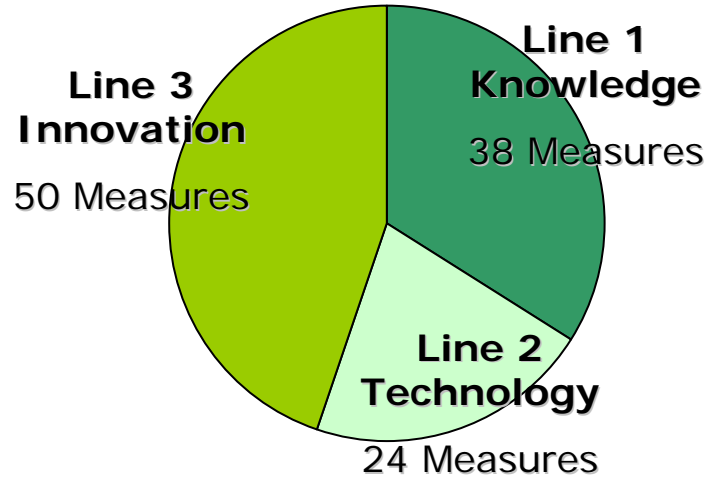
# Total implementation of Technological Plan measures

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- The 112 measures of the Technological Plan are **spread over 3 lines of action**.
- **Each measure is monitored** by the coordinators of the Technological Plan through a monitoring platform.
- At present, **79% of the measures are underway or concluded**.
- Most of the measures in the preparation phase are **waiting for QREN 2007-2013** so they can start.

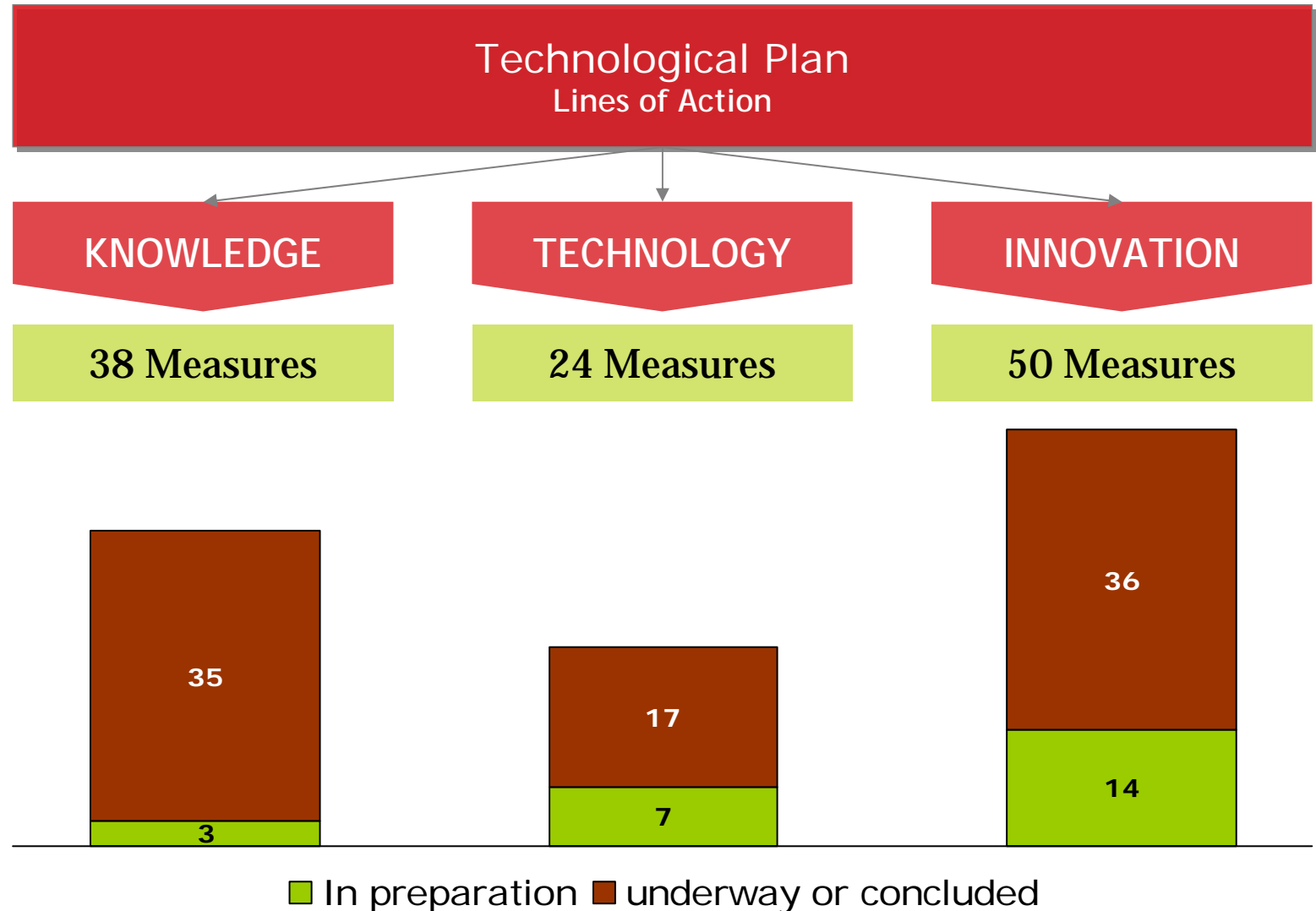
# Implementation of Technological Plan measures by Line of Action

