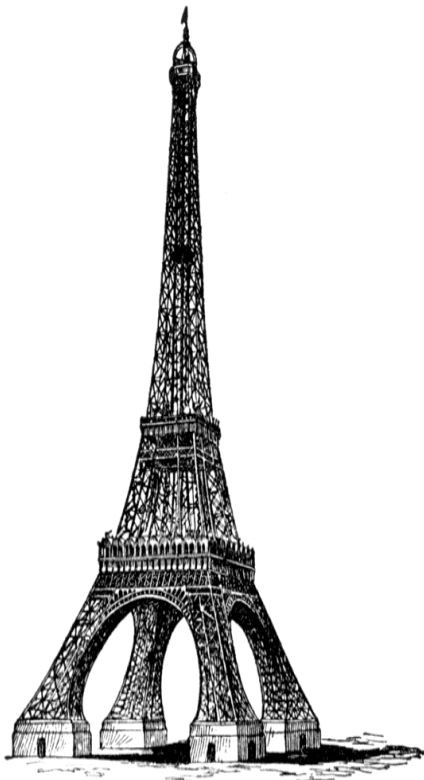


The EIFFEL Initiative

A European Discussion and a Possible Step
Towards a **Future Internet Forum**



Petri Mähönen
RWTH Aachen University

Background

...and a disclaimer



EIFFEL – How Did It Come About?

- Proposed and initiated by the EU Commission (J.Da Silva, July 2006)
- Group of **technical experts** acting as **individuals**
- About 50 participants in each meeting

- Structure: 4 working groups
 1. Evolution scenarios, technological and socio-economic drivers
 2. Technical Challenges
 3. Policy challenges, risks and opportunities for Europe
 4. Planning and Coordination Group

- Produced a white paper available at <http://www.future-internet.eu>

- Presented during an open & free workshop (Brussels, 15th of Dec. 2006)
 - Couple of hundred registered participants



What is Happening in the EU?

- A number of high-quality consortiums are planning projects, or have projects and academically oriented initiatives in the domain
 - But largely still without cohesion in plans and vision
 - There has been some smaller scale discussion forums (e.g. COST actions) but larger scale “Think Tank” activity is needed to get more cohesion
- Some large Integrated Projects are starting their work...
 - European Technology Platforms (ETPs) have ongoing discussions
 - Largely industry (stakeholder) driven
- In general, EU has been very strong on getting industrial initiatives on board and the status of evolutionary projects seems to be evolving well.
 - There has less large scale activity on “clean slate” and exploratory domain.



What is happening in the USA

- FIND and GENI
- This should not be misunderstood neither under/over estimated

- Post IP is a one way to state the goal...
...another is “clean slate”
- Perhaps more interesting is
“*gedankenexperiment*” vs. realism



Risk Taking Needed !

- Although evolutionary research part seems to be covered very well, and also design towards the future test beds is progressing, there is **too little and usually smaller** emphasis on exploratory high-risk, high-gain research.
- > Culture of risk taking needs to be encouraged and fostered

