An aerial photograph of a city, likely Helsinki, at sunset. The sun is low on the horizon, casting a warm orange glow over the city and the water. A large white ship is docked in the harbor. The city's buildings and the surrounding water are visible.

Evaluation Methods and Strategic Choices - Lessons Learned in Finland,

AEA Evaluation 2017

November 10, Washington, DC

01:45 PM - 03:15 PM, Madison B

Jari Hyvärinen, PhD

Tekes — the Finnish Funding Agency for Innovation

My presentation

1. Brief description of Tekes
2. Evaluation in Tekes
3. Challenges in evaluation
4. Learnings

Role of Tekes

Growth



Reach high

We fund companies that are eager and able to grow

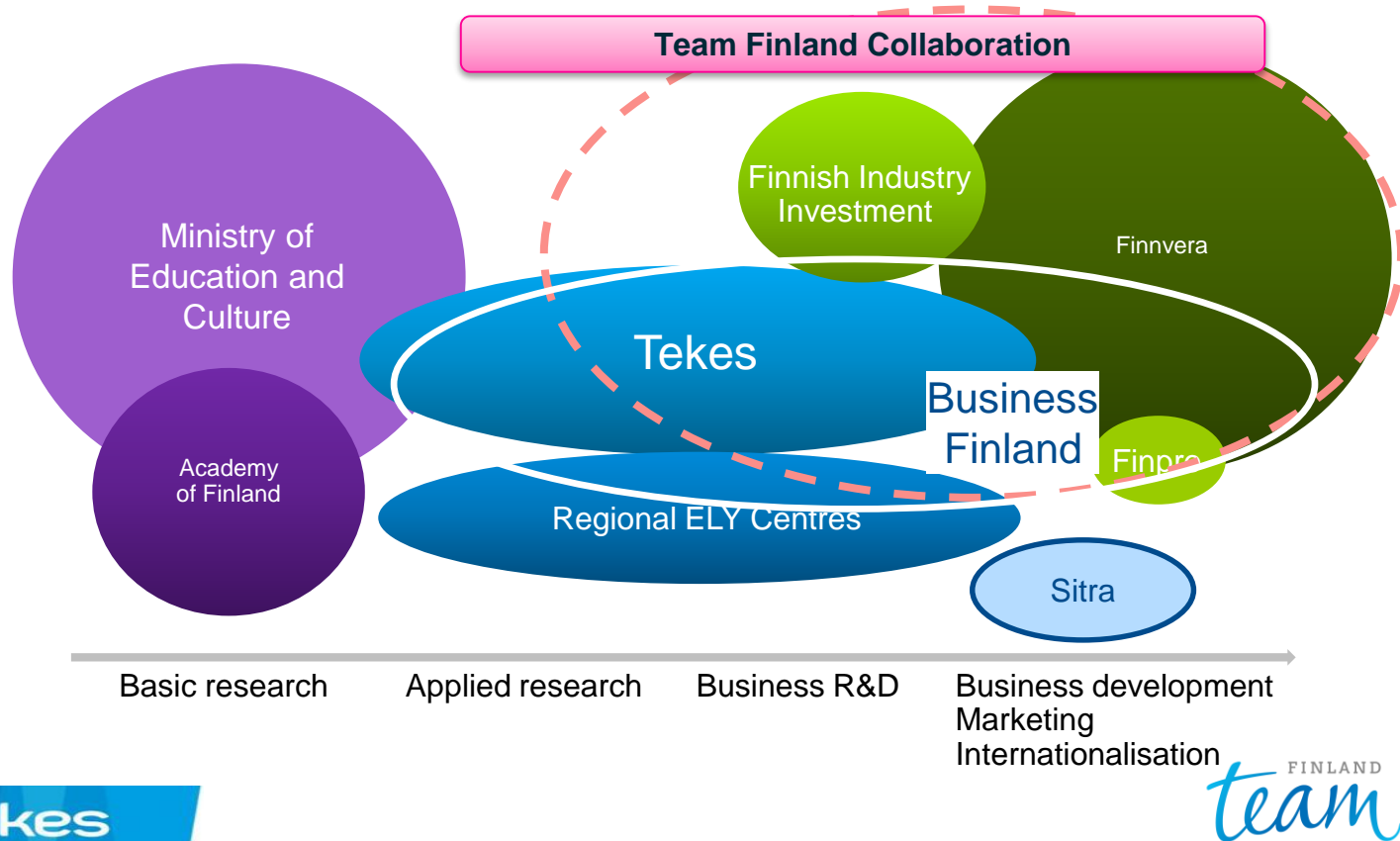
Networking



Facilitating collaboration between companies and research

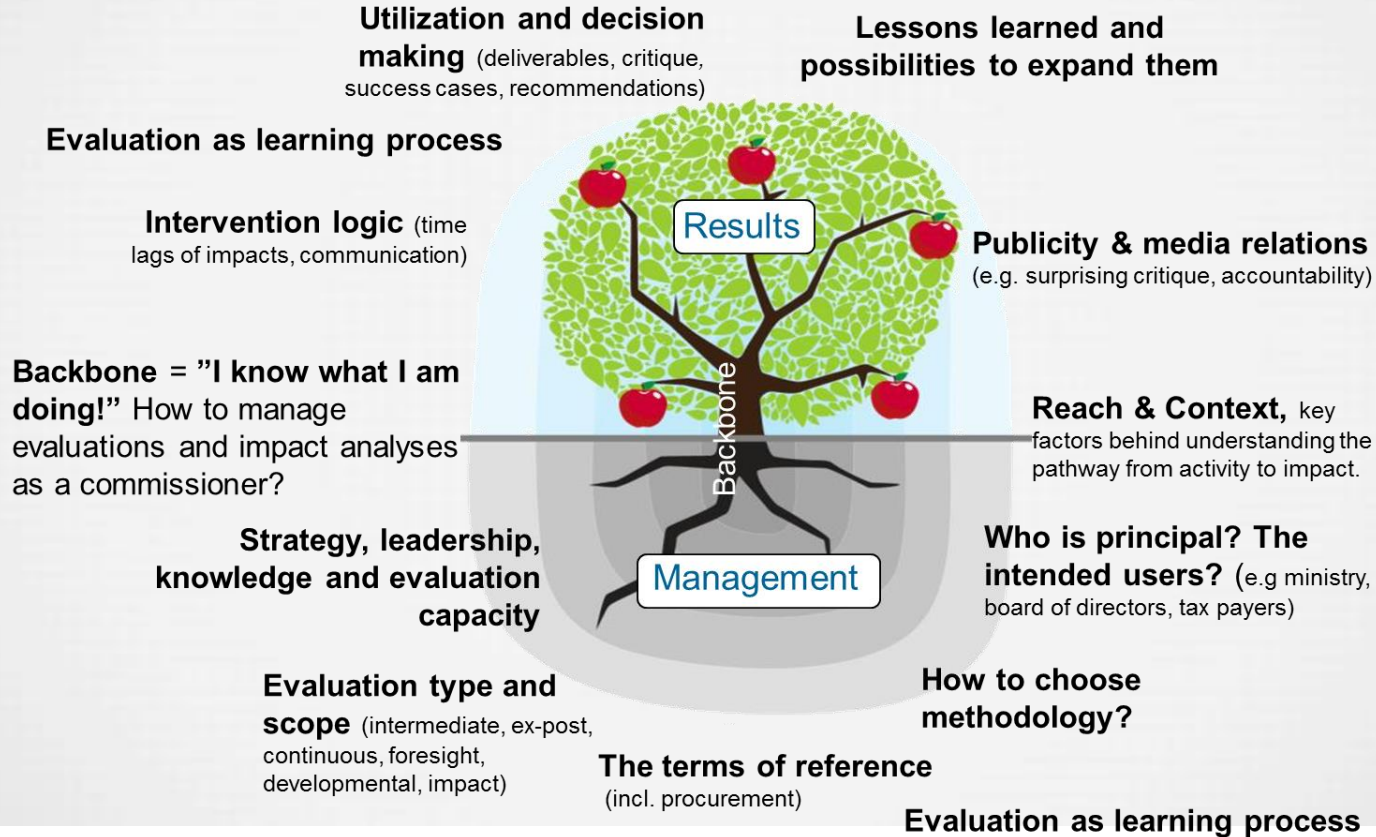
- Tekes is the most important publicly funded expert organisation for financing research, development and innovation in Finland.
- Tekes boosts wide-ranging innovation activities in research communities, industry and service sectors.
- Tekes promotes a broad-based view on innovation: besides funding technological breakthroughs, Tekes emphasises the significance of service-related, design, business, and social innovations.