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# Which translate into Five Transversal Focal Points of Action

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A strengthened  
scientific and  
technological base

Promoting the cooperation and development of national and international networks and betting in the increase of public and private investment in R&D.

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A better organised  
competitive base

Promoting poles of competitiveness and technology which strengthen the university/company link from the perspective of international assertion.

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A modern public  
administration

Using new technologies to make services more efficient, closer and more accessible to users.

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A favourable  
environment for  
business

Reducing bureaucracy and adapting public policy instruments to the needs of companies and entrepreneurs

A qualified  
population

Pledging in upgrading the qualifications of the active population and improving the initial training system.

# Examples of measures per priority action (1/2)

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A strengthened  
scientific and  
technological base

SIFIDE, International Partnerships,  
Commitment with Science, Portugal-Spain  
Research Institute, Reform of State  
Laboratories, International Evaluation

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A better  
organised  
competitive base

Poles of Competitiveness and Technology,  
National Logistics System, National Energy  
Strategy, PRIME Technology

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A modern public  
administration

Citizen Card, Simplex, PRACE, One-stop shop,  
Single Car Document, Electronic Passport,  
Direct Social Security, *NetEmprego* Portal,  
Electronic Mailbox, *Diário da República* Online

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# Examples of measures per priority action (2/2)

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A favourable  
environment for  
business

Rapid company start-up, **Rapid Brands**,  
Company Online, Electronic Invoice,  
Simplification of Notary Actions, Industrial  
Property On Line, **Webisation** of Business  
Community, **Finicia**

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A qualified  
population

English in Primary Education,  
Upgrading/training of active population, New  
Opportunities Initiative, Certification of  
Competences, Broadband access in schools and  
families, Technological Specialisation Courses

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# Innovating Portugal : 10 Challenges and Solutions

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- Challenge 1: Placing Portugal on the front line of broadband coverage
- Challenge 2: Helping families benefit from access to information society
- Challenge 3: Strengthening the internationalisation of the Scientific System
- Challenge 4: Making the job market more efficient
- Challenge 5: Simplifying citizens' relations with the public administration
- Challenge 6: Simplifying companies' relations with the public administration
- Challenge 7: Supporting innovative companies
- Challenge 8: Giving companies young and qualified managers
- Challenge 9: Preparing youth for the knowledge society
- Challenge 10: Retraining the active population to upgrade our qualification level

