INTERFACEUROPE

Mission MIRIADE

Etude des opportunités européennes pour le pôle Hom'Mer

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Produits pour l'innovation

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PLAN

1 - INTRODUCTION

2 – ETUDE D’OPPORTUNITES

3 – DIAGNOSTIC DE PROJETS

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1 - INTRODUCTION

2 – ETUDE D'OPPORTUNITES

3 – DIAGNOSTIC DE PROJETS

Objectifs de la mission

Objectif général

> Disposer d'un **inventaire de projets** pouvant potentiellement faire l'objet d'un financement européen dans le cadre du pôle HOM'MER

Objectifs spécifiques

> Une **étude des opportunités européennes** s'offrant au pôle HOM'MER et à ses membres (entreprises, y compris PME, laboratoires de recherche, universités, etc.)

Il s'agit de **découvrir toutes les opportunités européennes offertes**, et donc d'élargir considérablement les possibilités de participation à tous les financements européens de promotion de la recherche et de l'innovation

> Un **diagnostic Europe de projets** déjà identifiés comme potentiels

Il s'agit de **définir le meilleur positionnement possible par rapport à ces programmes de financement**, et donc d'évaluer les chances de succès et à améliorer les stratégie et les projets

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Etude des opportunités européennes relatives aux 3 axes constitutifs du Pôle Hom'Mer

AXE 1 : Protection de l'environnement marin

AXE 2 : Valorisation des ressources naturelles marines et du littoral

AXE 3 : Industries Maritimes

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Détail des axes

> AXE 1 : Protection de l'environnement marin

-Pollution marine (simulation)
-Eaux de ballast
-Toxicité des métaux lourds
-Toxicité des résidus de dragage
-Réchauffement climatique

> AXE 2 : Valorisation des ressources naturelles marines et du littoral

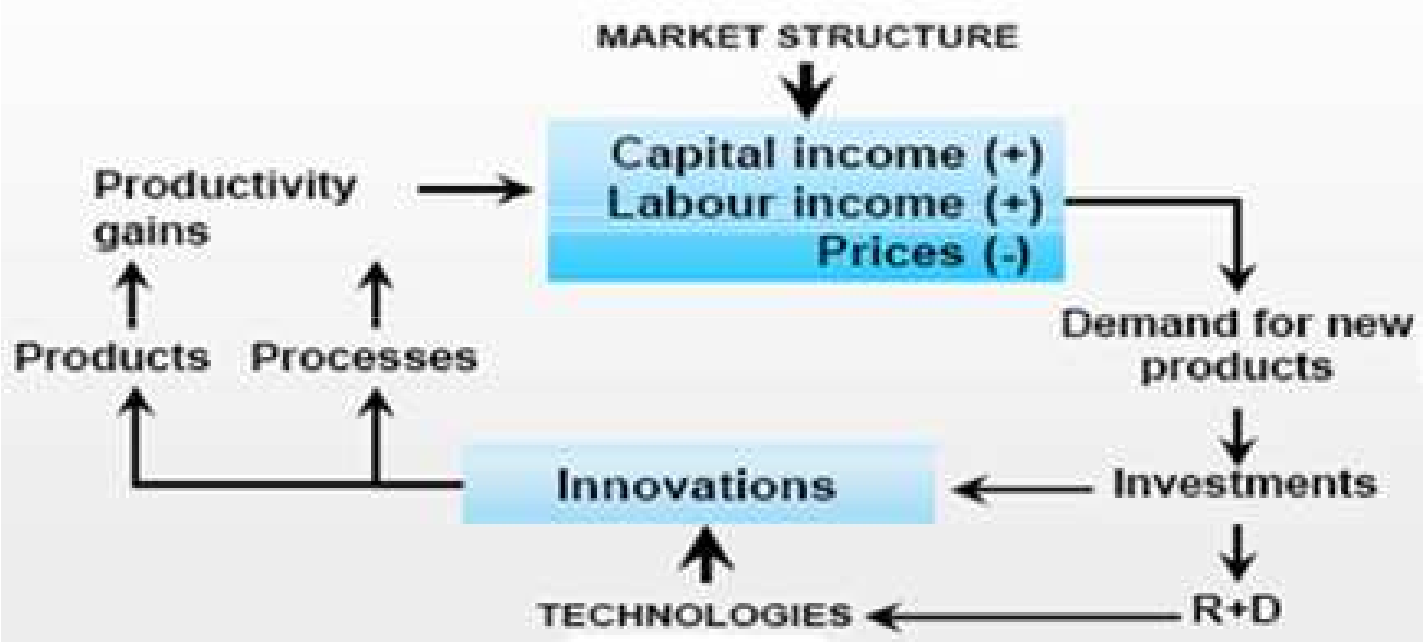
-Aquaculture -Pêche
-Conchyliculture
-Mytiliculture
-Elevage d'ormeaux
-Valorisation des déchets

> AXE 3 : Industries Maritimes

-Chantiers navals

Objectif général des financements européens :

Bâtir une économie compétitive basée sur la connaissance

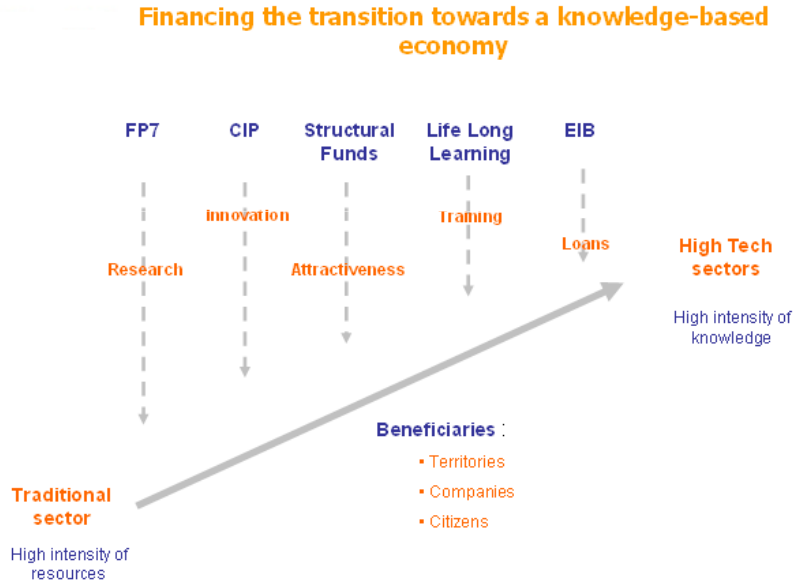


Source:

EC-HLEG Key Technologies, Brussels, sept. 20, 2005 - “Foresighting the new technology wave”
Prof. Emilio Fontela - Universidad Antonio de Nebrija, Spain

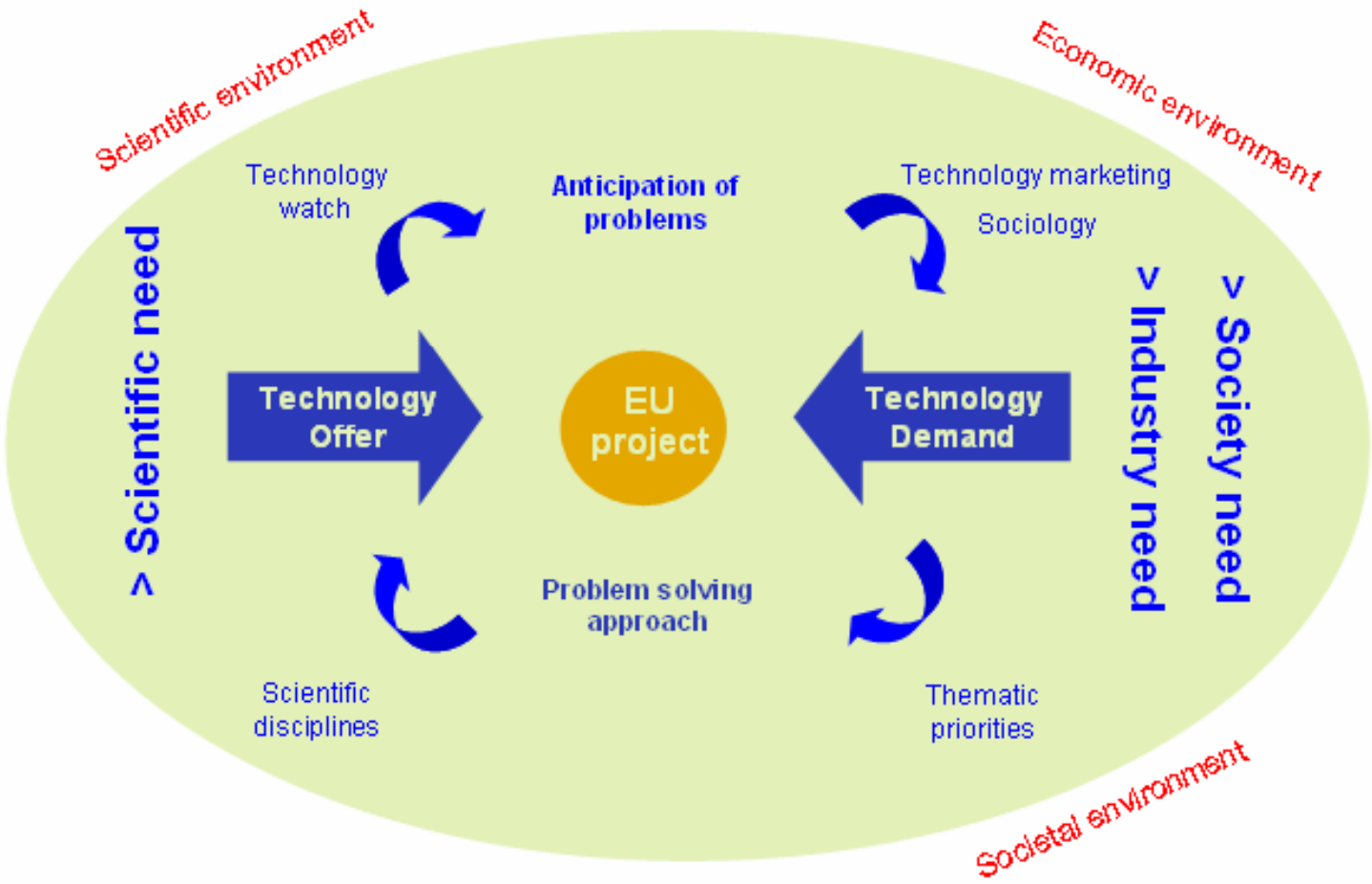
Objectif général des financements européens :

Bâtir une économie compétitive basée sur la connaissance



Approche des financements européens :

Des programmes ciblés sur des priorités économiques, sociétales ou scientifiques ... appelant des solutions innovantes basées sur le développement et l'exploitation de la RD ... sous forme de projets



Facteurs clés de succès des projets européens

Opportunité → **Faisabilité**

- Etre **bien positionné** au regard des **priorités thématiques européennes** reflétant les marchés porteurs et les besoins d'intérêt général
- Développer une **idée originale** et **pertinente**

- Disposer des **ressources nécessaires**
- Constituer un **partenariat complémentaire**
- Apporter et développer une **connaissance spécifique**
- Maîtriser la gestion de **projet collaboratif**
- Rédiger une **proposition attractive**

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Comment saisir les opportunités ?

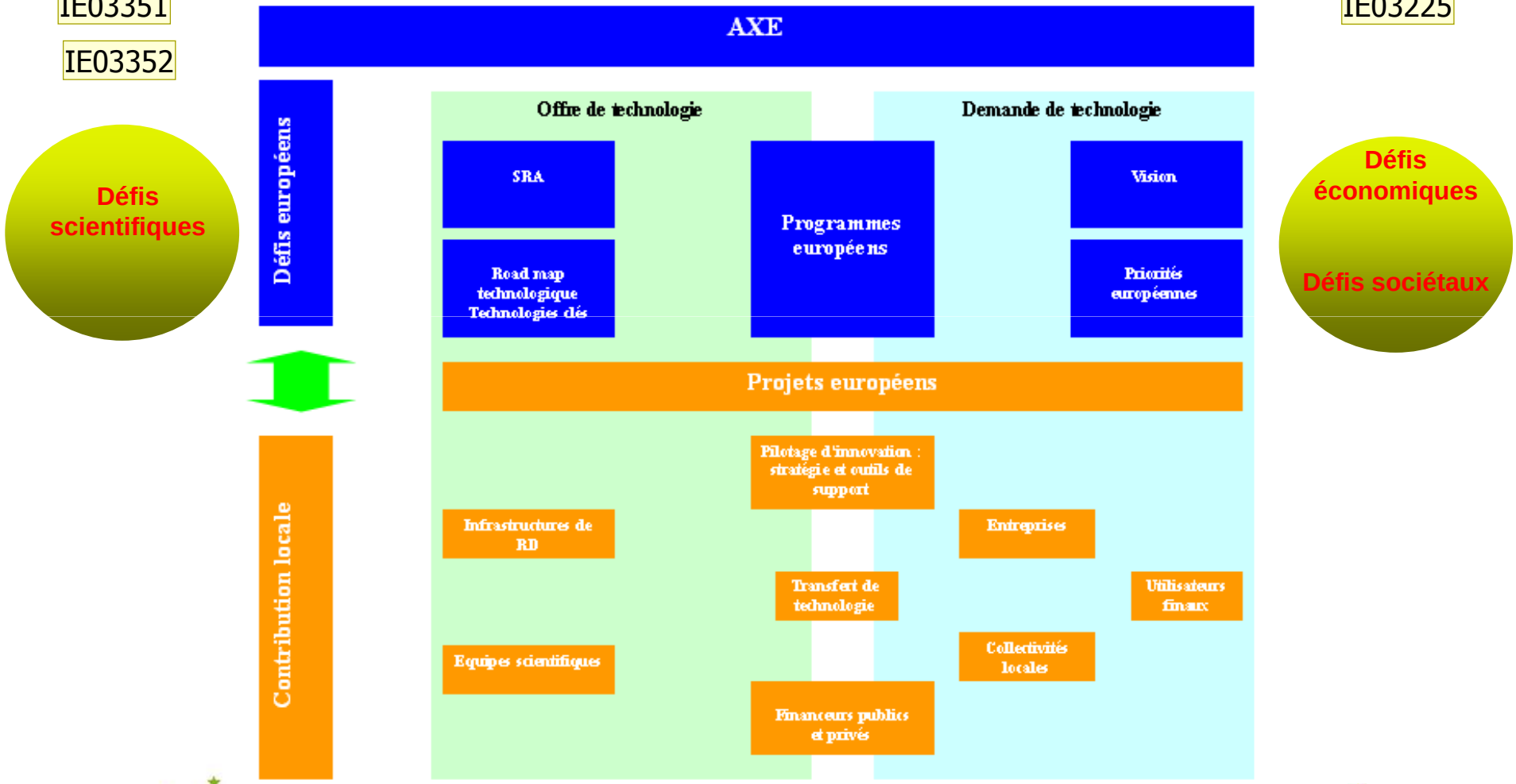
Approche projet et cluster

Aligner priorités européennes et capacités locales dans une démarche stratégique de projet

IE03351

IE03352

IE03225



Défis scientifiques

Défis économiques

Défis sociétaux

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Diapositive 11

IE03225 Politique maritime intégrée (livre bleu) :

> La formation de pôles d'activités multisectorielles améliore fortement l'intégration des entreprises et la compétitivité dans le secteur maritime.

Ces pôles d'activités jouent un rôle-clé dans le maintien du savoir-faire maritime de l'Europe et seront donc au coeur de la politique maritime. La coopération entre les secteurs public et privé concernant les centres d'excellence maritime offre également un cadre approprié permettant de bien comprendre et de programmer les interactions entre les différents secteurs et industries.
Interface Europe; 26/08/2008

IE03351 Cluster :

Un « cluster » (Cooke et Huggins, 2002) est une concentration géographique d'acteurs unis par des chaînes de valeur économiques, évoluant dans un environnement bénéficiant d'infrastructures de soutien, partageant une stratégie commune et visant à attaquer un même marché.

Interface Europe; 08/09/2008

IE03352 Ce que doit être un pôle (Luc Rousseau Direction générale des Entreprises, ministère de l'Économie, de l'Industrie et de l'Emploi Pierre Mirabaud Préfet)

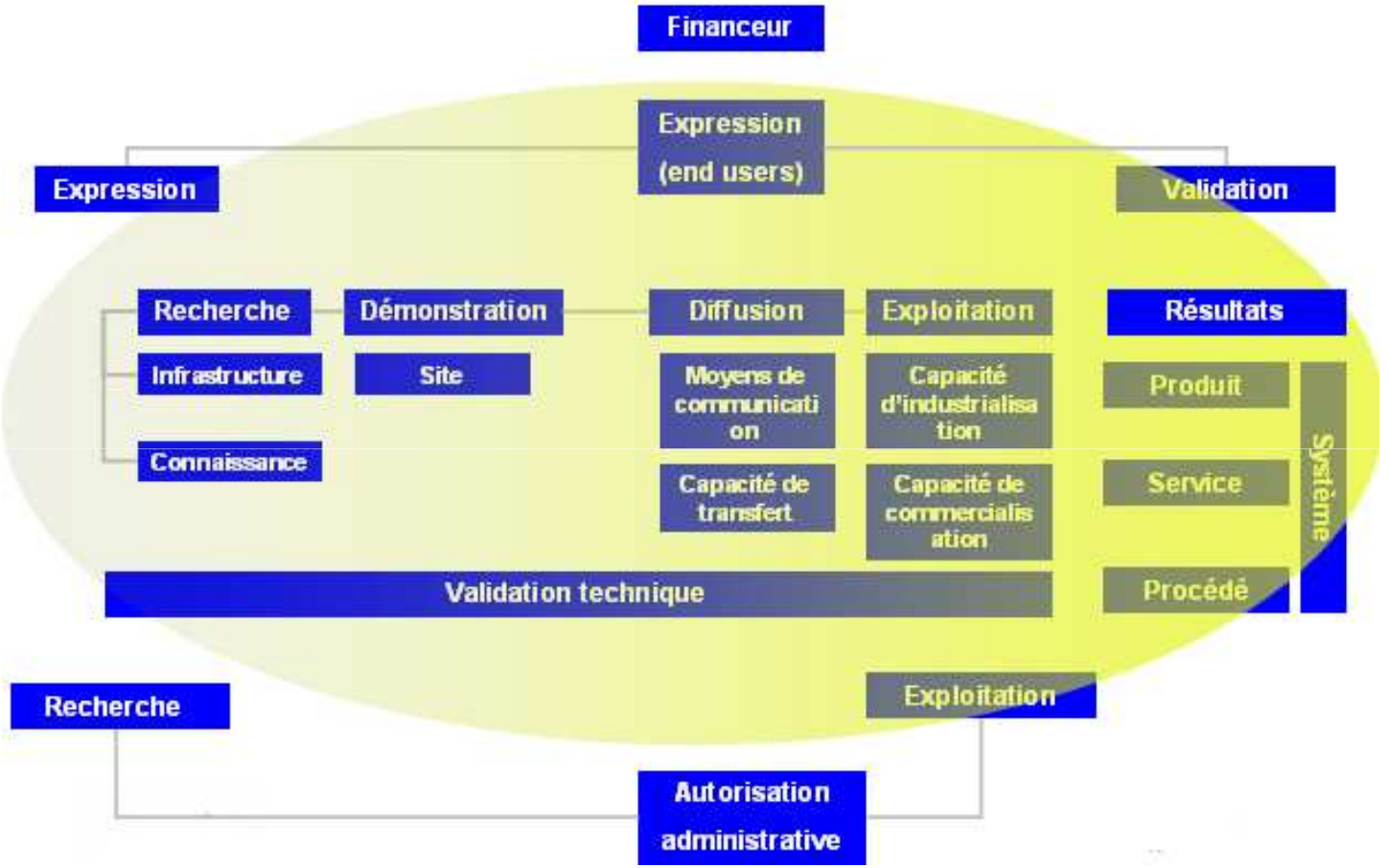
Un pôle est un écosystème dynamique orienté sur des marchés porteurs et à haute valeur ajoutée. Il s'appuie sur une organisation élaborant et développant des projets R&D collaboratifs et doit devenir rapidement un vecteur du développement économique du territoire, en lien avec les partenaires
territoriaux concernés, à travers les services rendus à ses membres et la réalisation de projets structurants.

Ces deux fonctions complémentaires se concrétisent notamment par :
• une vision stratégique (une ambition industrielle), caractérisée par une feuille de route ;
• des projets de R&D sur des briques technologiques identifiées et, pour lui donner corps, des outils structurants tels que plates-formes technologiques, outils de veille, outils de mutualisation ;
• une structuration du développement commercial visé (avec mise en commun d'analyses de marché, démarche marketing, relations privilégiées avec une population « témoin » des clients futurs, etc ;
• une visibilité et une stratégie européenne et internationale pour developer des partenariats technologiques (Eureka, PCRDT notamment) et attirer des compétences ;
• une politique de ressources humaines ancrée dans le lien avec les institutions de formation et une gestion prévisionnelle des emplois et des competences nécessaires ;
• le cas échéant une politique foncière et d'aménagement de l'espace comportant des projets structurants, pour s'assurer des moyens d'un développement à moyen terme du pôle ;

Conclusion:

Définir une stratégie dans une perspective européenne (stratégie) et utiliser la boîte à outil des financements européens (programmes) pour sa mise en oeuvre opérationnelle (projet)

Quel rôle dans les projets ? Chaine de valeur



1 - INTRODUCTION

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2.1.– Priorités et programmes européens

2.1.1 – Cadre global

2.1.2 - Défis à long terme : Perspectives européennes 2015 - 2030

2.1.3 - Défis à moyen terme : Programmes européens 2008 - 2013

2.1.4 - Défis à court terme : Appels à propositions européens 2008 - 2009

HOM'MER:

Quelle approche européenne de la recherche et de l'innovation pour le pôle Hom'Mer ?

"La recherche marine et maritime coûte cher : nous ne pouvons nous permettre d'être inefficaces.

Pour assurer la meilleure utilisation possible des ressources de l'Europe, il faut élaborer une **stratégie** claire établissant un **lien entre les priorités politiques et celles de la recherche**, traiter les **problèmes intersectoriels**, exploiter pleinement les **synergies** entre les efforts des États membres et ceux de la Communauté, **éviter les doubles emplois** et améliorer le **dialogue entre les acteurs intéressés.**

L'Europe doit également se demander comment la **recherche** peut contribuer davantage à **l'innovation** et comment transformer plus efficacement les **compétences** et les **connaissances** en **produits et services industriels**."

Source :
COMMUNICATION DE LA COMMISSION « Politique maritime intégrée – Communication de la Commission européenne » - 10.octobre 2007 (COM(2007) 575 final)

2004	World value (in € Million)	European value (in € Million)	European share of world value
Shipping & Transport	342,743	151,137	*44.1%*
Marine Tourism	168,189	71,812	*42.7%*
Offshore Oil & Gas	91,146	19,112	*20.9%*
Fish/Seafood Processing	79,859	8,241	*10.3%*
Marine Equipment	72,871	16,675	*22.9%*
Fishing	55,983	4,758	*8.5%*
Shipbuilding	37,746	13,143	*34.8%*
Ports	25,017	10,478	*41.9%*
Marine Aquaculture	23,876	3,483	*14.6%*
Cruise Industry	12,000	2,365	*19.7%*
Research & Development	10,629	3,273	*30.8%*
Seaweed	5,988	n/a	*n/a*
Marine Commerce	6,840	2,736	*40.0%*
Marine IT	3,570	1,382	*38.7%*
Minerals & Aggregates	2,741	1,344	*49.0%*
Renewable Energy	128	121	*94.5%*
Marine Biotechnology	2,190	n/a	*n/a*
Submarine Telecoms	1,126	185	*16.4%*
Ocean Survey	2,013	538	*26.7%*
Education & Training	1,537	n/a	*n/a*

Table 1: World marine sectors, IMI[1]

Source :

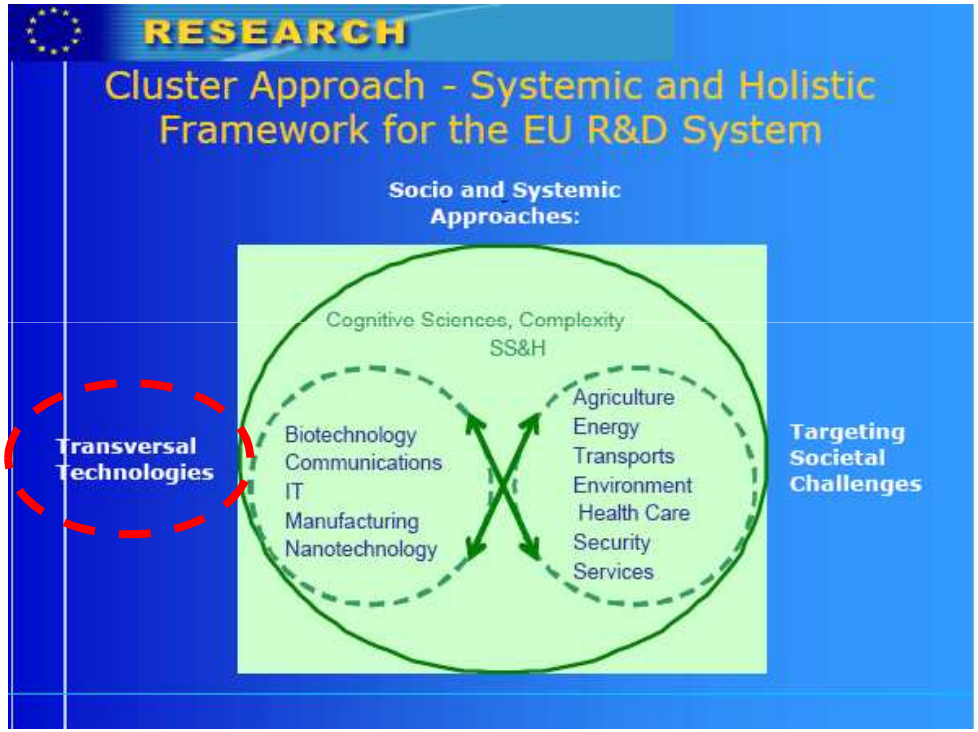
COMMISSION STAFF WORKING DOCUMENT « Maritime Clusters » - 17 octobre 2007

HOM'MER:

Quelle approche européenne de la recherche et de l'innovation pour le pôle Hom'Mer ?

Technologies clés

Recherche



Applications

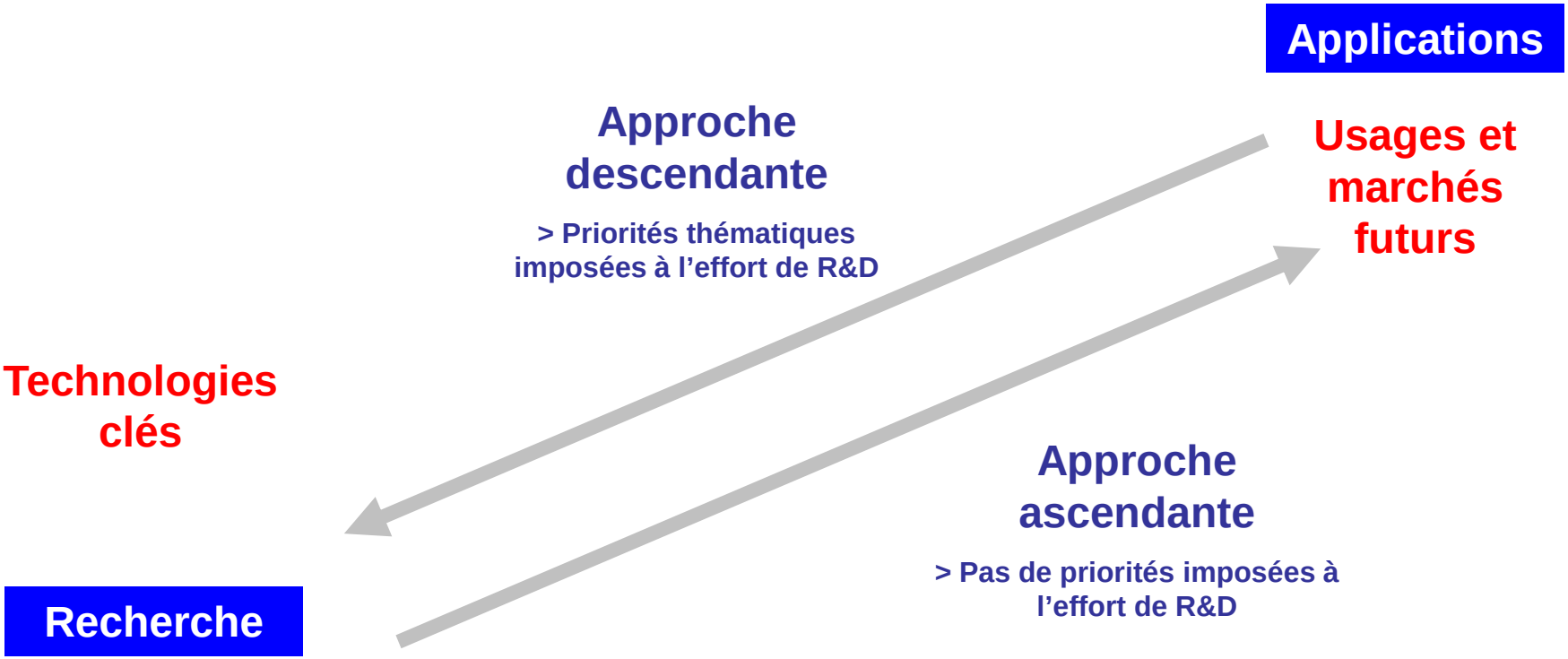
Usages et marchés futurs

Source:
Mrs T. De Lemos, Chair of the European expert group "Key Technologies for Europe"

Perspectives européennes

HOM'MER:

Quelle approche européenne de la recherche et de l'innovation pour le pôle Hom'Mer ?



Source:
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Perspectives européennes

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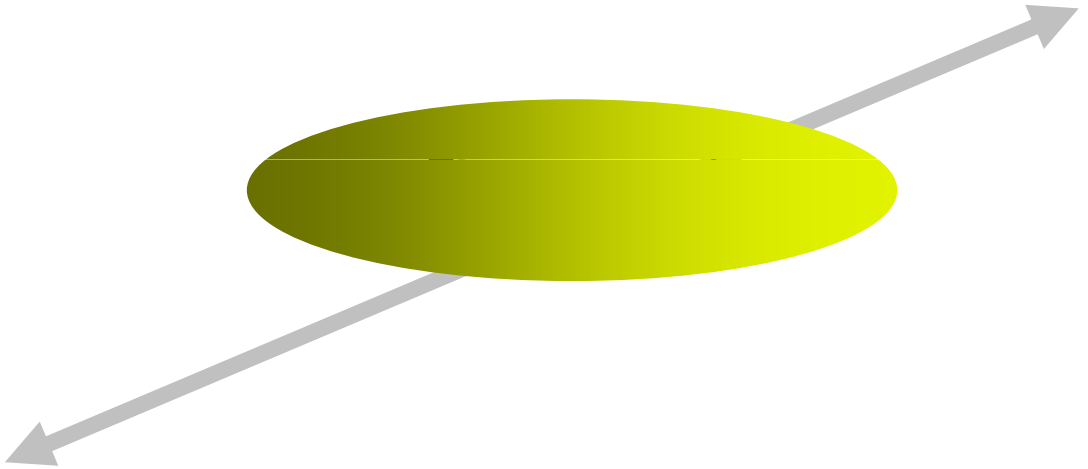
Applications

usages et marchés futurs



Recherche

Etat de l'art

Perspectives européennes

HOM'MER:

Quelle approche européenne de la recherche et de l'innovation pour le pôle Hom'Mer ?

Perspectives européennes

Diapositive 21

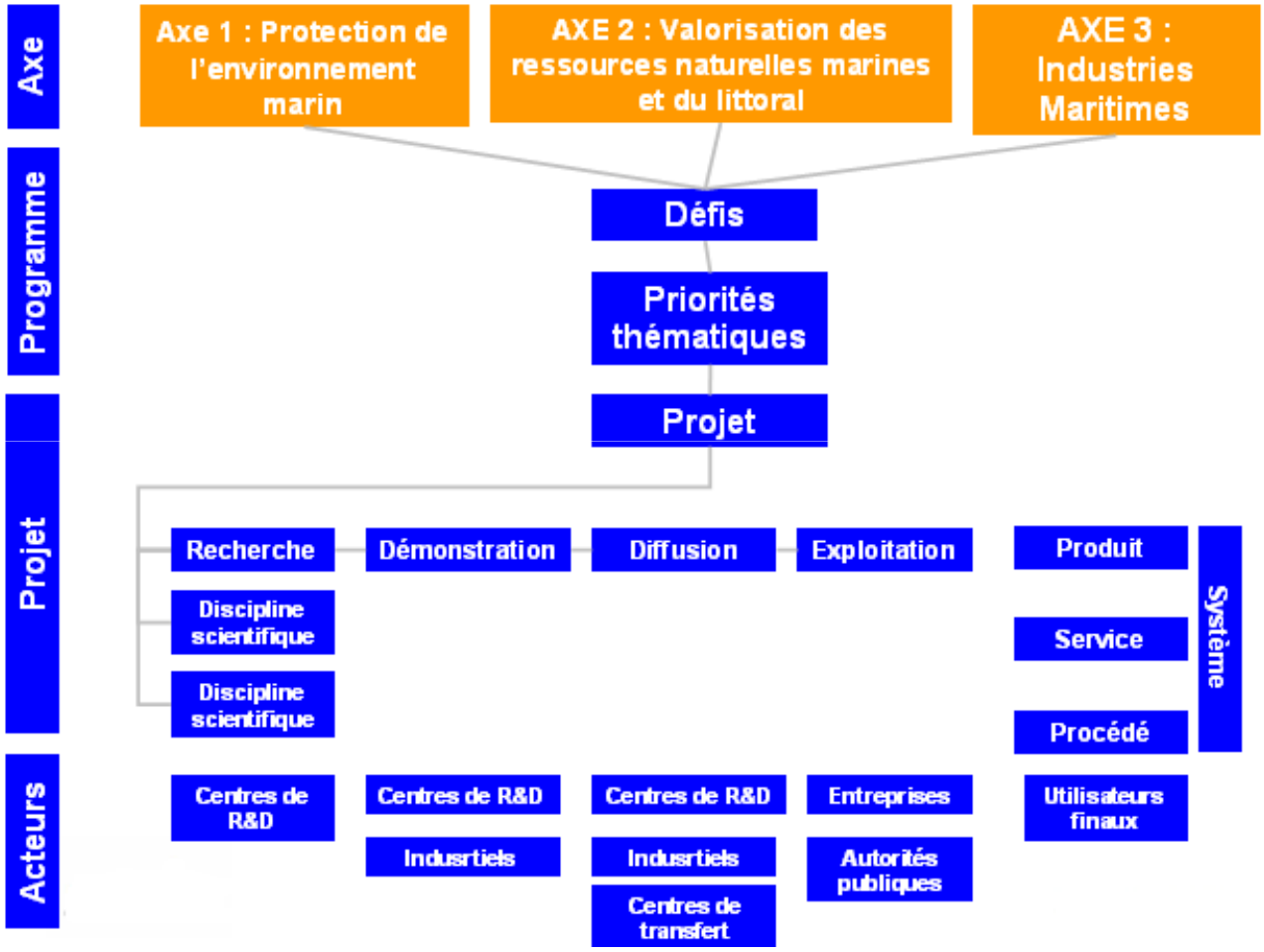
IE03243 Marché de masse ?
ou
Marché de niche pour des applications spécifiques faites sur mesure et à très haute valeur ajoutée
Interface Europe; 07/09/2008

IE03244 Améliorations recherchées pour le consommateur ou/et le citoyen (= critères de sélection des technologies développées) : réduction des coûts, amélioration de l'environnement, meilleure qualité de vie, plus grande sécurité, gains de productivité, compétitivité, etc
Interface Europe; 07/09/2008

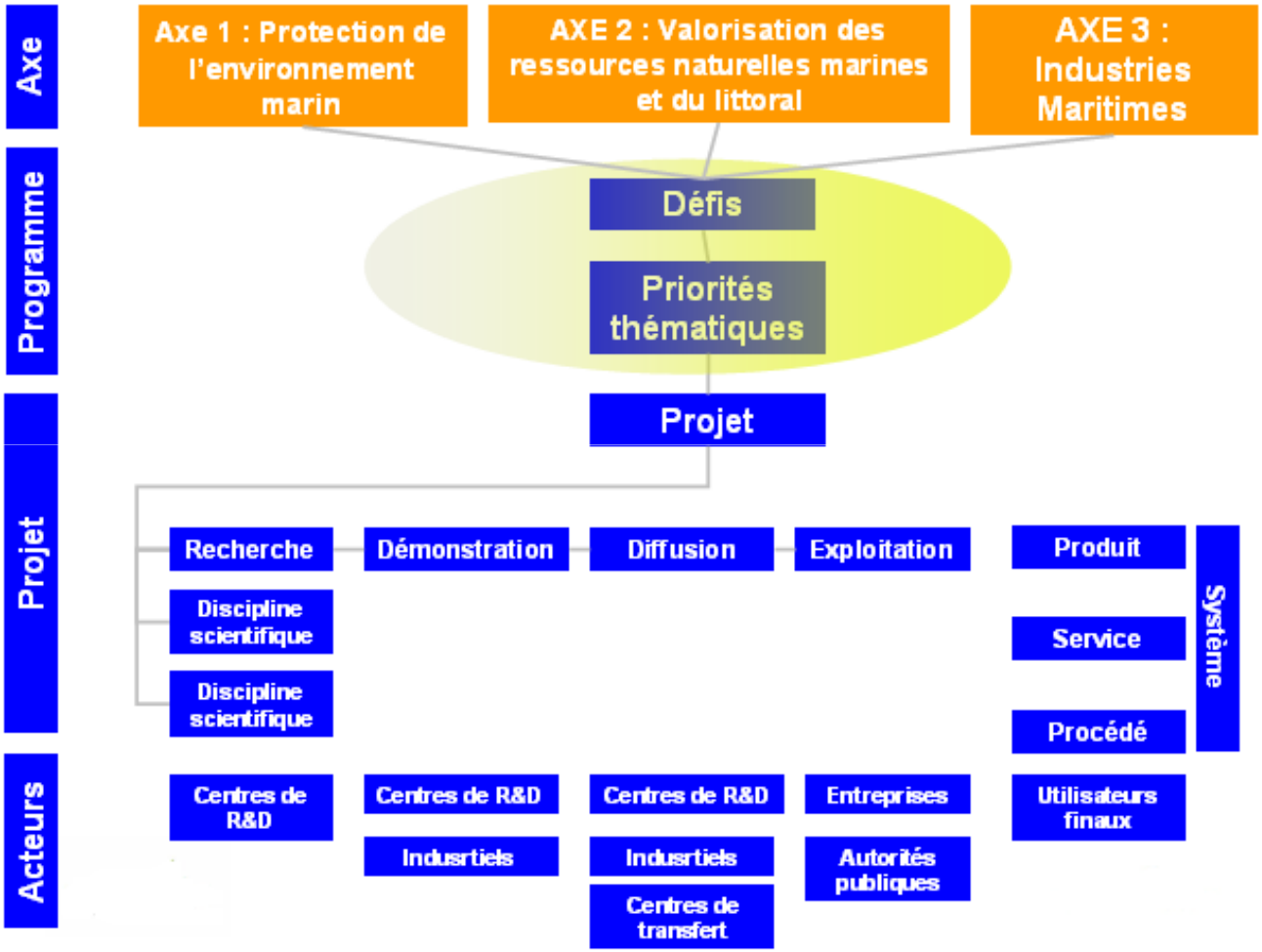
IE03245 Le dévelopment de produits basés sur les biotechnologiques (économie basée sur la bio-connaissance) est reconnu comme un domaine clé de développement en tant que « marché porteur »

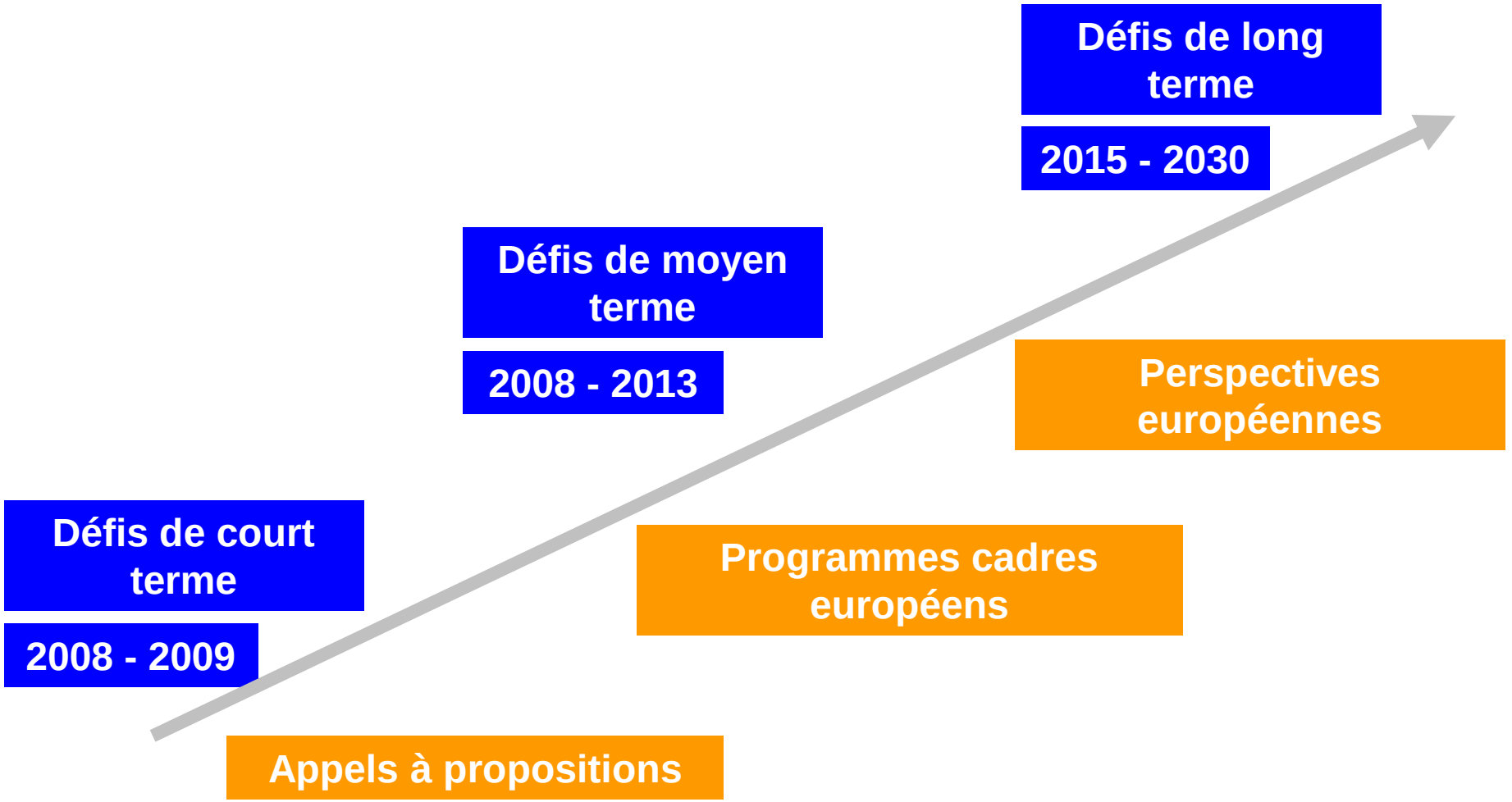
Lead markets: Markets for new research and innovation intensive products/systems/solutions for which Europe can provide the initial marketplace and European businesses have the potential to become global leaders.
Putting Knowledge into Practice: A broad-based Innovation Strategy for Europe, COM (2006)502,
13/9/06.
Interface Europe; 07/09/2008

Cadre global



Cadre global




Défis de long terme
2015 - 2030
Défis de moyen terme
2008 - 2013
Perspectives européennes
Défis de court terme
2008 - 2009
Programmes cadres européens
Appels à propositions

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Politique maritime intégrée

Plateformes technologiques sectorielles

Perspectives européennes

HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

Pour tirer parti des points forts de l'industrie européenne, les services de la Commission ont entrepris une **évaluation détaillée de la compétitivité de 27 secteurs de l'industrie européenne**:

« Les **industries agro-alimentaires et des sciences de la vie** (par exemple l'industrie de l'alimentation et des boissons, l'industrie pharmaceutique, l'industrie de la biotechnologie) représentent un cinquième de la valeur ajoutée manufacturière de l'UE et se caractérisent par des taux de croissance de moyens à élevés.

Les principaux défis sont :
•le développement des connaissances et
•l'amélioration de la réglementation.

Comme il s'agit d'industries très innovantes, les enjeux majeurs en la matière sont :
•la **R&D**,
•la protection des **droits de la propriété intellectuelle** et
•le **financement de l'innovation** pour les **PME** particulièrement innovantes.

HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

« Les industries reposent également sur l'adaptation continue et l'actualisation des **réglementations** pour suivre le progrès technologique tout en garantissant la **santé** et la **sécurité**.

La convergence internationale des réglementations est donc aussi un problème pour de nombreux secteurs.

Les défis prioritaires liés à ces secteurs incluent la nécessité de progresser vers l'établissement d'un **marché unique** pleinement concurrentiel des produits pharmaceutiques ainsi que les questions liées à **l'environnement** et à **l'accès au marché** pour les industries d'alimentation et des boissons, des produits pharmaceutiques et des produits cosmétiques.

(…)

Les [illegible] qui se sont déjà révélées être un processus ascendant volontaire très important **pour façonner les stratégies industrielles et politiques** dans des **domaines technologiques clés** bien définis, via leur « calendrier de recherche stratégique », contribueront également à **accroître l'investissement industriel** en matière de recherche et d'innovation et la **capacité de l'Europe à commercialiser de nouvelles technologies**.»

Source: *COMMUNICATION DE LA COMMISSION « Mettre en oeuvre le programme communautaire de Lisbonne : Un cadre politique pour renforcer l'industrie manufacturière de l'UE - vers une approche plus intégrée de la politique industrielle » - Bruxelles, le 5.10.2005*

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HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

► Une politique maritime intégrée pour l'Union européenne (Le Livre Bleu)

– un espace maritime européen sans barrières;
– une stratégie européenne pour la recherche marine;
– des politiques maritimes nationales intégrées, à élaborer par les États membres;
– un réseau européen de surveillance maritime;
– une feuille de route pour l'aménagement de l'espace maritime par les États membres;
– une stratégie pour atténuer les conséquences du changement climatique sur les régions côtières;
– une réduction des émissions de CO2 et de la pollution causée par la navigation;
– la lutte contre la pêche pirate et l'interdiction de la pratique destructrice de la pêche au chalut de fond en haute mer;
– un réseau européen de pôles d'activités maritimes («clusters»);
– un réexamen des dérogations à la législation du travail européenne accordées aux secteurs du transport maritime et de la pêche.

Source :
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0575:FIN:FR:PDF

HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

► Plan d'action

« *Le **potentiel économique de la mer** à l'ère de la mondialisation est énorme. L'expansion internationale du **transport maritime**, en particulier du transport par conteneurs, a engendré une croissance rapide dans les secteurs de la construction de ports et de navires et dans les services connexes. La demande de **produits de la mer** augmente continuellement, de même que le **tourisme maritime et côtier**, tandis que la **biotechnologie marine** renferme la promesse de **nouvelles utilisations des ressources naturelles de la mer**. Entre-temps, des **parcs éoliens off-shore**, associés à **l'énergie marémotrice** et **houlomotrice**, devraient accroître la part des énergies renouvelables dans l'approvisionnement énergétique de l'Europe*. »

2. La gouvernance maritime

- 2.1. Action en faveur d'une intégration des affaires maritimes dans l'Union européenne.
- 2.2. Obstacles réglementaires
- 2.3. Apprentissage collectif – Échange de meilleures pratiques

3. Les outils de l'élaboration de la politique intégrée

- 3.1. Les activités de surveillance
- 3.2. La planification de l'espace maritime et la gestion intégrée des zones côtières
- 3.3. Le Réseau européen d'observation et de données du milieu marin

HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

► Plan d'action

4. Optimiser l'utilisation durable des océans et des mers

- 4.1. Développement de clusters multisectoriels et de centres régionaux d'excellence maritime
- 4.2. Transport maritime
- 4.3. Promouvoir les carrières et l'emploi dans les secteurs maritimes
- 4.4. La politique portuaire
- 4.5. La pollution de l'air par les navires
- 4.6. Le démantèlement des navires
- 4.7. Action sur les infrastructures et les ressources de l'énergie maritime [nouveau texte]
- 4.8. Action sur l'amélioration de la situation des pêcheurs en mer
- 4.9. Mise en oeuvre de l'approche basée sur les écosystèmes dans la pêche européenne.
- 4.10. Propositions sur la protection des ressources halieutiques dans les eaux internationales

5. Developper une base de connaissances et un potentiel d'innovation pour la politique maritime

- 5.1. La recherche maritime européenne

6. Optimiser la qualité de la vie dans les régions côtières

- 6.1. Les informations sur les projets communautaires dans les régions côtières et leur financement
- 6.2. Les régions ultrapériphériques et les îles d'Europe
- 6.3. Action sur l'adaptation au changement climatique et sur son atténuation

Source : http://ec.europa.eu/maritimeaffairs/pdf/ActionPaper/action_plan_fr.pdf

HOM'MER:

Quel cadre européen d'action pour le pôle Hom'Mer ?

► Une stratégie européenne pour la recherche marine et maritime

Dans le contexte de la nouvelle politique maritime intégrée, la Commission européenne a adopté «**Une stratégie européenne pour la recherche marine et maritime**» visant à **remédier au morcellement du paysage européen de la recherche marine et maritime** grâce notamment aux actions concrètes suivantes :

• **renforcement des capacités** en ce qui concerne les nouvelles infrastructures (observatoires des océans ou navires de recherche spécialisés, par exemple), l'innovation et l'éducation ;

• **intensification de l'intégration** grâce à la promotion des activités de recherche interdisciplinaires sur des thèmes transversaux (tels que l'impact des activités humaines sur des écosystèmes côtiers et marins ou la protection et l'exploitation de la biodiversité marine) et à la combinaison de différentes formules de financement ;

• **promotion de synergies** dans la recherche entre les États membres, les régions et la Communauté et l'amélioration de l'accès aux infrastructures de recherche. Elle prévoit aussi de favoriser la coopération internationale étant donné que les problèmes liés aux océans ont une dimension planétaire et que l'UE partage avec des pays tiers les mers qui baignent ses côtes.

Source : http://ec.europa.eu/research/press/2008/pdf/com_2008_534_fr.pdf

Politique maritime intégrée

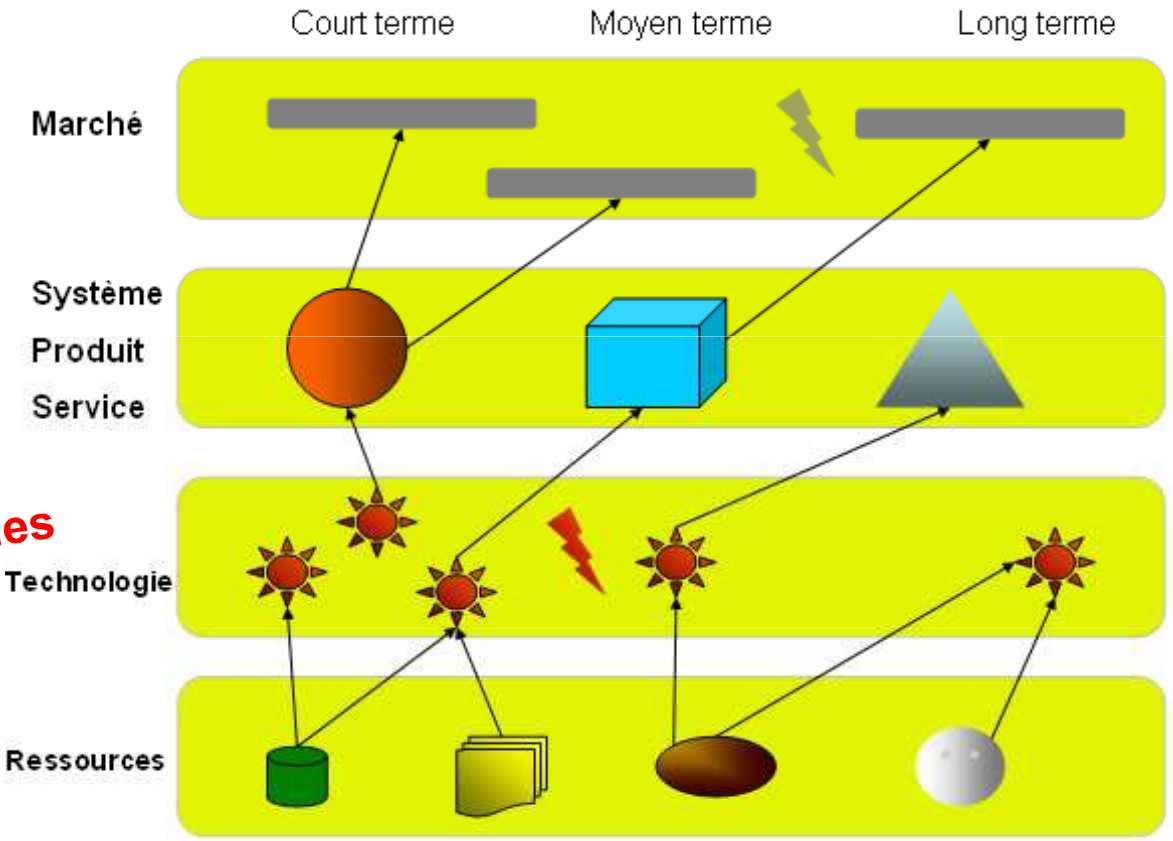
Plateformes technologiques sectorielles

Perspectives européennes

Aligner

Marchés > produits/services > technologies clés > ressources

Usages et marchés futurs



Technologies clés

Programmes européens

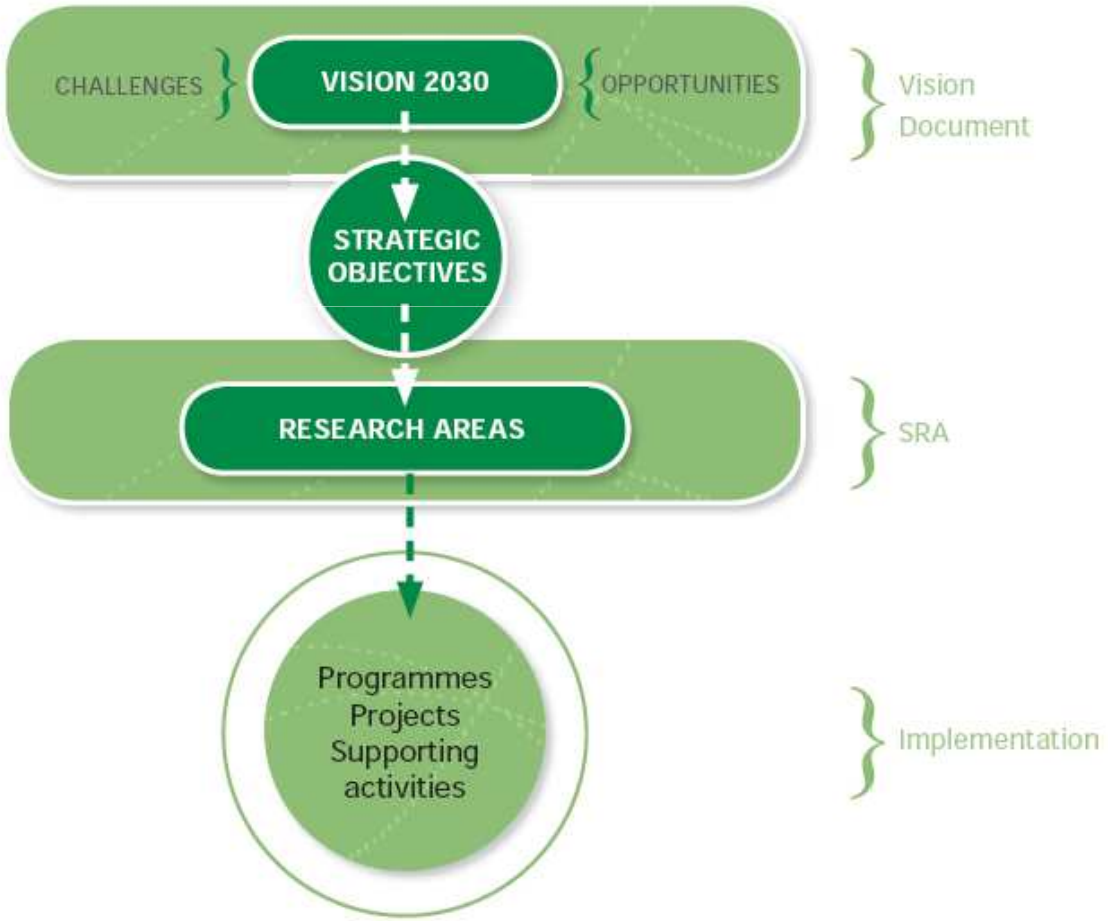
Projets européens

Feuille de route technologique

HOM'MER:

Qu'est-ce qu'une « plateforme technologique européenne » ?

Usages et marchés futurs



Technologies clés

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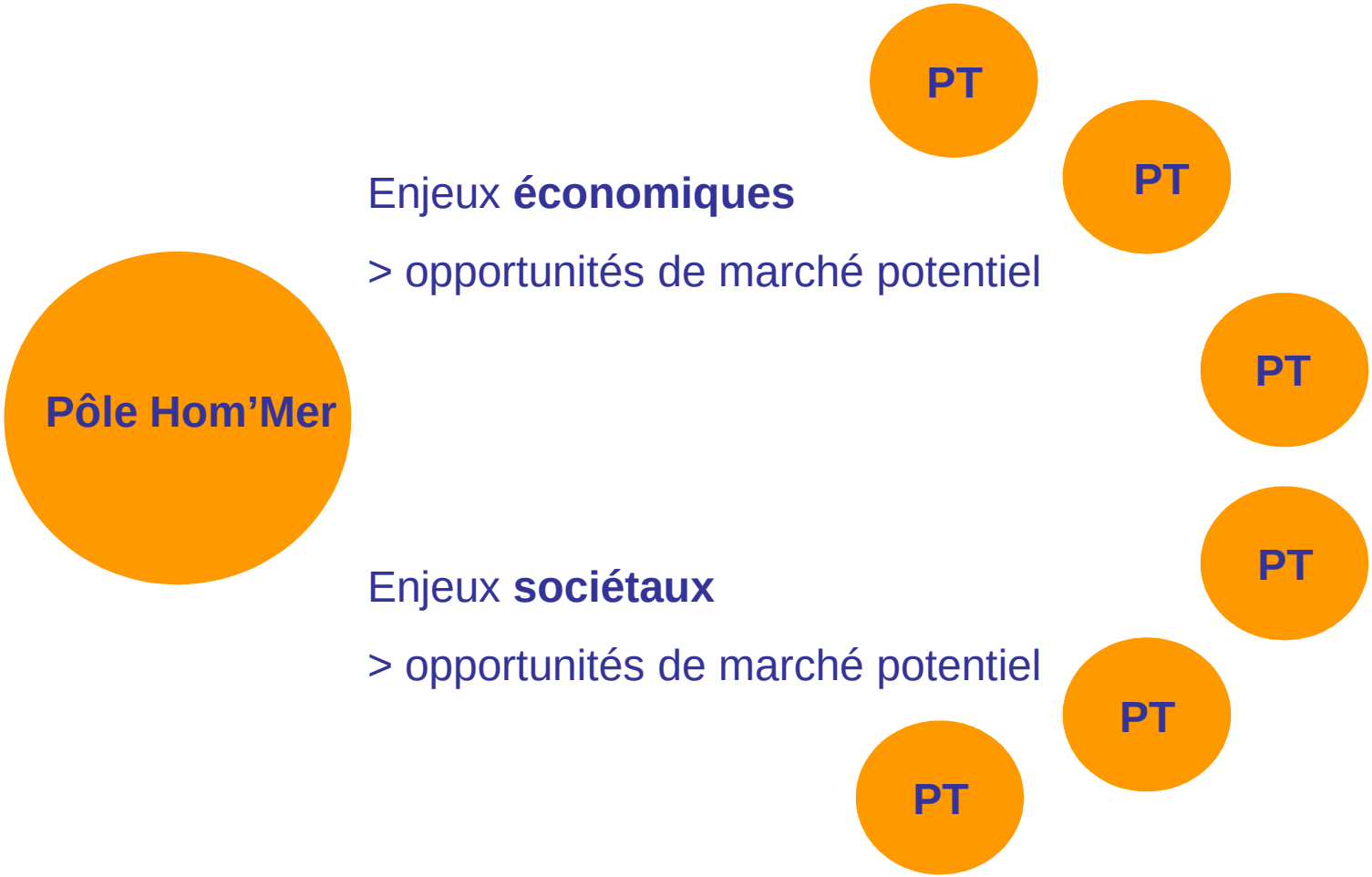
Quelles opportunités européennes pour le pôle Hom'Mer ?



Perspectives européennes

HOM'MER:

Quelles opportunités européennes pour le pôle Hom'Mer ?

Plateformes technologiques européennes	Protection de l'environnement marin	Valorisation des ressources naturelles marines et du littoral	Industries Maritimes
Advanced Engineering Materials and Technologies (EuMaT)	X	X	X
Embedded Computing Systems (ARTEMISA)	X		X
European Biofuels Technology Platform (Biofuels)	X	X	
European Construction Technology Platform (ECTP)	X	X	
European Technology Platform Industrial Safety			X
European Space Technology Platform (ESTP)	X		
The Integral Satcom Initiative (ISI)	X		X
European Steel Technology Platform (ESTEP)			X
European Technology Platform for Wind Energy (TPWind)		X	
European Technology Platform Food for Life (Food)		X	
Future Manufacturing Technologies (MANUFUTURE)			X
Future Textiles and Clothing (Euratex)		X	
Plants for the Future (Plants)		X	
European Technology Platform for Sustainable Chemistry (SusChem)		X	X
Water Supply and Sanitation Platform (WSSTP)	X		
Waterborne ETP (Waterborne)			X
Zero Emission Fossil Fuel Power Plants Technology Platform (ETP ZEP)	X	X	
European Aquaculture Technology Platform	X	X	

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HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

European Construction Technology Platform (ECTP): IE0329
http://www.ectp.org/

Advanced Engineering Materials and Technologies (EuMaT):
http://www.eumat.org/ IE03235

European Technology Platform Industrial Safety:
www.industrialsafety-tp.org IE03236

European Steel Technology Platform (ESTEP):
http://cordis.europa.eu/estep/ IE03238

European Technology Manufuture :
http://www.manufuture.org/

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IE0329 ECTP :

The Vision 2030 of Focus Area Cultural Heritage may be summarized as:
Holistic protection of living Cultural Heritage and its territorial setting by appropriate understanding; planning and management; monitoring, conservation and restoration, maintenance; encouragement of its sustainability and added value for Society and the Construction Sector; recognition of integration and diversity of cultural assets in relation to all citizens.

> To develop our understanding of the nature of moveable and immoveable cultural heritage environments (eg. mixing of air in cases and rooms and the interaction of water with complex building structures) through the development of risk management methodologies, models and tools.

> New techniques are required to identify, regulate and monitor territorial objects, which cannot be addressed either at the city or the regional levels, like waterways, coastal areas, and engineering artefacts. Here the EU and regional policy instruments are to be accompanied with the support of enhanced technological tools.

> To integrate new environmental challenges by assessing, predicting and managing the impacts of climate change, energy use and pollutant damage to safeguard cultural heritage assets in urban and natural areas. To develop prediction models, environmental impact assessment methodologies and risk assessment and risk preparedness studies. To set up information management systems as well as appropriate preventive measures and suitable interventions for the improved care of the cultural assets in relation with their environment and contents. To improve the use of traditional materials and skills, renewable forms of energy, water conservation and the implementation of recycling of materials for sustainable and cost-effective strategies in the adaptive re-use of
Cultural Heritage. In terms of disaster preparedness and risk management, there is the realisation that disasters may be unavoidable. The increasing influence of climate change means that the likelihood of extreme weather events such as storms, floods, droughts and high winds is increased, along with the already-present threats such as landslides, fire and physical damage.
Should disaster strike, it may be necessary to effect repairs on to a structure. This may range from small-scale repairs of individual components (i.e. broken windows or lost roofing slates) to large-scale reconstruction of a building, monument or assemblage of buildings.
Should this be the case a number of issues need to be raised, including:
• Supply of Appropriate Materials
• Skills and Labour
• Prevention of Repeated Damage

Given that with the increasing importance of climate change, more extreme weather events are predicted to occur in the next few decades, the

importance of disaster planning and risk management become clear.

