

Translational Research for Food Innovation Program in Thailand

Assoc Prof Dr Chaleeda Borompichaichartkul

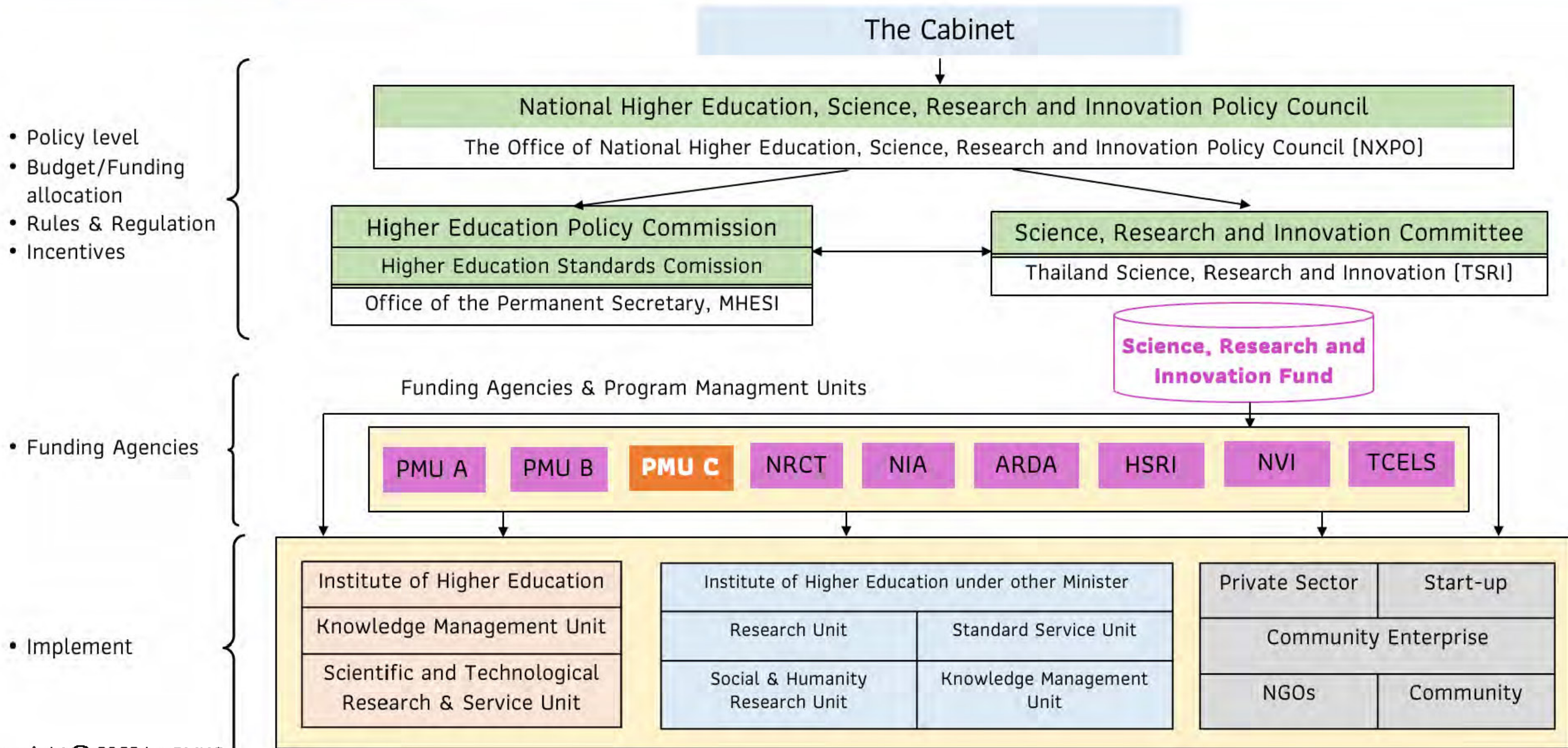
15 November 2023





Program Management Unit for Competitiveness: PMUC

PMUC has a mission to administer research fund to enhance the nation's competitiveness by fostering collaboration between the public and private sectors in Thailand and from abroad and advancing research outputs to market.



