

INNOVATION AND EXPORT IMPROVEMENT

National Research, Development and Innovation Office – Hungary



Hungary – an inspiring ecosystem for innovation

SMARTHUNGARY
SCIENTISTS, INVENTORS, INNOVATORS

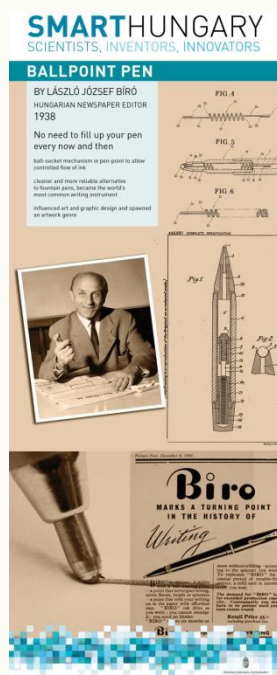
BALLPOINT PEN
BY LÁSZLÓ JÓZSEF BIRÓ
HUNGARIAN NEWSPAPER EDITOR
1938

No need to fill up your pen every now and then

Ball-socket mechanism in pen-point to allow continuous flow of ink

Cheaper and more reliable alternative to fountain pens, became the world's most common writing instrument

Influenced art and graphic design and spawned an artwork genre



Biro
MARKS A TURNING POINT
IN THE HISTORY OF
Writing

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LEONAR3D0
BY DÁNIEL RÁTAJ
2010

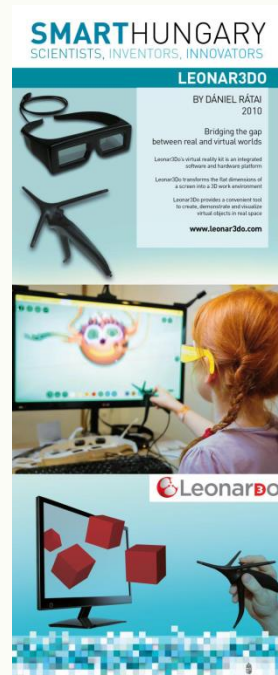
Bridging the gap between real and virtual worlds

Leonar3D0 virtual reality kit is an integrated software and hardware solution

Leonar3D0 transfers the full dimensions of a screen into a 3D work environment

Leonar3D0 provides a convenient tool to create, demonstrate and visualize virtual objects in real space

www.leonar3d0.com



Leonar3D0

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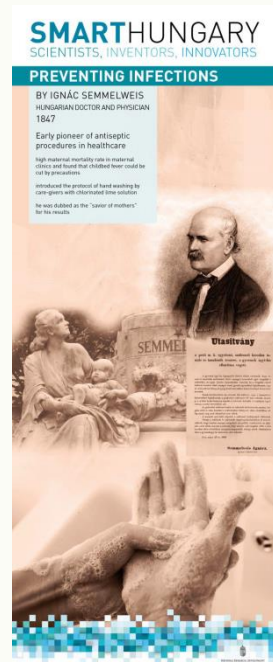
PREVENTING INFECTIONS
BY ISGNÁC SEMMELWEIS
HUNGARIAN DOCTOR AND PHYSICIAN
1847

Early pioneer of antiseptic procedures in healthcare

High maternal mortality rate in modern clinics had found their solution here: could be cut by antiseptics

Introduced the protocol of hand washing by soap-givers with chlorinated lime solution

He was dubbed the "savior of mothers" for his results



Uttatitay
Ignác Semmelweis, a pioneer of antiseptic procedures in healthcare

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HAND IN SCAN
BY TAMÁS HAIDEDEGER,
MELINDA NÁDY,
LÁSZLÓ SZILÁGYI,
PÉTER RÓNA,
AKOS LEHOTSKY
2012

Visible improvement of hand hygiene control

Real-time feedback on the user's hand hygiene essential tool for the training, control and monitoring of the hand disinfection quality in healthcare and other industries

Industrial system that integrates a hand scanner solution for reporting

www.handinscan.com



Hand-in-Scan
hand hygiene control

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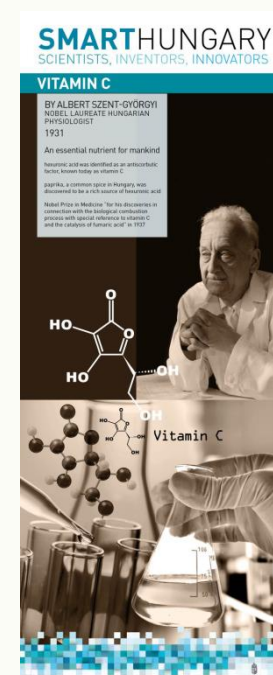
VITAMIN C
BY ALBERT Szent-Györgyi
NOBEL LAUREATE HUNGARIAN
PHYSIOLOGIST
1937