Environment Protection
Identify appropriate methods and systems of management to reduce the impact on the environment and to mitigate climate change effects by minimizing energy consumption and pollution production
Interface Europe; 18/08/2008

IE03235 EuMaT:
> Advanced materials with specific requirements for corrosion resistance :
Automotive, Rail & Marine industries (replacing conventional metals)
Extreme conditions: high-temperature, high pressure, creep, corrosion and radiation resistance
> Lightweight bio-composites, in particular, natural fibers in polymers composites
> Biochemistry
> Metal Ceramic Composites for transport and environment and sustainable development
> Development of new light materials for vehicle structures for ship building
> More stringent requirement for emissions and leakages require reliable high performance materials and understanding their behavior in processing handling hazardous chemicals and gases.
> Constructions navales: Life cycle costs, New process possibilities, Environment, safety and reliability (No leakages or emission, No hazardous mechanical failures Ecoefficient processes)
Interface Europe; 07/09/2008

IE03236 SRA :

ETPIS can contribute to the following specific programmes:
· Information and Communication Technologies : ICT to improve risk management;
· Nanosciences, Nanotechnologies, Materials and new Production Technologies : new processes, construction, nanosciences, multifunctional material
· Environment (including Climate Change) : impact of natural hazard on critical infrastructures
· Transport (including Aeronautics) : transport of hazardous goods, multimodal transportation of hazardous goods

ADVANCED RISK REDUCTION TECHNOLOGIES

Basic knowledge, methods and technologies need to be developed in:
· Technologies for inherently safer design and to reduce risks at source;
· Technologies to reduce emissions of hazardous substances and aerosols

· Novel and effective methods for reducing risks related to noise and vibration
Novel and effective methods for reducing risks related to electromagnetic hazards and optical radiations (non-laser and laser radiations)
· Technologies and methods for inherently safer design of industrial plants and installations to reduce major-accident hazards
· Technologies for reducing risks by collective protective systems and devices ;
· Protection systems and smart sensors for machines, production and transportation processes
· Software tools for detecting dangerous situations in industrial systems
· Systems and devices protecting against noise and vibration
· Collective protection devices against electromagnetic hazards and optical radiations
· Novel and advanced technology in lighting the workplaces
· Application of information technologies in safety-related systems
· New materials, technologies and test methods for personal protective equipment (PPE);
· Test methods and safety requirements for PPE applied against new specific hazards
· Innovative materials & individual systems for the personal protection of health and life
· Ergonomics innovations for PPE used in work and everyday life conditions

UNDERSTANDING THE IMPACT OF HUMAN AND ORGANISATIONAL FACTORS IN RISK CONTROL

Basic knowledge, methods and technologies need to be developed in:
· Human and Organisational Factors in Managerial Safety Factors in Organisational and Managerial Safety
· Human-Centred Design
· Integrated Risk Assessment and Management Methods & Techniques
· Human Performance & Technology Usability
· Human Factors in Emergencies and Crisis Management
· Safety and Quality: Could they be merged, do they really match?
Interface Europe; 06/09/2008

IE03238 SRA:
> Corrosion : Processing for critical applications (fire, earthquake, durability and corrosion)
The medium term target is to produce new steelbased solutions offering a higher resistance to a high temperature environment, to complex mechanical stress or to corrosion. Composite
products are one of the possible options in this field and manufacturing processes will be adapted to the fabrication of related composite steel grades. As an example, the promotion of the fine and dispersed precipitation of endogenous or exogenous particles is an initial possibility. Another option relies on products characterised by differences in properties between the surface and internal parts of the product.
• The incorporation of intelligent devices in the
steel structures allowing early detection of the

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

European Space Technology Platform (ESTP): IE0330
http://www.estp-space.eu/

The Integral Satcom Initiative (ISI): IE03237

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IE0330 Space TP:
In its communication on GMES from November 2005, the Commission sets out a strategy for delivering GMES, beginning with the pilot phase of the three first (fast-track) operational GMES services by 2008 (emergency management, land monitoring, and marine services).

GMES: Global Monitoring for Environment & Security
o Climate change, water resources management, atmospheric trace gas compositions, disasters forecasting, ...
o International treaties implementation and Safeguarding World Heritage sites (Kyoto protocol)
o Civil protection assistance (earthquake, flood monitoring, pollution tracking, ...), crisis management and humanitarian aid support

Integral Satcom Initiative (ISI):
The Integral Satcom Initiative - ISI (www.isi-initiative.eu.org) brings together all aspects related to satellite communications, including mobile, broadband, and broadcasting applications, security systems and applications, and the integration of data communications with navigation, Earth observation and Air Traffic Management systems, both for commercial and institutional/ governmental applications.

Interface Europe; 18/08/2008

IE03237 SRA:

A classification of satcom users into five macro-categories has been adopted:
1. Citizens and Governments: the CG institutional market
2. Individual users and families in their Homes: the IH market
3. Individual users on the Move: the IM market
4. User Groups in villages and Remote areas: the UGR market
5. User Groups on the Move: the UGM market

Key Research Themes of ISI:

Interworking with Galileo and GMES: Achieving and demonstrating successful inter-working with other (non communications) systems, networks and technologies, notably Galileo and GMES. Demonstrating satellite communications as essential complementary elements to exploit Navigation and Earth Observation systems to their fullest, and providing integrated applications fully meeting user demands.

Research Themes of particular relevance for Broadband applications and services:

c) Developing mobile broadband access with service characteristics which match as closely as possible those of terrestrial systems. Designing broadband MSS solutions for mobile collective terminals in aeronautical, maritime, vehicular and railway domains, and broadcast systems supporting terrestrial mobility and vehicular/handheld reception.

Research Themes of particular relevance for Mobile applications and services:
a) Developing multi-band MSS, incorporating on-the-move (e.g. L/S band technology) and transportable solutions and collective terminals (e.g. Ku/Ka band technology) sharing same infrastructure.
b) Designing reconfigurable low cost user terminals capable of working seamlessly between satellite and terrestrial systems.
c) Integrating satellite technologies into long-term (2020+) solutions for ATM/ATC systems.
d) Working on efficient broadcasting and multicasting technologies to develop MSS into mass markets, through the delivery of land-mobile broadcast and multicast services.
e) Researching satellite extensions for ad-hoc radios deployed in emergency events (e.g. Tetra 1 and 2, WLAN, WiFi) connecting field-workers with remote coordination centres database sites, etc.. Considerations will include the safety needs of on-field personnel in the front line, real time system reconfigurability to track on-field personnel, and the integration of communication and localisation systems for indoor and outdoor needs.

ASMS THEMATIC PRIORITY: MOBILE BROADCASTING AND MULTICASTING

One of the major strengths of satellites is their inherent capability to broadcast data to large audiences. The success of satellites in the TV broadcast market to fixed receivers is still one of the most commercially successful examples of the usage of communication satellites.

Satellite broadcasting for moving collective terminals
The type of mobility characterizing the terminal determines a specific mobile broadcast environment, which presents different needs and criticalities. Thus, there are different requirements and R&D challenges in the broadcast area to be taken into account for each identifiable environment. A concise overview of the most relevant R&D topics is as follows:
(...)

b) Ships
• Robust installation in particular in regard to antenna technologies and steering mechanisms (e.g., usage of the same outdoor unit for TV reception and downlink data services)
• Medium to low cost equipments, to be appealing also for vessels with small crews or leisure vehicles.
• Combination with distress and safety applications. In this framework, the requirements of the Global Maritime Distress and Safety System (GMDSS) for the return link would be advantageous, especially since only a low data rate return link would be necessary in association with broadcast and multicast services.

ASMS THEMATIC PRIORITY: NAV-COM
There exists a very broad framework of applications that need fulfilling the requirements of transport, mobility and precise location, the information contents of which is function of the user position. These are the so-called Navigation-Related Services (NRS) and Location-Based Services (LBS), depending on whether directing to a target or precisely locating objects is predominant.

The key concept of NRS and LBS NAV/COM services is the thorough integration of navigation and communication components. This can be pursued with two possible orthogonal approaches:

a) A horizontal integration, where integration is obtained at the user terminal and application level, by combining capabilities provided by independent NAV and COM entities
b) A vertical integration, where integration is obtained at system level, by defining a system architecture, which synergistically combines both capabilities at all levels: ground segment, space segment, user terminal segment, application level.

The former approach is in the current state of the art of applications that combine GPS-based navigation capability (in the near future GALILEO) with either terrestrial or satellite cellular mobile communications. A new space system is indeed required with the latter approach that combines the Signal-In-Space capability of the space navigation system with the communication capability of S-UMTS.
Possible applications include geo-referenced services capable of collecting/disseminating position data or supporting navigation decision taking and making, related to the instantaneous user position, such as an intelligent management of mobile work force, asset tracking and tracing, emergency assistance and management, m-commerce, etc.

ASMS THEMATIC PRIORITY: SECURITY/DISASTER RELIEF
In recent years, it has become evident that additional international attention needs to be placed on the importance and the need for enhanced telecommunication for public agencies and organizations dealing with law and order, safety of life and property, emergency and disaster relief. In this context, the use of a satellite overlay network allows efficient implementation of public protection and disaster relief (PPDR) applications. An example in this direction is the Emergency call application (Enhanced 112 service in Europe). The broadcasting capability of the satellite overlying network offers the possibility to exploit Location Based Broadcasting Services to implement PPDR. Thanks to the automatic collection of the user location, safety services improve their efficiency in case of disaster (e.g., earthquakes, pollution), and the citizens can be promptly informed of the guidelines to be applied. By disposing of a direct return link through the satellite, the user can communicate with the public service provider in order to notify anomalies, and report on crises. And according to his/her location, the user can benefit of the appropriate navigation information to reach safety services, even in a completely new landscape drawn due catastrophic conditions.

The key R&D topics are:
5.6.1 Emergency call management
The R&D issues related to the emergency call application are mainly linked to the terminal impact, as well as to interworking capabilities with terrestrial networks, e.g., the determination and automatic collection of the user location.

5.6.2 Population management & Localized Broadcast Services
The use of a satellite to alert the population about a risk or an impending disaster is an interesting application, the timeliness of which is testified by very recent catastrophic events, like the tsunami of December 2004 that has heavily damaged the Indian Ocean regions.
5.6.3 Satellite return link
The disposal of a direct return link (RL) through satellite is a necessary requisite for an efficient public protection and disaster relief application. The design of a satellite return link has to cope with several issues, including a clear service definition.
5.6.4 Low cost terminal impact
When considering a satellite return link, the unavoidable question is related to the terminal impact. What are the conditions to offer emergency call possibilities in outdoor line-of-sight conditions to a range of mobile satellite terminals, including handsets with no form-factor impacts and very limited price increase?
5.6.5 Incorporating mobile and nomadic distress and safety services in evolving and future mobile satellite services.

5.6.6 Provisioning of end to end secure mobile satellite services, to fulfil dual use of the system by civil and defence customers.

POSITIONING WITH RESPECT TO GALILEO & GMES

GENERAL CONCEPTS DRIVING ISI'S POSITIONING IN RELATION TO GALILEO AND GMES
a) Satellite Communications are essential elements to exploit Navigation and Earth Observation systems to their fullest.
b) Satellite Communications are not competing with the other two fundamental Satellite Technologies (NAV and EO systems); on the contrary, their complementary and synergic nature makes it possible for Satellite Systems to provide integrated applications fully meeting User demand.
c) The integration philosophy advantages are not limited to Satellite Technologies and Services: integration and interoperability of Satellite and Terrestrial systems are fundamental to the success of a high number of very promising applications.
d) ISI can play a very significant role in this integrated scenario, as a complement to Galileo and GMES to meet user expectations and as an initiative fully in line with the European Union strategic vision

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GMES

GMES Telecommunications needs
a) GMES User Communities are numerous and diversified. Even if it is not simple to get a clear picture of GMES users' telecommunication requirements and to identify from now all the GMES thematic areas where enhanced telecommunications functionalities will improve the quality of GMES services, it is already possible to list some areas where Satcoms are of paramount importance for GMES.
As a first example in case of emergency and crisis management, temporary communications links have to be rapidly deployed in order to enable rescue teams to coordinate and combine their effort from the very first hours of intervention. ISI will foster the validation and widespread adoption of the most appropriate standardised communications infrastructures to support management of pre- and post-crisis situations.
As a second example, GMES will benefit from, and is expected to also drive, upgrades of the most recent satellite telecommunication techniques for data collection (real time, global access) and distribution.

Satellite Telecommunications Solutions for GMES

Emphasis shall be put on:
i) Improvement of geographical service area, beyond coverage of existing terrestrial networks, in particular in developing countries, during crisis events as well as during the alert phase;
ii) Improvement of reactivity, through faster data collection, with real time control of sensors or fresher data delivery, or for access to and remote control in-situ sensors;
iii) Improvement of product quality, through the amount of data that can be collected and distributed thanks to higher available data rates;
iv) Improvement of terminal and on-ground infrastructure deployment features (lightweight, robustness, autonomy, ease of operation) for immediate and reliable use by rescue teams and victims needing temporary telecom means during and after crisis events.

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GALILEO

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

European Biofuels Technology Platform (Biofuels):
http://www.biofuelstp.eu IE03239

European Technology Platform for Wind Energy (TPWind):
http://www.windplatform.eu/ IE0337

Zero Emission Fossil Fuel Power Plants Technology Platform (ETP ZEP): IE03241
http://www.zero-emissionplatform.eu/

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IE0337

SRA :
The economics of offshore wind favour larger machines, which differ from those used onshore. The offshore environment may allow the relaxation of a number of constraints on turbine design, such as aesthetics and noise level. However, addressing marine conditions,corrosion and reliability issues creates new challenges in
the offshore sector. This will lead to a signifi cant modification of onshore machines in the near term and the development of specifi c offshore designs in the medium and long term.
Interface Europe; 18/08/2008

IE03239 Biofuel :

> knowledge-based bio-economy: biodegradable plastics

> industrial biotechnology is breaking new ground in understanding microbial biodiversity and bio-processes that could lead to valuable bio-products and bio-materials.

> "Renewable materials derived from agricultural feedstocks and used for industry
and energy can make a positive contribution to sustainable development,
deliver improved industry competitiveness and benefi ts to the rural economy,"
observed UK Minister of State for Industry and the Regions, Alun Michael.

> In addition to the countryside's role as a 'food factory', it could be used to grow
renewable bio-resources as sustainable raw materials for our energy needs and for industry.

> Busy careers have created a large market for ready-made and semi-prepared food and more people are eating out at restaurants than ever before. Moreover, an ageing population and the growing obesity epidemic caused by unhealthy diets and sedentary lifestyles have placed increased emphasis on healthier food products.

> 'Regenerative medicine', 'gene
therapy', 'therapeutic cloning', and the more precise and targeted use of organic matter to build better drugs promise to uncover cures and treatments for a plethora of degenerative and hereditary diseases and conditions, including Parkinson's and Alzheimer's disease, cancer, and more.

"New perspectives on the KBBE- Transforming Life Sciences knowledge into new, sustainable, eco-efficient and competitive products "Conference Report:

> Green biotechnology relates to agri-food
applications, such as the development of
genetically modifi ed crops and plants with
certain enhanced characteristics, including

drought resistance or salt tolerance. It also covers the application of life science knowledge to improve plant breeding techniques and to select wild plant candidates for domestication.

> White biotechnology is also known as industrial biotechnology and refers to the processing
and production of chemicals, materials and energy.
White biotech employs micro-organisms, such as yeasts, moulds and bacteria as so-called 'cell factories' and enzymes
to produce goods and services. This implies developing and producing chemicals at the cellular level by exploiting and adjusting natural processes in living organisms to generate the substances and enzymes needed by industry. Examples include environmentally friendly detergents and enzymes that replace the use of stones in stonewashed jeans.
Microbes are microscopic biological structures which make up about half of the Earth's biomass. They represent an untapped treasure trove of biological 'parts' and 'components', i.e. cells
which can be used to perform new functions
and create new materials.

> Grey biotechnology, which was once indistinguishable from white biotech, refers to environmental applications. This means creating sustainable technological solutions to protecting the environment. Examples of such technologies include the development of biological enzymes which can help to clean up the effects of manmade environmental disasters, such as oil spills, and micro-organisms that absorbs and
fi lters waste matter in sewage water as part of the purification process.
"The three fi elds of activity in industrial
biotechnology are biorenewables as feed stock, bioprocesses for production, and bioproducts for the market,"

>"As the third wave in the field of biotechnology, white biotech follows the red and green or agricultural applications of biotechnology." It means employing the life sciences and biotechnology in the production
process itself to fi nd more effi cient and sustainable ways of manufacturing products.

Humans have depended on plants since the
inception of civilisation for a large proportion of their food and raw materials (oils, fi bres, energy, and wood). But it is only now, at the beginning of the 21st century, that we are starting to construct a profound understanding of the basic mechanics of plant life – and this offers us enormous potential for the future.

> Another emerging way of detecting microscopic threats to our health is the fl edgling
fi eld of nanopathology. Rising pollution levels in recent decades have meant that an
increasing number of toxic nano-particles, from basalt to lead, are fi nding their way into our food and drink. They are usually in concentrations that are harmless, unless exposure to them is sustained over a large part of a person's lifetime. We need to be able to detect these contaminants effectively in order to assess the risk they pose and trace their origins, a task which is made the more complicated by the global nature of modern trade.
For instance, Gatti traced the minute traces of
basalt found in caulifl ower from her local supermarket to a volcanic eruption in Sicily,
and uranium particles found in a secretary's stomach to an organic farm near a tile

factory which used a uranium-based substance in its glazing process. Such early detection is invaluable in avoiding long-term health problems and in stemming contamination at the source. "Nanotools can help us to fi ght this war against contamination," she noted.

> Industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from residues. A major role for biorefineries is the production of biofuels that is fuels derived from lignocellulose feedstocks.

Interface Europe; 06/09/2008

IE03241 >

- objective of creating highly efficient power plants with near zero emissions, including CCS.

- With a mandate from the 2007 Spring European Council, Commission services are working on how the EU could support the construction of up to twelve large-scale demonstration power plants using CCS by 2015. Given the location of potentially suitable storage sites, notably offshore, several of these demonstration plants are likely to be located in coastal areas. Injection of CO2 into producing oil and gas fields, most of which are offshore, can increase the total yield of such fields by as much as 15%.

If CCS does come into widespread use, the location of future coal- and gas-fired power plants (or other fossil fuel conversion processes, eg refineries) may be concentrated in coastal areas adjacent to suitable the geological storage sites under seabed. Increased environmental and weather risks in these locations related to climate change will have to be taken into account.

Interface Europe; 06/09/2008

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

European Technology Platform Food for Life (Food):
http://etp.ciaa.eu/ IE0338

Plants for the Future (Plants): IE03240
http://www.epsoweb.org/

European Aquaculture Technology Platform: IE03354
http://www.eatpnet.eu/default.php

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IE0338 VISION :

In this Vision Document the following steps are
proposed in order to generate a competitive European agro-food sector that offers growth of
the European economy in a sustainable manner:
■ Focussing European innovation efforts on the
following topics: Food and Health, Food Quality
and Manufacturing, Food and Consumer, Food
Safety, Sustainable Food Production and Food
Chain Management, but ensuring that all R&D
initiatives in these broad areas are holistically
conceived across all of the themes with the perspective of the consumer as a major driver (the 'fork-to-farm' approach).

Current situation:
> the changed retailer-producer landscape
> Food safety, consumers and regulatory affairs
> Food and health, well-being and welfare
> The health of the ageing population of Europe

SRA : R&D needed to move forward

The European Technology Platform Food for Life will:
■ Support a sustainable, successful and competitive pan-European agro-food industry;
■(...)
■ Enhance the ability of the European agro-food
industries to create and exploit market opportunities that are less sensitive to price competition;
and
■ Promote the 'fork to farm' approach to add value to food chains.

6 key technologies are proposed:
> Food and Health: Focussed, collaborative food research will enable the development of innovative food products and process innovations that will make a major contribution to the well-being and welfare of the European consumers.
> Food Quality and Manufacturing: New innovative manufacturing technologies
providing high quality, novel or modified,
healthy products with improved, attractive
taste and convenience will enhance the competitiveness and growth of the European food sector.
> Food and Consumer: Much effort will be required to understand consumer attitudes, preferences, expectations and demands and to provide effective communication to the consumer and to obtain an active interaction with consumers. In this context it is important to realise that the term 'European consumer' embraces not just main-stream populations, but also ethnic and immigrant populations, whose eating habits and

diets may vary considerably and are currently only relatively poorly examined.
> Food Safety: All new developments have to comply with current and future expectations regarding the safety of the end product and the protection of the consumer against any threat to his or her health and well-being on a short- and long-term. This implies that new technological developments have to be assessed thoroughly with respect to the possible introduction of undesired side-effects of microbiological, toxicological or physical nature.
> Sustainable Food Production: This
Platform seeks to profitably provide European citizens with safe-, high-quality, health-promotingand affordable foods whilst meeting the increasing demands for sustainable food production as perceived from the economic-, environmental-, and social perspectives.
> Food Chain Management:food chain management examines the complexibility of the different food value chains (bread, pasta, meat, milk, etc.). Due to its complexity, all participants and processes in the manufacturing of a food and all management factors such as safety, quality and efficiency need to be studied in a management system simultaneously. This will require an overall integration of consumer-added value characteristics for each individual process in the food chain.

Research Topics:
■Life Cycle Analysis (LCA) of food chain(s) to prevent and reduce waste streams, decrease energy and water use and apply chemicals appropriately and judiciously.
■ Development of value-added technologies to facilitate innovations of the EU agro-food industry in food chains (animal/meat and fish; plant/crops; microbiological).
■ Advancement of farming technologies according to a diversity of farm management systems (integrated and organic farming).
■ Knowledge management to identify and involve
stakeholders, promote and encourage food chain
sustainable development across Europe

In the development of new, tasteful and convenient products it will be important to exploit
novel processing technologies whose use is
more environmentally-friendly than current
alternatives. These encompass technologies
and processes to manage pollution (e.g. air pollution control, waste management), products
and processes that are less-polluting and lessresource intensive, and ways to manage
resources more efficiently (e.g. reduced water
supply, energy-saving technologies).

This Vision for the ETP on Food for Life is fully consistent with the Building of a Knowledge-based Bio-economy, included in the European Commission's Working Paper on FP7, to be achieved by "bringing together science, industry and other stakeholders, to exploit new and emerging research opportunities that address social and economic challenges: the growing demand for safer, healthier and higher quality food and for sustainable use and production of renewable bioresources; the increasing risk of epizootic and zoonotic diseases and food-related disorders; threats to the sustainability and security of agricultural and fisheries production resulting in particular from climate change; and the increasing demand for high quality food, taking into account animal welfare and rural contexts."

Interface Europe; 18/08/2008

IE03240 "BUILDING THE EUROPEAN KNOWLEDGE BASED BIO-ECONOMY – THE IMPACT OF 'NON-FOOD' RESEARCH (1988 TO 2008)" - Outputs from the EPOBIO project December 2007:

It is now generally accepted that agriculture and forestry will become the providers of raw materials for an ever widening range of markets as the EU shifts from a petrochemical based economy to one with a greater reliance on biological raw materials.

Within the SRA two major goals are seen as the development of plants as energy production systems and the conversion of plants into production factories. For energy the aim is to produce better production systems with 50% lower energy input requirements, as well as to improve energy capture and to optimise selected highenergy plant biomass production systems. The central theme of the second objective is the optimisation of Non-Food plants as a vehicle to produce compounds of interest that will depend on improved gene expression technologies and new manufacturing techniques for production, extraction and processing.

The possibility of producing new antibiotics to counter drug resistance is also being investigated, as is the use of plants as factories for the production of proteins for use as vaccines.

Interface Europe; 06/09/2008

IE03354 VISION

Core priorities
☐ A strong relationship between the consumer and aquaculture
☐ The assurance of a sustainable aquaculture industry
☐ Understanding and reinforcing the role of aquaculture in society

Priorities:
> Aquaculture & the Consumer
☐ Contribution to health
☐ Increasingly well established links
☐ Need to know more on socio-economic benefits
☐ Contribution to nutrition
☐ Validity of contribution needed
☐ Contribution to lifestyle

☐ Food and dining…but also
☐ Angling, ornamental fish and
☐ Restocking

> A sustainable aquaculture industry
☐ Managing the biological life-cycle
☐ Importance of hatcheries
☐ Therapeutants
☐ Nutrition
☐ Systems & Technology
☐ New systems
☐ IT support
☐ Automation
☐ Health & Safety
☐ Sustainable Fish Feed Manufacture
☐ A key challenge
☐ Cost-effective supplies based on sustainable ingredients
☐ Regulatory Framework
☐ Appropriate legislation to guide and support development

> Role of aquaculture in Society
☐ Knowledge management
☐ Communication
○ Within profession/with stakeholders and with society
○ Education and training – skill development
○ Technology transfer
☐ Networking
☐ Influencing sectoral image and perceptions

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

Future Textiles and Clothing (Euratex): IE0350
http://www.euratex.org/

Embedded Computing Systems (ARTEMISA): IE03353
https://www.artemisia-association.org/

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IE0350 Vision:

>New Textile Applications

Clothing and interior textiles have in the past made up the dominant part of textile-based products in the market with a few further textile applications constituting small niches. With important advances in textile materials research, processing technologies and changing functional requirements of products in other industries over the last two decades, textiles have found an
ever broader range of application
in sectors as diverse as road, rail, marine or aerospace vehicles, engineering, construction, agriculture, power and environmental technologies, health care, defence and security etc.

The 21st century incarnations of mobility enabling textiles come in the form of:
(...)
• aircraft wing and body structures or boat rumps made of fibre and textile-based composites;
(...)
• flexible reservoirs, containers or bags used for transportation of gases, liquids and bulk goods by road, rail, water or air.

Also in the field of energy generation, transportation and storage, textiles find ever more innovative uses.
These include:
(...)
• anchoring or flotation elements for off-shore platforms

1. Bio-based materials :

Proposed research priorities in Bio-based materials application fields are:
• Production of new textile fibres based on fermentation and other bio-processes to more away from refined-oil based products ;
• Tailoring controlable biomedical properties of biomaterials by enzymatic chemical or physical structural modification;
• Smart surfaces and matrices to immobilise bioactive components;
• Biocomposite fibre reinforcements and bio-resins as fully biodegradable materials;

2. Biotechnology

Proposed research priorities in the Biotechnology field are:
• Biopolymers and biomass as a new bass for textile surface modification and coating;
• Bio-based textile auxiliaries and relative applications in best available techniques (BAT) and emerging techniques to minimise environmental impact of textile processing;
• Enzymatic systems and grafting of enzymes (or proteins) on textiles surfaces
• Other bioprocesses (including biocatalysis) to improve technological applications of new fibre materials and sustainable processing for cleaner

production principles.

Interface Europe; 27/08/2008

IE03353 ARTEMIS :
> Embedded Systems technologies are deployed in all market sectors - automotive, aerospace, medical, environment, communications, entertainment, textiles, transport, logistics, printing and chemicals, food & drink, timber and materials.
> The improved mobility, both of people and of goods, through fast, efficient, safe and accessible public transport (trains, metro, roads, maritime transport,...), the supply of utilities and energy, a better connected communication infrastructure, are all examples of Public Infrastructures that can take benefit from the huge potential offered by Embedded Systems.
> Safer and secure, better controlled road infrastructure (active road safety support, traffic management systems with more cooperative vehicles, active bridges, secure tunnels, ...) are achievable through greater integration of Embedded Systems.

> Manufacturing & Process Industries:
"Efficient, flexible manufacturing"
The "100% available factory" reduces the environmental strain of manufacturing industries while maximising manufacturing efficiency. Embedded Systems will precisely control process parameters, including the active reduction of pollutants, which reduces the total cost of manufacture. Further competitive advantage in manufacturing industries is assured by efficiency, meaning 100% plant availability and low maintenance that reduces cost.This will not only augment manufacturing employment in Europe, but also assure jobs in the design and manufacture of

the manufacturing equipment itself. Manufacturing flexibility is mandatory, to assure agile adaptation to market demands, particularly for individual customisation, thus reinforcing the competitive position. This will be achieved through reduced commissioning and production ramp up times, allowing fast changes in product type or grade to be made. Concrete targets are to reduce commissioning time from 3-6 months to less than 1 month, and assuring quick turn-around times, where model change-over time is reduced from 8-12 weeks to 1-2 weeks. Improvement in end product quality can also be achieved through active control of the manufacturing process, supporting the move from "off line" to "in process" quality control through advanced automation. Improved man/machine interaction through advanced Embedded Systems and "human-in-the-loop" control systems improves quality and productivity by assuring zero operator errors, as well as reducing accidents.

Interface Europe; 26/09/2008

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

European Technology Platform for Sustainable Chemistry (SusChem): http://www.suschem.org/

IE0355

Perspectives européennes

IE0355

SRA:

Quality of life:

>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling
properties able to recognise
and destroy pollutants and corrosion
agents. Specialty polymer industries
would benefit from 'intelligent'
composite materials based on organic
or inorganic materials and also biocompatible
materials;
> Smart materials that respond to their
environment, that are self-cleaning,
anti-fouling and have anti-corrosion
properties

Health care:

> Advanced sensors and
new micro-analytical devices will have a
substantial impact on health, environment,
and individual protection
strategies in the coming years. The
ability to reliably link biologically active
molecules to a surface will take
functional integration to levels previously
deemed impossible.
>Materials for medicine, agriculture,
nutrition, health care
> Topics are for example materials for
diagnostics and imaging, drug and bio-active compounds delivery systems, cosmetics

Citizen protection:

> Society has been increasingly challenged by accidents, terrorist attacks, sudden climate changes and catastrophes causing extensive personal and material damage. There is a need to develop new intelligent technologies in order to protect the civil population from these extreme situations as well as to provide new ways of predicting and avoiding them. Sensors for explosives, toxic agents and biohazards at low concentration, materials for personal protection and/or buildings, e.g. hospitals, airports, and vehicles, functional textiles that recognise and destroy toxic agents or administer the right counteragents. In addition, new sensor systems could help to detect chemical or biological threats and play an important role as components of security systems.

REACTION AND PROCESS DESIGN

Two complementary approaches are integrated in this section:
Chemical synthesis including:
• Novel synthetic routes and new reactions;
• Novel solvents and solvent-free routes; and
• Catalysis.
Process science and engineering including:
• Reactor design;
• Drying and purification methods;
• Distillation, crystallisation and separation technologies;
• Product design and formulation; and
• Process analysis and control.

INDUSTRIAL BIOTECHNOLOGY

The strategic research agenda should be organised within the following research areas in industrial biotechnology:

- Novel enzymes and micro-organisms - metagenomics
- Fermentation science:
- Metabolic engineering and modelling:
- Performance proteins and nanocomposite materials:
- Microbial genomics and bio-informatics:
- Biocatalyst function and optimisation:
- Bio-catalytic process design:
- Innovative down-stream processing:
- Integrated bio-refineries:

Interface Europe; 19/08/2008

HOM'MER:

Positionnement au regard des visions développées par les Plateformes technologiques européennes

Pôle Hom'Mer

Plateformes technologiques européennes pertinentes :

Water Supply and Sanitation Platform (WSSTP):
http://www.wsstp.eu/ IE03264

Waterborne ETP (Waterborne): IE0358
http://www.waterborne-tp.org/

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Produits pour l'innovation

Perspectives européennes

INTERFACEUROPE

Diapositive 44

IE0358 SRA:

The Low Risk Ship
The Low Energy, Low Emissions Ship
The Autonomous Ship
The Sustainable Recreational Craft
The Future Ship Designs For Short Sea Operations
The European Cruise Ship
Seven Day Ship Design
Leading Shipbuilding
Energy Transport in Extreme Conditions
Intelligent Integrated Transport Network
Intermodal Waterways
Accelerated Sustainable Port Development

Interface Europe; 19/08/2008

IE03264 SRA :

Pilot 1 - Mitigation of water stress in coastal zones

Coastal zones have large numbers of tourists during summertime, who demand high environmental and water quality standards. This can cause a conflict between the needs of local industry, agriculture, tourism and the environment.

To mitigate water stress in costal zones the Platform identified needs for research and technology development in the following areas:

* prevention of deficit, use of alternate water resources and artificial recharge. Climate change impact evaluation.
* mitigation of salt-water intrusion
* monitoring network, prevention and control of pollution and contaminants, forecasting network
* optimisation of borehole infrastructure for ground water abstraction and prevention of saline water intrusion (positioning, design and operation)

Pilot 3- Sustainable water management and agriculture:
The amount of water is not increasing, but the world population is increasing and needs to be fed. Agriculture is among the most essential challenges in the 21srt century: feeding 9 billion inhabitants demands more water. At the same time we need to balance increased agricultural productivity with protecting the environment and our water supplies. The following key actions are described in the SRA (2006).

· Safe use and reuse of water in agriculture. This calls for the design of new technologies and management methods for e.g. 'cascading'

systems and safe reuse of treated wastewater.

· Improvement of water use efficiency at different scales (local, regional, economic branch). This needs the development of new water management tools, such as integrated models and decision support systems at basin level. Further on, the improvement of sustainable production methods (including options for organic farming) at farm level is required as well as improvement of water use efficiency and water productivity.

· Reduction of diffuse pollution caused by agrochemicals, nutrients and manure. This will require the development of cost-effective, easy-to-access and adaptive technologies for precise dosing and application: agro-chemicals, fertilization and semi-liquid manure spreading.

Pilot 4- Sustainable water management for industry

The Technical Working Group Water in ndustry reviews the next issues: water management (demand, resources and waste treatment, preserving high quality, policies), water use (quantity, lowest price, own sources and own treatment, water fit for use water recycle, reduction of water use) and waste water (reduce waste, removing/recover components and heat as salts, metals, impurities and microbiology) and the integration of the three levels. Further boundary condition, chain evaluation of industrial products and separation technologies will be discussed.

Rather than focusing on specific area or site, this pilot addresses few clusters of industries which have similar problems : chemistry, caper and pulp, food, textiles, energy, oil/ gas....are water consuming industries which also discharge used water into the environment. All industries need to become more efficient in their use of water, including partial and full recycling; integration of energy and water management to reduce the carbon impact of their activities. Implementation cases will focus on

water fit for use
* closing water cycles
* reducing environmental impact and water costs (energy)
*water quality monitoring and control
*control of biofouling, scaling and corrosion sectors of industry using large amounts of water.

Pilot 5- Reclamation of degraded water zones
Water resources must be protected against pollution and poor quality systems must be improved, especially those used for water supplies. The Water Framework Directive (23/10/2000) is demanding sound ecological quality in Europe and we need to apply sustainable techniques to achieve its goals. In this area a wide variety of research needs were identified and described in the SRA (2006). Among these are the following.

* Development of techniques to map the state of degraded water sources systems, to derive the cause-effect relationships that have led to the degraded state, to plan scenarios for system restoration, covering physical, ecological, social and economic benefits and costs.
* Development of optimal strategies, Decision Support Systems and Early Warning System using model and real-time data (hydrological, pollution loads, water quality...).

* To derive from these cases 'lessons-learned' and 'best practice' guidelines for possible application in similar cases in Europe and outside Europe.
* To develop appropriate treatment technologies to ensure that discharges to the environment can reliably meet the required standards.

Pilot 6- Proactive and corrective management of extreme hydro-climatic events
Our climate is changing, leading to longer drier periods and more intense rainfall events. This will change the demand for water, the availability of resources and cause more flooding. We need to be able to manage our water systems throughout these events to ensure we are able to continue to supply water to people, protect the environment, and protect people and property from floods, that is to develop:

* forecasting the hydro-meteorological aspects
* warning systems, monitoring network and crisis management
* long term flood mitigation
* short and long-term drought management and river management
* regional scale flooding
* local scale multiple hazard management

2.1.– Priorités et programmes européens

2.1.1 – Cadre global

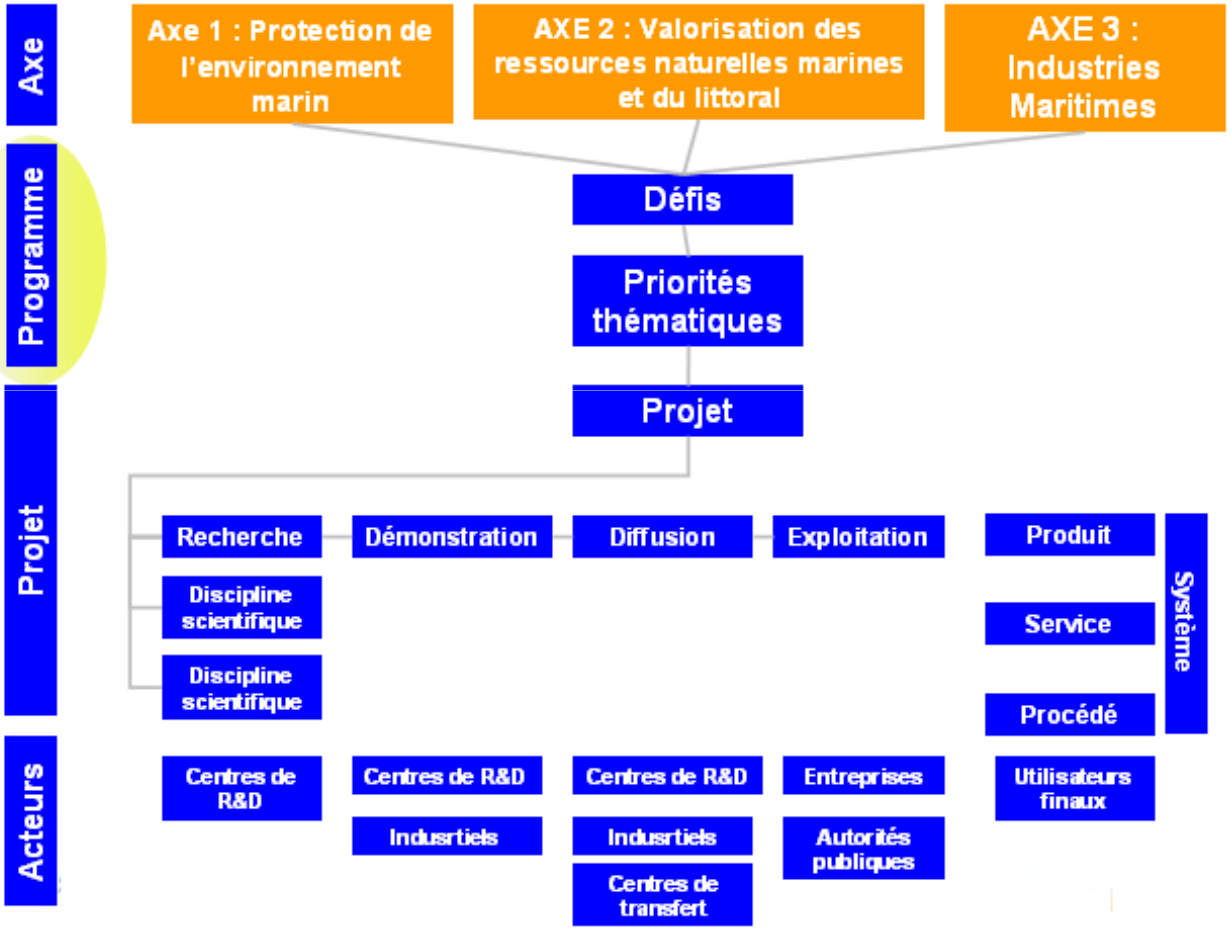
2.1.2 - Défis à long terme : Perspectives européennes 2015 - 2030

2.1.3 - Défis à moyen terme : Programmes européens 2008 - 2013

2.1.4 - Défis à court terme : Appels à propositions européens 2008 - 2009

Défis à moyen terme :

Programmes européens 2008 - 2013



Centres de transfert

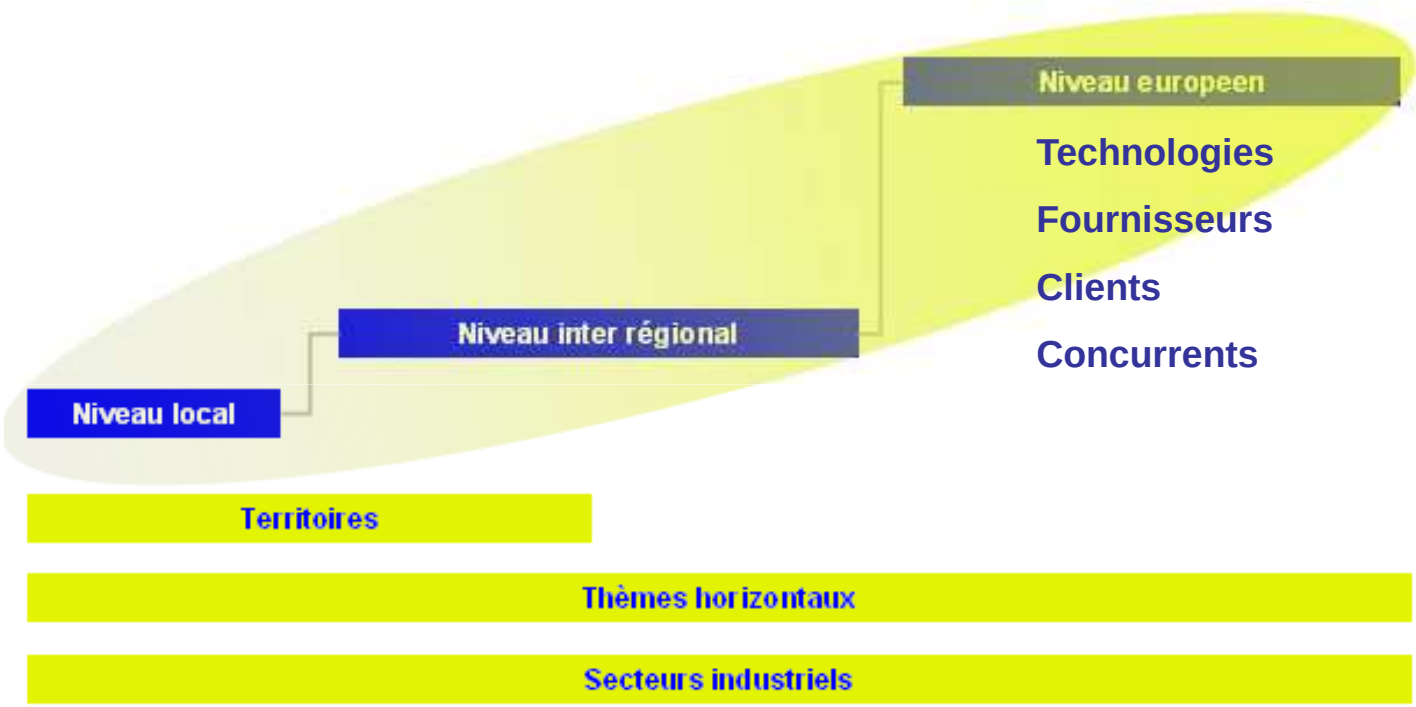
Synergie potentielle entre les 3 axes constitutifs du pôle Hom'Mer et les priorités thématiques européennes

	AXE 1 : Protection de l'environnement marin					AXE 2 : Valorisation des ressources naturelles marines et du littoral					AXE 3 : Industries Maritimes
	Pollution marine (simulation)	Eaux de ballast	métaux lourds	résidus de dragage	Réchauffement climatique	Aquaculture	Pêche	Conchyliculture	Elevage d'ormeaux	Valorisation des déchets	Construction navale
Alimentation	X	X	X	X	X	X	X	X	X	X	
TIC	X						X				X
Santé	X	X	X	X	X	X	X	X	X	X	X
Environnement	X	X	X	X	X	X	X	X	X	X	X
Energie					X	X	X	X	X	X	X
Transport	X	X			X		X			X	X
NMP		X	X	X						X	X
Espace	X										
Sécurité											X
SHS	X	X	X	X	X	X	X	X	X	X	X

Programmes européens

Quelle stratégie cohérente pour l'attractivité des territoires et la compétivité des secteurs ?

IE03246



►Stratégie de renforcement des atouts locaux (territoire) ... autour de la chaîne de valeur (secteur) de chaque axe ... dans une perspective de valorisation européenne (secteurs/thèmes)

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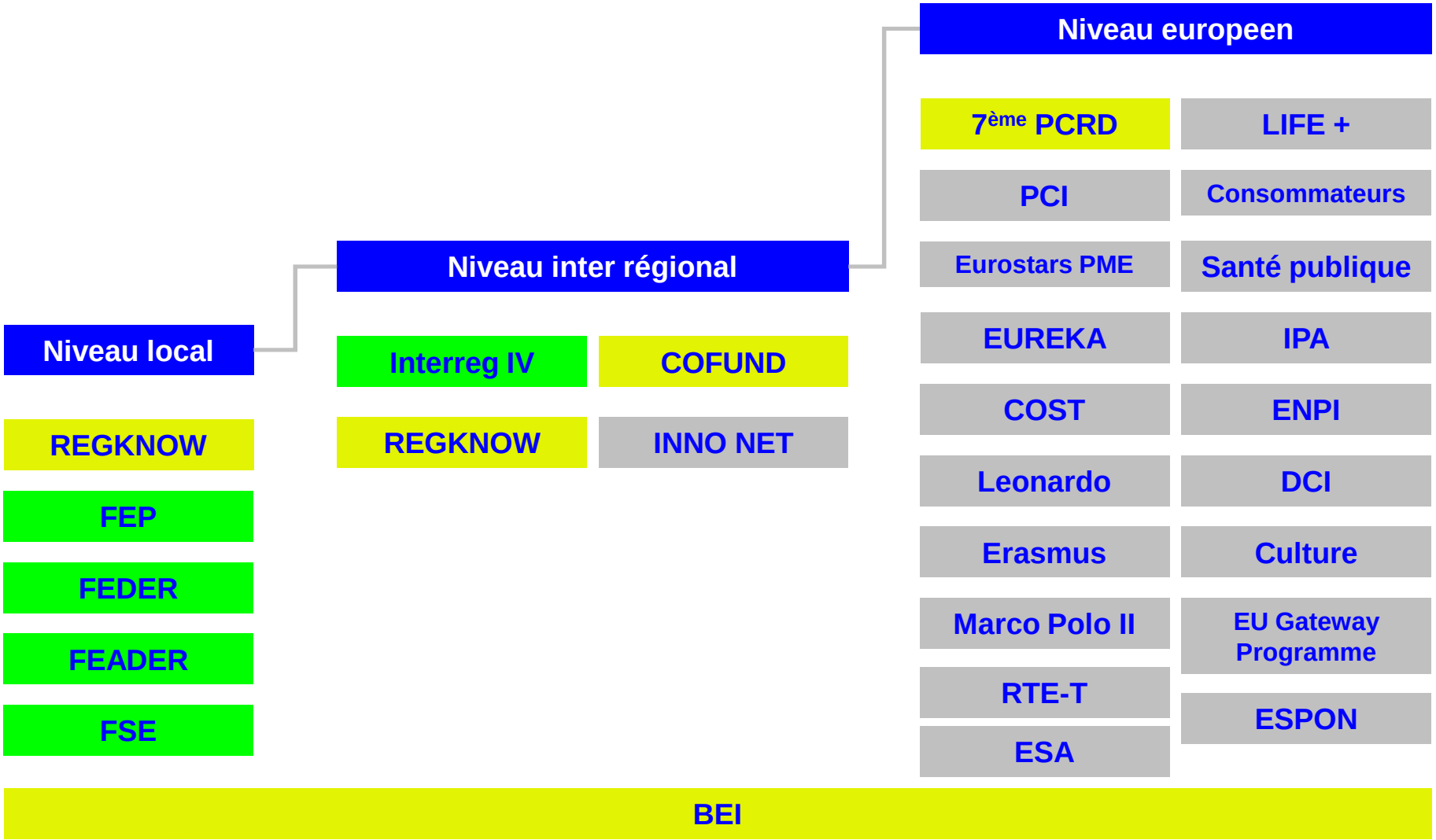
IE03246 A practical Guide

Structural Funds first, followed by FP7 or CIP
It is often the case that funding is available to a research organisation or company under the Structural Funds in order to take the first tentative steps in research or in developing an innovative technology or product. The conditions for granting such funding are usually generous and flexible, especially in the least-developed regions. This allows the research organisation or company to grow to the point where it can enter the more competitive environment of FP7 for research activities and the development of technology or the CIP for broader innovative activities.
Interface Europe; 07/09/2008

L’escalier de l’excellence



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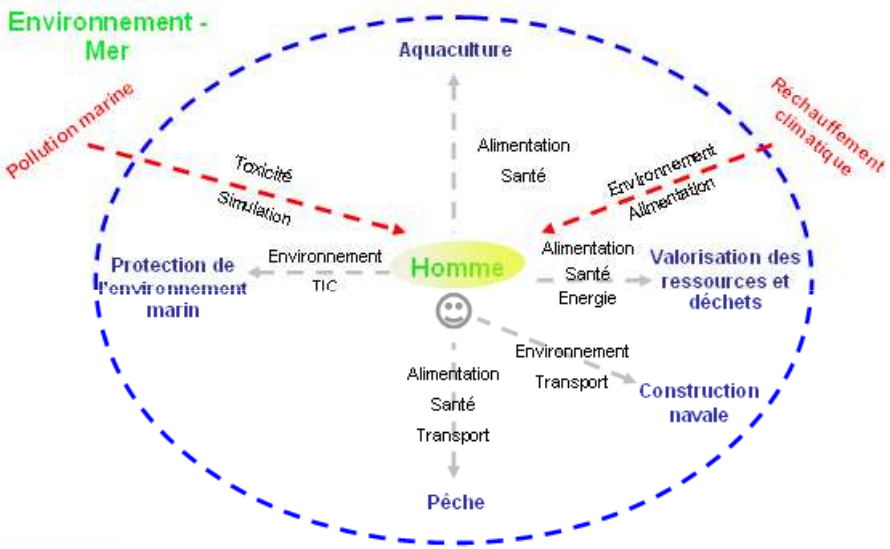
Approche territoriale et sectorielle du pôle Hom'Mer

Développement de connaissance

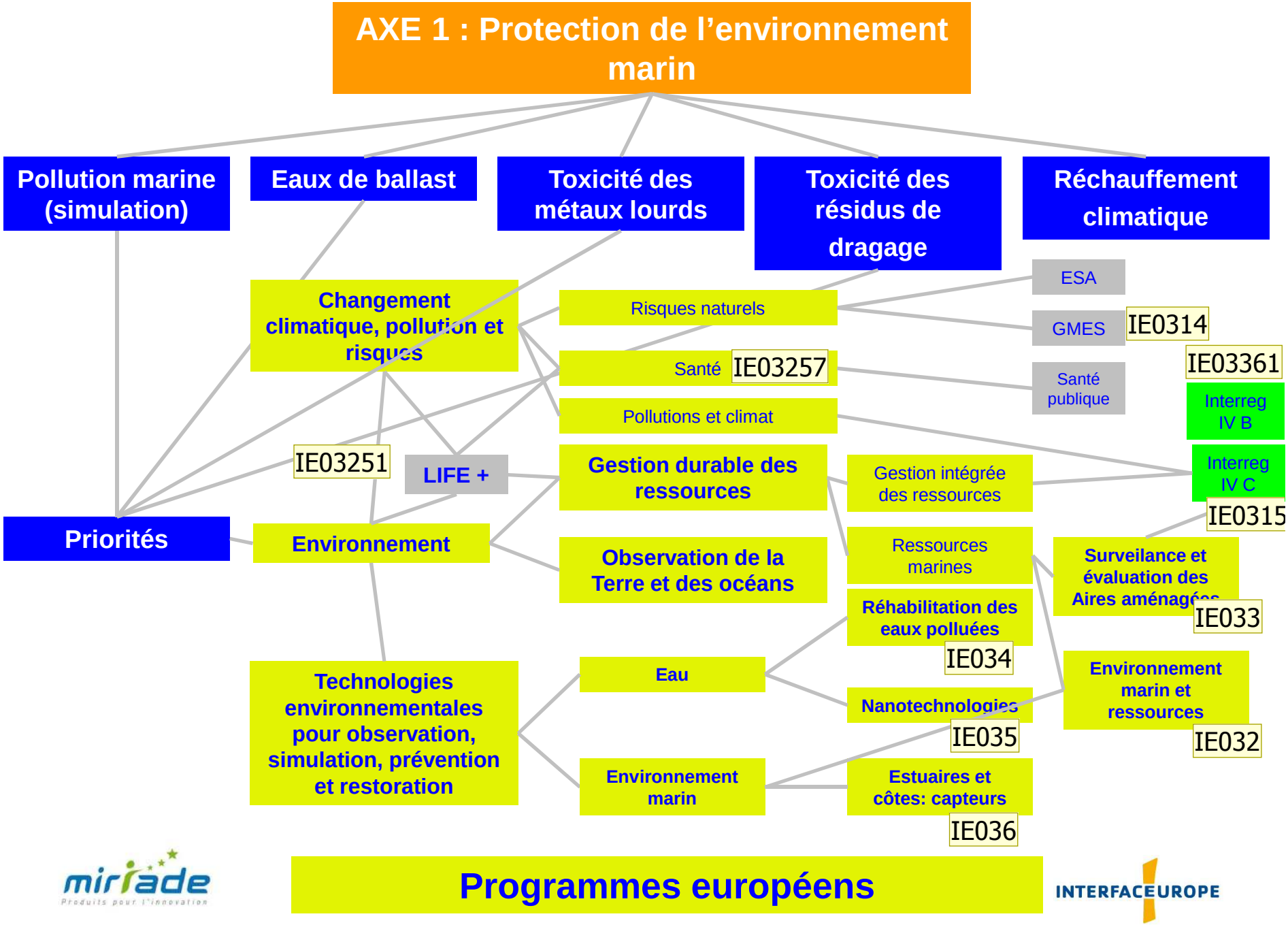
- **territoriale**
  - ex : connaissance du littoral bas-normand
- **sectorielle**
  - ex : recherche génomique sur les larves d'huîtres



Valorisation

- **territoriale**
  - ex : développement durable des ports et estuaires
- **sectorielle**
  - ex : valorisation des déchets

Programmes européens


AXE 1 : Protection de l'environnement marin
Pollution marine (simulation)
Eaux de ballast
Toxicité des métaux lourds
Toxicité des résidus de dragage
Réchauffement climatique
Changement climatique, pollution et risques
Risques naturels
Santé
IE03257
Pollutions et climat
ESA
GMES
IE0314
Santé publique
IE03361
Interreg IV B
Interreg IV C
IE0315
IE03251
LIFE +
Gestion durable des ressources
Gestion intégrée des ressources
Priorités
Environnement
Observation de la Terre et des océans
Ressources marines
Surveillance et évaluation des Aires aménagées
IE033
Réhabilitation des eaux polluées
IE034
Technologies environnementales pour observation, simulation, prévention et restoration
Eau
Nanotechnologies
IE035
Environnement marin et ressources
IE032
Environnement marin
Estuaires et côtes: capteurs
IE036
Programmes européens

IE032 Ecosystem approach to marine environment and resources

Research under this topic will require a trans-disciplinary and integrative ecosystem approach, combining an improved understanding of the functioning of Europe's marginal seas and the direct and indirect impacts from their uses (e.g. by aquaculture, fisheries, extraction of minerals, etc.), on the water quality and ecology, in order to contribute to the development of sustainable use patterns through an ecosystem-based management. Research should address the following elements:

Socio-economic valuation of coastal and shelf seas in view of their goods and services, evaluation of the costs of non-action, costs of improved assessment and monitoring programmes in support of the implementation of the EU Marine Strategy; Assessment of the combined impacts from aquaculture, fisheries within the EEZ (Exclusive Economic Zone) (EEZ) of the Member States, extractions of minerals, oil and gas, eutrophication, shipping, release of land-based pollutants into the coastal zone, tourism, etc. on the marine ecosystems.

Interface Europe; 09/08/2008

IE033 Monitoring and Evaluation of Spatially Managed Areas (SMA)

The seas around Europe are home to an exceptionally wide range of seabed habitats and their associated biodiversity, whilst also supporting a variety of marine industries. These multiple uses can lead to increasing challenges for marine environment managers, such as conflicts between users, or between economic interest and conservation requirements, and there is a greater potential for degradation of the marine ecosystems. Therefore, access to information about the distribution and quality of seabed habitats is essential for effective sustainable management.

Research under this topic should develop special science-based guidelines, criteria, concepts and models to implement, follow-up, monitor and evaluate spatially managed areas for the integrated uses of the ocean and its resources. This should include the identification and classification of essential marine habitats starting from the existing data sets and maps in order to help end users to better understand the ecological status of the species and the impacts of anthropogenic activities. It should also support the spatial component of the management of resources in the marine environment and be used to develop management zoning schemes within Marine Protected Areas (MPAs). Geological information for both the surface and subsurface should be integrated with the Digital Terrain Model (DTM), linking both surface and subsurface information. Geological structures that are significant for geohazard assessment should be identified with criteria that are well established as well as novel.

Interface Europe; 09/08/2008

IE034 Rehabilitation technologies for degraded water systems presenting quantity and quality problems

This action should promote the development of innovative rehabilitation technologies for degraded surface water and groundwater systems (e.g. rivers and streams, lakes and reservoirs, wetlands, coastal aquifers, etc.) to provide sustainable environmental solutions and the design of generic restoration guidelines and rehabilitation standards that may meet compliance needs towards regulations. Emphasis should be given to technology developments that integrate engineering, physical, biological and ecological sciences. Research proposals should integrate different case studies (including locations from outside Europe, if appropriate) addressing large scale complex problems combining a wide range of risks, problems sources and degradation processes, and cumulative, synergistic and long-term impacts resulting from agricultural practices, existing or developed water infrastructures, urban development and/or industrial activities To help reconciling conflict views and interests in rehabilitation strategies and techniques, particular attention should be given to the acceptability of the designed solutions through end user involvement, public-private synergies, trade-offs and decision-making processes. Indicators and information systems, technology transfer, education and training activities and analysis of the socio-economic benefits of the proposed rehabilitation solutions should as well be addressed. This action should foresee a substantial participation of industrial partners and end-users.

Interface Europe; 09/08/2008

IE035 Nanotechnologies for water treatment

Nanotechnology presents many benefits for environmental technology applications, such as remediation, treatment or sensor development and

monitoring purposes. In the field of water, nanotechnology has the potential to contribute to long-term water quality, availability, and viability of water resources such as through advance filtration that enables sustainable water reuse, recycling or desalination. The aim of this action is to support research and technological development in the field of water treatment by applying developed or adapted nano-engineered materials to promising separation, purification and/ or detoxification technologies. Proposals should focus on process intensification aiming at improving selectivity, robustness, stability and performance while reducing energy requirements and byproduct generation. Specific monitoring issues, as well as safety, environmental and health aspects, should be included if directly associated with the new technological solution proposed. Priority will be given to novel ideas and emerging technologies promising major advances and a large potential impact in the long-term, including cost-effectiveness.

Interface Europe; 09/08/2008

IE036 Development of automated sensing technologies for estuaries, coastal areas and seas

Estuaries and coastal areas are extremely important as source of nutrients, sediments and pollutants for the marine environment. Sustainable fishery activities require a detailed knowledge on their input. Moreover, monitoring is necessary to assess the impact of climate change on key parameters for aquatic systems as defined by European policies and initiatives such as the Marine Thematic Strategy and the Maritime Policy Green Paper. This demands sophisticated monitoring technologies where gliders (but also profilers or AUV) and buoys equipped with sensors could play an important role. Examples of parameters to be measured with adequate spatial and temporal resolution include, but are not limited to, nutrients, pollutants, chlorophyll, Carbon species, micro-organisms, and selected physico-chemical parameters (e.g. pH, O2, T). The projects should produce clear and measurable advances – in relation to a selection of the key parameters and to the system operation - with respect to sensor miniaturisation, energy consumption, robustness, long-term accuracy and overall system performance (interoperability, data management, capital and operational costs, etc.). The prototype sensors should be developed to a level that will allow them to move to market as a next step. The participation of SMEs is particularly encouraged.

Interface Europe; 09/08/2008

IE0314 GMES :

- Improve the safety and efficiency of maritime transport and naval operations;
- Enable the sustainable exploitation and management of ocean resources (offshore oil and gas industry, fisheries);
- Mitigate the effects of environmental hazards and pollution crisis (oil spills, harmful algal blooms);
- Contribute to ocean climate variability studies and seasonal climate prediction;
- Improve national security and reduce risks;
- Advance marine research with the aim to better understand the global climate, the ocean and its ecosystems.

Interface Europe; 07/09/2008

IE0315 INTERREG IV C:

priority 2 of the programme which includes the following sub-themes: natural and technological risks (including climate change); water management; waste management; biodiversity and preservation of natural heritage (including air quality); energy and sustainable transport; cultural heritage and landscape.

Interface Europe; 07/09/2008

IE03251 LIFE + (regroupe plusieurs programmes de la
période 2000-2006 (LIFE III, Forest Focus, NATURA 2000, programme sur le développement urbain durable).
Objectif : Soutenir la mise en oeuvre du 6ème Programme d'action pour l'environnement

qui vise à :
- Lutter contre le changement climatique ;
- Enrayer la réduction de la diversité de la nature et de la biodiversité ;
- Améliorer la santé et la qualité de vie ;
- Promouvoir l'utilisation et la gestion durables des ressources naturelles et des déchets ;
- Adopter des approches stratégiques en matière d'élaboration, de mise en oeuvre et d'intégration des politiques, notamment pour améliorer la gouvernance environnementale et sensibiliser davantage le public.

Life + Nature et biodiversité : Soutien centré sur la mise en oeuvre des directives de l'UE relatives à la conservation des habitats naturels et des oiseaux sauvages et sur la définition et le suivi des politiques et réglementations de l'UE en matière de nature et de biodiversité ;

- Life + Politique et gouvernance en matière d'environnement : Echanges dans des domaines où les politiques, les approches, la législation ou les moyens de mise en oeuvre en sont à un stade précoce ; mesures favorisant la participation active du public etc.

- Life + Information et communication.

Interface Europe; 07/09/2008

IE03257 Programme d'action communautaire dans le domaine de la santé publique

Objectif 1 - Améliorer la sécurité sanitaire des citoyens
Axe 1 : Protéger les citoyens contre les menaces pour la santé (y compris le bioterrorisme).
Axe 2 : Améliorer la sécurité des citoyens (pandémies, infections dans les hôpitaux…).

