



Star-Clusters; Creating new European biorefinery collaborations

Johan Elvnert,
Coordinator of Star-COLIBRI,
Representing the
Forest Based Sector ETP and CEI-Bois

“About us”

The birth of the Star-COLIBRI project

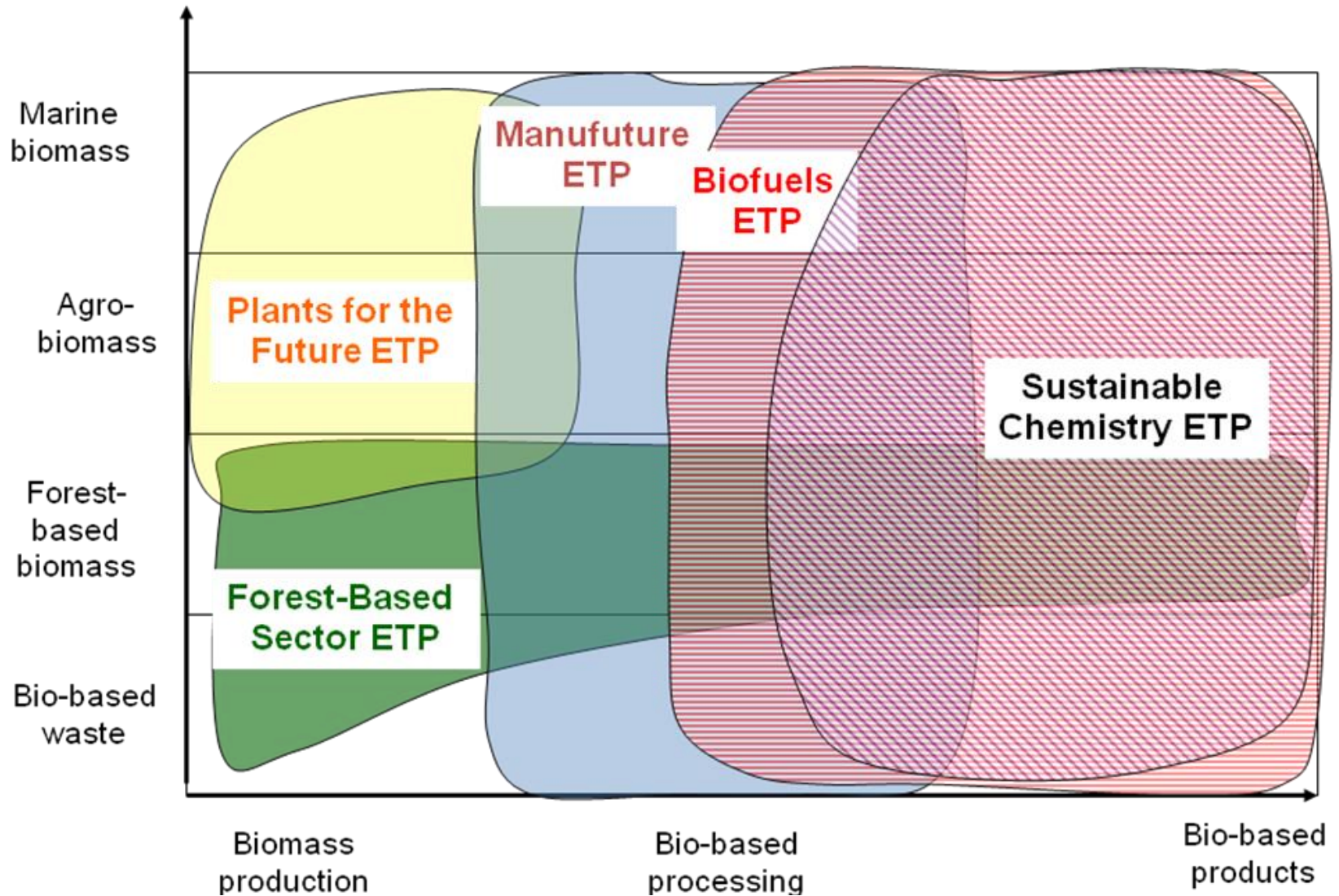
Research Call launched by the European Commission
(Biorefineries Joint CSA call December 2008)

Objectives:

A successful proposal should (in the area of biorefineries):

- ▶ “Promote coordination of on-going research at European and national levels” ...
- ▶ “... defining research priority needs...”
- ▶ “Information exchange in any aspect of the entire value chain...”

