

BUSINESS DRIVEN INNOVATIVE SOLUTIONS IN PORTUGAL

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TOPICS COVERED IN THE PRESENTATION

- 1. SOME PRELIMINARY REMARKS ON INNOVATION**
- 2. THE PORTUGUESE INNOVATION CONTEXT**
- 3. COTEC - ITS MISSION, STRATEGY AND INICIATIVES**
- 4. THREE UNDERGOING INITIATIVES**
 - 4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION**
 - 4.2 THE COHiTEC PROGRAMME**
 - 4.3 PROMOTION OF POLES OF COMPETITIVENESS**

1. SOME PRELIMINARY REMARKS ON INNOVATION

INNOVATION = CREATING ECONOMIC OR SOCIAL VALUE FROM KNOWLEDGE

✓ **INNOVATION (ACCORDING TO THE OECD OSLO MANUAL)**

⇒ **PRODUCT (GOOD OR SERVICE)** } **TECHNOLOGICAL**

⇒ **PROCESS**

⇒ **ORGANIZATION**

⇒ **MARKETING**

✓ **THE GENERATION OF KNOWLEDGE (i.e. R&D) AND ITS DIFFUSION (i.e. QUALIFICATION OF PEOPLE) ARE NECESSARY BUT NOT SUFFICIENT CONDITIONS FOR INNOVATION**

1. SOME PRELIMINARY REMARKS ON INNOVATION (CONT.)

ENTREPRENEURSHIP = ACCEPTING CALCULATED RISKS, TOLERATING ERRORS, LEARNING FROM EXPERIENCE, SHARING KNOWLEDGE, SEARCHING FOR EXCELLENCE, BEHAVING RESPONSIBLY,...

- ✓ **ENTREPRENEURSHIP IS A NECESSARY BUT NOT SUFFICIENT CONDITION FOR INNOVATION**
- ✓ **QUALIFIED ENTREPRENEURSHIP IS A NECESSARY BUT NOT SUFFICIENT CONDITION FOR TECHNOLOGICAL INNOVATION (WHICH REQUIRES THE PROTECTION OF INTELLECTUAL PROPERTY) ADDRESSING GLOBAL MARKETS (WHICH REQUIRES ORGANIZATIONAL AND MARKETING INNOVATION)**

