

fimecc

— Finnish Metals and Engineering  
Competence Cluster

FIMECC Oy

Finnish Metals and Engineering Competence Cluster

Overview

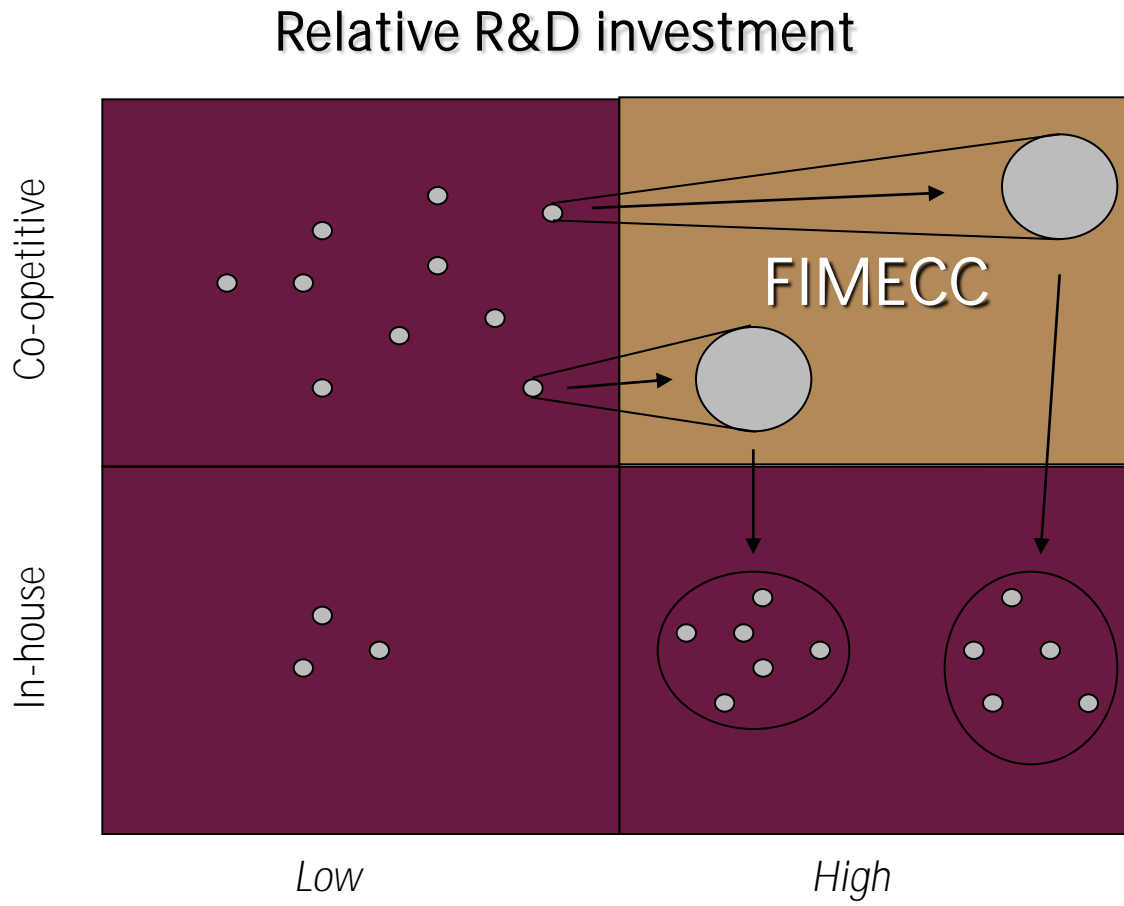
# Our Vision - Create a World Class Platform for Science Based Competitiveness

- ▶ FIMECC will create
  - Application-driven research
  - International research networks
  - World-class scientific results
  - Globally leading competences in selected focus areas
- ▶ FIMECC research is based on
  - Customer needs - demand pull
  - Ambitious targeted objectives
  - Open dynamic international cooperation and co-creation