Objectif 2 - Promouvoir la santé pour renforcer la prospérité et la solidarité
Axe 1 : Favoriser un vieillissement actif et en bonne santé et contribuer à réduire les inégalités en matière de santé :
- Promouvoir les initiatives visant à prolonger les années de vie en bonne santé ;
- Soutenir les initiatives visant à lutter contre les inégalités en matière de santé et à les réduire dans et entre les Etats membres ;
- Favoriser les investissements dans la santé en coopération avec d'autres politiques et fonds communautaires (notamment soutien, au titre de la politique régionale, des investissements dans les infrastructures sanitaires dans les régions de convergence) ;
- Renforcer la solidarité entre les systèmes de santé nationaux en favorisant la coopération sur des questions comme la mobilité des patientset les soins de santé transfrontaliers.
Axe 2 : Promouvoir des modes de vie plus sains en agissant sur les déterminants de la santé (alcool, tabac, consommation de drogue et qualité de l'environnement social et physique) :
- Action au niveau communautaire pour faciliter la coopération et l'échange de bonnes pratiques et compléter les mesures nationales ;

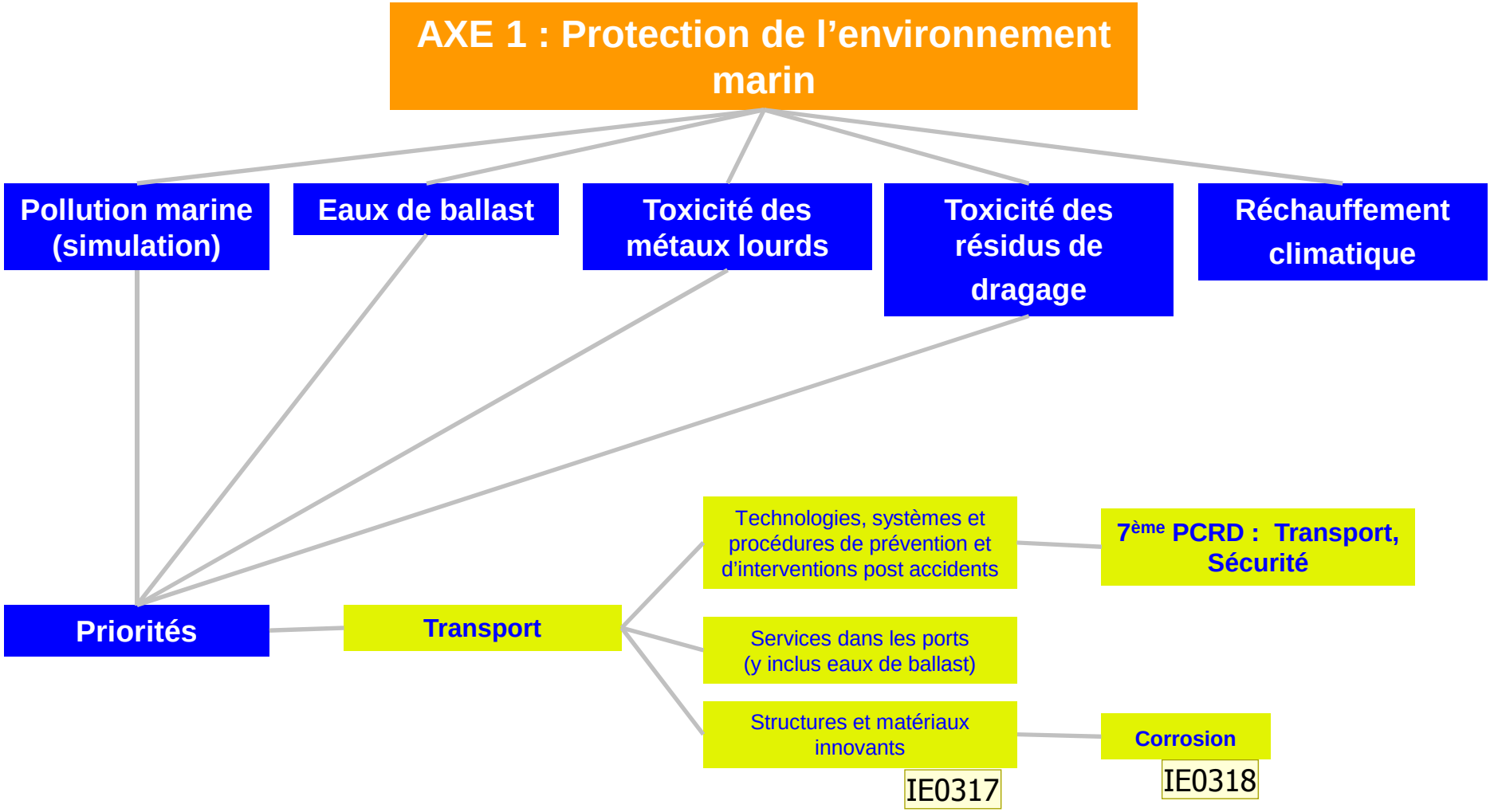
- Action communautaire axée sur la promotion de la santé et la prévention ;
- Actions ciblées, portant notamment sur les déterminants liés au mode de vie et sur les déterminants liés aux dépendances ;
- Mesures en faveur d'une alimentation saine.

Objectif 3 - Produire et diffuser des connaissances en matière de santé
Axe 1 : Échanger des connaissances et des bonnes pratiques (notamment sur les questions transfrontalières liées à la coopération entre systèmes de santé).
Axe 2 : Collecter, analyser et diffuser des informations en matière de santé au niveau communautaire.
Interface Europe; 07/09/2008

IE03361 Interreg IV B:

Priority 2, "Protect, secure and enhance the marine and coastal environment sustainably"

Objective 2.4. – Protect and promote natural spaces, water resources and coastal zones.
Interface Europe; 26/09/2008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Pollution marine (simulation)
Eaux de ballast
Toxicité des métaux lourds
Toxicité des résidus de dragage
Réchauffement climatique
Priorités
Transport
Technologies, systèmes et procédures de prévention et d'interventions post accidents
7ème PCRD : Transport, Sécurité
Services dans les ports (y inclus eaux de ballast)
Structures et matériaux innovants
IE0317
Corrosion
IE0318

IE0317 Improved services in terminals

Technologies and procedures for improved services delivered by transport terminals. Particular emphasis will be placed on effective, clean and safe operations in terminals and minimisation of turn-round time and cost.

Proposals will cover one or more of the following subjects:

• Vehicles/vessels manoeuvring assistance within and close to terminals/ports.

• Terminal auxiliary services (e.g. infrastructures maintenance and inspection, mooring, hazards mitigation, information and communication).

• Waste management and reduction (including ballast water in ports).

• Loading/unloading of cargo and their transhipment within terminals are not included in this topic (these subjects are included in topic SST.2008.2.1.1).

• Networking/co-operation between terminals.

• Definition of service quality standards for terminals.

Interface Europe; 09/08/2008

IE0318 Continental Shipping

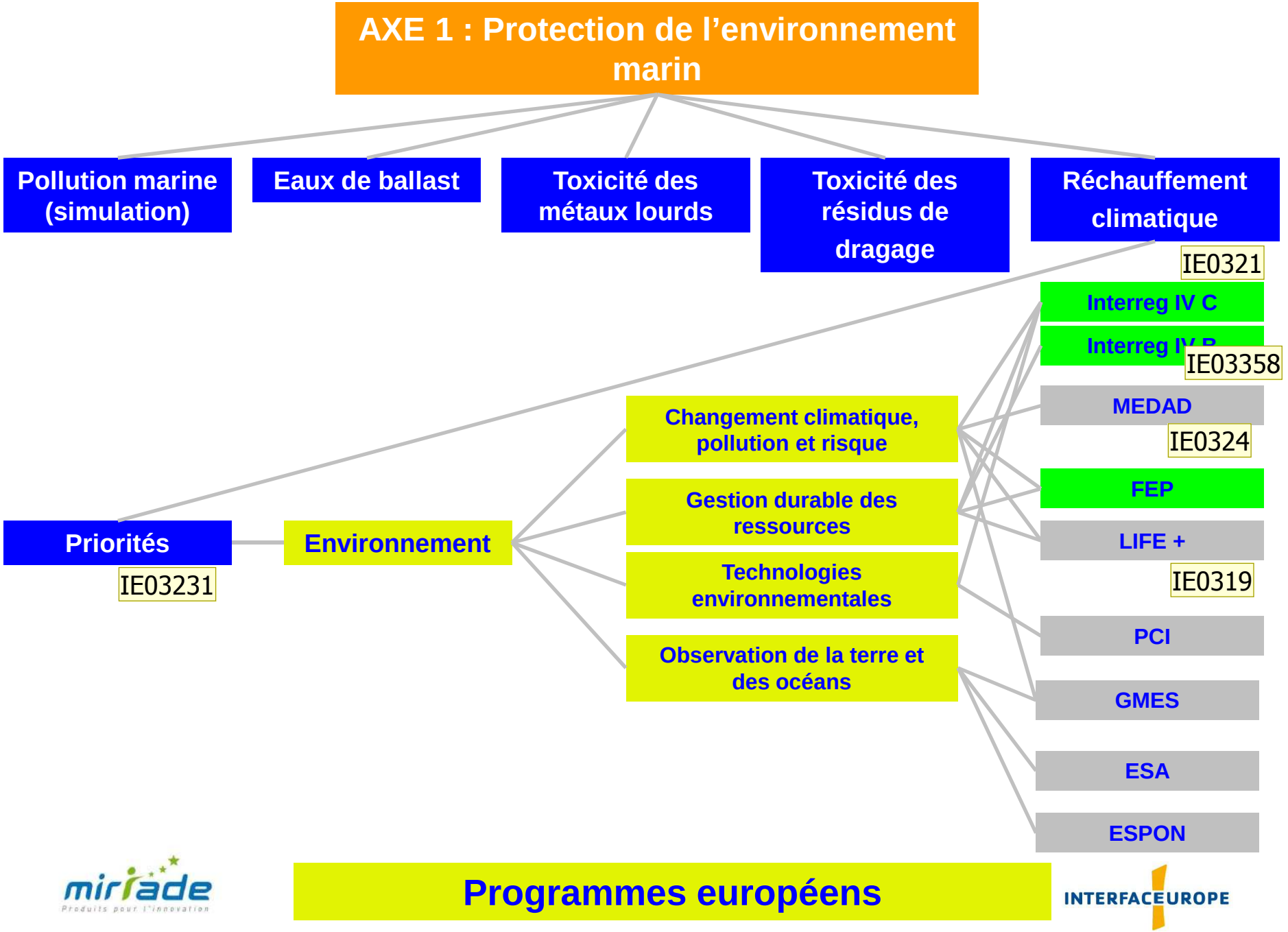
The aim of the research is to promote the development of sustainable waterborne transportation of passengers and goods within Europe, inside its lands and around its coast lines.

Activities will address:

•(...)

• Innovative environmentally friendly hull coatings to prevent bio-fouling and corrosion

Interface Europe; 21/08/2008


AXE 1 : Protection de l'environnement marin
Pollution marine (simulation)
Eaux de ballast
Toxicité des métaux lourds
Toxicité des résidus de dragage
Réchauffement climatique
IE0321
Interreg IV C
Interreg IV B
IE03358
MEDAD
IE0324
FEP
LIFE +
IE0319
PCI
GMES
ESA
ESPON
Priorités
IE03231
Environnement
Changement climatique, pollution et risque
Gestion durable des ressources
Technologies environnementales
Observation de la terre et des océans
Programmes européens

Diapositive 53

IE0319 LIFE + (regroupe plusieurs programmes de la
période 2000-2006 (LIFE III, Forest Focus, NATURA 2000, programme sur le développement urbain durable).
Objectif : Soutenir la mise en oeuvre du 6ème Programme d'action pour l'environnement
qui vise à :
- Lutter contre le changement climatique ;
- Enrayer la réduction de la diversité de la nature et de la biodiversité ;
- Améliorer la santé et la qualité de vie ;
- Promouvoir l'utilisation et la gestion durables des ressources naturelles et des déchets ;
- Adopter des approches stratégiques en matière d'élaboration, de mise en oeuvre et
d'intégration des politiques, notamment pour améliorer la gouvernance environnementale et
sensibiliser davantage le public.

Life + Nature et biodiversité : Soutien centré sur la mise en oeuvre des directives de l'UE
relatives à la conservation des habitats naturels et des oiseaux sauvages et sur la définition
et le suivi des politiques et réglementations de l'UE en matière de nature et de biodiversité ;

- Life + Politique et gouvernance en matière d'environnement : Echanges dans des
domaines où les politiques, les approches, la législation ou les moyens de mise en oeuvre
en sont à un stade précoce ; mesures favorisant la participation active du public etc.

- Life + Information et communication.
Interface Europe; 07/09/2008

IE0321 Two main priorities are targeted: 'Innovation and Knowledge economy' and 'Environment and Risk prevention'.

Priority 2 of the programme - sub-themes:

natural and technological risks (including climate change);
water management;
waste management;
biodiversity and preservation of natural heritage (including air quality);
energy and sustainable transport;
cultural heritage and landscape.
Interface Europe; 10/08/2008

IE0324 Programme "Gestion et impacts du changement climatique": intitulé "Atténuation, adaptation et régionalisation", il a pour objectif de développer des connaissances utiles pour aider à la décision en matière de réduction des impacts et d'adaptation au changement climatique. Il met notamment l'accent sur l'identification de couplages entre phénomènes, liés au changement en cours et de toutes échelles, dont les conséquences peuvent altérer l'environnement ou la société.

La date limite de dépôt des projets est fixée au 4 novembre 208
Interface Europe; 11/08/2008

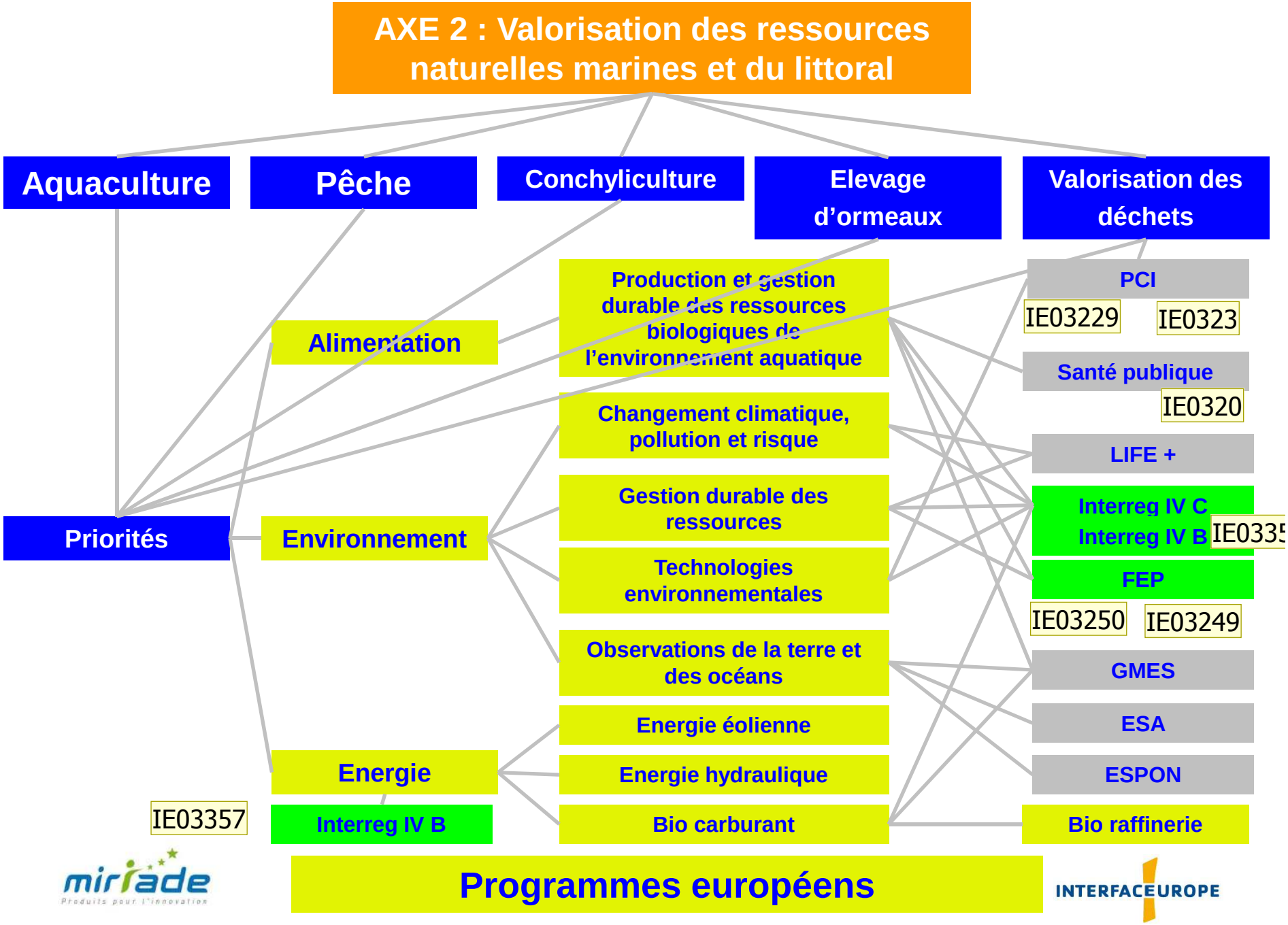
IE03231 4 August 2008 – Climate Change: Commission launches public consultation on post-2012 agreement
The European Commission launches today a public consultation on the European Union's approach to a global climate change agreement up to and beyond 2012 when the current Kyoto Protocol targets will end. Stakeholders and the general public are invited to put forward their views on a number of critical issues, such as mid-term emission reduction targets for developed countries and emission reduction actions for developing countries, adaptation to climate change, technology cooperation and finance. The results of the survey will help shape the EU's position on the global post-2012 agreement.

Further information:
http://europa.eu/rapid/pressReleasesAction.do?reference=IP/08/1239&format=HTML&aged=0&language=EN&guiLanguage=fr
Interface Europe; 05/09/2008

IE03358 Interreg IV B

Priority 2, "Protect, secure and enhance the marine and coastal environment sustainably"

Objective 2.4. – Protect and promote natural spaces, water resources and coastal zones.
Interface Europe; 26/09/2008


AXE 2 : Valorisation des ressources naturelles marines et du littoral
Aquaculture
Pêche
Conchyliculture
Elevage d'ormeaux
Valorisation des déchets
Priorités
Alimentation
Environnement
Energie
Production et gestion durable des ressources biologiques de l'environnement aquatique
Changement climatique, pollution et risque
Gestion durable des ressources
Technologies environnementales
Observations de la terre et des océans
Energie éolienne
Energie hydraulique
Bio carburant
PCI
IE03229
IE0323
Santé publique
IE0320
LIFE +
Interreg IV C
Interreg IV B
IE0335
FEP
IE03250
IE03249
GMES
ESA
ESPON
Bio raffinerie
IE03357
Interreg IV B
Programmes européens

Diapositive 54

IE0320 Two main priorities are targeted: 'Innovation and Knowledge economy' and 'Environment and Risk prevention'.

Priority 2 of the programme - sub-themes:

natural and technological risks (including climate change);
water management;
waste management;
biodiversity and preservation of natural heritage (including air quality);
energy and sustainable transport;
cultural heritage and landscape.
Interface Europe; 10/08/2008

IE0323 CIP
For Eco Innovation
example:
Materials recycling
Deadline: Thursday 11 September
Interface Europe; 10/08/2008

IE03229 Programme Compétitivité et innovation:

« Fournir des informations ou apporter un soutien aux agriculteurs et aux sylviculteurs désireux d'alimenter le marché bioénergétique.

Promouvoir un dialogue renforcé entre les producteurs de biomasse ou de biocarburants (agriculteurs, sylviculteurs et fabricants de biocarburants) et les investisseurs potentiels (promoteurs de projets, institutions financières et partenaires potentiels dans le financement coopératif de projets ou d'autres régimes de financement innovants). » EIE
Interface Europe; 05/09/2008

IE03249 Fonds Européen pour la Pêche (FEP)

Objectifs :
- Assurer la pérennité des activités de la pêche et l'exploitation durable des ressources halieutiques ;
- Promouvoir un équilibre durable entre les ressources et la capacité de pêche de la flotte de pêche communautaire ;
- Renforcer le développement d'entreprises économiquement viables dans le secteur de la pêche et rendre plus compétitives les structures de l'exploitation des ressources ;
- Favoriser la protection et la valorisation de l'environnement et des ressources de la mer ;
- Favoriser le développement durable et l'amélioration de la qualité de vie dans les zones concernées par des activités de pêche ;
- Promouvoir la valorisation des ressources humaines et l'égalité entre les hommes et les

femmes actifs dans le secteur de la pêche.

Budget 2007-2013 : 3,849 milliards € (dont 191,7 millions € pour la France).
Le taux de cofinancement communautaire devra être compris entre 20 et 50% des dépenses publiques.

Axes et actions :
1. Adaptation de la flotte de pêche :
Aides au retrait définitif des navires de pêche, aides aux propriétaires de navires et aux équipages contraints d'interrompre temporairement leurs activités de pêche pour faciliter la reconstitution des stocks, soutien pour l'amélioration de la sécurité et de l'hygiène à bord ou pour l'utilisation d'engins de pêche moins agressifs pour le milieu marin, aides aux jeunes pêcheurs pour l'acquisition d'un navire d'occasion, encouragement à la formation professionnelle, soutien en faveur de la flotte de pêche artisanale.
Interface Europe; 07/09/2008

IE03250 Fonds Européen pour la Pêche (FEP)

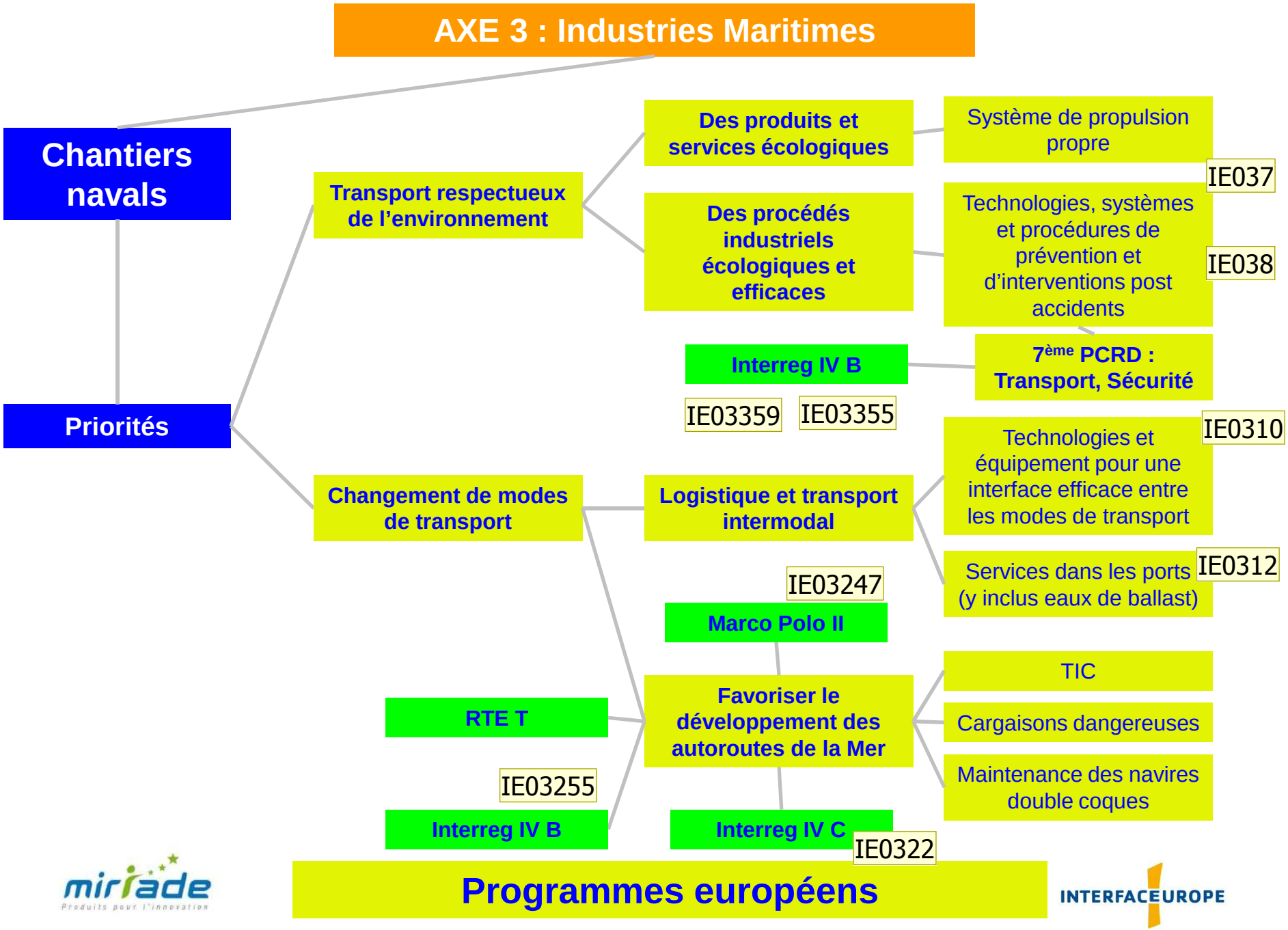
Budget 2007-2013 : 3,849 milliards € (dont 191,7 millions € pour la France).
Le taux de cofinancement communautaire devra être compris entre 20 et 50% des dépenses publiques.
Axes et actions :
2. Aquaculture, pêche dans les eaux intérieures, transformation et commercialisation
- Aquaculture : investissements productifs (diversification, formation tout au long de la vie, etc.), mesures aqua-environnementales, mesures de santé publique et en matière vétérinaire ;
- Pêches dans les eaux intérieures : aide à la réaffectation des navires à des fins autres que la pêche ;
- Transformation et commercialisation : amélioration des conditions de travail, des conditions sanitaires et d'hygiène, et de la qualité des produits, réduction des impacts négatifs sur l'environnement, application de technologies nouvelles, développement de méthodes innovantes de production.
Interface Europe; 07/09/2008

IE03356 Interreg IV B

> Priority 2, "Protect, secure and enhance the marine and coastal environment sustainably"

Objective 2.2. – Sustainable management and protection of the resources of marine spaces;
Interface Europe; 26/09/2008

AXE 3 : Industries Maritimes



IE037 New ship propulsion systems

The aim of the research is to optimize the hydrodynamic performance of new ship propulsion systems. Activities will address integrated hull forms and complex propulsion configurations to maximise the conversion of ship power into thrust. Investigations will target large area propulsion and distributed propulsion concepts coupled with complex hull designs. Radically new concepts, such as biomechanical design, large area propellers will be proposed for the overall maximisation of energy conversion combined with low levels of propeller cavitation, noise and vibration also considering ice-conditions.

Activities will include:

• The development of methodologies based on advanced CAE tools for the accurate prediction of thrust conversion, noise and vibration

• Application of the above methodologies to predict the hydrodynamic behaviour of new propulsion systems. Validation through physical model testing.

• Definition and assessment of new propeller concepts integrated with innovative hull forms. The research will consider both mechanical and electric drives, in particular highefficiency water-jets, new pod concepts (including considerations on modular design and in-service replacement), propulsion systems to operate in ice.

• Use of non-metallic propulsion materials will be explored and assessed.

• Analysis of operational reliability, compliance with safety rules and economic factors.

New configurations will be investigated under all operational conditions, for example in manoeuvring rough seas. Deliverables will include concepts for large scale propulsion demonstrating high efficiency gains, propulsion designs integrated with hull design models, concepts for large area propulsion integrated with new ship designs, economic and operational analysis.

Interface Europe; 09/08/2008

IE038 Preventive and emergency interventions to protect marine, coastal and land environments

Technologies, systems and procedures for preventive and emergency post-accident interventions on vehicles and vessels. Activities will aim at rapid, effective and safe detection, notification and interventions on vehicles and vessels in emergency situations (e.g. capsized ships, vehicle collisions, oil spills). Activities will also include the development of technologies, systems and procedures for accident preventive intervention on vehicles and vessels. Concerning operations at sea, the research will for example address the integration of underwater robotics, advanced sensing and tooling for effective interventions in wrecks and prevention of oil spills. The mechanical, chemical and biological (including their combination) removal of spillages (oil, other polluting substances, dangerous goods) at sea and on land may also be addressed. Activities will also include the development of accident modelling and simulation tools for impact prediction and intervention definition in real time. International Cooperation with USA, Russia and Japan is suggested in particular for underwater interventions.

Interface Europe; 09/08/2008

IE0310 Improved services in terminals

Technologies and procedures for improved services delivered by transport terminals. Particular emphasis will be placed on effective, clean and safe operations in terminals and minimisation of turn-round time and cost.

Proposals will cover one or more of the following subjects:

• Vehicles/vessels manoeuvring assistance within and close to terminals/ports.

• Terminal auxiliary services (e.g. infrastructures maintenance and inspection, mooring, hazards mitigation, information and communication).

• Waste management and reduction (including ballast water in ports).

• Loading/unloading of cargo and their transhipment within terminals are not included in this topic (these subjects are included in topic SST.2008.2.1.1).

• Networking/co-operation between terminals.
• Definition of service quality standards for terminals.
Interface Europe; 09/08/2008

IE0312 Maritime and inland waterways transport
The objective is to promote the attractiveness of waterborne transport. Activities will cover competitive solutions for short sea shipping, inland waterways and deployment of the Motorways of the Sea, including recourse to the use of modern information/location technologies. Maritime safety will be addressed through information and telematic technologies, optimised man-machine interactions, improved conditions for transport of hazardous goods and maintenance of double-hull vessels.
Expected impact:
• Increased modal shift for short sea shipping to reach a modal share of 40 %.
• Increased involvement of private sector.
• Proposals must ensure at least a neutral impact on climate change.
Interface Europe; 09/08/2008

IE0322 Two main priorities are targeted: 'Innovation and Knowledge economy' and 'Environment and Risk prevention'.

Priority 2 of the programme - sub-themes:

natural and technological risks (including climate change);
water management;
waste management;
biodiversity and preservation of natural heritage (including air quality);
energy and sustainable transport;
cultural heritage and landscape.

Interface Europe; 10/08/2008

IE03247 Marco Polo II :

« Actions en faveur des « autoroutes de la mer » : Mise en place de services qui permettent de transférer directement du fret de la route vers des lignes de cabotage maritime incluant ou non des parcours sur voies d'eau intérieures, ainsi que d'autres modes de transports où les parcours routiers sont aussi courts que possible.
- « Actions d'évitement du trafic » : Toute action novatrice intégrant le transport dans les logistiques de production afin d'éviter le transport routier d'un pourcentage important de fret tout en maintenant les capacités globales de production et d'emploi sur le territoire de l'Union européenne.
Interface Europe; 07/09/2008

IE03255 Réseaux transeuropéens de transport

Faciliter l'harmonisation, la jonction et le développement d'infrastructures en
matière de transport (tout mode de transports) sur l'ensemble de l'UE, en vue de parachever le marché unique.
Interface Europe; 07/09/2008

IE03355 Interreg IV B

Priority 2, "Protect, secure and enhance the marine and coastal environment sustainably"

Objective 2.1. – Improve maritime safety;
Interface Europe; 26/09/2008

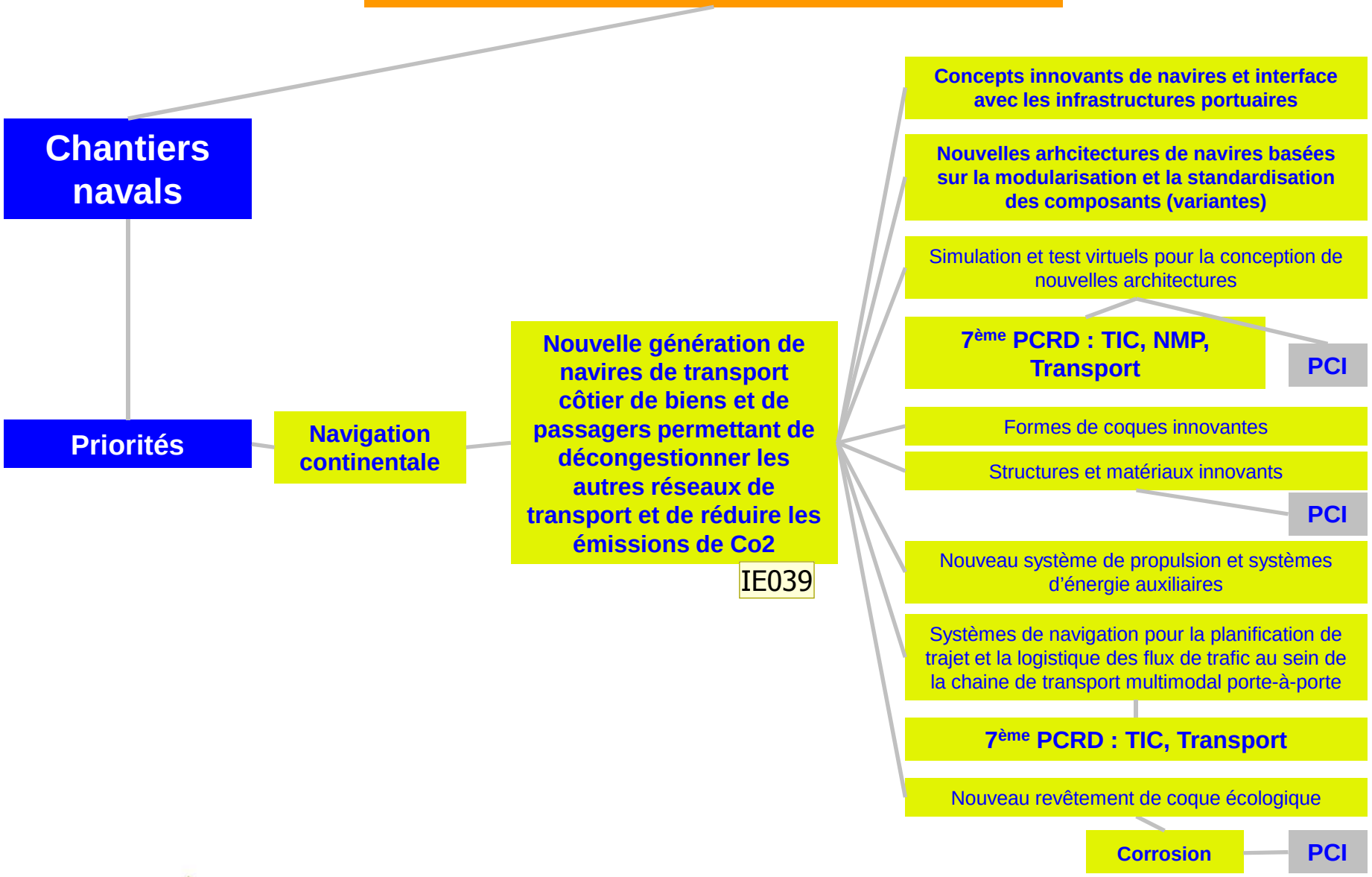
IE03359 Interreg IVB:

Priority 3, "Improve accessibility and internal links"

Objective 3.1. – Promote interoperability and continuity of existing transport networks, and sea/road/rail/air intermodality;

Objective 3.2. – Promote short sea shipping and cooperation between ports.
Interface Europe; 26/09/2008

AXE 3 : Industries Maritimes



Programmes européens

IE039 Continental Shipping

The aim of the research is to promote the development of sustainable waterborne transportation of passengers and goods within Europe, inside its lands and around its coast lines. For the further enhancement of overall transport efficiency, it will be essential to promote alternative transportation modes such as Short Sea Shipping and Inland Navigation which can decongest European transport networks and offer cleaner transport solutions in terms of CO2 emissions. A new generation of vessel concepts will be studied, conceived and validated along with the necessary technological developments. In addition consideration will be given to safety and security problems, ship/shore interface, logistics, LCC optimisation, ice-conditions and Arctic routes and measures for an efficient deployment of the results at fleet level.

Activities will address:

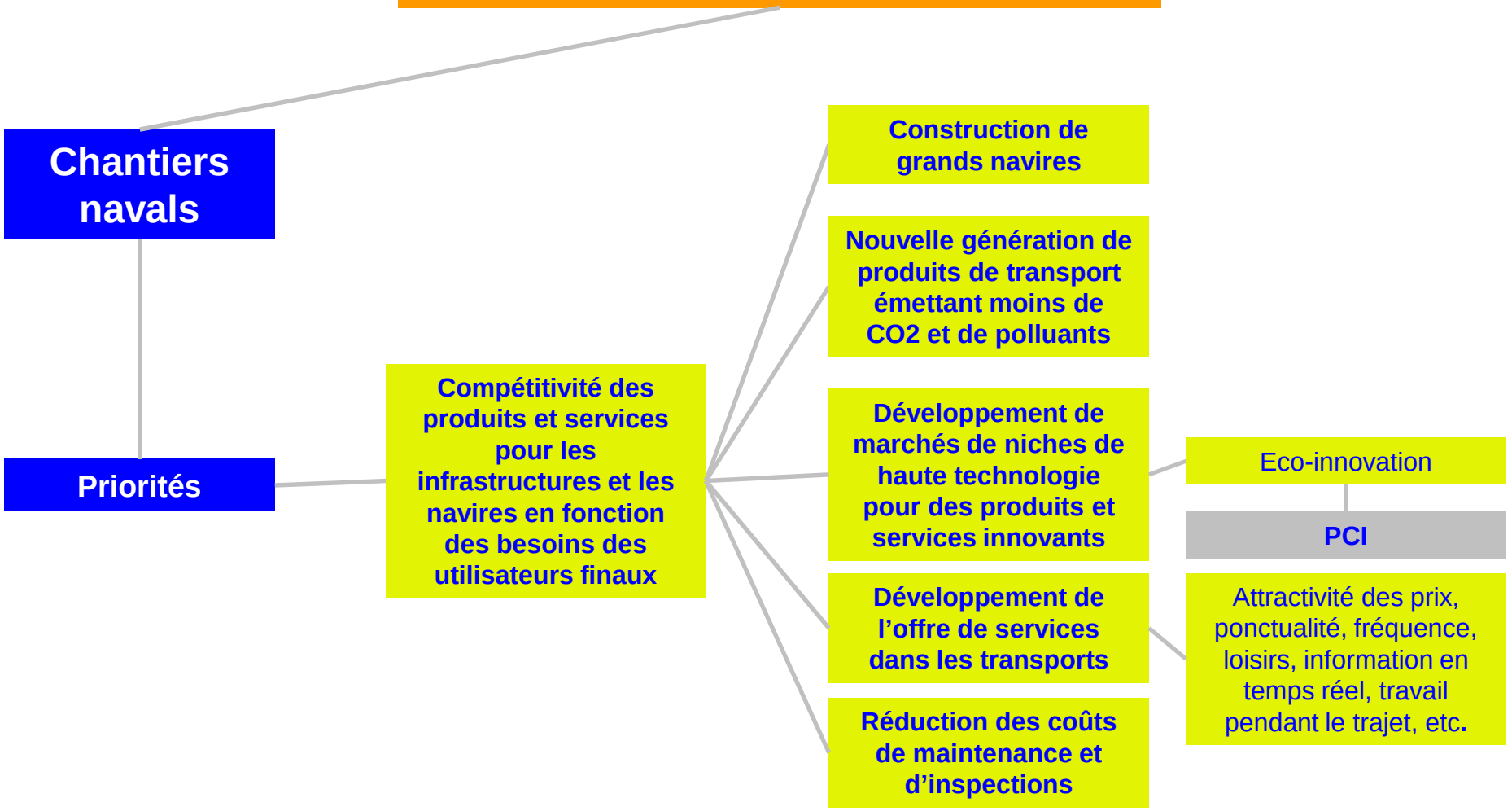
- Innovative vessel concepts and their interfaces with infrastructures
- New ship architectures based on modularisation and standardisation of components for the cost effective design of ship variants, reduction of lead times and sub-system outfitting and maintenance cost.
- Virtual simulation and testing for new ship architectures.
- Innovative hull forms with optimal hydrodynamic performance, integration of innovative drag reduction concepts and enhanced manoeuvrability in restricted waters.
- Innovative ship structures and new material for optimal transported weight/cost performance and increased crashworthiness.
- New propulsion and auxiliary energy systems which are safe, reliable and energy efficient.
- New specialised cargo handling systems and ship/shore interfaces
- Safe operations with special consideration for limited and shallow water conditions, overtaking manoeuvres, collision and grounding.
- Development of navigation systems for optimal route planning and the logistics of traffic flows within door-to-door multimodal transportation chains.
- Innovative environmentally friendly hull coatings to prevent bio-fouling and corrosion.

Activities will lead to the improved environmental and economic performance of European continental waterborne transportation ensuring its increase in market share and volume. They will also look at consolidating the European industrial leadership in the global market and efficiently responding to forthcoming growth in economic activity and transport demand. The economical comparative analysis highlighting advantages of the developed solutions with respect to Far East products is also included

Major deliverables will be innovative ship designs, systems and procedures for their safe operation, integrated logistics concepts for door-to-door transport in EU-27, new concepts for collaborative ship building and harmonised supporting tools for efficient shipbuilding processes.

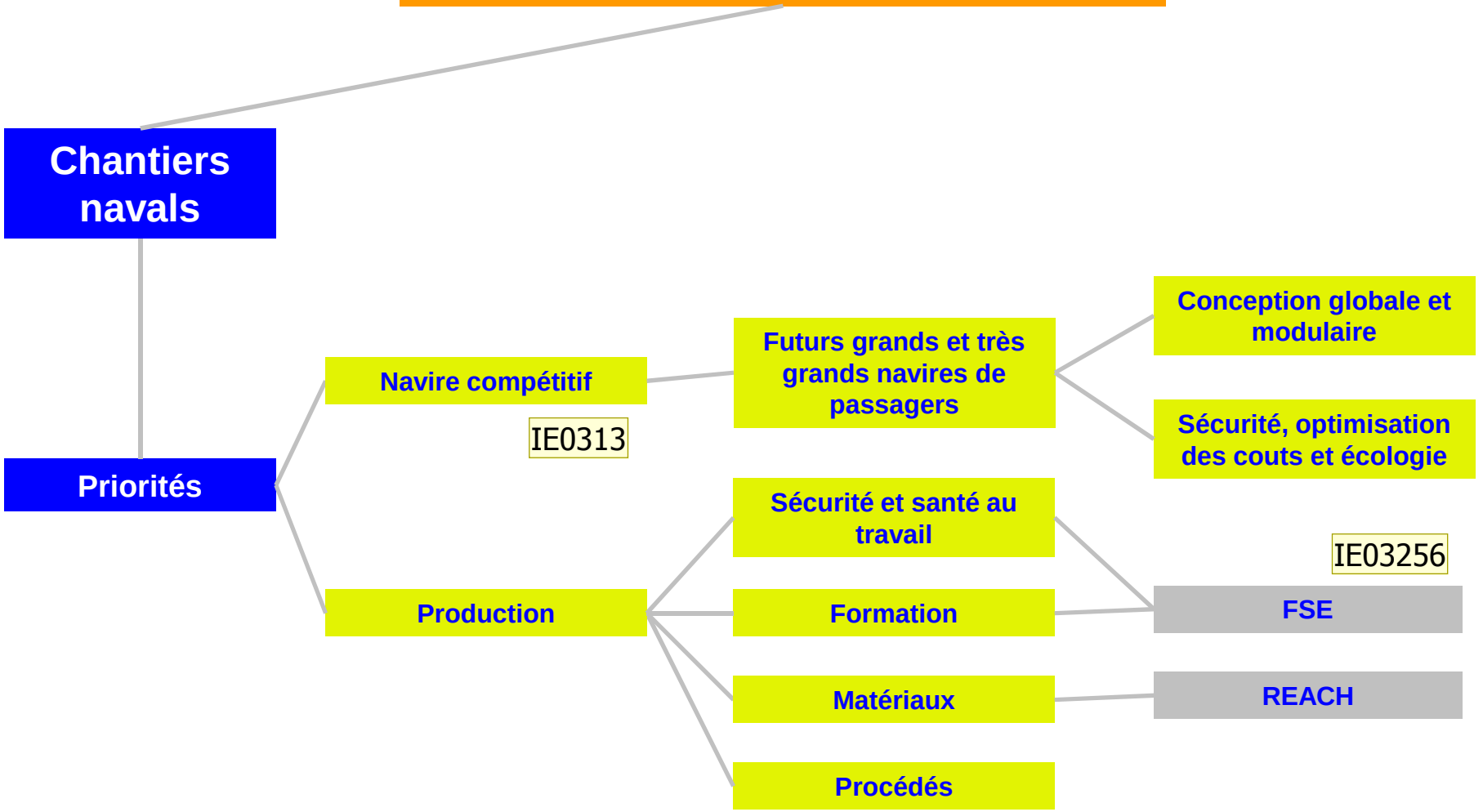
Interface Europe; 09/08/2008

AXE 3 : Industries Maritimes



Programmes européens

AXE 3 : Industries Maritimes



Programmes européens

IE0313 The competitive ship

The objective of the research will be to develop new concepts and technologies for future large and ultra-large passenger ships. Methodologies will employed that are based on a holistic and multi-criteria approach which addresses life-cycle cost optimisation, safety and environmental friendliness.

The research will make use of the most advanced methods and tools available for the design and production of complex technical systems, integrated resources, life cycle management, risk analysis and collaborative design, as well as the most innovative solutions for critical ship systems. These methods and technologies will be applied to a passenger ship to enable a complete revision and elaboration of new architectural and technical concepts based on optimisation and modularisation of components and sub-systems. Emphasis will be placed on lifetime costs, optimal interactions and interchangeability of ship systems for cost effective production and minimal life time operational costs.

Activities will include:

• Methods and concepts to assess and quantify the impact of ship design parameters on lifecycle costs, safety and environment including feedback from ship operation to design. These will be validated based on real vessels and operational data

• In partnership with system suppliers and other important actors in the process chain, establishment of a framework and tools that enable collaborative multi-criteria and multi level optimisation taking into account the complexity of large and ultra-large passenger ships together with the real needs and competences of shipyard design offices

• The tools will incorporate breakthrough technologies and architectural concepts that address the following sub-systems and design criteria:

o Optimisation of space in the different ship areas: public space, passenger cabins and service areas.

o Improving payload to gross tonnage ratio of hull structures and outfitting components to increase customer value.

o Increased modularity of all spaces and systems to reduce building cost and allow cost efficient out-fitting and maintenance.

o Optimisation of the ship propulsion chain, auxiliary systems and overall power management to reduce the consumption of resources and emissions to environment.

o Minimisation of noise and vibration levels both for passengers inside ships and to reduce emissions in the vicinity of ports.

• Optimisation of the entire logistics chain aboard ship and between ship and shore to improve safety, security and reduce operational cost.

• Application of the developed tools within one or more concept vessels, together with a through life cost benefit analysis that demonstrates the competitive advantage compared to existing techniques and designs.

Activities to ensure the operational take up and application of the tools developed within a commercial environment are included. Establishment of performance indicators that will demonstrate the benefit from the technologies developed after the completion of the research is also included.

Deliverables will consist of:

- validated new methodologies and tools for life-cycle cost assessment in ship design,
- framework tools for the optimisation of the ship and its key systems,
- architectural and technical concepts for ships of the future designed on systems based approach,
- proof and validation of feasibility of these techniques within an operational commercial environment,
- concept designs compared to conventional state of the art, prototypes and numerical models for key sub-systems,
- cost benefit analysis,
- steps to ensure application of the technologies,

- performance indicators and measure to ensure continued measurement of the post project impact.

Interface Europe; 09/08/2008

IE03256 FSE

Priorités thématiques retenues par la France pour l'intervention du FSE au travers du programme opérational national sont :
- Contribuer à l'adaptation des travailleurs et des entreprises aux mutations économiques ;
- Améliorer l'accès à l'emploi des demandeurs d'emploi ;
- Renforcer la cohésion sociale, favoriser l'inclusion sociale et lutter contre les discriminations ;
- Investir dans le capital humain et la mise en réseau, l'innovation et les actions transnationales.

Interface Europe; 07/09/2008

2.1.– Priorités et programmes européens

2.1.1 – Cadre global

2.1.2 - Défis à long terme : Perspectives européennes 2015 - 2030

2.1.3 - Défis à moyen terme : Programmes européens 2008 - 2013

2.1.4 - Défis à court terme : Appels à propositions européens 2008 - 2009

Appels à propositions européens 2008 - 2009

Political area	Call title	Deadline for submission	Theme	More information
	FP7-NMP-2008-SME-2	23/09/2008 (second stage)	Nanosciences, Nanotechnologies, Materials and new Production Technologies	link
	FP7-ENERGY-2008-TREN-1	8/10/2008	Energy	link
	FP7-ENERGY-2009-3	25/11/2008	Energy	link
	FP7-ENERGY-2009-1	25/11/2008	Energy	link
FP7: COOPERATION	FP7-2009-BIOREFINERY_CP	02/12/2008	Energy Environment (including Climate Change) Food, Agriculture and Fisheries, and Biotechnology Nanosciences, Nanotechnologies, Materials and new Production Technologies	link
	FP7-2009-BIOREFINERY_CSA	02/12/2008	Energy Environment (including Climate Change) Food, Agriculture and Fisheries, and Biotechnology Nanosciences,	link

Recommendations d'actions

> Définir le positionnement stratégique européen à moyen/long terme de votre établissement au regard :

- **des priorités des plateformes technologiques européennes**
- **des priorités thématiques des programmes européens**

> Aligner, le cas échéant, priorités d'établissement et priorités européennes : stratégie d'établissement

> Contribuer à la définition des priorités européennes en proposant des thèmes d'appels à propositions : lobbying européen

> Répondre aux appels à propositions (ciblés ou ouverts): démarche projet

mirade
Produits pour l'innovation

INTERFACEUROPE

2.2 – Projets européens

Quel potentiel d'innovation pour le Pôle Hom' Mer au regard des opportunités européennes ?

Approche globale

+

Politique maritime intégrée

+

Plateformes technologiques européennes

+

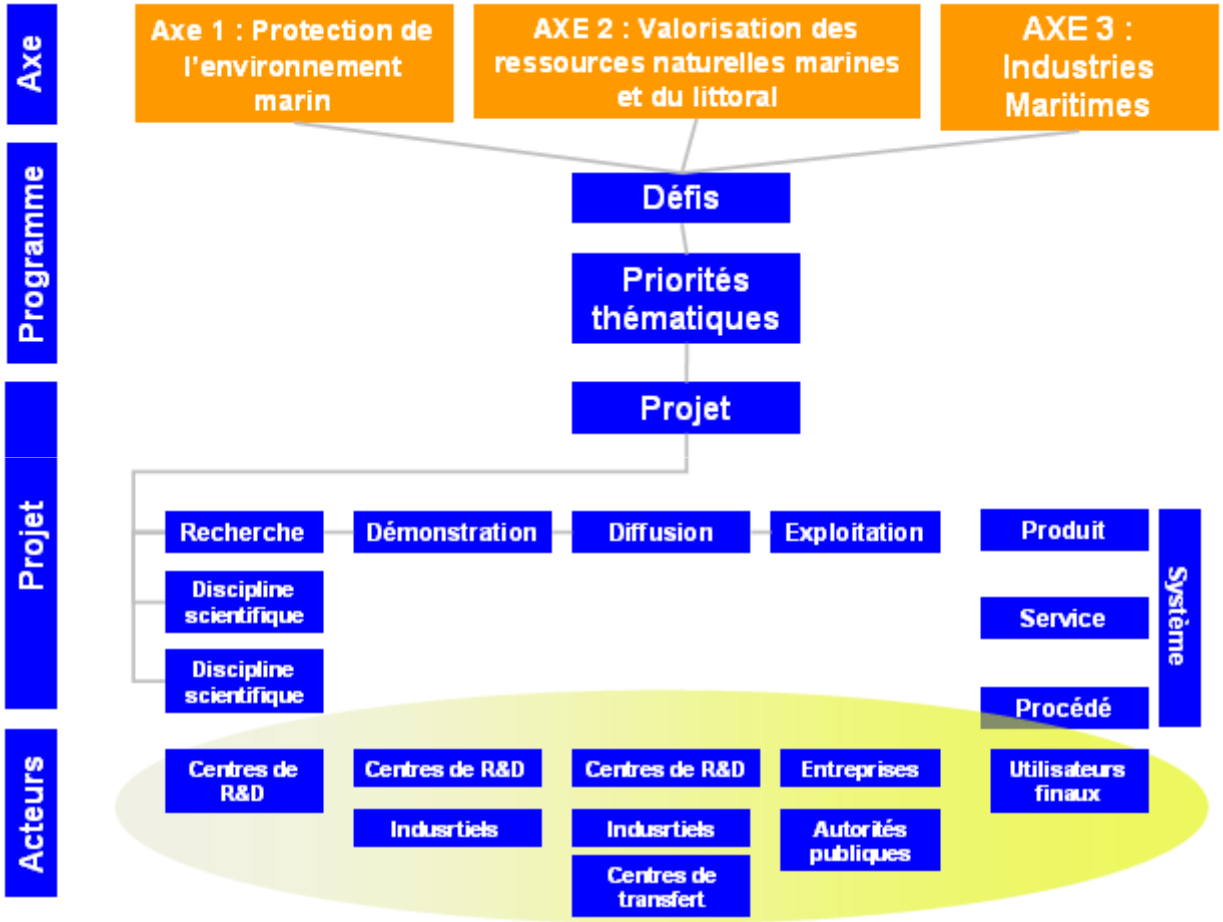
Programmes européens

=

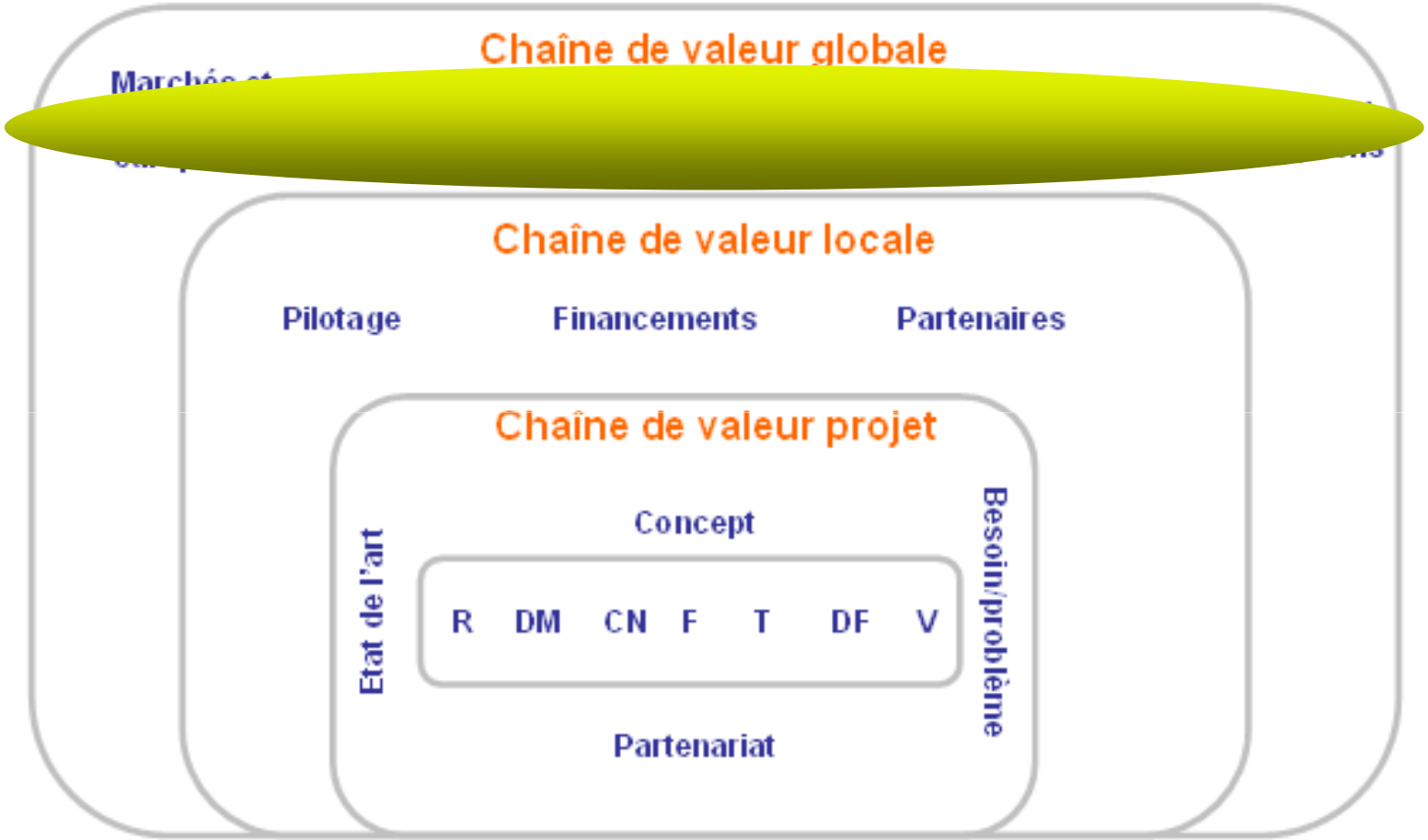
Potentiel d'innovation

Perspectives européennes

Chaînes de valeur des projets européens de recherche et d'innovation



Chaîne de valeur globale



R: recherche; DM: démonstration; CN: coordination/networking; F : formation; T: transfert; DF: diffusion; V: Valorisation économique

Chaîne de valeur globale

Marchés et priorités européens

Législation européenne

Financements européens

Projets européens

Clusters européens

Réseaux européens

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Marchés et priorités européens

- **Voir partie 2.1 de l'étude d'opportunités**

Chaîne de valeur globale

Marchés et priorités européens

Législation européenne

Financements européens

Projets européens

Clusters européens

Réseaux européens

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Législation européenne

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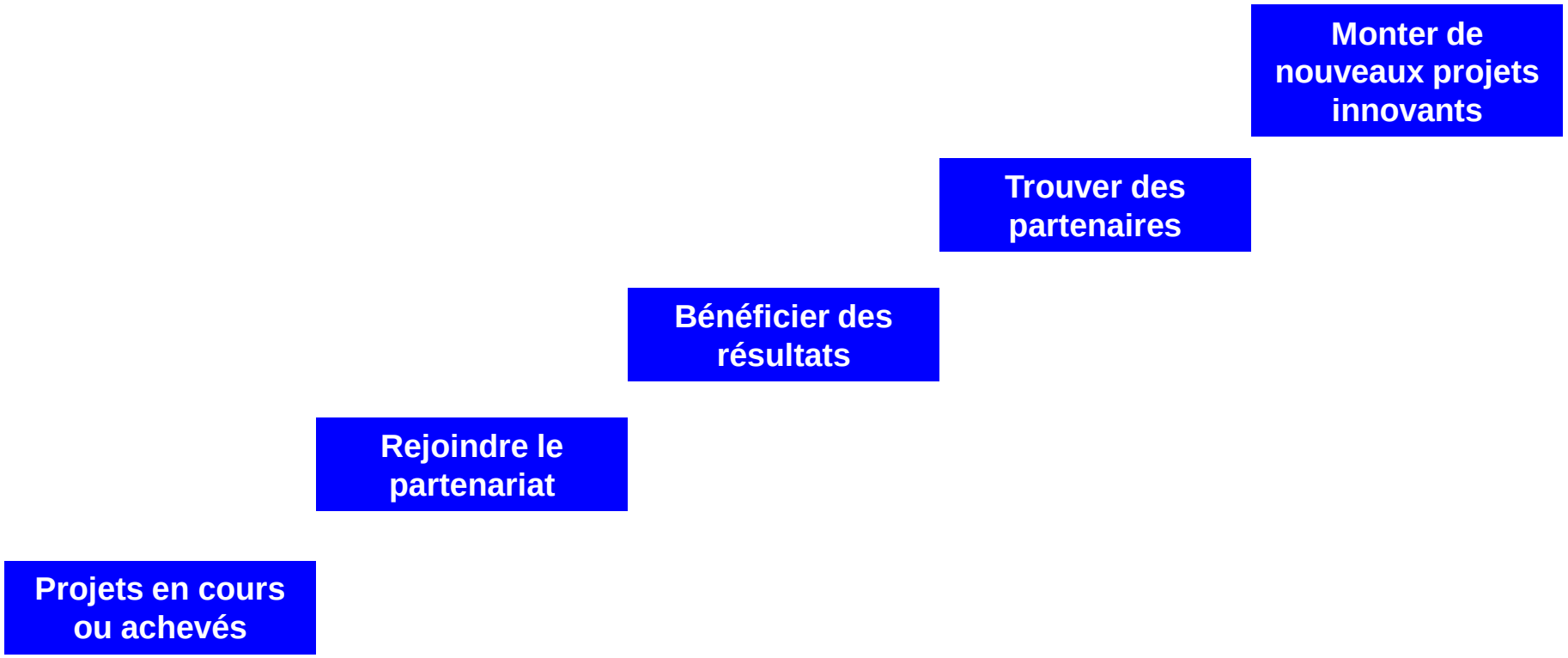
Projets européens

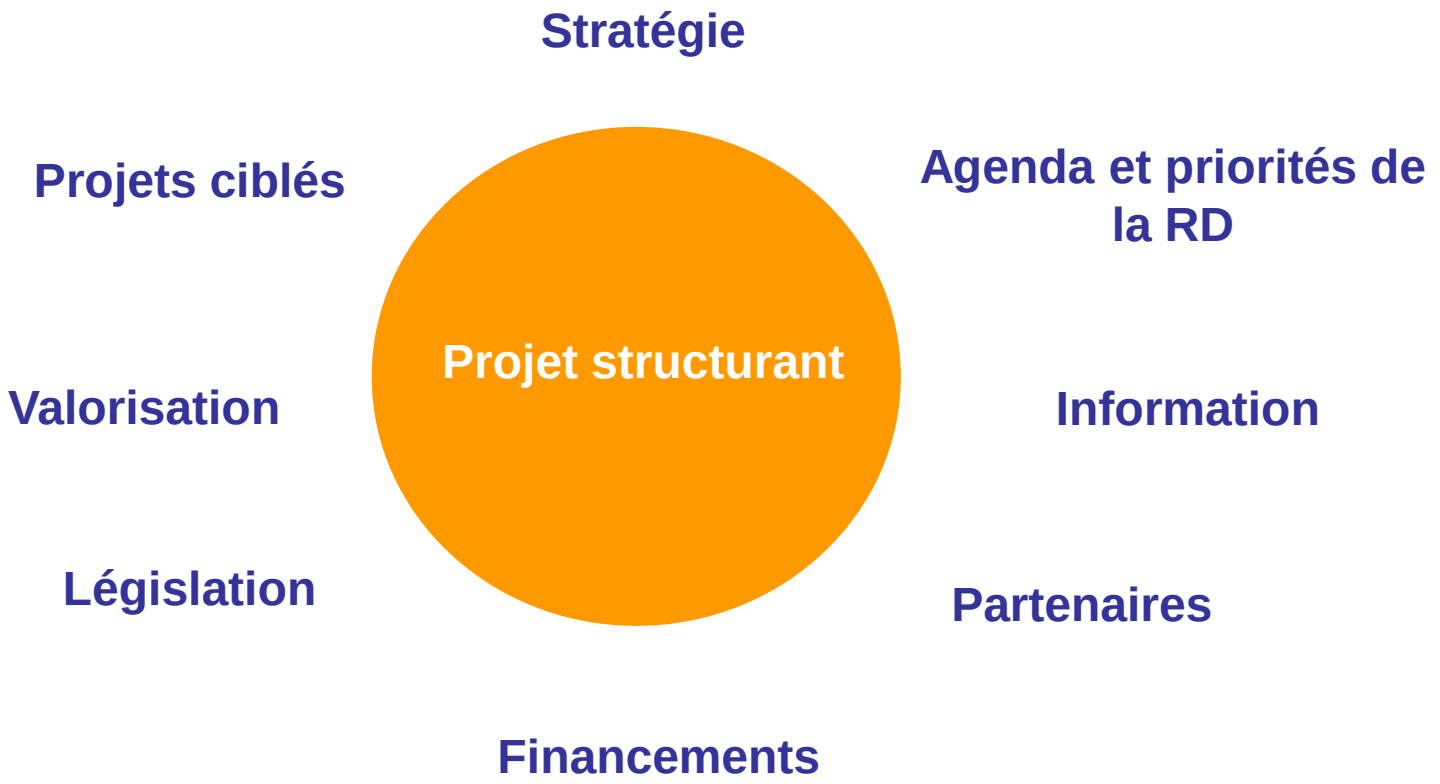
POLITIQUES ET ACTIONS EUROPEENNES DANS LE DOMAINE DE LA MER

Bonnes pratiques européennes



Exemple de projets européens

Positionnement au regard des projets structurants



Exemple de projets européens

Exemples de projets structurants

Réseaux d'intermédiaires de l'innovation:

- INNO Net
- Regknow

Chaine de valeur du labo au marché :

- Projets intégrés

Projet structurant

Réseaux scientifiques :

- REX
- Actions de coordination
- Réseaux d'infrastructures

Incubateurs d'idées :

- Plateformes technologiques
- Groupes d'experts

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets structurants 6ème PCRD

- AMPERA
- BiodivERSA
- ASCABOS
- BASIN
- BOSS4GME
- CLEAN BLACK SEA
- ECOOP
- EDIT

Projets structurants 6ème PCRD

- ENCORA
- ESONET
- GMOSS
- MAPO
- MARBEF
- MARINERA
- MARTEC

Exemple de projets européens

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Produits pour l'innovation

INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets structurants 6ème PCRD

- MELIA
- MERSEA
- MODELKEY
- OASIS
- OSIRIS
- PASARELAS
- PREVIEW
- SANY

Projets structurants 6ème PCRD

- SEADATANET
- SEPRISE
- SESAME
- SPREEX
- TERREGOV
- WIN

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés 6ème PCRD

- AQUA-FINDER
- BIOECOTOX
- BIO-ENGINEERS
- BIOTOXMARIN
- COBO
- DEWS
- DOUBLECHECK
- DYVINE

Projets ciblés 6ème PCRD

- ECODIS
- ECOMANAGE
- ELME
- ESTTAL
- EU-MOPs
- INTERRISK
- MACROMICRO
- INTAMAP

Projets ciblés 6ème PCRD

- INSEA
- MEDSI
- MIDIA
- NOMORE
- OSH
- PEARL
- PUMPSEA
- POP&C

Exemple de projets européens

mirade
Produits pour l'innovation

INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés 6ème PCRD

- PREWEC
- REACT
- TBTIMPACTS
- WAPSCIENCE
- WINSOC

Projets structurants 7ème PCRD

- EPOCA
- MyOcean
- Euro-Argo
- Forum GMES 2008

Projets ciblés 7ème PCRD

- PHYTOCHANGE

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
  - Défis
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Projets ciblés LIFE

- 'cleanmag'
- Eco-dock
- OSIS
- Oil Spill Identification System for Marine Transport
- Sensor for detection of oil spills from offshore installations
- Coastal management strategy for Southwest Finland