Public funding actors in the Finnish innovation environment



Evaluation in Tekes

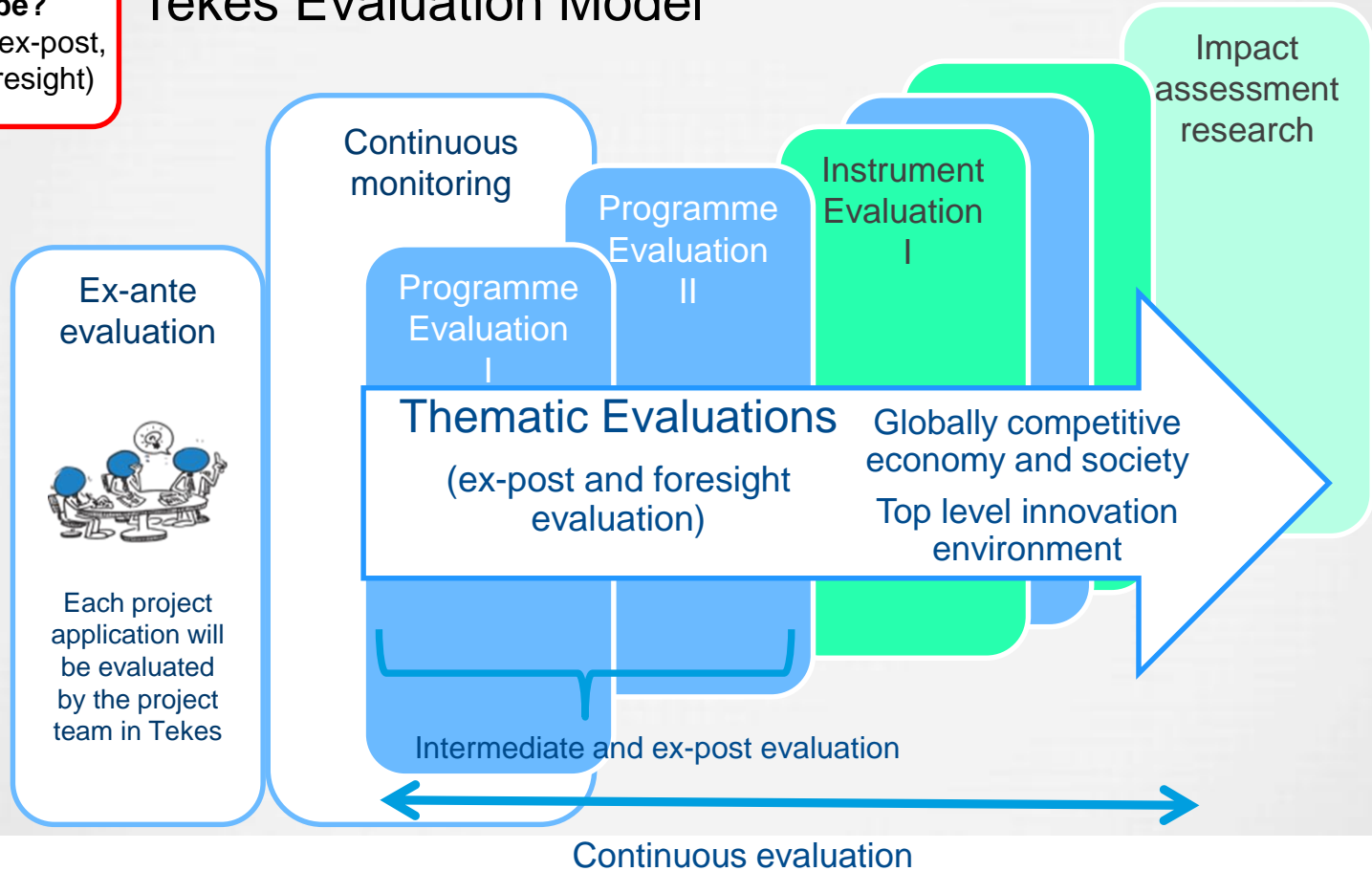
Critical Points in Evaluation Management and Results



Evaluation type?