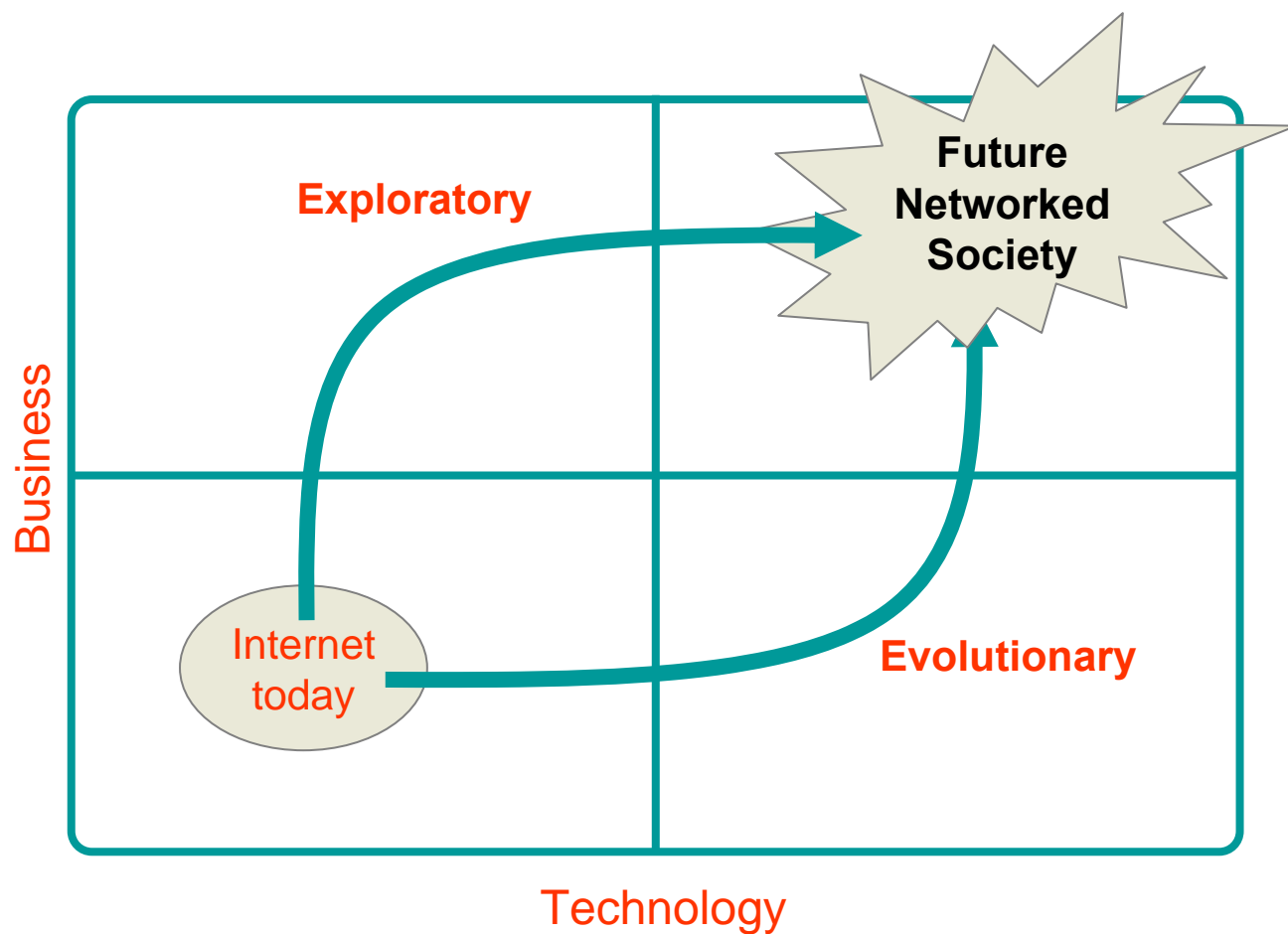


Bridging Needed

- There is need to have a better **bridge** between high-quality evolutionary research and exploratory smaller projects.
- >The current model of small presentations in coordinating meetings is not enough to foster open, academic-style and critical exchange of ideas, especially at the architectural level.
- >There is need to foster a true debate and deep technical discussions. Generate the healthy tussle!