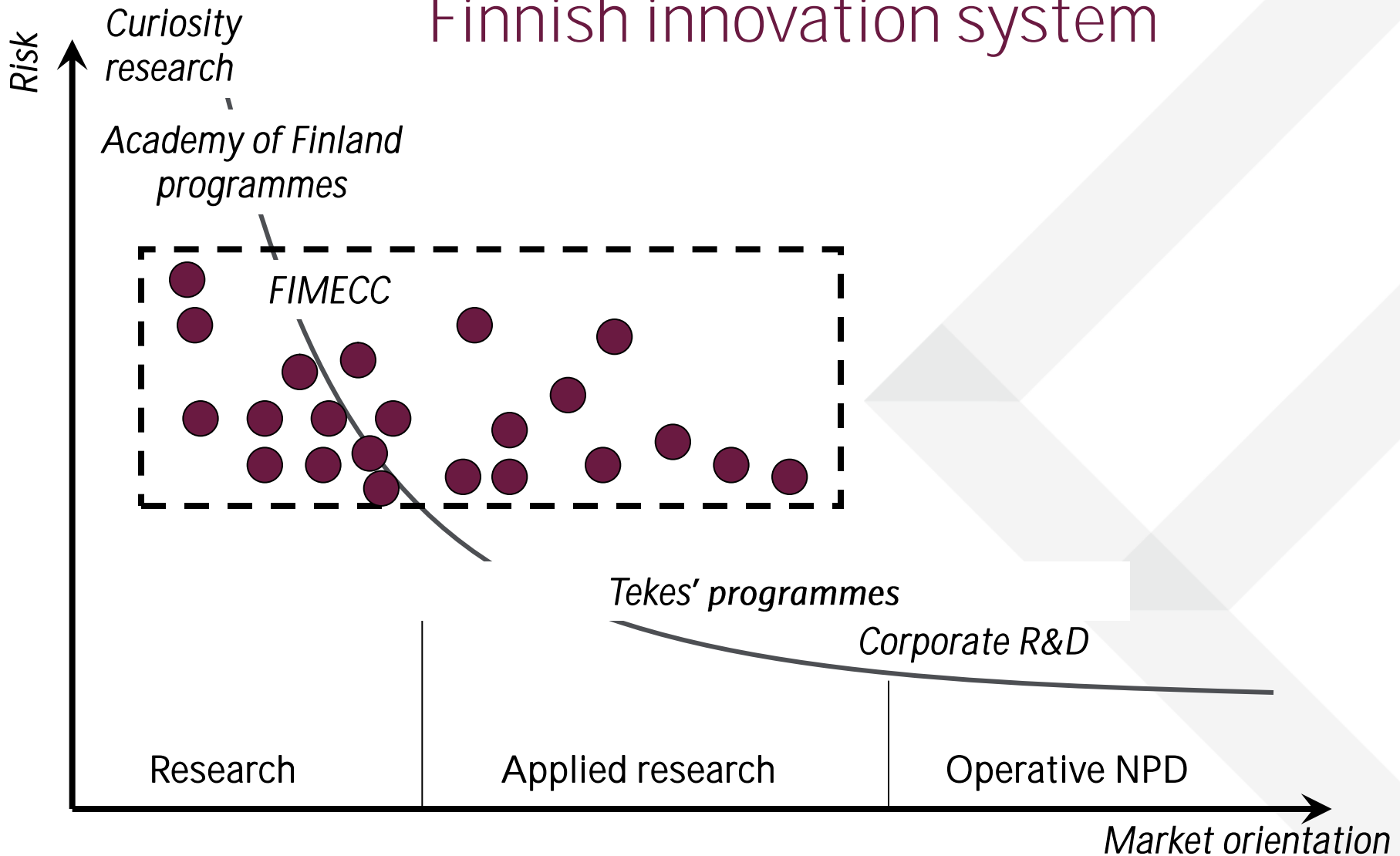
# What is the change in the Finnish innovation system?