- Policy level
- Budget/Funding allocation
- Rules & Regulation
- Incentives

- Funding Agencies

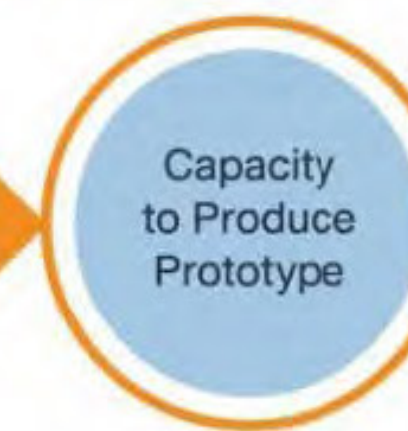
- Implement



FUNDING / INVESTMENT



MANUFACTURING-INNOVATION PROCESS



Technological Development

Market Evolution



IRL 1
Concept

IRL 2
Components



IRL 3
Completion



IRL 4
Chasm

IRL 5
Competition

IRL 6
Changeover

- Scale up
- Enabling Technology
- Prototype
- Testing / standard



Complicated Technology

TRL



Incremental Technology



Focused Industrial Sectors

01

Functional ingredient, High Valued Agricultural Products & Health Foods

02

Health & Medicine

03

Bioenergy, Biochemical & Biomaterials

04

Tourism & Creative Economy

05

Digital Platform

06

Circular Economy of Thailand

07

Future Mobility, Robotics & Automation

08

Logistics

Industrial Enabling Programmes

01

Technology Localisation

02

Public Private Partnership – Innovation Driven Enterprise (PPP- IDE)

03

National Quality Infrastructure

04

IDEs

05

Global Partnership

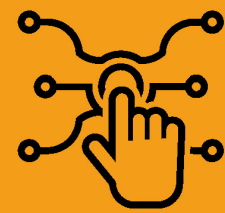
FOCUSED PARTNERSHIPS

From our strategic roadmap, the funding will be allocated to these following types of partnerships.



Technology partnership

- Tech transfer/utilisation
- Technology search
- Opportunity studies
- Selection & Planning
- Legal Aspect/Funding
- Standard



Market dev. partnership

- Growing current market
- Moving into new market segment
- Expanding into new geographical market



Investment partnership

- Angel/VC/CVC global network
- Deep-Tech fundraising
- Mergers & Acquisitions (M&A)