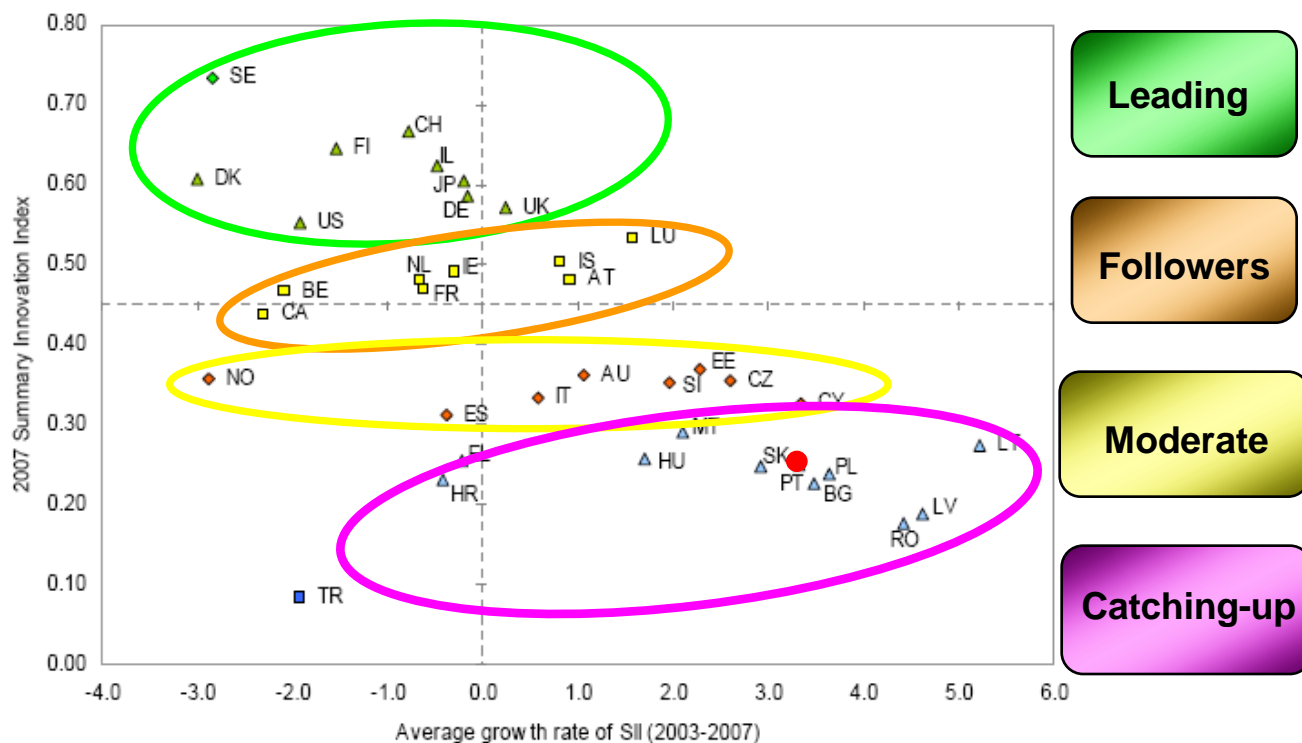
2. THE PORTUGUESE INNOVATION CONTEXT

- **IN PORTUGAL, THE R&D INTENSITY IS LOW, ALTHOUGH IT HAS BEEN INCREASING IN THE LAST DECADE**
- **THE R&D EFFORT IS CARRIED OUT MOSTLY BY STATE UNIVERSITIES AND OTHER PUBLIC INSTITUTIONS, WHICH EMPLOY THE MAJORITY OF THE RESEARCHERS**

- **RECENT SIGNS CONCERNING PORTUGUESE INNOVATION ARE ENCOURAGING**

2. THE PORTUGUESE INNOVATION CONTEXT (CONT.)

- ACCORDING TO THE EUROPEAN INNOVATION SCOREBOARD 2007 PORTUGAL IS BELOW THE EU AVERAGE BUT IT IS CATCHING UP



2. THE PORTUGUESE INNOVATION CONTEXT (CONT.)

- **ACCORDING TO THE OECD SCIENCE, TECHNOLOGY AND INDUSTRY SCOREBOARD 2007 – INNOVATION AND PERFORMANCE IN THE GLOBAL ECONOMY, PORTUGAL RANKS**
 - **4TH (AMONGST 33 COUNTRIES) IN THE AVERAGE RATE OF GROWTH OF BUSINESS R&D (1995-2005)**
 - **3RD (AMONGST 32 COUNTRIES) IN THE AVERAGE GROWTH OF BUSINESS RESEARCHERS (1995-2005)**
 - **3RD (AMONGST 32 COUNTRIES) IN THE GRADUATION RATE AT DOCTORAL LEVEL (AS A PERCENTAGE OF THE RELEVANT AGE COHORT, 2004)**
 - **3RD (AMONGST 32 COUNTRIES) IN THE GRADUATION RATE AT DOCTORAL LEVEL IN SCIENCE AND ENGINEERING (AS A PERCENTAGE OF THE RELEVANT AGE COHORT, 2004)**
 - **2ND (AMONGST 32 COUNTRIES) IN THE PERCENTAGE OF DOCTORATES AWARDED TO WOMEN**

3. COTEC - ITS MISSION, STRATEGY AND INICIATIVES

- FOLLOWING AN INITIATIVE BY THE FORMER PRESIDENT OF PORTUGAL, MR. JORGE SAMPAIO, COTEC WAS SET UP IN APRIL 2003 BY **100 OF THE LARGEST COMPANIES ESTABLISHED IN PORTUGAL**
- GLOBALLY, THEIR GROSS ADDED VALUE REPRESENTED ABOUT **18% OF THE PORTUGUESE GNP**

MISSION

«TO PROMOTE THE **COMPETITIVENESS OF COMPANIES** ESTABLISHED IN PORTUGAL, THROUGH THE DEVELOPMENT AND THE DIFFUSION OF **A CULTURE AND PRACTICE OF INNOVATION** AS WELL AS OF **“RESIDENT” KNOWLEDGE**»

