



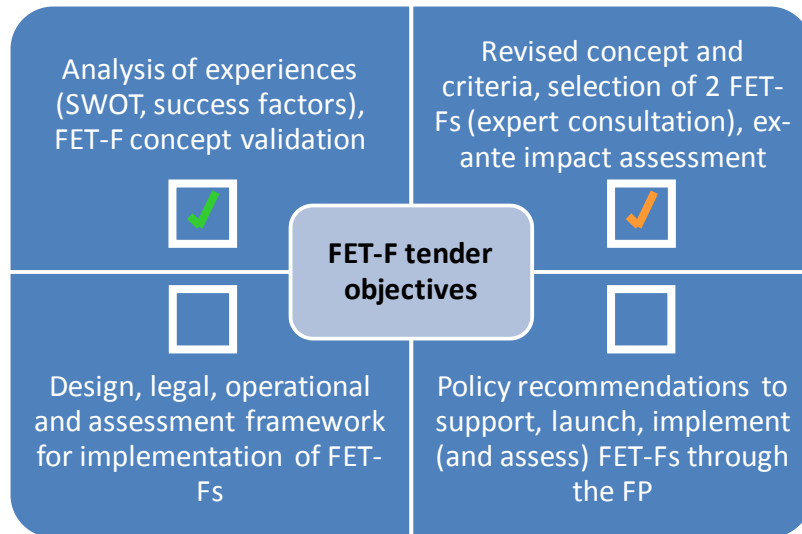
# FET Flagship Study First Results

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- FET Flagship study
- Previous flagship-like initiatives
- Lessons learned and success factors
- Expert opinions
- Refined concept and criteria
- Next steps

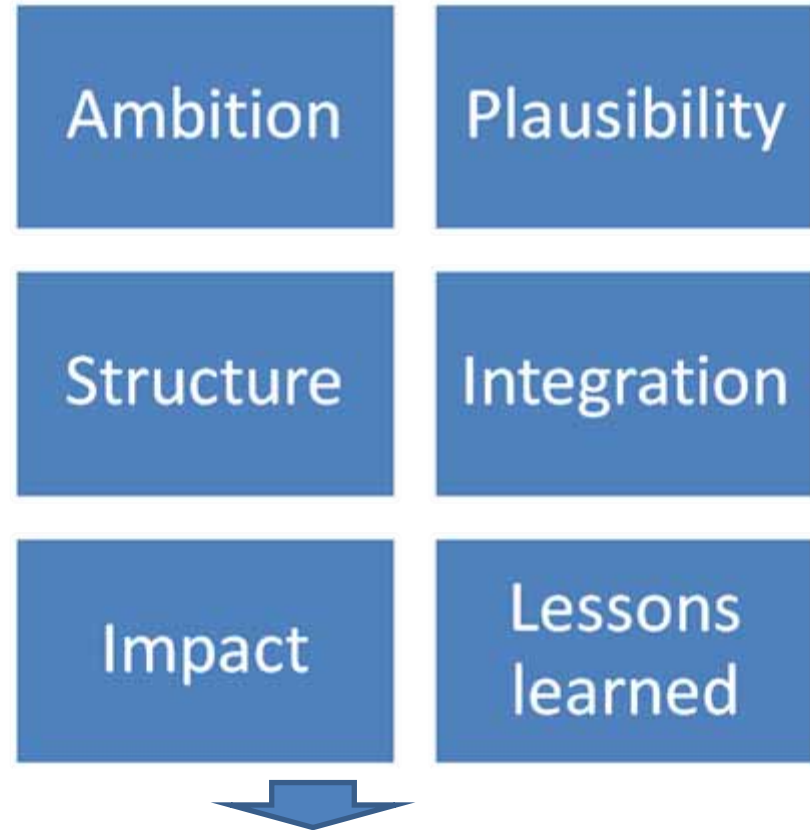


## Progress towards objectives

- 60 flagship-like examples collected
- 6 selected for detailed analysis
- Interviews with experts
- **Analysis of success factors for each and all examples**
- Ex-ante impact assessment
- **Consultation with 12 experts (interviews)**
- Refined concept and criteria
- Selection and validation WS preparation
- 21 experts
- Analysis of design, legal, operational frame started
- First policy recommendations