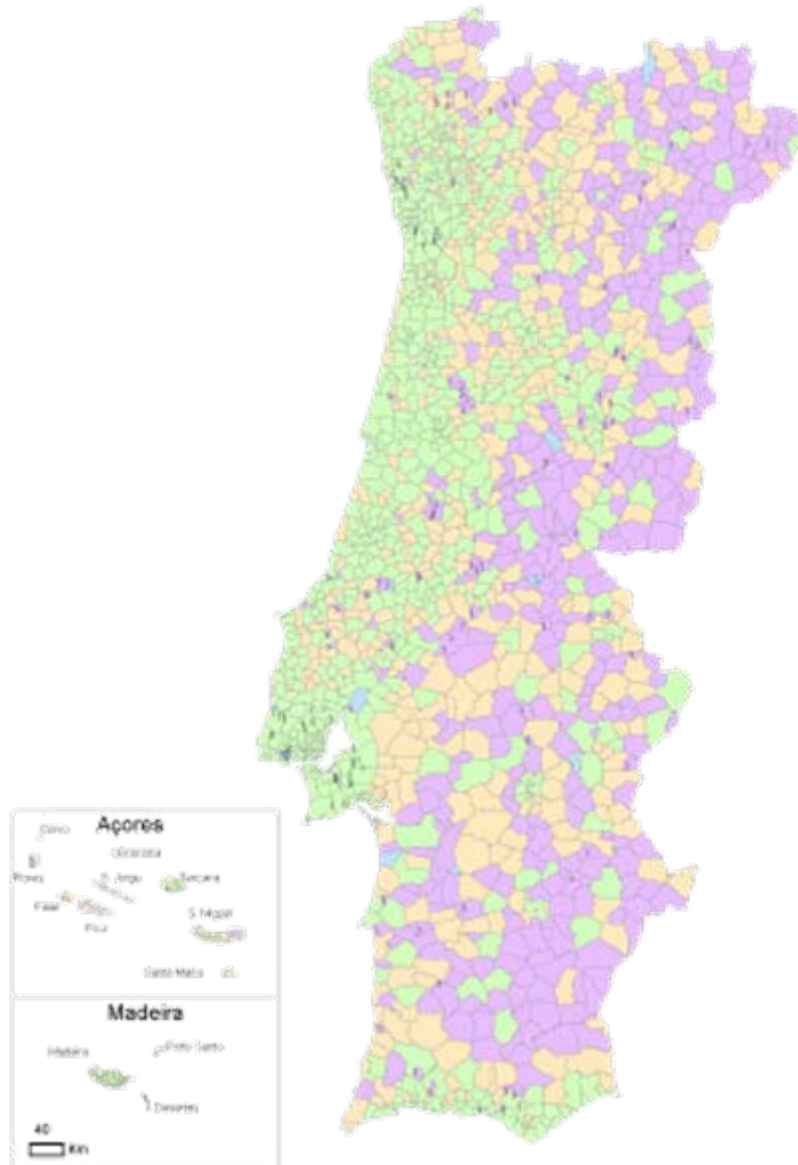
# Challenge 1: Placing Portugal on the front line of broad band coverage

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- Assuring the national territory is completely covered with technological access to broadband Internet – **concluded on 26 June 2006**
- Connecting all public schools to broadband Internet – **concluded on 31 January 2006**
- Using broadband access in public services – **73% of public administration departments are already connected to broadband**

# Challenge 1: Placing Portugal on the front line of broad band coverage

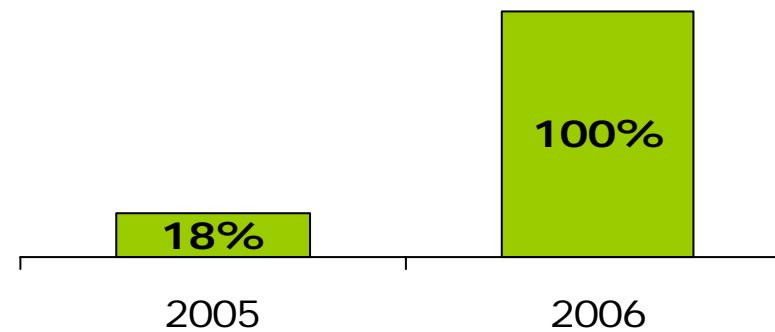
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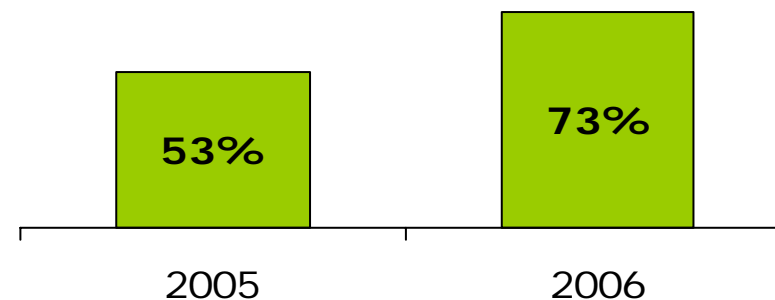
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Public schools connected to Internet on broadband



Source: FCCN

Central public admin. departments with broadband Internet connection



Source: OSIC/UMIC

- Assuring the national territory is completely covered with technological access to broadband Internet – **concluded on 26 June 2006**
- Connecting all public schools to broadband Internet – **concluded on 31 January 2006**
- Using broadband access in public services – **73% of public administration departments are already connected to broadband**

