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Research should start from development needs and socio-economic value

Linking government, researchers and businesses

From funding research to building an innovation ecosystem



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What should come first?

A research idea?

A technological opportunity?

A development need?



They should meet at the beginning, not at the end of the project.

For applied research, socio-economic value is not an annex to the proposal. It should shape the question, the partnership and the pathway to implementation.

From science push to challenge-driven innovation

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Conventional linear model

Research → publication → prototype → search for a user

Challenge-driven model

Development need → shared challenge → research and experimentation → validation → adoption



Impact is designed in, not added on.

Why good research does not automatically create impact

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GOVERNMENT

Public value
Security and resilience
Accountability

Procedures
Short decision cycles
Low tolerance for failure

RESEARCHERS

Scientific quality
New knowledge
Research careers

Limited market insight
Few implementation partners
Different timelines

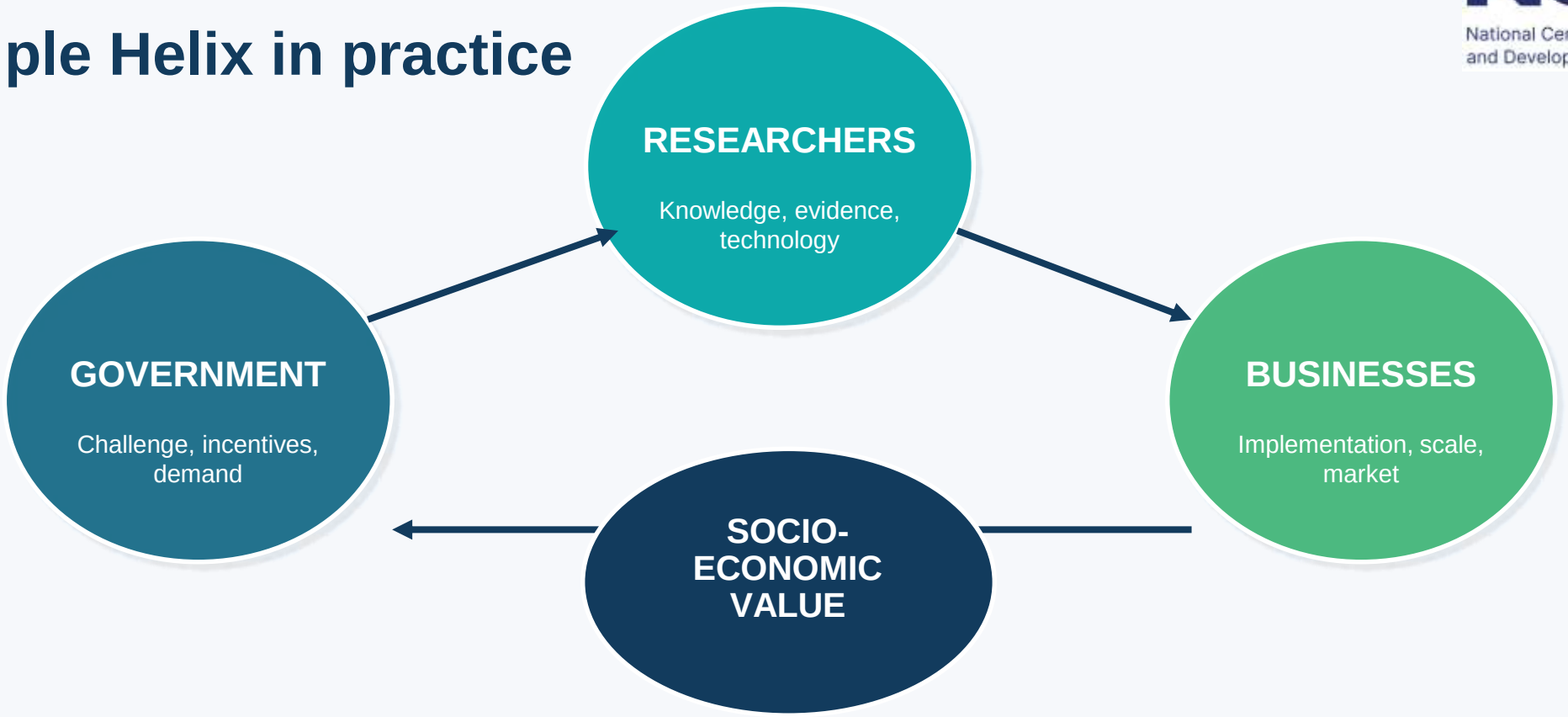
BUSINESSES

Customers and scale
Competitiveness
Return on investment

High technology risk
Long time to market
Financing constraints

Resources often meet too late, around projects rather than around shared challenges.

The Triple Helix in practice



The relationship must continue beyond the funding period.

Government as system architect and intelligent customer

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1

Identify

strategic challenges

2

De-risk

technology and markets

3

Connect

partners and capabilities

4

Create demand

for innovative solutions

5

Measure

outcomes and learn

Be specific about the problem and expected outcome. Stay open about the technological pathway.

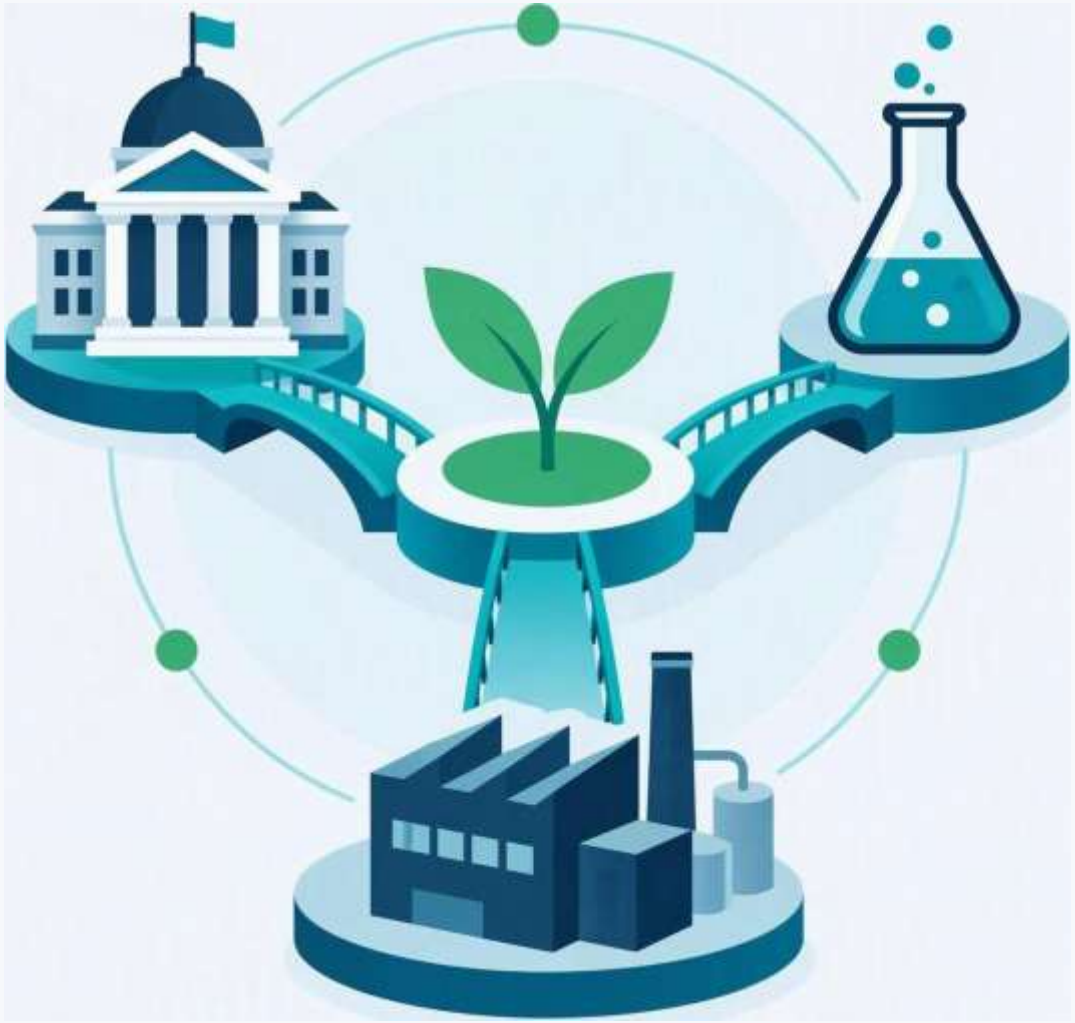
NCBR: connecting public priorities, science and markets