3. COTEC - ITS MISSION, STRATEGY AND INICIATIVES

STRATEGIC GOALS

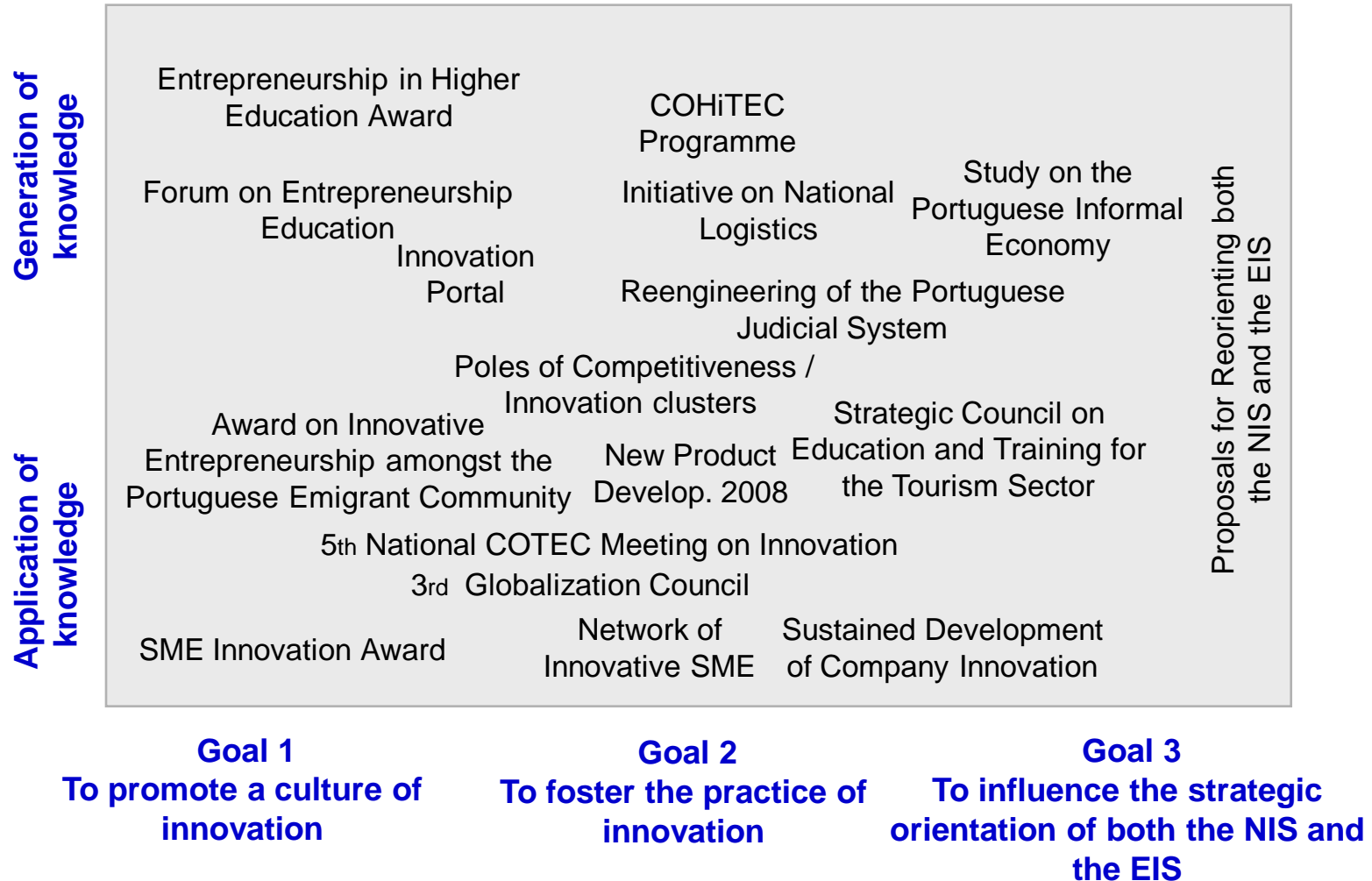
- **TO PROMOTE A CULTURE OF INNOVATION AS A CRUCIAL SOURCE OF COMPANY COMPETITIVENESS**
- **TO FOSTER THE PRACTICE OF INNOVATION BY ALL THE AGENTS OF THE NATIONAL INNOVATION SYSTEM**
- **TO INFLUENCE THE STRATEGIC ORIENTATION OF BOTH THE PORTUGUESE AND THE EUROPEAN INNOVATION SYSTEMS**
- **TO REMOVE CONTEXT BARRIERS TO INNOVATION**

