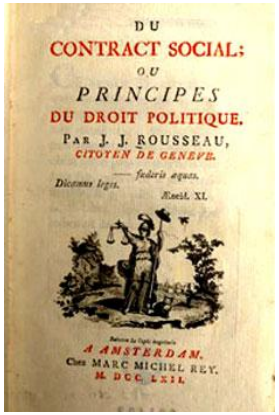
About Research Project Proposals

Public Research Grants

A **contract** between the **society** and **you**

Part of the *Social Contract*


DU
CONTRACT SOCIAL;
OU
PRINCIPES
DU DROIT POLITIQUE.
PAR J. J. ROUSSEAU,
CITOYEN DE GENEVE.
— *fœderis æquas.*
Dicamus leges. *Æneid.* XI.
A AMSTERDAM,
Chez MARC MICHEL REY.
M. DCC. LXII.

Society gives you money and resources

You carry out research *for* the society, which is deemed *useful*

What does useful mean?

- **Basic Research:** It improves the public knowledge about the world significantly and hence contributes to our civilisation.

- **Applied Research:** It contributes immediately to the solution of a practical problem.

Who decides what is useful?

- The society? The people?
- Should we make a referendum?
- Should we ask the Kronenzeitung?

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Peer Review:
Society delegates this decision to trusted experts.

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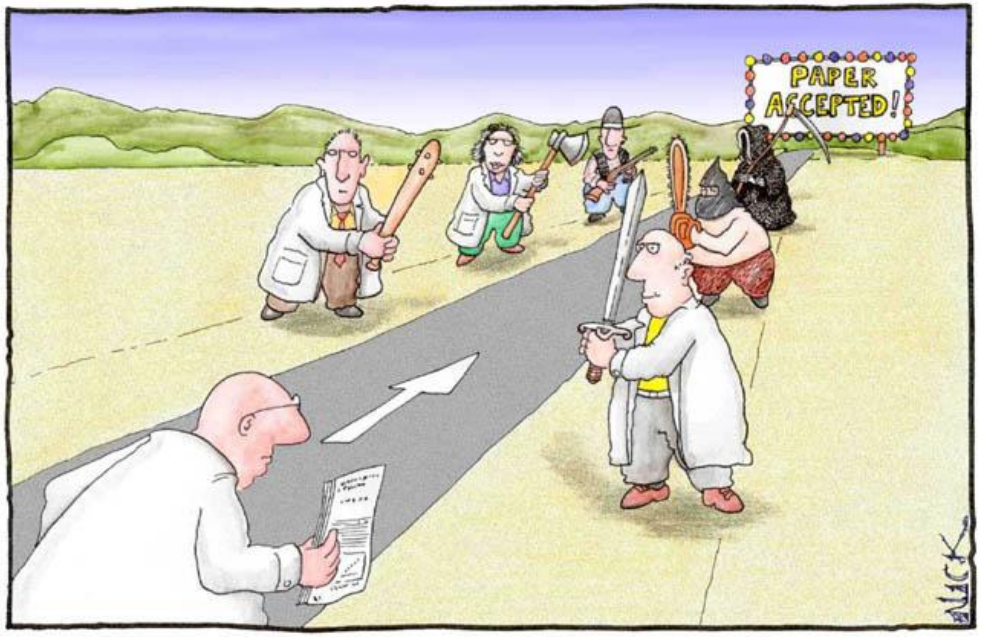
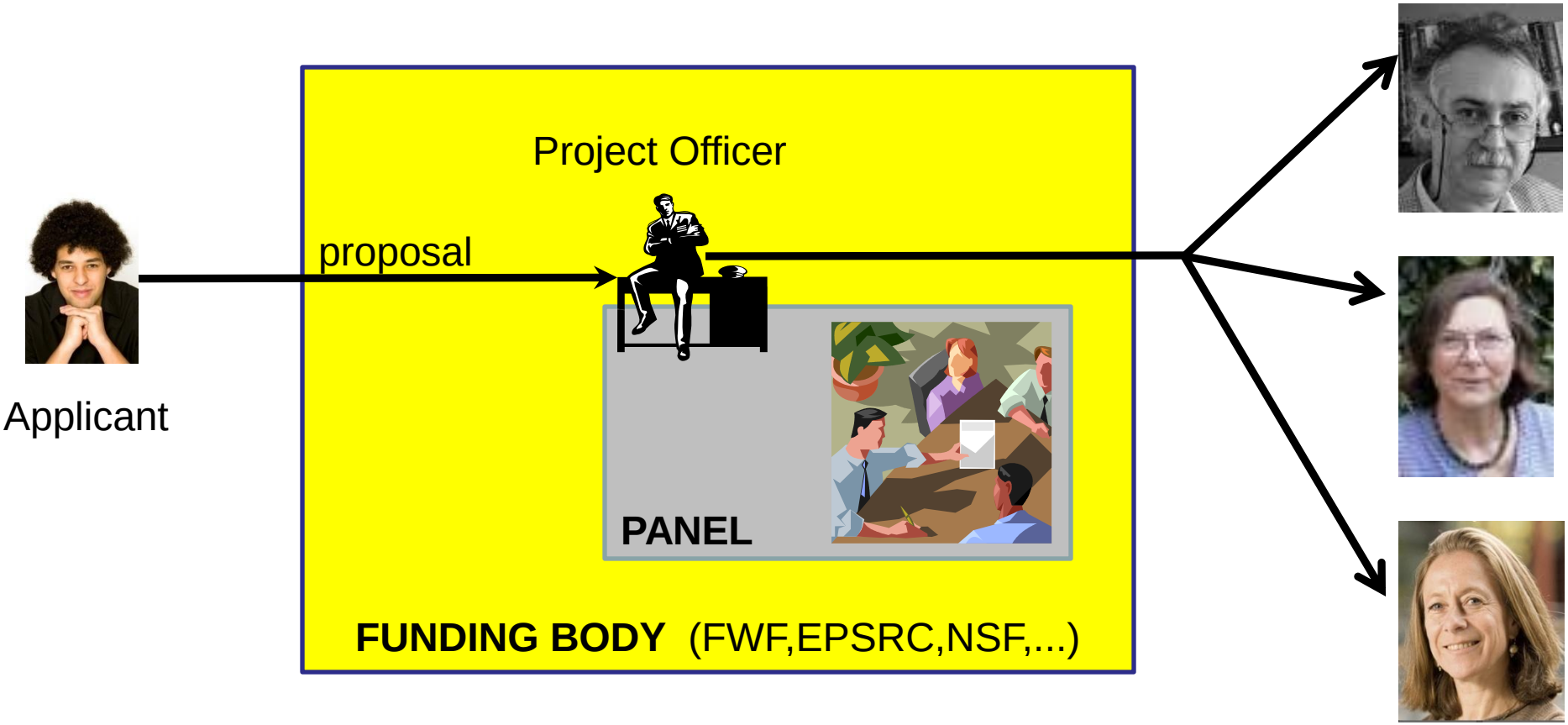