Projets ciblés LIFE

- ICZM
- Integral Coastal Conservation Initiative
- Environmentally friendly coast protection
- Strategies and Tools Toward Sustainable Tourism in Mediterranean Coastal Areas
- Concerted Actions for the Management of the Strymonikos Coastal Zone

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés LIFE

- •Development of a consensus Based Integrated Coastal Zone Management Strategy for Bantry Bay
- •A demonstration of ICZM implementation in the Moray Firth
- •Development of Strategies for Sustainable Tourism Investments in the Mediterranean Nations
- •Sea−Land System: concerted Actions for the Coastal Zone Management

Projets ciblés LIFE

- •Elefsina Bay 2020
- •E−coport
- •EMAS PO.LI.
- •Gaza Coastal and Marine Environmental Action Plan
- •a Model for Environment Education and International Cooperation on Advanced Wastewater Treatment (A−WWT) in Rural Areas
- •Analyses and comparison of assessment methods related to industrial pollution of water in the countries forming the Meuse watershed

Exemple de projets européens

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INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

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- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés LIFE

- **A Biotic Index of Fish Integrity (IBIP) to evaluate the ecological quality of lotic ecosystems – application to the Meuse River basin.**
- **Development of a common method in quality assessment and approach of contaminated sediments**
- **Efficiency of applied policies regarding prevention and control of diffuse and dispersed pollution in surface waters: inventory and comparison of approaches in Germany, Belgium, France, Netherlands, United Kingdom and Sweden**

Projets ciblés LIFE

- **Multi−parameters surveillance and protection of water quality**
- **Remotely controlled monitoring of eutrophicating substances from diffuse sources in the region Saar−Lor−Lux**

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets Pôle de compétitivité Bretagne

- eX-TREME : le haut débit en haute mer
- GALILEOCEAN
- GIRAC
- HEXECO
- HYCARE
- MODENA

Projets Pôle de compétitivité Bretagne

- ASEMAR
- NACRE
- NOSS
- PIRANA
- STRACES
- PREVICOT

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets Pôle de compétitivité PACA

- CAPASEATY
- EXTREMA
- MATRIL / GYROVIZ
- PORAM
- RAPACE
- SEA EXPLORER
- SOAC-CHIRP

Projets MEDA

- CAP Nador
- AMIS
- ICAM
- Plan of Action for an Integrated Coastal Zone anagement in the area of Port Said (Egypt)
- IMAC
- SAFEMED

Exemple de projets européens

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Produits pour l'innovation

INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
  - Défis
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Projets ciblés 6ème PCRD

- BAWAPLA
- MATEMIN
- OCEANSAVER

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés 6ème PCRD

- BFPS
- BIO-ENGINEERS
- 'Biogeological engineering'
- CLEANCOMPOST
- IPSAF
- LIGHT MANURE
- METOLEVOL
- MYCOHELPER
- SUSAN
- WATERNORM

Projets structurants 6ème PCRD

- MULTIPROTECT
- VELLA

Projets ciblés LIFE

- RETOXMET

Exemple de projets européens

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projet ciblé LIFE

- Development of an integrated approach for the removal of tributyltin (TBT) from waterways and harbours: prevention, treatment and reuse of TBT contaminated sediments

Projet Pôle de compétitivité Bretagne

- SEDIDEPOT

Projets ciblés 6ème PCRD

- BIOGEOMORPHESII
- SWIRL-JET STUDY

Projet Pôle de compétitivité PACA

- SEDIGEST

Exemple de projets européens

mirade
Produits pour l'innovation

INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

Pollution marine (simulation)

Eaux de ballast

Toxicité des métaux lourds

Toxicité des résidus de dragage

Réchauffement climatique

Projets structurants 6ème PCRD

- BASIN
- BOSS4GMES
- CARBOOCEAN
- CIRCLE
- CONSCIENCE
- DRAGON
- DRAGONESS
- ECOOP

Défis

Projets structurants 6ème PCRD

- EDIT
- ESONET
- ESONIM
- EUR-OCEANS
- GMOSS
- GOCINO

Projets structurants 6ème PCRD

- HUMBOLDT
- MARTEC
- MERSEA
- MOTIIVE
- QUANTIFY
- SANY
- SEPRISE
- WIN

Exemple de projets européens

mirade
Produits pour l'innovation

INTERFACEUROPE

AXE 1 : Protection de l'environnement marin

- Pollution marine (simulation)
- Eaux de ballast
- Toxicité des métaux lourds
- Toxicité des résidus de dragage
- Réchauffement climatique

Défis

Projets ciblés 6ème PCRD
- INTERRISK
- MAP

Projets structurants 7ème PCRD
- MEECE

Projet Pôle de compétitivité PACA
- EROSCOTE

Exemple de projets européens

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets structurants 6ème PCRD
- AQUABREEDING
- AQUAFUNC
- AQUAGENOME
- AQUAGRIS
- AQUAMAX
- AQUAS
- ASCABOS
- ASSEM AQUACULTURE PL

Projets structurants 6ème PCRD
- BASIN
- BiodivERSA
- BOSS4GMES
- COASTAL ERA-NET
- CONSENSUS
- DIPNET
- EADGENE
- EDIT
- ENCORA
- EPIZONE
- ERMES
- ESONET
- EUROLATSEA
- FABRE TP

Projets structurants 6ème PCRD
- FEUFAR
- FINE
- GENIMPACT
- GMOSS
- IMAQUANIM
- IMPACT FISH
- IMPASSE
- INCOFISH
- MARBEF
- MariFish
- MARINE GENOMICS
- MARINERA
- MARTEC
- MERSEA

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets structurants 6ème PCRD
- OATP
- PANDA
- PROFET Policy
- RANA
- REPROFISH
- SAMI
- SEADATANET
- SEAFOOD plus

Projets structurants 6ème PCRD
- SEPRISE
- SESAME
- WOPER

Projets ciblés 6ème PCRD
- ALFA
- ALGADEC
- ANTIBIAUS
- AQUADEGAS
- AQUAETREAT
- AQUAFIRST
- AQUALABS
- ASPECT

Projets ciblés 6ème PCRD
- BENEFISH
- BIFF
- BIOTOX
- BIOTOXMARIN
- BIOWARM
- BLUE SEED
- BOMOSA
- CAESAR
- COMPETUS
- CRAB
- EUROCARP
- DETECTOX
- DOLFIN
- DOUBLECHECK

mirade
Produits pour l'innovation

Exemple de projets européens

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés 6ème PCRD
- ECASA
- ESCAPEPROOFNET
- ESTTAL
- DESIGNACT
- FASTFISH
- FINE FISH
- FISHBONEP
- FISHIMRES

Projets ciblés 6ème PCRD
- FISHINOIDS
- FISHTANKRECIRC
- FRESHLABEL
- GRRAS
- INTELFISHTANK
- KEYZONES(R)
- MAST
- MULTISTRESS
- PARAQUAM
- NETWASH
- OPINF
- MUSSELHARVEST
- PATHMEDA
- PHARMAPOX

Projets ciblés 6ème PCRD
- PHARMAR
- PHARMARINE
- PHILMINAQ
- PIMAQUABI
- PLANKTON-NET
- PROTENCH
- RACEWAYS
- SALMONPHARM
- SEACASE
- SPIES-DETOX
- SPIINES 2
- SPONGES
- SUBFISHCAGE
- STUNFISHFIRST

mirade
Produits pour l'innovation

Exemple de projets européens

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés 6ème PCRD
- SUSTAINAQUA
- TAPAS
- WEALTH
- TURPRO
- TBTIMPACTS

Projets structurants 7ème PCRD
- MyOcean
- Forum GMES 2008

Projets ciblés 7ème PCRD
- ROSA

Projet Pôle de compétitivité Bretagne
- GALILEOCEAN
- AMPHORE
- ARCHAEAL DNA REPAIR
- AZOSTIMER

Projet Pôle de compétitivité Bretagne
- ECOKELP
- HEMORGAN
- I2D
- ORMEAUX
- PREVICOT
- SEALACIAN
- ULVOLIGO

Projet Pôle de compétitivité PACA
- AMPHORE
- AQUAPARADOXE
- AQUAPECTEN
- BIOMARINE
- SLACIN

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets structurants 6ème PCRD
- ASCABOS
- BiodivERSA
- BOSS4GMES
- EDIT
- ENCORA
- ESONET
- FINE
- GMOSS

Projets structurants 6ème PCRD
- IBEFISH
- INDECO
- IN EX FISH
- ICES-FISHMAP
- ISTAM
- INCOFISH
- MARBEF
- MariFish
- MARINE GENOMICS
- MARINERA
- MARTEC
- MERSEA
- PASARELAS
- PROFET Policy

Projets structurants 6ème PCRD
- RANA
- SEADATANET
- SEPRISE
- SESAME
- SLIME

Projets ciblés 6ème PCRD
- AFISA
- AFRAME
- AQUAFIRST
- BECAUSE
- BIOTOXMARIN
- CEVIS
- COBECOS

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés 6ème PCRD
- COMMIT
- DEGREE
- DNACHIP
- EFIMAS
- ELME
- EMPAFISH
- FINE
- FISBOAT

Projets ciblés 6ème PCRD
- FISH & CHIPS
- FISHACE
- FISHBONEP
- IMAGE
- NECESSITY
- POORFISH
- PRONE
- RECLAIM
- SHEEL
- TBTIMPACTS
- UNCOVER

Projets structurants 7ème PCRD
- MyOcean
- Forum GMES 2008

Projets ciblés 7ème PCRD
- ALIENFISH&CLIMCHANGE

Projets ciblés LIFE
- Benign and environmentally friendly fish processing practices to provide added value and innovative solutions for a responsible and sustainable management of fisheries
- Integral management of fishing waste in a coastal area: Pilot scheme
- Small Cetaceans in the European Atlantic and North Sea

Projet Pôle de compétitivité Bretagne
- GALILEOCEAN
- COGEPECHE
- Internet Pêche Bas Coût
- eX-TREME
- MODENA
- SIAD
- AMPHORE
- ARCHAEAL DNA REPAIR
- DEEP OASES

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projet Pôle de compétitivité Bretagne
- ECOKELP
- Grand Largue
- I2D
- HEMORGAN
- ITIS
- Optipêche
- PIRANA
- SEALACIAN
- PREVICOT

Projet Pôle de compétitivité PACA
- AMPHORE
- AQUAPARADOXE

Exemple de projets européens

mirade
Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets structurants 6ème PCRD
- AQUAGRIS
- SAFEFOODNET

Projet Pôle de compétitivité Bretagne
- NACRE
- SEDIDEPOT

Projets ciblés 6ème PCRD
- CHITOMED
- CYCLER-SUPPORT
- ELME
- ENVIROPHYTE
- FEEDING FATS SAFETY
- REMOVALS
- REPRO
- WAPSCIENCE
- WATER REUSE

Projets ciblés LIFE
- A new technology for treating municipal and/or industrial wastewater with low environmental impact
- Clean Technology for Rest Product Treatment
- Best Available Technique for water reuse in TextiLE SMEs
- A new application of phytodepuration as a treatment for the olive mill waste water disposal
- Ecology Cluster for Overall Waste Re-engineering
- Demonstration of effective and efficient TANnery EFfluent TREATment using an innovative integrated and compact biological and physical treatment plant

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés LIFE
- Demonstration of integrated total water management for a cluster of 8 industries, implementing a centralized water supply and a semi collective WWTS and resulting in substantial ground water and energy savings

Projets ciblés LIFE
- Ecotoxicological evaluation of municipal and industrial waste waters
- Electro−destruction of toxic nitrate and ammonia ions. Demonstration of a sustainable wastewater treatment technology in power plants that removes nitrates up to zero percent and prevents sewage sludge generation

Projets ciblés LIFE
- High quality water recycling including thermal energy recovery in photo film and photo paper production
- Innovative demonstration facility for the treatment of waste water from olive oil presses (OMW) with material and energetic utilization of the residues
- Novel, low cost biodegradable absorbent materials for the removal of a range of organic and inorganic contaminants from waste water
- Environmentally friendly phosphorus removal in anaerobe effluent by means of the struvite process

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés LIFE

- Project for recovery and reuse of industrial waters and trivalent chromium generated by tannery waste processing
- Reduction of the nitrogen discharge from the leather industry
- Environmental management for the quality control of sewerage networks

Projets ciblés LIFE

- Tannery Wastewater Recycling in Leather Industries
- The demonstration of the environmental benefits of a new chemical process (Formose), capableof 100% reduction of formaldehyde from industrial effluent waste streams.
- Waste Water Cleaning through Ultrasonic Resonance
- Water Purification Tertiary Treatment using Photo oxidation at semi industrial scale (FOTOTEX)

Projets ciblés LIFE

- Centralised Monitoring of Decentralised Wastewater Treatment Plants
- Integrated Multi−Objective System for optimal management of urban drainage
- Removal of toxic heavy metals from waste water by special yeast produced by bioconversion on food byproducts − an integrated solution for wastewater treatment
- Smart Flow in Reiderland
- Risk based reduction of microbial pollution discharge to coastal waters

Optimised environmental rainwater management systems in the sphere of the environmental engineering

Exemple de projets européens

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés LIFE
- Substance flow related water/sewage management in European hospitals − strategies for water saving potentials and pollution control of sewage
- Sustainable management, at local level, of the alluvial aquifer of the River Tordera, through the reuse of waste water

Projets ciblés LIFE
- Techniques for the assessment of the operating conditions and the control of the efficiency of Sea Outfalls at the service of coastal WWTP − Waste Water Treatment Plants using underwater sensors and acoustic telemetry systems
- Wastewater Reuse−Guideline development. Pilot artificial recharging of aquifers through direct injection and irrigation, for seawater intrusion control within the framework of integrated and sustainable water management

Projets ciblés LIFE
- New technologies for husks and waste water recycling plus
- Efficient recycling and disposal of sewage sludge with innovative thermo−catalytic low temperature conversion technique
- Recycling of industrial and institutional waste rich in mineral resources for the manufacture of binders, while saving on natural resources (clay and lime)
- Recycling of organic wastes through cofermentation in municipal sewage sludge digesters
- Wastewater management saves natural ecosystems

Exemple de projets européens

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés LIFE

- Treatment and re−use of urban stormwater runoff by innovative technologies for removal of pollutants
- Demonstration of a laundry innovative waste water recycling technology
- Integrated Wastewater Purification Management

Projets ciblés LIFE

- Upgrading of wastewater treatment plants with ultrasound treatment for reducing the production of sludge
- Waste prevention through sewage sludge reuse for efficient energy generation at waste water treatment sites
- Closing the nitrogen cycle from urban landfill leachate by biological nitrogen removal over nitrite and thermal treatment
- Waste Water Treatment Improvement and Efficiency in Small Communities
- Geo−sanitation − evapotranspiration of sewerage waters

Projets ciblés LIFE

- Development of a new salt water purification system in the tanning sector for reuse
- Sustainable water management in the textile wet industry through an innovative treatment process for wastewater re−use
- Clean and recycle residual water from Municipal Waste Water Treatment Plants on the Lower Mondego Basin
- Construction, Start−up and 16−months Performance Check of a Demonstration plant (Lagoon−Memb Prototype) for the Cost−Efficient Treatment of Municipal Wastewater in Rural Districts up to Service Water Quality

Exemple de projets européens

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INTERFACEUROPE

AXE 2 : Valorisation des ressources naturelles marines et du littoral

Aquaculture | **Pêche** | **Conchyliculture** | **Elevage d'ormeaux** | **Valorisation des déchets**

Défis

Projets ciblés LIFE

- New Floating Macrophyte Green Filters (FMF) For the Mediterranean Region
- RAINWater MANagement and treatment plant Vienna−Blumental (RAINMAN)
- Sanitation Concepts for separate Treatment of Urine, Faeces and Greywater

Projets ciblés LIFE

- Development and adjustment to the Mediterranean conditions of an integrated system for waste collection and recycling
- Integral management of fishing waste in a coastal area : Pilot scheme
- Starting with the promotion of Integrated Product Policy (IPP) approach in Mediterranean countries
- The demonstration of high rate enzyme hydrolysis as the safest and most environmentally friendly way to treat sewage for theland recycling

Projets ciblés LIFE

- Process water recycling with a thermophile membrane bio reactor installation for treatment of high temperature waste water, containing recalcitrant cod −varying in load, concentration and composition with almost zero waste (sludge) production.
- A new automated method for the analysis of Escherichia coli in wastewater effluent
- Local recycling of wastewater and organic household waste

Exemple de projets européens

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INTERFACEUROPE

AXE 3 : Industries Maritimes

Chantiers navals

Défis

Projets structurants 6ème PCRD
- ACMARE
- ALERT
- BOSS4GMES
- CAPOEIRA
- CAREMAR
- COUNTERACT
- EFFORTS
- ENCOMAR

Projets structurants 6ème PCRD
- ENCORA
- ESONET
- EUROMAR-BRIDGES
- EUROMIND
- FELICITAS
- FLAGSHIP
- FREIGHTWISE
- GMOSS
- HERCULES
- HTA
- ICOMOB
- INMARE
- INTERSHIP
- LIMES
- LINK
- MARINERA
- MARSTRUCT
- MARTEC
- MC-WAP
- MERSEA
- MOSES
- MTCP
- NET-TRACK
- PREVIEW
- PROMIT

Projets structurants 6ème PCRD
- QUANTIFY
- SAFEDOR
- SAND. Core
- SEADATANET
- SPREEX
- VIRTUE
- Visions

Projets ciblés 6ème PCRD
- ADOPT
- BAWAPLA
- CALM II
- CAS
- CHINOS
- CLEANMOULD
- CREATE3S
- CREATING
- DE-LIGHT TRANSPORT
- DIFIS
- DSS_DC
- GreenDock
- ELME
- EMDM
- EU-MOPs

mirade
Produits pour l'innovation

Exemple de projets européens

INTERFACEUROPE

AXE 3 : Industries Maritimes

Chantiers navals

Projets ciblés 6ème PCRD
- POP&C
- PORT CITIES
- POSSEIDON
- SAFE OFFLOAD
- SAFECRAFTS
- SAFEICE
- SAFETOW
- SECURCRANE
- SHIPDISMANTL
- SHIPMATES
- SMOOTH
- SUPERPROP
- TBTIMPACTS

Projets ciblés LIFE
- ZEMSHIPS
- LNG Tanker
- WINTECC

Défis

Projets ciblés 6ème PCRD
- GIFT
- HANDLING WAVES
- HISMAR
- HULL INSPECTOR
- IMPROVE
- KITE
- LOGBASED
- OFIENGINE
- OSH

Projets structurants 7ème PCRD
- MyOcean
- Forum GMES 2008

Projets ciblés 7ème PCRD
- STARNETregio
- SECTRONIC

Projet Pôle de compétitivité Bretagne
- eX-TREME
- GALILEOCEAN
- MODENA
- CONVENAV
- CORONAV
- FEMEM
- Grand Largue
- HEOL
- HYCARE
- NACRE
- NavEcoMat
- OPTICREW
- PAC2010
- PIRANA
- PAINTCLEAN

Exemple de projets européens

mirade Produits pour l'innovation

INTERFACEUROPE

AXE 3 : Industries Maritimes

Chantiers navals

Défis

Projet Pôle de compétitivité PACA

- BMCI
- CAP NG
- CAPCHIMIC
- CIM 1&2
- COFOSERNAV
- CREIDIN

Projet Pôle de compétitivité PACA

- CVAO
- DAMPEM
- DEESSE
- ECOPAINT PACA
- e-MOVISCEM
- MARINA PASS
- MARINE BIO FUEL
- MARVEST
- MATRIL / GYROVIZ
- MOTT
- NAVYCLEAN
- PAC SM
- PRONOSTIC
- REPCET
- SEAPASS - Phase 1
- SEEH
- U 119C

Exemple de projets européens

Chaîne de valeur globale

Marchés et priorités européens

Législation européenne

Financements européens

Projets européens

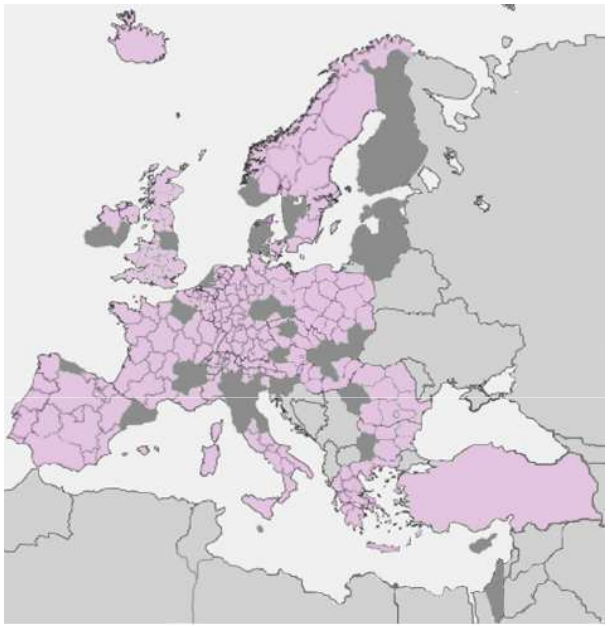
Clusters européens

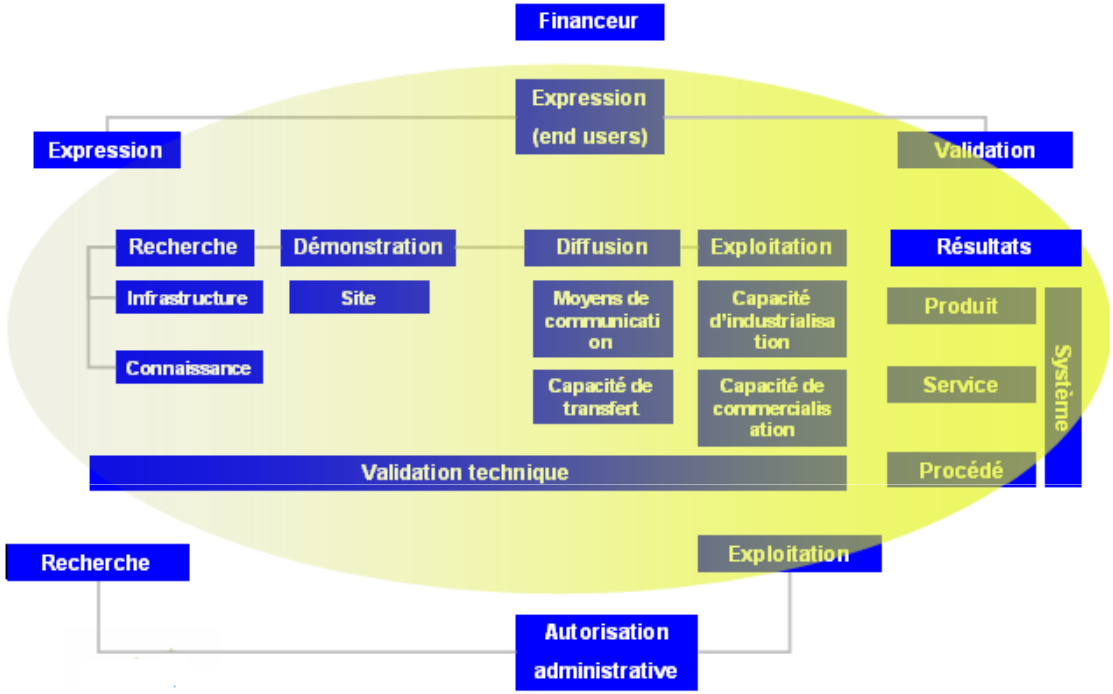
Réseaux européens

mirade
Produits pour l'innovation

INTERFACEUROPE

Positionnement du pôle Hom'Mer par rapport aux autres pôles de compétitivité français





Positionnement du pôle Hom'Mer par rapport aux autres pôles de compétitivité français

Pôle Hom'Mer

Pôle de compétitivité Mer - Bretagne

	Thèmes	Pôle de compétitivité Mer - Bretagne			
		Sécurité et sureté maritime	Naval et nautisme	Ressources énergétiques marines	Environnement et aménagement du littoral
Pôle de compétitivité Hom'Mer	Protection de l'environnement marin	X			X
	Valorisation des ressources naturelles marines et du littoral			X	
	Industries Maritimes	X	X		

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Produits pour l'innovation

INTERFACEUROPE

Positionnement du pôle Hom'Mer par rapport aux autres pôles de compétitivité français

Pôle Hom'Mer

Pôle de compétitivité Mer - PACA

	Thèmes	Pôle de compétitivité Mer - PACA				
		Sécurité et sureté maritime	Naval et nautisme	Ressources biologiques marines	Ressources énergétiques marines	Environnement et aménagement du littoral
Pôle de compétitivité Hom'Mer	Protection de l'environnement marin	X				X
	Valorisation des ressources naturelles marines et du littoral				X	
	Industries Maritimes	X	X			

mirade
Produits pour l'innovation

INTERFACEUROPE

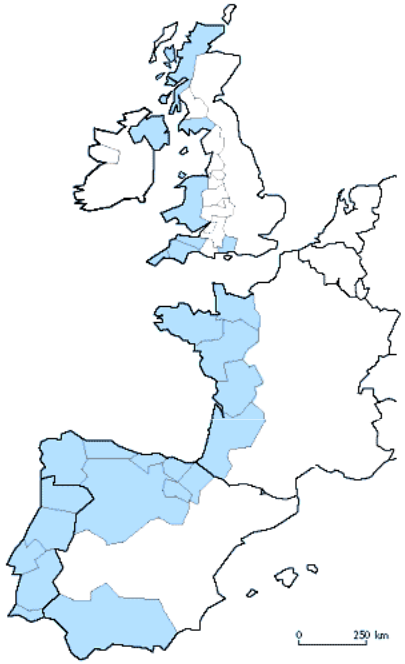
Positionnement du pôle Hom'Mer par rapport aux autres pôles de compétitivité français

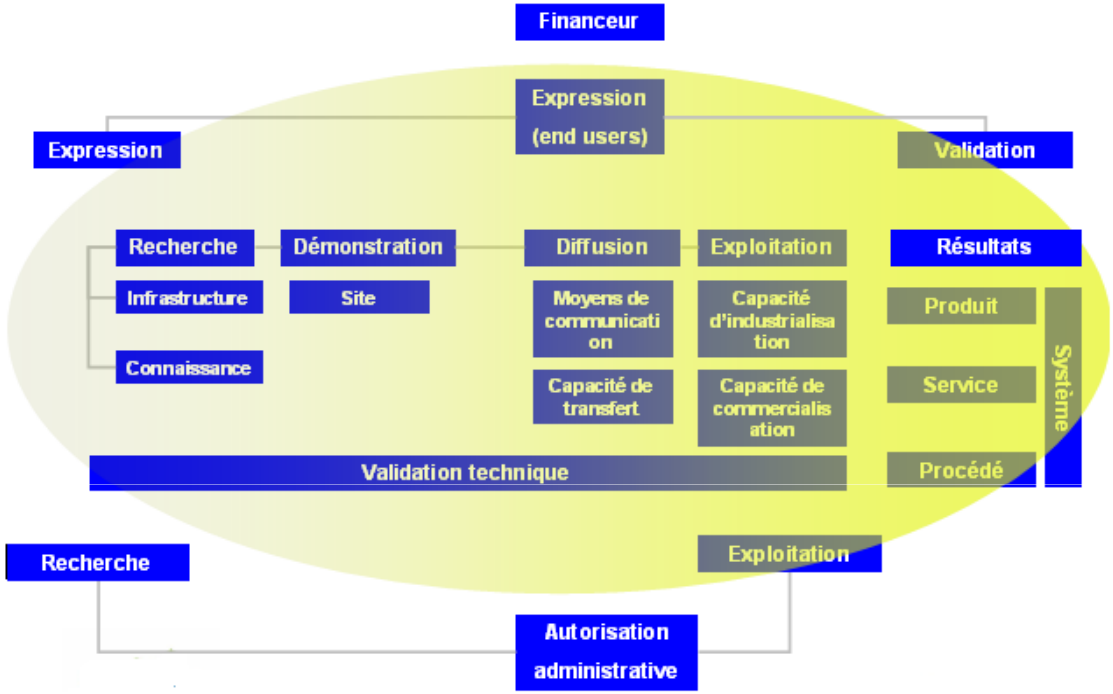
Pôle Hom'Mer

Pôle de compétitivité XXXX (alimentation, biotech, energie, matériaux, etc.)

	Pôle de compétitivité XXXXX			
Pôle de compétitivité Hom'Mer				

Positionnement des acteurs bas-normands par rapport aux autres acteurs de l'Arc Atlantique





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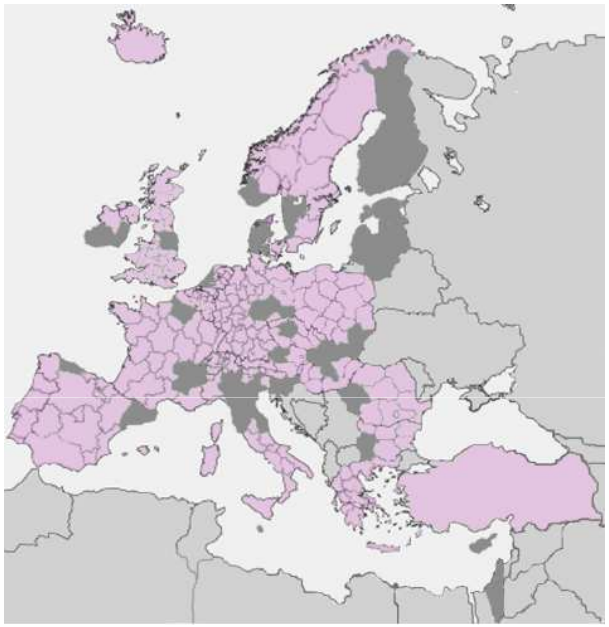
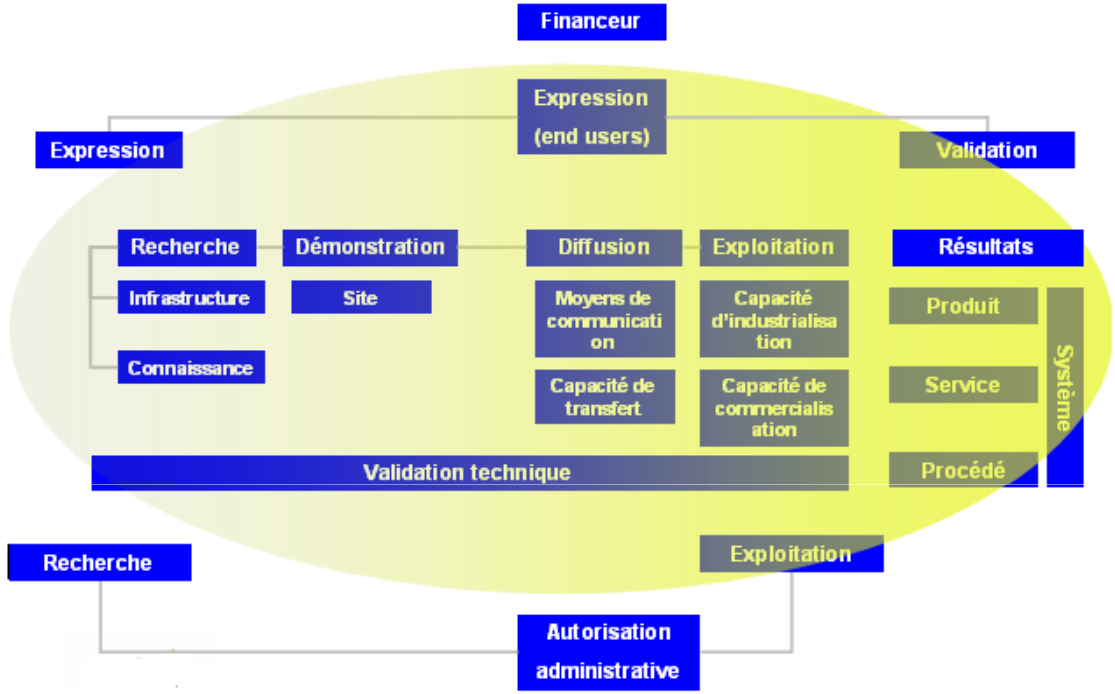
Produits pour l'innovation

INTERFACEUROPE

Positionnement des acteurs bas-normands par rapport aux autres acteurs européens





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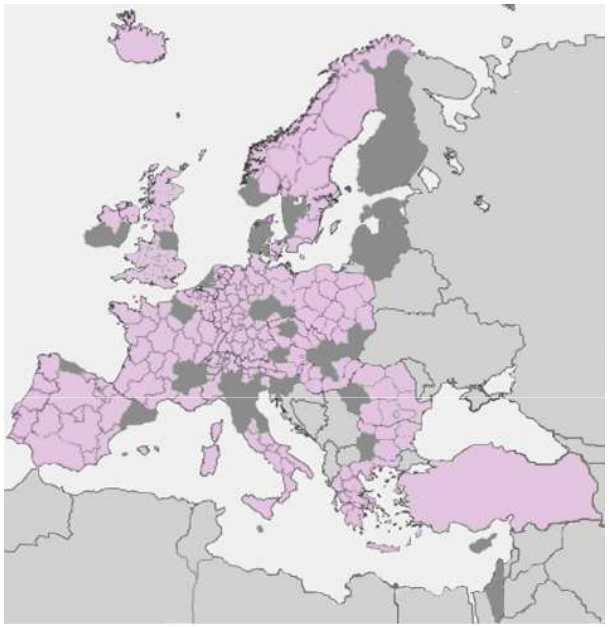
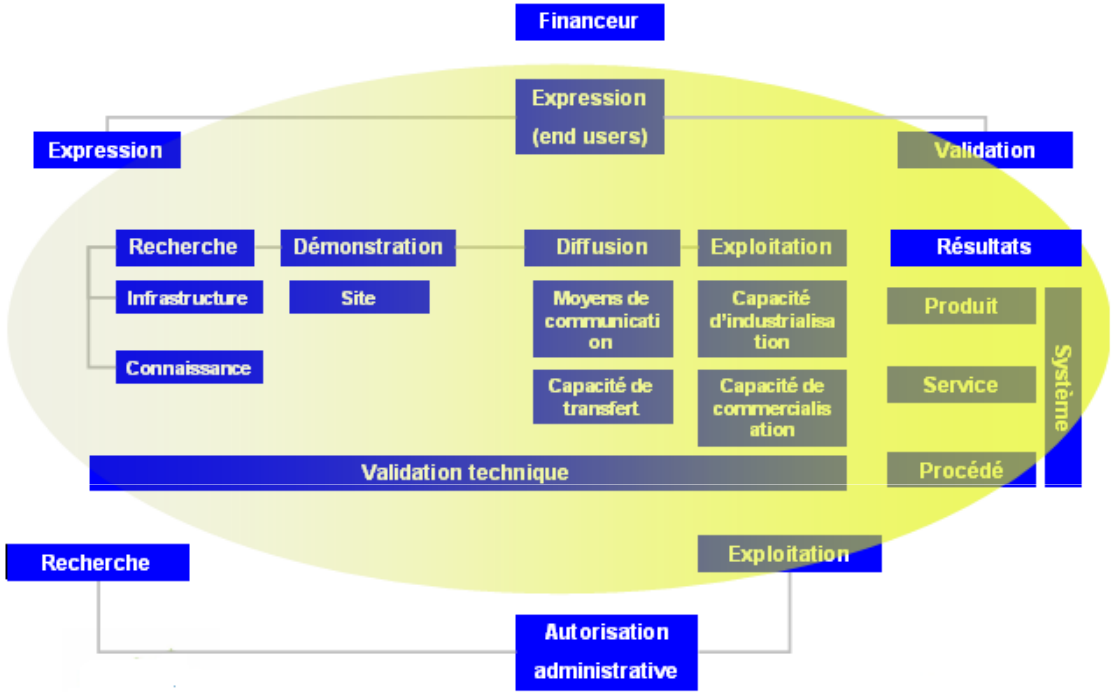
Produits pour l'innovation

INTERFACEUROPE

Positionnement du pôle Hom'Mer par rapport aux autres clusters européens





Positionnement du pôle Hom'Mer par rapport aux « European Maritime Clusters »

Source :

COMMISSION STAFF WORKING DOCUMENT « Maritime Clusters » - 17 octobre 2007

Perspectives européennes

Clusters européens

Exemple

Fishing and Fishing Products regional clusters in Europe

1, 2 and 3 star regional clusters

Cluster	Employees	Size	Spec.	Focus	Stars	Innovation	Exports	Notes
Galicia (A CoruÃ±a), ES	48 703	13.52	24.14	4.73%	***	Low	Strong	
		%						
Ã•sland, IS	11 499	3.19%	38.77	7.59%	***	N/A	Very strong	
Nord-Norge (TromsÃ¸), NO	5 291	1.47%	13.74	2.69%	***	N/A	Very strong	
Highlands and Islands (Inverness), UK	4 694	1.30%	15.16	2.97%	***	Medium	Weak	
Ireland, IE	14 597	4.05%	4.68	0.92%	**	N/A	Weak	
Latvija, LV	12 158	3.37%	6.95	1.36%	**	Low	Very strong	
Sicilia (Palermo), IT	11 828	3.28%	4.42	0.87%	**	Low	Weak	
Bretagne (Rennes), FR	8 576	2.38%	5.05	0.99%	**	Medium	Weak	
Eesti, EE	7 361	2.04%	6.94	1.36%	**	Medium	Strong	
Lietuva, LT	7 080	1.96%	4.52	0.89%	**	Low	Very strong	
Pomorskie (Gdansk), PL	6 512	1.81%	7.79	1.53%	**	Low	Weak	b
Kentriki Ellada (Patras), GR	6 472	1.80%	4.43	0.87%	**	N/A	Strong	
Centro (Coimbra), PT	5 647	1.57%	4.37	0.86%	**	Low	Strong	
Vestlandet (Bergen), NO	5 275	1.46%	7.44	1.46%	**	N/A	Very strong	
E Riding and N Lincs, UK	5 215	1.45%	7.37	1.44%	**	Medium	Weak	

Innovation: Data is for region, regardless of cluster category. Based on 2006 European Regional Innovation Scoreboard, MERIT
Exports: Data is national export data for the cluster category, regardless of region. Based on International Cluster Competitiveness Project, ISC at HBS
Note
a) Cluster Stars uncertain: detailed data unavailable
b) Year of data is more than three years older than the reference year (2006)
Source: European Cluster Observatory. ISC/CSC cluster codes 1.0, dataset 20070613

Clusters européens

Exemple

NE Scotland (Aberdeen), UK	5 201	1.44%	10.08	1.97%	**	Medium	Weak	
Voreia Ellada (Thessaloniki), GR	5 097	1.41%	2.26	0.44%	**	N/A	Strong	
Puglia (Bari), IT	4 762	1.32%	2.19	0.43%	**	Low	Weak	
PaÃ-s Vasco (Bilbao), ES	4 633	1.29%	2.52	0.49%	**	High	Strong	
Cantabria (Santander), ES	4 409	1.22%	9.95	1.95%	**	Low	Strong	
Nisia Aigaiou, Kriti (Iraklion), GR	4 289	1.19%	5.92	1.16%	**	N/A	Strong	
AndalucÃ-a (Sevilla), ES	9 967	2.77%	1.86	0.36%	*	Low	Strong	
Danmark, DK	9 710	2.69%	1.89	0.37%	*	High	Very strong	
Veneto (Venice), IT	7 087	1.97%	1.83	0.36%	*	Medium	Weak	
CataluÃ±a (Barcelona), ES	6 376	1.77%	1.02	0.20%	*	Medium	Strong	
Valencia, ES	4 418	1.23%	1.15	0.22%	*	Low	Strong	
Asturias (Oviedo), ES	3 870	1.07%	5.25	1.03%	*	Low	Strong	
Marche (Ancona), IT	3 383	0.94%	2.83	0.55%	*	Low	Weak	
Zachodniopomorskie (Szczecin), PL	3 312	0.92%	5.68	1.11%	*	Low	Weak	b
Algarve (Faro), PT	3 137	0.87%	11.72	2.30%	*	Low	Strong	
Sardegna (Cagliari), IT	2 748	0.76%	2.53	0.50%	*	Low	Weak	
Bremen, DE	2 397	0.67%	4.54	0.89%	*	Medium	Weak	
Cyprus, CY	1 878	0.52%	3.02	0.59%	*	Low	Weak	a
TrÃ¸ndelag (Trondheim), NO	1 817	0.50%	5.10	1.00%	*	N/A	Very strong	
LÃ¼neburg, DE	1 785	0.50%	2.37	0.46%	*	Low	Weak	
Basse-Normandie (Caen), FR	1 652	0.46%	2.13	0.42%	*	Medium	Weak	
Del-Dunantul (PÃ©cs), HU	1 369	0.38%	2.16	0.42%	*	Low	Weak	
Agder og Rogaland (Kristiansand), NO	1 229	0.34%	2.05	0.40%	*	N/A	Very strong	

Source: European Cluster Observatory. ISC/CSC cluster codes 1.0, dataset 20070613

Bonnes pratiques européennes

Case studies of clustering efforts in Europe:

Analysis of their potential for promoting innovation and competitiveness*

*Preliminary draft version for distribution in the European Presidential Conference on Innovation and Clusters, Stockholm 22-23 January 2009

This report has been drafted by the consultancy Competitiveness.com, under the Europe Innova Cluster Mapping Project for the Enterprise and Industry Directorate-General of the European Commission. The views expressed in this report are those of the authors and do not necessarily reflect the opinion or position of the European Commission and in no way commits the institution

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

The dilemma: The Humber seafood industry in decline

In 1990, the Humber seafood industry, centred around the cities of Grimsby and Hull, in the Humber estuary of England, sold 80 percent of its catch in frozen form to large retailers. Reduced catch quotas due to depleted fish stocks, combined with demand from retailers for larger volume of gutted and filleted product, were further driving processors to seek new sources. Developing countries were becoming an increasingly large source of seafood as a result of decreases in transportation costs and tariffs, and improved on-board processing capacity. Employment in the primary processing sector (which includes the most basic steps of gutting, washing, chilling, etc.) had dropped 42 percent since the mid 1990s. By 2005, the frozen fish market was languishing and the seafood industry was in decline.

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

The opportunity: A sophisticated market

The Humber fishing industry in fact had a golden opportunity. British consumers are sophisticated and demanding buyers of convenience foods. Accordingly, their supermarkets lead Europe in developing new products and in changing quickly in response to market demands.

Thirteen of Europe's top 20 food manufacturers are based in the UK.

Amid this outlook, the prospects for seafood were particularly bright. Growing popular awareness of healthy diets, scares over meat safety, nutritional discoveries of the benefits of fish, and an increased consumer priority on freshness with a willingness to pay a premium price for it, all pointed to a strategic opportunity for development of a high value added seafood product line. Yet prior to the cluster initiative, most of the Humber seafood research and development was centred on fishing itself or on processing technology.

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

The challenge: Industry transformation

Fish lovers who once looked forward to exotic travel to sample far off delicacies now nonchalantly purchase fish and seafood from several continents at their local fish mongers.
Underlying this dramatic change is a revolution in global logistics. Although it still may take days for a trawler to return to a distant port, a significant volume of high-end seafood now makes its way to market via air cargo. But with international sourcing comes a web of international regulations, safety issues and quality control challenges. Only a few of the most sophisticated producers can master these supply chain difficulties, and retailers have a strong incentive to establish close relationships to a selected few of them to ensure quality, dependability, and an ability to quickly respond to market changes.
The Humber seafood industry was not structured in such a way as to be able to easily embrace such challenges. Restoring long-term competitiveness would require major changes to businesses that had invested heavily in the infrastructure of the frozen fish business.
Perhaps more challenging still would be creating the awareness of the market opportunity and a commitment to transformation among businesses that were accustomed to seeking government assistance for the status quo.

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

Cluster strategy: A strategic analysis

The UK regional development agency for the area that includes the Humber estuary, known as Yorkshire Forward, focused on five industry clusters during its first five years, from 2000 to 2005, including one of the UK's largest sectors, Food and Drinks. A screening diagnostic (…) recommended focusing on segments such as fishing within the previously classified Food and Drinks cluster, given the dissimilarities in their circumstances and strategic needs.

An analysis of the fishing industry cluster found that long term competitiveness would depend on a significant shift from the traditional focus of R&D (fishing and processing) to innovation that would foster development of new, high-value added products such as fresh fish and ready-to-eat seafood dishes (requiring advanced logistics and information technology).

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

Cluster strategy: A strategic analysis

The cluster Competitiveness Reinforcement Initiative (CRI) had four objectives:

1. Gain an impartial evaluation of the cluster and determine which companies were driving the cluster forward, as well as what the appropriate strategies for the cluster were.

2. Make companies aware of the existing regional programmes

3. Improve the extent to which Yorkshire Forward programmes met the needs of the cluster

4. Coordinate policies with other institutional partners in the Yorkshire and Humber region with the aim of creating a competitive environment adapted to the companies within the cluster.

Several key business leaders were taken on reference trips to Spain and the Netherlands to learn about world class clusters first-hand. Although the region boasted the largest concentration of cold storage facilities in Europe, the businesses did not realize that the world's major seafood market places receive most of their seafood by air. Several companies had recently made large investments in freezing equipment and cold storage and did not want to acknowledge the threat from cheaper imports. Switching from frozen to fresh seafood required substantial commitment and investment that local businesses, often with CEOs nearing retirement, were reluctant to make.

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

Enabling a transformation: Executing cluster strategy

A new strategy for the cluster was agreed upon, embracing three prime activities that would enable the cluster to become the leading value-added fresh/chilled fish hub serving Europe:

1) Improving incoming logistics, 2) market concentration, and 3) developing export products and logistics.

The logistics improvements were designed to overcome Humber's major disadvantage in time-to-market, critical in a transformation from frozen to fresh products. Humber was processing some 70 to 80 percent of the UK's seafood, but some 60-70 percent of that was sourced through distant airports in London and Edinburgh, then transported by road to Yorkshire. The cluster project proposed a state-of-the-art facility for handling perishable fish imports at the Humberside airport.

Consolidating the market was deemed essential because neither of the existing markets at Hull and Grimsby had the volume of buyers sufficient for sustainability. Most fish processors purchase raw material on contract and used the markets only for buying niche products. To make Humber the critical hub for seafood in Europe, the consolidated marketplace would offer additional logistics and other services based on the model of the Dutch flower auctions. No such fish marketplace exists in Europe, although perishables auctions for other products such as flowers, fruits and vegetables have followed substantial consolidation of those industries. There are more than 400 fish auctions in Europe, most working locally.

Because supermarkets in the UK dominate the value chain and wield great market power, the cluster initiative proposed development of export-focused products to enable Humber producers to develop a better capacity to respond to market demands as well as develop a counterweight to squeezed profitability in serving UK retailers.

Bonnes pratiques européennes

Humber seafood cluster: Moving from commodity to high value Producer

Progress and impact of the cluster initiatives

Through 2007, the most significant progress among the three objectives has taken place in the development of the perishable products hub at Humberside airport, notwithstanding a rather slow process due to unanticipated bureaucratic hurdles.

The most difficult of the objectives to achieve has been consolidation of the two marketplaces into one, which must be close to Humberside airport and the cluster's re-focused logistics in order to operate as an efficient hub. Hull's Fishgate is state-of-the art but small, while Grimsby's Fishmarket has greater capacity but requires investment for modernisation.

In the past, each local authority responded to "market needs" by promoting local facilities, the proliferation of which runs counter to developing a single, world-class hub. Yorkshire Forward has had to spend considerable resources and energy to overcome resistance from local governments.

The export initiative has resulted in cluster members identifying France as a target market and travelling there on a research trip. However, the habit of relying on UK supermarkets to dictate demand is proving difficult to change, and one cluster member claims that the Humber businesses "don't have the mindset to go abroad."

Extending the lessons of the cluster initiatives to higher levels of government has also proved difficult. Although the UK Seafish Authority participated in the project, a recent policy whitepaper made no mention of the cluster's new strategy.

Chaîne de valeur globale

Marchés et priorités européens

Législation européenne

Financements européens

Projets européens

Clusters européens

Réseaux européens

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Produits pour l'innovation

INTERFACEUROPE

Réseaux et groupes d'experts européens

INTERFACEUROPE

POLITIQUES ET ACTIONS EUROPEENNES DANS LE DOMAINE DE LA MER

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Produits pour l'innovation

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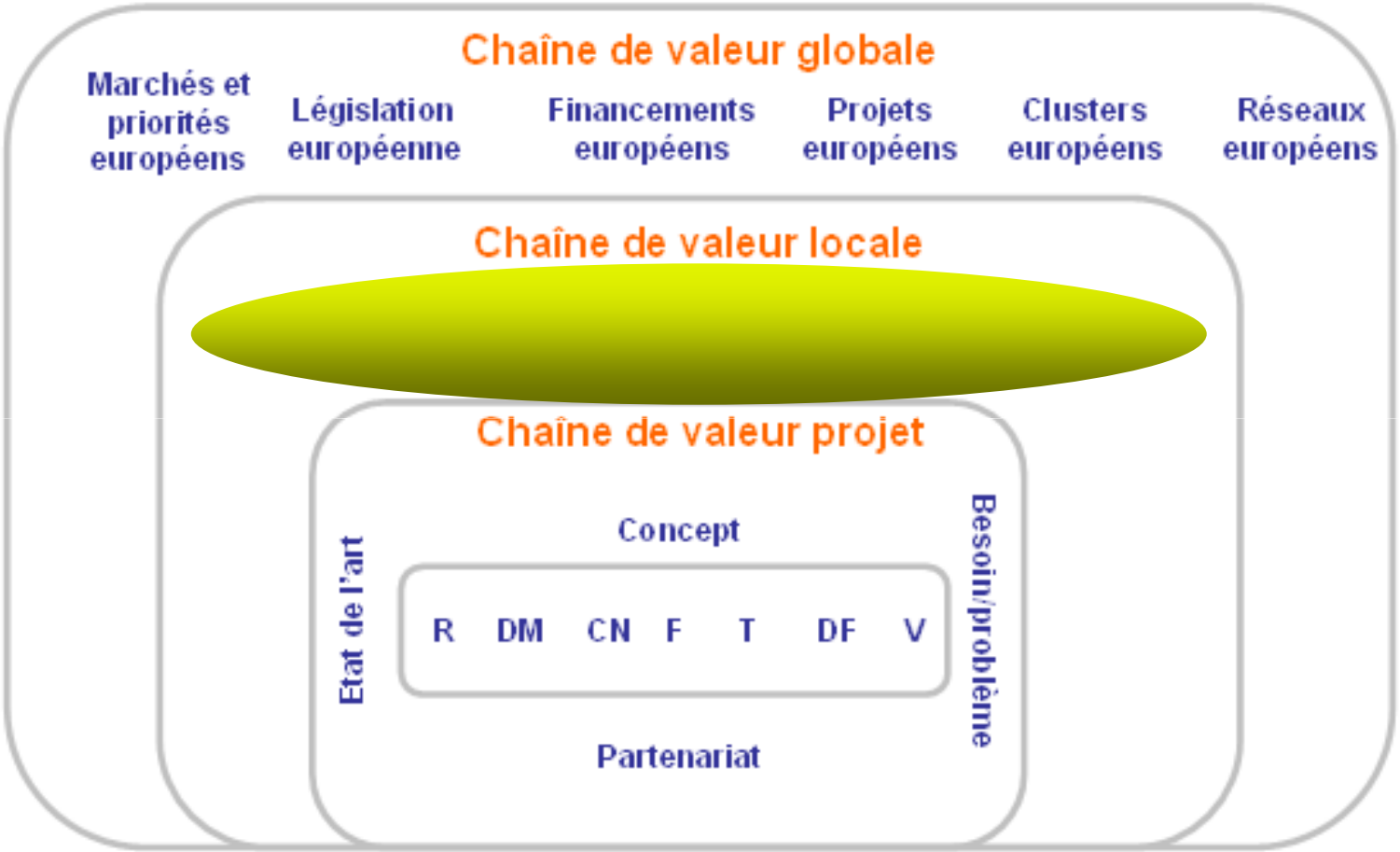
Chaîne de valeur locale



R: recherche; DM: démonstration; CN: coordination/networking; F : formation; T: transfert; DF: diffusion; V: Valorisation économique

Chaîne de valeur du pôle Hom'Mer

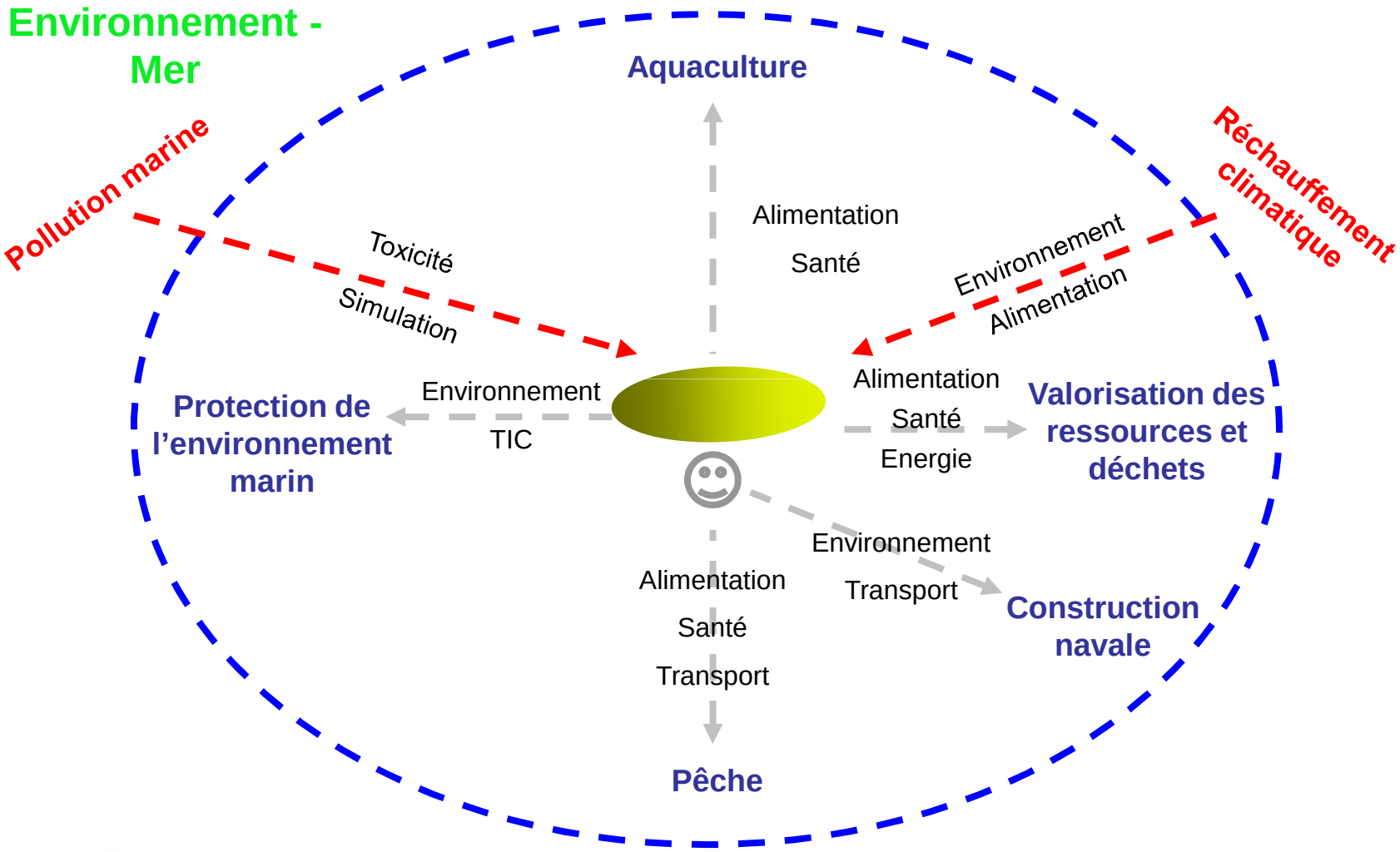
	AXE 1 : Protection de l'environnement marin					AXE 2 : Valorisation des ressources naturelles marines et du littoral					AXE 3 : Industries Maritimes
	Pollution marine (simulation)	Eaux de ballast	Métaux lourds	Résidus de dragage	Réchauffement climatique	Aquaculture	Pêche	Conchyliculture	Elevage d'ormeaux	Valorisation des déchets	Construction navale
Pollution marine (simulation)	O	X	X	X	X	X	X	X	X		
Eaux de ballast	X	O				X	X	X	X		X
Métaux lourds	X		O	X		X	X	X	X		
Résidus de dragage	X		X	O		X	X	X	X	X	
Réchauffement climatique	X				O	X	X	X	X	X	
Aquaculture			X	X	X	O	X	X	X	X	
Pêche		X	X	X	X	X	O	X	X	X	X
Conchyliculture		X	X	X	X	X	X	O	X	X	
Elevage d'ormeaux		X	X	X	X	X	X	X	O	X	
Valorisation des déchets				X	X	X	X	X	X	O	
Construction navale		X					X				O

mirade
Produits pour l'innovation

Synergie potentielle

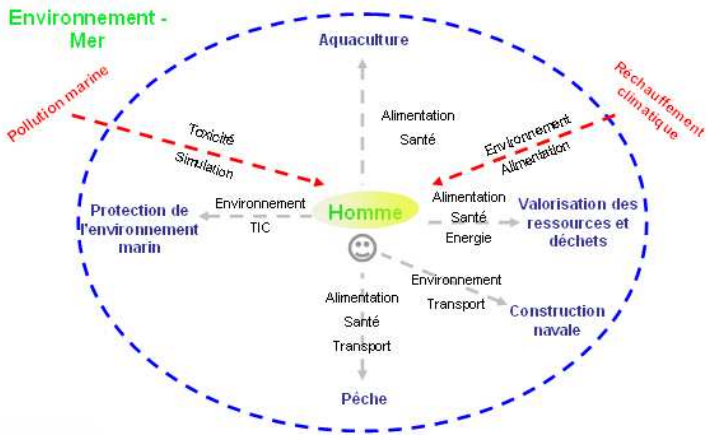
INTERFACEUROPE

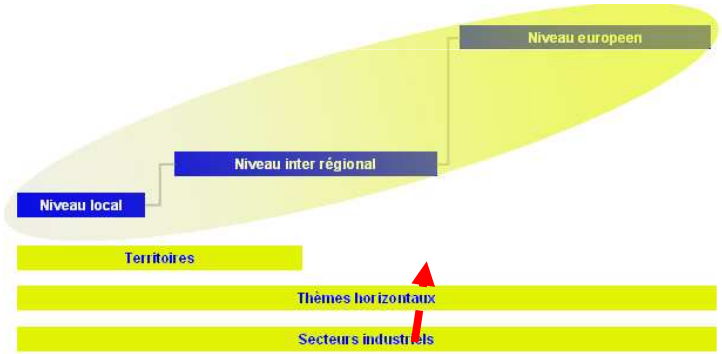
Chaîne de valeur du pôle Hom'Mer



Synergie potentielle

Stratégie et actions de développement du pôle Hom'Mer





► Stratégie de renforcement des atouts locaux (territoire) ... autour de la chaîne de valeur (secteur) de chaque axe ... dans une perspective de valorisation européenne (secteurs/thèmes)

Synergie potentielle

Développement du pôle Hom'Mer au niveau local

Actions collectives

- Pilotage du pôle Hom'Mer IE03347

Actions individuelles

- Renforcement des capacités des acteurs du pôle Hom'Mer (équipement, pesonnel, etc.)
- Participation des acteurs aux évaluations de projets européens IE03348
- Développement des projets portés par les acteurs (détection et accompagnement au montage et à la gestion de projets : voir fiches individuelles de diagnostic de projets européens)
- Synergies potentielles entre les acteurs locaux (voir ci-après)

mirade Produits pour l'innovation

Synergie potentielle

INTERFACEUROPE

IE03347 Pôle Hom'Mer

Actions possibles :

- Structuration locale de l'offre et de la demande de R&D autour des thèmes développés par le Pôle Hom'Mer
- Développer une vision à court, moyen et long terme au regard des perspectives de développement économique (demande de R&D) en asociant les milieux académiques, les milieux industriels, les autorités publiques, etc.
- l'organisation d'un évènement de type NOW I organisé en interne à la Basse Normandie pourrait permettre de valider les opportunités de collaborations entre tous ces acteurs et d'en identifier d'autres
- Définir le positionnement des acteurs locaux (offreurs et demandeurs de technologie) au sein de la chaîne de valeur au niveau européen ainsi que leur contribution potentielle à la réalisation de la vision
- Renforcer les capacités locales des équipes de recherche (offre de R&D : infrastructures, équipement, personnel, formation, etc.)
- Rechercher activement des partenariats extérieurs complémentaires
- Développer une capacité locale de pilotage :
- Assurer la cohérence des soutiens financiers publics et privés locaux, régionaux, nationaux et européens au service de la stratégie au regard des objectifs du pôle
- Fournir des services de support (montage et gestion des projets collaboratifs complexes, propriété intellectuelle, financement, expertise scientifique et technique, communication, etc.)
- Mettre en place les bases essentielles d'un pôle bâti sur la connaissance
- Assurer que les besoins en R&D des entreprises soient satisfaites par les centres de R&D (analyse de marché, audit technologique des besoins en R&D des entreprises, définition commune entre les centres de RD et les entreprises des priorités de RD à moyen terme, définition de cahier des charges fonctionnels, recours à des schémas de sous-traitance de la R&D, etc.)
- Assurer que les nouvelles opportunités technologiques présentant un potentiel de valorisation économique soient diffusées auprès des entreprises concernées (bourse de technologie, site web, rencontres entre les centres de RD et les entreprises des priorités de RD, mobilité de chercheurs dans les entreprises, mobilité d'ingénieurs d'entreprises dans les centres de R&D, recours à des schémas de transfert de connaissances ainsi qu'à des schémas de développement de technologie et de démonstration, etc.)
- Assurer une veille technologique et économique permanente pour les acteurs du pôle au niveau national, inter régionale, européenne et internationale permanente permettant d'anticiper les futures opportunités
- Rejoindre les initiatives en cours (réseaux, projets structurants, etc.)
- Développer des projets collaboratifs associant les milieux académiques et les milieux industriels
- Développer des relations structurées et de coopération avec les autres clusters européens positionnés sur des thèmes similaires ou connexes
- Organiser des rencontres d'affaires inter régionales et européennes
- Communiquer sur l'existence et les opportunités offertes par le pôle

Instruments de financement mobilisables :

- FEDER
- Regknow (7ème PCRD)
- INNET

Interface Europe; 21/08/2008

IE03348 The website to register as an expert for research activities is available on CORDIS. The call for experts is open both for individuals and for organisations.

Further information: https://cordis.europa.eu/emmfp7/index.cfm?fuseaction=wel.welcome
Interface Europe; 05/09/2008

Développement du pôle Hom'Mer au niveau inter régional

Actions collectives

- Valoriser le **caractère territorial** (ex: protection du littoral) du pôle Hom'Mer via :
  - Une plateforme européenne sur le thème de la protection du littoral développée dans le cadre d'Interreg : définition d'une stratégie commune autour de spécialisations territoriales, développement d'un réseau d'acteurs spécialisés, mutualisation de moyens, formation et attrait de chercheurs, développement de projets collaboratifs, communication externe, valorisation économique auprès d'entreprises, développement de clusters régionaux, développement d'infrastructures régionales, etc.

Actions individuelles

- Synergies potentielles entre les acteurs de l'arc atlantique :
  - intégration des projets en cours (Cantabrie et XXXX , etc.) au sein d'une démarche inter régionale
  - mutualisation de l'utilisation d'équipements pour des sujets d'intérêt commun (Lidar, Clarec, algobanque, écloserie expérimentale, etc.) aux acteurs régionaux et sectoriels de la Mer

mirade
Produits pour l'innovation

Synergie potentielle

INTERFACEUROPE

Développement du pôle Hom'Mer au niveau européen

Actions collectives

- Valoriser le **caractère sectoriel** et **intégrateur** du thème de la Mer via :
  - Une plateforme technologique européenne sur le thème de la Mer (7ème PCRD) afin de répondre à la volonté de l'UE de définir et mettre en oeuvre une politique maritime intégrée : cette plateforme permettrait d'associer les milieux académiques, les milieux économiques ainsi que les autorités publiques (collectivités territoriales, etc.)
  - Une mise en réseau des clusters intervenant sur le thème de la Mer (INNO NET) IE03349
  - Une « Communauté de connaissance et d'innovation » autour de la Mer (Institut Européen de Technologie)
  - Un portail européen fédérant toutes les initiatives en cours (réseaux d'excellence, projets intégrés, actions de coordinations, ERAnet, ITN, Interreg, plateformes technologiques, etc.) sur le thème de la Mer (DG Entreprise)

Actions individuelles

- Synergies entre les acteurs européens de la chaîne de valeur
  - Exemples : Projets potentiels (voir ci-après)

mirade Produits pour l'innovation

Synergie potentielle

INTERFACEUROPE

Diapositive 135

IE03349 Politique maritime intégrée (livre bleu):

> réseau européen de pôles d'activités maritimes («clusters»);
Interface Europe; 26/08/2008

Développement du pôle Hom'Mer au niveau international

Actions collectives

• **Valoriser le savoir faire** dans d'autres régions du monde via des partenariats avec des initiatives similaires :

- de la Méditerranée (Processus de Barcelone, MEDA, UPM, Coopération internationale du 7ème PCRD, etc.) : dépollution de la mer Méditerranée
- autres bassins maritimes (mer des Caraïbes, sud-est de l'océan Indien, Macaronésie)
- etc.