Five European Technology Platforms teamed up



The resulting project:

Star-COLIBRI:

Strategic **T**argets for 2020 – **C**ollaboration Initiative on **B**iorefineries

- 2 years duration (November 2009 – October 2011)
- 2 M Euro in EU funding
- **11 partners**

Technology Platforms & Industry Confederations

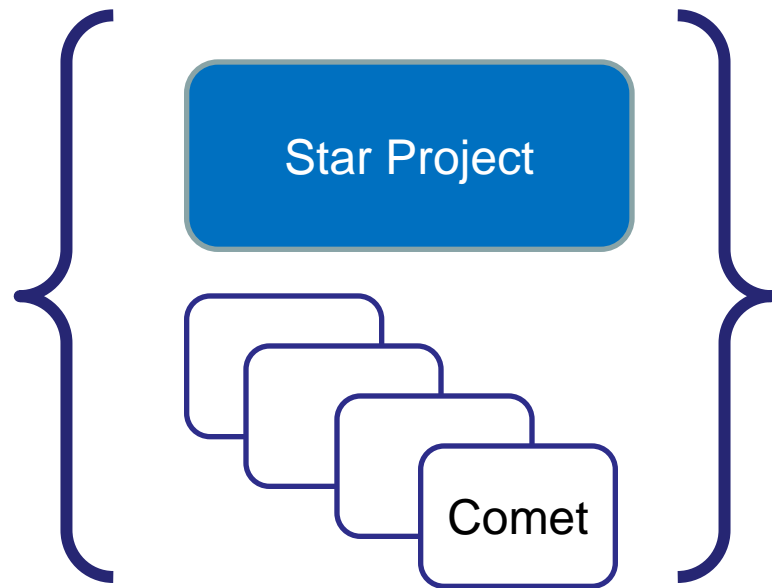
Forest-Based Sector ETP
CEI-Bois (Coordinator)
Plants for the Future ETP
Sustainable Chemistry ETP
Biofuels ETP
AET MANUFUTURE sub-ETP

Research Organisations

UoY * University of York
VTT * Technical Research Centre of Finland
IAR * Association Industries et Agro-Ressources
A+F part of Wageningen University
DBFZ - German Biomass Research Centre

One of the deliverables is “StarClustering”;

- “A new strategy to facilitate coordination of segregated research streams”