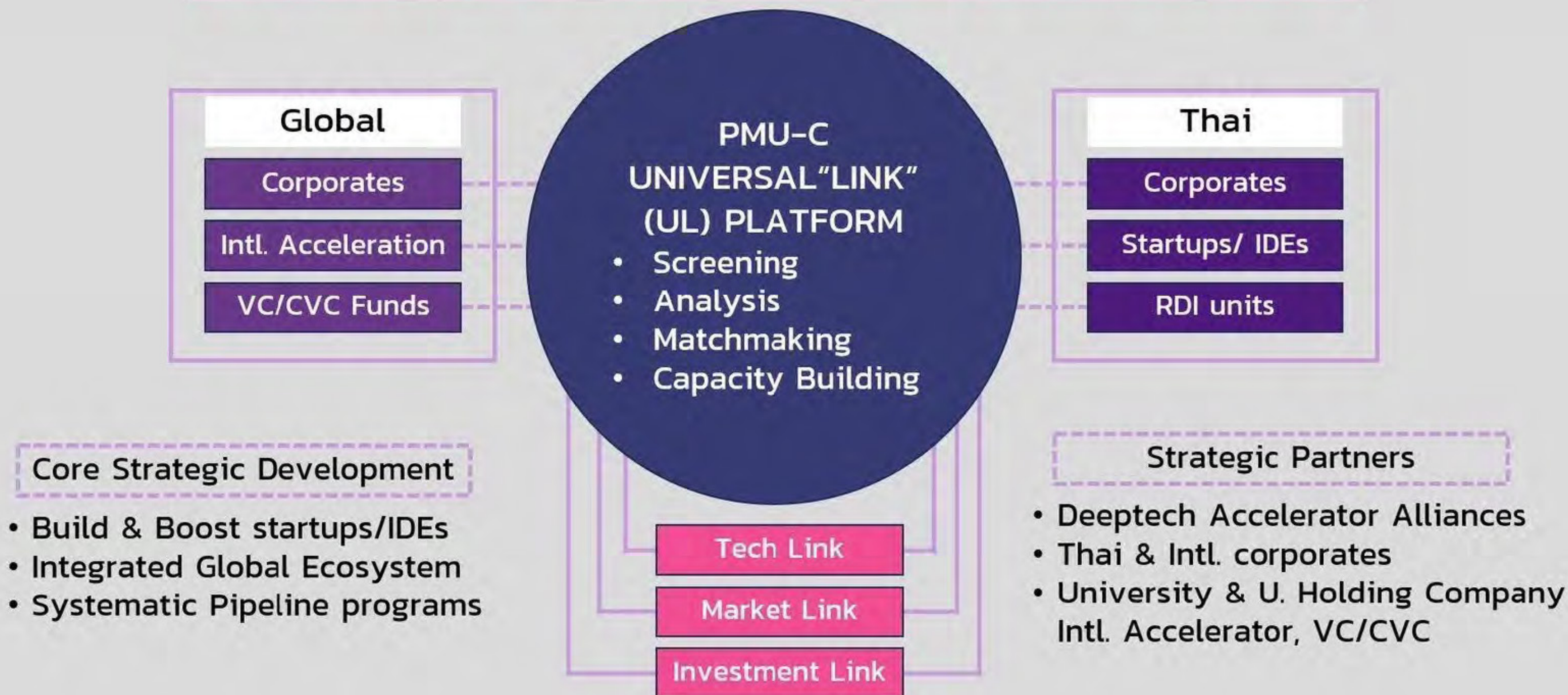
Entrepreneur & talented partnership

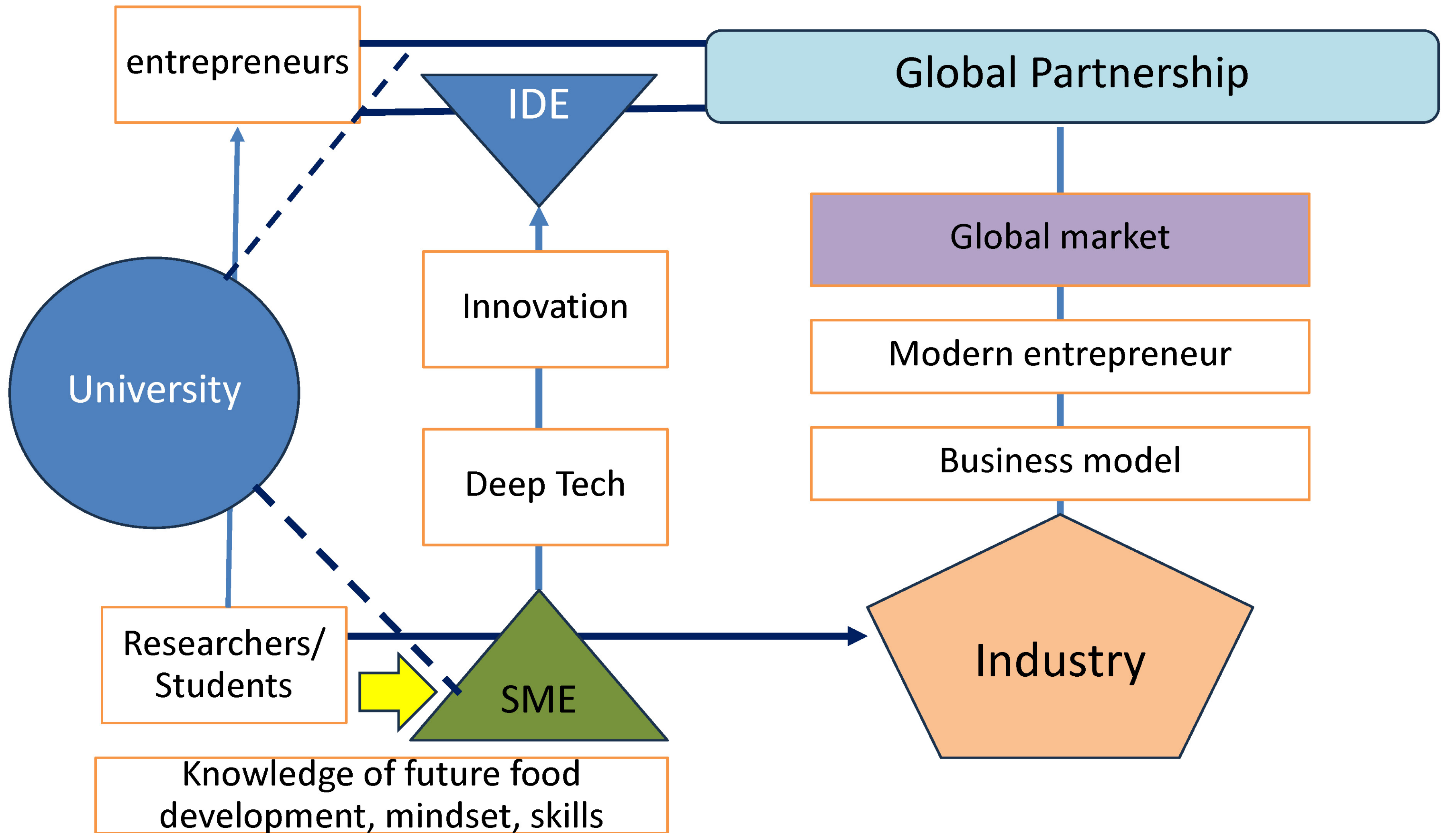
- Tech Startups
- SMEs
- IDE (Start & Scale)


































PMU-C UNIVERSAL LINK (UL): Global Ecosystem Expansion

A universal strategic linkage acceleration through integration of Thai & global innovation ecosystem