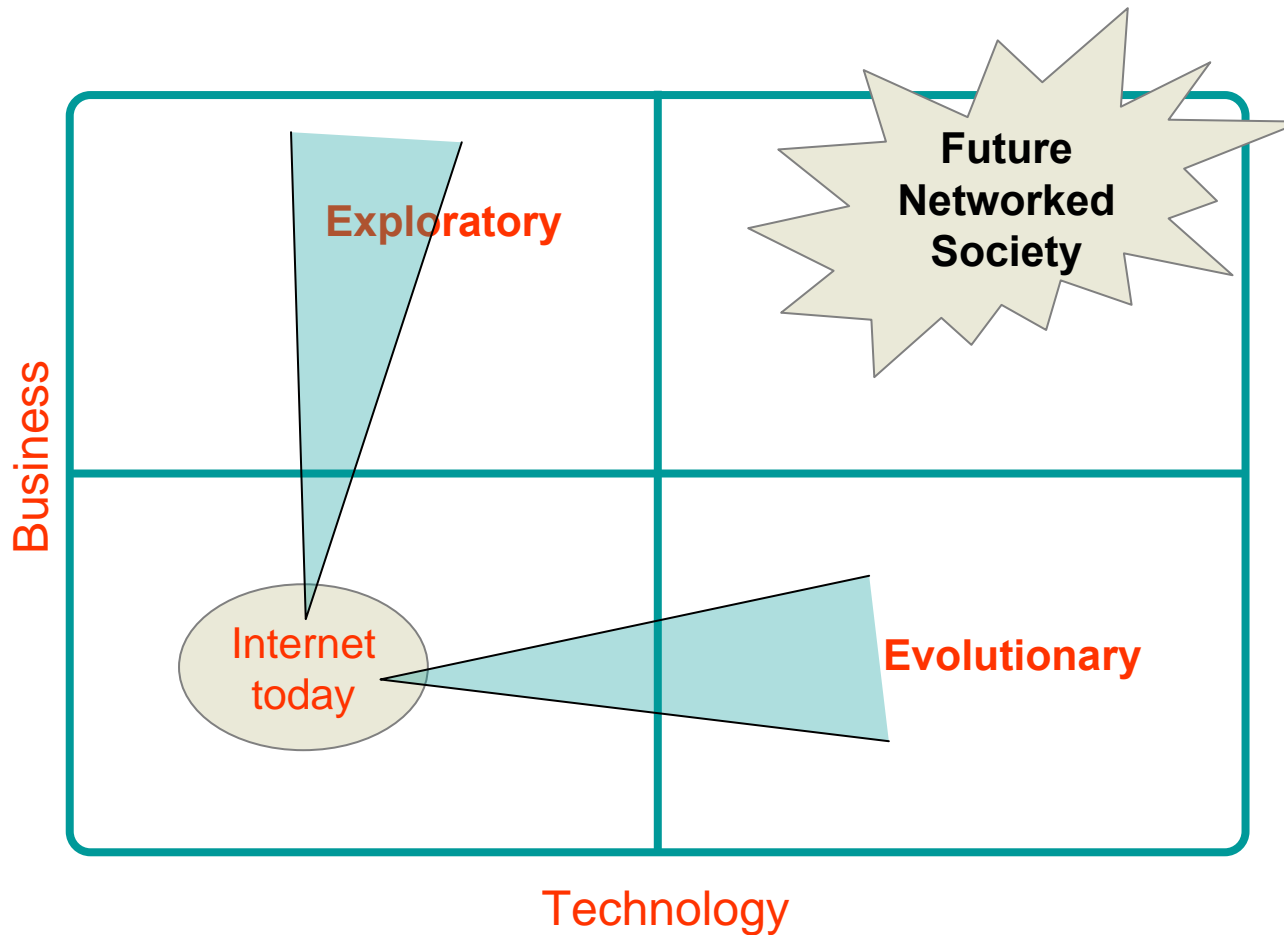
Needed: A Phased Approach for Developing Research Agendas following a Balanced Approach



- Recognize importance of evolutionary & explorative path (**balance**)



