ERC & EIC—Crossing the gap from basic research to innovations

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FFG Promoting Innovation. FiLi Finnish Liaison Office for EU R&I KOWI Kooperationsstelle EU der Wissenschaftsorganisationen

Die Österreichische Forschungsförderungsgesellschaft (FFG)
Finnish Liaison Office for EU and R&I (FiLi)
Kooperationstelle EU der Wissenschaftsorganisationen (Kowi)

My EU project experience

Coordinator

Multilingua 1999–2001; MEGMRI 2008–12; BREAKBEN 2016–19, ConnectToBrain 2019–2026

CO-PI

COBRAIN 1996–98; Enough Sleep 2005–8; IMPPACT, 2008– (M. Pollari)

Coordinator or CO-PI in failed proposals

Telematics, PROBRAIN, Atomic magnetometer, TMS therapy, SEEDIFF, PAMSCAN, ULTRASCAN, B-Drive, UPBEAT, PAMNET, ERC x 3, Innovation Launchpad x 2, Proof-of-Concept x 2 etc.

Evaluator

FET Open, FET Flagship, ERC StG, ERC CoG, ERC SyG, MSCA, EIC

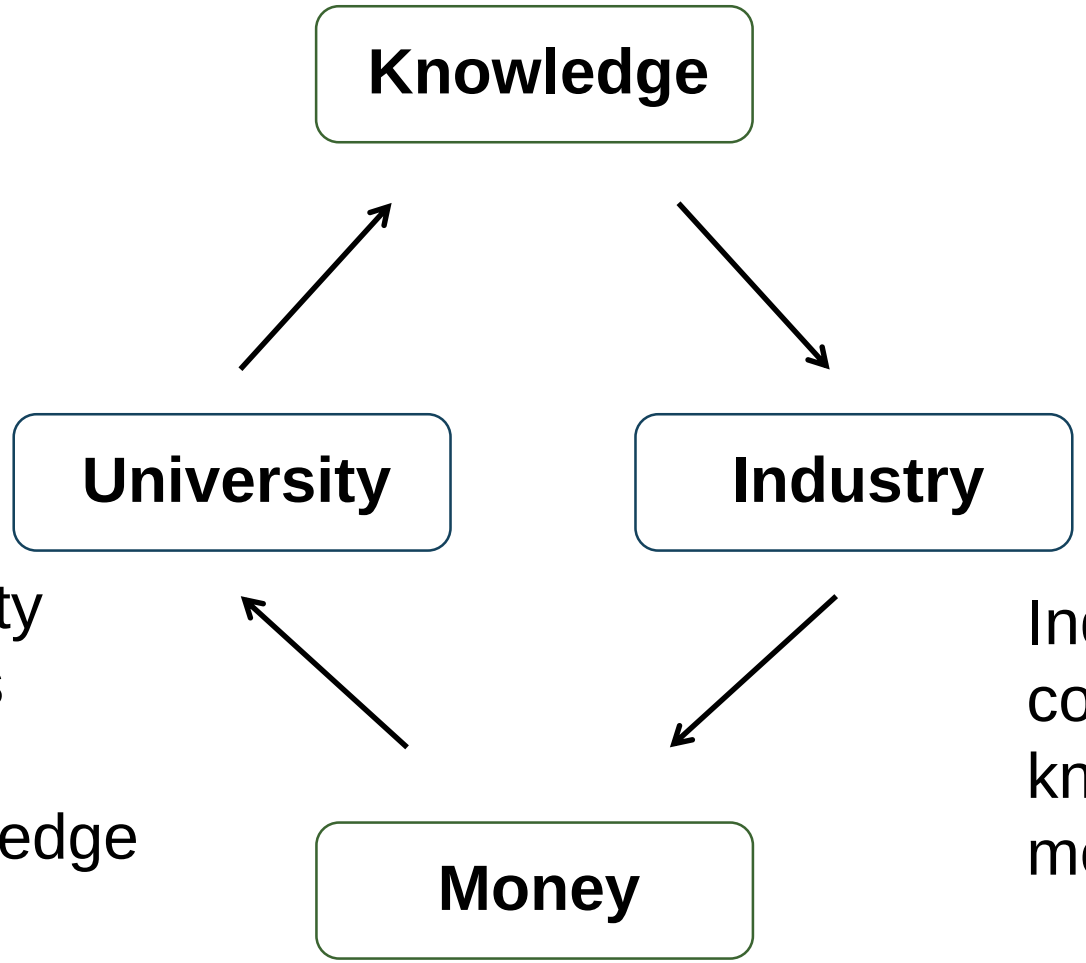
Member of project follow-up teams

ABI (brain–computer interface); Insight 2+ (Brain research); PRESENCCIA (virtual reality), etc.