(intermediate, ex-post, continuous, foresight)

Tekes Evaluation Model



Reach & Context, key factors behind understanding the pathway from activity to impact

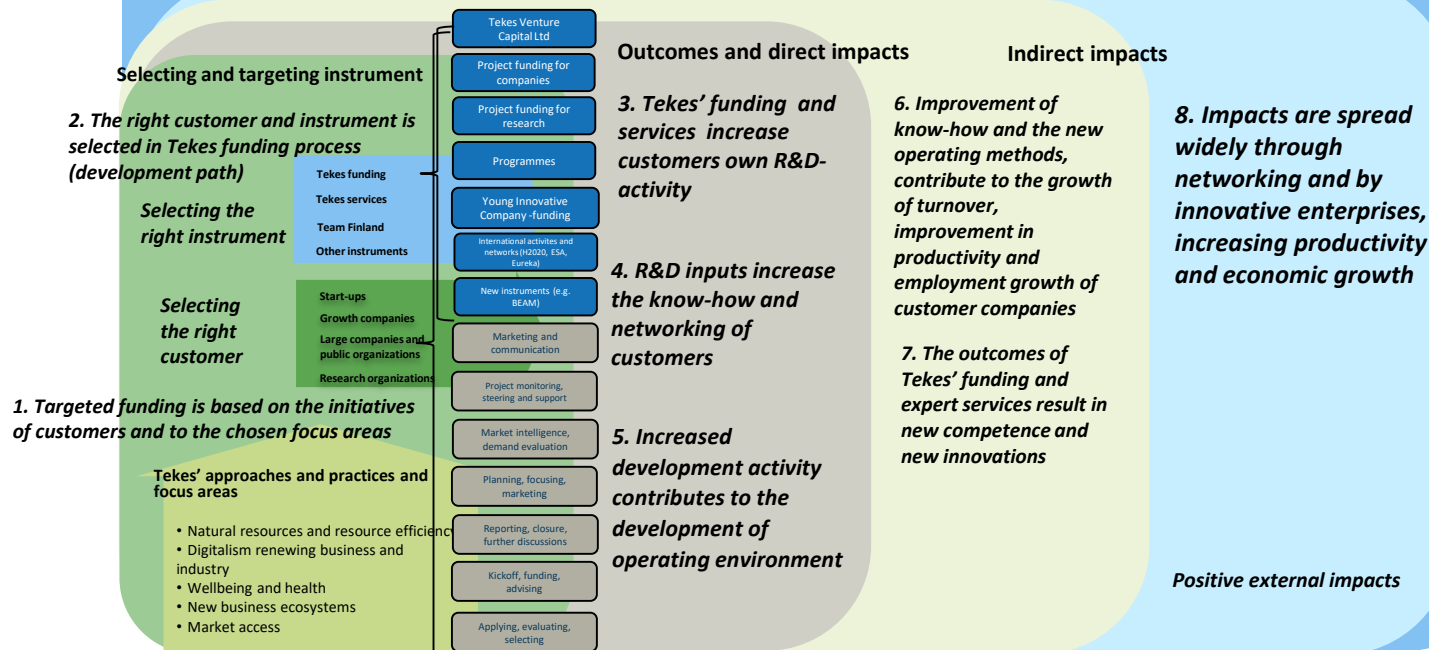
Tekes Impact Assessment Model 2017

Globally competitive business and industry

Top-level innovation environment

Impact on society

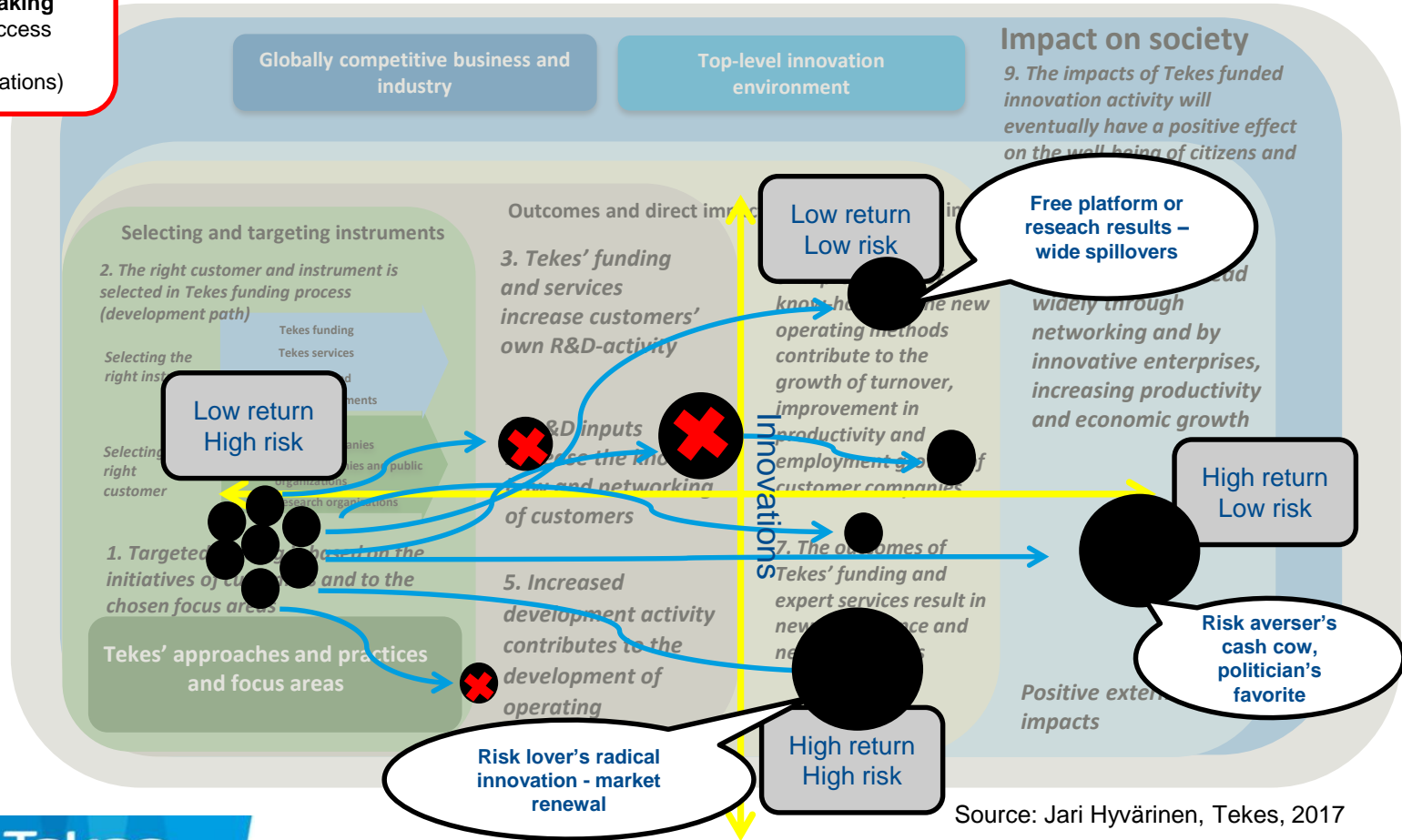
9. The impacts of Tekes funded innovation activity will eventually have a positive effect on the well-being of citizens and the environment.



Challenges

Communications,
utilization and
decision making
(critique, success
cases,
recommendations)

Challenge #1: Tekes Impact Model and Risk-Return Scenario



Reach & Context,
key factors behind
understanding the
pathway from
activity to impact

