



# **Development System And Program Review System in Europe**

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# The principles of planning , executing , and evaluating

- Targets to be achieved
- What should we do?
- Who should do?
- How to do?
- Review and evaluation system
- Where to improve and how to improve?



- Consider potential difficulties occurred during execution, at early planning stage
- Review plan target during executing stage
- Amend errors after evaluation
- Ensure connection and coherence to planning, execution and evaluation

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- Learn from EU's experience
  - Case comparison between Taiwan and EU
  - A+ Plan of MOEA
  - TOP university Plan of MOE
  - Nanotechnology plan of NSC and ITRI



# European Union Introduction

- A political & economic community
- 27 member states
- European Parliament
- European Council
- European Commission (EC)
- Executive Branch
- Commission President, 27 Commissioners



# EC Introduction

## 18 Directorates-General (DG)

- Agriculture & Rural Development
- Competition
- Economic & Financial Affairs
- Education and Culture
- Employment, Social Affairs & Equal Opportunities
- Energy and Transport
- Enterprise & Industry
- Environment
- Executive Agencies
- Fisheries & Maritime Affairs
- Health & Consumer Protection
- Information Society & Media
- Internal Market & Services
- Joint Research Center
- Justice, Freedom & Security
- Regional Policy
- Research
- Taxation and Customs Union



# **DG for Research Introduction**

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## **15 Directorates (A – L, R, S, T)**

- A - Inter-institutional & Legal Matters – Framework Programme
- B - European Research Area: Research Programmes & Capacity
- C - European Research Area: Knowledge-based Economy
- D - International Cooperation
- E - Biotechnologies, Agriculture, Food
- F - Health
- G - Industrial Technologies
- H - Transport
- I –Environment
- J - Energy (EURATOM)
- K - Energy
- L - Science, Economy & Society
- R - Resources
- S - Implementation of the 'Ideas' Programme
- T - Implementation of Activities to Outsource



# **DG for Research Introduction**

Work closely with

*DG - Joint Research Centre*

*DG – Information Society & Media*

*DG - Energy & Transport*

*DG - Environment*

*DG - Enterprise & Industry*



# DG-Research Mission

- To develop EU's policy in Research & Technological Development (RTD)
- To coordinate European research activities in member states
- To support EU's policies in other DGs
- To promote a better understanding of roles of science in modern societies
- To stimulate a public debate about research related issues at European level



# Implementation of Policy

## **Framework Programme (FP) for RTD**

- Organize & Financially Support
- Cooperation between
- Schools/Universities
- Research Centers
- Industries (including SME)



# Planning Introduction

- Resources and profit sharing
- Raise the living standard
- Change ideology and bring R & D into full play
- Take care of the disadvantaged minority
- Cooperation instead to competition
- Cultivate EU R&D by elimination of the unqualified



# Execution Introduction (One)

- FP1(1984-1987)
- FP2(1987-1991)
- FP3(1991-1994)
- The early base to promote the development of Science and Technology :
  - Unification of European system
  - Transportation, Communication system
  - Financial , taxation , and banking system
  - Legislation, Medical insurance system
  - Unemployment Aid , Retirement system
  - Education , S & T talent cultivation sytem



# Execution Introduction (Two)

## **4th FP (FP4 1994-1998) Objectives:**

- Research and Technological Development (RTD) Programmes
- Demonstration Programmes
  - Focusing on subjects selected for their specific added value
  - Encouraging the integration of European research activities
- Priority subjects:
  - Information and communications technologies:
  - Industrial technologies
  - Environment
  - Life sciences and technologies
  - Non-nuclear energy
  - Transport
  - Targeted socio-economic research



# Execution Introduction (Two)

## **5th FP (FP5 1998-2002) Objectives:**

- Solve problems of combining technological, industrial, economic, social & cultural aspects.
- Respond to the major socio-economic challenges facing Europe
- Priority subjects:
  - Quality of life and management of living resources
  - User-friendly information society
  - Competitive and sustainable growth
  - Energy, environment and sustainable development
  - Improving human research potential and the socio-economic knowledge base



# Execution Introduction (Two)

## **6th FP (FP6 2002-2006) Objectives:**

- Focusing and Integrating Research
- Priority subjects:
  - Life sciences, genomics and biotechnology for health
  - Information Society Technologies (IST)
  - Nanotechnologies & nanosciences, knowledge-based multifunctional materials, new production processes & devices
  - Aeronautics and space
  - Food quality and safety
  - Sustainable development, global change, and ecosystems
  - Citizens and governance in a knowledge-based society



# Execution Introduction (Two)

## **6th FP (FP6 2002-2006) Objectives:**

- Structuring the European Research Area
- Priority subjects:
  - Research and innovation
  - Human resources and mobility (Marie Curie actions)
  - Research infrastructures
  - Science and society
  - - Strengthening the European Research Area
- Priority subjects:
  - Coordination of existing activities
  - Development of research and innovation policies



# Execution Introduction (Two)

- **7th FP (FP7 2006-2013) Objectives:**
- Carry the achievements of FP6 towards the development of a knowledge-based economy and society in Europe.
  - Support transnational cooperation on every scale across the EU
  - Enhance investigator-driven basic research based on excellence
  - Strengthen human potential in research & technology in Europe, both quantitatively and qualitatively
  - Develop and enhance the excellence of European research institutions and universities



# **Execution Introduction (Two)**

## **7th FP (FP7 2006-2013) Objectives**

- Priority subjects:
  - Cooperation Programme (mission oriented):

Knowledge and Technology which address European social, economic, environmental, public health and industrial challenges, serve the public and support developing countries.
  - Ideas Programme:

To develop very high-level frontier research at European level, building on excellence in Europe and raising its profile at international level.
  - People Programme:

To make Europe most attractive to the best researchers
  - Capacities Programme:

Optimize the use and development of research infrastructures



# **Execution Introduction (Two)**

## **7th FP (FP7 2006-2013) Objectives**

- **FP7 DOES NOT support/finance research activities**
  - aiming to clone humans for reproductive purpose
  - intended to modify the genetic heritage of human beings which could make such changes heritable
  - intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including those created by means of somatic cell nuclear transfer



# Execution Introduction (Three)

- Foster educational an S & T talents
- Eliminate national frontier and make talents available for entire EU
- Bologna system university and post graduate education
- Training & Mobility of Researchers Plan (Individual)
- Marie Curie Mobility Plan (Individual and Network)



# **Execution Introduction (Four)**

- S & T research for a singular field (Liberal)
- Integrate multinational teams
- Large plans based on academic sector
- Pursuit academic excellence
- Multi- disciplines S &T Research (leading)
- Large industrial, governmental, academic research plan for a singular goal
- Seek technical break through, develop and broaden industrial market



# **Examination and Review**

## **Introduction**

- **An EU official with one or two S & T Professionals**
- **Apply review plan, supervise plan execution and evaluate plan result**
- **Plan amendment recommendation ( every half year)**
- **Possibility to cease case execution during mid term review**
- **Examination and Review cost account for 0.5 % of the total plan budget**



## Three cases comparison between Taiwan and EU

- A+ Plan of MOEA
- TOP university Plan of MOE
- Nanotechnology plan of NSC and ITRI



# EU Promoting Innovation

- Innovation is the key to converting cutting-edge research into high-quality products, effective services, and new business models that can compete in today's global marketplace, which includes emerging competitors.