- ▶ **International cooperation in research is brought into a higher level**
  - Significant research cluster is attractive partner for global researchers
- ▶ **Private sector is given more responsibility on research strategy definition**
  - FIMECC is responsible for launching research themes
  - Open and cross-disciplinary approach will create new settings
- ▶ **Large companies as well as SMEs obtain improved funding opportunities**
  - Tekes funding decisions are made in theme rather than project level
- ▶ **Research institutions obtain improved opportunities for long-term research**
  - FIMECC offers increased long-term funding for research which meets academically and commercially high standards
- ▶ **Companies and public research institutes are brought into deeper cooperation**
  - FIMECC makes it possible to flexibly change personnel between participating organizations

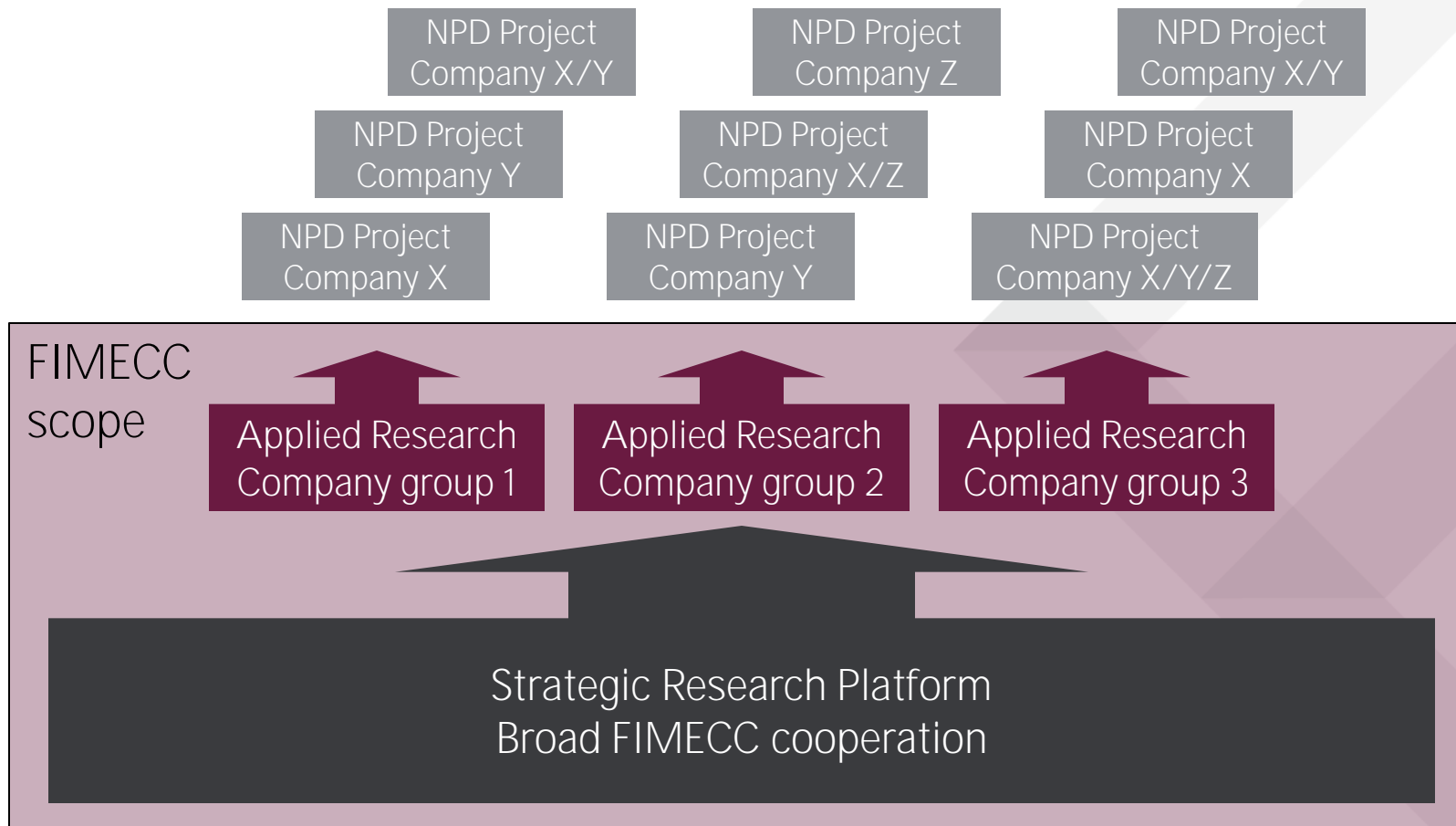