Challenge #2 Evaluation results in macro level

Impacts on
companies

Project level
impacts

Actions

Takes

Productivity
Renewal

Macro
goals

Competitiveness

Wellbeing

Spillovers

Growth

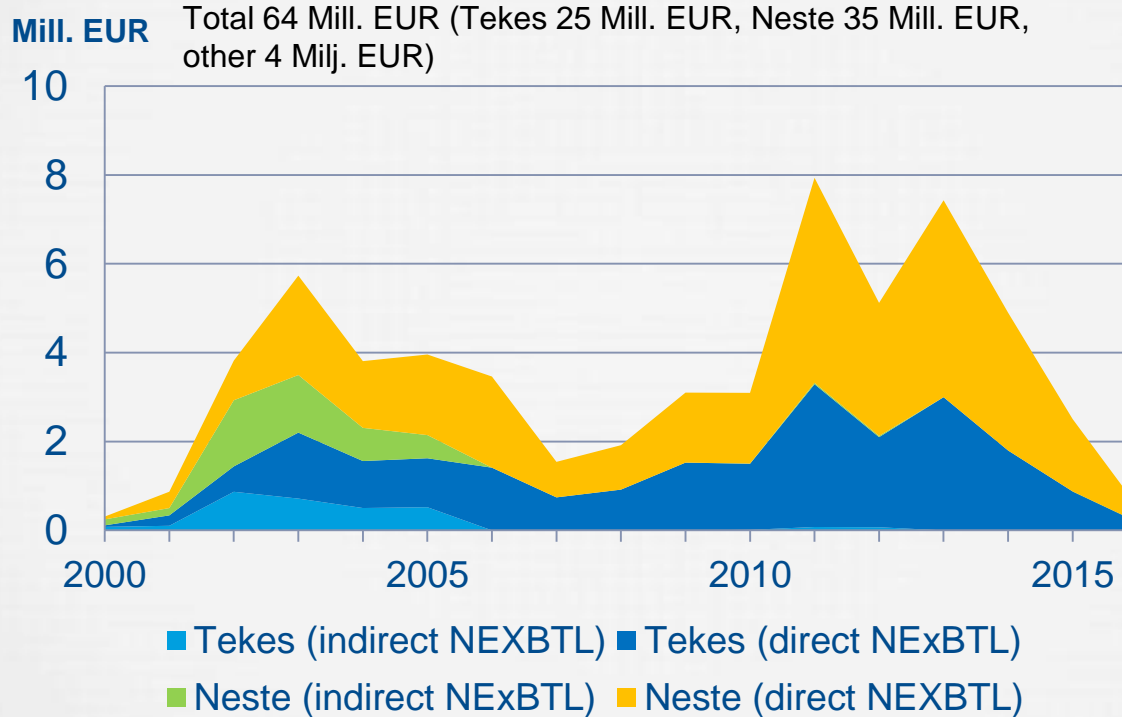
MIND THE GAP

Who is principal?
(board of directors,
ministry, tax
payers)

Communication:
intervention
logic & time lags
of impacts

Challenge #3 Long time lags

Example: Biofuel NEXBTL and Tekes Funding



Neste Oil renewable
fuels total turnover
was 2 372 MEUR and
profit 402 MEUR in
2015, Source: Neste
Oil Annual Report
2015

Source: Tekes 2016

How to choose methodology?

Goals vs. methods
(survey, interviews,
case studies,
econometrics)

Challenge #4: Evaluation Process at R&D Project Level and company behaviour

Ex-ante evaluation

- Evaluation of the project:
 - Asta client tool
 - Eval project tool
 - Risks
 - Challenges
 - Goals
 - Novelty value
 - Co-operation
 - Exploitation of results
 - Commercialisation

Ex-post evaluation

- Final project reports
- 3 years after project reports:

Project achievements:

- New project innovation
- New service innovation
- New process innovation
- New social innovation
- New environmental innovation