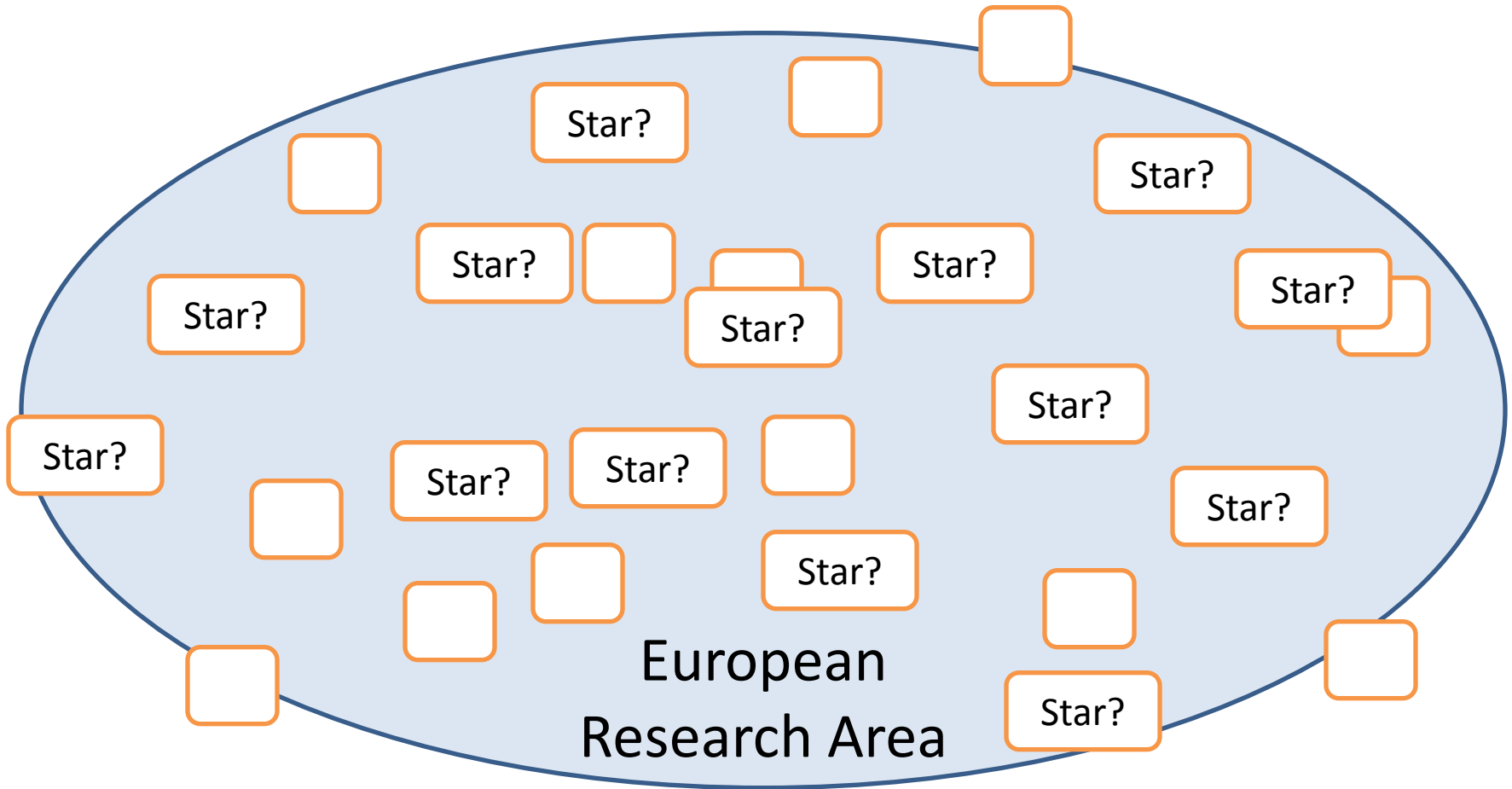


Why the idea was born:

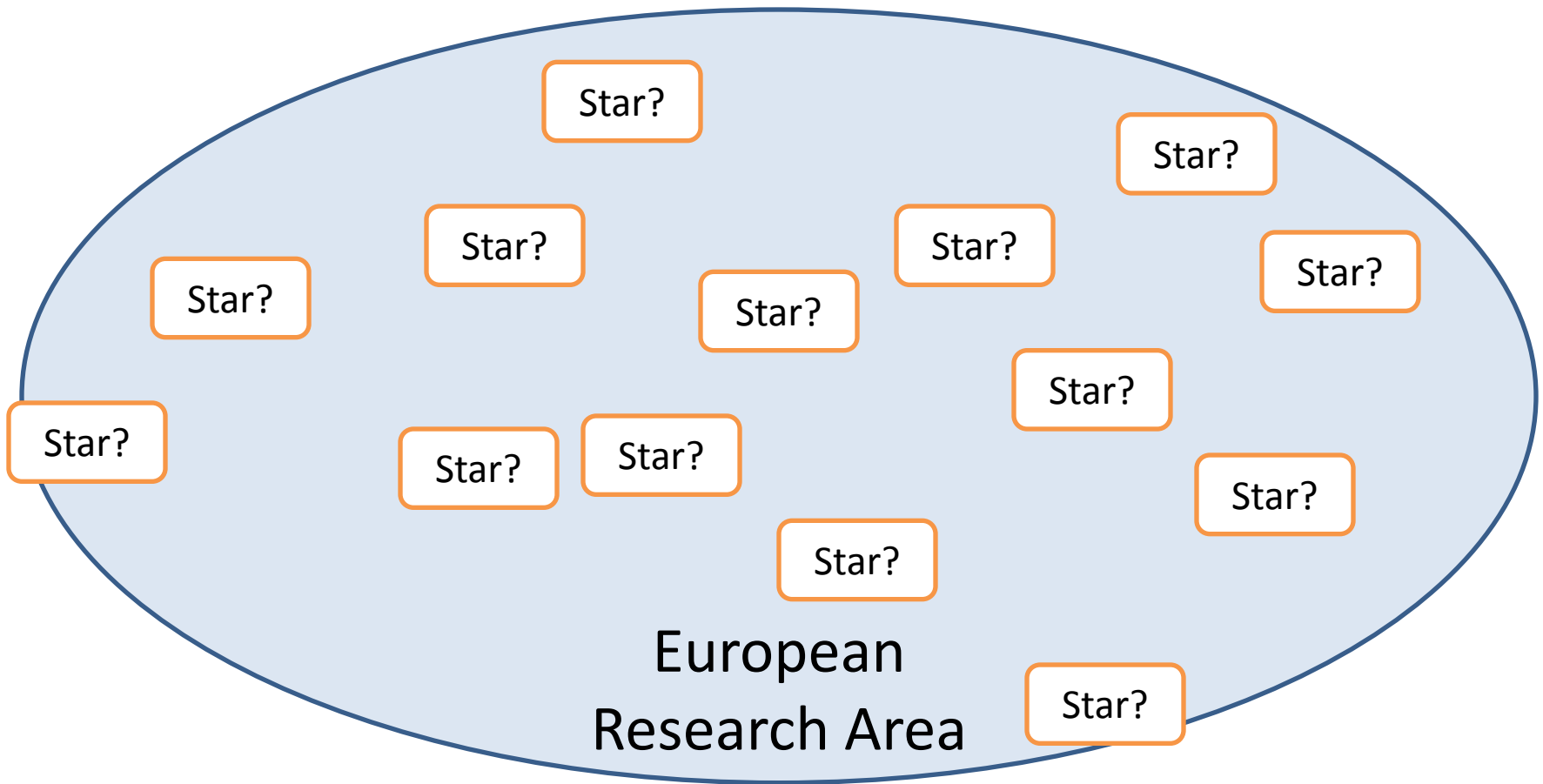
- “Large” research projects might have a broad European impact, but sometimes they are not so “innovative”
- Smaller research projects seldom have enough critical mass to have a European impact, even if they are very innovative and produce very good results
- Europe needs role models and success stories acting as catalysts for change