# Challenge 2: Helping families benefit from access to the information society

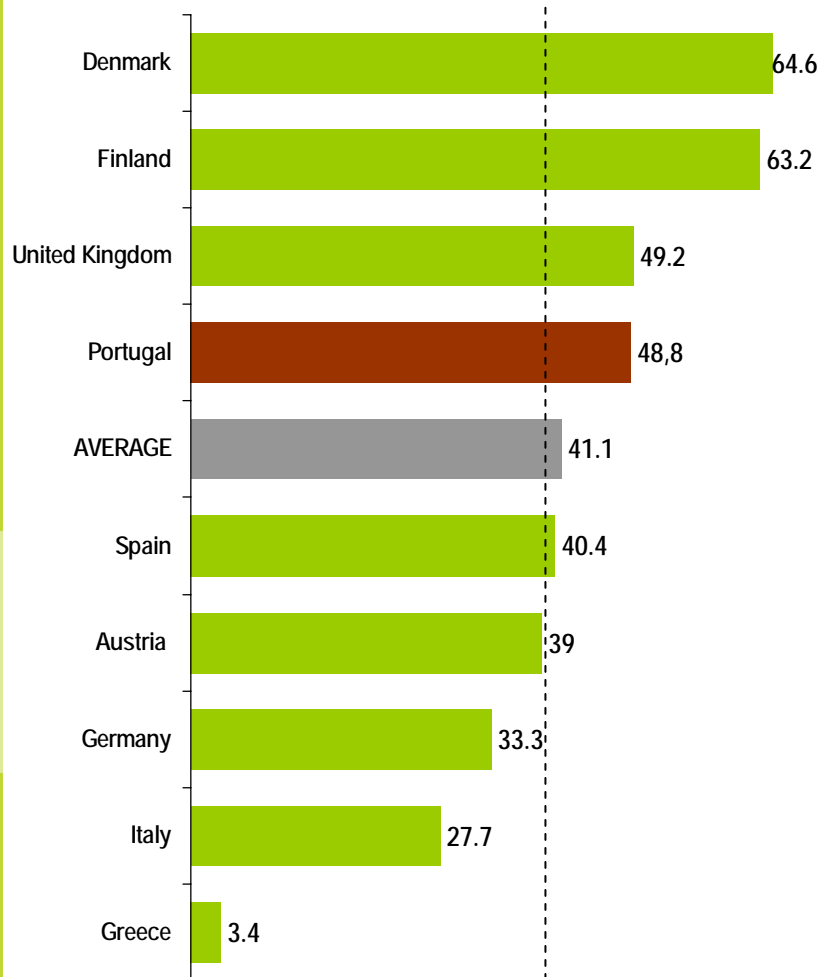
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## Penetration of Broad Band in Homes with PC (2005):



Source: Capgemini / Eurostat

- Guaranteeing conditions for the growth of the broad band market – **in Portugal, almost half of homes with PC already have broadband connection (4th in Europe)**
- Creating conditions in which each family can buy a computer – **tax benefits up to 250€ in force since December 2005**
- Making Electronic Mailbox available to all citizens – **Universal Mail Box Via CTT available since 27 June.**

# Challenge 2: Helping families benefit from access to the information society

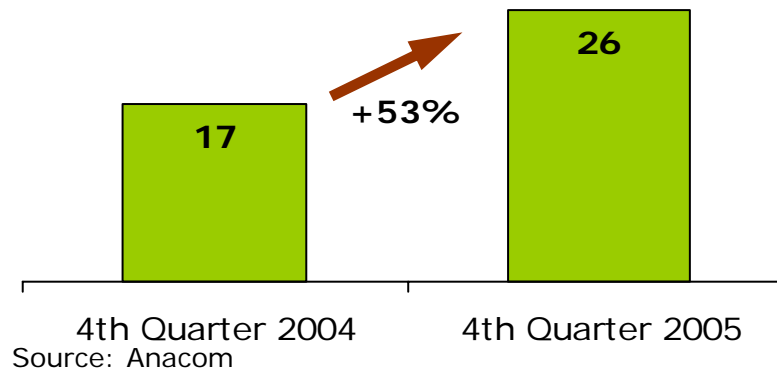
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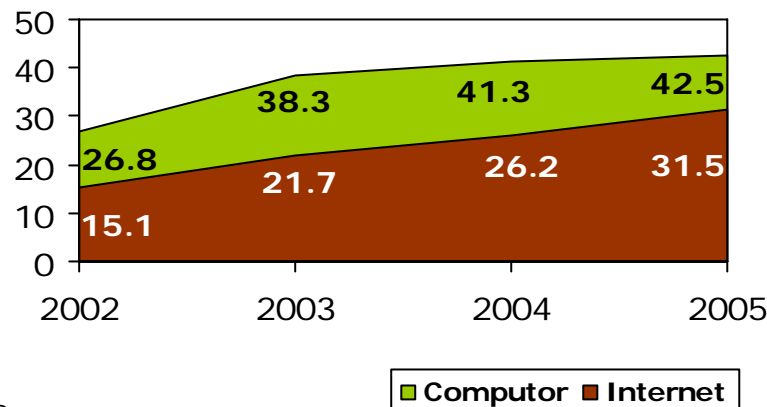
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Broadband connections in Family households (%)