PERMANENT STRATEGIC CONCERN

TO BRIDGE THE GAP BETWEEN THE GENERATION OF KNOWLEDGE AND ITS APPLICATION

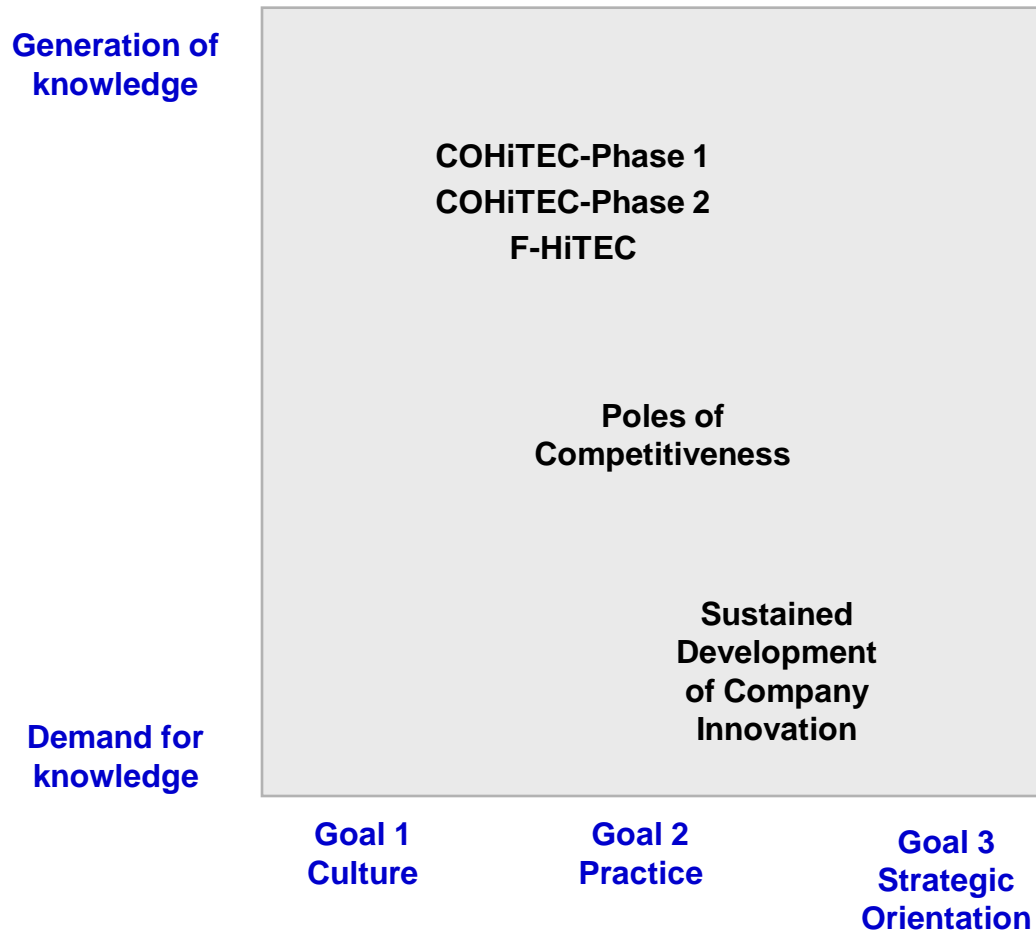
3. COTEC - ITS MISSION, STRATEGY AND INICIATIVES

COTEC STRATEGIC MATRIX WITH THE 2008 INICIATIVES



4. THREE UNDERGOING INITIATIVES

THEIR POSITIONING IN COTEC STRATEGIC MATRIX



4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

OBJECTIVE

TO STIMULATE AND SUPPORT COMPANIES OPERATING IN PORTUGAL TO DEVELOPING INNOVATION IN A SYSTEMATIC AND SUSTAINED WAY SO AS TO STRENGTHEN THEIR COMPETITIVE ADVANTAGES IN A GLOBAL AND KNOWLEDGE BASED WORLD ECONOMY

PHASE I (2006 - 2008)

AIMED AT PREPARING AND TESTING A SET OF INSTRUMENTS FOR THE PROMOTION OF COMPANY INNOVATION

PHASE II (2008 - 2010)

AIMED AT DIFFUSING THE APPLICATION OF THOSE INSTRUMENTS TO A PROGRESSIVELY HIGHER NUMBER OF COMPANIES OPERATING IN PORTUGAL (TARGET: 650 COMPANIES BY THE END OF 2010)