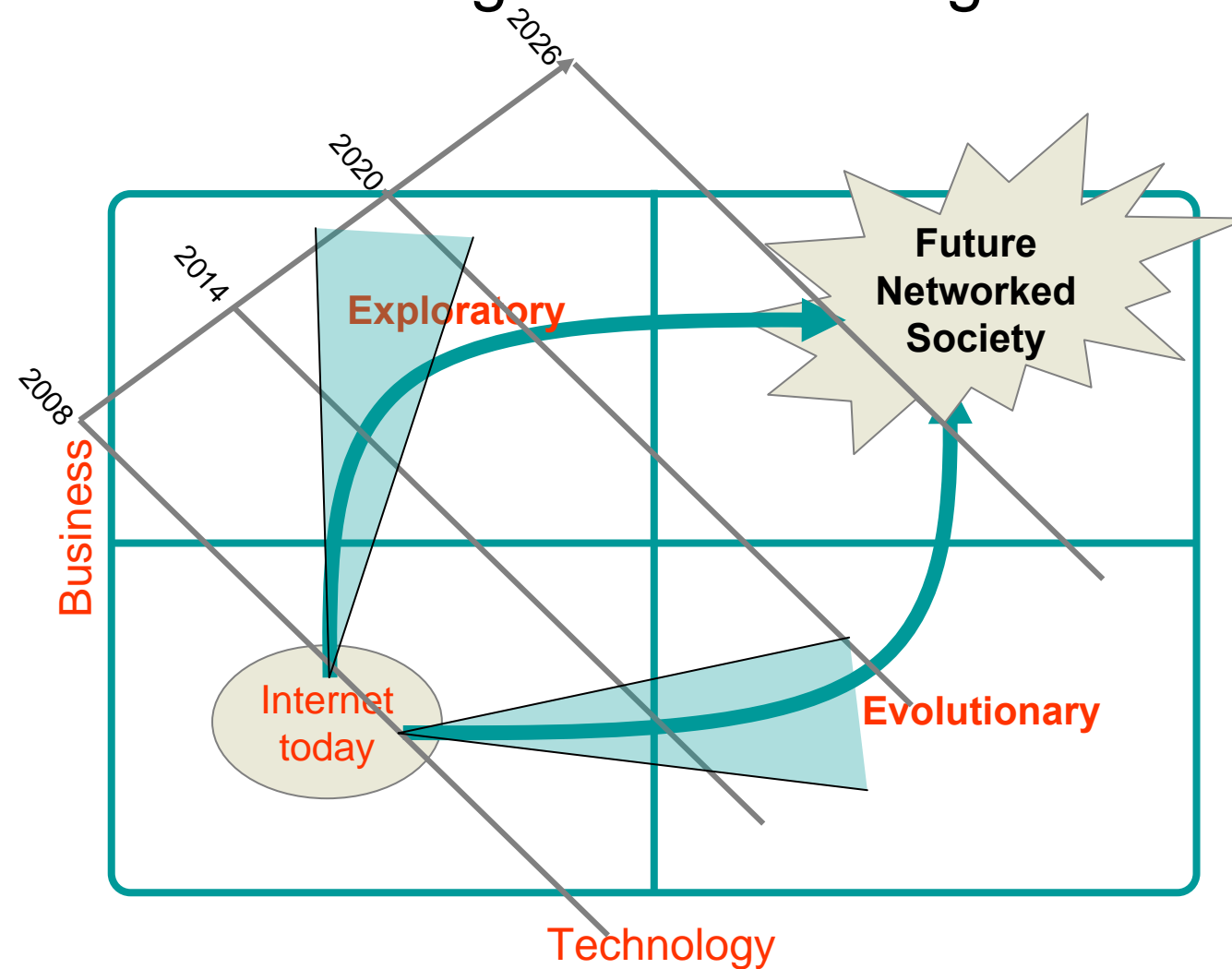
Needed: A Phased Approach for Developing Research Agendas following a Balanced Approach



- Recognize importance of evolutionary & explorative path (**balance**)
- Vision trajectories developed on both paths (**research agendas**)



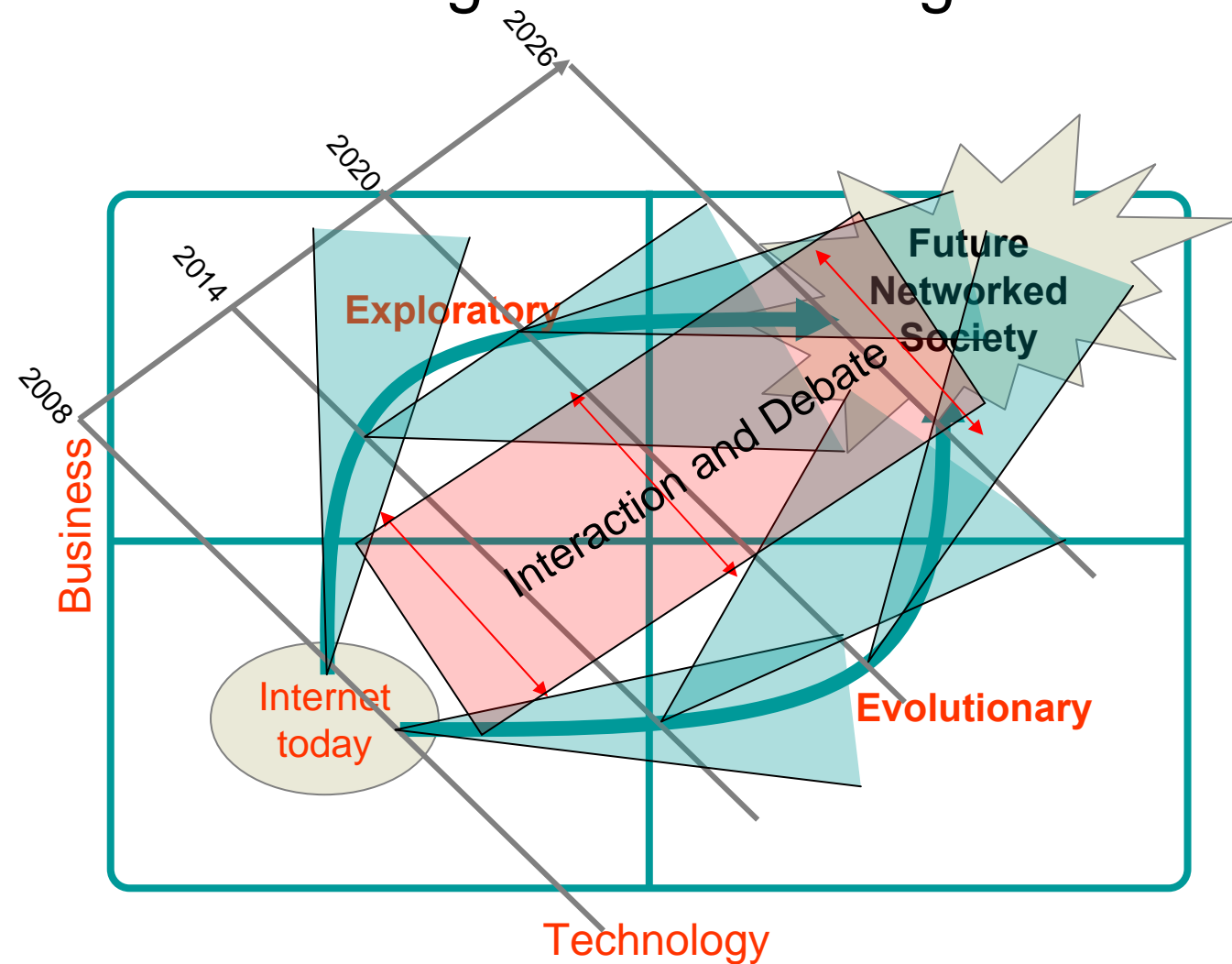
Needed: A Phased Approach for Developing Research Agendas following a Balanced Approach