Family households with PC and Access to Internet (%)



Source  
INE/UMIC

- Guaranteeing conditions for the growth of the broadband market – **in Portugal, almost half of homes with PC already have broadband connection (4th in Europe)**
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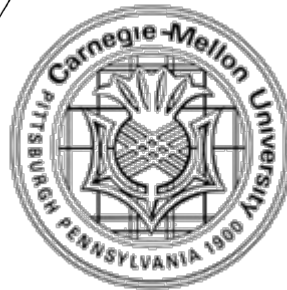
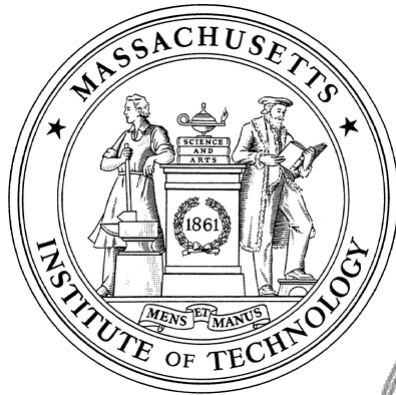
# Challenge 3: Strengthening internationalisation of the Scientific System

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- Establishing partnerships between foreign institutions of excellence and Portuguese universities – **protocols have been signed with MIT (25/2), Carnegie Mellon University (10/3) and Texas University (22/3)**
- Development of Iberian partnerships in key areas – **Portugal-Spain International Research Institute is being set up and the first meeting of the technical committee took place on 8/2**

# Challenge 4: Making the job market more efficient

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The screenshot shows the NetEmprego portal interface. At the top, there is a navigation bar with the IEF logo and the text 'NETEMPREGO Ministério do Trabalho e da Solidariedade Social'. Below this, a large banner features a smiling woman and the slogan 'Virar a página para um novo rumo'. A horizontal menu contains links for 'Registe-se', 'Ofertas de Emprego', 'Currículos', and 'Centros de Emprego'. The main content area is divided into two columns: 'Procura Emprego?' and 'Procura Colaboradores?'. The 'Procura Emprego?' section lists links for 'Portugal, Europa e Administração Pública', 'Registe o seu Currículo', and 'Apoios à criação do próprio emprego'. The 'Procura Colaboradores?' section lists 'Consulte CV's que se ajustem às suas necessidades' and 'Registe a sua Oferta'. On the right side, there is a 'Autenticação Área Pessoal' section with radio buttons for 'Candidato' and 'Entidade', input fields for 'Utilizador:' and 'Palavra-Chave:', and an 'OK' button. Below the authentication section are links for 'recuperar palavra-chave' and 'alterar palavra-chave'. The browser's address bar shows 'http://www.netemprego.pt/IEFP/...'.

- Creating a portal to make job seeking and job offers easier – the *NetEmprego* portal was launched on 28 June and has already received:
  - 90,809 CVs and
  - 4,410 job offers.