4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

PROJECT 1 - IDENTIFICATION AND DIFFUSION OF MODELS AND MECHANISMS AIMED AT REINFORCING THE SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

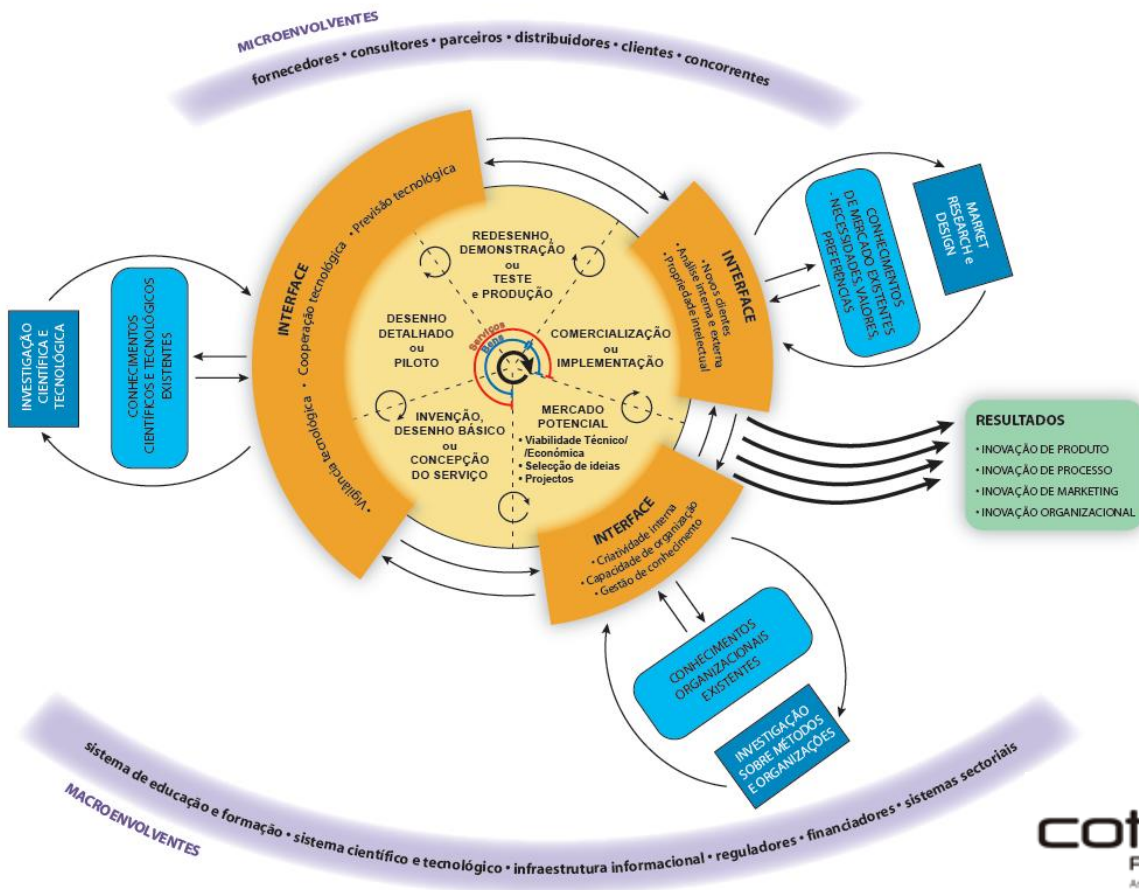
⇒ **INTERACTIVE CHAIN MODEL**

- **FOUR TYPES OF INNOVATION**
- **NON LINEAR INNOVATION PROCESS**
- **NETWORKING (REQUIRING ADEQUATE INTERFACES)**

⇒ **DIFFERENT TYPES OF INNOVATION REQUIRED AT DIFFERENT STAGES OF COMPANY LIFE**

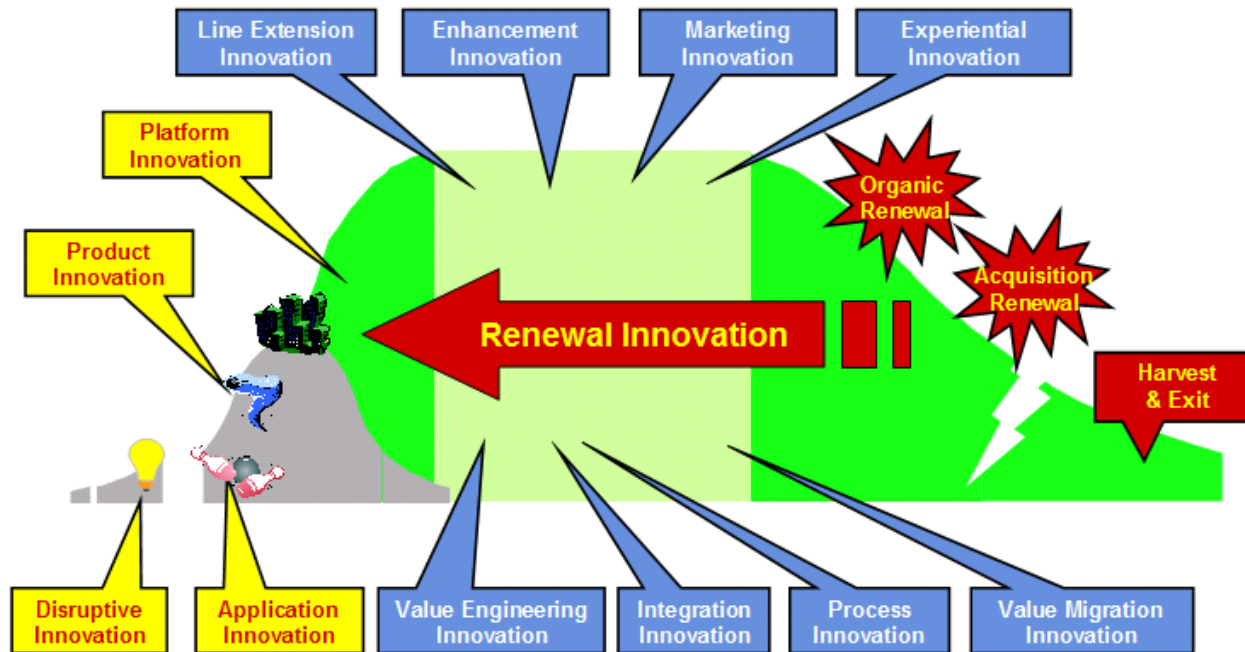
4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

INTERACTIVE CHAIN MODEL



4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

A Broad Universe of Innovation Types



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4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