- Recognize importance of evolutionary & explorative path (**balance**)
- Vision trajectories developed both paths (**research agendas**)
- Development of agendas over time (**phased approach**)



Needed: A Phased Approach for Developing Research Agendas following a Balanced Approach



- Recognize importance of evolutionary & explorative path (**balance**)
- Vision trajectories developed both paths (**research agendas**)
- Development of agendas over time (**phased approach**)

-> **Interaction & debate needed to make agendas and visions meet in common challenge**



EIFFEL Whitepaper Recommendation

Setup **Support Action** in order to enhance more in-depth **discussion** in this field along the lines of the EIFFEL findings

Support Action here is an European Union terminology meaning the funded project will support technical work through some means, e.g. by organizing workshops, conferences, roadmaps, . . .



Proposal



What is Needed in Short Term?

- A Forum also in Europe that ensures that there is a coherent discussion on the future internet research. This discussion should include **not only technical but also policy and governance related issues.**
- The discussion forum is not about coordination, it is there to allow a lively discussion and *disagreement* on topical & technical/scientific issues.

Guarantee & enforce **scientific, technical and policy** level **debate** in Europe on guiding principles for the Future Networked Society



EIFFEL



What is Needed in Long Term?

- The main organizers of the EIFFEL initiative believe that the work should not stop to EIFFEL.
- We need an international forum that ensures coherence between the international research community, aiming for maximum impact along the explorative path
- Allowing regional initiatives to thrive yet build communities that will span these local initiatives

Guarantee and enforce scientific & **technical** level **debate** within the international research community on guiding principles for the Future Networked Society