# Challenge 5: Simplifying citizens' relations with the public administration

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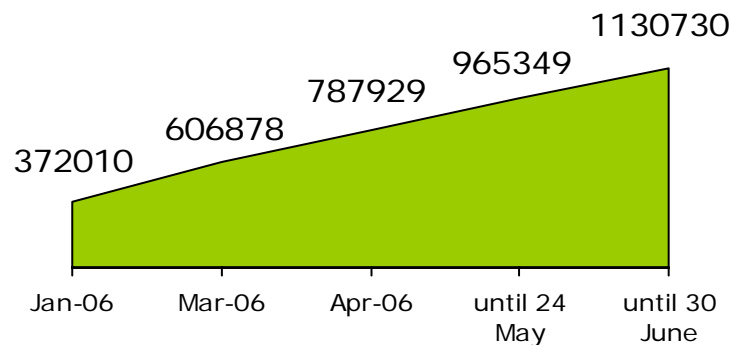


**Launched in November 2005**

Applications to service	95,195
Updates of Social Security data base	87,258
Number of different hits to services	604,616

## Single Car Document

**Registration Certificates Issued**  
(since launch on 30/10/05)



Source: Min.Justiça

- New online public services launched and existing ones improved – **Portugal was in fifth place in Europe of the countries making most progress in the last two years in the development of on-line services available to their citizens, launching:**

- Direct Social Security
- Portuguese Electronic Passport
- Single Car Document
- Citizen Card (pilot phase in 2006)

# Challenge 5: Simplifying companies' relations with the public administration

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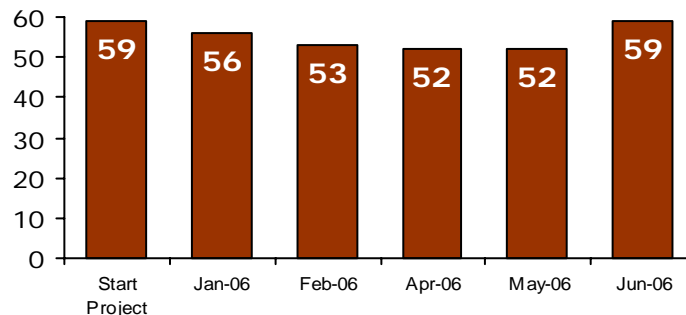
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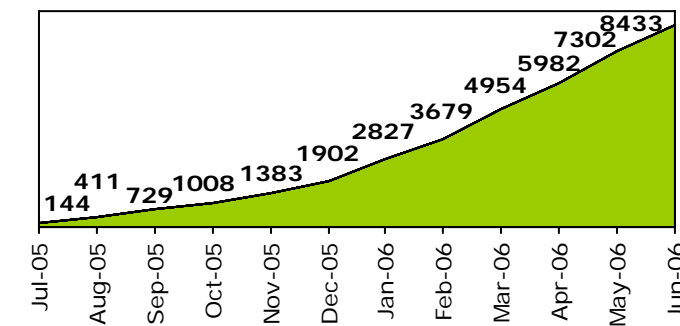


Average time of company start-up



Source: Min.Justiça

Total Rapid Start-ups to date



Source: Min.Justiça

- Simplifying the bureaucracy of starting up a company – **Portugal now has the quickest process for starting up a company in Europe, thanks to the Rapid Start-up service, also available on-line; nearly half the companies starting up at present use this service**
- Simplifying the procedures for registering brands – **Rapid Brand Initiative launched on 14 July**

# Challenge 7: Supporting innovative companies

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Five essential priorities

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**prime**  
Programa de Incentivos à Modernização da Economia

QUEM SOMOS CONTACTOS FAQ LINKS SUGESTÕES MAPA DO SITE IN ENGLISH

- PROGRAMA
- APOIOS
- FORMULÁRIOS
- PROJECTOS
- LEGISLAÇÃO
- PUBLICITAÇÃO
- NOTÍCIAS
- EVENTOS
- DESTAQUES
- PUBLICAÇÕES
- ÁREA RESERVADA

**SIME I&DT – Candidaturas Abertas!**  
Apoios à Investigação e Desenvolvimento Tecnológico das Empresas!  
Invista em novos ou melhores produtos, processos ou sistemas!  
Consulte a ficha de Medida.

**Conferência Debate**  
Infra-estruturas Científicas e Tecnológicas  
Agentes da valorização Económica do Conhecimento  
**17 de Julho**  
Conheça o estudo "As Infra-estruturas Tecnológicas no Sistema Nacional de Inovação – Evolução 1996-2005".

**URBCOM**  
Dia 17 reabrem as candidaturas em Albergaria-a-Velha, Tábuas, Vila Nova de Poiares e Penacova.

**SIVETUR - 3.ª Fase**  
Candidaturas abertas de: **5 de Maio a 28 de Julho!**

**Formulários**  
Vai apresentar uma candidatura? Confirme se tem a **última versão do formulário.**

**PITER**  
Prazos limitados para a apresentação de Projectos Integrados Turísticos de Natureza Estruturante e Base Regional.