The project peer review process



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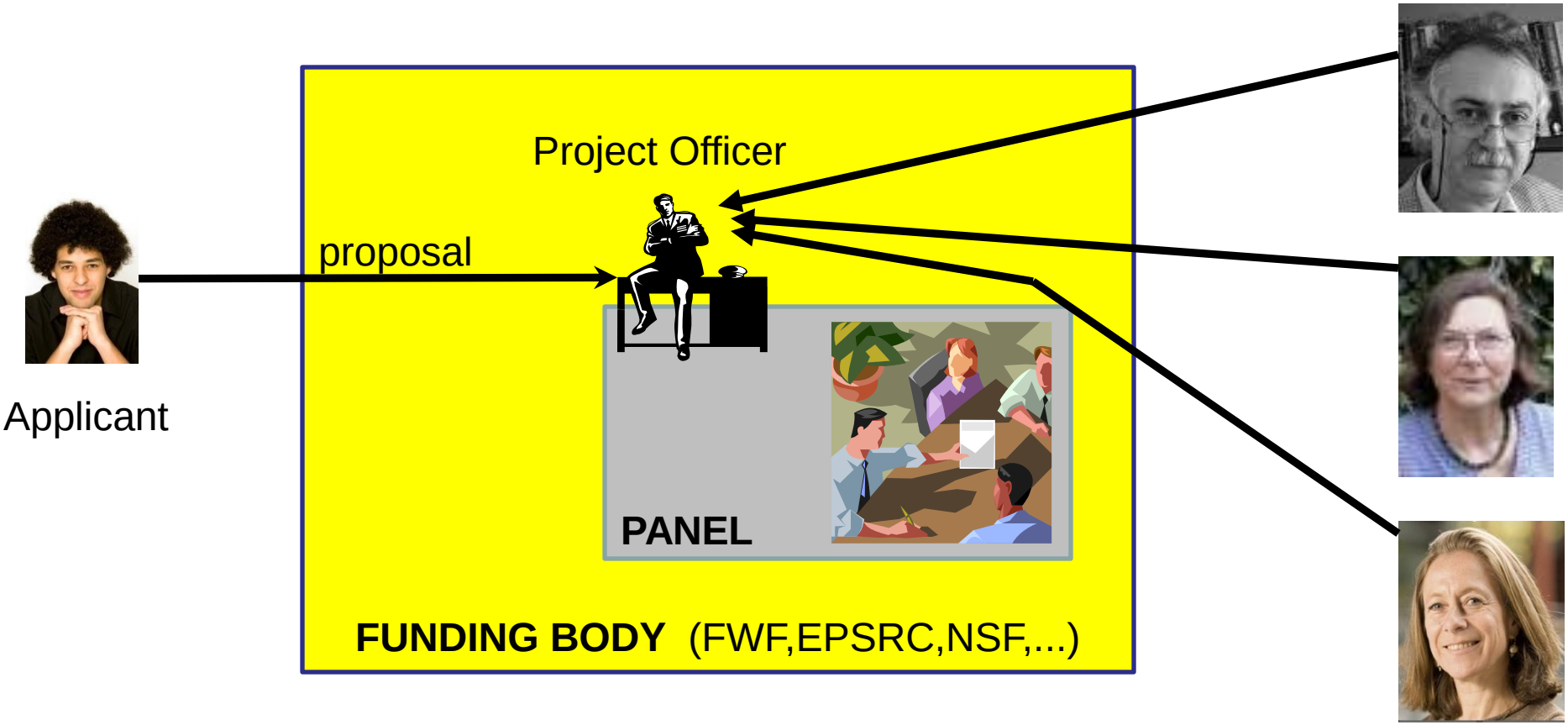