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NCBR is not only a funding agency.

It converts public priorities and development challenges into opportunities for researchers and businesses to jointly develop, test and deploy solutions.

- Strategic direction
- Risk sharing
- Partnerships
- Commercialisation
- Socio-economic impact



More than PLN 80 billion allocated to R&D projects since 2007

NCBR
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Mechanism 1: collaborative applied research



Public user

defines the need and validation context

Research team

develops methods and scientific evidence

Business partner

engineers, industrialises and scales

NCBR

shares risk and protects public value

A consortium becomes an ecosystem when partners jointly define the problem, risks, success criteria and pathway to adoption.

Mechanism 2: mission-oriented international programmes

EEA and Norway Grants priorities

Green transition

Climate, energy, environment and sustainable transformation

Democracy and rights

Institutions, rule of law and human rights

Social inclusion and resilience

Stronger communities, services and capacity to adapt

The priorities guide research towards important needs, but do not predetermine the scientific answer.

Mechanism 3: innovation procurement



1. **Explore** — Several competing approaches
2. **Prototype** — Build and refine solutions
3. **Test** — Real or near-real conditions
4. **Adopt** — Procure, commercialise, scale

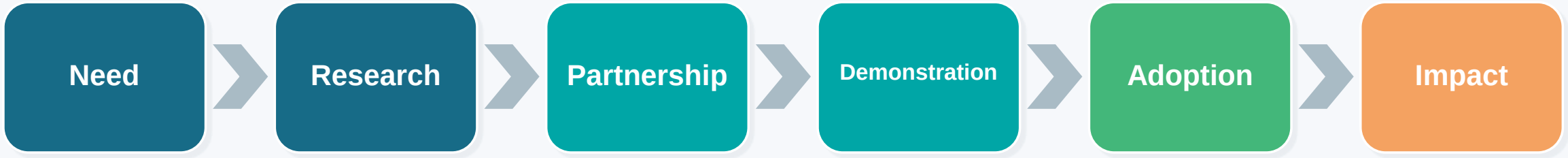
NCBR experience

12 pre-commercial procurements | 2 innovation partnerships | 1 grand challenge

THE VALUE PATHWAY

From funding to measurable impact

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Research

knowledge, methods, quality

Technology

performance, TRL, reliability

Market

customer, cost, investment

Society

service quality, inclusion, resilience

Environment

emissions, resources, circularity

A completed project is an output. Value appears when the result is used.

Five conditions for socio-economic value

1	**Shared problem**	A concrete need and a real user
2	**Early engagement**	Business and users involved before the proposal is complete
3	**Success criteria**	Measurable technical, market and public-value outcomes
4	**Adaptive delivery**	Stages, milestones and the freedom to change direction
5	**Pathway to scale**	A first buyer, financing, ownership and regulatory route

FROM TRANSACTIONS TO TRANSFORMATION

A shift in the role of a funding agency

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TRADITIONAL LOGIC

Calls
Funding opportunities

Projects
Individual contracts

Compliance
Procedures and eligible costs

Outputs
Reports, publications, prototypes

NCBR ambition

ECOSYSTEM LOGIC

Missions
Shared development challenges

Portfolios
Complementary projects and instruments

Learning
Evidence, adaptation and coordination

Impact
Adoption, capability and value

Finance projects, but manage for system-level results.

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Fund research, but build ecosystems.

Support projects, but pursue impact.

Research should start from a development need, but it should not end with a research result.
It should end with capability, adoption and measurable value for society.

Thank you