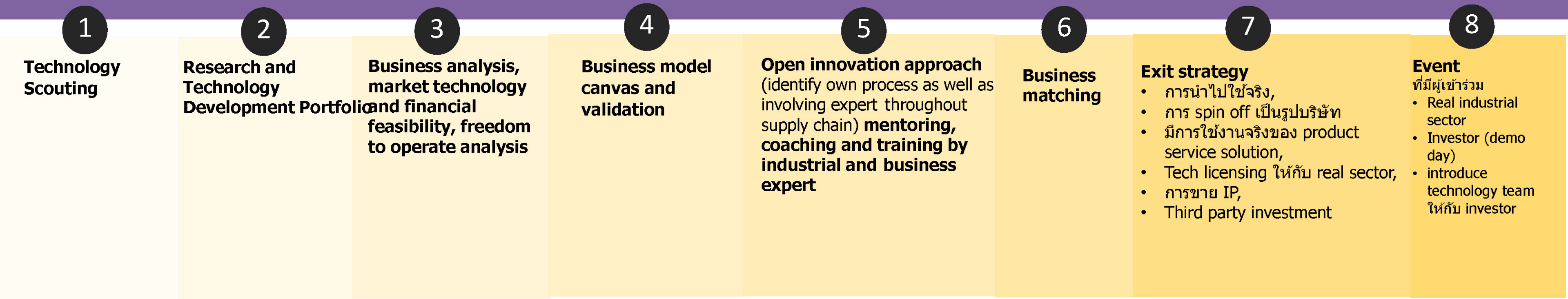
Goal: Accelerating 1,000 selected solutions annually (Outbound & Inbound)





<p>3 years → 189 M Manager</p>	<p>CU</p>   <p>ศ.สพ.ญ.ดร.เกวลิ์ ฉัตรตรงศรี</p>	<p>MUMT</p>   <p>รศ.ดร.กุลชาติ จังภัทรพงศา</p>	<p>NU</p>   <p>รศ.ดร.สุชกัญญา ยะโสธรศรีกุล</p>	<p>SUT</p>   <p>อ.พงศักราชวุฒิ หมั่นบุทธิ</p>	<p>NSTDA</p>   <p>ดร.เอกอนงค์ จางบัว</p>	<p>iNT, MU</p>   <p>รศ.ดร.ยศชนัน วงศ์สวัสดิ์</p>	<p>KU</p>   <p>รศ.ดร.วราภรณ์ มหากาญจนกุล</p>	<p>TU</p>   <p>ศ.ดร. อาณัติ สิมิตเดช</p>	<p>KMUTNB</p>   <p>ผศ.ดร.ชลกาญจน์ วงศ์อภรทัย</p>	<p>KMITL</p>   <p>ผศ.ดร.รัชณี กุลยานนท์</p>	<p>KMUTT</p>   <p>ดร.อมรรัตน์ วัฒนล้ำเลิศ</p>
<p>Focus area</p>	<p>Medical/ MedTech/ Med Devices</p>	<p>Tech Designing, verification & validation ด้าน IVD, Test Kits</p>	<p>Herb, Environment</p>	<p>Health & Wellbeing, Smart Cities</p>	<p>Food Innovation</p>	<p>Healthcare- Oriented Deep Tech Venture Builder</p>	<p>Agricultural Technology, Food Innovation Natural Product Innovation</p>	<p>Accessible Design for Elderly well- being: Food, Cosmeceutical and Physical safety</p>	<p>Industrial Robotic</p>	<p>Smart Materials, Devices and System</p>	<p>AI IoT Robotic</p>
<p>Accelerator</p>											