**Infra-Estruturas Tecnológicas**  
A partir de 1 de Maio, inclusive, está suspensa a apresentação de propostas de ideias no âmbito das Infra-Estruturas Tecnológicas.

- Realigning the priorities of the incentive systems for companies to stimulate innovation – **PRIME was realigned in accordance with the priorities of the technological plan (business innovation, internationalisation and clustering of activities), involving:**

– 1554 applications

– 1428 million euros of proposed investment

– 192 million euros of public incentives

# Challenge 8: Giving companies young and qualified managers

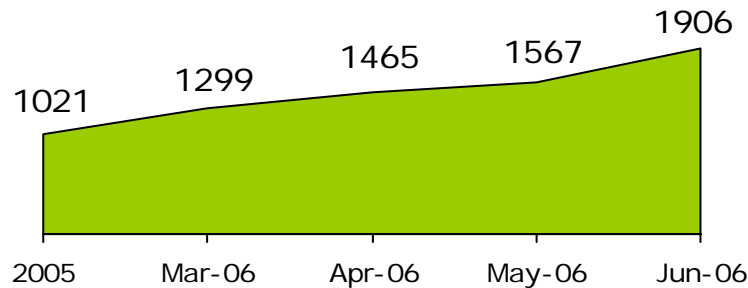
A strategic pledge for Portugal

Five essential priorities

Innovating Portugal

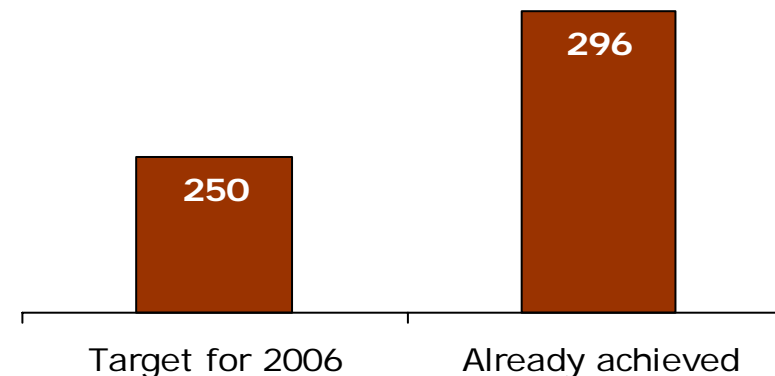
A shared challenge

Young people integrated by  
InovJovem  
Programme (accumulated)



Source: IAPMEI

Young people integrated in  
InovContacto Programme



Source: ICEP

- Integrating young graduates in companies through the *InovJovem* Programme— **1906 young graduates were integrated in SME, well in excess of the 1900 pledged, and they will be joined by another 2501 this year**
- Offering young graduates working experience abroad – the *InovContacto* Programme has **exceeded its target for 2006, placing 296 young graduates**