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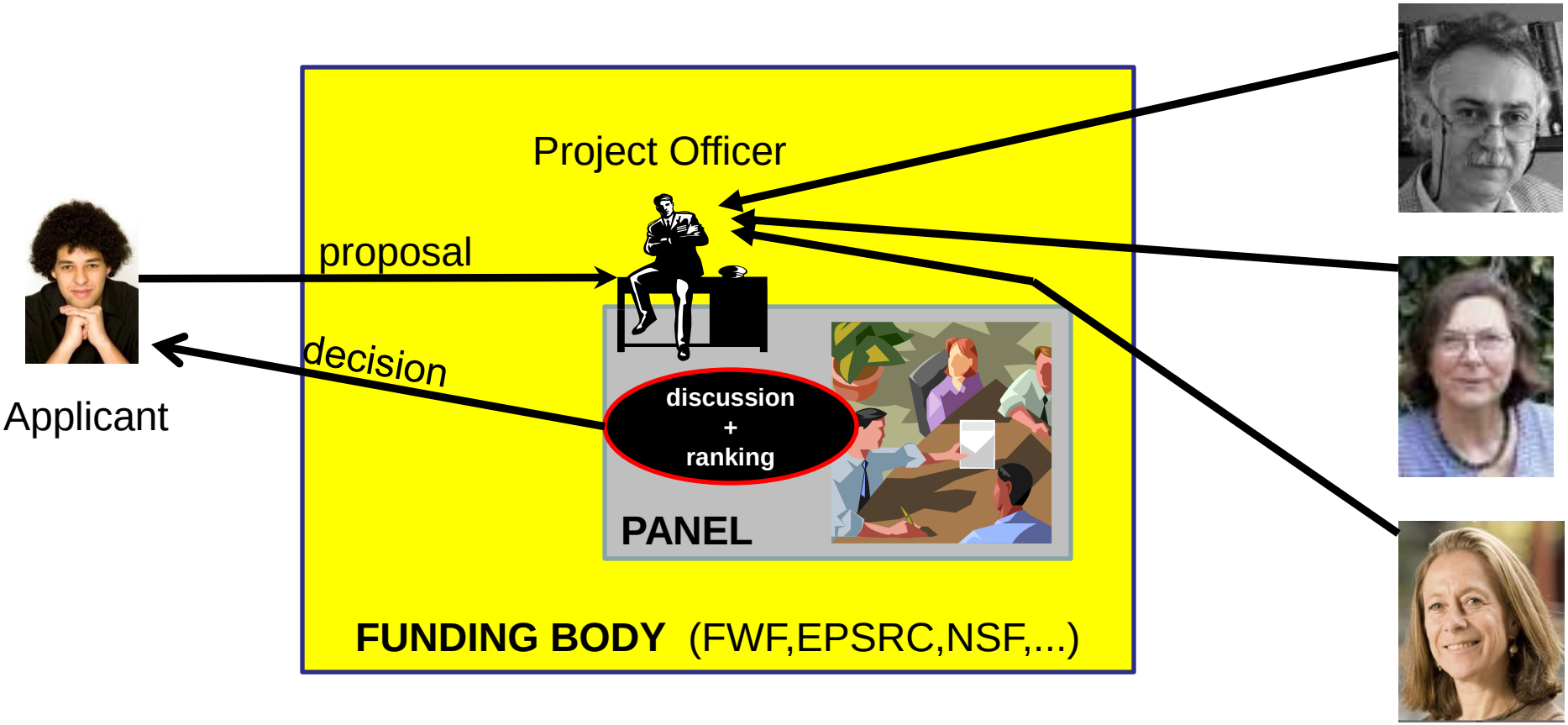