The first step of the StarClustering strategy is to identify the Star projects...

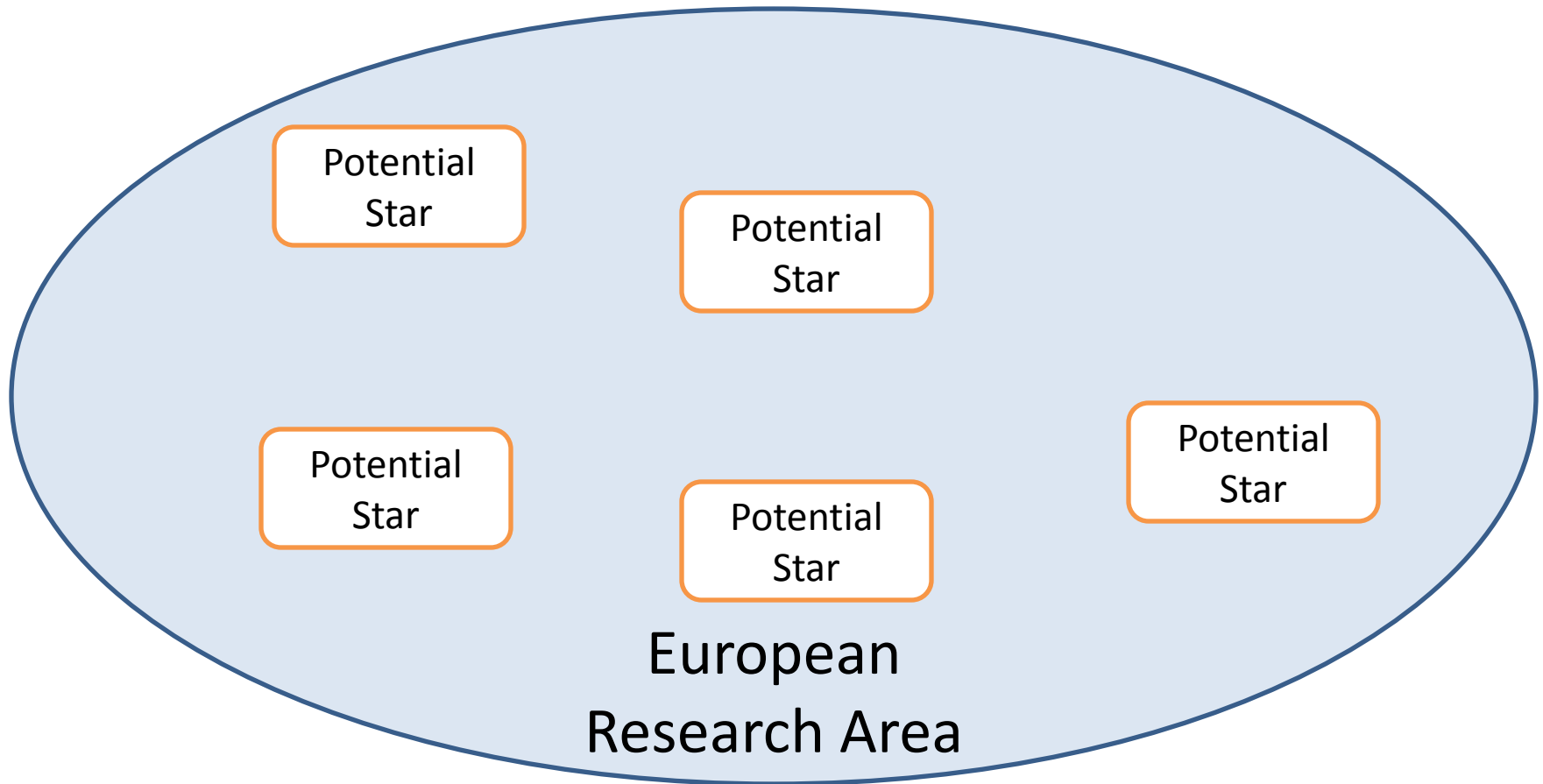
1. We have identified 300 biorefinery-related, collaborative research projects



2. Around 45 of these projects passed the size criteria for “Star” projects



3. Nine projects were selected as “Star” project candidates



Criteria for **SELECTING** potential Star Projects

▶ **Innovation for the market**

“Innovation” means that a Star project must bring added value to the market. **The project must be based on a technological breakthrough.**

▶ **Significant impact on the market**

A Star project must have a significant impact on the market by the time horizon of 2020. “*Significant impact*” means that the industrialization step of the project would have an important market size and/or would need an important quantity of biomass.