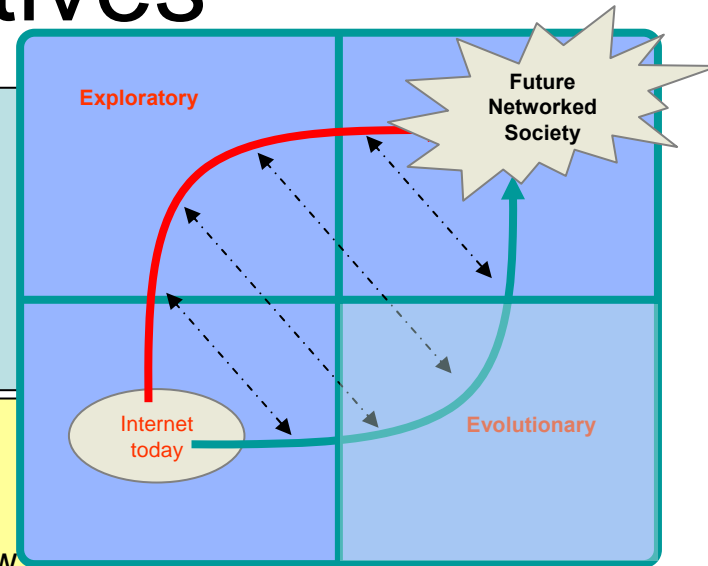


Future Internet Forum



EIFFEL Objectives

Create Momentum	<p>Provide (international) forum for discussion</p> <ul style="list-style-type: none"> – between researchers within different disciplines – between regional initiatives (e.g., FIND, EIFFEL) – between explorative and evolutionary paths – towards other forums like ISOC, IRTF, IETF – towards experimental research activities
Create Coherence	<p>High-level technical meetings</p> <ul style="list-style-type: none"> – Open but with strong demands on track record – Brainstorming & exchange of ideas – Scientific consensus building and identification on new challenging areas, based on reviewing merits of ongoing research -> finding the “far-sight” ideas – Develop guiding principles for the Future Networked Society
Provide Support	<p>Value added support for research community</p> <ul style="list-style-type: none"> – Pool of independent experts built around TAs (Technical Area) – Informal reality check review through research manifestos
Provide Grounding	<p>Connect with infrastructural efforts (e.g., GENI, Arcadia, FIRE)</p> <ul style="list-style-type: none"> – Feed visions and research into deployment and vice versa – Ensure that experimental research is fundamental when researching towards the Future Networked Society

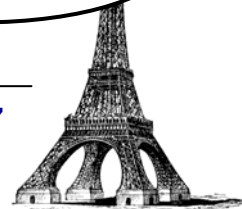
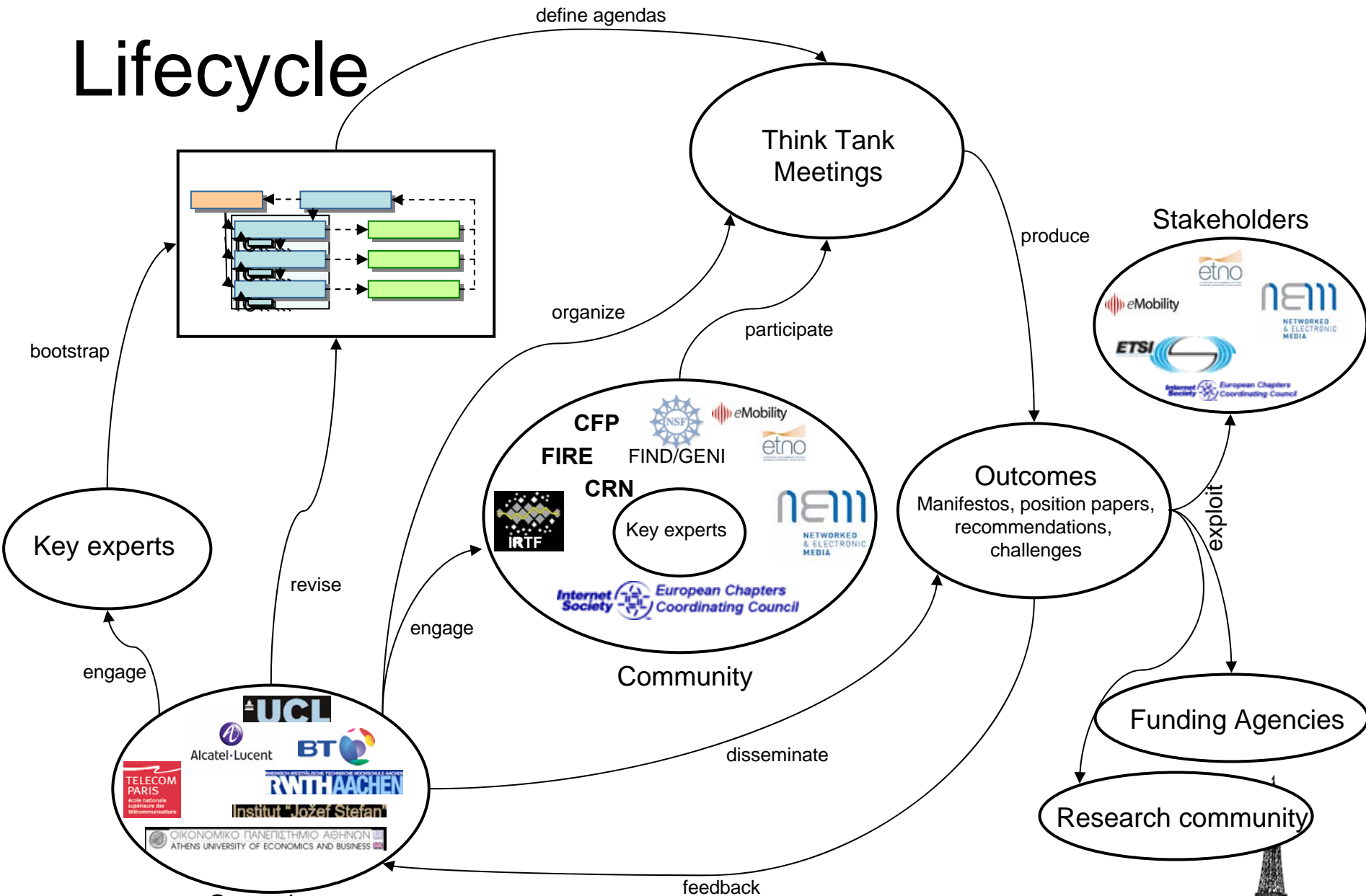