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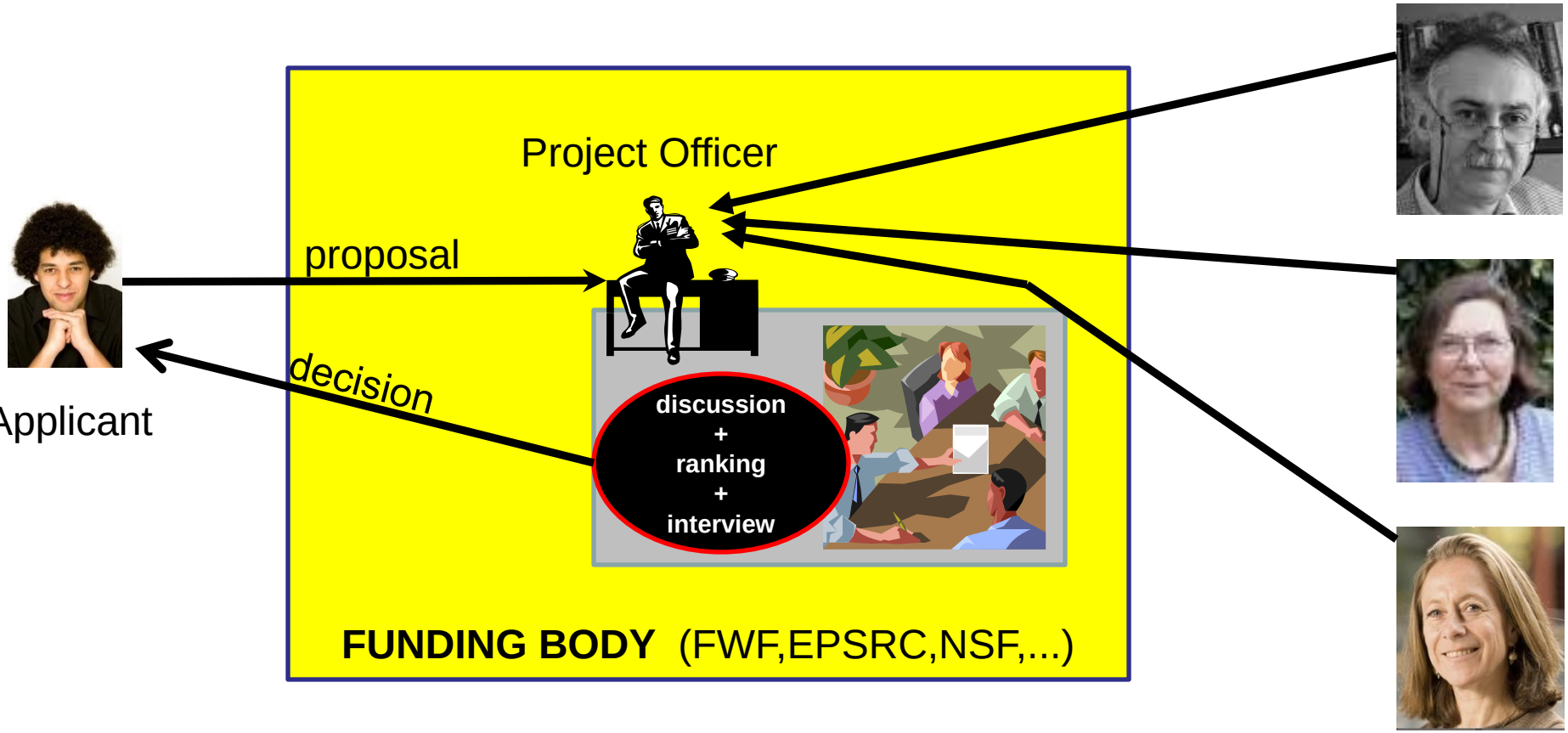