PROJECT 2 - DEVELOPMENT OF A METHODOLOGY FOR CLASSIFYING RESEARCH, DEVELOPMENT AND INNOVATION (RDI) ACTIVITIES

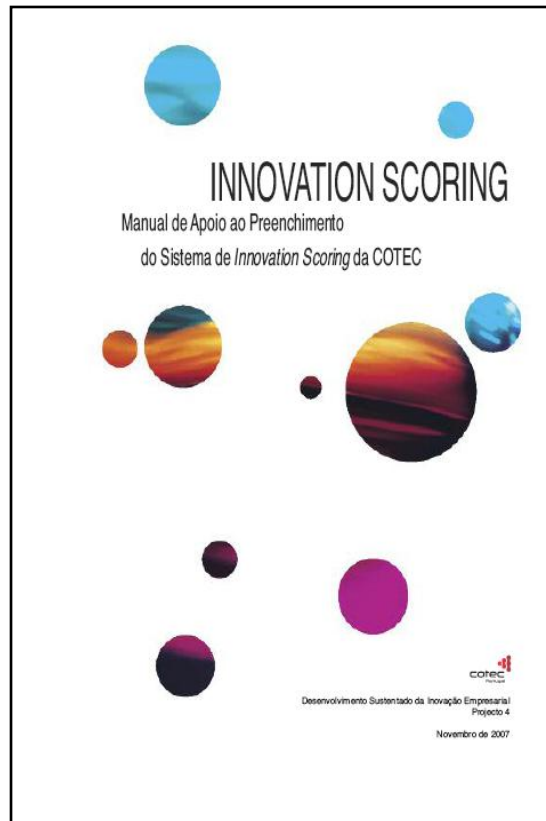
⇒ **MANUAL**

Identificação e Classificação
das Actividades de

IDI 

4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

PROJECT 3 - DEVELOPMENT OF AN INNOVATION SCORING SYSTEM



Associação Empresarial para a Inovação



4.1 SUSTAINED DEVELOPMENT OF COMPANY INNOVATION

PROJECT 4 - ACCREDITED CERTIFICATION OF RDI MANAGEMENT SYSTEMS

⇒ 4 PORTUGUESE STANDARDS



MARTIFER



Renova



4.2 THE COHITEC PROGRAMME

OBJECTIVE

TO CREATE VALUE FROM KNOWLEDGE
GENERATED FROM TECHNOLOGICAL RESEARCH
DEVELOPED BY PORTUGUESE UNIVERSITIES
(ADOPTING THE NORTH CAROLINA STATE
UNIVERSITY TEC METHODOLOGY)