Project results

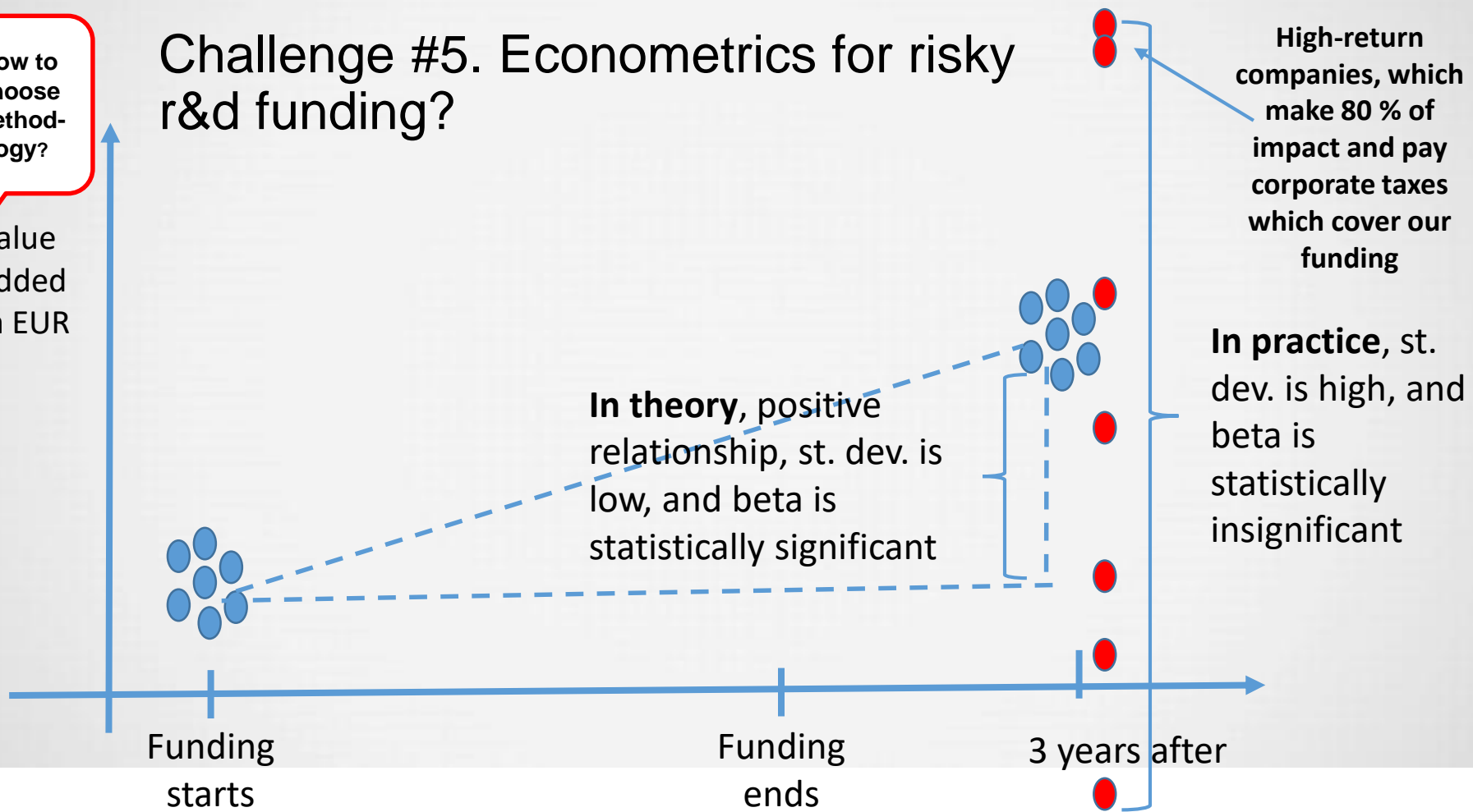
- Patents, utilisation models, Trade marks, IPR:s (product protection), Licences, Spin-offs, New co-operation models

Vs. Control group in a small country like Finland

How to
choose
method-
ology?

Challenge #5. Econometrics for risky r&d funding?

Value
added
in EUR



Learnings

Critical Points in Evaluation Management and Results

Evaluation type?

(intermediate, ex-post, continuous, foresight)

"Ex-post evaluation comes too late, but how to get relevant information for continuous evaluation"

Communications, utilization and decision making
(critique, success cases, recommendations)

"Goals of R&D&I projects differ"

Reach & Context,
key factors behind understanding the pathway from activity to impact

"Impact model & actions - projects – organizations – macro level"

Communication: intervention logic & time lags of impacts

"Time lags are mostly too short and impacts cannot be measured properly because capabilities move forward to new sources in the economy"

Who is principal?
(board of directors, ministry, tax payers)

"How to spread a message that this is relevant for tax payers?"

How to choose methodology?

"Evaluation needs variety of methods, not only econometrics or qualitative methods but analysis from multiple angles!"

Finnish wellbeing relies on the economic growth created by innovations

Innovation activity is a key driver of economic growth and enables the funding of welfare services in the long term.

Thank you!

Jari Hyvärinen
Tekes, Finland
jari.hyvarinen@tekes.fi

Results of completed Tekes projects

R&D and innovation projects completed in 2016 generated

- **2,250** products, services or other innovations
- **1,000** patents or patent applications
- **680** academic thesis

Total 1,980 completed projects