For large proposals there is often also an interview of shortlisted applicants

Approval Rate of FWF

Approval rates for Stand-alone Projects

	requested funding	*number of proposals*
2005	**31,9 %**	**38,4 %**
2006	**35,1 %**	**40,2 %**
2007	**37,9 %**	**41,6 %**

Proposal: Time and Effort

Project Idea: Needs some time for free flow of thoughts…

Background Research: 2 days – 2 months.

Requires: - lots of Google Scholar use
- much reading, and
- discussion with colleagues

Proposal: Time and Effort

Proposal writing: 2–6 weeks full time

- CV etc.
- Introduction (2-3 pages)
- Technical part (17 pages)
- Related work
- Costing (with help from admin staff)
- Form filling (tedious!)

FWF Guidelines

1 Scientific aspects

- aims (hypotheses):
- relation to the international scientific work in the field (international status of the research);
- explanation of how the project could break new groundscientifically (innovative aspects);

- importance of the expected results for the discipline
- methods;
- work plan, time plan as well as strategies for dissemination of results;
- co-operations (national and international).

Summary

A project proposal can take up to 3 months and can be a substantial investment in terms of time and energy.

Message from the Dean

- INF does quite well with projects, but we could do much better.
- Many researchers still do not apply for grants.
- We need to improve this situation.
- Incentives?

Benefits of Funded Projects

- Research can be done that could not be done otherwise.
- Students and post-docs can be hired.
- Computers, conference trips, …
- Money: 20% overhead. Future: Full costing.

Accepted Project

- Budged normally about 350.000
- 1 post-doc, 1-2 students for several years
- 3 workstations, trips, invitations

- Mid-term report
- Final report and Evaluation
- Financial reports
- In total no more than 2 weeks admin work.

Why bother applying?

A colleague from Industry, 1988

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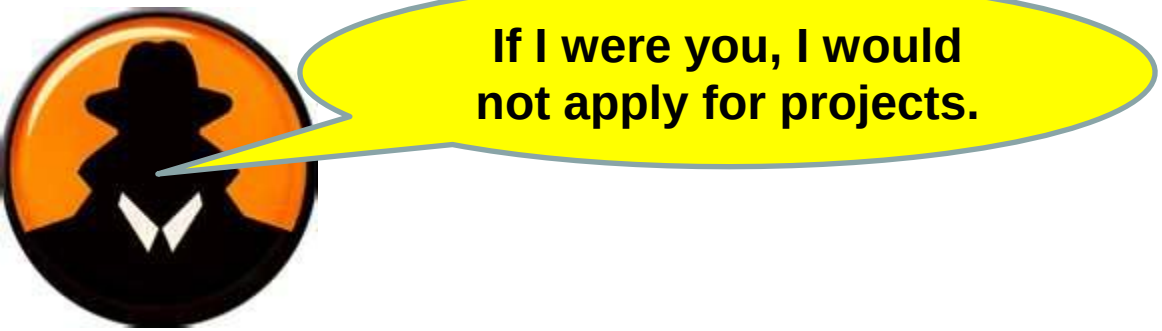

A colleague from Industry, 1988

Why bother applying?

A colleague from Industry, 1988

I was sympathetic to this, but …

… TU is not Inst. of Advanced Study.

+ Never trust "if I were you" phrases.

Reasons Against Proposals

"Why should I go through the hassle of it. What does it buy me personally?"

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"Why should I go through the hassle of it.
What does it buy me personally?"