		2010									
	Leader	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct
<b>WP1 Analysis</b>	<b>FFG</b>										
1.1 Identification of previous flagships	FFG	■									
1.2 Analysis of success factors	eutema		■								
1.3 Revised concept and criteria	eutema		■								
<b>WP2 Revised concept validation</b>	<b>eutema</b>										
2.1 Consultation (incl. further FET-F topics)	eutema			■							
2.2 Ex-ante impact assessment	FFG			■							
2.3 Validation and selection workshop	FFG			■	●						
2.4 FET-F Selection	eutema				■						
<b>WP3 FET-F Framework</b>	<b>FFG</b>										
3.1 Resource and key player analysis	eutema					■	■				
3.2 Governance models, legal frameworks, instruments	FFG				■	■	■				
3.3 Suitability assessment	FFG						■	■			
3.4 Implementation planning	FFG							■	■		
<b>WP4 - Policy Recommendations</b>	<b>eutema</b>										
4.1 Implementation roadmap	eutema							■	■	■	
4.2 Support activities and policy tools	FFG							■	■	■	
<b>WP5 - Project Management</b>	<b>eutema</b>										
5.1 Methodology and work plan	eutema	■				■					
5.2 Management and quality control	eutema	●	●	●	●	●	●	●	●	●	
Milestones		●				●				●	
		Kick-off				Workshop, interim meeting				Final meeting	
Deliverables			●		●	●			●	●	
			D1		D2, D3	D4			D5, D6	D5 final	

Previous flagship-like example
DARPA Challenge
Human Genome Project
Large Hadron Collider
Long-term Ecological Network
Strategic Computing Initiative
Assembling the Tree of Life



**Success Factors**

## Results: Cross-cutting principles

- Involve the research community in shaping the program
- Balance individual researcher goals with those of the initiative
- Clearly define and evaluate goals of initiative
- Leadership
- Develop an appropriate structure
- Create an environment conducive to integration
- Implement data management plan prior to data acquisition
- Initiatives need not be hypothesis driven to impact research

- Consultation
  - “Mission” character of flagships is key.
  - Goals are important for alignment (integration), agencies, politicians, PR.
  - Goals must not be oversimplified, too narrow or short-ranged.
  - Opinions on time-to-impact vary broadly in the community. For some, early results needed, but 10-year time-to-impact generally.
  - Science comes first, other impacts will follow – other stress social and economic results.
  - Researchers are sceptic about “planning” breakthroughs.
  - Real breakthroughs come from single researchers and small groups.
  - Flagships must be more than a collection of projects.
  - Room for creative thinking needed.
  - Scepticism about budget size (100m/yr): quality spending, S&T staff, sustainability.
- Leadership considered key for integration and management.

- Consultation (management)
  - Content is more important than management and logically first.
  - Structure and management also depend on topic.
  - Suggestion to install a strong team (20 people) for S&T planning.
  - Disagreement about necessity to create a centre.
  - Main challenge is integration of projects.
  - No micro-management possible: more a funding agency
- Consultation (topics)
  - More precision required compared to ISTAG description
  - All topics considered important, more and smaller flagships?
  - Focus on an area of true European excellence
  - Ideas for new topics, e.g. truly mission-oriented: zero road deaths
  - Interdisciplinary work regarded as essential both within and beyond ICT

*Refined flagships* are defined as large-scale interdisciplinary European ICT research initiatives. The core elements of a flagship are:

- Clear specification of a broadly accepted long-term mission
- Integrative research agenda to realize the common mission
- Strong potential for technological innovation and economic exploitation
- In areas of established European *scientific* excellence
- Strong scientific leadership steering the research activities
- A federated effort by the EU and member states including industry and global partners where appropriate

Flagships should use calls or competitions for generating ideas and projects. However, flagships are more than a number of projects or a loosely interrelated cluster of projects grouped around a problem because they create synergy and integration. Different topics may require joint infrastructure, localized centres, or a network of research organisations. This can be realized using different governance models.

Flagships: clearly **science-driven** with inherent risks, but “**goal achieving**” character of flagships is key.

Scientific mission should be **complex, comprehensive and broad**, but it must be **clear** when it is fulfilled and should be **easy to communicate**.

Goals are important for alignment, interdisciplinary integration, and for agencies, politicians and a broad public.

Flagships are focused, **long-term initiatives**, but create impact, new technologies, and evaluations **along the way**.

Flagships will benefit from **strong scientific leadership**. Leaders act as the glue binding people and projects together; they have to be identified early.

Consider efforts and infrastructure **to integrate data between various research groups**. Create an **environment rewarding integration**.

Perform scrutiny in **regularly evaluating progress towards the goals** and taking corrective actions.

Remain **open to the participation of small groups or individuals** as the origins of creative new ideas.

**Integrate different ICT fields or integrate ICT with other scientific disciplines** including the humanities. ICT is not just at the service of another discipline, it is at the core.

Flagships should be managed by a small, possibly multidisciplinary team of top people. They must break down high-level goals to smaller aims and topics. Management and the shape of flagships may be different for different topics.

Some form of centre (either virtual or physical) can be useful for achieving integration.

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