Advisor to grant applicants

Member of FETAG 2018–2020

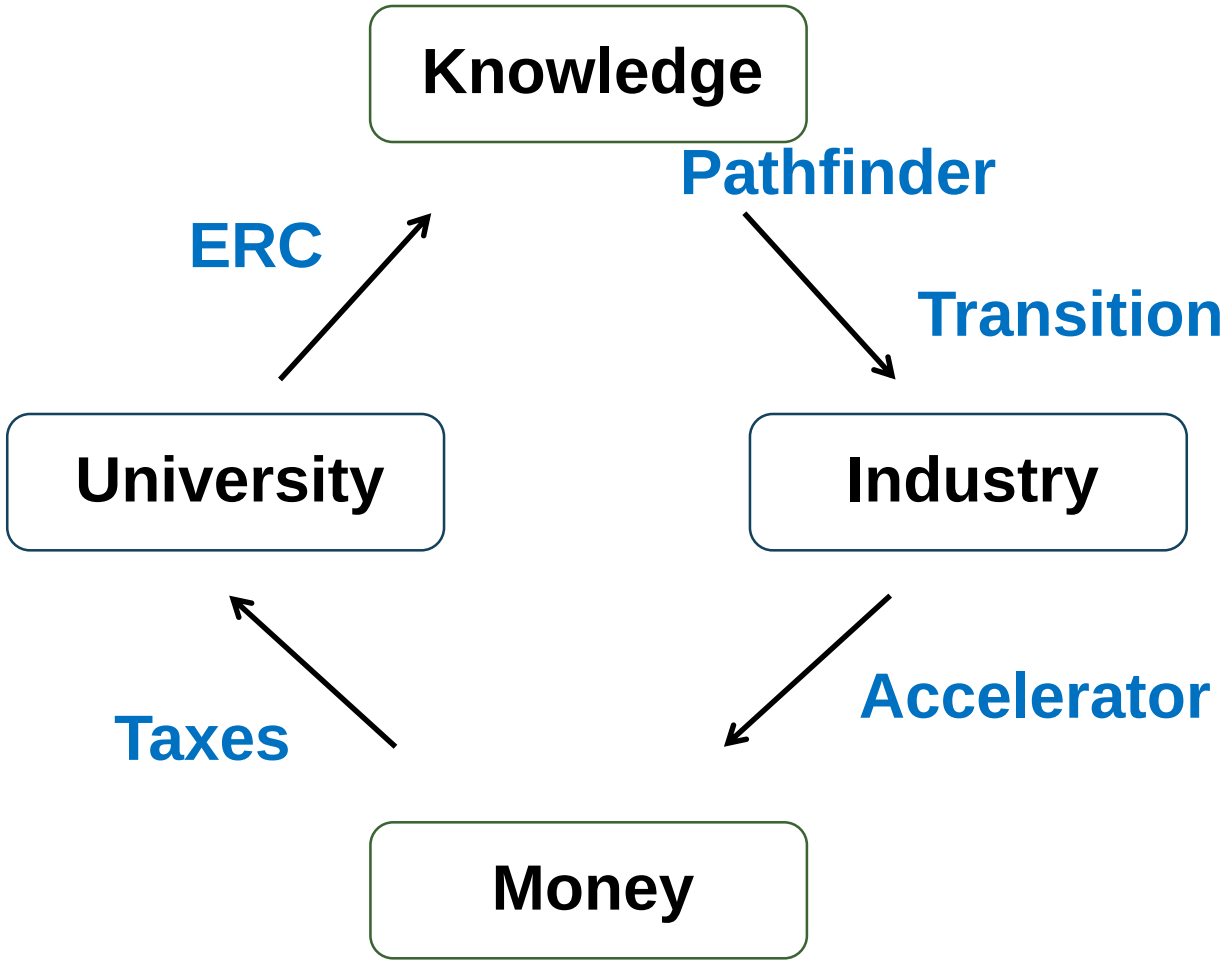
R2B, simple model



University converts money to knowledge

Industry converts knowledge to money

R2B, simple model



Technology Readiness Levels (TRLs)