Deep Science and Technology acceleration process



Deep Science & Technology Accelerators Platform

เกิดการร่วมลงทุน **972** ล้านบาท

งบประมาณ บพข.
189.45 ล้านบาท

3 ปี
2563 - 2565



ผลตอบแทนจากโครงการ

11 ACCELERATORS

84
STARTUPS

อยู่ระหว่างเจรจาร่วมลงทุน
5 STARTUPS
628 ล้านบาท

11 LICENSING
มูลค่าโดยประมาณ
475 ล้านบาท

5 CO-RESEARCH
มูลค่าโดยประมาณ
30 ล้านบาท

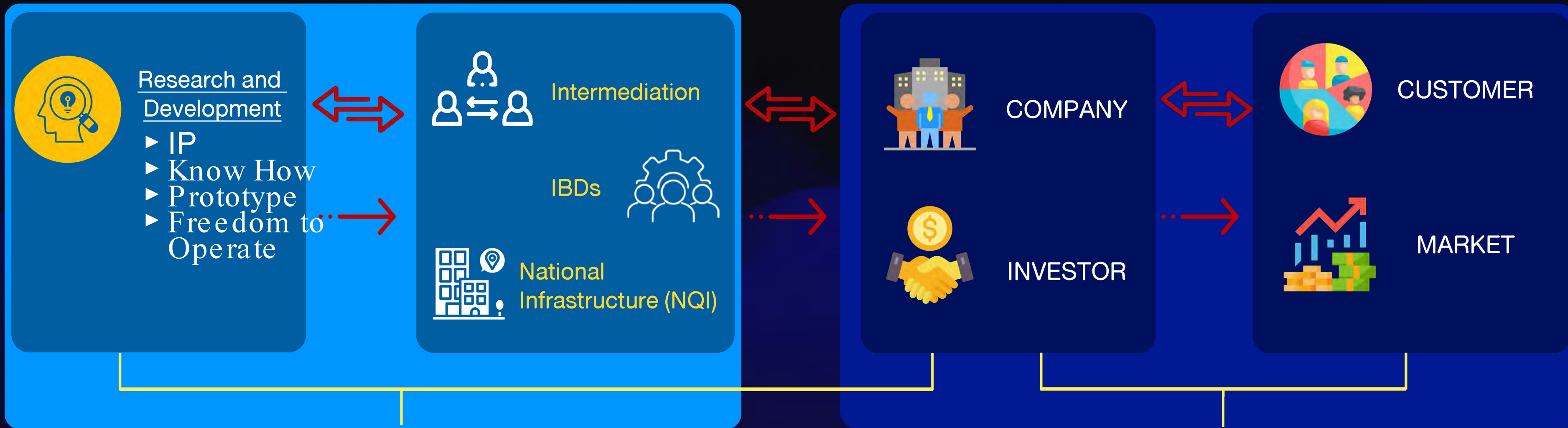
22 STARTUPS
เข้าร่วมงาน
IPI TECHINNOVATION
2023 ณ ประเทศสิงคโปร์