IE03350

Actions individuelles

• Synergies entre les acteurs internationaux de la chaîne de valeur

- voir partie relative aux projets

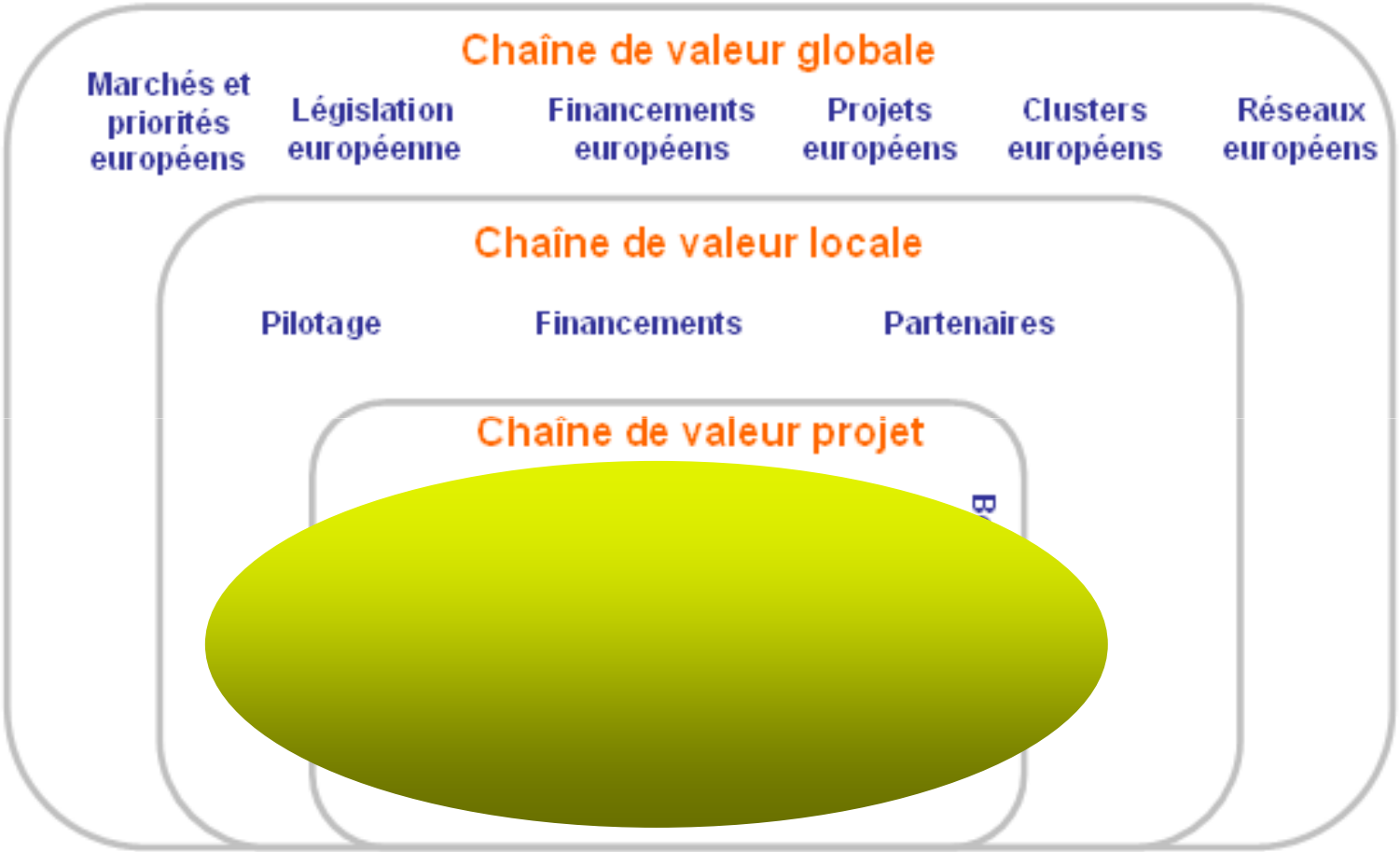
Diapositive 136

IE03350 Politique maritime intégrée (plan d'action) :

> Création d'un réseau d'échange de meilleures pratiques entre les îles, les régions ultrapériphériques et d'autres régions maritimes isolées
> Encouragement de la participation tant des îles que des régions ultrapériphériques dans les activités de mise en réseau de l'initiative Les régions, actrices du changement économique en 2008.

Interface Europe; 26/08/2008

Chaîne de valeur projet



R: recherche; DM: démonstration; CN: coordination/networking; F : formation; T: transfert; DF: diffusion; V: Valorisation économique

Chaîne de valeur projet

Concept: projets potentiels

Etat de l’art: disciplines scientifiques

Partenaires

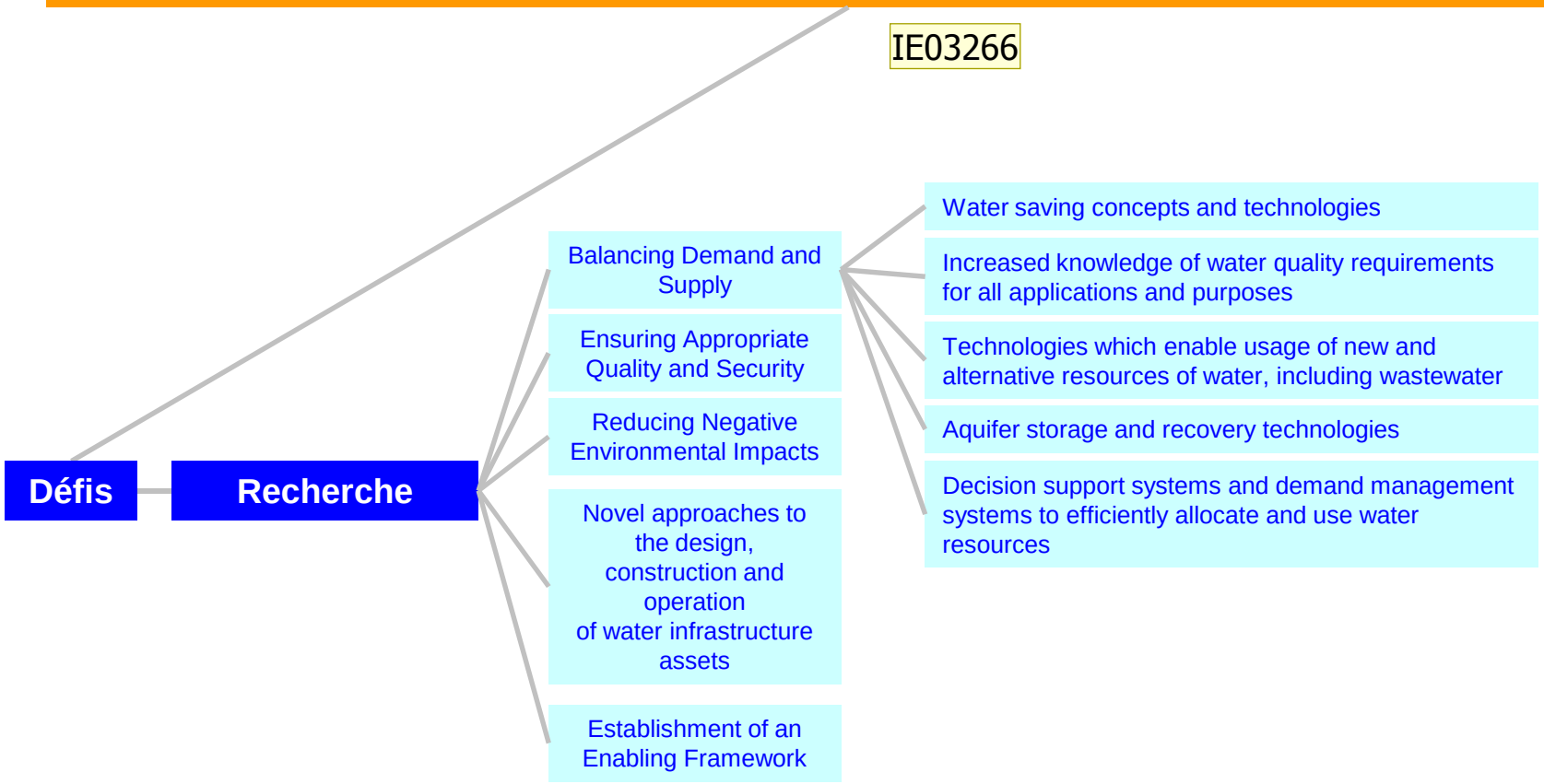
E: recherche; DM: démonstration; C: coordination/networking; F : formation; T: transfert; DF: diffusion; V: Valorisation économique

Projets potentiels sur le thème « Mer »

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes Mer



Diapositive 140

IE03266 Water Sanitation TP - SRA:

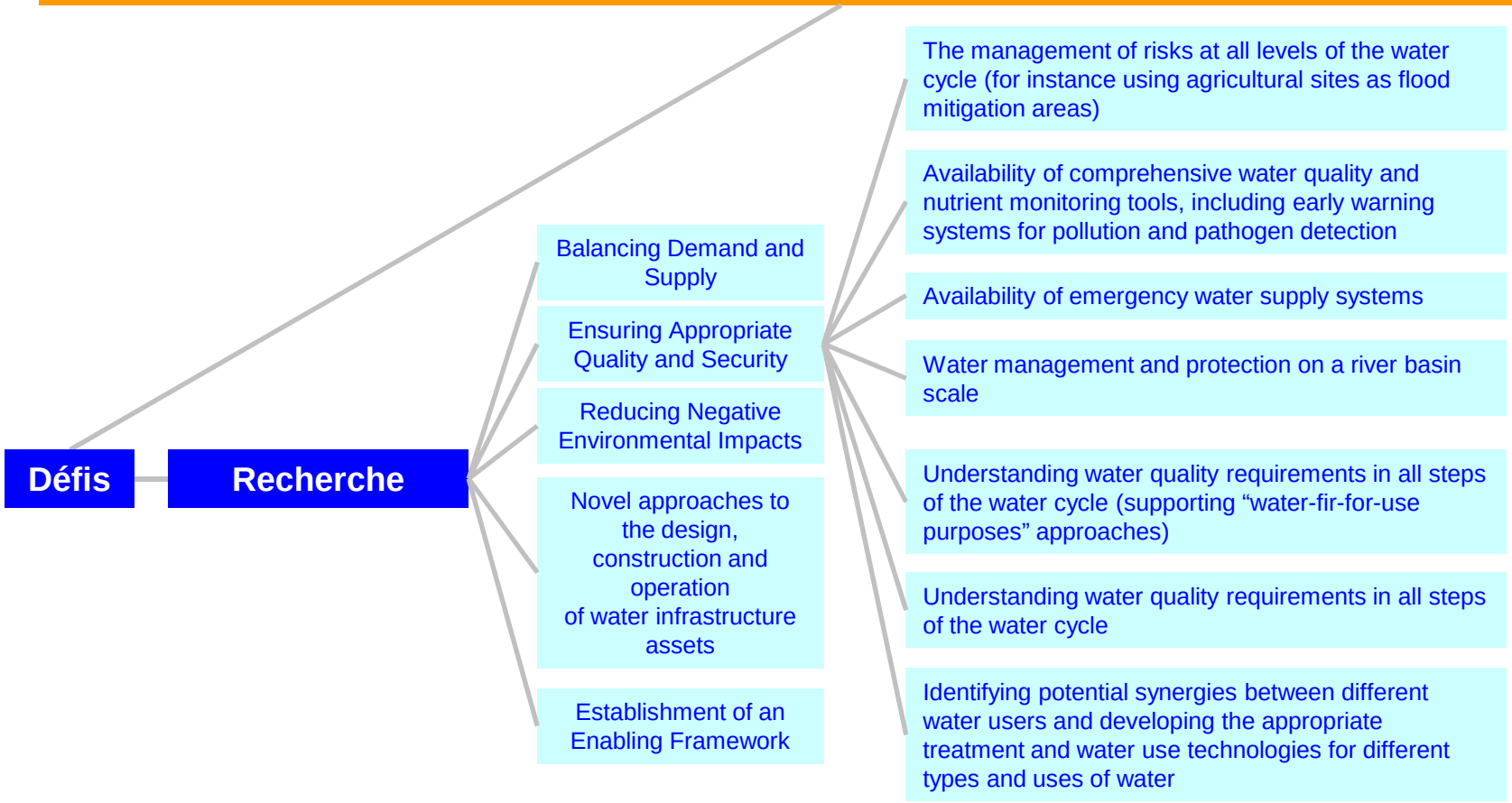
Drivers:
- Climate change is predicted to cause significant changes in precipitation and temperature patterns, affecting the availability of water
- Existing infrastructure is aging and deteriorating
- Globalisation and population growth are enforcing rapid changes (migration, urbanization, industrial activities, patterns of food production) leading to a dramatic increase in high-quality water consumption.

Challenges:
- Challenge 1: Increasing Water Stress and Water Costs
- Challenge 2: Urbanization
- Challenge 3: Extreme events
- Challenge 4: Rural and under-developed areas

Research areas:
• Balancing demand and supply
• Ensuring appropriate quality and security
• Reducing negative environmental impacts
• Novel approaches to the design, construction and operation of water infrastructure assets
• Establishment of an enabling framework

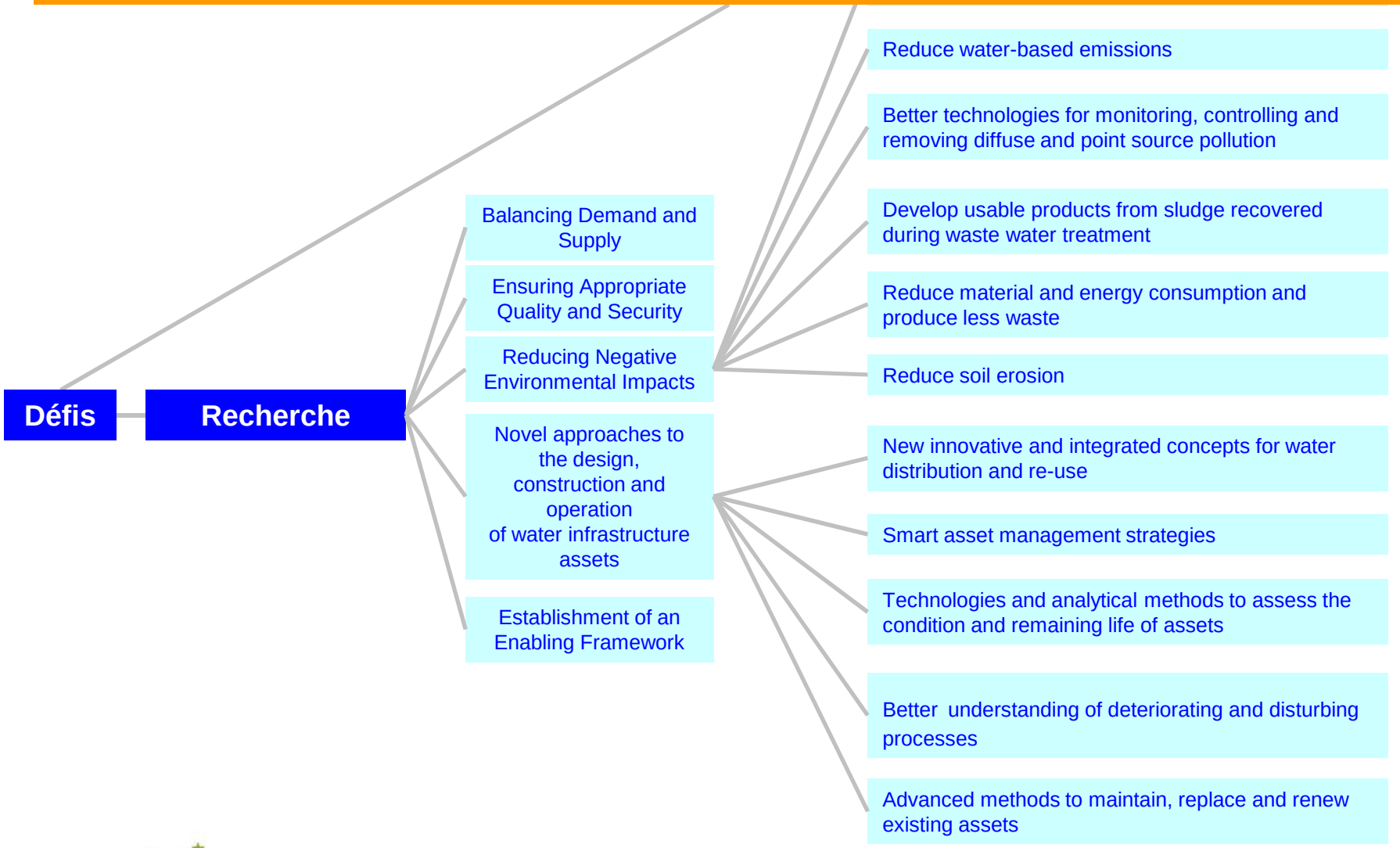
Interface Europe; 07/09/2008

Projets potentiels issus des opportunités européennes Mer



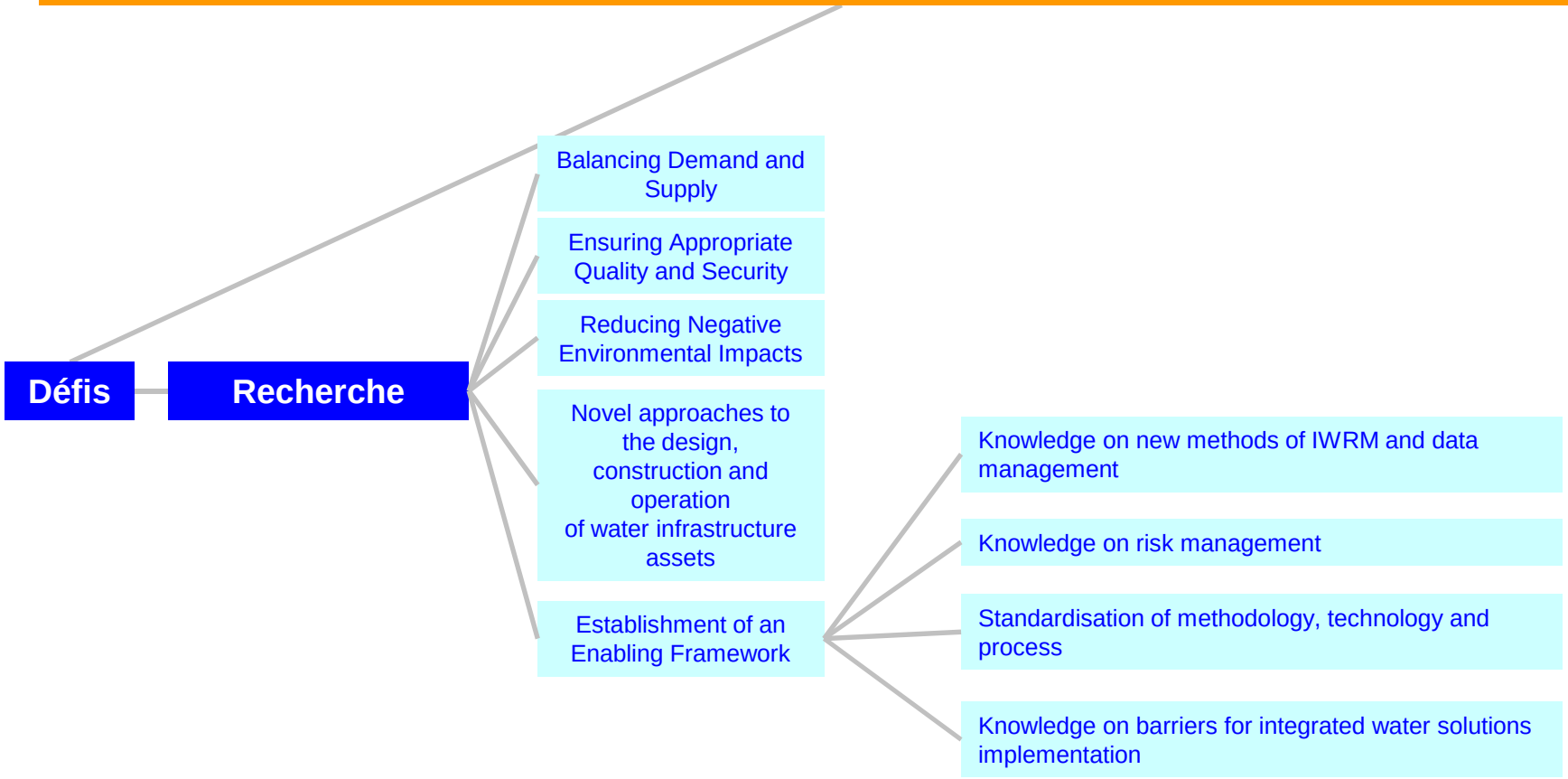
Idées de projets potentiels

Projets potentiels issus des opportunités européennes Mer



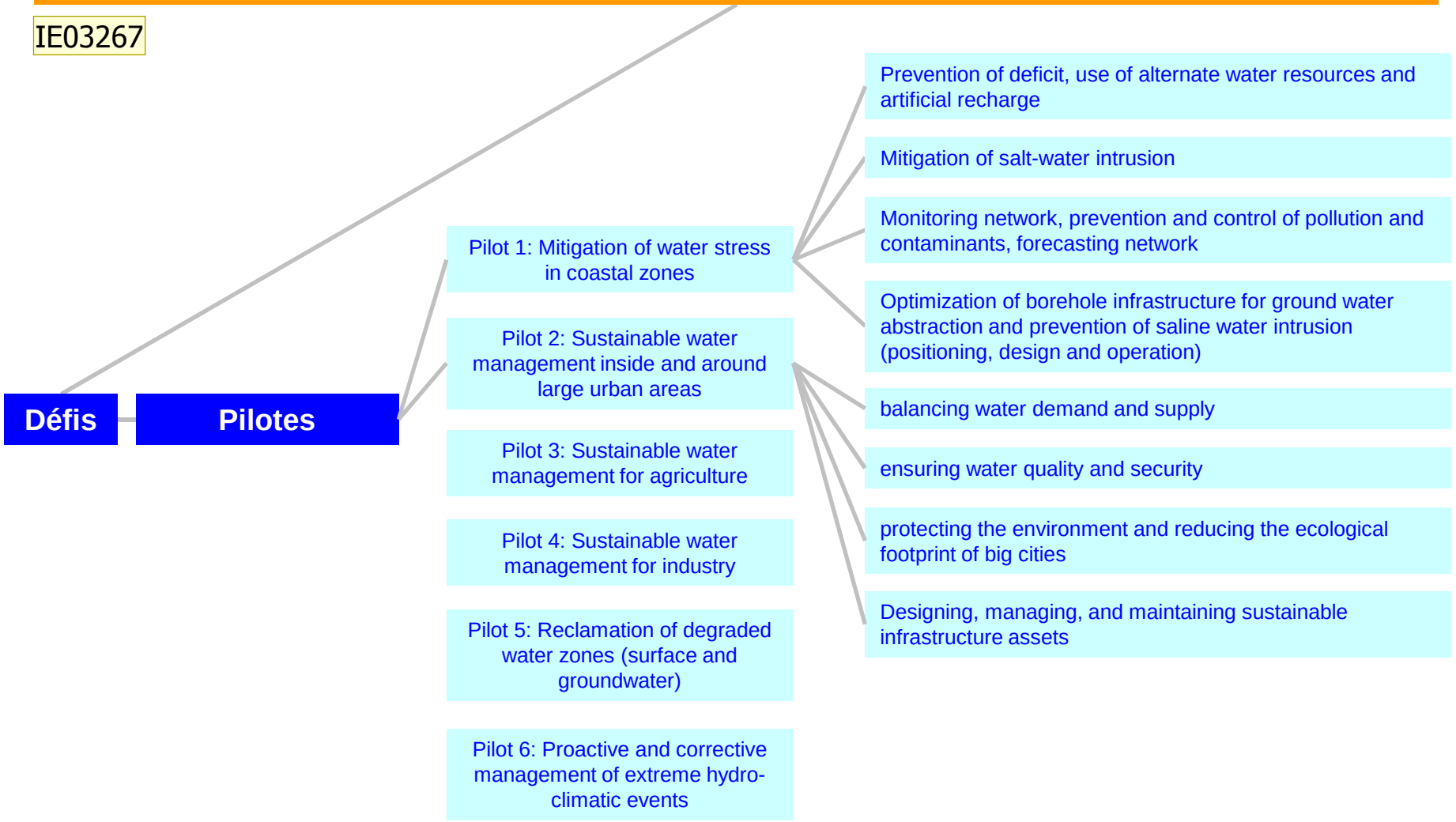
Idées de projets potentiels

Projets potentiels issus des opportunités européennes Mer



Projets potentiels issus des opportunités européennes Mer

IE03267



Idées de projets potentiels

Diapositive 144

IE03267 Water Sanitation TP - SRA:

To address these problems an integrated approach based on the "Integrated Water Resource Management (IWRM)" concept will be used to establish a set of six pilot themes

Interface Europe; 07/09/2008

Projets potentiels issus des opportunités européennes Mer

IE03268

Défis — **Pilotes**

- Pilot 1: Mitigation of water stress in coastal zones
- Pilot 2: Sustainable water management inside and around large urban areas
- Pilot 3: Sustainable water management for agriculture
- Pilot 4: Sustainable water management for industry
- Pilot 5: Reclamation of degraded water zones (surface and groundwater)
- Pilot 6: Proactive and corrective management of extreme hydro-climatic events

Pilot 3: Sustainable water management for agriculture

- Safe use and reuse of water in agriculture and its long-term impact on the environment. This calls for the design of new technologies and management methods for e.g. 'Cascading' systems and safe reuse of treated wastewater
- Improvement of water use efficiency at different scales (local, regional, economic branch). This needs a) the development of new water management tools, such as integrated models and decision support systems at basin level, b) the improvement of sustainable production methods (including options for organic farming) at farm level and c) improvement of water use efficiency and water productivity.
- Reduction of diffuse pollution caused by agrochemicals, nutrients and manure. This will require the development of cost-effective, easy-to-access and adaptive technologies for precise dosing and application: agro-chemicals, fertilization and semi-liquid manure spreading

Pilot 4: Sustainable water management for industry

- Water fit for use
- Reducing environmental impact and water costs
- Water quality monitoring and control
- Control of biofouling, scaling and corrosion

mirade
Produits pour l'innovation

Idées de projets potentiels

INTERFACEUROPE

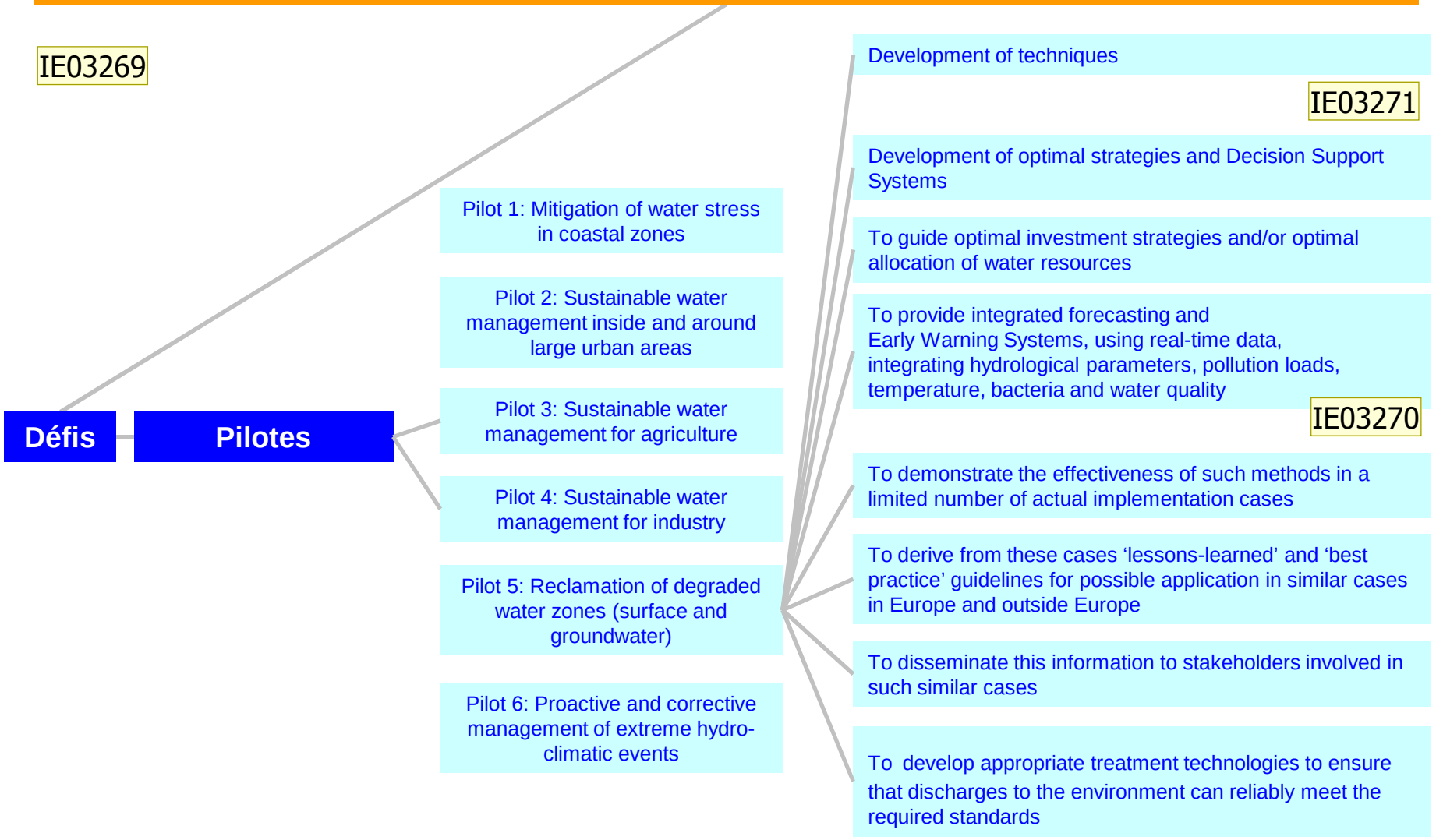
Diapositive 145

IE03268 Water Sanitation TP - SRA:

To address these problems an integrated approach based on the "Integrated Water Resource Management (IWRM)" concept will be used to establish a set of six pilot themes

Interface Europe; 07/09/2008

Projets potentiels issus des opportunités européennes Mer



Idées de projets potentiels

Diapositive 146

IE03269 Water Sanitation TP - SRA:

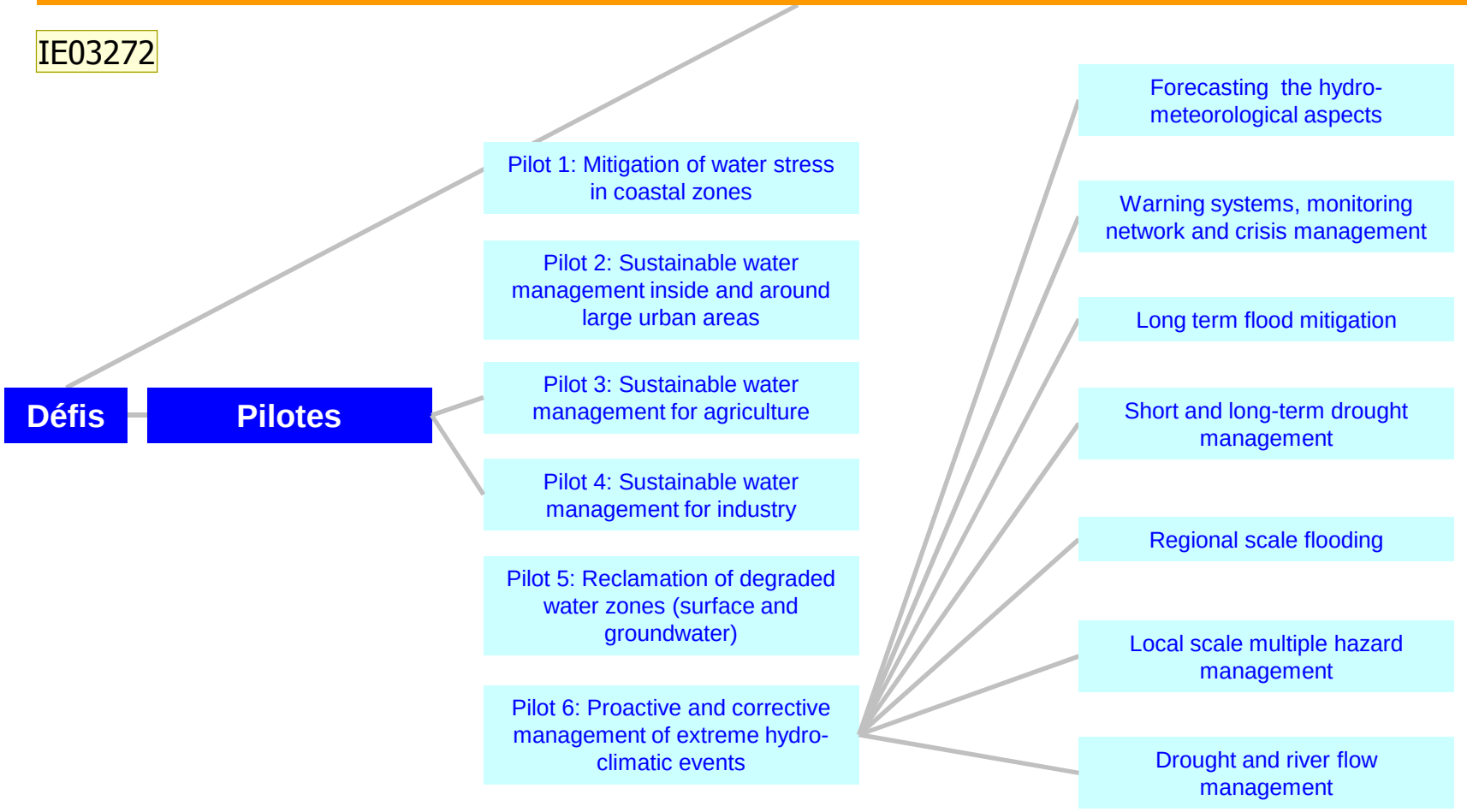
To address these problems an integrated approach based on the "Integrated Water Resource Management (IWRM)" concept will be used to establish a set of six pilot themes
Interface Europe; 07/09/2008

IE03270 - develop contingency plans for various stakeholders;
- monitor progress in implementation on a wide variety of parameters
- monitor compliance with regulations, including EU
directives
Interface Europe; 07/09/2008

IE03271 - to map the state of degraded water sources systems
- to derive the cause-effect relationships that have led to the degraded state
- to generate information that can support transparent decision making between all stakeholders
- to plan scenarios for system restoration,
covering physical, ecological, social and economic
benefits and costs
- to mitigate specific adverse impacts
Interface Europe; 07/09/2008

Projets potentiels issus des opportunités européennes Mer

IE03272



Diapositive 147

IE03272 Water Sanitation TP - SRA:

To address these problems an integrated approach based on the "Integrated Water Resource Management (IWRM)" concept will be used to establish a set of six pilot themes

Interface Europe; 07/09/2008

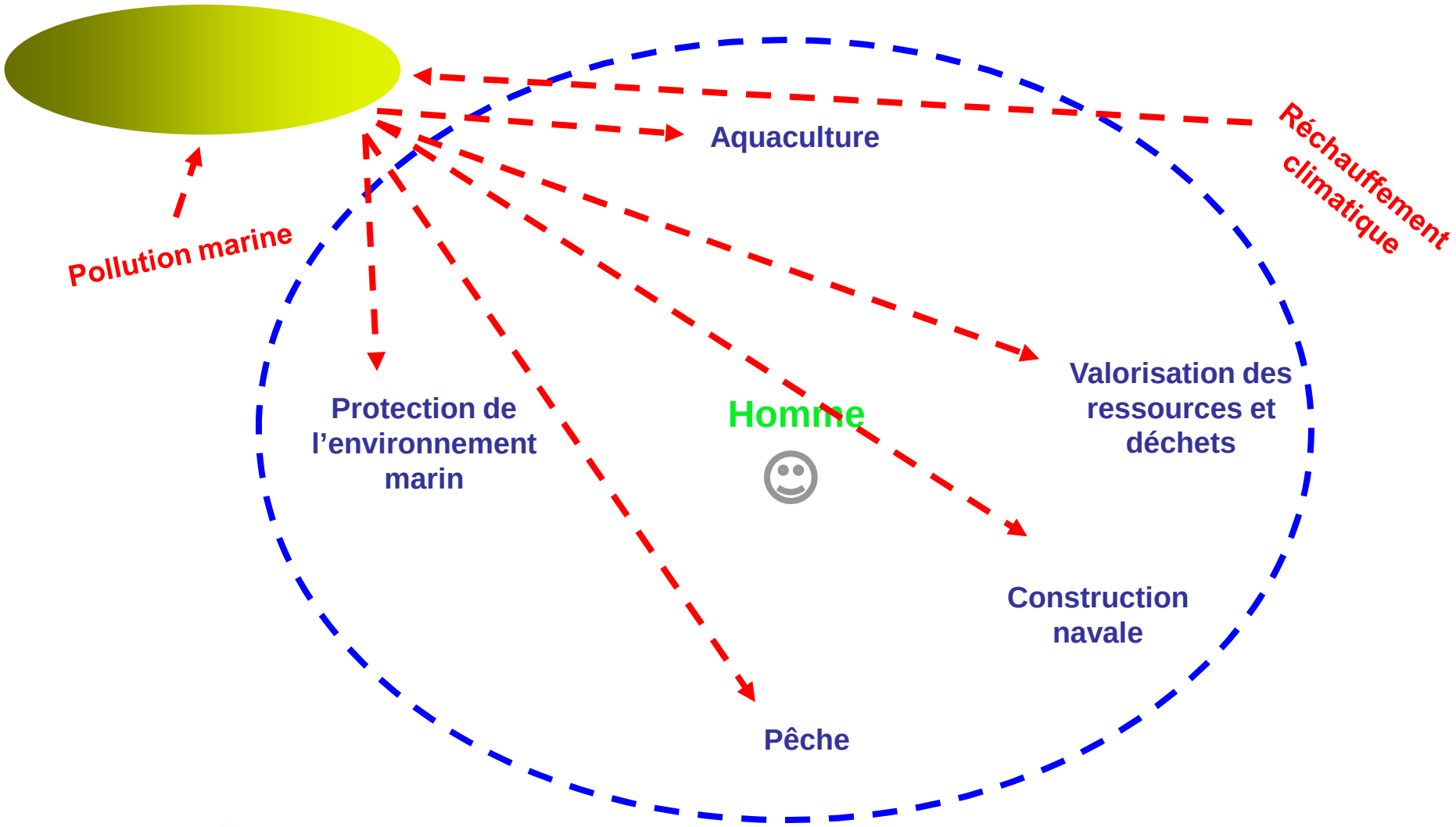
Projets potentiels sur le thème « Mer »

Issus des opportunités européennes

Issus des synergies locales

Synergie potentielle

Projets potentiels issus des synergies locales



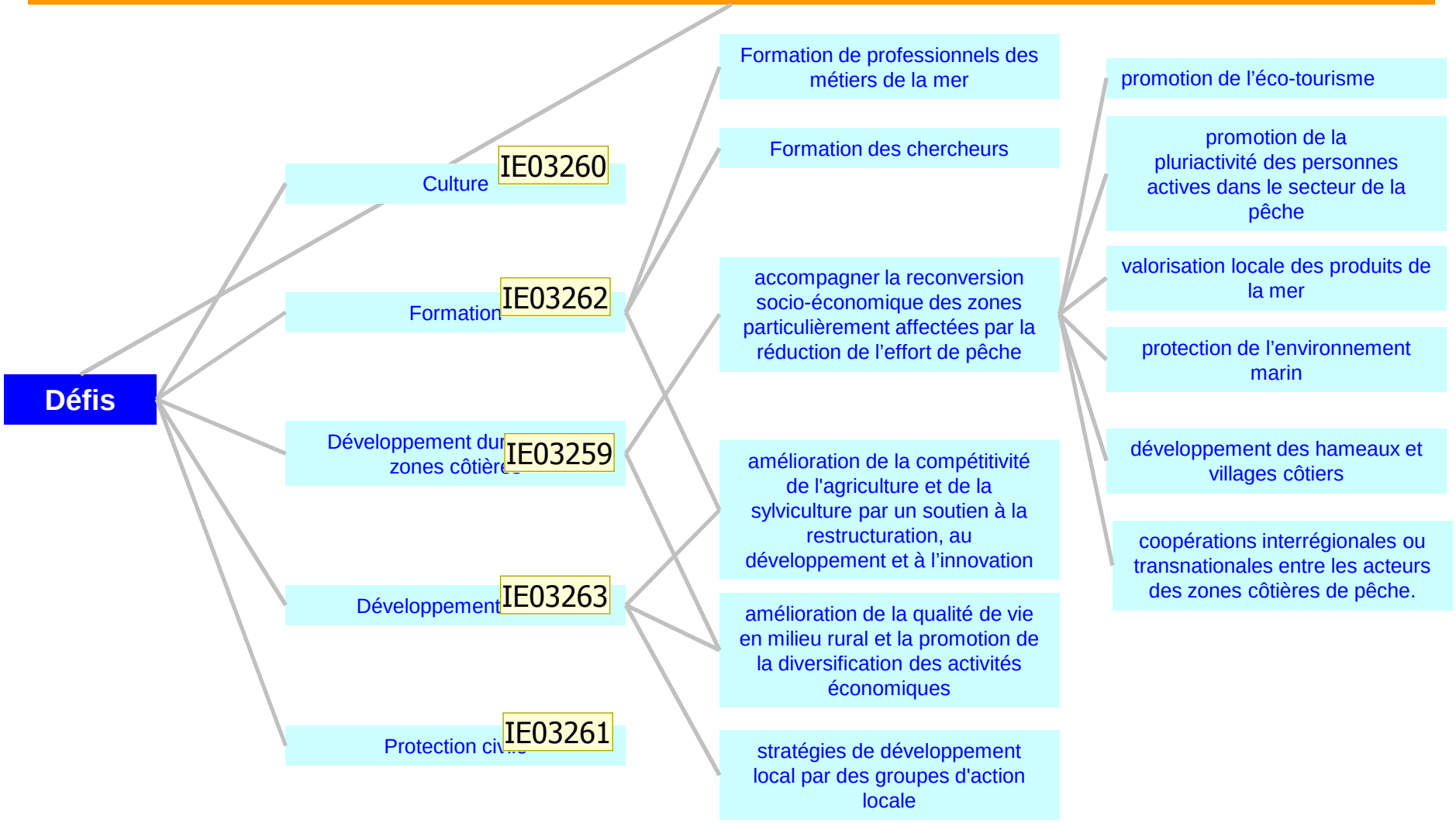
Synergie potentielle

Projets potentiels sur le thème « Homme »

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes
Homme



Synergie potentielle

IE03259 Fonds Européen pour la Pêche (FEP)

Budget 2007-2013 : 3,849 milliards € (dont 191,7 millions € pour la France).
Le taux de cofinancement communautaire devra être compris entre 20 et 50% des dépenses publiques.

4. Développement durable des zones côtières
Mesures visant à accompagner la reconversion socio-économique des zones particulièrement affectées par la réduction de l'effort de pêche : promotion de l'éco-tourisme, promotion de la pluriactivité des personnes actives dans le secteur de la pêche, valorisation locale des produits de la mer, protection de l'environnement marin, développement des hameaux et villages côtiers, coopérations interrégionales ou transnationales entre les acteurs des zones côtières de pêche.

Ces mesures sont prises dans le cadre d'une stratégie de développement local mise en oeuvre par des groupes locaux représentant les partenaires publics et privés des différents secteurs socioéconomiques concernés, qui sont sélectionnés par les Etats membres suite à des appels à propositions.
Interface Europe; 07/09/2008

IE03260 Programme "Culture 2007-2013"

Actions de coopération culturelle de nature sectorielle ou transectorielle entre opérateurs européens (au moins trois pays).
Interface Europe; 07/09/2008

IE03261 Instrument financier pour la protection civile

Soutenir et compléter les efforts déployés par les Etats membres pour protéger les personnes, l'environnement et les biens en cas de catastrophes naturelles ou causées par les activités humaines, d'actes terroristes ou d'accidents technologiques, radiologiques ou environnementaux ;
- Favoriser la coopération entre les Etats membres dans le domaine de la protection civile.

Actions:
> actions en matière de prévention et de préparation (études, enquêtes, modélisation et élaboration de scénarios ; formations et information du public etc.)
> actions de réaction aux situations d'urgence (envoi d'experts, accès aux ressources en matériel, renforcement des ressources en moyens de transport, etc.)
Interface Europe; 07/09/2008

IE03262 Programme d'action intégré dans le domaine de l'éducation et de la formation tout au long de la vie

Objectif: Favoriser les échanges, la coopération et la mobilité entre les systèmes européens d'éducation et de formation afin qu'ils deviennent une référence mondiale en terme de qualité

1) 4 sous-programmes sectoriels :
- Comenius : Enseignement scolaire ;
- Erasmus : Enseignement supérieur (y compris stages en entreprise dans l'UE) ;
- Leonardo da Vinci : Formation professionnelle ;
- Grundtvig : Enseignement des adultes.

2) Un programme transversal :
- Activité 1 : Coopération et innovation politiques en matière d'éducation et de formation tout au long de la vie ;
- Activité 2 : Promotion de l'apprentissage des langues ;
- Activité 3 : Utilisation renforcée des TIC ;
- Activité 4 : Echange de bonnes pratiques.

3) Programme Jean Monnet : Soutien aux établissements et activités dans le domaine de l'intégration européenne.

Actions soutenues :
- Mobilité dans un autre Etat membre des personnes participant à l'éducation et à la formation tout au long de la vie (apprenants et personnels éducatifs) ;
- Partenariats bilatéraux et multilatéraux conclus entre établissements ou organismes responsables de l'éducation et de la formation en vue de mettre en oeuvre des projets européens d'apprentissage communs ;
- Projets multilatéraux spécialement destinés à promouvoir la qualité dans les systèmes d'éducation et de formation grâce au transfert transnational d'innovation ;
- Projets et les réseaux multilatéraux de structures issues de trois Etats membres au moins et agissant dans un domaine, une discipline ou un secteur éducatif/de formation particulier. Ces projets et réseaux doivent viser à favoriser les échanges et la diffusion des bonnes pratiques éducatives.

Interface Europe; 07/09/2008

IE03263 FEADER : Fond Européen de Développement Rural

Les quatre axes d'intervention du FEADER :
1. L'amélioration de la compétitivité de l'agriculture et de la sylviculture par un soutien à la restructuration, au développement et à l'innovation (Axe 1), notamment via les actions de développement du potentiel humain (formation, installation des jeunes agriculteurs, services aux agriculteurs etc.), la restructuration du potentiel physique (amélioration et développement des infrastructures en relation avec le développement et l'adaptation des secteurs agricole et forestier, modernisation des exploitations etc.), le soutien aux agriculteurs participant à des programmes

d'amélioration de la qualité de la production et des aliments et soutien aux exploitations de semi-subsistance et à la mise en place de groupements de producteurs dans
les nouveaux Etats membres, qui doivent devenir compétitifs.

2. L'amélioration de l'environnement et de l'espace rural par un soutien à la gestion des terres (Axe 2), notamment au travers d'indemnités versées aux agriculteurs des zones de montagne et à ceux installés dans les régions à handicaps naturels; de compensations aux agriculteurs dont les activités sont affectées par les mesures de protection des sites au titre de NATURA 2000 ; de mesures agro-environnementales (qui resteront obligatoires), d'indemnités pour le bien-être des animaux et d'un soutien pour les investissements non productifs.

3. L'amélioration de la qualité de vie en milieu rural et la promotion de la diversification des activités économiques (Axe 3), notamment les aides pour la diversification vers des activités non agricoles, les aides à la création de micro-entreprises, à la promotion du tourisme, à la rénovation de villages, à la mise en valeur du patrimoine rural et à la formation professionnelle des acteurs. Ces mesures seraient mises en oeuvre à travers des stratégies de développement local.

4. Mise en place de projets de type LEADER (mise en oeuvre de stratégies de développement local par des groupes d'action locale).

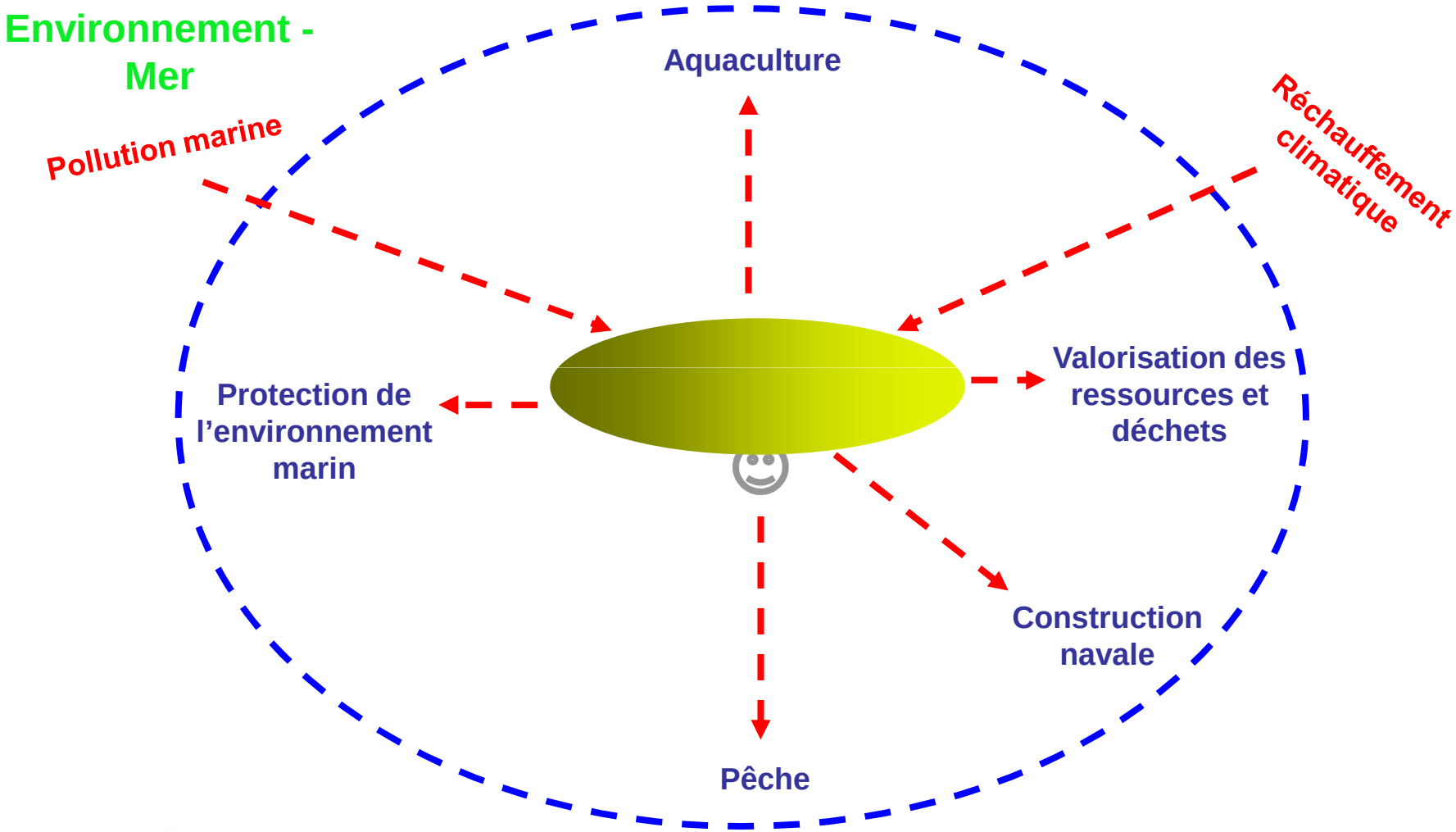
Interface Europe; 07/09/2008

Projets potentiels sur le thème « Homme »

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des synergies locales



Synergie potentielle

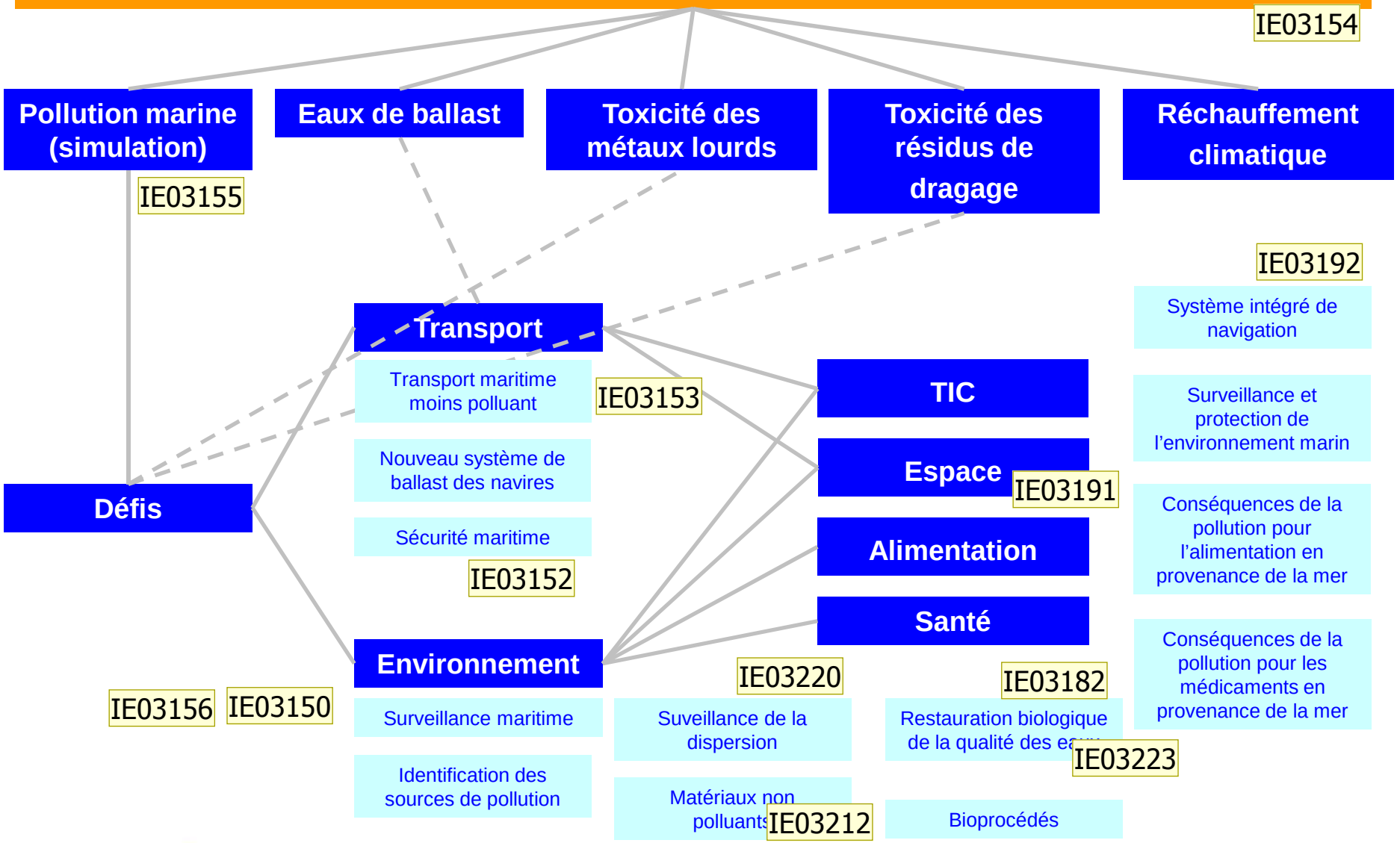
Projets potentiels sur le thème «Pollution marine»

Issus des opportunités européennes

Issus des synergies locales

Synergie potentielle

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 155

IE03150 Politique maritime intégrée pour l'UE (livre bleu) :

> Réseau plus intégré de systèmes de surveillance des eaux européennes :
- programme de travail détaillé en vue de l'intégration de tous les systèmes européens de surveillance maritime, qui couvriront les zones maritimes ainsi que d'autres aspects non liés aux frontières (2008). Des liens pourront également être tissés avec les travaux du secteur privé dans ce domaine, et l'intégration des systèmes en place au niveau régional pourra aussi être prévue

> Réseau européen d'observation et de données du milieu marin (Emodnet): Intégré au réseau mondial des systèmes d'observation de la Terre (GEOSS) et à l'initiative relative à la surveillance mondiale pour l'environnement et la sécurité (GMES), il ouvrira également des débouchés nouveaux pour les entreprises commerciales de haute technologie du secteur maritime et améliorera l'efficacité d'activités telles que la surveillance maritime, la gestion des ressources marines et les recherches sur le milieu marin dans les laboratoires européens :
- feuille de route (2008)
- plan d'action européen (2009)

Interface Europe; 26/08/2008

IE03152 Politique maritime intégrée (plan d'action) :

> Système européen de surveillance des frontières (Eurosur).

Interface Europe; 26/08/2008

IE03153 Politique maritime intégrée (plan d'action)

> pollution de l'air par les navires :

- promotion de l'utilisation du réseau électrique terrestre par les navires à quai dans les ports de la Communauté au niveau européen
- projet «Clean Ship» («navire propre») pour accroître les connaissances et développer une technologie de pointe permettant de réduire la pollution de l'air par les navires, d'améliorer leur efficacité (amélioration de la forme de la coque afin d'accroître les performances, conception des moteurs, etc.) ou d'utiliser des carburants alternatifs.

Interface Europe; 26/08/2008

IE03154 Politique maritime intérée (plan d'action) :

> Des entreprises européennes accroissent en permanence leur savoir-faire dans le domaine du contrôle de la pollution, des ressources marines renouvelables, de la recherche océanographique, de l'exploration en haute mer, des travaux maritimes et de l'ingénierie côtière. L'économie européenne doit encourager et exploiter ce potentiel d'innovation. C'est pourquoi, dans le cadre de la communication «Une politique maritime intégrée», nous devons faire un pas qualitatif vers le renforcement de la recherche marine en la reliant au développement technologique.