Strategic research activities



# Positioning of FIMECC in the Finnish innovation system

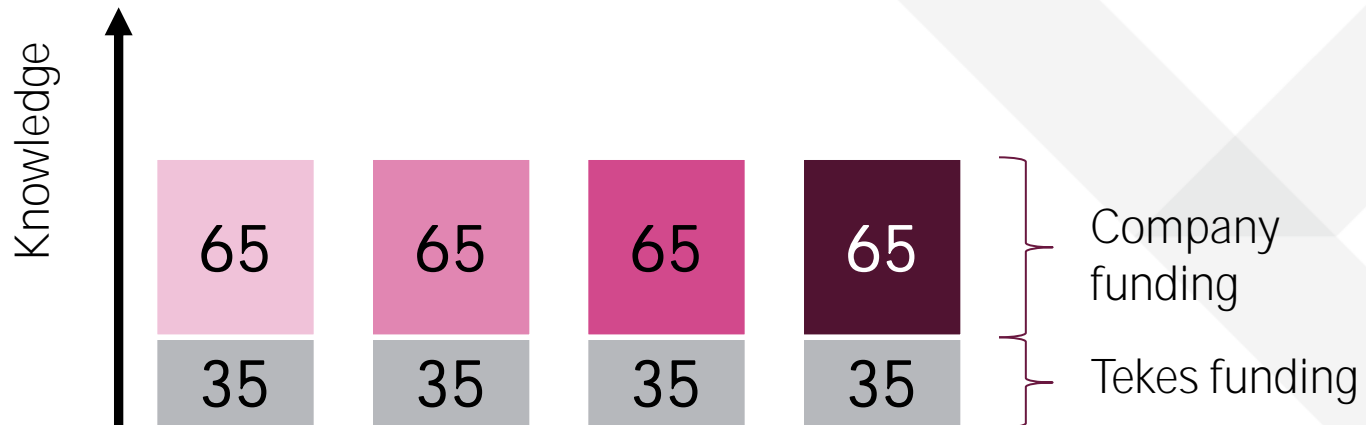


# Medium Term Research Horizon



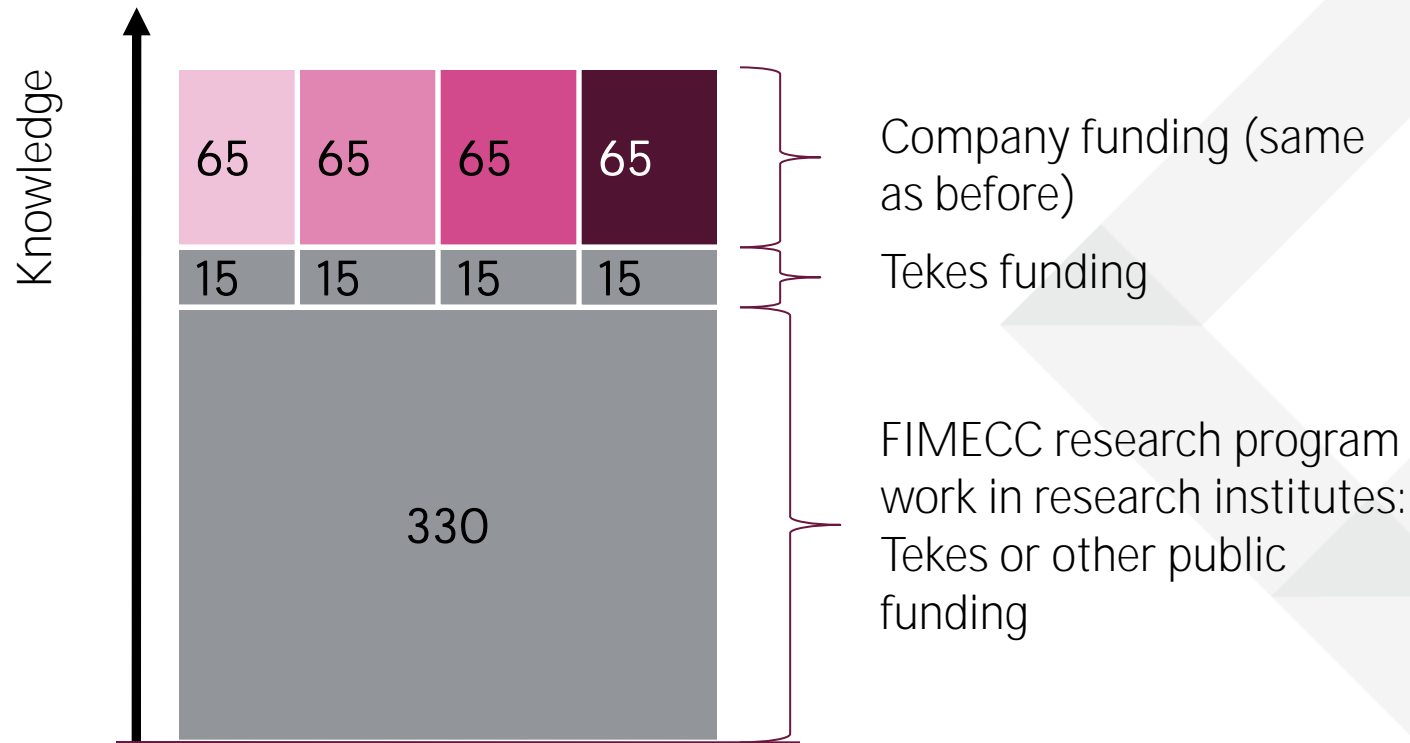
# Why overlapping company projects?

- ▶ **Theory:** Companies carry out basic and applied research by contracting with research institutes
- ▶ **Practice:** Research institutes investigate same things in different projects