▶ **Consequent industrial co-financing**

The presence of industrial partners in the Star Project’s consortium is not enough to guarantee a real industrial strategy within the project.

▶ **Quality of the strategy**

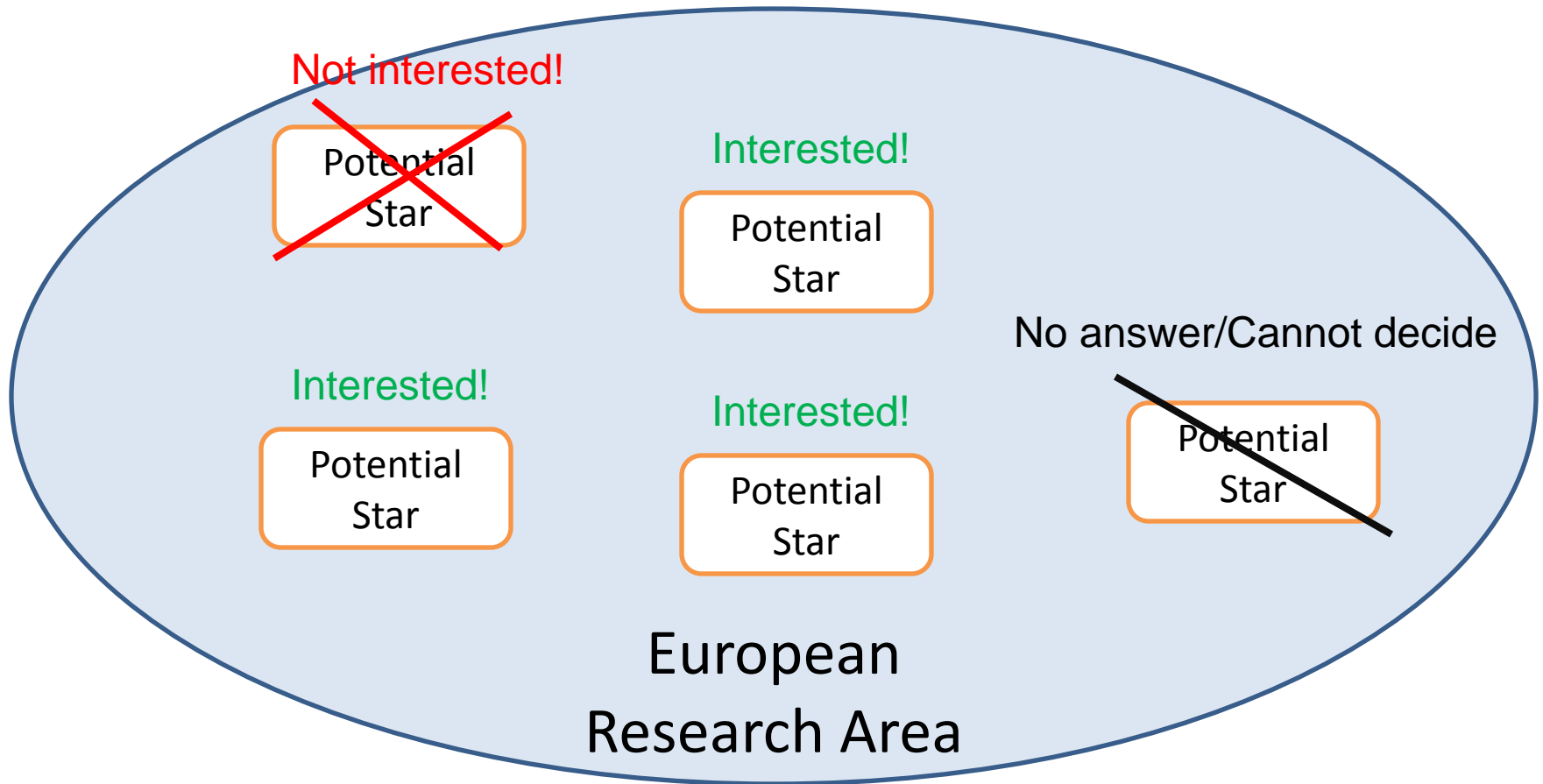
The strategy of a Star project has to integrate different parts of the value chain and should not be focused on one step.