# Challenge 9: Preparing youth for the knowledge society

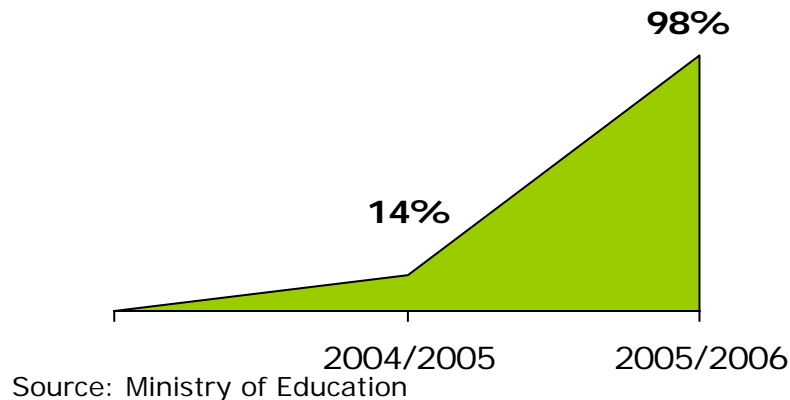
A strategic pledge for Portugal

Five essential priorities

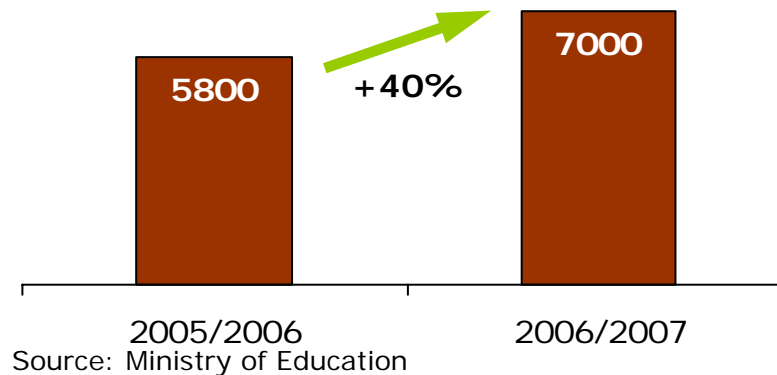
Innovating Portugal

A shared challenge

Basic Schools covered with English teaching



1st Cycle teachers with training in mathematics



- The teaching of English throughout the first cycle of basic education as an indispensable foreign language – **This year, 98% of schools and 97% of pupils in the 3rd and 4th years were taught English**
- Promoting technological literacy – **148,663 competence certificates were awarded in 2005**
- Combating failure in schools – **An increasing number of teachers are involved in on-going training**

# Challenge 10: Retraining active population to upgrade our qualification level

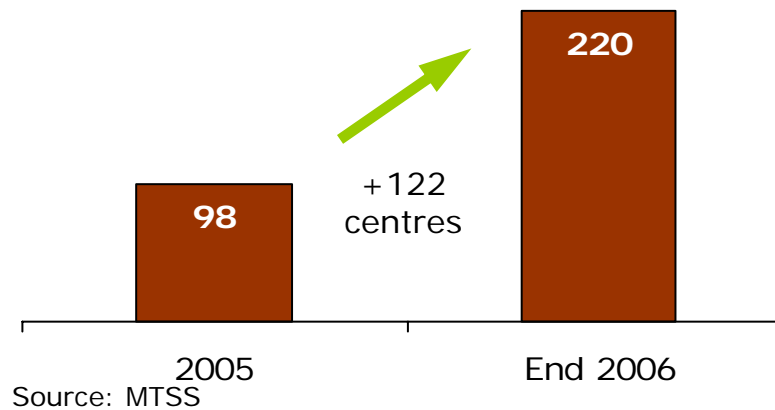
A strategic pledge for Portugal

Five essential priorities

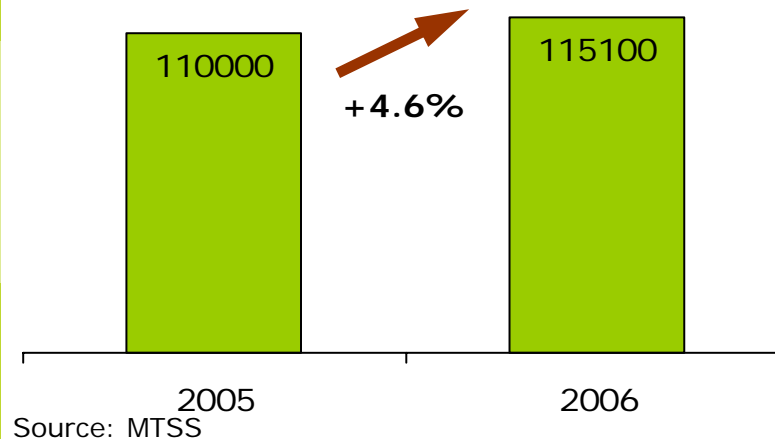
Innovating Portugal

A shared challenge

Competence Recognition, Validation and Certification Centres



Dual Certification Courses



- Guaranteeing the right supply of adult training—**The New Opportunities Initiative has gained strength since it was launched, guaranteeing the supply of adult education and training courses, dual certificate courses and increasing numbers of competence recognition, validation and certification centres (220 at end of this year)**

# An agenda for structural change

A strategic  
pledge for  
Portugal

Five essential  
priorities

Innovating  
Portugal

A shared  
challenge

- **The Technological Plan agenda is fully underway.**
- Its aim to be the driver of structural change requires **persistence and sharing.**
- The reflexes of this agenda are vital to the **allocation of public resources** (OGE, QREN), to the **design of policies** and to the **choices made** by private agents.
- Hence, it is essential that it is **appropriated by the civil society.**
- **We have held open auditions** in the five regions of Continental Portugal and we have debated the Technological Plan with CES and CNADS.
- We now want to hear the Advisory Council so that our work can continue improving and overcome the challenges facing Portugal.