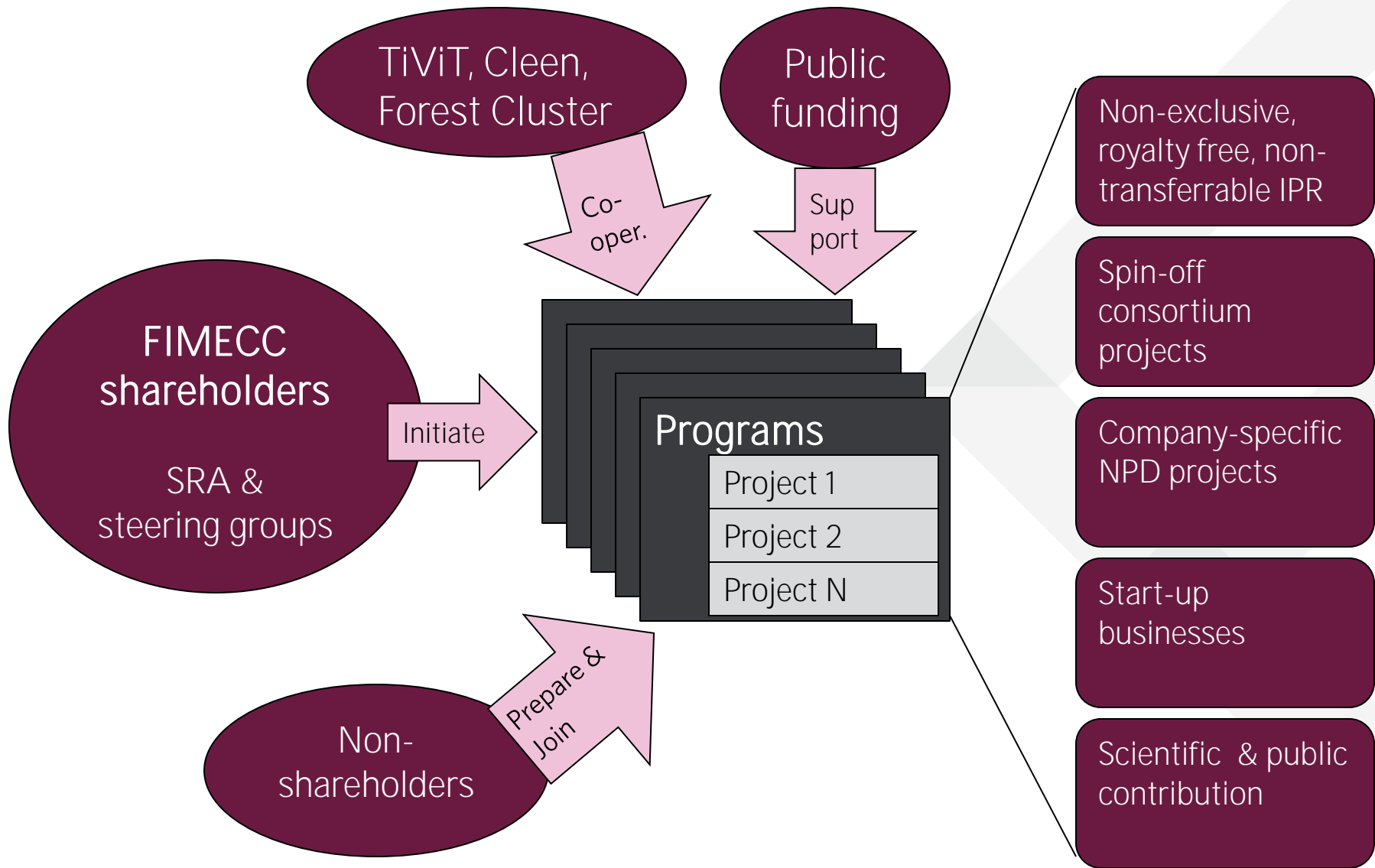
Company Output / Input:  $100/65 = 1,53$

# Join FIMECC and increase your payback!



Company output / input  $(330+80)/65 = 6,3$  (before 1,53)

# FIMECC in the research environment



# Shareholders

## Institutions

- ▶ Hanken School of Economics
- ▶ Helsinki School of Economics
- ▶ Helsinki University of Technology
- ▶ Hermia Oy
- ▶ Lappeenranta University of Technology
- ▶ Laurea Univ. of Applied Sciences
- ▶ Metropolia Univ. of Applied Sciences
- ▶ Tampere University of Technology
- ▶ University of Art and Design Helsinki
- ▶ University of Jyväskylä
- ▶ University of Oulu
- ▶ University of Vaasa
- ▶ VTT Technical Research Centre of Finland
- ▶ Åbo Akademi

## Industry

- ▶ ABB Oy
- ▶ Andritz Oy
- ▶ Boliden Kokkola Oy
- ▶ Cargotec Oyj
- ▶ FIMA ry
- ▶ Finn-Power Oy
- ▶ Konecranes Oyj
- ▶ KONE Oyj
- ▶ Kumera Oy
- ▶ Metso Oyj
- ▶ Outokumpu Oyj
- ▶ Outotec Oyj
- ▶ Rautaruukki Oyj
- ▶ Raute Oyj
- ▶ STX Europe Oy
- ▶ Tieto GMR Oy

# Strategic research themes:

## Outcomes

Service Business (open systems & processes)