▶ **Sustainability**

A Star project must also include environmental and sustainability aspects such as energy efficiency, environmental performance, impacts on food production schemes, impact on water use and quality, changes in land-use, sustainable access to biomass, impact on biodiversity and net balance of greenhouse gases.

Project	Description	Coord.	Funding	Rank
CATCHBIO	Catalysts	NL	NL	1
EuroBioRef	Fuels from multifeedstock	FR	EU	2
BioFuels 2021	Biofuels programme	DE	DE	3
FUTUROL	Cellulosic-ethanol	FR	FR	4
AFORE	Pulp&Paper Biorefinery	FI	EU	5
BIOLYFE	Fuels from lignocellulosic materials	IT	EU	5
Bio4Energy	Lignocellulosic biorefinery	SE	SE	7
BE-Basic	Research Programme in Chemistry	NL	NL	8
BIOCORE	Lignocellulosic biorefinery	FR	EU	8
ALGOHUB	Microalgae in nutrition and health	FR	FR	10
HYPE	Hydrolysatation and fermentation of lignocellulosic feedstock	FI	EU	11
Forbioplast	Bioplastics etc	IT	EU	12
Green Chem	Biomass valorization	UK	UK	13
CBP	Vegetable oils to bioplastics and lubricants	DE	DE	14
SUPRA-BIO	Fuels and Chemicals	UK	EU	15
LCF	Lignocellulose	DE	DE	16
TECHFLAX	Flaxseed oil fractionation	FR	FR	17
DEINOL	New bacteria in fermentation of ethanol. Project assessed but during discussions it was felt that, although it scored high on a quality rating, this would lend itself better to being a potential Comet project.	FR	FR	