It gives you a lot of personal benefits:

- More research → more & better publications
- More financial autonomy
- More respect
- Better CV for future jobs
- Management Experience.
- Helps you to assess your own research goals.

Reasons Against Proposals

"I am too busy. I don’t have time to write a proposal."

Reasons Against Proposals

"I am too busy. I don’t have time to write a proposal."

If this is permanently so, then revise your priorities, possibly with a coach.

Or maybe you have a wrong view of what an academic job means…

Man hat keine Zeit, man nimmt sie sich!

Reasons Against Proposals

"The refereeing process is unfair"

Reasons Against Proposals

"The refereeing process is unfair"

We experience unfairness from the Kindergarten on, and still continue to live and to pursue our goals. Why give up here?

Analyse rejection and USP of proposal.

Study successful proposals.

Sell yours better! (→ later)

Reasons Against Proposals

"As a newcomer I have no chance"

Reasons Against Proposals

"As a newcomer I have no chance. "

Everybody was once a newcomer…

You could say in the intro of your proposal that this is your first grant application. Referees will understand.

EPSRC: First Grant Scheme.

Reasons Against Proposals

"My ideas are too advanced & unconventional"

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Funding bodies like high risk proposals that could lead to groundbreaking results.

But referees need to be *reminded* about this.

Explain it clearly in the introduction.

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"Potential and Risks: We are aware that the proposed research aims at exploring unconventional new methods that are far beyond the current state-of-the-art. We were encouraged by the call for proposals which explicitly looks for such proposals* This naturally implies a considerable risk. However, this risk is mitigated by the fact that even a partial solution to the main problem would provide valid new methods**…**

How to sell your proposal

- Your proposal is a (*mind*-) *product* that you need to sell.
- A product must be good. Only fools will buy a crappy product. It happens though.
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  - Market research (market intelligence)
  - Product communication (communicate USP)

Market Research

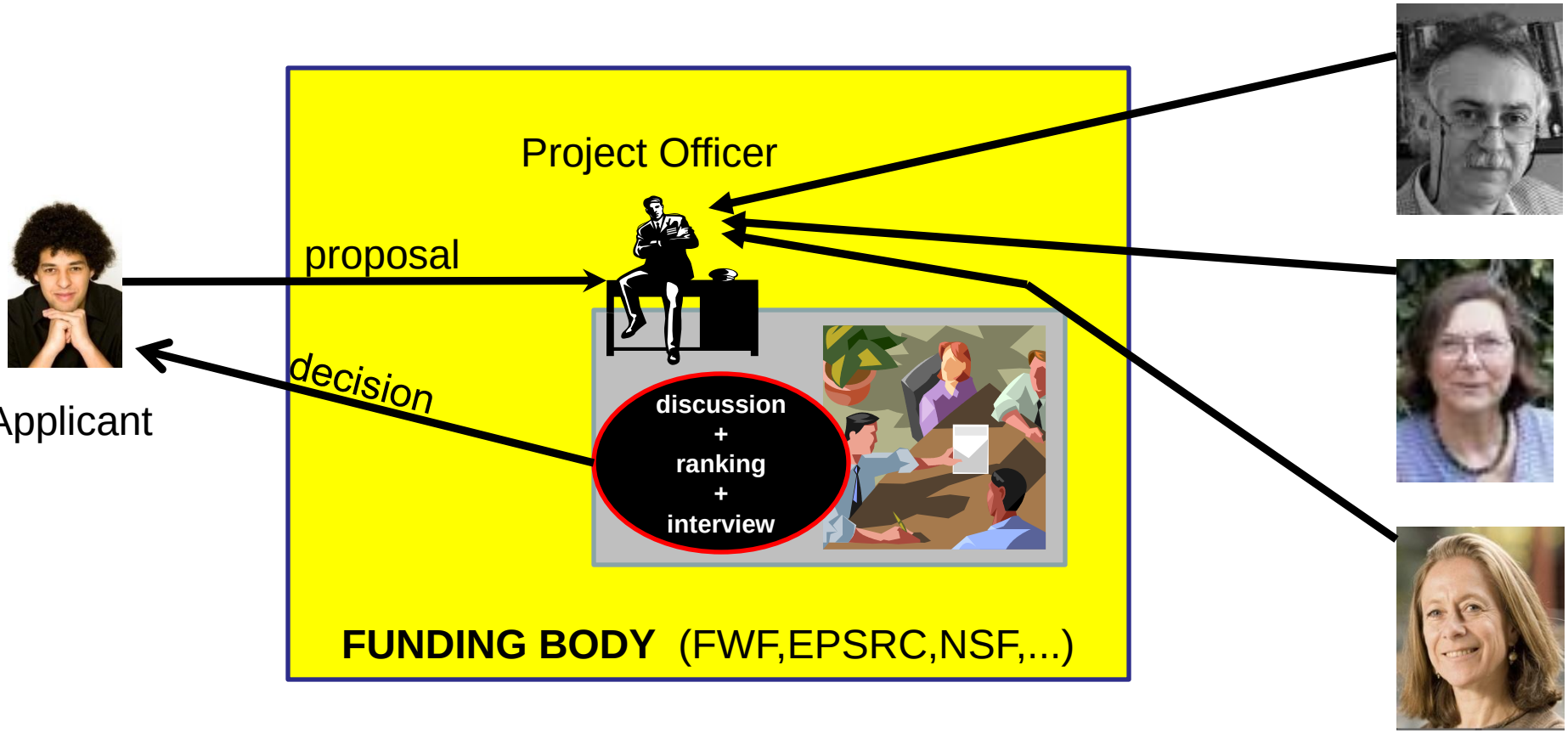
1. Identify the most appropriate funding body and call.