NSTDA

TECHNOLOGY COMMERCIALIZATION

Innovation One

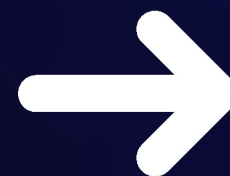


TECHNOLOGY TRANSFER

TECHNOLOGY DIFFUSION

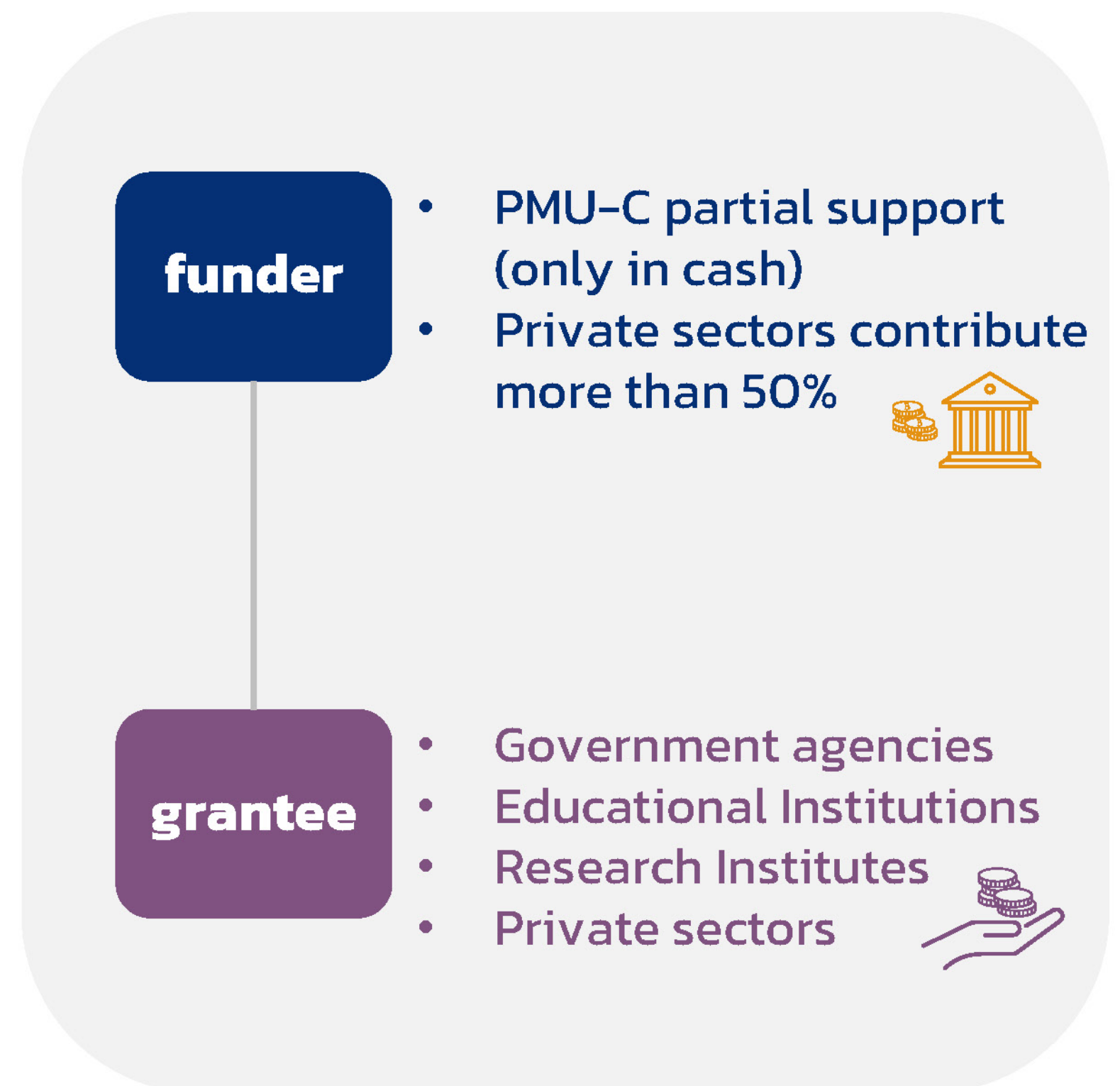
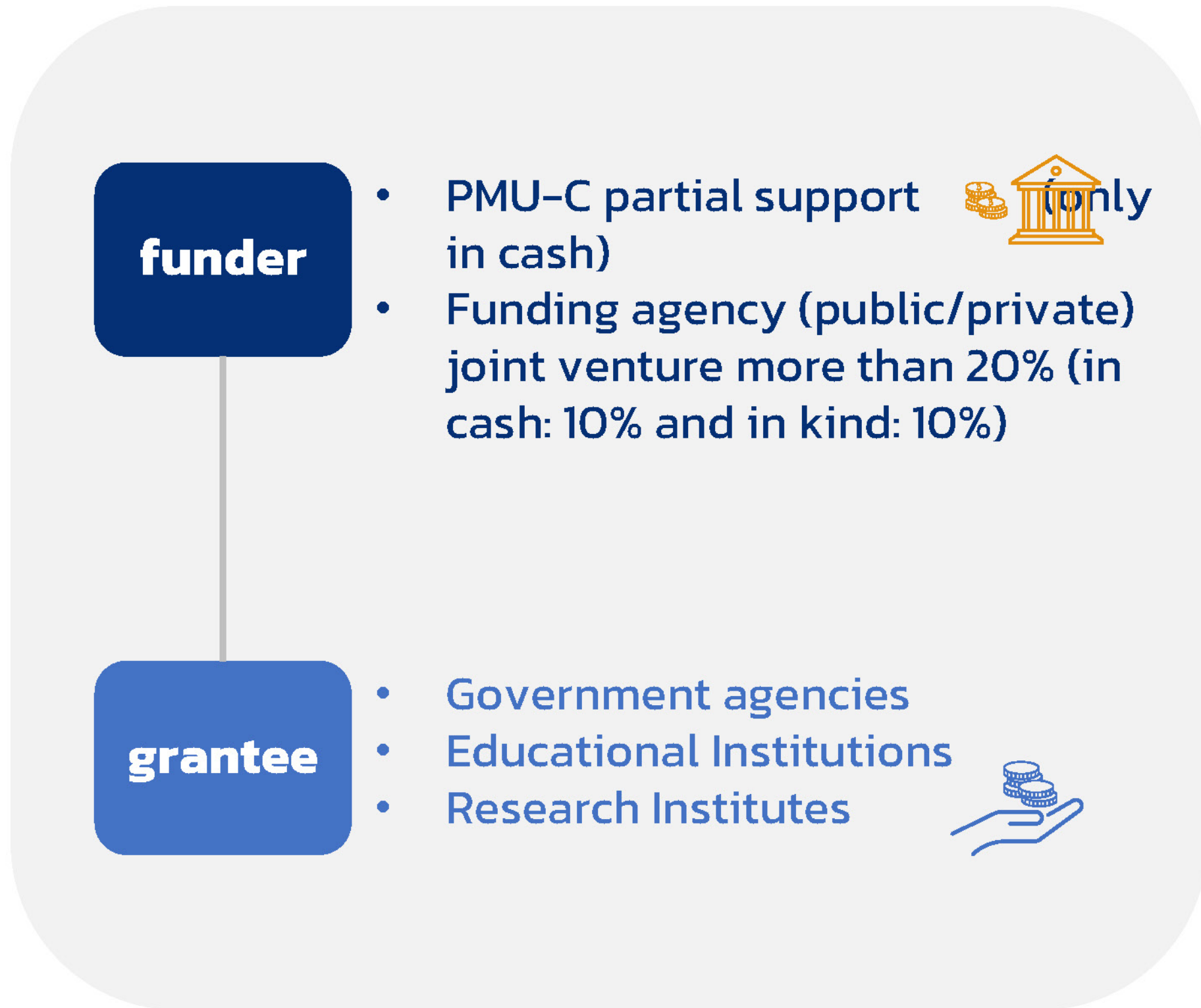