High performance  
service concepts

User Experience, Usability & Industrial Design

Outstanding  
user experience

Global Networks (supply & demand chain mgmt)

Efficient and flexible  
network structures

Intelligent Solutions (products & processes)

Leading solutions  
to pioneering  
customers

Breakthrough Materials (materials & processing)

New materials that  
create new markets

# Strategic research themes & program coverage:

Under construction

Launched

SB

FutIS: Service design & production

UE

UXUS: User exp. in complex systems

GN

I&N: Project Business

GP4Variants: Series Production Business

IS

EFFIMA: Machines

Future Automation

ELEMET: Metal Processes

BM

LIGHT: Product Structures

DEMAPP: Properties

ACTIVE: New Materials

# Service Business

- ▶ Business and earning logic
- ▶ Service productization
- ▶ Service production and management
- ▶ Profitability and productivity
- ▶ Conceptualizing and categorization

# User Experience

- ▶ Design strategy: Horizon
- ▶ Design process: Factory
- ▶ Industrial design: Human interface

# Global Networks

- ▶ Strategy and global networks
- ▶ Value network design and management
- ▶ Product life-cycle management in dispersed global networks
- ▶ Efficient and environmental-friendly logistic solutions

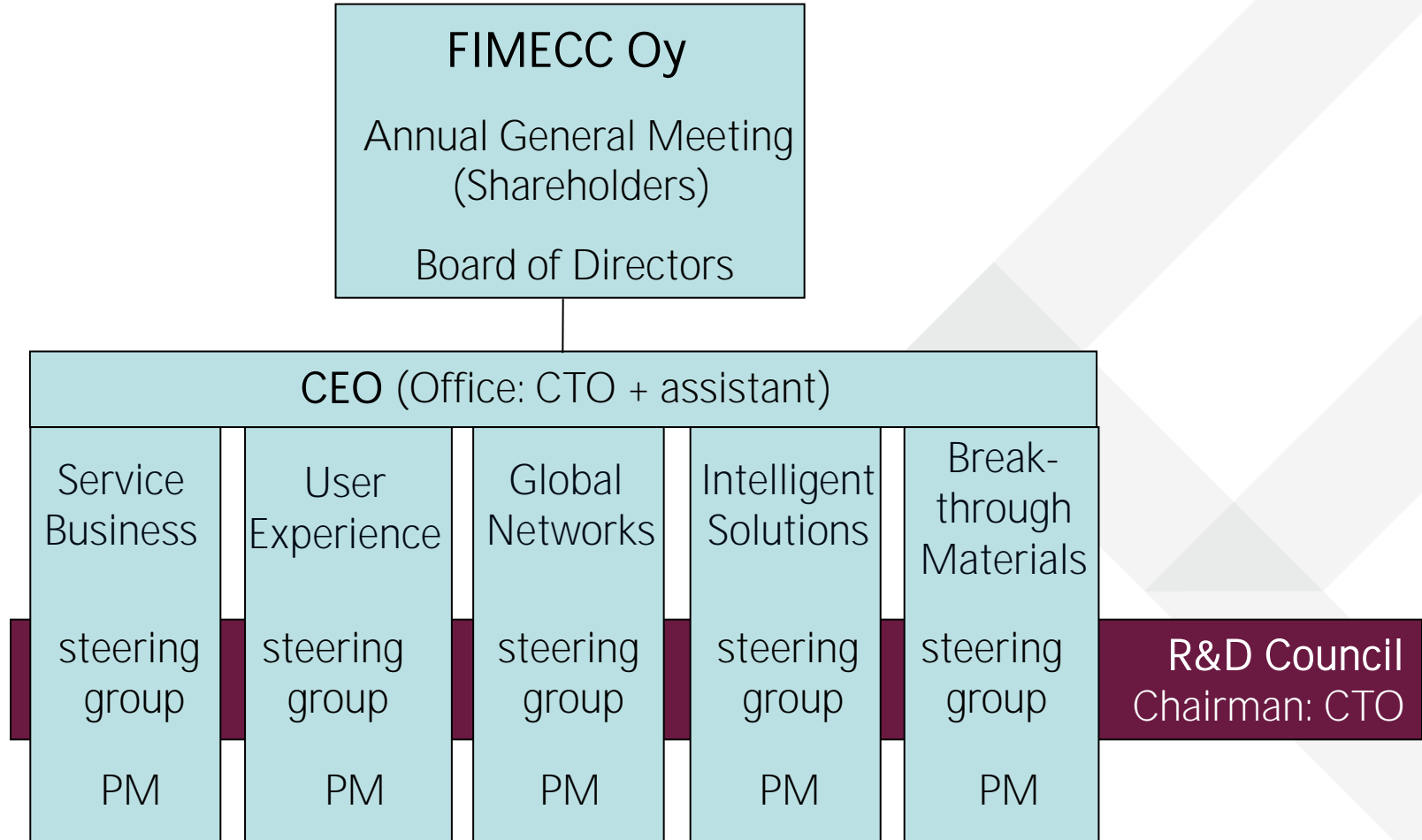
# Intelligent Solutions

- ▶ Intelligent products and concepts
- ▶ Intelligent automation and systems
- ▶ Intelligent production
- ▶ Life cycle management
- ▶ Modelling and simulation

# Breakthrough materials

- ▶ Light constructions (e.g. nanotech.)
- ▶ Cutting, forming, joining and surface treatments
- ▶ Active and functional solutions
- ▶ Demanding applications
- ▶ Production technology

# Organization



# Organization of research activities

- ▶ FIMECC Oy personnel
  - **Chief Executive Officer** (CEO) is responsible for overall management and results of FIMECC Oy
  - **Chief Technology Officer** (CTO) is responsible for management and direction of research activities
- ▶ Shareholders' representatives
  - **R&D council** acts as an innovation platform, helps to direct research and acts as communication channel of the shareholders