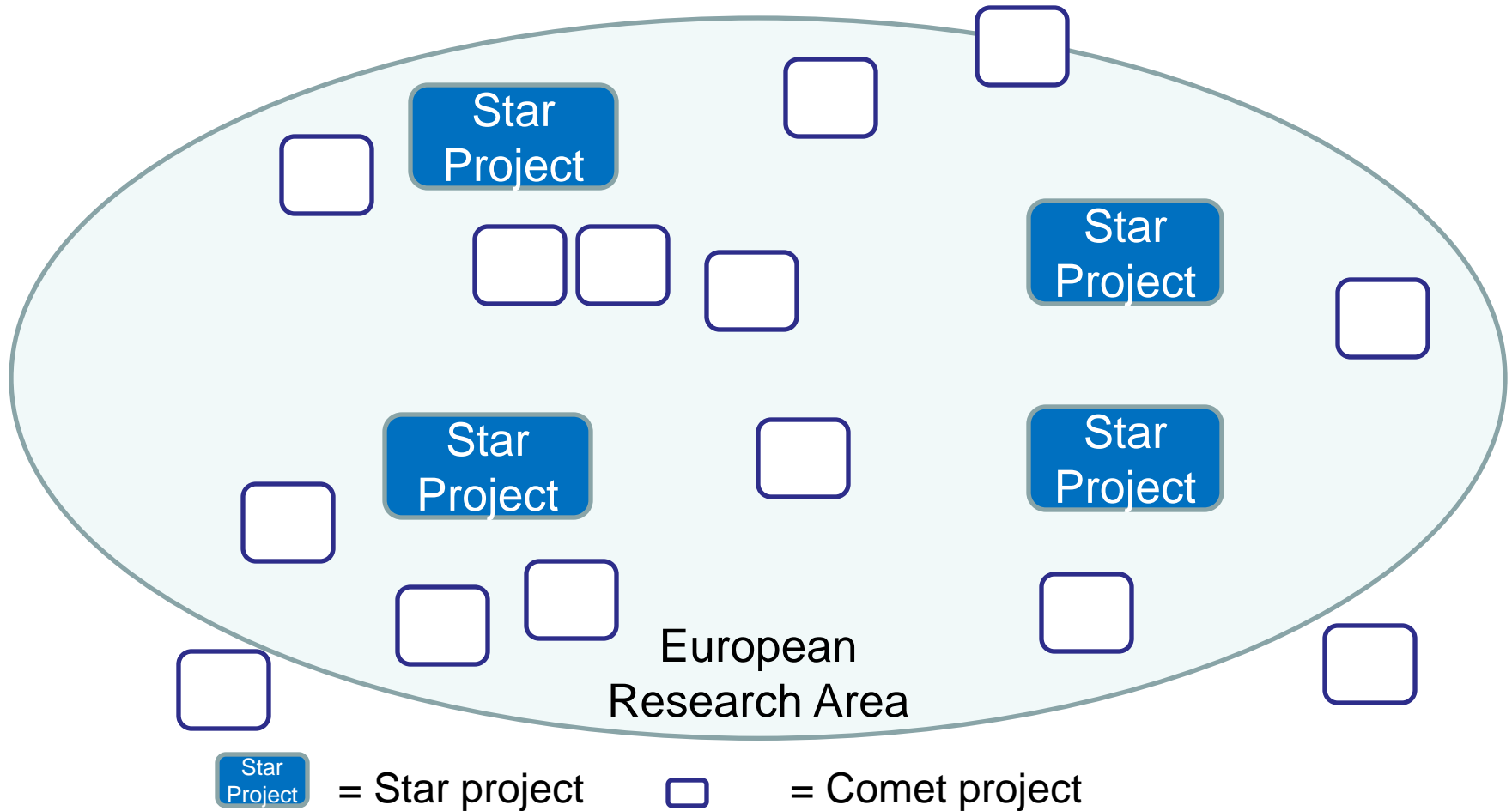
4. After contacting Coordinators



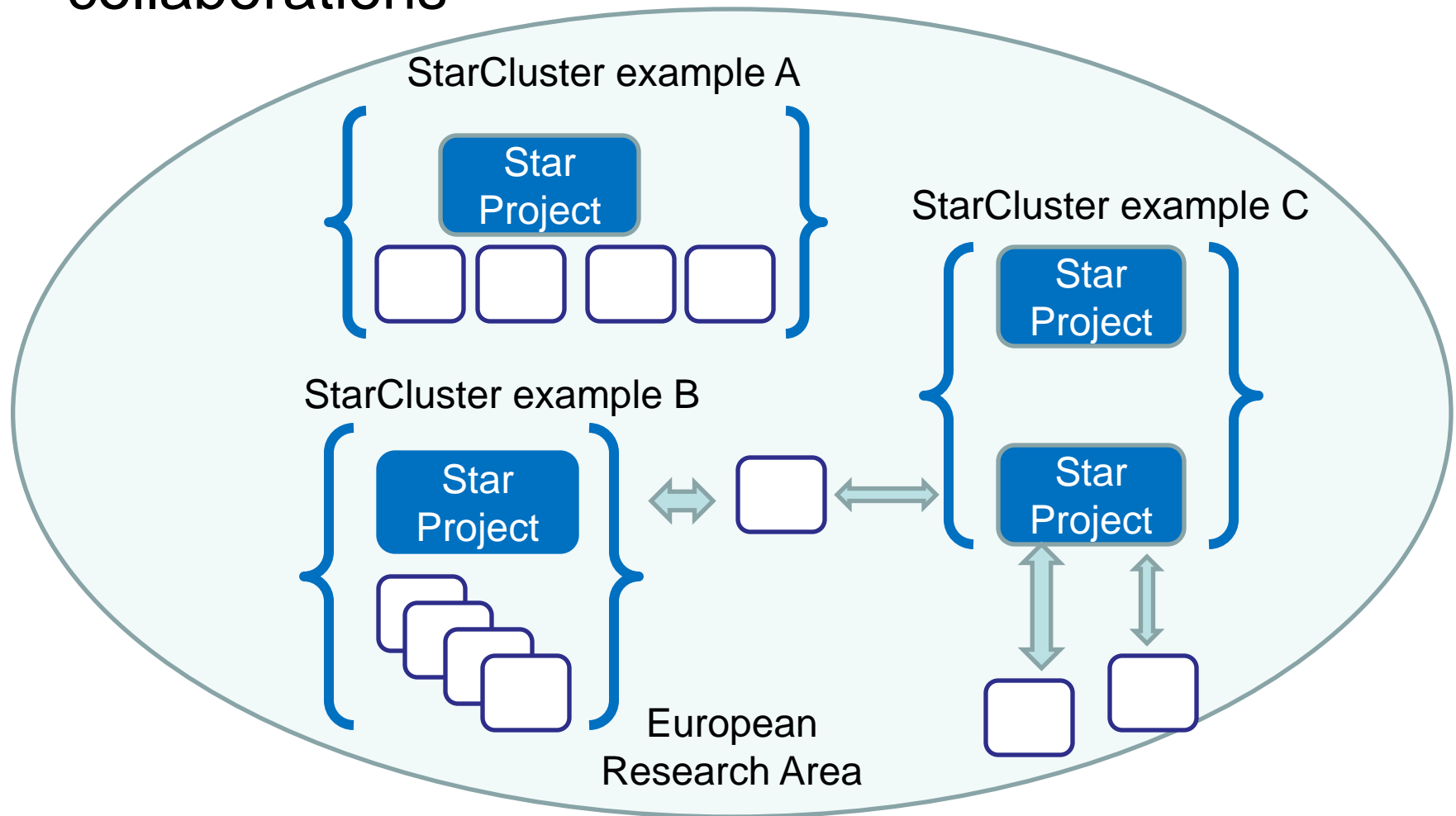
5. Current Star project situation

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StarClustering step 2: Find Comet projects (smaller high-tech projects)