FEEDBACK



TECHNOLOGY TRANSFER FLOW

Private sector as “the research co-funder”



Private sector as “the research grantee”

funder

- PMU-C partial in cash



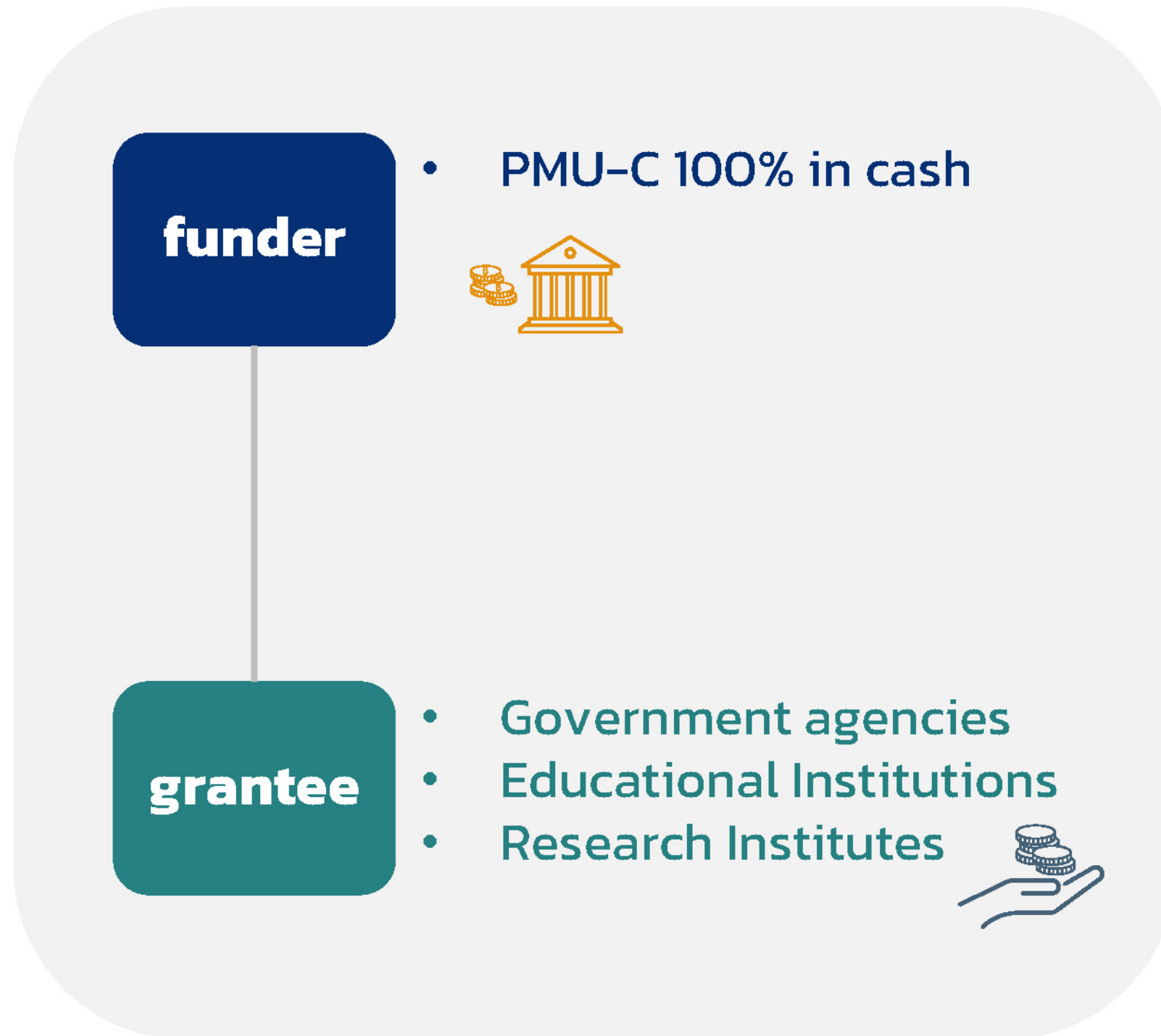
grantee

- Private sectors shall support more than 25% (in cash: 10% and in kind: 15%)