Interface Europe; 26/08/2008

IE03155 Politique martime intégrée (livre bleu) :

> Stratégie communautaire en matière de prévention des catastrophes et le développement d'une stratégie d'adaptation au changement climatique, avec une attention particulière pour les régions côtières (courant 2008).
Interface Europe; 26/08/2008

IE03156 Politique maritime intégrée (plan d'action) :

> La Commission lancera l'élaboration d'un Atlas européen des mers sur la base des informations spatiales disponibles et sur la base des travaux du réseau européen d'observation et de données du milieu marin. Elle prévoit sa première publication en 2009.
Interface Europe; 26/08/2008

IE03182 Biofuel Technology Platform:

> Another emerging way of detecting microscopic threats to our health is the fledgling field of nanopathology. Rising pollution levels in recent decades have meant that an increasing number of toxic nano-particles, from basalt to lead, are finding their way into our food and drink. They are usually in concentrations that are harmless, unless exposure to them is sustained over a large part of a person's lifetime. We need to be able to detect these contaminants effectively in order to assess the risk they pose and trace their origins, a task which is made the more complicated by the global nature of modern trade.
For instance, Gatti traced the minute traces of basalt found in caulifl ower from her local supermarket to a volcanic eruption in Sicily, and uranium particles found in a secretary's stomach to an organic farm near a tile factory which used a uranium-based substance in its glazing process. Such early detection is invaluable in avoiding long-term health problems and in stemming contamination at the source. "Nanotools can help us to fi ght this war against contamination," she noted.
Interface Europe; 26/08/2008

IE03191 Space TP:
In its communication on GMES from November 2005, the Commission sets out a strategy for delivering GMES, beginning with the pilot phase of the three first (fast-track) operational GMES services by 2008 (emergency management, land monitoring, and marine services).
Interface Europe; 26/08/2008

IE03192 Integral Satcom Initiative (ISI):
The Integral Satcom Initiative - ISI (www.isi-initiative.eu.org) brings together all aspects related to satellite communications, including mobile, broadband, and broadcasting applications, security systems and applications, and the integration of data communications with navigation, Earth observation and Air Traffic Management systems, both for commercial and institutional/ governmental applications.
Interface Europe; 26/08/2008

Diapositive 155 (suite)

IE03212 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Quality of life:

>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling
properties able to recognise
and destroy pollutants and corrosion
agents. Specialty polymer industries
would benefit from 'intelligent'
composite materials based on organic
or inorganic materials and also biocompatible
materials;
> Smart materials that respond to their
environment, that are self-cleaning,
anti-fouling and have anti-corrosion
properties
Interface Europe; 27/08/2008

IE03220 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Citizen protection:

> Society has been increasingly challenged
by accidents, terrorist attacks, sudden
climate changes and catastrophes
causing extensive personal and material
damage. There is a need to develop new intelligent technologies in order to
protect the civil population from these
extreme situations as well as to provide
new ways of predicting and avoiding
them. Sensors for explosives, toxic
agents and biohazards at low concentration,
materials for personal protection
and/or buildings, e.g. hospitals, airports,
and vehicles, functional textiles that
recognise and destroy toxic agents or

administer the right counteragents. In addition, new sensor systems could help to detect chemical or biological threats and play an important role as components of security systems.
Interface Europe; 27/08/2008

IE03223 Water Supply and Sanitation Platform (WSSTP):

> Mitigation of water stress in coastal zones:

To mitigate water stress in costal zones the Platform identified needs for research and technology development in the following areas

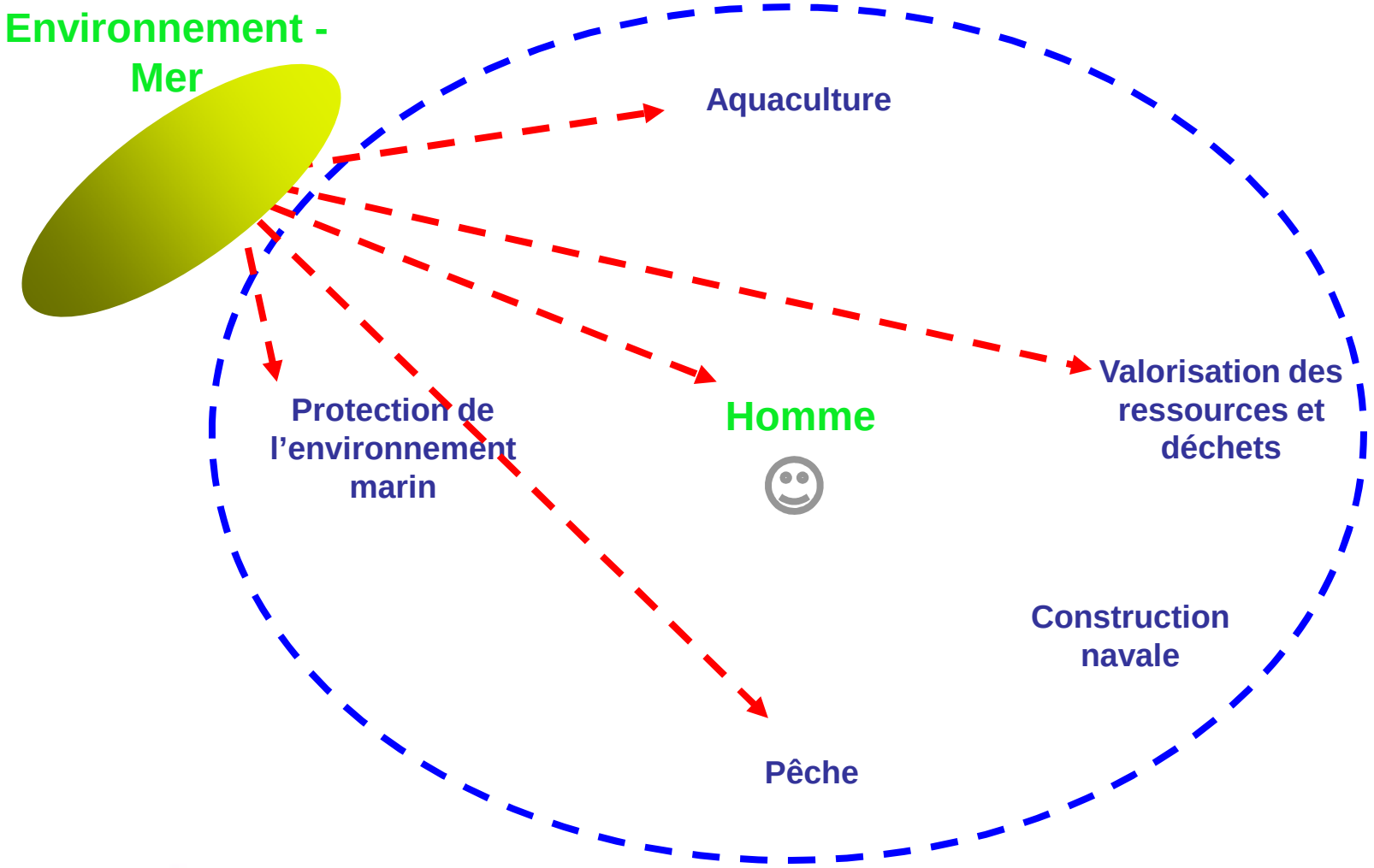
* prevention of deficit, use of alternate water resources and artificial recharge. Climate change impact evaluation.
* mitigation of salt-water intrusion
* monitoring network, prevention and control of pollution and contaminants, forecasting network
* optimisation of borehole infrastructure for ground water abstraction and prevention of saline water intrusion (positioning, design and operation)

Interface Europe; 27/08/2008

Projets potentiels sur le thème «Pollution marine»

- Issus des opportunités européennes
- Issus des synergies locales

Projets potentiels issus des synergies locales



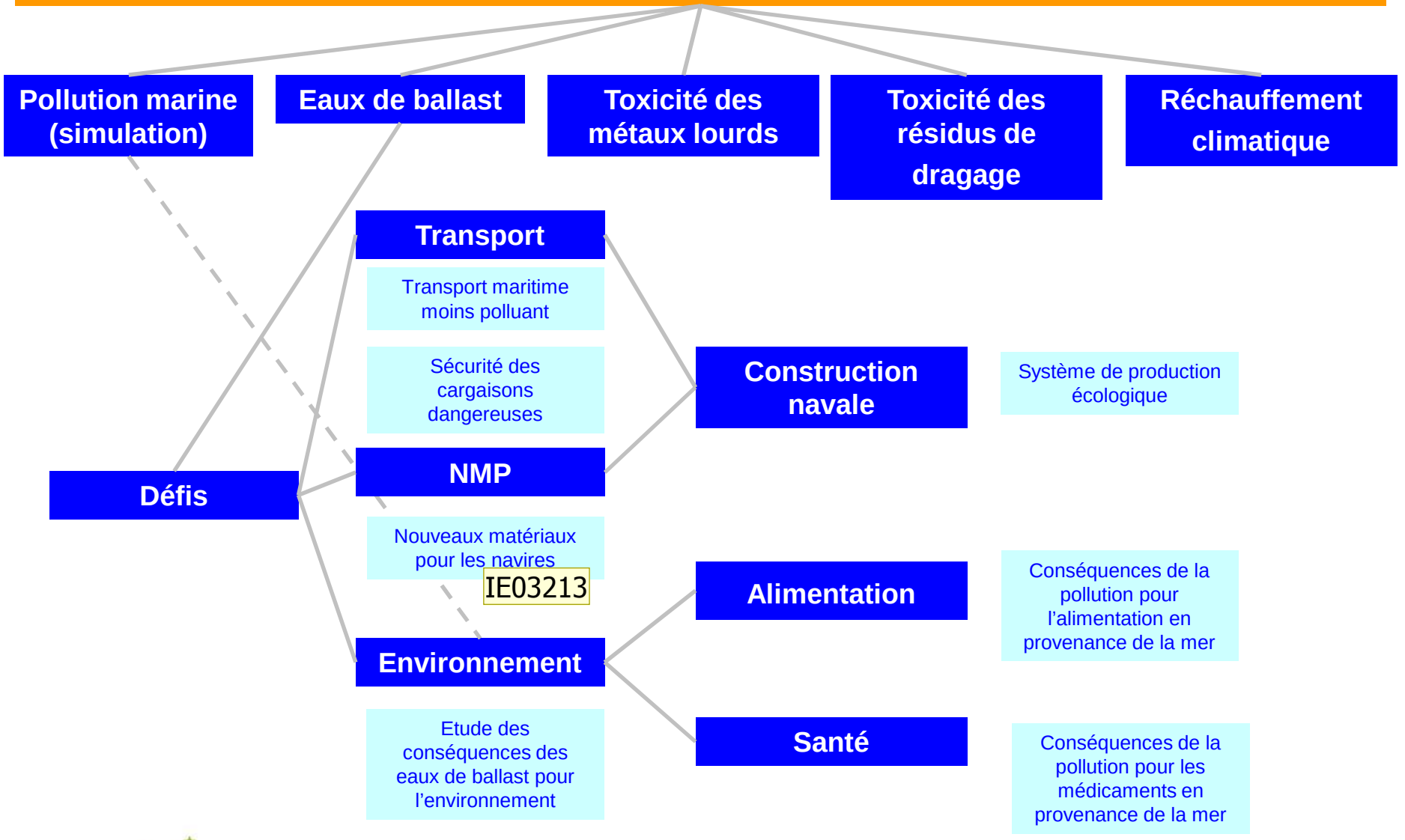
Synergie potentielle

Projets potentiels sur le thème «Eaux de ballast»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 159

IE03213 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Quality of life:

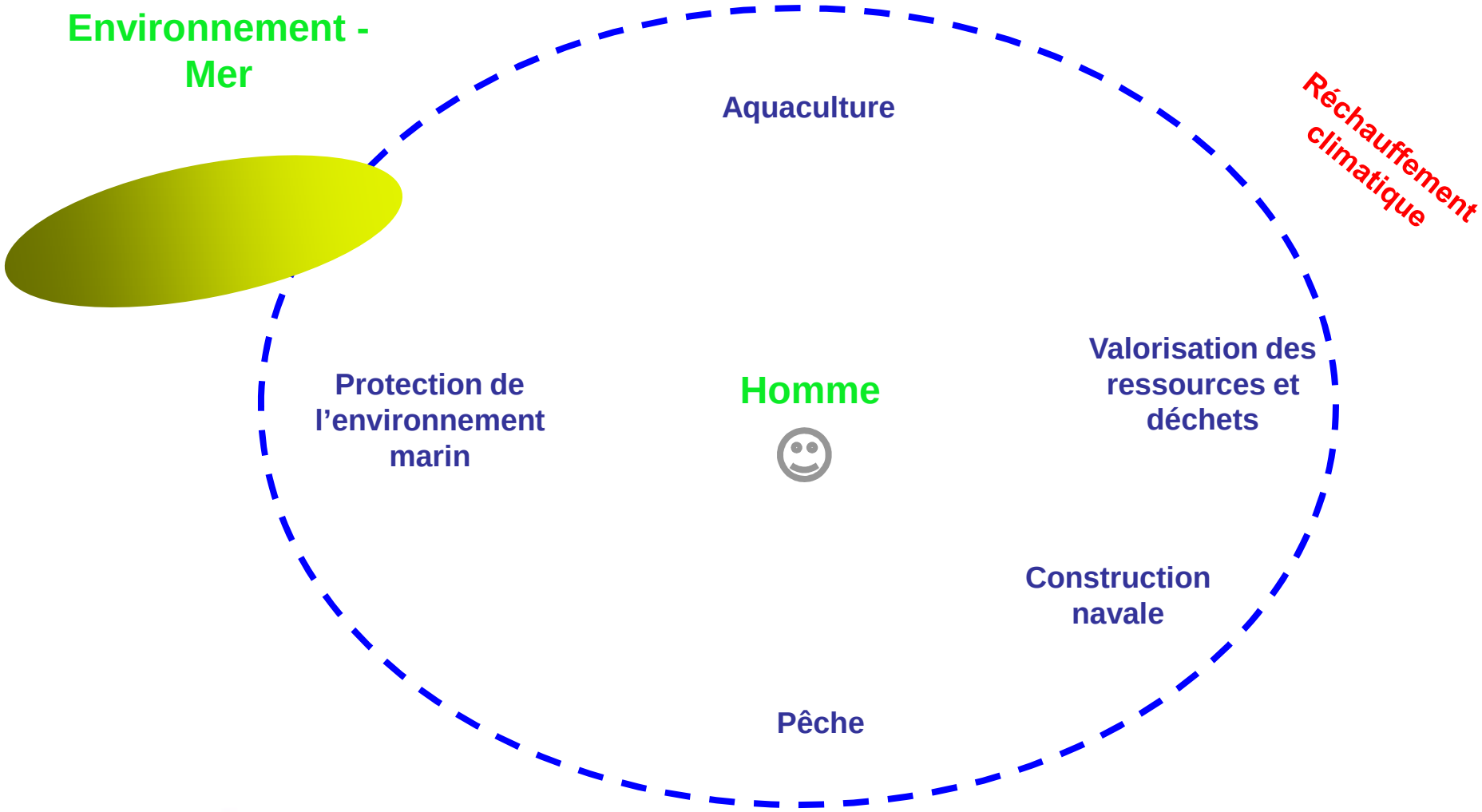
>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling
properties able to recognise
and destroy pollutants and corrosion
agents. Specialty polymer industries
would benefit from 'intelligent'
composite materials based on organic
or inorganic materials and also biocompatible
materials;
> Smart materials that respond to their
environment, that are self-cleaning,
anti-fouling and have anti-corrosion
properties

Interface Europe; 27/08/2008

Projets potentiels sur le thème «Eaux de ballast»

- Issus des opportunités européennes
- Issus des synergies locales

Projets potentiels issus des synergies locales

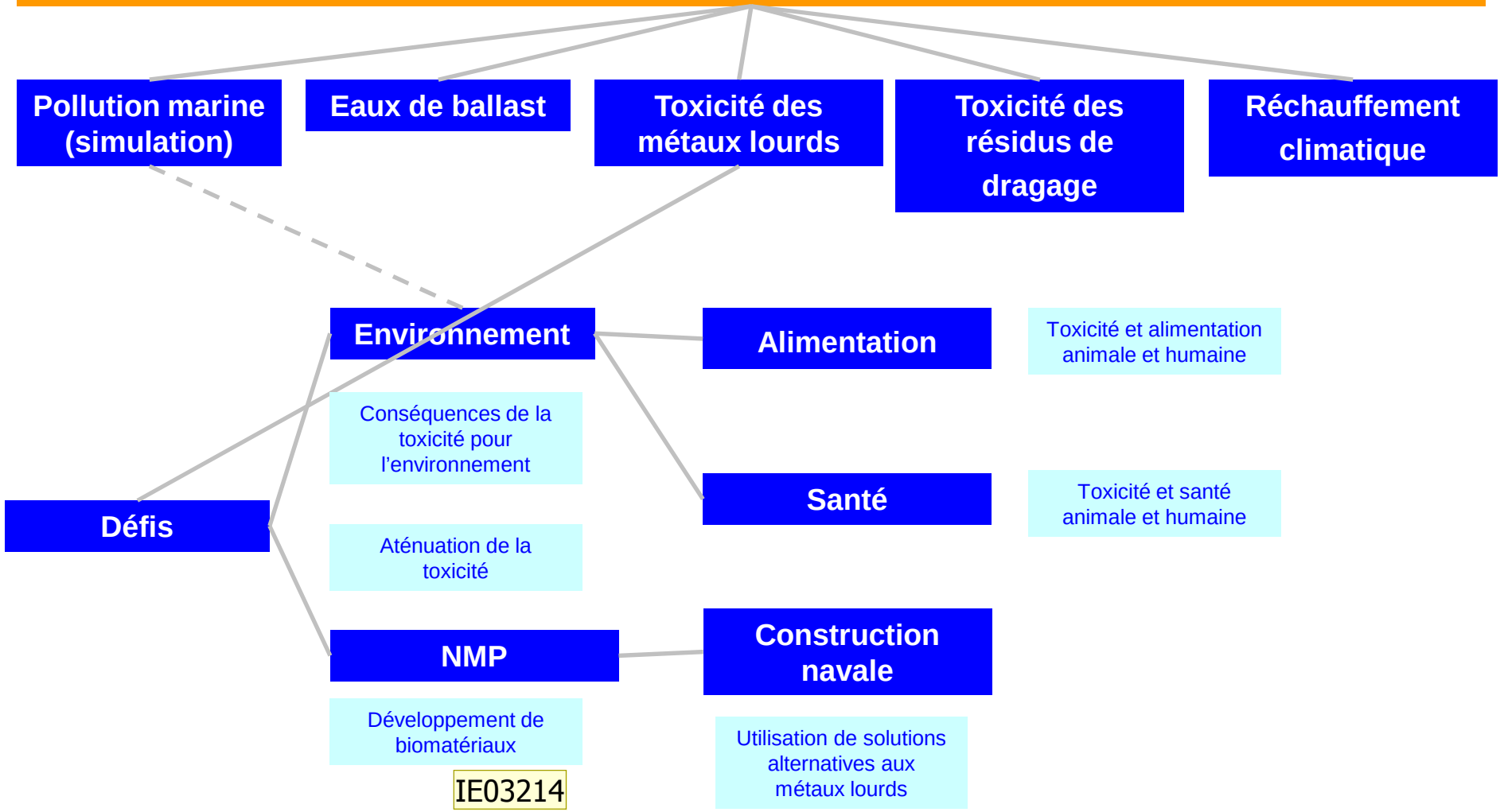


Synergie potentielle

Projets potentiels sur le thème «Toxicité des métaux lourds»

- Issus des opportunités européennes
- Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 163

IE03214 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Quality of life:

>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling
properties able to recognise
and destroy pollutants and corrosion
agents. Specialty polymer industries
would benefit from 'intelligent'
composite materials based on organic
or inorganic materials and also biocompatible
materials;
> Smart materials that respond to their
environment, that are self-cleaning,
anti-fouling and have anti-corrosion
properties

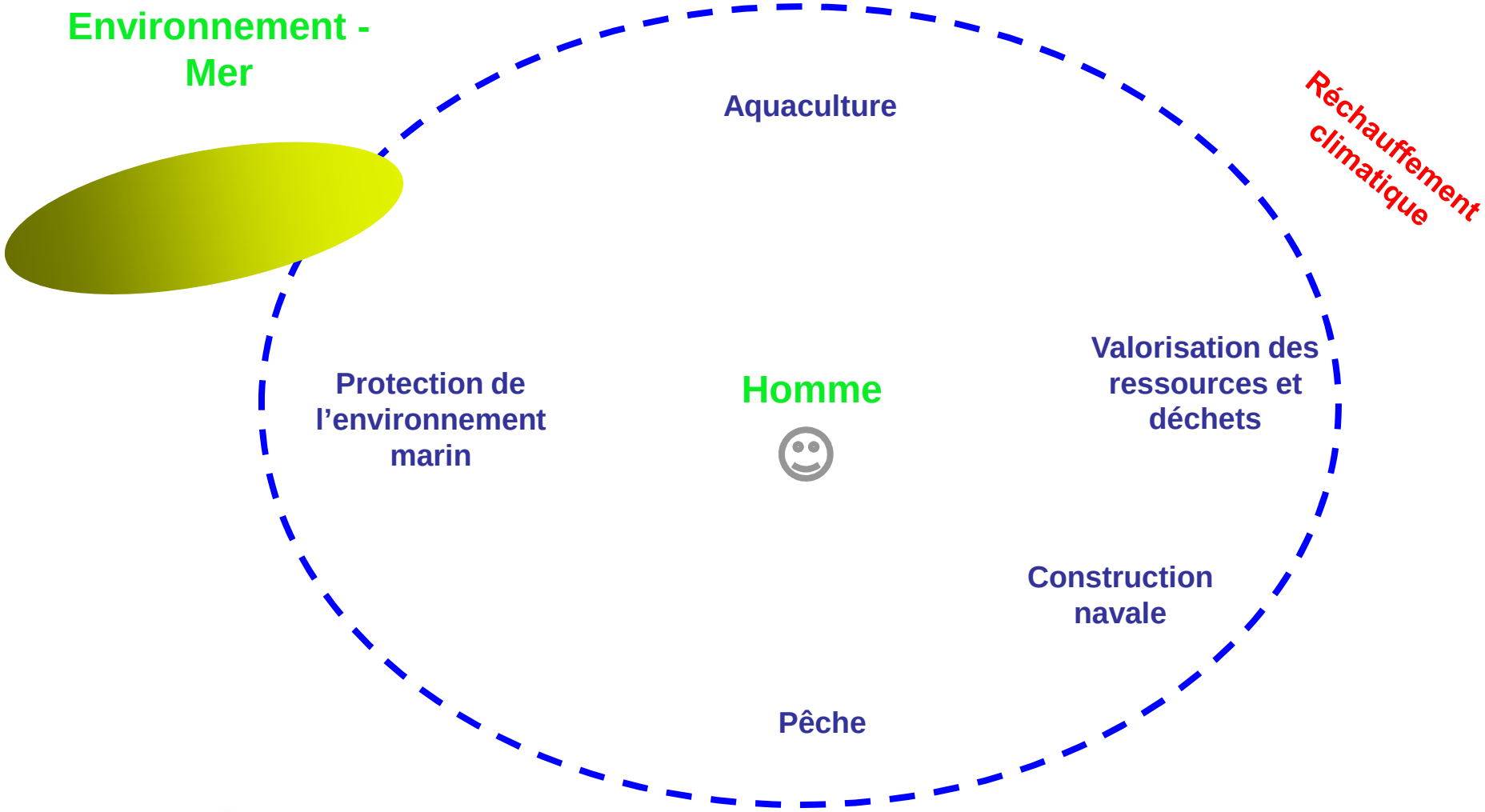
Interface Europe; 27/08/2008

Projets potentiels sur le thème «Toxicité des métaux lourds»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des synergies locales



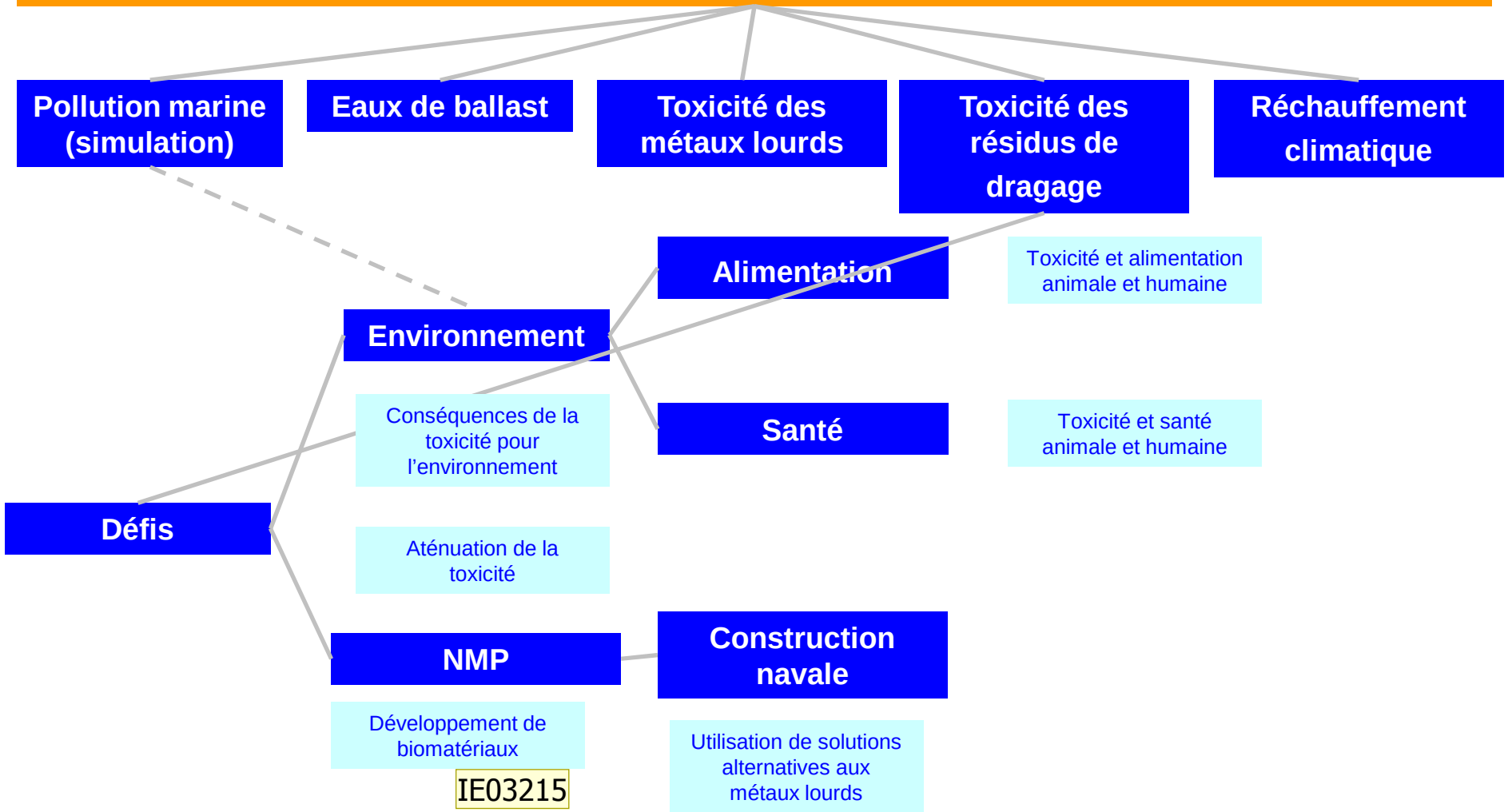
Synergie potentielle

Projets potentiels sur le thème «Toxicité des résidus de dragage»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 167

IE03215 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Quality of life:

>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling
properties able to recognise
and destroy pollutants and corrosion
agents. Specialty polymer industries
would benefit from 'intelligent'
composite materials based on organic
or inorganic materials and also biocompatible
materials;
> Smart materials that respond to their
environment, that are self-cleaning,
anti-fouling and have anti-corrosion
properties

Interface Europe; 27/08/2008

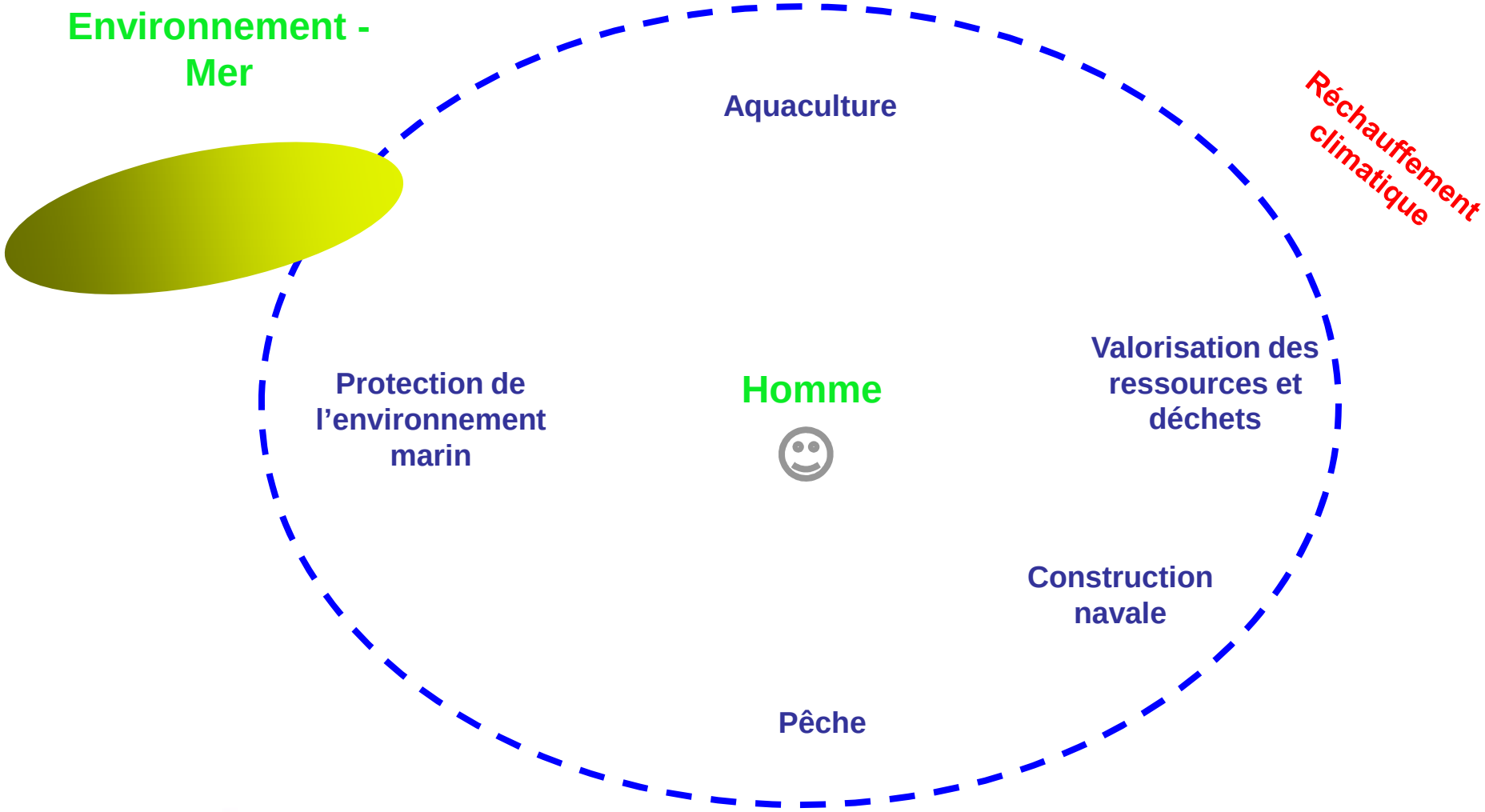
Projets potentiels sur le thème «Toxicité des résidus de dragage»

Issus des opportunités européennes

Issus des synergies locales

Synergie potentielle

Projets potentiels issus des synergies locales

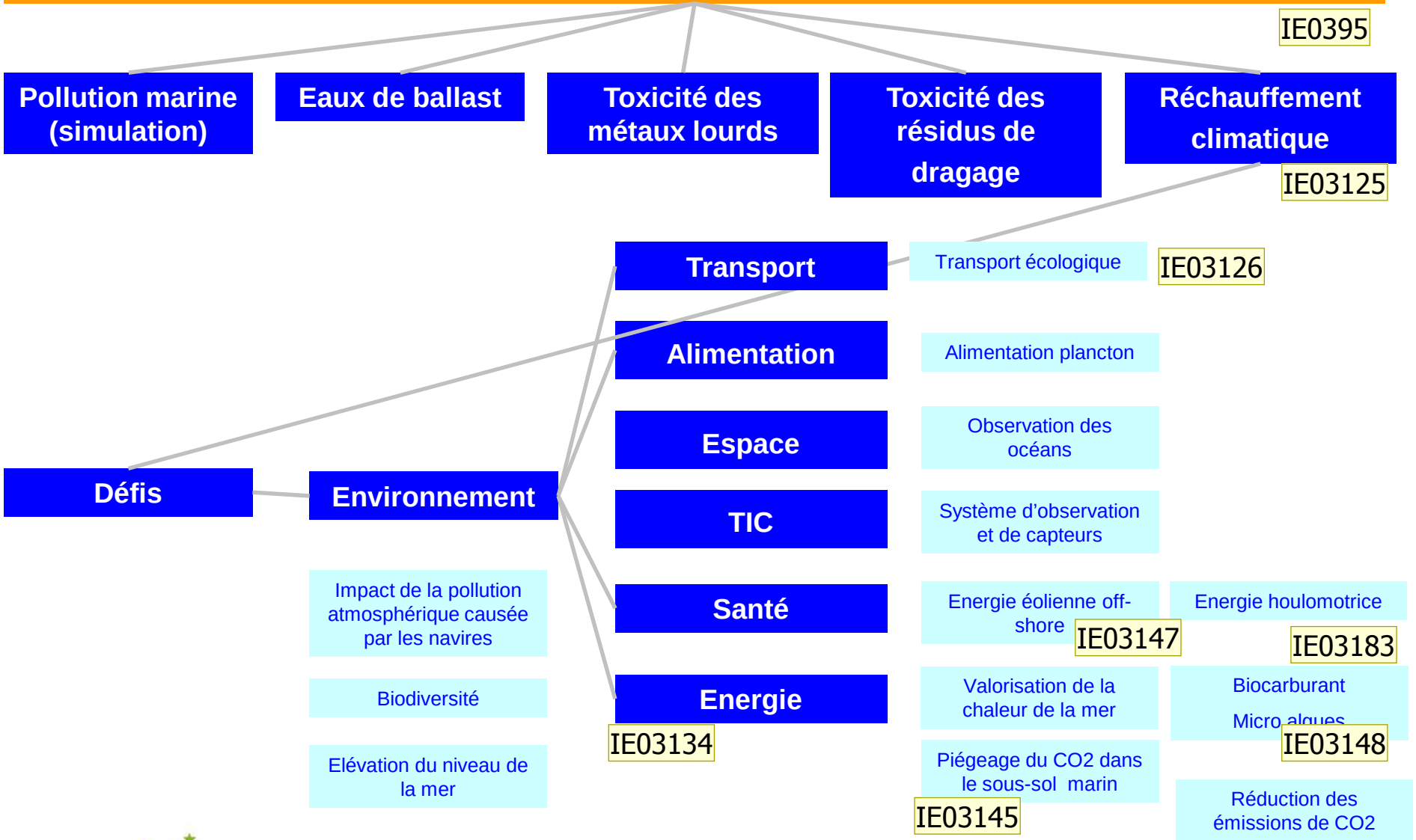


Synergie potentielle

Projets potentiels sur le thème «Réchauffement climatique»

- **Issus des opportunités européennes**
- **Issus des synergies locales**

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 171

IE0395 Development of cleaner technologies and the improvement of bioremediation and waste biotreatment processes with an emphasis on environmental friendly products and processes, recycling and/or biodegradation of
wastes and industrial by-products, bioassays to monitor the effects of toxic
chemicals on biological systems,
Interface Europe; 18/08/2008

IE03125 Politique martime intégrée (livre bleu) :

> Stratégie communautaire en matière de prévention des catastrophes et le développement d'une stratégie d'adaptation au changement climatique, avec une attention particulière pour les régions côtières (courant 2008).
Interface Europe; 26/08/2008

IE03126 Politique maritime intégrée (livre bleu) :

> Réduction des émissions de CO2 et de la pollution causée par la navigation
Interface Europe; 26/08/2008

IE03134 Document de travail de la Commission européenne intitulé «Energy policy and maritime policy: ensuring a better fit» : consacré aux connexions et aux synergies entre les politiques énergétique et maritime de l'Europe :

> "Ocean energy systems cover a wide range of applications that can be deployed on the
shoreline and offshore. Research encompasses shoreline and offshore wave energy devices,
tidal current turbines and salinity gradient systems. Technology is emerging to allow large
scale demonstration projects. To date, a few demonstration prototypes exist"
Interface Europe; 26/08/2008

IE03145 Politique maritime intégrée (livre bleu) :

> Le piégeage du carbone dans le sous-sol marin est une activité novatrice qui offre de belles perspectives pour atténuer le changement climatique.
L'Union européenne doit rester à la pointe de cette technologie et définir un cadre réglementaire cohérent pour exploiter pleinement cet avantage.

> Document de travail de la Commission européenne intitulé «Energy policy and maritime policy: ensuring a better fit» : consacré aux connexions et aux synergies entre les politiques énergétique et maritime de l'Europe :

"CCS may well be an essential element in allowing continued power generation and energyintensive
activities in Europe from fossil fuels in a climate-compatible way during the next decades of transition to a sustainable energy future. The global market for CCS technologies could be immense, given the dependence on coal in many countries and the need to limit global CO2 emissions.

(...)

A number of off-shore CO2 related activities
need to be established: (i) transport of CO2 by ship or by dedicated pipeline systems; (ii)
drilling of test wells and CO2 injection wells in underground geological formations below the
seabed, installation of the injection infrastructures (including platforms) and operation of injection of CO2 into such formations; (iii) long-term storage of CO2 in geological subseabed formations; (iv) monitoring of CO2 capture, transport and storage activities."

"With a mandate from the 2007 Spring European Council, Commission services are working on how the EU could support the construction of up to twelve large-scale demonstration power plants using CCS by 2015. Given the location of potentially suitable storage sites, notably offshore, several of these demonstration plants are likely to be located in coastal areas. Injection of CO2 into producing oil and gas fields, most of which are offshore, can increase the total yield of such fields by as much as 15%.

If CCS does come into widespread use, the location of future coal- and gas-fired power plants (or other fossil fuel conversion processes, eg refineries) may be concentrated in coastal areas adjacent to suitable the geological storage sites under seabed. Increased environmental and weather risks in these locations related to climate change will have to be taken into account."
Interface Europe; 26/08/2008

IE03147 Document de travail de la Commission européenne intitulé «Energy policy and maritime policy: ensuring a better fit» : consacré aux connexions et aux synergies entre les politiques énergétique et maritime de l'Europe

> "There is much interest in the wind industry in a European maritime policy, notably establishment and use of marine spatial planning, lessening the regulatory risks. Coordinated data gathering and access, underpinning risk assessments, would be welcomed."

Wind TP SRA :
The economics of offshore wind favour larger machines, which differ from those used onshore. The offshore environment may allow the relaxation of a number of constraints on turbine design, such as aesthetics and noise level. However, addressing marine conditions, corrosion and reliability issues creates new challenges in the offshore sector. This will lead to a significant modification of onshore machines in the near term and the development of specific offshore designs in the medium and long term.

Textile TP - Vision:

Also in the field of energy generation, transportation and storage, textiles find ever more innovative uses.
These include:
(...)
• anchoring or flotation elements for off-shore platforms
Interface Europe; 27/08/2008

IE03148

Document de travail de la Commission européenne intitulé «Energy policy and maritime policy: ensuring a better fit» : consacré aux connexions

et aux synergies entre les politiques énergétique et maritime de l'Europe :

> "Marine biomass feedstock for energy production is currently exploited only marginally but it may have important potential. Research is necessary on order to assess the current technologies for marine biomass production and conversion, and to identify the major challenges and opportunities for its exploitation for energy production."

Plants for the Future TP:

For energy the aim is to produce better production systems with 50% lower energy input requirements, as well as to improve energy capture and to optimise selected highenergy plant biomass production systems.
Interface Europe; 27/08/2008

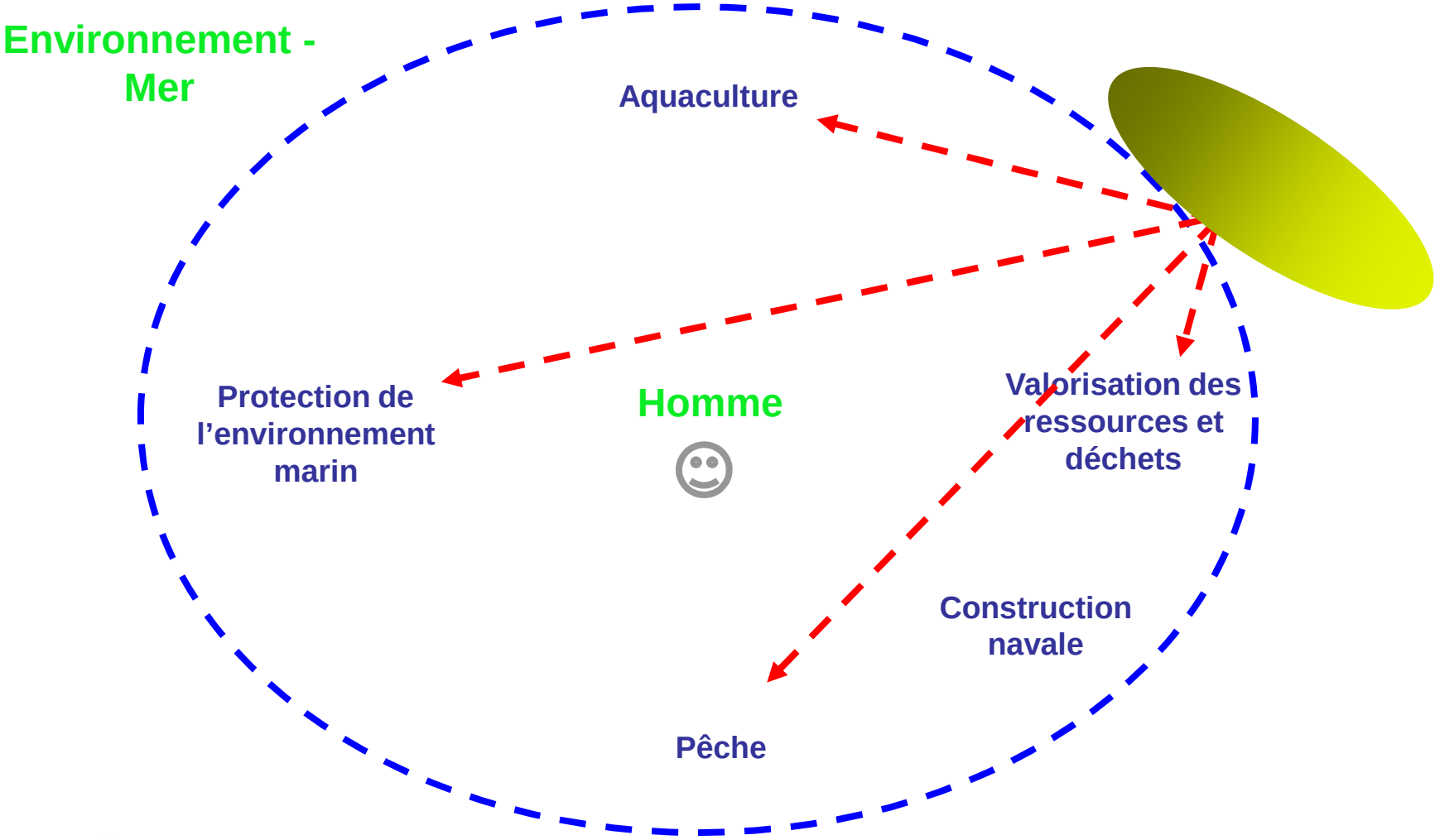
IE03183 Biofuel Technology Platform:

> Industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from residues. A major role for biorefineries is the production of biofuels that is fuels derived from lignocellulose feedstocks.
Interface Europe; 26/08/2008

Projets potentiels sur le thème «Réchauffement climatique»

- Issus des opportunités européennes
- Issus des synergies locales

Projets potentiels issus des synergies locales



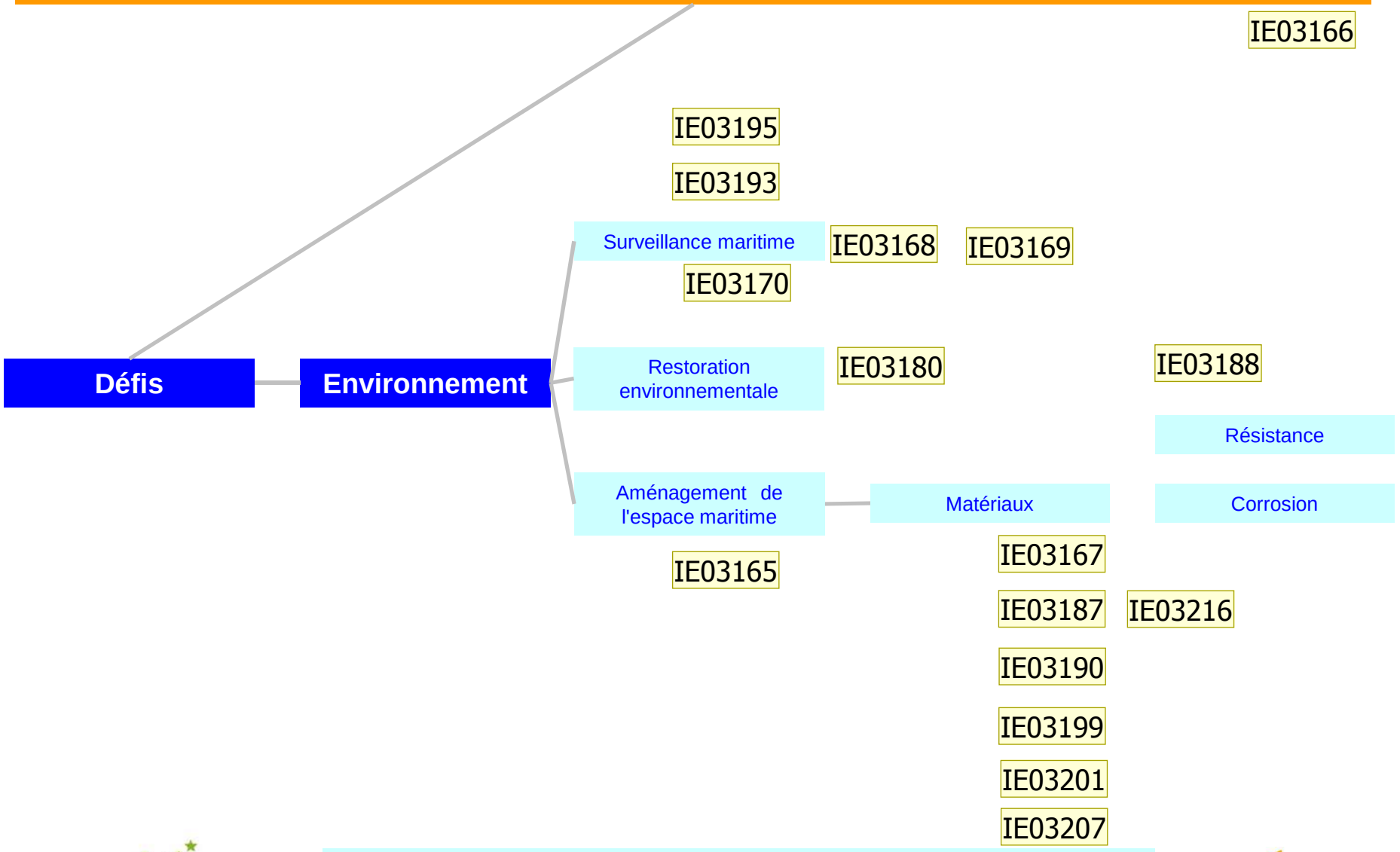
Synergie potentielle

Projets potentiels sur le thème « Protection de l'environnement marin »

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 1 : Protection de l'environnement marin



Idées de projets potentiels

Diapositive 175

IE03165 Politique maritime intégrée (livre bleu) :

> feuille de route pour l'aménagement de l'espace maritime par les États membres : développement d'un système d'échange de meilleures pratiques, entre les pouvoirs publics, dans les domaines de la planification de l'espace
maritime et de la gestion intégrée des zones côtières (2009):
Interface Europe; 26/08/2008

IE03166 Politique maritime intérée (plan d'action) :

> Des entreprises européennes accroissent en permanence leur savoir-faire dans le domaine du
contrôle de la pollution, des ressources marines renouvelables, de la recherche océanographique, de l'exploration en haute mer, des travaux maritimes et de l'ingénierie côtière. L'économie européenne doit encourager et exploiter ce potentiel d'innovation. C'est pourquoi, dans le cadre de la communication «Une politique maritime intégrée», nous devons faire un pas qualitatif vers le renforcement de la recherche marine en la reliant au développement technologique.

Interface Europe; 26/08/2008

IE03167 EuMaT:
> Advanced materials with specific requirements for corrosion resistance :
Automotive, Rail & Marine industries (replacing conventional metals)
Extreme conditions: high-temperature, high pressure, creep, corrosion and radiation resistance
Interface Europe; 26/08/2008

IE03168 Interface Europe 26/08/2008
Politique maritime intégrée pour l'UE (livre bleu) :

> Réseau plus intégré de systèmes de surveillance des eaux européennes :
- programme de travail détaillé en vue de l'intégration de tous les systèmes européens de
surveillance maritime, qui couvriront les zones maritimes ainsi que d'autres aspects
non liés aux frontières (2008). Des liens pourront également être tissés avec les travaux du secteur privé dans ce domaine, et l'intégration des systèmes en place au niveau régional pourra aussi être prévue

> Réseau européen d'observation et de données du milieu marin (Emodnet): Intégré au réseau mondial des systèmes d'observation de la Terre (GEOSS) et à l'initiative relative à la surveillance mondiale pour l'environnement et la sécurité (GMES), il ouvrira également des
débouchés nouveaux pour les entreprises commerciales de haute technologie du secteur
maritime et améliorera l'efficacité d'activités telles que la surveillance maritime, la gestion
des ressources marines et les recherches sur le milieu marin dans les laboratoires européens :
- feuille de route (2008)
- plan d'action européen (2009)
Interface Europe; 26/08/2008

IE03169 Interface Europe 26/08/2008

Politique maritime intégrée (plan d'action) :

> La Commission lancera l'élaboration d'un Atlas européen des mers sur la base des informations spatiales disponibles et sur la base des travaux du réseau européen d'observation et de données du milieu marin. Elle prévoit sa première publication en 2009.
Interface Europe; 26/08/2008

IE03170

ARTEMIS :
> Embedded Systems technologies are deployed in all market sectors - automotive, aerospace, medical, environment, communications, entertainment, textiles, transport, logistics, printing and chemicals, food & drink, timber and materials.
> The improved mobility, both of people and of goods, through fast, efficient, safe and accessible public transport (trains, metro, roads, maritime transport,...), the supply of utilities and energy, a better connected communication infrastructure, are all examples of Public Infrastructures that can take benefit from the huge potential offered by Embedded Systems.
> Safer and secure, better controlled road infrastructure (active road safety support, traffic management systems with more cooperative vehicles, active bridges, secure tunnels, ...) are achievable through greater integration of Embedded Systems.
Interface Europe; 26/08/2008

IE03180 Biofuel Technology Platform:

> Grey biotechnology, which was once indistinguishable from white biotech, refers to environmental applications.
This means creating sustainable technological solutions to protecting the environment. Examples of such technologies include the development of biological enzymes which can help to clean up the effects of manmade environmental disasters, such as oil spills, and micro-organisms that absorbs and
fi lters waste matter in sewage water as part of the purification process.
Interface Europe; 26/08/2008

IE03187 ECTP :

> To develop our understanding of the nature of moveable and immoveable cultural heritage environments (eg. mixing of air in cases and rooms and the interaction of water with

complex building structures) through the development of risk management methodologies, models and tools.

> New techniques are required to identify, regulate and monitor territorial objects, which cannot be addressed either at the city or the regional levels, like waterways, coastal areas, and engineering artefacts. Here the EU and regional policy instruments are to be accompanied with the support of enhanced technological tools.
Interface Europe; 26/08/2008

IE03188 ECTP :

> To integrate new environmental challenges by assessing, predicting and managing the impacts of climate change, energy use and pollutant damage to safeguard cultural heritage assets in urban and natural areas. To develop prediction models, environmental impact assessment methodologies and risk assessment and risk preparedness studies. To set up information management systems as well as appropriate preventive measures and suitable interventions for the improved care of the cultural assets in relation with their environment and contents. To improve the use of traditional materials and skills, renewable forms of energy, water conservation and the implementation of recycling of materials for sustainable and cost-effective strategies in the adaptive re-use of
Cultural Heritage. In terms of disaster preparedness and risk management, there is the realisation that disasters may be unavoidable. The increasing influence of climate change means that the likelihood of extreme weather events such as storms, floods, droughts and high winds is increased, along with the already-present threats such as landslides, fire and physical damage.
Should disaster strike, it may be necessary to effect repairs on to a structure. This may range from small-scale repairs of individual components (i.e. broken windows or lost roofing slates) to large-scale reconstruction of a building, monument or assemblage of buildings.
Should this be the case a number of issues need to be raised, including:
• Supply of Appropriate Materials
• Skills and Labour
• Prevention of Repeated Damage

Given that with the increasing importance of climate change, more extreme weather events are predicted to occur in the next few decades, the importance of disaster planning and risk management become clear.
Interface Europe; 26/08/2008

IE03190

SRA :

ETPIS can contribute to the following specific programmes:

• Environment (including Climate Change) : impact of natural hazard on critical infrastructures

ADVANCED RISK REDUCTION TECHNOLOGIES

Basic knowledge, methods and technologies need to be developed in:
• Technologies for inherently safer design and to reduce risks at source;
• Technologies to reduce emissions of hazardous substances and aerosols
• Novel and effective methods for reducing risks related to noise and vibration
Novel and effective methods for reducing risks related to electromagnetic hazards and optical radiations (non-laser and laser radiations)
• Technologies and methods for inherently safer design of industrial plants and installations to reduce major-accident hazards
• Technologies for reducing risks by collective protective systems and devices ;
• Protection systems and smart sensors for machines, production and transportation processes
• Software tools for detecting dangerous situations in industrial systems
• Systems and devices protecting against noise and vibration
• Collective protection devices against electromagnetic hazards and optical radiations
• Novel and advanced technology in lighting the workplaces
• Application of information technologies in safety-related systems
• New materials, technologies and test methods for personal protective equipment (PPE);
• Test methods and safety requirements for PPE applied against new specific hazards
• Innovative materials & individual systems for the personal protection of health and life
• Ergonomics innovations for PPE used in work and everyday life conditions

UNDERSTANDING THE IMPACT OF HUMAN AND ORGANISATIONAL FACTORS IN RISK CONTROL

Basic knowledge, methods and technologies need to be developed in:
• Human and Organisational Factors in Managerial Safety Factors in Organisational and Managerial Safety
• Human-Centred Design
• Integrated Risk Assessment and Management Methods & Techniques
• Human Performance & Technology Usability
• Human Factors in Emergencies and Crisis Management
• Safety and Quality: Could they be merged, do they really match?

IE03193 Integral Satcom Initiative (ISI):

The Integral Satcom Initiative - ISI (www.isi-initiative.eu.org) brings together all aspects related to satellite communications, including mobile, broadband, and broadcasting applications, security systems and applications, and the integration of data communications with navigation, Earth observation and Air Traffic Management systems, both for commercial and institutional/ governmental applications.

Key Research Themes of ISI:

Interworking with Galileo and GMES: Achieving and demonstrating successful inter-working with other (non communications) systems, networks and technologies, notably Galileo and GMES. Demonstrating satellite communications as essential complementary elements to exploit Navigation and Earth Observation systems to their fullest, and providing integrated applications fully meeting user demands.

Interface Europe; 26/08/2008

IE03195

Space TP:
In its communication on GMES from November 2005, the Commission sets out a strategy for delivering GMES, beginning with the pilot phase of the three first (fast-track) operational GMES services by 2008 (emergency management, land monitoring, and marine services).

GMES: Global Monitoring for Environment & Security
o Climate change, water resources management, atmospheric trace gas compositions, disasters forecasting, ...
o Civil protection assistance (earthquake, flood monitoring, pollution tracking, ...), crisis management and humanitarian aid support
Interface Europe; 26/08/2008

IE03199 ESTEP - SRA:
> Corrosion : Processing for critical applications (fire, earthquake, durability and corrosion)
The medium term target is to produce new steelbased solutions offering a higher resistance to a high temperature environment, to complex mechanical stress or to corrosion. Composite products are one of the possible options in this field and manufacturing processes will be adapted to the fabrication of related composite steel grades. As an example, the promotion of the fine and dispersed precipitation of endogenous or exogenous particles is an initial possibility. Another option relies on products characterised by differences in properties between the surface and internal parts of the product.
• The incorporation of intelligent devices in the steel structures allowing early detection of the occurrence of a disaster will even increase the efficiency of the steel solutions offered.

The main emphasis should be directed to the

technical and scientific development of materials
and products, including composite structures, and the development of new products, new
construction systems, production and construction processes. Product development is already focused on the evolution of standardised products and mass customised production systems. However, further innovations must be carried out to develop new steel grades with improved corrosion resistance and fire safety, new technical solutions for combining steel with other materials, and associated innovative design features. This would offer new potential for a healthier lifestyle, such as minimisation of noise and vibrations, improvement in thermal insulation systems, and the capacity to integrate alternative energy systems. Finally, the development of new assembly processes would contribute to reductions in on-site costs.
Interface Europe; 27/08/2008

IE03201 Wind TP SRA :
The economics of offshore wind favour larger machines, which differ from those used onshore. The offshore environment may allow the relaxation of a number of constraints on turbine design, such as aesthetics and noise level. However, addressing marine conditions, corrosion and reliability issues creates new challenges in the offshore sector. This will lead to a significant modification of onshore machines in the near term and the development of specific offshore designs in the medium and long term.
Interface Europe; 27/08/2008

IE03207 Textile TP - Vision:

>New Textile Applications

With important advances in textile materials research, processing technologies and changing functional requirements of products in other industries over the last two decades, textiles have found an ever broader range of application
in sectors as diverse as road, rail, marine or aerospace vehicles, engineering, construction, agriculture, power and environmental technologies, health care, defence and security etc.

Also in the field of energy generation, transportation and storage, textiles find ever more innovative uses.
These include:
(...)
• anchoring or flotation elements for off-shore platforms
Interface Europe; 27/08/2008

IE03216 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Quality of life:

>Smart internal and external
coatings with self-cleaning properties
and responsive to changes in the
environment or surfaces with antifouling

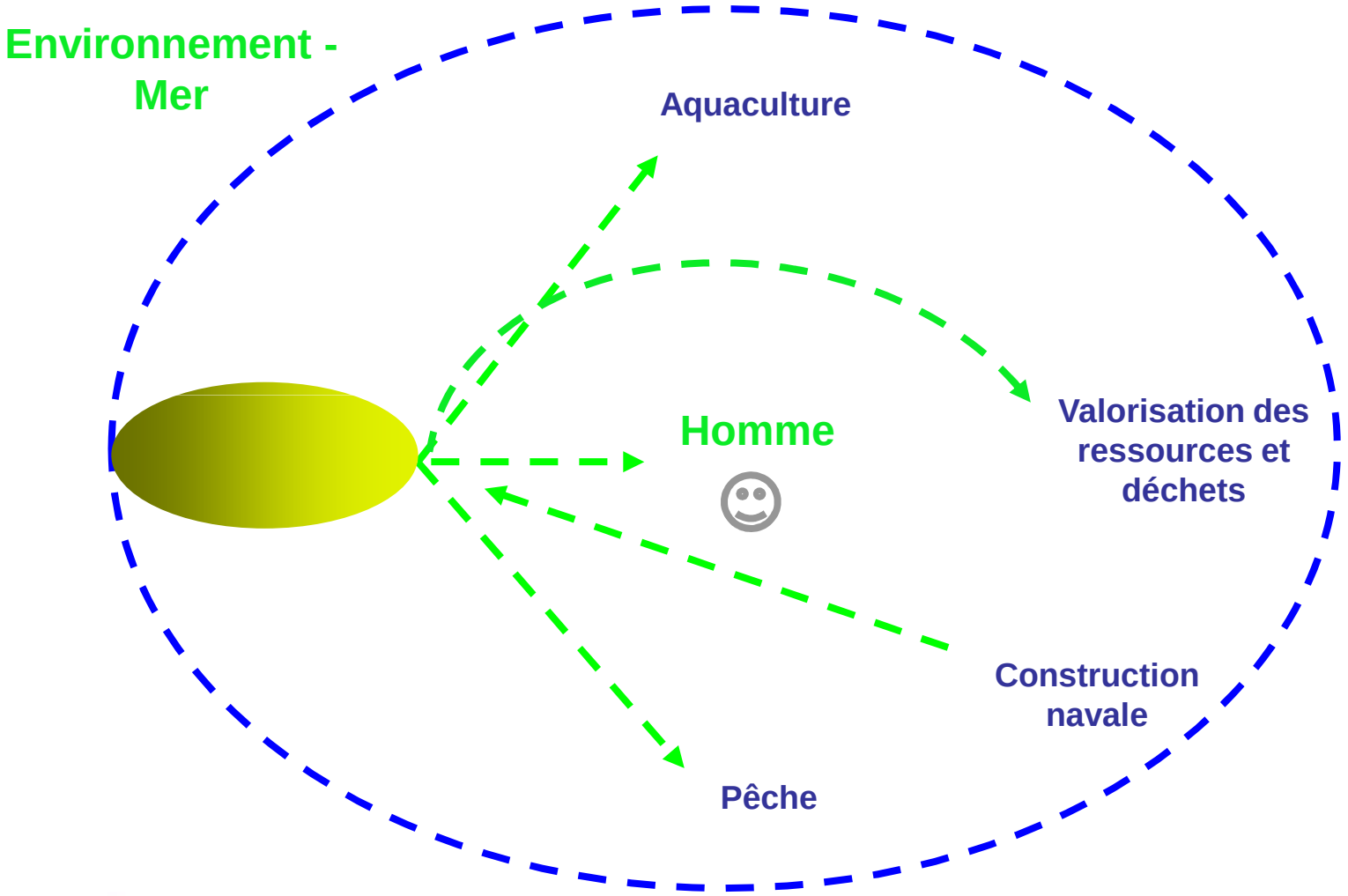
Projets potentiels sur le thème « Protection de l'environnement marin »

Issus des opportunités européennes

Issus des synergies locales

Synergie potentielle

Projets potentiels issus des synergies locales



Synergie potentielle

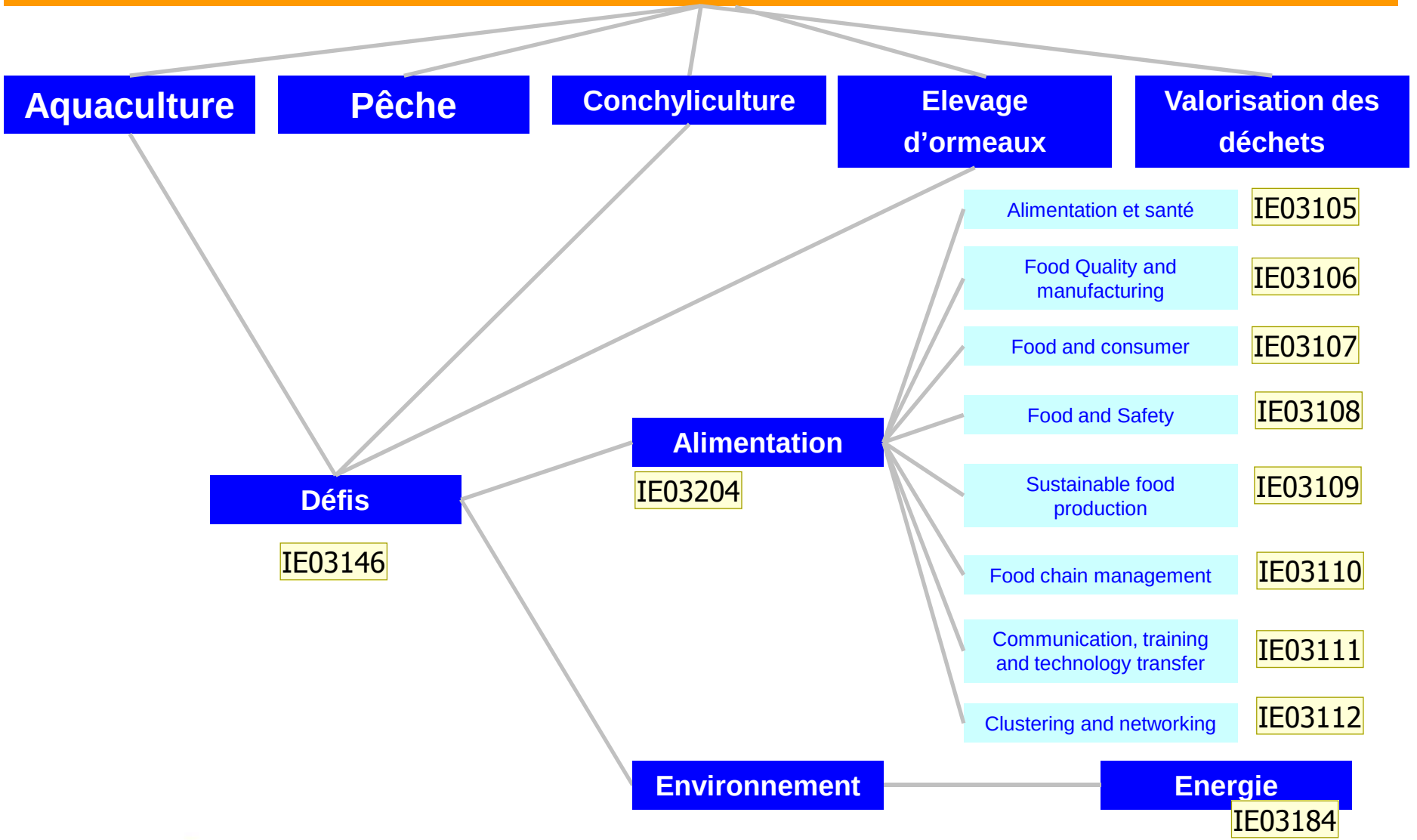
Projets potentiels sur le thème «Aquaculture»

Issus des opportunités européennes

Issus des synergies locales

Synergie potentielle

Projets potentiels issus des opportunités européennes AXE 2 : Valorisation des ressources naturelles marines et du littoral



Idées de projets potentiels

IE03105 European Technology Platform on Food for Life:
VISION DOCUMENT

Research topics will include:
■ New and effective food-based strategies to optimise:
☞ Children's growth and mental development;
☞ Lean body mass in adults, including maintenance of muscle function and prevention of obesity;
☞ Immune function and mental performance;
☞ Healthy gastro-intestinal tract for improved well-being and resistance to diseases;
☞ Basis of key strategic research areas in food and health: biomarker discovery and validation (epidemiology; systems biology/nutrigenomics; intervention trials).
■ New and effective food-based strategies for reducing the risk of diet-related diseases, such as obesity, cardiovascular disease, type 2 diabetes, arthritis, osteoporosis and cancer.
■ The influence of diet on the ageing process, e.g. energy intake.

SRA :

Goal 2. Understanding effects of diet-gut interactions on intestinal and immune functions
Major research challenges
1. To enhance the knowledge and study the mechanism of the relation between the immune system and other organ systems such as the brain, the endocrine system and the intestine and their relation to physical activity.

2. To study foetal and neonatal nutrition in relation to immune (de)regulation during later life by metabolic/immunologic imprinting.

3. To identify and validate minimally invasive biomarkers of the immune system and related systems in order to achieve and accelerate progress. The limited availability of widely accepted and effective pre-clinical model systems for screening purposes must also be

addressed to improve mechanistic understanding
and stimulate scientific progress,
innovation and regulatory decisions.

Goal 3. Understanding the link
between diet and metabolic
function (obesity and associated
metabolic disorders)
Major research challenges
1. To understand the genetic background of individual
metabolic profiles in relation to body
weight control and the risk for development of
co-morbidities such as type 2 diabetes and
metabolic syndrome with increasing weight.
2. To develop effective food ingredients and
dietary strategies to prevent (re-)gain of
weight.
3. To define the effects of diets and nutrients
early in life for health outcomes in later years.
4. To tackle the nutrition-related wasting diseases in the elderly population and understanding the role of nutrition in healthy ageing
5. To develop risk-benefit (disease) models and
scenario studies on obesity and on nutrition
and healthy ageing

Goal 4. Understanding consumer behaviour and effective communication in relation to health and nutrition
Major research challenges
1. To understand the process and key determinants of behavioural change, such as food habit-formation and -breaking.
2. To understand consumer knowledge of nutritional concepts and responsiveness to communication formats, including health schemes
(e.g. pyramids etc), health claims, simplified
labelling (e.g. sign posting) as well as targeted,
more personalised food recommendations
(e.g. from advances in nutrigenomics).
3. To understand the perception and determinants of a 'healthy food lifestyle', analysing the cross-cultural and subpopulation group differences.
4. To understand the role of biological determinants in food choice (including the role of
genomics and brain functions).

Interface Europe; 18/08/2008

IE03106 European Technology Platform on Food for Life:
VISION DOCUMENT

Research topics will include:
Perception of taste
■ Technologies to drastically reduce sugar, salt and fat levels in food products without compromising sensory properties.
■ Understanding the dynamics of sensory perception from receptor to brain, including cross modal interactions of the senses, flavour release and structure breakdown.
■ Technologies for new products and meal concepts with attractive sensory characteristics for specific groups such as children and the elderly.
■ Technologies to create novel, exciting food product textures based on the concept of dynamic structuring and breakdown.
Manufacturing
■ Technologies for minimising by-products and waste production.
■ Rapid analytical on-line methods to measure required properties of supplied raw materials.
■ Sustained attention to competitive low cost processing.
■ Innovation in and industrialisation of regional gastronomy.
■ Technologies for flexible packaging process systems and active, intelligent and convenient packaging systems.
■ Integrated production and process design.
■ Technologies for flexible, distributed and miniaturised processing systems to cope with personal demands as well as hygienic and minimal processing systems for optimal quality.
■ Bioprocessing and improved separation technologies for novel ingredients.
■ Technologies for convenience foods: easy to handle, time saving, ready-to-eat and heat-to-eat.