   FWF, EU, WWTF, FFG, …

1. Analyse and "optimise" the decision process.

- Who are the decision makers?
- How can I help them to make a good decision?

The project peer review process



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Project officer (+panel)

Project officer (+panel) will choose referees.
They have little time and need to decide quickly.
Guide them towards a good decision!

Good keywords + Appropriate abstract +
+ Explanatory first page + Good references.

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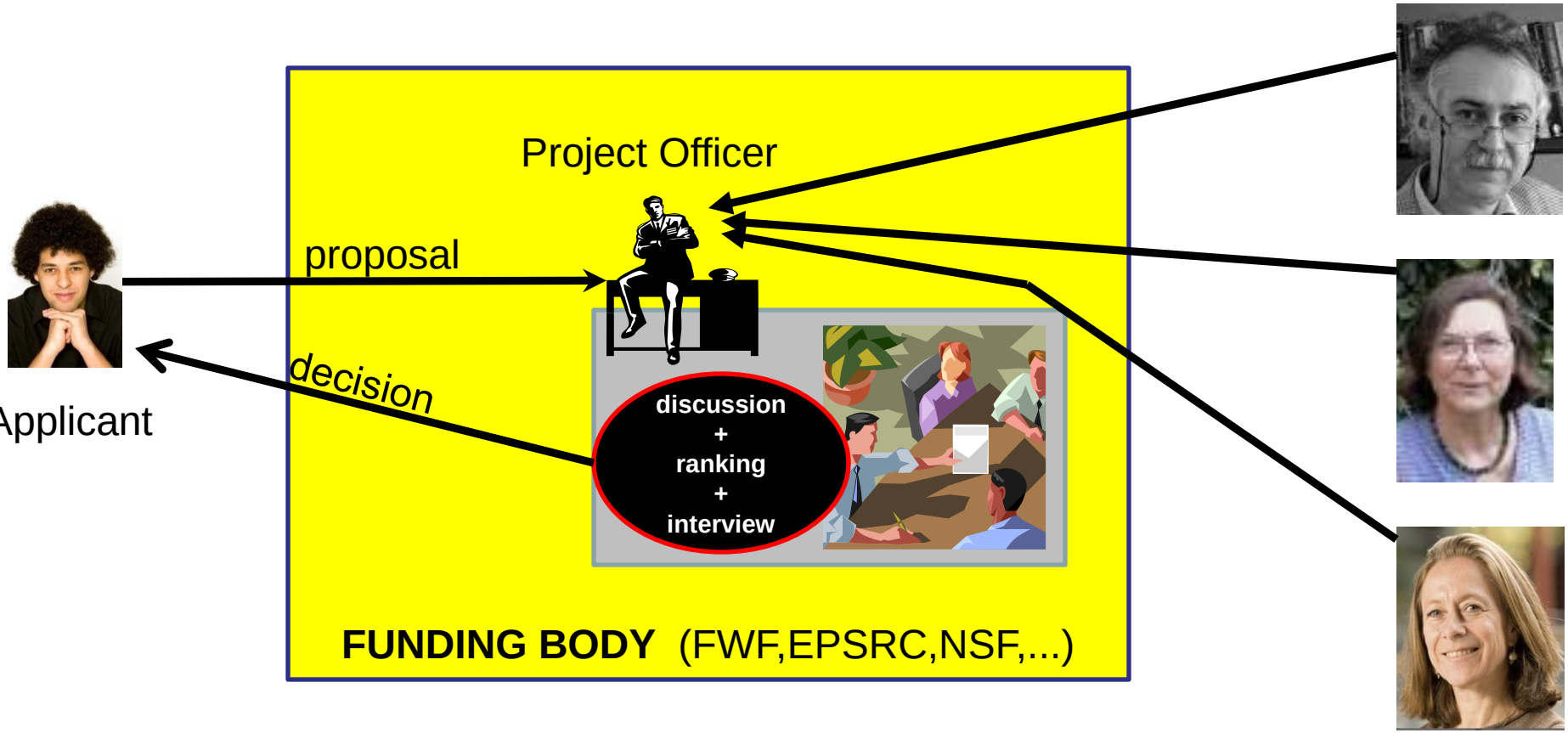