Science

Technology

Commercialization

Business

EIC Pathfinder TRL1 => TRL4

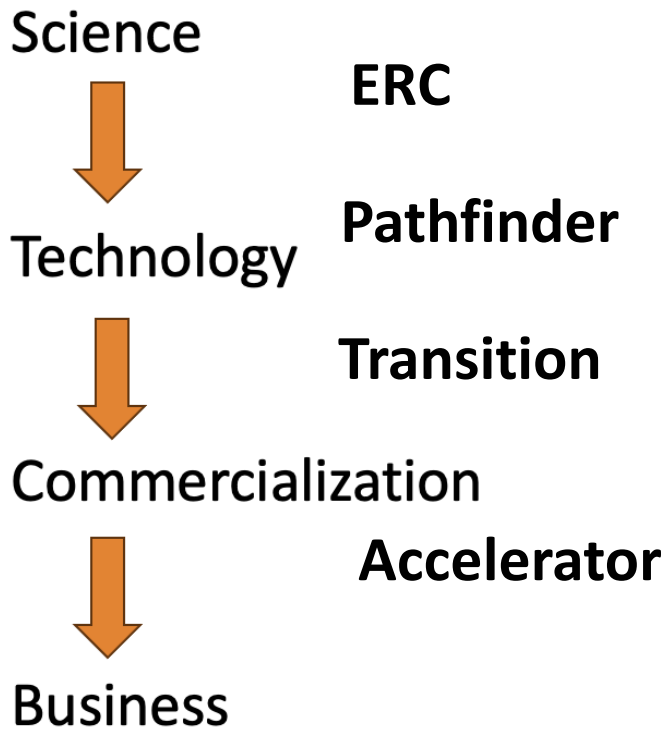
EIC Transition TRL4 => TRL5–6

EIC Accelerator TRL5–6 => TRL8–9

EIC (Pathfinder) vs. ERC (StG, CoG, SyG)? What kind of team?

ERC is for ***advancing science***.

EIC Pathfinder is for ***finding a path*** from science towards a **radically new technology**.



The team must have all necessary **skills** for the planned work.

Recipe for a good proposal? More risks or more realistic approach?

The ambition level must be very high, e.g., 10X goalsetting.

The risk can be very high, but it should be because of the unknown, not because of the incompetence or lack of passion of the group.

A great proposal induces a wow effect in the evaluator.

– Why didn't I invent it?
– I would like to work with them!
– What a great idea!
– This must be funded!
– It would be unethical not to fund.

„Losing is not an option for her."

Quote from the movie *The Queen's Gambit*

To prepare a great proposal is extremely challenging, but if you take it really seriously, you can do it.

EIC Transition vs. Pathfinder?

– Pathfinder TRL1 => TRL4
– Transition TRL4 => TRL5–6

See picture at https://kthinnovationreadinesslevel.com/

In the Transition phase, you must pay increased attention to business aspects.

Recommendations for a successful Transition proposal?

– Think about the intended outcome of the project (the Objective).

– Describe the Objective extremely clearly already in the very beginning of the proposal.

– Describe very clearly the long-term Impact: How will the world be better if you succeed.

– For every € invested by EU taxpayers, the benefit of a fully successful project must be at least 10 €, preferably 100 €.

– The plan must be very ambitious, but feasible and credible.

– For any choice made, explain why: “We will use the X method, because Y et al. showed that it has advantage Z.”

– No typos, no grammatical errors, all acronyms explained

– Several clear illustrations.

Interviews (the 2. part of the evaluation)?

– Take it seriously.

– Very simple slides, very clear and concise language; speak slowly.

– Minimal number of bullet points.

– Practice the presentation (many, many times) in front of lay and expert audiences.

– Make absolutely sure that your presentation will fit in the given time frame.

– Predict questions; develop concise, very clear answers

– Don’t spend much time on answering little details (unless crucial).

– Show synergy, enthusiasm, optimism, courage, humility, self-confidence etc.

– Be yourself, be honest, show respect to the other PIs and the panel members

What is needed?

Time (and money)

- The coordinator must do most of the work
- Intensive proposal-writing meetings (2–5 days)

High quality

- Excellent science, excellent groups
- Use flawless, clear, and easy-to-read language
- Be complete: leave no guesswork for the evaluator (be specific)
- Remove unnecessary text, add figures
- Let outsiders read and criticize the application (this may be decisive)

Factors that lower the score

Impact

- Only indirect impact
- No big impact outside the academic world
- Dissemination plan missing or deficient
- Technology transfer not convincing

Science and technology

- Lack of clearly stated objectives, unclear milestones, poorly defined focus
- Modest goals (not far beyond present state of the art)
- Details of the implementation not clearly described
- Some statements (e.g., beliefs) are not sufficiently backed by reliable data

Factors that lower the score

Management

- Not clearly described
- No risk analysis or the risk analysis does not cover risks in the science
- No clear criteria for success

Consortium

- PIs do not complement each other
- Consortium merely the sum of its parts (”no added value from collaboration”)
- Part of the necessary expertise missing (e.g., AI expertise)

Use of resources

- Too large or too small budget for some items

Good proposal

Objectives: Ambitious and measurable; stated in a crystal clear way

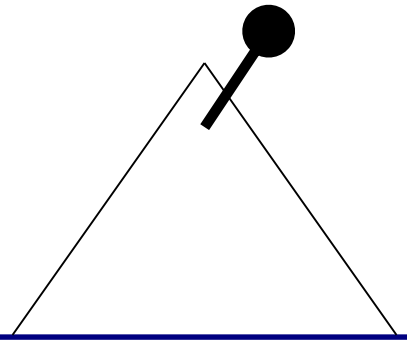
Impact and vision: Breakthrough or opening of new science branch

Beauty: The idea, the language, the logo, the figures, the layout

Credibility: Why you are the best in the world to do it?

Completeness: Everything described

Make a good proposal



A deficient grant proposal will be rejected.

A good one will be funded.

Therefore, make a good proposal!