SRA:
Goal 1. Producing tailor-made food products

Major research challenges
1. To develop and apply novel processes for the implementation of the PAN profiles through innovative product functions.

2. To develop convenient, tailored personalised food products to meet all consumer preferences, acceptance and needs.

3. To identify bioactive food constituents from plant, animal and microbial sources, and beneficial micro-organisms and their mechanisms of action.

4. To develop environmentally friendly sustainable food processes, such as better utilisation of side streams and innovations to avoid excessive packaging.

Goal 2. Improving process design, process control and packaging

Major research challenges
1. To provide improved PAN functions through the redesign and optimisation of food processing and packaging, in order to increase competitiveness and sustainability.
2. To introduce scaleable and flexible food manufacturing techniques and their intelligent in-line control.

3. Risk-benefit balanced innovative, sustainable, and safe food packaging for implementation into integrated food chain concepts.

Goal 3. Improving understanding of process-structure-property relationships

Major research challenge
1. To understand relationships of food structures from molecular via nano- to macro scale with respect to product and process design, and to develop new processing principles for improved PAN profiles.

Goal 4. Understanding consumer behaviour in relation to food quality and manufacturing
Major research challenge
1. To integrate consumer-orientation in new product development, and to understand consumer responses to new products, processes and packaging technologies across different target groups.

Interface Europe; 18/08/2008

IE03107 European Technology Platform on Food for Life:
VISION DOCUMENT

Research topics will include:
■ Understanding and predicting food selection for a healthy diet, and stimulating a good habitual consumption of foods. This might include developing personalised information and products optimising quality and consumer health and the prediction of future trends at the global, EU, regional and local level.
■ The design and validation of new ways to effectively communicate and target information on healthy diets at various population groups with different information needs, including minority ethnic populations and those most at risk.
■ Mapping the dietary habits of ethnic and immigrant populations in Europe and effectively exploiting this new knowledge.
■ Mapping food culture in Europe and in the global market.
■ Analysing the role of price versus other food benefits and how this differs between specific target groups (e.g. low income consumers).
■ Consumer-controlled product development; models and techniques for translating consumer information into sensory and non-sensory product specifications.
■ Understanding the determinants of consumer acceptance of food technologies, and how this varies according to individual consumer benefits.
Are new technologies the answer to the demands

and health requirements of consumers? What is the best strategy for the food industry to adopt when using technology applied to product innovation?
Interface Europe; 18/08/2008

IE03108 European Technology Platform on Food for Life: VISION DOCUMENT

Research topics will include:

■ A 'systems' approach for improved food safety and reduced food spoilage, including the development of integrated processing and packaging solutions; a holistic approach of safety of cooked foods; understanding shelf life.
■ Methods of quantitative risk assessment and predictive modelling of safety and spoilage risks along the extended supply chain, including product and process design models, novel detection routines and the impact of cold chain.
■ Reliable tracking and tracing systems to ensure product safety and guarantee product origin.
■ Epidemiology and surveillance – not only strengthen and broaden surveillance networks (e.g., Enter.Net), but also develop scientific predictive insight into how pathogens survive and disseminate.
■ Food-borne micro-organisms and their ecophysiology; community interactions, host-microbe- and food-microbe interactions, pathogenicity and virulence mechanisms using functional genomics.
■ Viruses, parasites and emerging pathogens – molecular mechanisms of emergence.
■ New technologies – development and complete validation.
■ Research on consumer perception of food safety.
■ Reduction and eventual elimination of all animal testing in food safety.
■ Cleanroom technology.
■ Holistic approach to the relation between processing and food safety, including cooking.

SRA:

Goal 1. Predicting and monitoring the behaviour and fate of relevant known and emerging biological hazards

Major research challenges
1. To describe and understand how microorganisms respond to the various environmental stimuli and stresses which the food matrices present and to predict the effects and eventual consequences that these might have on resistance and persistence.

2. To enhance understanding of behaviour and virulence traits of food-borne pathogens and the mechanisms of emergence: using epidemiological and typing data, monitoring virulence traits and better describing mechanisms of virulence and emergence of virulence, and the effects of the food chain on these characteristics. Reduce or limit and, if possible, replace animal testing.

Goal 2. Predicting and monitoring the behaviour and fate of relevant known and emerging chemical hazards including toxins of biological origin
Major research challenges
1. To generate data and knowledge on chemical contaminants in food and strategies for reduction; generating and interpreting data on the fate of chemicals in the food chain (role of primary production, processing, persistence, biotransformation, destruction, accumulation of metabolites, recontamination) and improving exposure assessments for key potential hazards, including the migration of chemicals from packaging materials into food. Such knowledge will be both valuable per se and essential to support the modelling activities proposed in Goal 3.
Development of measures to avoid biological and chemical contamination in agricultural production and to reduce formation of heat-induced contaminants (which is important for ensuring optimal sensory characteristics), for example, using novel food preservation technologies.

2. To describe and understand the effects of chemical hazards in humans; new approaches to hazard characterisation for the determination of chemical risks, including improving the risk estimation at very low levels of exposure; identifying chemical hazards and their health effects on humans and determining the levels at which chemical hazards have adverse effect on humans; interaction between toxicants; bioavailability of chemical contaminants; development of artificial organ- and cell culture-based procedures to determine toxicological effects in order to limit and, if possible, replace animal experiments; and gathering and analysis of epidemiological data (special care will be taken to gather and analyse in a population-disaggregated manner including gender).

3. To develop new methods to support chemical food safety; development and validation of analytical techniques and sampling plans for chemical contaminants, of non-destructive technologies for on-line monitoring of chemical residues and for off-line screening, based on a holistic approach, to evaluate the 'total toxic charge', including both targeted and untargeted compounds. This includes novel biomarkers of exposure to key contaminants and analytical tools for multi-residues exposure scenarios.

Goal 3. Improving risk assessment and risk-benefit evaluation

Major research challenges
1. To gather and generate relevant data on food composition and consumption patterns including ethnic and traditional foods, where possible in a continuous way building on existing initiatives such as EuroFIR; and on epidemiological, analytical and toxicological or physiological data

on chemical and biological contaminants.

2. To develop and validate appropriate science based quantitative risk assessment tools and models (in vitro, in vivo, in silico) based on the generated data for those areas with the biggest impacts on reducing food-borne illnesses; refinement of data required for risk assessment of food allergens and tools to analyse such data.

3. To develop and validate scientific approaches to carry out risk versus benefit evaluation along the food chain.

4. To develop and design tools based on models (see above and see Goals 1 and 2), for the evaluation of the individual and combined effects at every stage of the integrated food chain.

Goal 4. Developing tools to ensure security of the food chain

Major research challenges
1. To develop technologies for reduction or elimination of hazards at the level of primary production.

2. To develop novel technologies for reduction or removal of chemical and biological hazards during processing.

3. To develop effective methodologies for tracking and tracing of microbes, contaminants and allergens along the food chain

4. To develop new logistic approaches for strengthening safe distribution of foods, including abuse detection and approaches for the prevention of food adulteration and bioterrorism.

Goal 5. Understanding and addressing consumer concerns with food safety issues

Major research challenges
1. To identify and quantify determinants of consumer trust and confidence in the food provision system (including trust in actors and institutions) for an understanding of consumer

confidence and its changes over time (monitoring).

2. To understand consumers' perception of risk issues, particularly in the context of riskbenefit trade-offs and the amplification of risk perceptions beyond the available scientific evidence.

3. To understand the way the European consumers prefer risks to be communicated to them (by whom, frequency, modality) in normal times as well as in case of incidents or crisis.

Interface Europe; 18/08/2008

IE03109 European Technology Platform on Food for Life: VISION DOCUMENT

Research topics will include:

■ Compilation of new modelling tools and indicators for operational processes in the agro-food industry in Europe.
■ Description of various scenarios depending on worldwide changes in environment, economy and society.
■ Life Cycle Analysis (LCA) of food chain(s) to prevent and reduce waste streams, decrease energy and water use and apply chemicals appropriately and judiciously.
■ Development of value-added technologies to facilitate innovations of the EU agro-food industry in food chains (animal/meat and fish; plant/crops; microbiological).
■ Advancement of farming technologies according to a diversity of farm management systems (integrated and organic farming).
■ Knowledge management to identify and involve stakeholders, promote and encourage food chain sustainable development across Europe, with a particular

focus on new Member States and Candidate Countries.

SRA:

Goal 1. Progressing the sustainability of food production and supply in Europe

Major research challenges
1. To develop a methodology for describing the essential parameters of sustainability of the food supply system using system analysisbased sustainability indicators.

2. To develop dynamic modelling tools to determine and demonstrate the sustainability frontiers of different food production systems in order to drive innovation into more sustainable solutions.

3. To formulate models to describe food and biological raw material chains in Europe in order to show the sustainability of different supply chains in the context of the whole European system.

Goal 2. Developing scenarios of future European food production and supply

Major research challenges
1. To identify relevant factors in the future that will affect or improve the sustainability of European food production systems, and use them to build scenarios, integrating demographics, economy, policy and trade and environmental change. Scenarios of a global and 'top down' character will be undertaken where expert assessments are made based on existing knowledge and methods for analysis and prediction. Comparision with 'bottom up' scenarios based on participation and interviews with stakeholders are also required.

2. To use scenarios to study “What if?” alternatives, for a number of food production systems and policy options, using a 15 to 100 year perspective.

Goal 3. Developing sustainable processing, preservation, packaging and logistic systems

Major research challenges
1. To develop methods for value chain analysis of entire food chains explicitly incorporating the assessment of economic, environmental and social factors.

2. To develop viable approaches and innovations to reduce energy, water and material use in food processing and packaging; improve utilisation of food raw materials and reduce waste throughout the production chain by developing systems for reprocessing of adding value to food waste to food or feed, using the 'biorefinery' model.

3. To build different industrial systems, including food primary production and food industries in 'industrial ecology' relationships, exchanging matter, water and energy and economic value in inter-industrial networks.

Goal 4. Ensuring sustainable primary food production in Europe

Major research challenges
1. To identify and analyse the major environmental, social and economic pressures of primary food production (crop, livestock and fish) constraining the sustainability of the food chain and investigate options for alleviating these pressures and analyse the implications for sustainability.

2. To identify novel primary food production systems and evaluate their sustainability.

3. To analyse and optimise sustainable biological

production systems of food, feed, fuel, forestry and green chemistry including aspects of landscape and quality of life issues.

Goal 5. Understanding consumers and their behaviour regarding sustainable food production

Major research challenges

1. To analyse and monitor the sustainability of emerging lifestyle trends (including food waste generation, energy and water use) and food consumption patterns.

2. To understand how consumers are prepared to pay for, or deny themselves (e.g. in terms of convenience and taste), food products produced in a sustainable manner, and how responses differ between different consumer groups (according to gender, age, region, socio-economic grouping).

3. To analyse purchasing motives, related to ethical convictions, of different consumer groups in different European regions.

4. To analyse dietary sustainability, develop and validate measures for quantifying the level of sustainability of shopping baskets/food consumption patterns and understand consumer expectations, attitudes and responsiveness to sustainable products, production systems and corporate social responsibility.

5. To develop appropriate materials for educating and informing stakeholders about sustainable food production (to maximise consumer preference for products derived from sustainable food production systems).

Interface Europe; 18/08/2008

IE03110 European Technology Platform on Food for Life:
VISION DOCUMENT

Research topics will include:

Research topics will include:
■ Technical sciences: early and effective implementation of new generation of information- and communication technologies and data handling within the agro-food sector and adoption of new generation tools relating to production-, trade-, retail- and consumer issues.
■ Business administration: business organisation, quality-, risk- and innovation management to coordinate intra- and inter-organisational relationships, marketing aspects.
■ Institutional and industrial economics.
■ Industrial engineering and production management.
■ Social sciences: social aspects of trans-national networking activity, communication and organisation within value-added chains, supporting for complex problem solving in scientific, societal, agro-food industrial and business environments.

SRA:

Goal 1. Serving consumer needs for affordable food of quality and diversity

Major research challenges
1. To determine opportunities for innovations and improvements in the organisation of processes (in production, logistics and management) along the value chain.

2. To analyse and model organisational network alternatives that combine efficiency and responsiveness to changing consumer demands for quality and diversity.

2. To analyse and model organisational network alternatives that combine efficiency and responsiveness to changing consumer demands for quality and diversity.

Major research challenges
1. To understand and map tracking/tracing and transparency needs of enterprises, chains, and consumers (transparency needs).

2. To design reference models (blueprints) for tracking, tracing and transparency networks that serve value chains and consumers (system design).

Goal 3. Serving SME needs for better integration into value chain relationships

Major research challenges
1. To better understand integration needs and integration barriers.

2. To model and deliver suitable approaches for functional co-operation (e.g. collaborative quality planning) in SME networks.

3. To model and support knowledge communities for SME innovation support

Goal 4. Serving sector needs for better understanding the dynamics in critical success factors for competitive performance and sustainability in times of globalisation and change

Goal 4. Serving sector needs for better understanding the dynamics in critical success factors for competitive performance and sustainability in times of globalisation and change

IE03111 European Technology Platform on Food for Life:
VISION DOCUMENT

Research topics will include:
Activities will include:
■ Providing training and dissemination services to a wide range of stakeholders in the agro-food sector.
■ Developing an effective dialogue with society.
■ Disseminating new findings and research results to a broad and interested public.
■ Identifying and transferring relevant best practices at all levels.
■ Stimulating and promoting entrepreneurial activities.
■ Identifying appropriate measures and mechanisms for training, including on the job options.
■ Complementing and supporting existing channels, identifying requirements that are common to other industry sectors and supporting cost-effective joint activities.
■ Integrating R&D and industrial partners in training and technology transfer, thus connecting science to industry and emphasising the importance of all partners in the food innovation chain.
■ Developing new, simple methods for structuring existing fragmented information at SMEs level and making it available and easily understandable for factory personnel to improve knowledge management.
■ Strengthening and improving schemes to support trans-sectorial mobility of R&D staff with special attention for mobility involving new Member States.
■ Establishing associations of agro-food manufacturers and R&D organisations.
■ Promoting the benefits of collective research funded by groups of SMEs especially in new Member States.
■ Establishing databases for communication, training and technology transfer.
■ Network maintenance.
■ Personnal transfer.

IE03112 European Technology Platform on Food for Life:
VISION DOCUMENT

Activities will include:

■ Clustering and networking with other initiatives: platforms; networks; and projects. Building networks with the health and technology sectors and optimising clustering in the knowledge and innovation chain.
■ Providing a network for informing food-related policy makers in industry and at regional, national and EU level.
■ Establishing a horizontal link between thematic areas.
■ Accessing (venture) capital: especially relevant for start-ups and SMEs.
■ Interacting with financial institutions and insurance companies.
Interface Europe; 18/08/2008

IE03146 Politique maritime intégrée (livre bleu) :

> La croissance de l'aquaculture pour répondre à l'augmentation de la demande mondiale en produits de la mer devrait être obtenue dans un cadre réglementaire qui favorise l'esprit d'entreprise et l'innovation et assure la conformité avec des normes rigoureuses en ce qui concerne l'environnement et la santé publique.
Interface Europe; 26/08/2008

IE03184 Biofuel Technology Platform:

> Industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from residues. A major role for biorefineries is the production of biofuels that is fuels derived from lignocellulose feedstocks.
Interface Europe; 26/08/2008

IE03204 European Technology Platform Food for Life (Food):

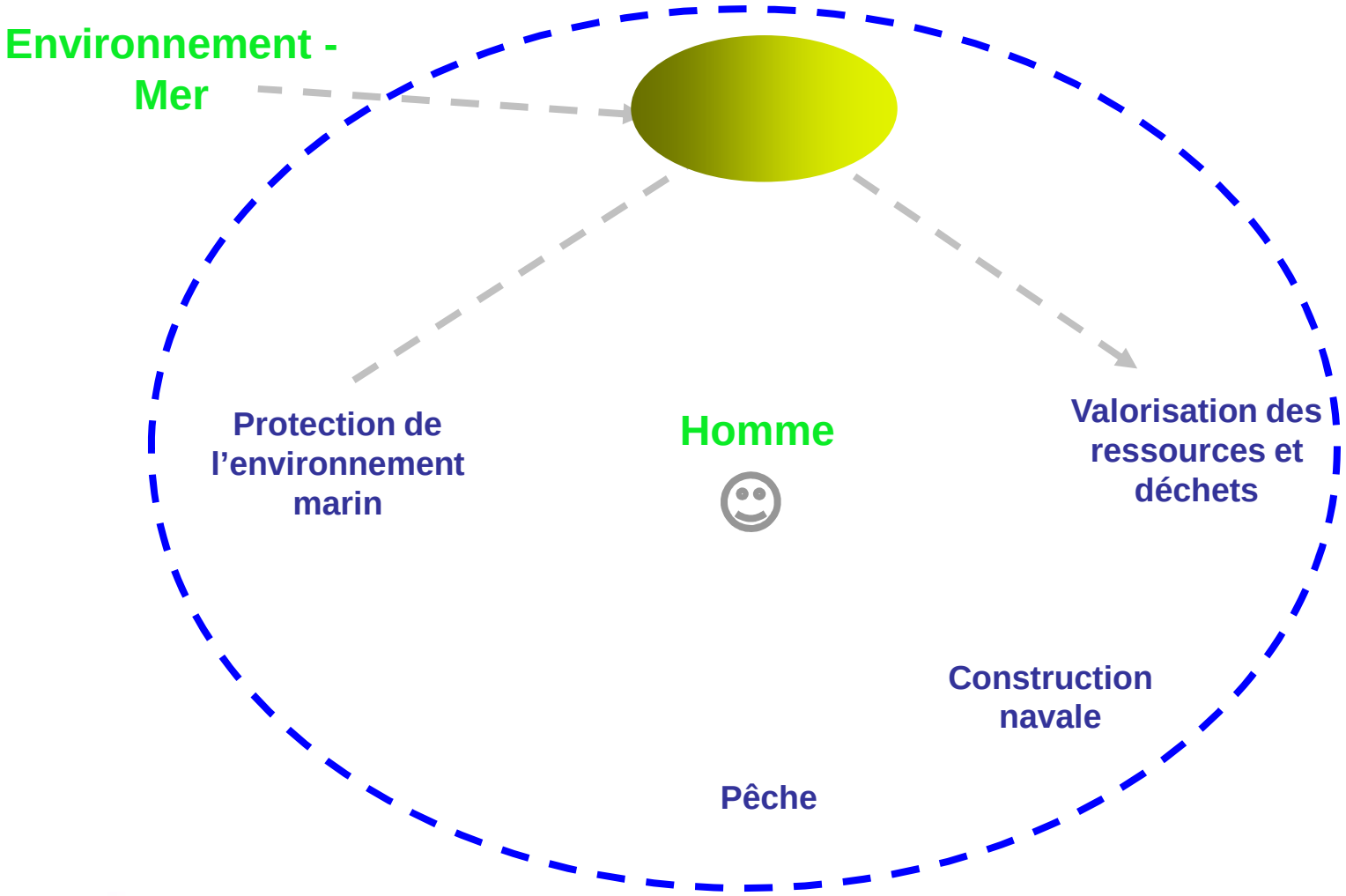
6 key technologies are proposed:

Projets potentiels sur le thème «Aquaculture»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des synergies locales



Synergie potentielle

Projets potentiels issus des synergies locales

Synthèse des fiches projets NOW

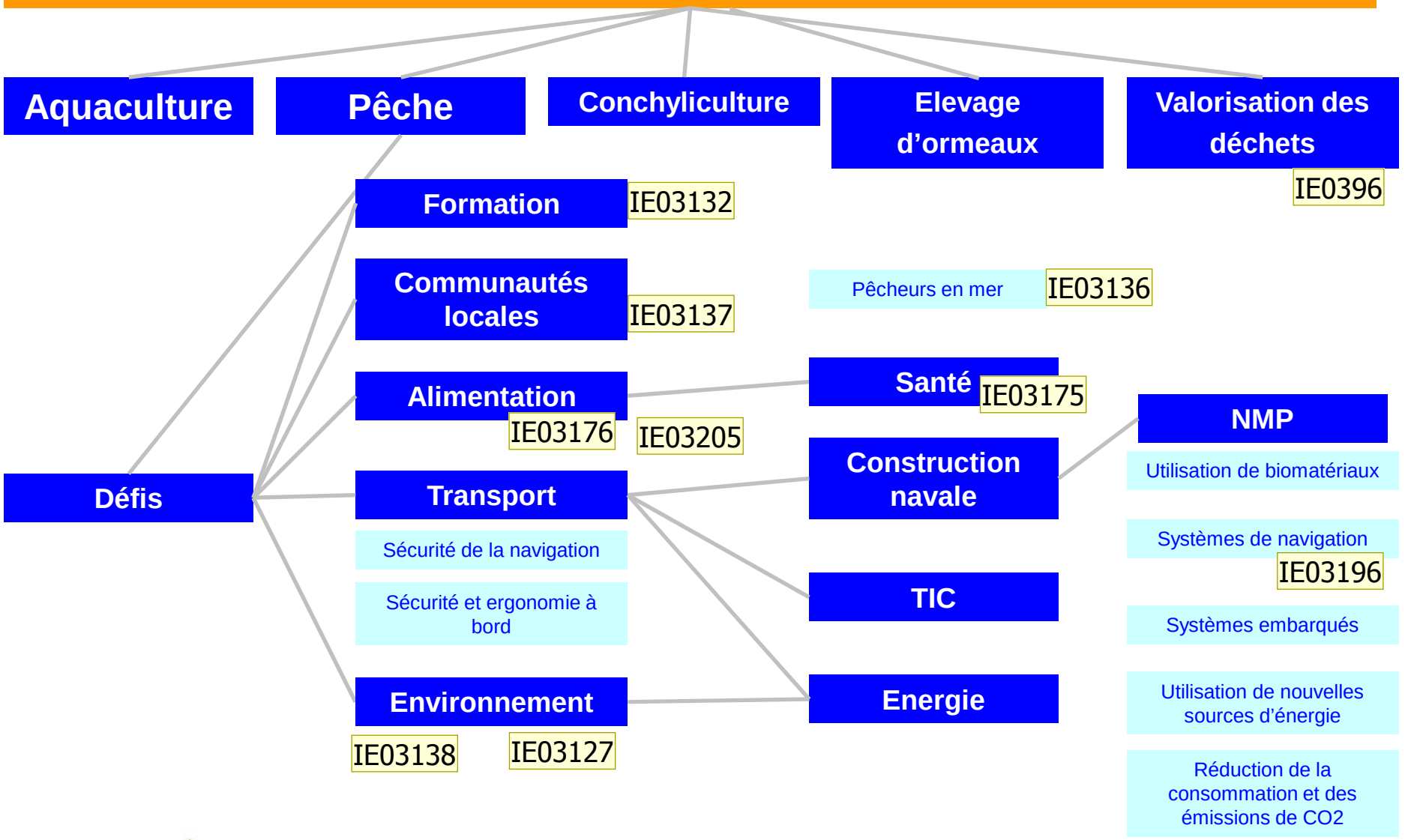
AQUACULTURE	
ESITC	Traitement / Valorisation des déchets minéraux de l'aquaculture marine
Europe + Fondation	Aquaculture liée au développement maritime durable
IFREMER (F. Orvain)	Bilan carbone des activités conchylicoles La viabilité de la polyculture
IFREMER (P . Baudry)	- Aquaculture et conservation des huîtres plates européennes - Invasion des huîtres du Pacifique en Europe
IFREMER (P. Sourdaine)	Influence de l'environnement sur la performance de reproduction des mollusques marins et des poissons
AUDELOR	- Repeuplement et aquaculture par exploitation des co-produits de la pêche en cycle court - Plateformes hybrides énergies renouvelables et aquaculture off shore
ITSASMENDI KOI	Possibilités de repopulation aquacole pour les poissons
UCBN / CNRS	Impact des fermes sur le transport des sédiments
SATMAR	Création de nouvelles fermes aquacoles (péninsule ibérique), élevage d'essaims d'huîtres et palourdes
INTECHMER	Etendre la problématique liée à Saumons de France à la pathologie des élevages de saumons en Europe.
IVAMER	Valorisation des co-produits aquacoles

Projets potentiels sur le thème «Pêche»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 2 : Valorisation des ressources naturelles marines et du littoral



Idées de projets potentiels

IE0396 industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from residues.

biorefinery, with an emphasis on the use of biotechnology for the conversion of biomass and waste into valueadded products. The use of novel biotechnology approaches for utilizing wastes, including aquaculture wastes, to make high added value products is also covered in a more general way. A further topic covers the exploration of microbial diversity in the aquatic environment or in the soil.

Development of cleaner technologies and the improvement of bioremediation and waste biotreatment processes with an emphasis on environmental friendly products and processes, recycling and/or biodegradation of wastes and industrial by-products, bioassays to monitor the effects of toxic chemicals on biological systems,
Interface Europe; 18/08/2008

IE03127 Politique maritime intégrée (livre bleu):

> lutte contre la pêche pirate
Interface Europe; 26/08/2008

IE03132 Politique maritime intégrée (plan d'action) :

Ressources humaines :

> La Commission travaillera avec les États membres, les partenaires sociaux, les clusters maritimes et les établissements universitaires à orientation maritime afin d'améliorer le statut des métiers de la filière maritime, d'offrir aux jeunes Européens des perspectives de carrière plus attrayantes à long terme dans les clusters maritimes et de faciliter la mobilité entre les emplois en mer et à terre. Toutes les professions qualifiées, notamment dans les domaines de la navigation, de l'ingénierie et de l'électronique, seront couvertes.
Une série d'actions seront présentées afin d'atteindre les objectifs susmentionnés d'ici la fin 2009.

> La Commission s'efforcera, en totale collaboration avec les États membres, les partenaires sociaux, les clusters maritimes et les établissements d'enseignement et de formation

maritimes, de créer un «certificat d'excellence maritime», qui pourra être obtenu sur une base volontaire et qui sanctionnera les compétences de travailleurs hautement qualifiés qui pourront se mettre à la disposition du secteur du transport maritime et des clusters maritimes.
Interface Europe; 26/08/2008

IE03136 Politique maritime intégrée (plan d'action)

> Action pour l'amélioration de la situation des pêcheurs en mer :

- Débat avec les acteurs concerncés sur la base du rapport de la Commission sur la mise en oeuvre pratique des dispositions de la directive 93/103/CE concernant les prescriptions minimales de sécurité et de santé au travail à bord des navires de pêche qui doit être adopté en 2008. Il dressera une analyse détaillée de l'impact de la directive sur la protection de la santé et de la sécurité des pêcheurs européens et permettra d'identifier les besoins d'action par rapport au cadre réglementaire de l'UE et à la mise en oeuvre pratique des dispositions de la directive.
Interface Europe; 26/08/2008

IE03137 Politique maritime intégrée (plan d'action) :

> La Commission étudiera plus en détail des pistes devant mener à une approche plus exhaustive de l'avenir des communautés de pêche, y compris le développement d'initiatives locales de marquage. En outre, un document de travail sera publié sur le rôle potentiel des pêcheurs en tant que «gardiens de la mer» proposant notamment des services environnementaux à la communauté, en 2008.

> En 2008, la Commission adoptera une communication sur l'application générale de l'approche basée sur les écosystèmes pour la politique commune de la pêche (règlement de base de 2002 sur la politique commune de la pêche). Cette communication vise à garantir une approche claire et cohérente de la durabilité de l'économie maritime de l'Union européenne.
Interface Europe; 26/08/2008

IE03138 Politique maritime intégrée (plan d'action) :

> Mise en oeuvre d'une politique destinée à éliminer progressivement les rejets de la pêche européenne (rejet en mer de poissons morts indésirables capturés accidentellement) :

- En 2008, la Commission présentera une feuille de route sur l'élaboration d'une législation pertinente et indiquera les premiers exemples concrets de la nouvelle politique.
Interface Europe; 26/08/2008

IE03175 Biofuel Technology Platform:

> Busy careers have created a large market for ready-made and semi-prepared food and more people are eating out at restaurants than ever before. Moreover, an ageing population and the growing obesity epidemic caused by unhealthy diets and sedentary lifestyles have placed increased emphasis on healthier food products.
Interface Europe; 26/08/2008

IE03176 Biofuel Technology Platform:

> Green biotechnology relates to agri-food applications, such as the development of genetically modifi ed crops and plants with certain enhanced characteristics, including drought resistance or salt tolerance. It also covers the application of life science knowledge to improve plant breeding techniques and to select wild plant candidates for domestication.
Interface Europe; 26/08/2008

IE03196 Satcom SRA:

A classification of satcom users into five macro-categories has been adopted:
1. Citizens and Governments: the CG institutional market
2. Individual users and families in their Homes: the IH market
3. Individual users on the Move: the IM market
4. User Groups in villages and Remote areas: the UGR market
5. User Groups on the Move: the UGM market

Research Themes of particular relevance for Broadband applications and services:

c) Developing mobile broadband access with service characteristics which match as closely as possible those of terrestrial systems. Designing broadband MSS solutions for mobile collective terminals in aeronautical, maritime, vehicular and railway domains, and broadcast systems supporting terrestrial mobility and vehicular/handheld reception.

Research Themes of particular relevance for Mobile applications and services:
a) Developing multi-band MSS, incorporating on-the-move (e.g. L/S band technology) and transportable solutions and collective terminals (e.g. Ku/Ka band technology) sharing same infrastructure.
b) Designing reconfigurable low cost user terminals capable of working seamlessly between satellite and terrestrial systems.
c) Integrating satellite technologies into long-term (2020+) solutions for ATM/ATC systems.
d) Working on efficient broadcasting and multicasting technologies to develop MSS into mass markets, through the delivery of land-mobile broadcast and multicast services.
e) Researching satellite extensions for ad-hoc radios deployed in emergency events (e.g. Tetra 1 and 2, WLAN, WiFi) connecting field-workers with remote coordination centres database sites, etc.. Considerations will include the safety needs of on-field personnel in the front line, real

time system reconfigurability to track on-field personnel, and the integration of communication and localisation systems for indoor and outdoor needs.

ASMS THEMATIC PRIORITY: MOBILE BROADCASTING AND MULTICASTING

One of the major strengths of satellites is their inherent capability to broadcast data to large audiences. The success of satellites in the TV broadcast market to fixed receivers is still one of the most commercially successful examples of the usage of communication satellites.

Satellite broadcasting for moving collective terminals
The type of mobility characterizing the terminal determines a specific mobile broadcast environment, which presents different needs and criticalities. Thus, there are different requirements and R&D challenges in the broadcast area to be taken into account for each identifiable environment. A concise overview of the most relevant R&D topics is as follows:
(...)

b) Ships
• Robust installation in particular in regard to antenna technologies and steering mechanisms (e.g., usage of the same outdoor unit for TV reception and downlink data services)
• Medium to low cost equipments, to be appealing also for vessels with small crews or leisure vehicles.
• Combination with distress and safety applications. In this framework, the requirements of the Global Maritime Distress and Safety System (GMDSS) for the return link would be advantageous, especially since only a low data rate return link would be necessary in association with broadcast and multicast services.

ASMS THEMATIC PRIORITY: NAV-COM
There exists a very broad framework of applications that need fulfilling the requirements of transport, mobility and precise location, the information contents of which is function of the user position. These are the so-called Navigation-Related Services (NRS) and Location-Based Services (LBS), depending on whether directing to a target or precisely locating objects is predominant.

The key concept of NRS and LBS NAV/COM services is the thorough integration of navigation and communication components. This can be pursued with two possible orthogonal approaches:
a) A horizontal integration, where integration is obtained at the user terminal and application level, by combining capabilities provided by independent NAV and COM entities
b) A vertical integration, where integration is obtained at system level, by defining a system architecture, which synergistically combines both capabilities at all levels: ground segment, space segment, user terminal segment, application level.

The former approach is in the current state of the art of applications that combine GPS-based navigation capability (in the near future GALILEO) with either terrestrial or satellite cellular mobile communications. A new space system is indeed required with the latter approach that combines the Signal-In-Space capability of the space navigation system with the communication capability of S-UMTS.
Possible applications include geo-referenced services capable of collecting/disseminating position data or supporting navigation decision taking and making, related to the instantaneous user position, such as an intelligent management of mobile work force, asset tracking and tracing,

emergency assistance and management, m-commerce, etc.

ASMS THEMATIC PRIORITY: SECURITY/DISASTER RELIEF
In recent years, it has become evident that additional international attention needs to be placed on the importance and the need for enhanced telecommunication for public agencies and organizations dealing with law and order, safety of life and property, emergency and disaster relief. In this context, the use of a satellite overlay network allows efficient implementation of public protection and disaster relief (PPDR) applications. An example in this direction is the Emergency call application (Enhanced 112 service in Europe). The broadcasting capability of the satellite overlying network offers the possibility to exploit Location Based Broadcasting Services to implement PPDR. Thanks to the automatic collection of the user location, safety services improve their efficiency in case of disaster (e.g., earthquakes, pollution), and the citizens can be promptly informed of the guidelines to be applied. By disposing of a direct return link through the satellite, the user can communicate with the public service provider in order to notify anomalies, and report on crises. And according to his/her location, the user can benefit of the appropriate navigation information to reach safety services, even in a completely new landscape drawn due catastrophic conditions.

The key R&D topics are:
5.6.1 Emergency call management
The R&D issues related to the emergency call application are mainly linked to the terminal impact, as well as to interworking capabilities with terrestrial networks, e.g., the determination and automatic collection of the user location.

5.6.2 Population management & Localized Broadcast Services
The use of a satellite to alert the population about a risk or an impending disaster is an interesting application, the timeliness of which is testified by very recent catastrophic events, like the tsunami of December 2004 that has heavily damaged the Indian Ocean regions.
5.6.3 Satellite return link
The disposal of a direct return link (RL) through satellite is a necessary requisite for an efficient public protection and disaster relief application. The design of a satellite return link has to cope with several issues, including a clear service definition.
5.6.4 Low cost terminal impact
When considering a satellite return link, the unavoidable question is related to the terminal impact. What are the conditions to offer emergency call possibilities in outdoor line-of-sight conditions to a range of mobile satellite terminals, including handsets with no form-factor impacts and very limited price increase?
5.6.5 Incorporating mobile and nomadic distress and safety services in evolving and future mobile satellite services.
5.6.6 Provisioning of end to end secure mobile satellite services, to fulfil dual use of the system by civil and defence customers.

POSITIONING WITH RESPECT TO GALILEO & GMES

GENERAL CONCEPTS DRIVING ISI'S POSITIONING IN RELATION TO GALILEO AND GMES
a) Satellite Communications are essential elements to exploit Navigation and Earth Observation systems to their fullest.
b) Satellite Communications are not competing with the other two fundamental Satellite Technologies (NAV and EO systems); on the contrary, their complementary and synergic nature makes it possible for Satellite Systems to provide integrated applications fully meeting User demand.
c) The integration philosophy advantages are not limited to Satellite Technologies and Services: integration and interoperability of Satellite and Terrestrial systems are fundamental to the success of a high number of very promising applications.

d) ISI can play a very significant role in this integrated scenario, as a complement to Galileo and GMES to meet user expectations and as an initiative fully in line with the European Union strategic vision

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GMES

GMES Telecommunications needs
a) GMES User Communities are numerous and diversified. Even if it is not simple to get a clear picture of GMES users' telecommunication requirements and to identify from now all the GMES thematic areas where enhanced telecommunications functionalities will improve the quality of GMES services, it is already possible to list some areas where Satcoms are of paramount importance for GMES.
As a first example in case of emergency and crisis management, temporary communications links have to be rapidly deployed in order to enable rescue teams to coordinate and combine their effort from the very first hours of intervention. ISI will foster the validation and widespread adoption of the most appropriate standardised communications infrastructures to support management of pre- and post-crisis situations.
As a second example, GMES will benefit from, and is expected to also drive, upgrades of the most recent satellite telecommunication techniques for data collection (real time, global access) and distribution.

Satellite Telecommunications Solutions for GMES

Emphasis shall be put on:
i) Improvement of geographical service area, beyond coverage of existing terrestrial networks, in particular in developing countries, during crisis events as well as during the alert phase;
ii) Improvement of reactivity, through faster data collection, with real time control of sensors or fresher data delivery, or for access to and remote control in-situ sensors;
iii) Improvement of product quality, through the amount of data that can be collected and distributed thanks to higher available data rates;
iv) Improvement of terminal and on-ground infrastructure deployment features (lightweight, robustness, autonomy, ease of operation) for immediate and reliable use by rescue teams and victims needing temporary telecom means during and after crisis events.

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GALILEO

NAV-COM Market:
Preliminary examples of applications with high growth potentiality include global tracking and tracing of mobile assets, fleet management, location based services, emergency, security, search and rescue and marine surveillance

Safety and Emergency Services
a) Combination of multimedia communications with high-accuracy positioning supported by broadband satellites and Galileo makes it possible to implement services for the safety of citizens as well as to manage emergencies. Wide area outdoor electronic-monitoring combining telecommunication and positioning capabilities can be used by police forces in order to monitor wide territories, prompt react to natural disasters and rescue people.

IE03205 European Technology Platform Food for Life (Food):

6 key technologies are proposed:
> Food and Health: Focussed, collaborative food research will enable the development of innovative food products and process innovations that will make a major contribution to the well-being and welfare of the European consumers.
> Food Quality and Manufacturing: New innovative manufacturing technologies
providing high quality, novel or modified,
healthy products with improved, attractive
taste and convenience will enhance the competitiveness and growth of the European food sector.
> Food and Consumer: Much effort will be required to understand consumer attitudes, preferences, expectations and demands and to provide effective communication to the consumer and to obtain an active interaction with consumers. In this context it is important to realise that the term 'European consumer' embraces not just main-stream populations, but also ethnic and immigrant populations, whose eating habits and diets may vary considerably and are currently only relatively poorly examined.
> Food Safety: All new developments have to comply with current and future expectations regarding the safety of the end product and the protection of the consumer against any threat to his or her health and well-being on a short- and long-term. This implies that new technological developments have to be assessed thoroughly with respect to the possible introduction of undesired side-effects of microbiological, toxicological or physical nature.
> Sustainable Food Production: This
Platform seeks to profitably provide European citizens with safe-, high-quality, health-promotingand affordable foods whilst meeting the increasing demands for sustainable food production as perceived from the economic-, environmental-, and social perspectives.
> Food Chain Management:food chain management examines the complexibility of the different food value chains (bread, pasta, meat, milk, etc.). Due to its complexity, all participants and processes in the manufacturing of a food and all management factors such as safety, quality and efficiency need to be studied in a management system simultaneously. This will require an overall integration of consumer-added value characteristics for each individual process in the food chain.

Research Topics:
■Life Cycle Analysis (LCA) of food chain(s) to prevent and reduce waste streams, decrease energy and water use and apply chemicals appropriately and judiciously.
■ Development of value-added technologies to facilitate innovations of the EU agro-food industry in food chains (animal/meat and fish; plant/crops; microbiological).
■ Advancement of farming technologies according to a diversity of farm management systems (integrated and organic farming).
■ Knowledge management to identify and involve
stakeholders, promote and encourage food chain
sustainable development across Europe

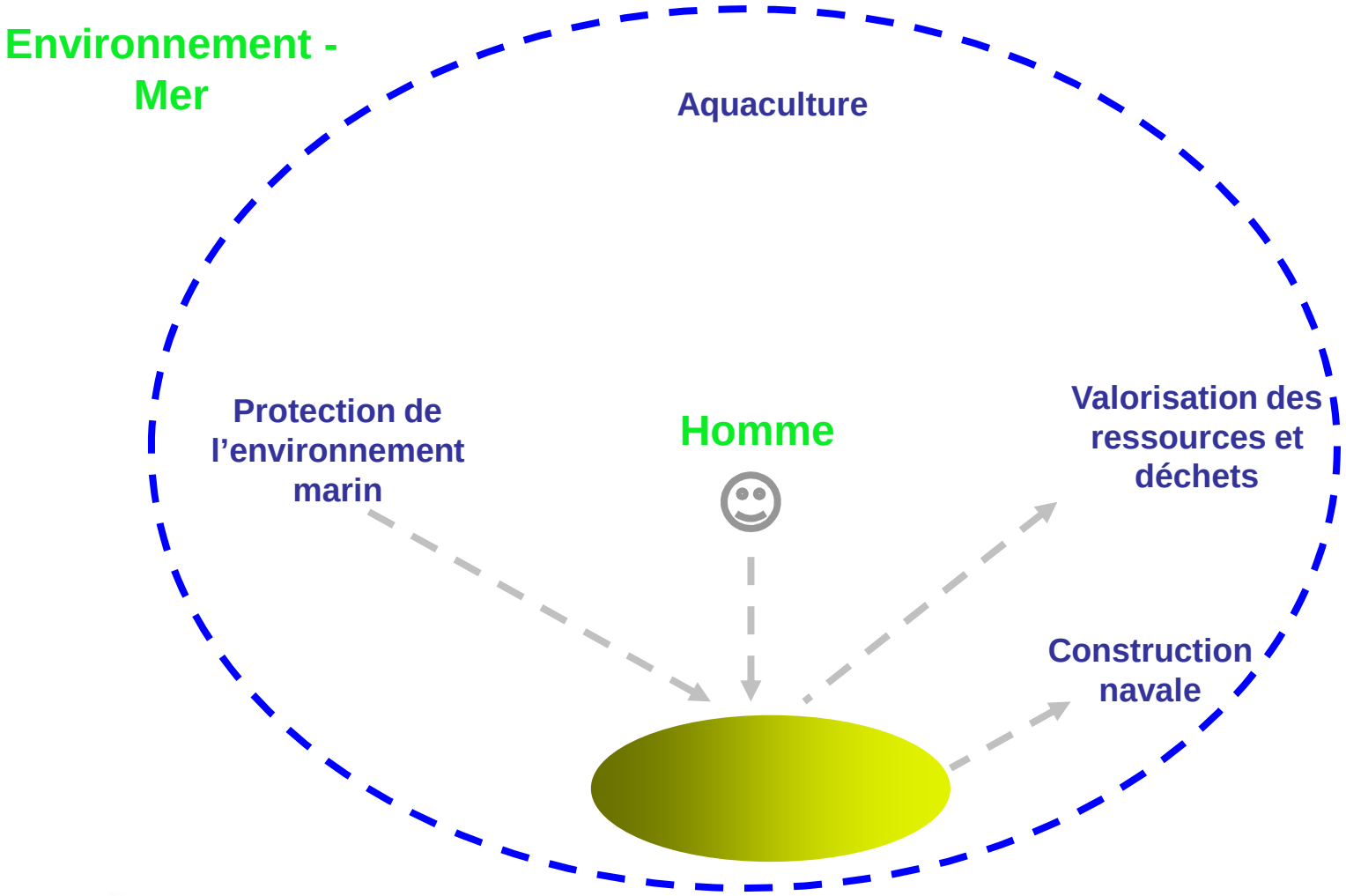
In the development of new, tasteful and convenient products it will be important to exploit
novel processing technologies whose use is
more environmentally-friendly than current
alternatives. These encompass technologies

Projets potentiels sur le thème «Pêche»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des synergies locales



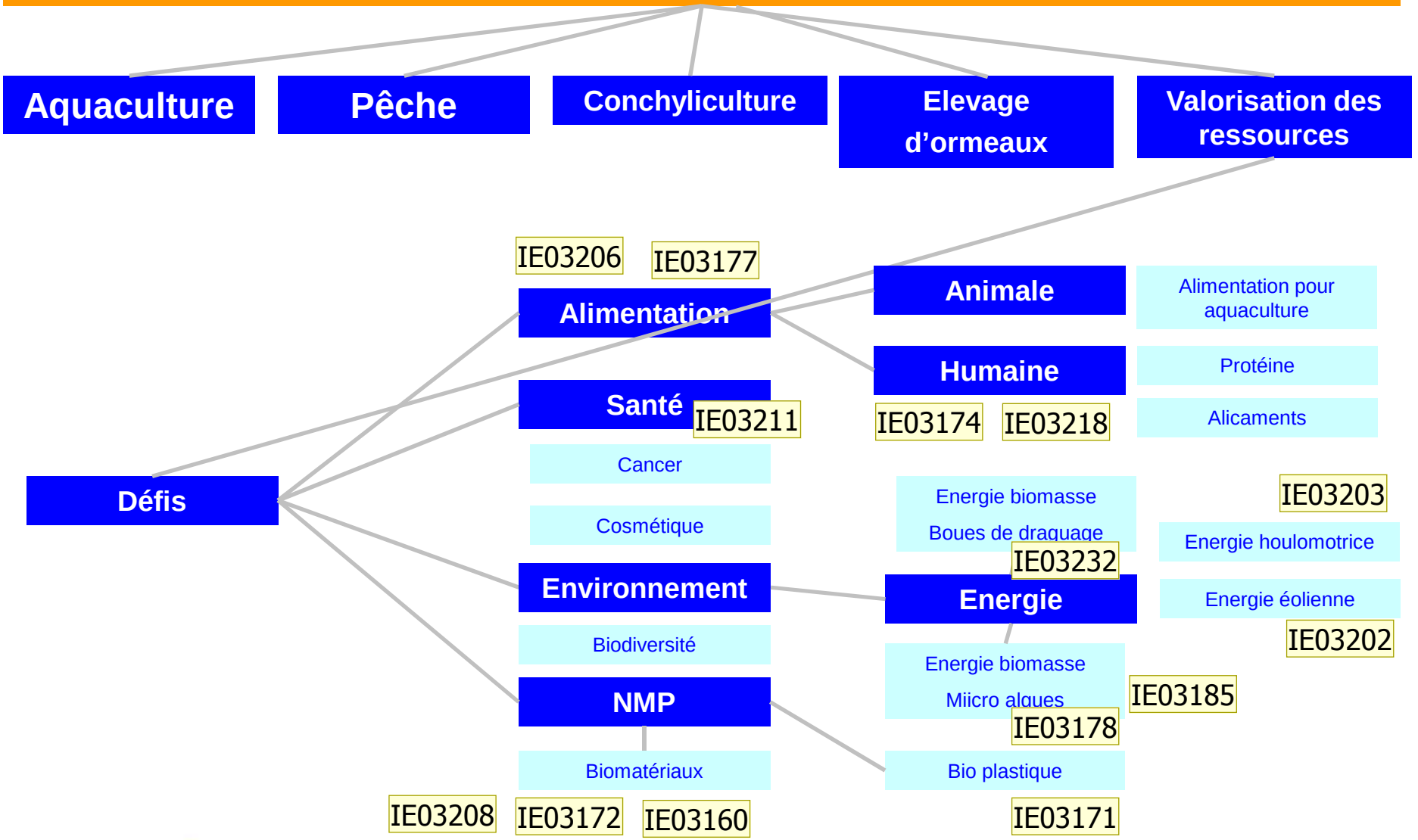
Synergie potentielle

Projets potentiels sur le thème «Valorisation des ressources naturelles marines et du littoral»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 2 : Valorisation des ressources naturelles marines et du littoral



Idées de projets potentiels

Diapositive 188

IE03160

EuMaT:
> Advanced materials with specific requirements for corrosion resistance :
Automotive, Rail & Marine industries (replacing conventional metals)
Extreme conditions: high-temperature, high pressure, creep, corrosion and radiation resistance
> Lightweight bio-composites, in
particular, natural fibers in polymers composites
> Biochemistry
> Metal Ceramic Composites for transport and environment and sustainable development
> Development of new light materials for vehicle structures : for ship building
> More stringent requirement for emissions
and leakages require reliable high performance materials and understanding their
behavior in processing handling hazardous chemicals and gases.
Interface Europe; 26/08/2008

IE03171 Biofuel Technology Platform:

biodegradable plastics
Interface Europe; 26/08/2008

IE03172 Biofuel Technology Platform:

> industrial biotechnology is breaking new ground in understanding microbial biodiversity and bio-processes that could lead to valuable bio-products and bio-materials.
Interface Europe; 26/08/2008

IE03174 Biofuel Technology Platform:

> Busy careers have created a large market for ready-made and semi-prepared food and more people are eating out at restaurants than ever before. Moreover, an ageing population and the growing obesity epidemic caused by unhealthy diets and sedentary lifestyles have placed increased emphasis on healthier food products.
Interface Europe; 26/08/2008

IE03177 Biofuel Technology Platform:

> Green biotechnology relates to agri-food
applications, such as the development of
genetically modifi ed crops and plants with
certain enhanced characteristics, including
drought resistance or salt tolerance. It also covers the application of life science knowledge to improve plant breeding techniques and to select wild plant candidates for domestication.
Interface Europe; 26/08/2008

IE03178 Biofuel Technology Platform:

> White biotechnology is also known as industrial biotechnology and refers to the processing and production of chemicals, materials and energy.
White biotech employs micro-organisms, such as yeasts, moulds and bacteria as so-called 'cell factories' and enzymes to produce goods and services. This implies developing and producing chemicals at the cellular level by exploiting and adjusting natural processes in living organisms to generate the substances and enzymes needed by industry. Examples include environmentally friendly detergents and enzymes that replace the use of stones in stonewashed jeans.
Microbes are microscopic biological structures which make up about half of the Earth's biomass. They represent an untapped treasure trove of biological 'parts' and 'components', i.e. cells
which can be used to perform new functions
and create new materials.

Plants for the Future TP:

For energy the aim is to produce better production systems with 50% lower energy input requirements, as well as to improve energy capture and to optimise selected highenergy plant biomass production systems.
Interface Europe; 27/08/2008

IE03185 Biofuel Technology Platform:

> Industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from
residues. A major role for biorefineries is the production of biofuels that is fuels derived from lignocellulose feedstocks.
Interface Europe; 26/08/2008

IE03202 Document de travail de la Commission européenne intitulé «Energy policy and maritime policy: ensuring a better fit» : consacré aux connexions et aux synergies entre les politiques énergétique et maritime de l'Europe

> "There is much interest in the wind industry in a European maritime policy, notably establishment and use of marine spatial planning, lessening the regulatory risks. Coordinated data gathering and access, underpinning risk assessments, would be welcomed."

Wind TP SRA :
The economics of offshore wind favour larger machines, which differ from those used onshore. The offshore environment may allow the relaxation of a number of constraints on turbine design, such as aesthetics and noise level. However, addressing marine conditions, corrosion and reliability issues creates new challenges in the offshore sector. This will lead to a significant modification of onshore machines in the near

term and the development of specific offshore designs in the medium and long term.

Textile TP - Vision:

Also in the field of energy generation, transportation and storage, textiles find ever more innovative uses.
These include:
(...)
• anchoring or flotation elements for off-shore platforms
Interface Europe; 27/08/2008

IE03203 Biofuel Technology Platform:

> Industrial fermentation (white biotechnology) is supported as a key route to clean processes using purpose-grown crops (possibly modified GMO based on green biotech), as well as residues and effluents from the agro-industry. The combination of such processes is expected to lead to an increase in the number of biorefineries with complete utilisation of the feedstocks for food, feed or Non-Food, incorporating biological and other techniques, including mechanical separation, as well as energy recovery from
residues. A major role for biorefineries is the production of biofuels that is fuels derived from lignocellulose feedstocks.
Interface Europe; 27/08/2008

IE03206 European Technology Platform Food for Life (Food):

6 key technologies are proposed:
> Food and Health: Focussed, collaborative food research will enable the development of innovative food products and process innovations that will make a major contribution to the well-being and welfare of the European consumers.
> Food Quality and Manufacturing: New innovative manufacturing technologies
providing high quality, novel or modified,
healthy products with improved, attractive
taste and convenience will enhance the competitiveness and growth of the European food sector.
> Food and Consumer: Much effort will be required to understand consumer attitudes, preferences, expectations and demands and to provide effective communication to the consumer and to obtain an active interaction with consumers. In this context it is important to realise that the term 'European consumer' embraces not just main-stream populations, but also ethnic and immigrant populations, whose eating habits and diets may vary considerably and are currently only relatively poorly examined.
> Food Safety: All new developments have to comply with current and future expectations regarding the safety of the end product and the protection of the consumer against any threat to his or her health and well-being on a short- and long-term. This implies that new technological developments have to be assessed thoroughly with respect to the possible introduction of undesired side-effects of microbiological, toxicological or physical nature.
> Sustainable Food Production: This
Platform seeks to profitably provide European citizens with safe-, high-quality, health-promotingand affordable foods whilst meeting the

increasing demands for sustainable food production as perceived from the economic-, environmental-, and social perspectives.
> Food Chain Management:food chain management examines the complexibility of the different food value chains (bread, pasta, meat, milk, etc.). Due to its complexity, all participants and processes in the manufacturing of a food and all management factors such as safety, quality and efficiency need to be studied in a management system simultaneously. This will require an overall integration of consumer-added value characteristics for each individual process in the food chain.

Research Topics:
■Life Cycle Analysis (LCA) of food chain(s) to prevent and reduce waste streams, decrease energy and water use and apply chemicals appropriately and judiciously.
■ Development of value-added technologies to facilitate innovations of the EU agro-food industry in food chains (animal/meat and fish; plant/crops; microbiological).
■ Advancement of farming technologies according to a diversity of farm management systems (integrated and organic farming).
■ Knowledge management to identify and involve
stakeholders, promote and encourage food chain
sustainable development across Europe

In the development of new, tasteful and convenient products it will be important to exploit
novel processing technologies whose use is
more environmentally-friendly than current
alternatives. These encompass technologies
and processes to manage pollution (e.g. air pollution control, waste management), products
and processes that are less-polluting and lessresource intensive, and ways to manage
resources more efficiently (e.g. reduced water
supply, energy-saving technologies).

Interface Europe; 27/08/2008

IE03208 Textile TP - Vision:

>New Textile Applications

With important advances in textile materials research, processing technologies and changing functional requirements of products in other industries over the last two decades, textiles have found an ever broader range of application
in sectors as diverse as road, rail, marine or aerospace vehicles, engineering, construction, agriculture, power and environmental technologies, health care, defence and security etc.
Interface Europe; 27/08/2008

IE03211 Plants for the Future TP:

The central theme of the second objective is the optimisation of Non-Food plants as a vehicle to produce compounds of interest that will depend

on improved gene expression technologies and new manufacturing techniques for production, extraction and processing.

The possibility of producing new antibiotics to counter drug resistance is also being investigated, as is the use of plants as factories for the production of proteins for use as vaccines.
Interface Europe; 27/08/2008

IE03218 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Health care:

> Advanced sensors and new micro-analytical devices will have a substantial impact on health, environment, and individual protection strategies in the coming years. The ability to reliably link biologically active molecules to a surface will take functional integration to levels previously deemed impossible.
>Materials for medicine, agriculture, nutrition, health care
> Topics are for example materials for diagnostics and imaging, drug and bio-active compounds delivery systems, cosmetics
Interface Europe; 27/08/2008

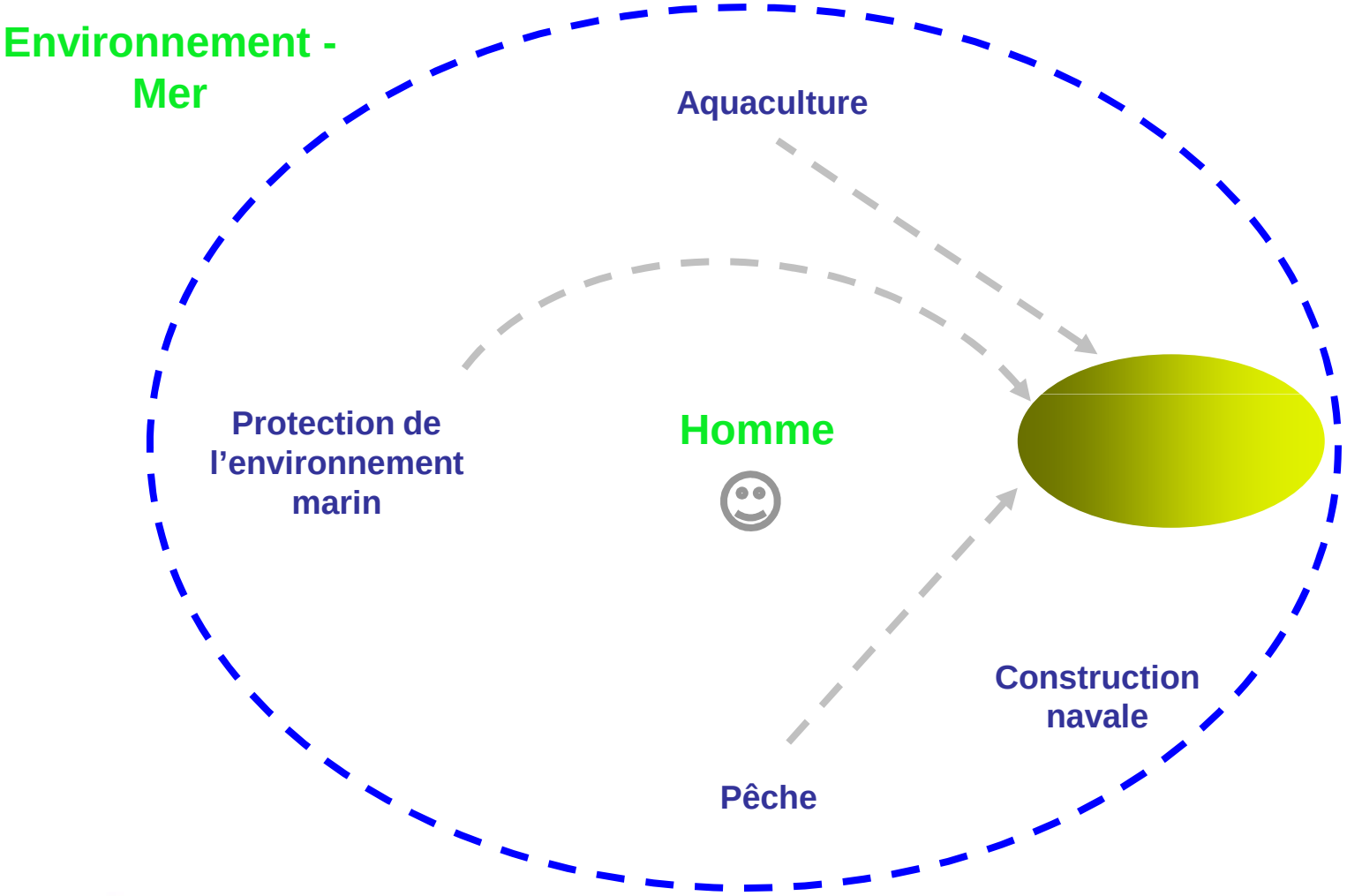
IE03232 Filières de traitement:
> filières de pré-traitement
> filières de traitement intermédiaire
> filières de traitement final

Filières d'élimination et de valorisation:
> valorisation agronomique par épandage sur des terres agricoles, en sylviculture, pour la réhabilitation des sols dégradés (végétalisation), en jardinage,…
> valorisation de matière par l'utilisation des sous-produits des filières comme substituant à une matière première,
> valorisation énergétique pour produire de l'électricité, de la chaleur et/ou les deux (cogénération),
> mise en décharge en cas où les produits ne peuvent être valorisés
Interface Europe; 06/09/2008

Projets potentiels sur le thème «Valorisation des ressources naturelles marines et du littoral»

- Issus des opportunités européennes
- **Issus des synergies locales**

Projets potentiels issus des synergies locales



Synergie potentielle

Projets potentiels issus des synergies locales

Synthèse des fiches projets NOW

Communauté Urbaine de Cherbourg	Energies marines

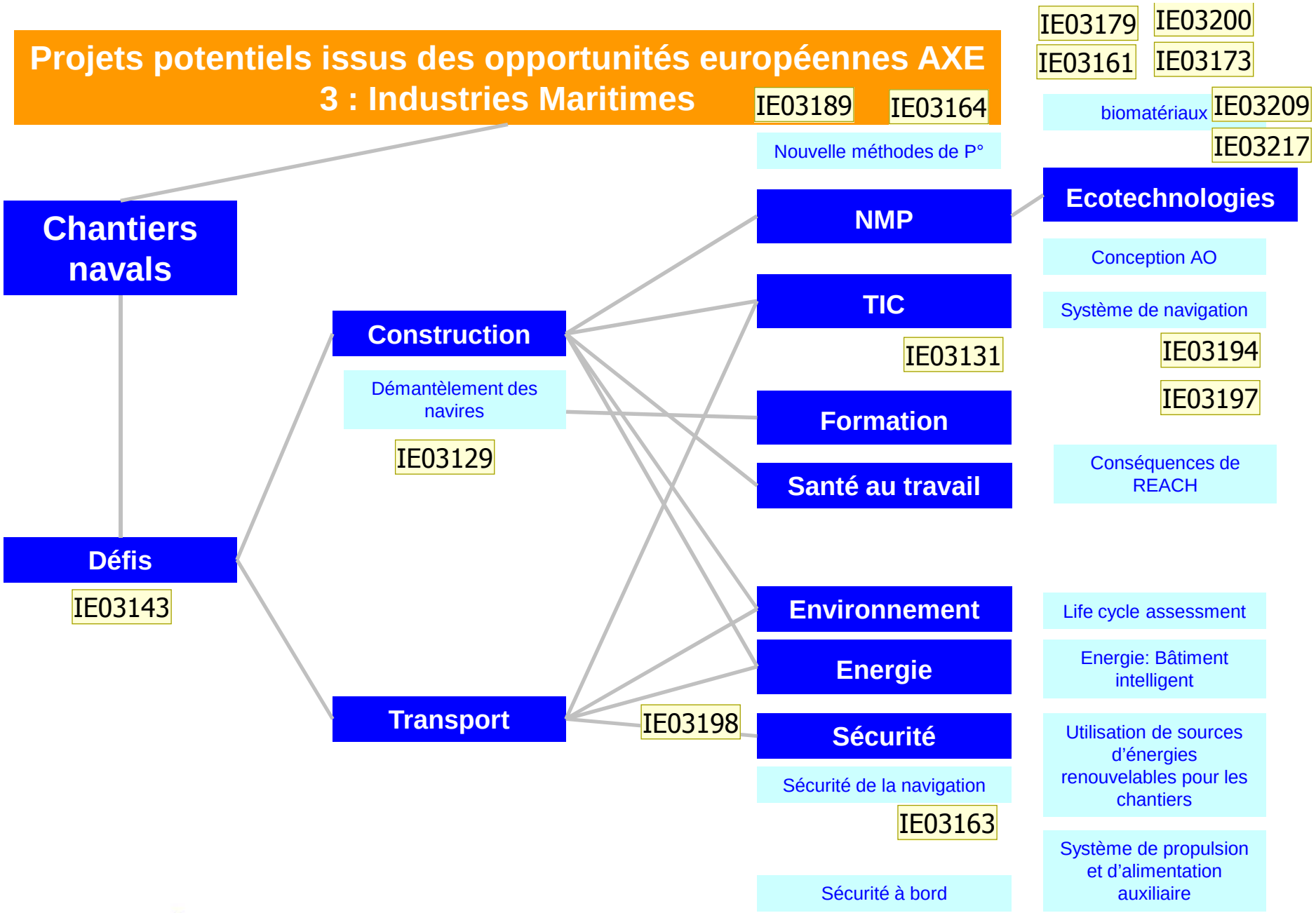
Synergie potentielle

Projets potentiels sur le thème «Constructions navales»

Issus des opportunités européennes

Issus des synergies locales

Projets potentiels issus des opportunités européennes AXE 3 : Industries Maritimes



Idées de projets potentiels

Diapositive 193

IE03129

> démantèlement des navires :
Communication de la Commission européenne sur une stratégie européenne de démantèlement des navires (2008) : 2 options européennes :
- promotion d'actions volontaires du secteur en faveur du démantèlement propre des navires, par exemple sous la forme de la diffusion d'informations sur les infrastructures «vertes» et du développement de programmes de certification et de rétribution;
- encouragement de la recherche sur le démantèlement des navires.
Interface Europe; 26/08/2008

IE03131 Politique maritime intégrée (livre bleu) :

> Déploiement de services maritimes
électroniques fondés sur des normes ouvertes d'applications à large bande à valeur ajoutée
intégrées à d'autres systèmes de contrôle et de communication à bord et à terre afin d'améliorer l'intégration du transport maritime dans les diverses chaînes logistiques et la simplification des documents commerciaux et administratifs à bord (par exemple l'apprentissage en ligne, la télémédecine, les communications professionnelles et personnelles).(2009)
Interface Europe; 26/08/2008

IE03143 Politique maritime intégrée (livre bleu) :

> La chaîne logistique maritime européenne doit pouvoir compter sur des chantiers
navals et sur des entreprises de réparation et d'équipement maritime à la pointe du progrès, et
l'Union européenne doit se fonder sur les initiatives fructueuses (Waterborne - Leadership 2015) pour promouvoir le
développement de ces entreprises, en particuliers les PME
Interface Europe; 26/08/2008

IE03161

EuMaT:
> Advanced materials with specific requirements for corrosion resistance :
Automotive, Rail & Marine industries (replacing conventional metals)
Extreme conditions: high-temperature, high pressure, creep, corrosion and radiation resistance
> Lightweight bio-composites, in
particular, natural fibers in polymers composites
> Biochemistry
> Metal Ceramic Composites for transport and environment and sustainable development
> Development of new light materials for vehicle structures : for ship building
> More stringent requirement for emissions
and leakages require reliable high performance materials and understanding their
behavior in processing handling hazardous chemicals and gases.
> Shipbuilding: Life cycle costs, New process possibilities, Environment, safety and reliability (No leakages or emission, No hazardous mechanical failures Ecoefficient processes)

Interface Europe; 26/08/2008

IE03163

ARTEMIS :
> Embedded Systems technologies are deployed in all market sectors - automotive, aerospace, medical, environment, communications, entertainment, textiles, transport, logistics, printing and chemicals, food & drink, timber and materials.
> Safer and secure, better controlled road infrastructure (active road safety support, traffic management systems with more cooperative vehicles, active bridges, secure tunnels, ...) are achievable through greater integration of Embedded Systems.