FOCUS

CREATION OF HIGH-TECH / HIGH-GROWTH STARTUPS

PARTICIPANTS

- SCIENTISTS AND MBA STUDENTS
- MANAGEMENT LECTURERS
- EXECUTIVES IN RESIDENCE

4.2 THE COHITEC PROGRAMME (CONT.)

PHASE 1 (3-MONTH PERIOD: IN CLASS + FIELD WORK)

- TO BUILD UP BUSINESS OPPORTUNITIES

PHASE 2 (6-MONTH PERIOD: VIRTUAL COMPANY + FINANCING UP TO € 75.000)

- CONCEPT VALIDATION (BUSINESS AND TECHNOLOGY)
- VALUE CREATION FOR THE FOUNDERS
- DEVELOPMENT OF AN INVESTMENT GRADE BUSINESS PLAN
- DOUBLE 'BEAUTY PARADE' AIMING AT CONVERTING BUSINESS PROJECTS INTO REAL HIGH-TECH / HIGH-GROWTH STARTUPS

F-HITEC

- A 3.5 MILLION € FUND SET UP BY COTEC TO INVOLVE ITS ASSOCIATE MEMBERS IN THE CO-FINANCING OF NEW VENTURE COMPANIES

4.2 THE COHITEC PROGRAMME (CONT.)

INTERNATIONAL RECOGNITION

- THE COHITEC PROGRAMME RECEIVED IN 2006 THE PRICE FOUNDATION ENTREPRENEURSHIP EDUCATORS AWARD (UNIVERSITY OF STANFORD)

4.3 PROMOTION OF POLES OF COMPETITIVENESS

BACKGROUND

- **BASED ON ITS EXPERIENCE IN PROMOTING A POLE ON INFORMATION AND COMMUNICATION TECHNOLOGIES (STARTED EARLY IN MAY 2004 AND PROGRESSING SUCCESSFULLY), COTEC DECIDED IN 2006 TO PROMOTE OTHER POLES OF COMPETITIVENESS**

4.3 PROMOTION OF POLES OF COMPETITIVENESS

KEY ELEMENTS

- **COMPETITIVENESS** ⇒ **POLES LED BY COMPANIES**
- **MEMBERSHIP SHOULD INCLUDE R&D AND KNOWLEDGE DIFFUSION INSTITUTIONS**
- **SELECTIVE MEMBERSHIP**
- **DEFINITION OF A CLEAR AND FLEXIBLE STRATEGY ADDRESSING GLOBAL / FAST GROWING MARKETS**
 - **TECHNOLOGICAL POLES (ORIGINATING ON A STRONG R&D PUSH)**
 - **INDUSTRIAL POLES (WITH MAIN FOCUS CLOSER TO MARKET INDUSTRIAL R&D)**
- **'COOPETITION' ⇒ LIGHT BUT EFFECTIVELY LED STRUCTURE (SEEKING THE INVOLVEMENT OF ALL PARTNERS) AND PROPERLY STRUCTURED AND FINANCED PROJECTS (RARELY INVOLVING ALL PARTNERS)**

4.3 PROMOTION OF POLES OF COMPETITIVENESS

SELECTED AREAS FOR COTEC INTERVENTION

- **HEALTH SCIENCES** (A SPECIAL SECTOR IN WHICH THE LINEAR INNOVATION MODEL DEFINITELY APPLIES)
- **INFORMATION AND COMMUNICATION TECHNOLOGIES**
- **TRADITIONAL SECTORS** (WHERE INDUSTRIAL POLES ARE PROBABLY MORE RELEVANT THAN TECHNOLOGICAL ONES)
 - **CONSTRUCTION** (LEADING EVENTUALLY TO A PLATFORM)
 - **FOREST BASED INDUSTRIES**
 - **SHOEMAKING AND TEXTILE** (DESIGN AND FASHION)
 - **WINE**