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Referees (your customers)

Communicate USP & meta-information.

Think like them while writing proposal
(activate your mirror neurons)

Have proposal pre-reviewed by friends

*Write a good **introduction!***

About Introductions

- The „selling“ phase of your project:

  The body of the proposal is your detailed product description.

  The introduction sells it to the referee.

- If the introduction is not well-written, the rest of the proposal will not be read with attention.

- Referees form their opinion on your proposal while reading the introduction. This opinion cannot be improved in the proposal body! It can be *confirmed* or it can be worsened...

Important findings

Many referees of a proposal read mainly the abstract and the introduction.

They make quick „sanity“ checks to the technical part but do not read it in detail.

They look carefully at the references in order to see whether related work they happen to know is cited, and whether *their own work* is cited.

Official aims of the introduction

- Telling what your proposal is all about
- Situating it in a scientific context
- Summarizing the methods
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These are indeed important aims that must be fulfilled. However, ther are, in addition, important secret aims!

Secret aims

- Raising the interest of the referee.
- Raising the curiosity of the referee.
- Convincing the referee that you are going to solve an important problem.
- Convincing the referee that your planned results will be:
  - innovative
  - nontrivial
  - useful
  - scholarly obtained
- Helping the referee to accept your proposal by providing arguments s/he can use in the report.

Empathy

The most important gift for writing an introduction is empathy:

- Be able to feel and suffer with the referee
- Be able to see with the eyes of the referee
- Understand the needs of a referee

Empathy is a gift, but it can also be trained...

How to raise the referee's curiosity?

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By dramatizing…

1. There is this important problem everybody would like to solve.

2. There are serious obstacles towards a solution .

3. By brave research, I will fight the obstacles and solved this problem

How to raise the reader‘s curiosity?

By dramatizing…

1. There is this important problem everybody would like to solve.

   The princess/prince to be conquisted and married (by the refree)

2. There are serious obstacles towards a solution .

   The dragon

3. By brave research I fight the obstacles and solved this problem

   The fight and victory

Relevance

- Clearly identify the problem you are going to tackle

- Explain why it is relevant to many others.
  Again, you may use dramatization.

Even the most boring research can be dramatized in the introduction.

For example: You make an experimental evaluation and comparison of two heuristics for solving NP-hard problems.

Dramatization approach: „The user is in a great dilemma...“
„We need a systematic study in order to provide useful guidelines...“

Possible structure of intro

- One sentence or short paragraph about what the project is about and a mini-summary of main intendedresults. (1 par)
- Introducing the important problem you want to solve, give some (possibly simplified) definitions (1 par)
- Why is this problem important, who has attempted to solve it, which solutions exist so far, why aren‘t they sufficient, why are we left with a dilemma, what are the main obstacles, why would it be useful to fight them. What would be the benefit of a (better) solution. (1/2 page)
- ***Value for money:*** Explain why the results will provide value to society.

- Elaboration on single obstacles and how you want to overcome them.
- Short description of new methods and planned results and their advantage and usefulness in chronological order.
- Some remarks about the nontriviality of the approach
- Summary of main results in form of a dotlist
- Further related work
- Roadmap „This proposal is organized as follows...“