Interface Europe; 26/08/2008

IE03164

ARTEMIS :

> Manufacturing & Process Industries:
"Efficient, flexible manufacturing"
The "100% available factory" reduces the environmental strain of manufacturing industries while maximising manufacturing efficiency. Embedded Systems will precisely control process parameters, including the active reduction of pollutants, which reduces the total cost of manufacture. Further competitive advantage in manufacturing industries is assured by efficiency, meaning 100% plant availability and low maintenance that reduces cost.This will not only augment manufacturing employment in Europe, but also assure jobs in the design and manufacture of the manufacturing equipment itself.
Manufacturing flexibility is mandatory, to assure agile adaptation to market demands, particularly for individual customisation, thus

reinforcing the competitive position. This will be achieved through reduced commissioning and production ramp up times, allowing fast changes in product type or grade to be made. Concrete targets are to reduce commissioning time from 3-6 months to less than 1 month, and assuring quick turn-around times, where model change-over time is reduced from 8-12 weeks to 1-2 weeks. Improvement in end product quality can also be achieved through active control of the manufacturing process, supporting the move from "off line" to "in process" quality control through advanced automation. Improved man/machine interaction through advanced Embedded Systems and "human-in-the-loop" control systems improves quality and productivity by assuring zero operator errors, as well as reducing accidents.
Interface Europe; 26/08/2008

IE03173 Biofuel Technology Platform:

> industrial biotechnology is breaking new ground in understanding microbial biodiversity and bio-processes that could lead to valuable bio-products and bio-materials.
Interface Europe; 26/08/2008

IE03179 Biofuel Technology Platform:

> White biotechnology is also known as industrial biotechnology and refers to the processing and production of chemicals, materials and energy.
White biotech employs micro-organisms, such as yeasts, moulds and bacteria as so-called 'cell factories' and enzymes to produce goods and services. This implies developing and producing chemicals at the cellular level by exploiting and adjusting natural processes in living organisms to generate the substances and enzymes needed by industry. Examples include environmentally friendly detergents and enzymes that replace the use of stones in stonewashed jeans.
Microbes are microscopic biological structures which make up about half of the Earth's biomass. They represent an untapped treasure trove of biological 'parts' and 'components', i.e. cells which can be used to perform new functions and create new materials.

Interface Europe; 26/08/2008

IE03189 ETPIS:

ETPIS can contribute to the following specific programmes:
• Information and Communication Technologies : ICT to improve risk management;
• Nanosciences, Nanotechnologies, Materials and new Production Technologies : new processes, construction, nanosciences, multifunctional material
• Transport (including Aeronautics) : transport of hazardous goods, multimodal transportation of hazardous goods

UNDERSTANDING THE IMPACT OF HUMAN AND ORGANISATIONAL FACTORS IN RISK CONTROL

Basic knowledge, methods and technologies need to be developed in:
• Human and Organisational Factors in Managerial Safety Factors in Organisational and Managerial Safety
• Human-Centred Design
• Integrated Risk Assessment and Management Methods & Techniques
• Human Performance & Technology Usability
• Human Factors in Emergencies and Crisis Management
• Safety and Quality: Could they be merged, do they really match?

ADVANCED RISK REDUCTION TECHNOLOGIES

Basic knowledge, methods and technologies need to be developed in:
• Technologies for inherently safer design and to reduce risks at source;
• Technologies to reduce emissions of hazardous substances and aerosols
• Novel and effective methods for reducing risks related to noise and vibration
Novel and effective methods for reducing risks related to electromagnetic hazards and optical radiations (non-laser and laser radiations)
• Technologies and methods for inherently safer design of industrial plants and installations to reduce major-accident hazards
• Technologies for reducing risks by collective protective systems and devices ;
• Protection systems and smart sensors for machines, production and transportation processes
• Software tools for detecting dangerous situations in industrial systems
• Systems and devices protecting against noise and vibration
• Collective protection devices against electromagnetic hazards and optical radiations
• Novel and advanced technology in lighting the workplaces
• Application of information technologies in safety-related systems

- New materials, technologies and test methods for personal protective equipment (PPE);
- Test methods and safety requirements for PPE applied against new specific hazards
- Innovative materials & individual systems for the personal protection of health and life
- Ergonomics innovations for PPE used in work and everyday life conditions

Interface Europe; 26/08/2008

IE03194 Integral Satcom Initiative (ISI):
The Integral Satcom Initiative - ISI (www.isi-initiative.eu.org) brings together all aspects related to satellite communications, including mobile, broadband, and broadcasting applications, security systems and applications, and the integration of data communications with navigation, Earth observation and Air Traffic Management systems, both for commercial and institutional/ governmental applications.
Interface Europe; 26/08/2008

IE03197 Satcom SRA:

A classification of satcom users into five macro-categories has been adopted:
1. Citizens and Governments: the CG institutional market
2. Individual users and families in their Homes: the IH market
3. Individual users on the Move: the IM market
4. User Groups in villages and Remote areas: the UGR market
5. User Groups on the Move: the UGM market

Research Themes of particular relevance for Broadband applications and services:

c) Developing mobile broadband access with service characteristics which match as closely as possible those of terrestrial systems. Designing broadband MSS solutions for mobile collective terminals in aeronautical, maritime, vehicular and railway domains, and broadcast systems supporting terrestrial mobility and vehicular/handheld reception.

Research Themes of particular relevance for Mobile applications and services:
a) Developing multi-band MSS, incorporating on-the-move (e.g. L/S band technology) and transportable solutions and collective terminals (e.g. Ku/Ka band technology) sharing same infrastructure.
b) Designing reconfigurable low cost user terminals capable of working seamlessly between satellite and terrestrial systems.
c) Integrating satellite technologies into long-term (2020+) solutions for ATM/ATC systems.
d) Working on efficient broadcasting and multicasting technologies to develop MSS into mass markets, through the delivery of land-mobile broadcast and multicast services.
e) Researching satellite extensions for ad-hoc radios deployed in emergency events (e.g. Tetra 1 and 2, WLAN, WiFi) connecting field-workers with remote coordination centres database sites, etc.. Considerations will include the safety needs of on-field personnel in the front line, real time system reconfigurability to track on-field personnel, and the integration of communication and localisation systems for indoor and outdoor needs.

ASMS THEMATIC PRIORITY: MOBILE BROADCASTING AND MULTICASTING

One of the major strengths of satellites is their inherent capability to broadcast data to large audiences. The success of satellites in the TV broadcast market to fixed receivers is still one of the most commercially successful examples of the usage of communication satellites.

Satellite broadcasting for moving collective terminals
The type of mobility characterizing the terminal determines a specific mobile broadcast environment, which presents different needs and criticalities. Thus, there are different requirements and R&D challenges in the broadcast area to be taken into account for each identifiable environment. A concise overview of the most relevant R&D topics is as follows:
(...)

b) Ships
• Robust installation in particular in regard to antenna technologies and steering mechanisms (e.g., usage of the same outdoor unit for TV reception and downlink data services)
• Medium to low cost equipments, to be appealing also for vessels with small crews or leisure vehicles.
• Combination with distress and safety applications. In this framework, the requirements of the Global Maritime Distress and Safety System (GMDSS) for the return link would be advantageous, especially since only a low data rate return link would be necessary in association with broadcast and multicast services.

ASMS THEMATIC PRIORITY: NAV-COM
There exists a very broad framework of applications that need fulfilling the requirements of transport, mobility and precise location, the information contents of which is function of the user position. These are the so-called Navigation-Related Services (NRS) and Location-Based Services (LBS), depending on whether directing to a target or precisely locating objects is predominant.

The key concept of NRS and LBS NAV/COM services is the thorough integration of navigation and communication components. This can be pursued with two possible orthogonal approaches:
a) A horizontal integration, where integration is obtained at the user terminal and application level, by combining capabilities provided by independent NAV and COM entities
b) A vertical integration, where integration is obtained at system level, by defining a system architecture, which synergistically combines both capabilities at all levels: ground segment, space segment, user terminal segment, application level.

The former approach is in the current state of the art of applications that combine GPS-based navigation capability (in the near future GALILEO) with either terrestrial or satellite cellular mobile communications. A new space system is indeed required with the latter approach that combines the Signal-In-Space capability of the space navigation system with the communication capability of S-UMTS.
Possible applications include geo-referenced services capable of collecting/disseminating position data or supporting navigation decision taking and making, related to the instantaneous user position, such as an intelligent management of mobile work force, asset tracking and tracing, emergency assistance and management, m-commerce, etc.

ASMS THEMATIC PRIORITY: SECURITY/DISASTER RELIEF

In recent years, it has become evident that additional international attention needs to be placed on the importance and the need for enhanced telecommunication for public agencies and organizations dealing with law and order, safety of life and property, emergency and disaster relief. In this context, the use of a satellite overlay network allows efficient implementation of public protection and disaster relief (PPDR) applications. An example in this direction is the Emergency call application (Enhanced 112 service in Europe). The broadcasting capability of the satellite overlying network offers the possibility to exploit Location Based Broadcasting Services to implement PPDR. Thanks to the automatic collection of the user location, safety services improve their efficiency in case of disaster (e.g., earthquakes, pollution), and the citizens can be promptly informed of the guidelines to be applied. By disposing of a direct return link through the satellite, the user can communicate with the public service provider in order to notify anomalies, and report on crises. And according to his/her location, the user can benefit of the appropriate navigation information to reach safety services, even in a completely new landscape drawn due catastrophic conditions.

The key R&D topics are:
5.6.1 Emergency call management
The R&D issues related to the emergency call application are mainly linked to the terminal impact, as well as to interworking capabilities with terrestrial networks, e.g., the determination and automatic collection of the user location.

5.6.2 Population management & Localized Broadcast Services
The use of a satellite to alert the population about a risk or an impending disaster is an interesting application, the timeliness of which is testified by very recent catastrophic events, like the tsunami of December 2004 that has heavily damaged the Indian Ocean regions.
5.6.3 Satellite return link
The disposal of a direct return link (RL) through satellite is a necessary requisite for an efficient public protection and disaster relief application. The design of a satellite return link has to cope with several issues, including a clear service definition.
5.6.4 Low cost terminal impact
When considering a satellite return link, the unavoidable question is related to the terminal impact. What are the conditions to offer emergency call possibilities in outdoor line-of-sight conditions to a range of mobile satellite terminals, including handsets with no form-factor impacts and very limited price increase?
5.6.5 Incorporating mobile and nomadic distress and safety services in evolving and future mobile satellite services.
5.6.6 Provisioning of end to end secure mobile satellite services, to fulfil dual use of the system by civil and defence customers.

POSITIONING WITH RESPECT TO GALILEO & GMES

GENERAL CONCEPTS DRIVING ISI'S POSITIONING IN RELATION TO GALILEO AND GMES
a) Satellite Communications are essential elements to exploit Navigation and Earth Observation systems to their fullest.
b) Satellite Communications are not competing with the other two fundamental Satellite Technologies (NAV and EO systems); on the contrary, their complementary and synergic nature makes it possible for Satellite Systems to provide integrated applications fully meeting User demand.
c) The integration philosophy advantages are not limited to Satellite Technologies and Services: integration and interoperability of Satellite and Terrestrial systems are fundamental to the success of a high number of very promising applications.
d) ISI can play a very significant role in this integrated scenario, as a complement to Galileo and GMES to meet user expectations and as an initiative fully in line with the European Union strategic vision

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GMES

GMES Telecommunications needs
a) GMES User Communities are numerous and diversified. Even if it is not simple to get a clear picture of GMES users' telecommunication requirements and to identify from now all the GMES thematic areas where enhanced telecommunications functionalities will improve the quality of GMES services, it is already possible to list some areas where Satcoms are of paramount importance for GMES.
As a first example in case of emergency and crisis management, temporary communications links have to be rapidly deployed in order to enable rescue teams to coordinate and combine their effort from the very first hours of intervention. ISI will foster the validation and widespread adoption of the most appropriate standardised communications infrastructures to support management of pre- and post-crisis situations.
As a second example, GMES will benefit from, and is expected to also drive, upgrades of the most recent satellite telecommunication techniques for data collection (real time, global access) and distribution.

Satellite Telecommunications Solutions for GMES

Emphasis shall be put on:
i) Improvement of geographical service area, beyond coverage of existing terrestrial networks, in particular in developing countries, during crisis events as well as during the alert phase;
ii) Improvement of reactivity, through faster data collection, with real time control of sensors or fresher data delivery, or for access to and remote control in-situ sensors;
iii) Improvement of product quality, through the amount of data that can be collected and distributed thanks to higher available data rates;
iv) Improvement of terminal and on-ground infrastructure deployment features (lightweight, robustness, autonomy, ease of operation) for immediate and reliable use by rescue teams and victims needing temporary telecom means during and after crisis events.

ELEMENTS RELATED TO THE ISI POSITIONING WITH RESPECT TO GALILEO

NAV-COM Market:
Preliminary examples of applications with high growth potentiality include global tracking and tracing of mobile assets, fleet management, location based services, emergency, security, search and rescue and marine surveillance

Safety and Emergency Services
a) Combination of multimedia communications with high-accuracy positioning supported by broadband satellites and Galileo makes it possible to implement services for the safety of citizens as well as to manage emergencies. Wide area outdoor electronic-monitoring combining telecommunication and positioning capabilities can be used by police forces in order to monitor wide territories, prompt react to natural disasters and rescue people.
Interface Europe; 26/08/2008

IE03198 Leadership 2015 :

"LeaderSHIP 2015 - Définir l'avenir de l'industrie européenne de la construction et de la réparation navales La compétitivité par l'excellence"

Le 7e programme-cadre inclut aussi comme nouveau
thème de recherche la sécurité – y compris le développement de solutions spécifiques pour le secteur maritime
Interface Europe; 26/08/2008

IE03200 ESTEP - SRA:
> Corrosion : Processing for critical applications (fire, earthquake, durability and corrosion)
The medium term target is to produce new steelbased solutions offering a higher resistance to a high temperature environment, to complex mechanical stress or to corrosion. Composite
products are one of the possible options in this field and manufacturing processes will be adapted to the fabrication of related composite steel grades. As an example, the promotion of the fine and dispersed precipitation of endogenous or exogenous particles is an initial possibility. Another option relies on products characterised by differences in properties between the surface and internal parts of the product.
• The incorporation of intelligent devices in the
steel structures allowing early detection of the
occurrence of a disaster will even increase the
efficiency of the steel solutions offered.

The main emphasis should be directed to the
technical and scientific development of materials
and products, including composite structures, and the development of new products, new
construction systems, production and construction processes. Product development is already focused on the evolution of standardised products and mass customised production systems. However, further innovations must be carried out to develop new steel grades with improved corrosion resistance and fire safety, new technical solutions for combining steel with other materials, and associated innovative design features. This would offer new potential for a healthier lifestyle, such as minimisation of noise and vibrations, improvement in thermal insulation systems, and the capacity to integrate alternative energy systems. Finally, the development of new assembly processes would contribute to reductions in on-site costs.
Interface Europe; 27/08/2008

IE03209 Textile TP - Vision:

>New Textile Applications

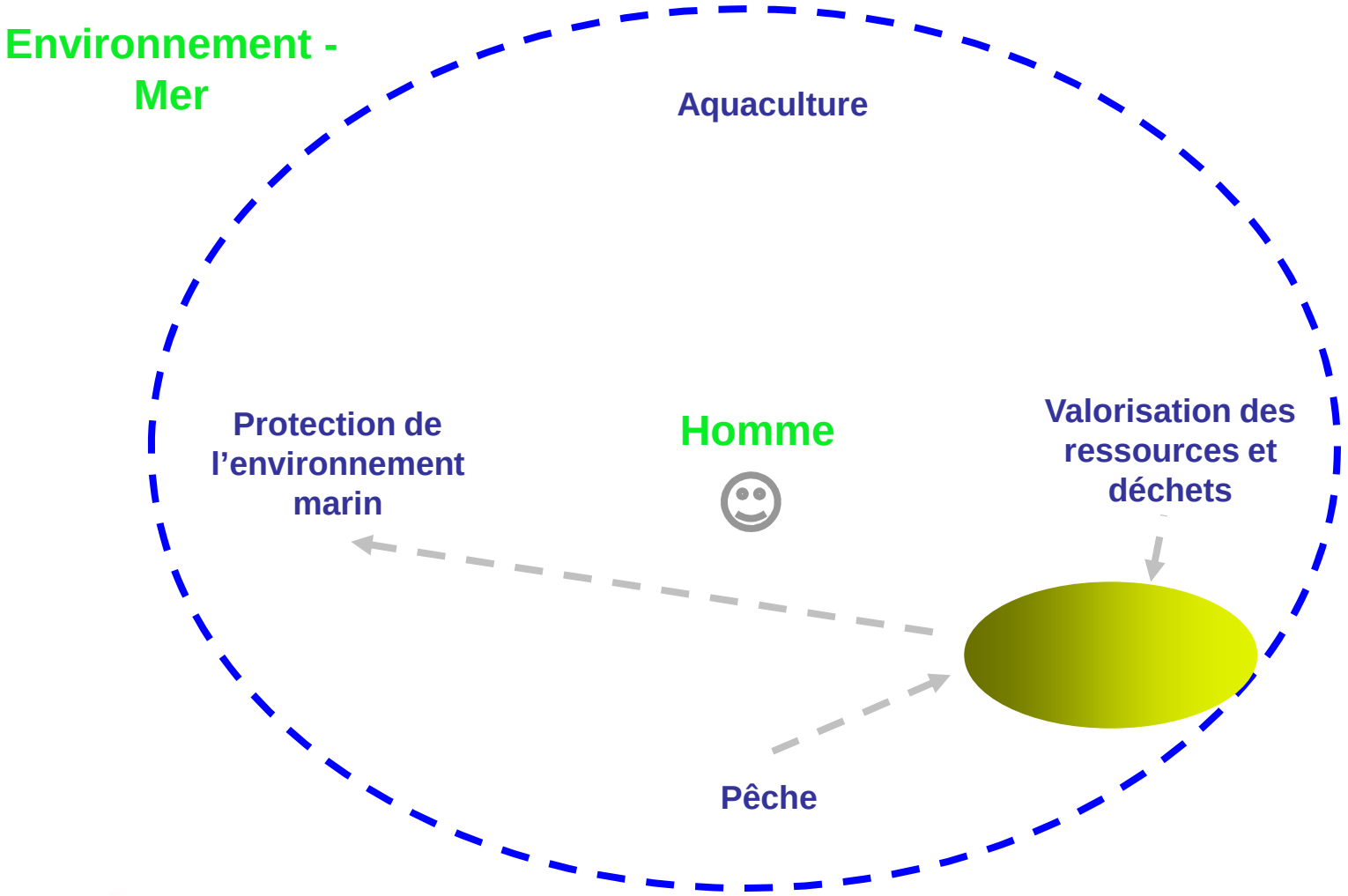
With important advances in textile materials research, processing technologies and changing functional requirements of products in other industries over the last two decades, textiles have found an ever broader range of application
in sectors as diverse as road, rail, marine or aerospace vehicles, engineering, construction, agriculture, power and environmental technologies, health care, defence and security etc.

The 21st century incarnations of mobility enabling textiles come in the form of:
(...)
• aircraft wing and body structures or boat rumps made of fibre and textile-based composites;

Projets potentiels sur le thème «Constructions navales»

- Issus des opportunités européennes
- Issus des synergies locales

Projets potentiels issus des synergies locales



Synergie potentielle

Chaîne de valeur projet

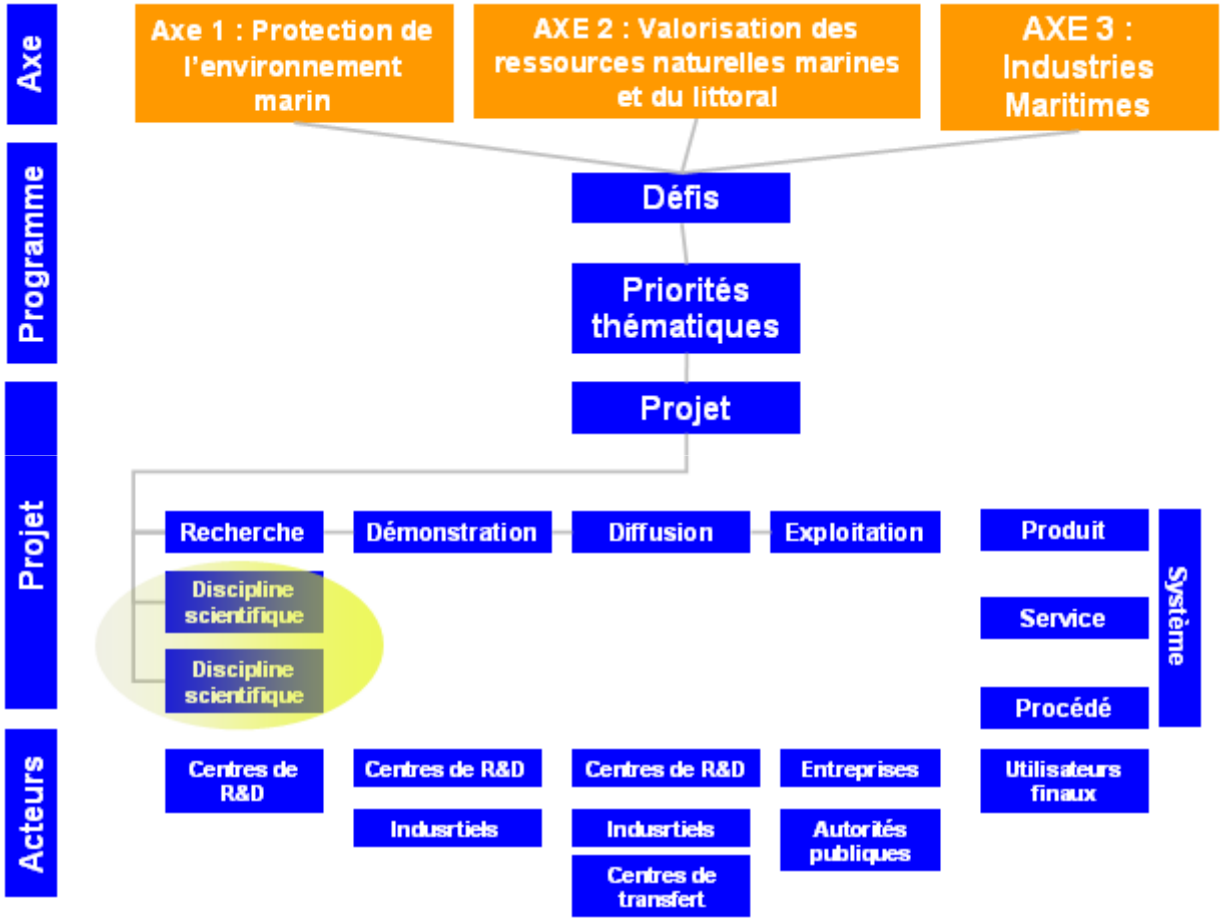
Concept: projets potentiels

Etat de l’art : disciplines scientifiques

Partenaires

E: recherche; DM: démonstration; C: coordination/networking; F : formation; T: transfert; DF: diffusion; V: Valorisation économique

Disciplines scientifiques



Disciplines scientifiques et applications pour le pôle Hom'Mer

Disciplines scientifiques	Applications	Axes du pôle Hom'Mer concernés		
		Protection de l'environnement marin	Valorisation des ressources naturelles marines et du littoral	Industries Maritimes
Biotechnologie	▪ Santé		X	
	▪ Alimentation		X	
IE03181	▪ Cosmétiques		X	
	▪ Adhésifs, peintures			
IE03219	▪ Aquaculture, pêche		X	
IE03221	▪ Restoration environnementale	X	X	
	▪ Bio films et corrosion	X		
IE03222	▪ Bio matériaux	X	X	X
	▪ Bio procédés	X	X	X
	▪ Energie		X	
	▪ Sécurité		X	
Physico-chimie	▪ agro-alimentaire		X	
	▪ écotoxicité	X	X	
Radioécologie marine	▪ Environnement	X		
	▪ Santé		X	
	▪ Alimentation		X	
	▪ TIC (modélisation mathématique)	X		

IE03186

IE03210

Diapositive 198

IE03181 Biofuel Technology Platform:

"The three fields of activity in industrial
biotechnology are biorenewables as feed stock, bioprocesses for production, and bioproducts for the market,"
Interface Europe; 26/08/2008

IE03186 Biofuel Technology Platform:

> 'Regenerative medicine', 'genetherapy', 'therapeutic cloning', and the more precise and targeted use of organic matter to build better drugs promise to uncover cures and treatments for a plethora of degenerative and hereditary diseases and conditions, including Parkinson's and Alzheimer's disease, cancer, and more.
Interface Europe; 26/08/2008

IE03210 Textile TP

Vision:

1. Bio-based materials :

Proposed research priorities in Bio-based materials application fields are:
• Production of new textile fibres based on fermentation and other bio-processes to more away from refined-oil based products ;
• Tailoring controlable biomedical properties of biomaterials by enzymatic chemical or physical structural modification;
• Smart surfaces and matrices to immobilise bioactive components;
• Biocomposite fibre reinforcements and bio-resins as fully biodegradable materials;

2. Biotechnology

Proposed research priorities in the Biotechnology field are:
• Biopolymers and biomass as a new bass for textile surface modification and coating;
• Bio-based textile auxiliaries and relative applications in best available techniques (BAT) and emerging techniques to minimise environmental impact of textile processing;
• Enzymatic systems and grafting of enzymes (or proteins) on textiles surfaces
• Other bioprocesses (including biocatalysis) to improve technological applications of new fibre materials and sustainable processing for cleaner production principles.
Interface Europe; 27/08/2008

IE03219 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Health care:

> Advanced sensors and
new micro-analytical devices will have a
substantial impact on health, environment,
and individual protection
strategies in the coming years. The
ability to reliably link biologically active
molecules to a surface will take
functional integration to levels previously
deemed impossible.
>Materials for medicine, agriculture,
nutrition, health care
> Topics are for example materials for
diagnostics and imaging, drug and bio-active compounds delivery systems, cosmetics
Interface Europe; 27/08/2008

IE03221 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

Citizen protection:

> Society has been increasingly challenged
by accidents, terrorist attacks, sudden
climate changes and catastrophes
causing extensive personal and material
damage. There is a need to develop new intelligent technologies in order to
protect the civil population from these
extreme situations as well as to provide
new ways of predicting and avoiding
them. Sensors for explosives, toxic
agents and biohazards at low concentration,
materials for personal protection
and/or buildings, e.g. hospitals, airports,
and vehicles, functional textiles that
recognise and destroy toxic agents or
administer the right counteragents. In
addition, new sensor systems could
help to detect chemical or biological
threats and play an important role as
components of security systems.
Interface Europe; 27/08/2008

IE03222 European Technology Platform for Sustainable Chemistry (SusChem) - SRA:

REACTION AND PROCESS DESIGN

Two complementary approaches are integrated in this section:
Chemical synthesis including:
• Novel synthetic routes and new reactions;
• Novel solvents and solvent-free routes; and
• Catalysis.

Process science and engineering including:
• Reactor design;
• Drying and purification methods;
• Distillation, crystallisation and separation technologies;
• Product design and formulation; and
• Process analysis and control.

INDUSTRIAL BIOTECHNOLOGY

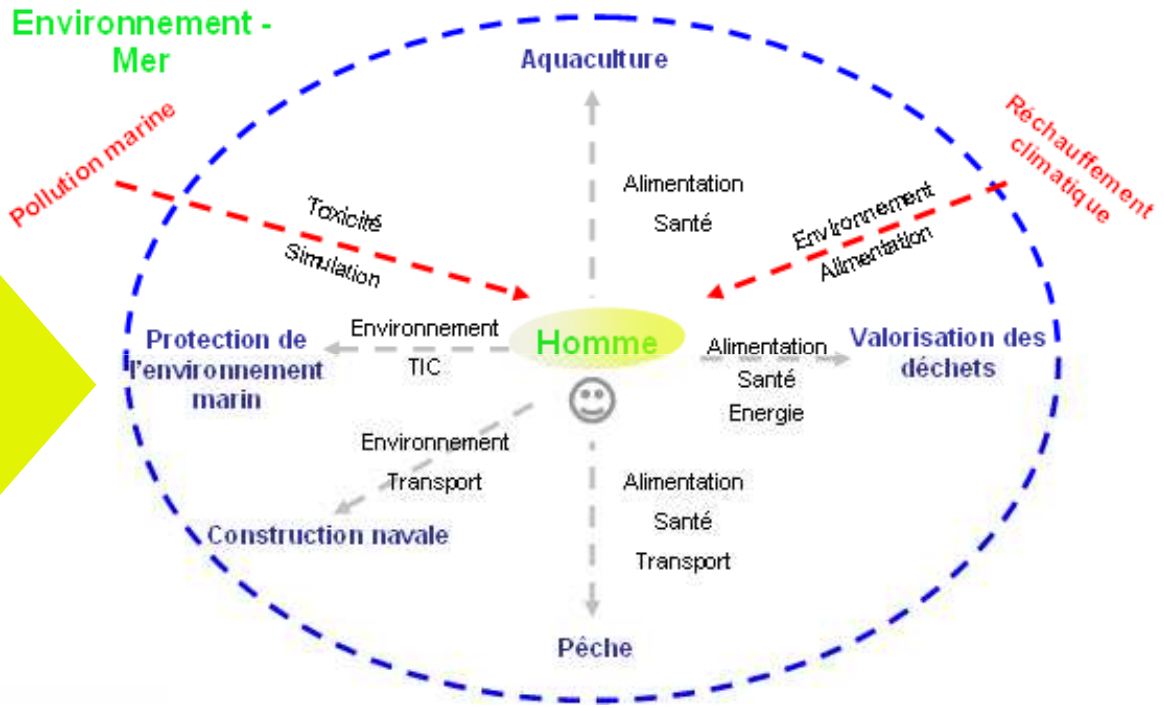
The strategic research agenda should be organised within the following research areas in industrial biotechnology:
• Novel enzymes and micro-organisms - metagenomics
• Fermentation science:
• Metabolic engineering and modelling:
• Performance proteins and nanocomposite materials:
• Microbial genomics and bio-informatics:
• Biocatalyst function and optimisation:
• Bio-catalytic process design:
• Innovative down-stream processing:
• Integrated bio-refineries:

Disciplines scientifiques et applications pour le pôle Hom'Mer

Disciplines scientifiques	Applications	Axes du pôle Hom'Mer concernés		
		Protection de l'environnement marin	Valorisation des ressources naturelles marines et du littoral	Industries Maritimes
Morphodynamique continentale et cotière	▪ Changement climatique	X		
	▪ Ressources de la pêche et de l'aquaculture		X	
	▪ Energies marines	X	X	
	▪ Gestion intégrée des zones côtières	X	X	X
Géologie – sédimentologie	▪ Environnement	X	X	
	▪ Energie (biomasse)	X	X	
TIC	▪ Observation de la terre et de la mer	X	X	
	▪ Trafic maritime	X		
	▪ Sécurité maritime	X		X
	▪ Courantologie	X	X	
Nanotechnologies	▪ Nouveaux matériaux		X	X
	▪ Nouvelles structures	X		X

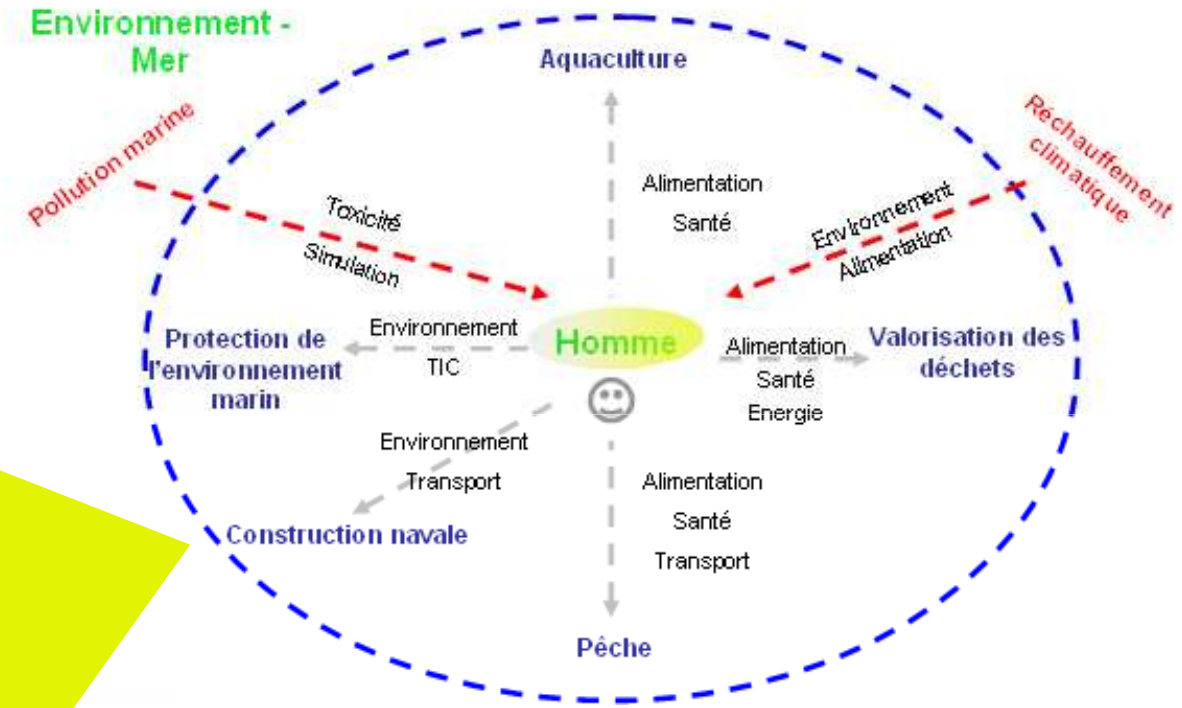
Approche globale et intégrée du pôle Hom'Mer

- Morphodynamique continentale et cotière
- Géologie – sédimentologie
- Physico-chimie
- Biotechnologie
- Radioécologie marine
- TIC
- Nanotechnologies



Synergie potentielle

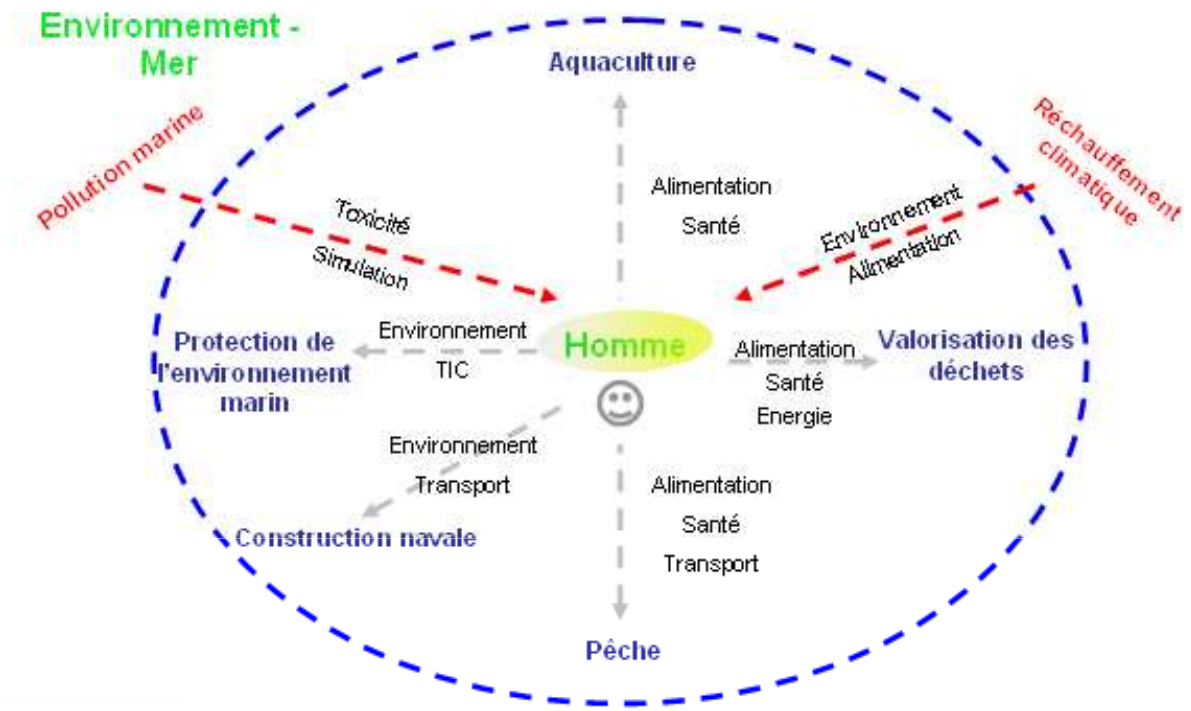
Approche globale et intégrée du pôle Hom'Mer



- Nanotechnologies
- Biotechnologie
- TIC
- Morphodynamique continentale et cotière

Synergie potentielle

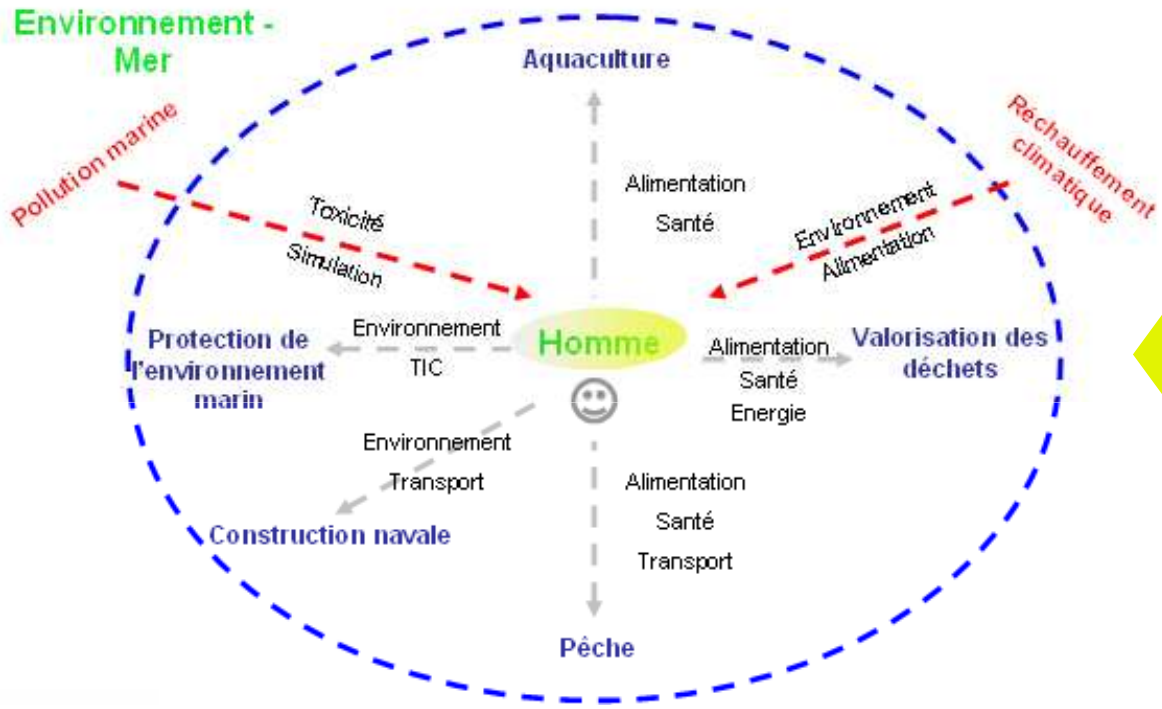
Approche globale et intégrée du pôle Hom'Mer



- Biotechnologie
- Radioécologie marine
- TIC
- Morphodynamique continentale et cotière
- Géologie – sédimentologie

Synergie potentielle

Approche globale et intégrée du pôle Hom'Mer



- Biotechnologie
- Physico-chimie
- Radioécologie marine
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- Morphodynamique continentale et cotière
- Géologie – sédimentologie
- TIC
- Nanotechnologies

Synergie potentielle

Approche globale et intégrée du pôle Hom'Mer

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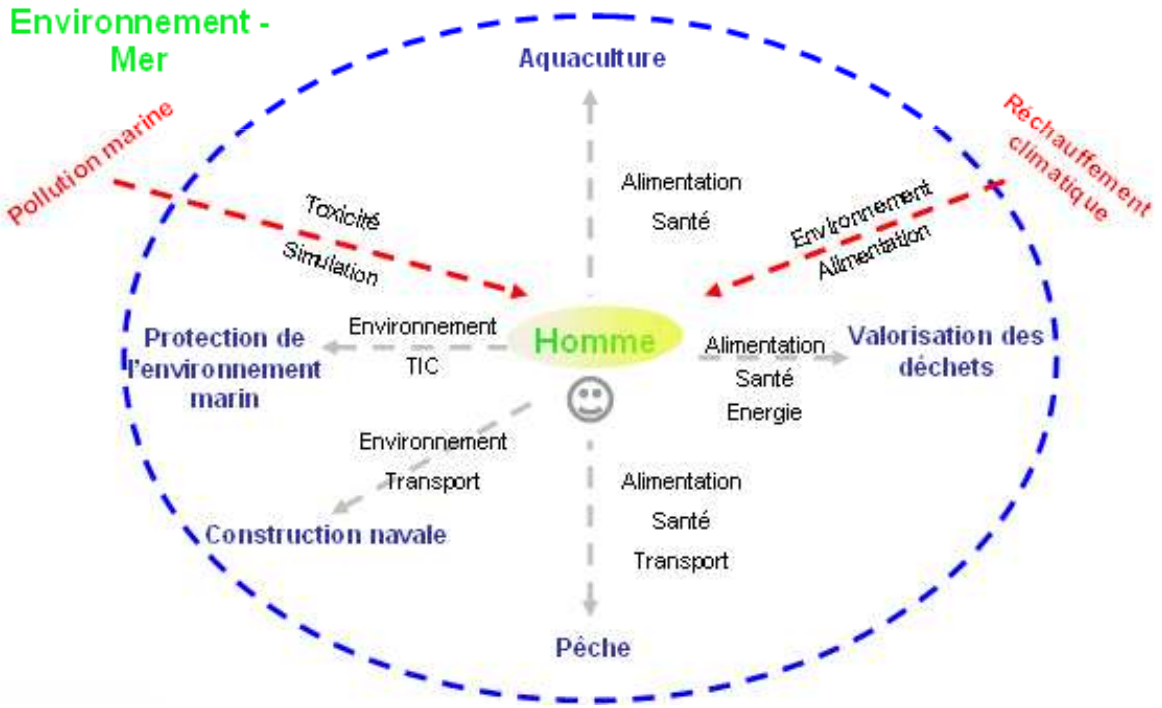


Synergie potentielle

Disciplines scientifiques et applications pour le pôle Hom'Mer

"Biotechnology in general, and **Modern Biotechnology** in particular, is considered one of the key enabling technologies of the 21st century to support the Lisbon Strategy and sustainable development."

- "*Modern biotechnology can be defined as use of cellular, molecular and genetic processes in production of goods and services. Its beginnings date back to the early 1970s when recombinant DNA technology was first developed. Unlike traditional biotechnology – which includes fermentation and plant and animal hybridisation – modern biotechnology involves a different set of technologies, including industrial use of recombinant DNA, cell fusion and tissue engineering among others."*

Source:

Bio4EU study – "Consequences, Opportunities and challenges of modern biotechnology for Europe" - April 2007 – JRC (European Commission)

Disciplines scientifiques et applications pour le pôle Hom'Mer

Modern Biotechnology applications:

Modern biotechnology in **primary production and agro-food**:

- Breeding and propagation of crops, livestock and fish, e.g use of genetic markers, genetic modification and embryo transfer;
- Feed additive production, e.g the amino acid lysine and the enzyme phytase;
- Veterinary and food diagnostics, e.g detection of BSE, salmonella, genetically modified crops and food;
- Veterinary vaccines, e.g for pseudorabies eradiction;
- Enzymes for food production, e.g fruit juice production.

Source:

Bio4EU study – "Consequences, Opportunities and challenges of modern biotechnology for Europe" - April 2007 – JRC (European Commission)

Disciplines scientifiques et applications pour le pôle Hom'Mer

Modern Biotechnology applications:

Modern biotechnology in industrial production, energy and the environment:

- (…)
- Detergents (e.g enzymes in laundry and automatic dishwasher detergents);
- Certain chemical products, e.g enzymes, biotechnology-based polymers, antibiotics, amino acids, drugs compounds (individual steps in the production process or fully biotechnological production);
- Bioethanol production

Source:

Bio4EU study – "Consequences, Opportunities and challenges of modern biotechnology for Europe" - April 2007 – JRC (European Commission)

Disciplines scientifiques et applications pour le pôle Hom'Mer

Table A.1 Technologies used in modern biotechnology

Nucleic-acid (DNA/RNA)-related technologies	• High-throughput sequencing of genome, gene, DNA • DNA synthesis and amplification • Genetic engineering • Anti-sense technology • siRNA technology	Analysis and modification of genetic material
Protein-related technologies	• High-throughput protein/peptide identification, quantification and sequencing • Protein/peptide synthesis • Protein engineering and biocatalysis	Analysis and modification of proteins
Metabolite-related technologies	• High-throughput metabolite identification and quantification • Metabolic pathway engineering	Analysis of metabolites (small molecules)
Cellular-/ subcellular-related technologies	• Cell hybridisation/fusion • Tissue engineering • Embryo technology • Stem-cell-related technologies • Gene delivery • Fermentation and downstream processing	Cell manipulation for various applications
Supporting tools	• Bioinformatics	Application of computational tools in analysis and storage of biological data

2.2.1.3 Breeding of fish

The main modern biotechnologies currently used in aquaculture are polyploidy induction and sex reversal. The use of molecular markers to optimise breeding strategies is increasing. Molecular markers in fisheries management (harvest fisheries) is still at a rather experimental/ pilot phase. Harvest fisheries and aquaculture are of less economic significance than agriculture. However, regionally they can be very important.

Economic significance of modern biotechnology in breeding fish

In 2004, the EU aquaculture sector produced a total of 1.4 million tonnes of fishery products with a value of some EUR 2.8 billion. Production has been relatively stable since 1999, after a considerable increase between 1993 and 1999 (46%). The EU accounts for about 2.5% of worldwide production by volume and 4.6% by value, being the world production leader for some species such as trout and mussels. Within EU fisheries production, aquaculture represents 19% by volume, but 30% by value. Spain (26%), France (18%) and the UK (15%) are the largest producers in the EU. The largest world producers are Asian countries, with China producing nearly 30 times as much as the EU[253].

In the EU, Atlantic salmon, rainbow trout, and oysters are among the five major species farmed. A survey of salmon, trout and oyster breeders and experts provided an indication of the adoption of modern biotechnologies in aquaculture[254]. It stated that molecular markers have been mainly used in salmon and trout breeding for parentage assignment supporting breeding efforts (e.g. via microsatellites) and accounted for 30% of the revenues of salmon and trout breeders (EUR 10 and 11 million, respectively), and 10% (EUR 2 million) for oyster breeders[255]. Sex reversal and ploidy induction techniques have mainly been applied to trout and oyster breeding, accounting for about 50% (EUR 18 million) and 20% (EUR 4 million) of total turnover, respectively. Applying these adoption rates to farm-level production provides an indication of the indirect relevance of modern biotechnologies. It was estimated that approximately 15% of EU-wide fish farming turnover was produced through the use of seed fish produced with the aid of modern biotechnologies (EUR 432 million), representing 0.04% of overall agro-food turnover.

Overall, available information indicates that modern biotechnologies are important for particular sectors, namely sex-reversal and ploidy induction in trout and oyster production and molecular markers in assisting genetic selection (almost exclusively through pedigree identification and related technologies and not through markers for specific traits) for salmon and trout, as a relatively large share of seed fish are produced using these technologies. Expert opinion indicates that sex and ploidy-related technologies may have reached the limits of potential benefit where applied (i.e. trout and oysters) and that, therefore, adoption is not likely to increase in the future. Nevertheless, these techniques have not been adopted to the same extent by all EU Member States, and thus EU-wide adoption can be expected to increase in the future. The highest increase in adoption is, however, expected for the use of molecular markers in breeding of all relevant species. Overall, an increase in the use and importance of modern biotechnologies in fish farming can be expected. Currently, however, the economic significance of breeding activities and aquaculture production is marginal in relation to the agro-food sector as a whole.

Regarding employment, the survey indicates that about 5% of employees in breeding companies/hatcheries have biotechnology-related jobs. However, no employment statistics are available for this sector. For fish farming, based on modern biotechnology adoption rates, it is estimated that about 10 000 jobs (out of 65 000) are related to modern biotechnology products.

Environmental implications of modern biotechnology in fish breeding and propagation

The environmental implications of the use of molecular markers in fish breeding have not been recorded. Nevertheless, the basic principles behind the potential environmental relevance of this technology are the same in all applications (fish, plants, and livestock). In relative terms, the expected improvements may be larger as fish breeding is more recent compared to plant and livestock breeding and therefore the genetic improvements to be made are larger; in absolute terms, however, the impacts are likely to be smaller, as the technology is used to a smaller extent in fish farming than in plants and livestock, and as the overall aquaculture output is much smaller. As far as ploidy and sex manipulation are concerned, the producers' survey[256] revealed benefits associated with the adoption of the technology, related to improved production efficiency, and reduced need for chemical treatment following secondary infections due to aggressiveness and stress.

Social implications of modern biotechnology in the breeding and propagation of fish

As far as ploidy induction and sex reversal in fish are concerned, both favourable and unfavourable views on their impacts on animal welfare have been expressed[257]. All-female trout production has been associated with a general increase in animal welfare as it is claimed to help alleviate up to 50% of secondary infections caused by early maturation, and its associated characteristics, such as reducing the need for chemotherapeutics. The induction of triploidy has been associated with increased deformity and susceptibility to disease (low stress tolerance) but also with the beneficial avoidance of maturity-related stressors.

Currently, the main applications of modern biotechnology for fish are ploidy induction and sex reversal, and, to a lesser but increasing extent, the use of molecular (genetic) markers to optimise breeding strategies. Ploidy induction results in an increase in sets of chromosomes from two to three by giving embryos a heat-, cold- or pressure shock shortly after fertilization. While polyploidy is lethal in mammals and birds, it has led to the development of many improved plant varieties, and triploid fish are viable and usually sterile. Triploidy can be advantageous for several reasons, including increased growth, increased carcass yield, increased survival and increased flesh quality. Sex manipulation is used to create monosex populations by hormonal treatment and appropriate breeding techniques. The resulting increased productivity is based on faster growth, reduced aggression and delayed maturation. Molecular markers in fisheries management (harvest fisheries) is still at a rather experimental/ pilot phase.

There are several types of biotechnology-based polymers:

- Lactic-acid based: Starch or sugar is fermented to produce lactic acid, which can be dried and extruded to obtain thermoplastic properties, e.g. Solanyl®, based on potato waste, produced by Rodenburg Biopolymers, the Netherlands (40 000 tonnes/year). Other EU producers are: PURAC, the Netherlands (80 000 tonnes/year) and Galactic, Belgium (25 000 tonnes/year). Lactic acid can also be chemically polymerised to form poly-lactic acid (PLA), which can be further used to make fibres, films, etc. (e.g. Nature Works®, using maize starch — Nature Works LLC, USA, 140 000 tonnes/year[405]). Applications include food packages, carpets, or PC body components.

Modern biotechnology in bioremediation

Bioremediation is the collective term for treatment of contaminated water, soil, air and solid waste with living organisms, mostly micro-organisms, to degrade or transform hazardous organic contaminants. These end-of-pipe applications of biotechnology were developed from the 1970s and 1980s onwards.

Amongst the different applications, biotechnological waste water treatment has the longest tradition, whereas biotechnological air filters and specific waste treatments are more recent. The mechanism is similar in all these applications, in that microorganisms adapted to degradation of specific pollutants are used to decontaminate environmental media. This can be done on-site, which is usually the more economic solution, or off-site, which entails transporting contaminated material to a decontamination site. Often the most suitable microorganisms are found in the direct environment of the contaminated material.

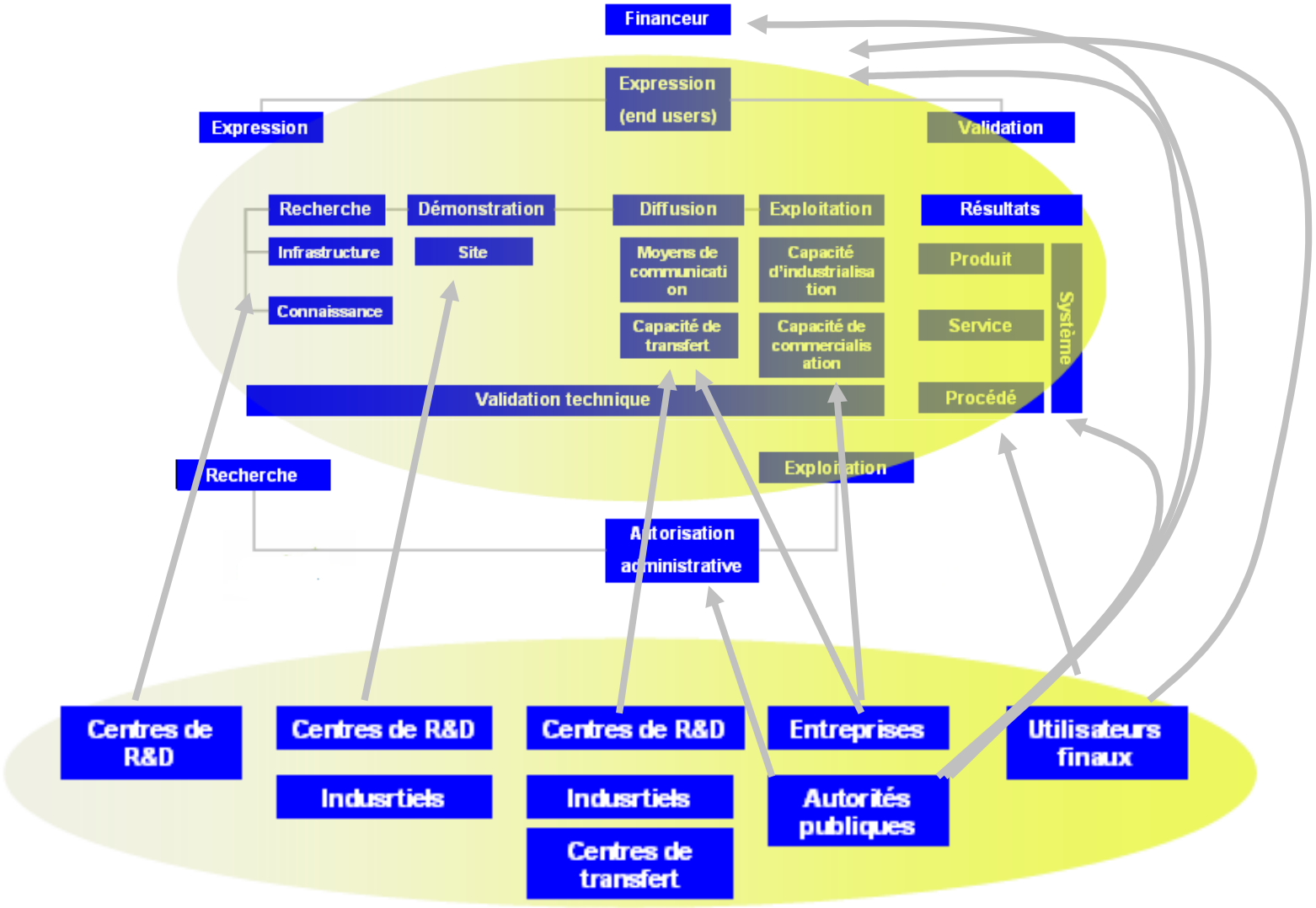
Chaîne de valeur projet

Concept: projets potentiels

Etat de l’art : disciplines scientifiques

Partenaires

Chaînes de valeur et projets européens



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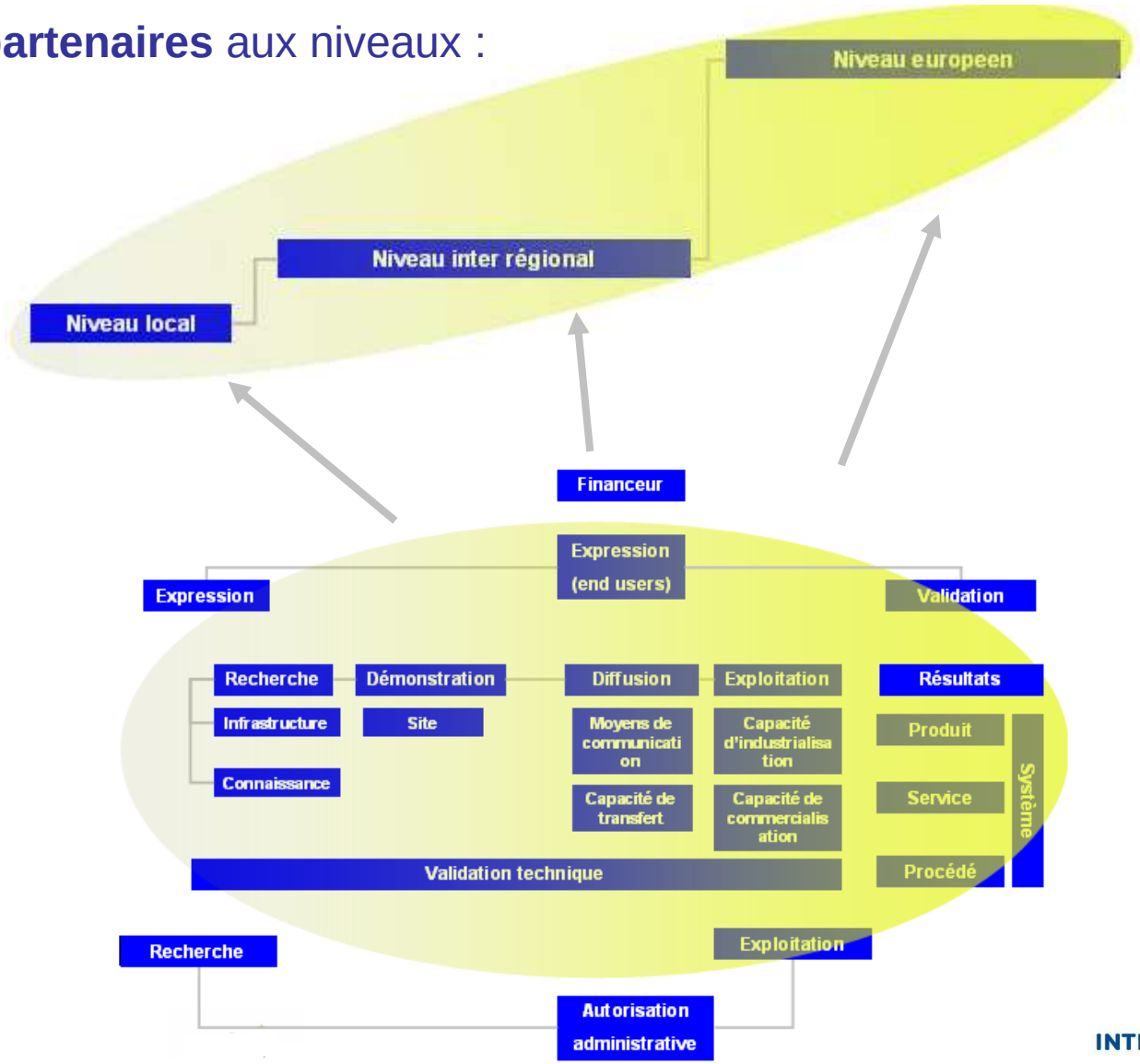
Chaînes de valeur et projets européens

Recherche de **partenaires** aux niveaux :

- Local
- Inter régional
- Européen



1 - INTRODUCTION

2 – ETUDE D'OPPORTUNITES

3 – DIAGNOSTIC DE PROJETS

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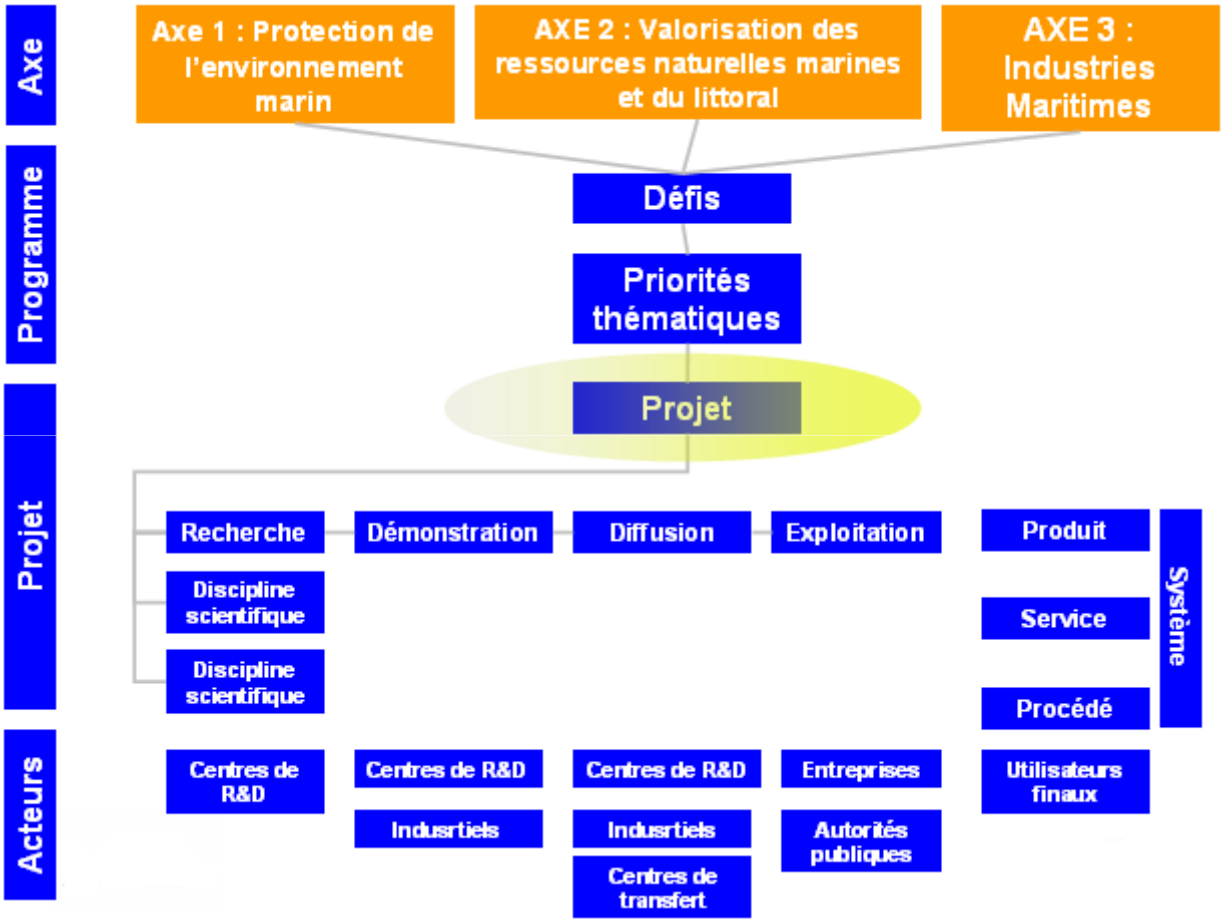
DIAGNOSTIC DE PROJETS



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Diagnostic individuel de projet européen

INTERFACEUROPE

Diagnostic Projets européens
IRSN

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