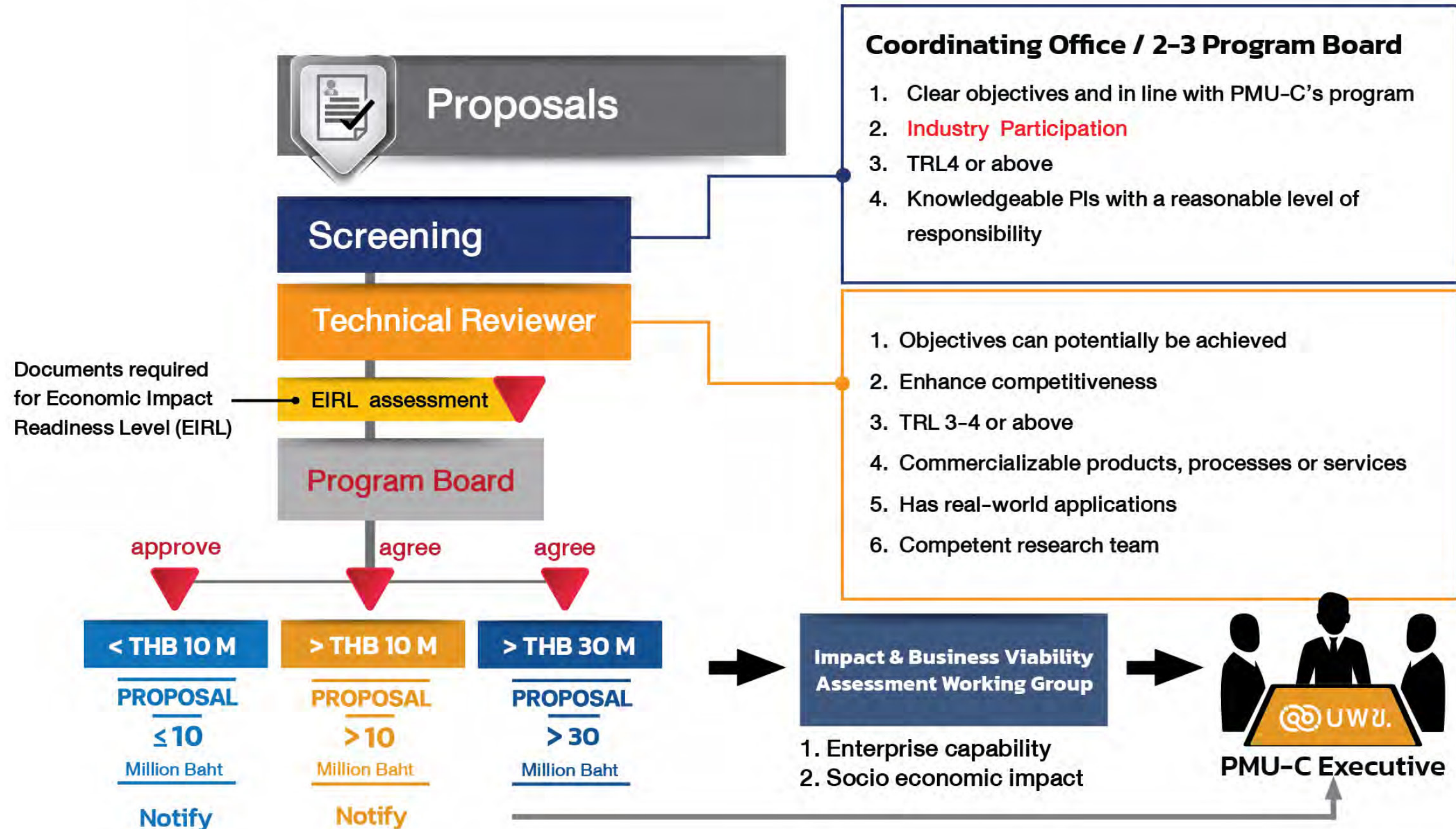
- Preliminary basic research from the private sector
- Collaboration with government research agencies
- Verifiability of private sector’s financial system

Funds for “the public benefit requirement”



- NQI
- Infrastructure
- Policy

Proposal Assessment Process



Functional Ingredient and High Valued Agricultural Products and Health Foods

Examples of research topics

- Production of health and functional food products meeting the market demand by employing advanced technologies
- Development of biological processes for the production of food ingredients and natural products, upcycling of agricultural and agro-industrial wastes, and circular agricultural and food production
- Development of equipment and machines to support farmers and food processing SMEs



Pilot plant for standardized herbal extract

Highlights

- Development of high-value products from porcine placenta functional ingredients
- Evaluation of consumption safety and effects of functional drink containing tuna oil on working memory, emotional stresses, and aging process in perimenopausal and menopausal women
- Pilot plant for standardized herbal extract



Porcine placenta functional ingredients

THANK YOU

More Information

<https://pmuc.or.th/>