EIFFEL– Process Framework

- EIFFEL develops principles for Future Networked Society by
 - **facilitating and stimulating scientifically oriented discussions** e.g. fundamental architecture principles, **inviting the key experts** in the respective areas
 - **providing specific reviews** on how it sees international progress on Future Internet oriented activities
 - building synergies b/w research areas & coherency b/w their results
 - ⇒ **ALL** outcomes e.g. reviews, “vision papers” are public
 - ⇒ **ALL** publicized results can be used by all project (operate under a typical academic licensing)
- EIFFEL outcomes
 - Exchange of ideas, research retreats → public summaries of meetings
 - Devise guiding principles -> architectural manifestos
 - Comparative analysis identifying research challenges -> research manifestos
 - Build positions in relevant areas for momentum creation -> position papers
 - Build pool of expertise/experts that can support other later activities



Lifecycle





***RESISTANCE IS FUTILE
JOIN IN TO OUR VISION***



The Main Issue: Neutrality

- **No hidden agenda** on biasing discussion on the silly debate between “practical” vs. “theoretical”, “industrial” vs. “academic”
- **Technology neutral:** mobility is not taken to be a key problem (which it is not 😊...IMHO)
- **Technically driven** debate, the facts and quality of the arguments count.
- **We have no predefined membership**



Main Focus: Think Tank Meetings

- The main focal point of the EIFFEL activity are the regular Think Tank meetings as research retreats.
- The meetings will debate and discuss on various issues
- The coordinators of the activity will provide summary reports and “proceedings” of these meetings. The reports will be public domain documents.
- Moreover, we fully expect that from some of the meetings the participants will generate “**Research Manifesto**” papers:
 - This is a majority (consensus) opinion paper on the state of the art in R&D domain also outlining the problem areas and what should be done to meet the challenges.



EIFFEL– What Happens?

- EIFFEL funding application is submitted and starting negotiations
 - The formal organisers for EIFFEL consists of 4 universities, 2 companies, and 1 research institute backed by a professional management company for administrative tasks.
 - Note that if accepted the EIFFEL will be an independent action, it is not a formal part of any governmental or European Union administrative entity. This guarantees that academic principles and free tussle are ensured.
- If successful
 - **We bootstrap the invitation** process to have “area leaders” for discussions and the invitation process for Think Tank (“research retreats”) participants.
 - **Setup the technical tools for collaboration**; wiki, web-pages,...
 - **The major meetings are already roughly planned for 3 years**
 - Germany (EIFEL-mountains), UK (London), Slovenia, Greece, and France (Paris)
 - **Internationalization:**
 - **We want to invite participants also outside Europe to meetings**
 - **Building liaison to other initiatives**



These men did not participate any European Project -- Should They ?



First unscientific glance

- **No lack of ideas...but perhaps a lack of radical ideas and definitely lack of “drive” still perceived.**
- **The future lack of large-scale testbeds is still there.**



Collaboration

EIFFEL is planned to provide cohesion in Europe, but not in vacuum we are very open for collaboration

For further information you can contact us

Petri.Mahonen@mobnets.rwth-aachen.de

Dirk.Trossen@bt.com

or visit

<http://www.future-internet.eu>