  - **Steering groups** prepare research program plans and project decisions for CEO and support themes with research initiatives
- ▶ Personnel in companies and research institutes
  - **Directors** manage research activities and initiatives in themes (part-time personnel of FIMECC Oy)
  - **Project managers** are responsible for individual projects
  - **Researchers**

# Principles

- ▶ No project can be part of research program...
  - ... if **all** shareholders have had **no** information in **any phase** of preparations
  - ... if less than two companies participate
  - ... if SG/BoD does not accept it against the decision making criteria
  - ... if the participants cannot sign Fimecc IPR principles and consortium agreement
- ▶ See: [www.fimecc.com](http://www.fimecc.com)

# Decision making process

## 1st discussion: Initiator – CTO

- 1) Does the initiative fit with SRA?
- 2) What is the appropriate type of initiative (A - C)?
- 3) What is the right steering group?

## A: Part of SG-designed future program

### 2nd discussion: Initiator – SGC

1. Does the initiative fit with planned future research programs?
2. Who are involved? (SGC and CTO can suggest new participants)
3. Does the initiative meet the targets of Fimecc?
4. How can preparations be opened/supported by Fimecc?
5. Should the initiative be connected with other initiatives?
6. Confidentiality issues

**SG:** Acceptance of the initiative as part of research program

**CEO/BoD:**  
Funding application for program

## B: Open call

**BoD:** Open call declaration

### Initiator:

Project plan/idea submittance

### R&D council:

Evaluation of initiatives

### SG & CTO:

Check connectivity and support preparations  
Selected projects form research program

### CEO/BoD:

Funding application for program

## C: Program spin-off consortia with SHOK-label

### 2nd discussion: Initiator – SGC

1. Does the initiative fit with on-going program?
2. Can SHOK-label be used?

**3rd discussion: CTO-Tekes**  
Is the initiative acceptable at Tekes?

### Initiator/CEO:

Funding application for consortia under SHOK-label

# 2009 Schedule