StarClustering step 3: Establishing more formalised collaborations



Looking for bilateral synergies between Star projects and a Comet projects

Description of Synergies	
2.1 Complementarities	Combining complementary research results and bridging technology-gaps by cross-fertilisation
2.2 Training/Education	The development of joint training schemes on new technologies
2.3 Harmonisation	Joint workshops and activities for the harmonisation of approaches such as Life-Cycle Analysis
2.4 Exploitation	Developing new methodology for sharing IPR, collaboration agreements etc.

potential Comet project

potential Comet project

potential Comet project

Potential Star Project

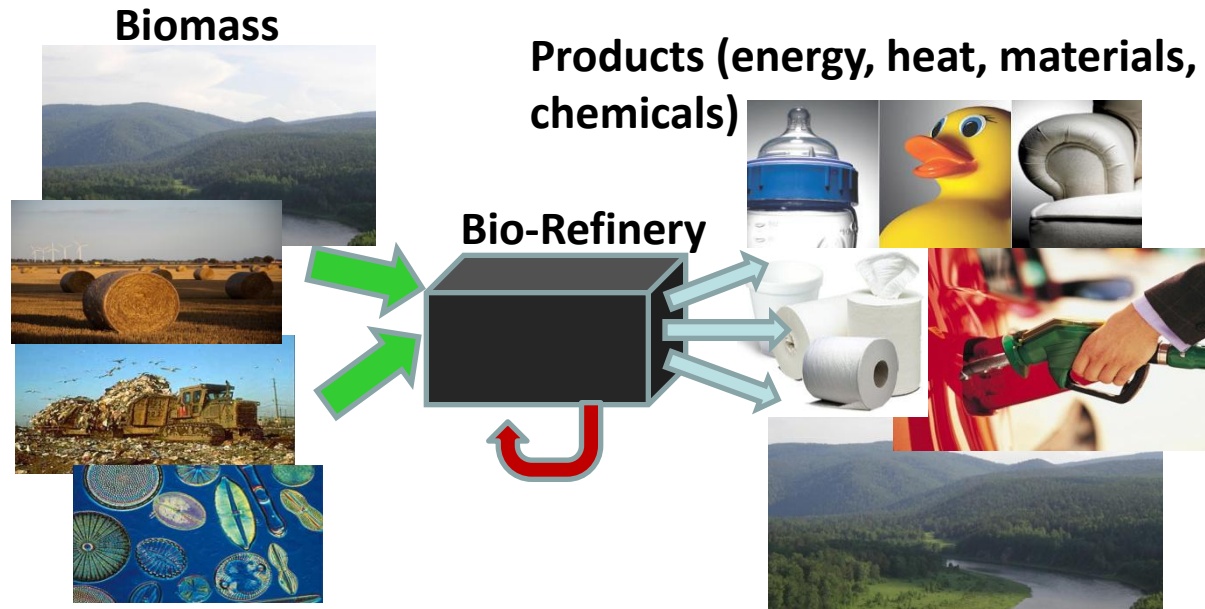
We envisage that the StarCluster will produce a “business plan” and work towards more ambitious targets

Potential benefits for StarCluster participants

Improved information exchange between the different stakeholders and projects	Transparency
A higher degree of visibility to society, industry and policy makers	Visibility
Less risk of wasting resources on overlapping tasks and activities	Coordination
Combining complementary research results and bridging technology-gaps by sharing of knowledge and cross-fertilisation	Complementarities
A broader stakeholder base and critical mass for exploitation activities	Critical mass
Easier access to information about international research projects	Knowledge
The development of joint training schemes on new technologies	Training/Education
Developing new methodology for sharing IPR, collaboration agreements etc.	Exploitation
Joint workshops etc. for the harmonisation of approaches such as LCA	Harmonisation
Mutual understanding and trust simplify the creation of future project consortia	Cooperation
Recommendations from StarCluster participants could influence future R&D programmes	Influence

Final Conclusions...

- StarClustering is so far only a theoretical concept
- We have identified some Stars but now remains to identify Comet projects and to cluster them together
- Initial obstacle is to overcome confidentiality issues, non-disclosure agreement, etc
- The potential Star **Bio4Energy** is making very good progress and is rewarded for its openness and transparent approach
- We hope that the StarCluster(s) will experience real and tangible benefits from the cluster collaboration, but they will also gain visibility
- By serving as role models, the StarCluster(s) may play a vital role for future policy development in Europe



Thank you for your attention!

Contact info:

Johan.elvnert@forestplatform.org

or

Johan.elvnert@cei-bois.org