An essential nutrient for mankind

Ascorbic acid was identified as an antiscorbutic factor known today as vitamin C

Aspirin, a common pain reliever, was discovered to be a salt of ascorbic acid

Nobel Prize in Medicine "for his discoveries in connection with the biological combination process with special reference to ascorbyl-C and the synthesis of ascorbyl acid" in 1937



Vitamin C

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FEMTONICS
BY BALÁZS RÓZSA AND
GERGELY KATONA
2012

First high speed 3D two-photon microscope

From 10 to 100 order higher measurement speed in 3D to compensate the extremely detailed color imaging methods

Identification of color measurement of activity of several thousand neurons in near cubic millimeter imaging volume

Monitoring the activity of several hundred neurons during rapid processing, onset of hundred dendritic spines, and axon boutons

3D measurement of activity in whole cortical columns which are stained with genetically encoded sensors (GECs)

www.femtonics.eu

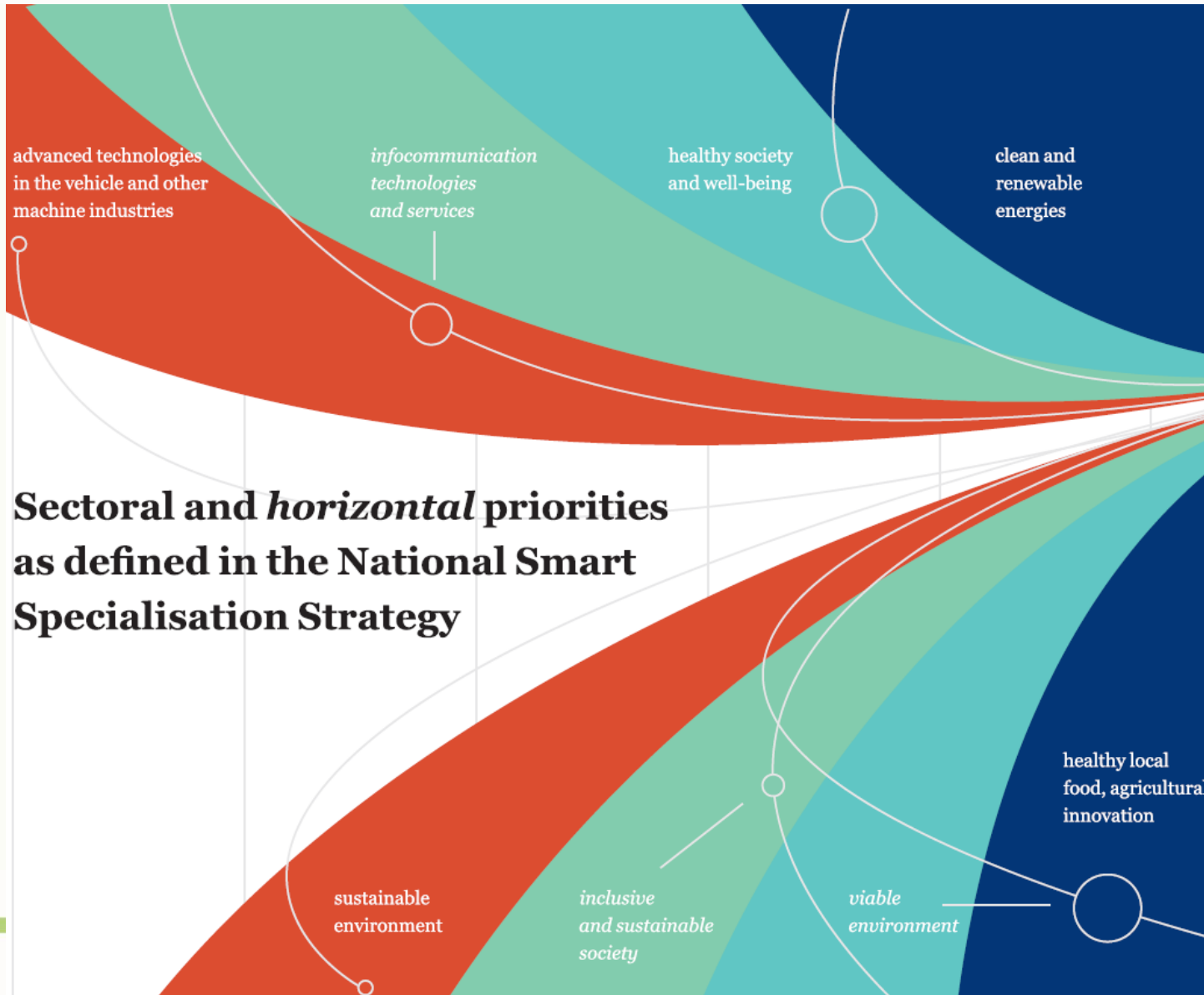


Femtonics

- Century long traditions of research excellence and innovation
- Coordinated support system of funding and venture capital



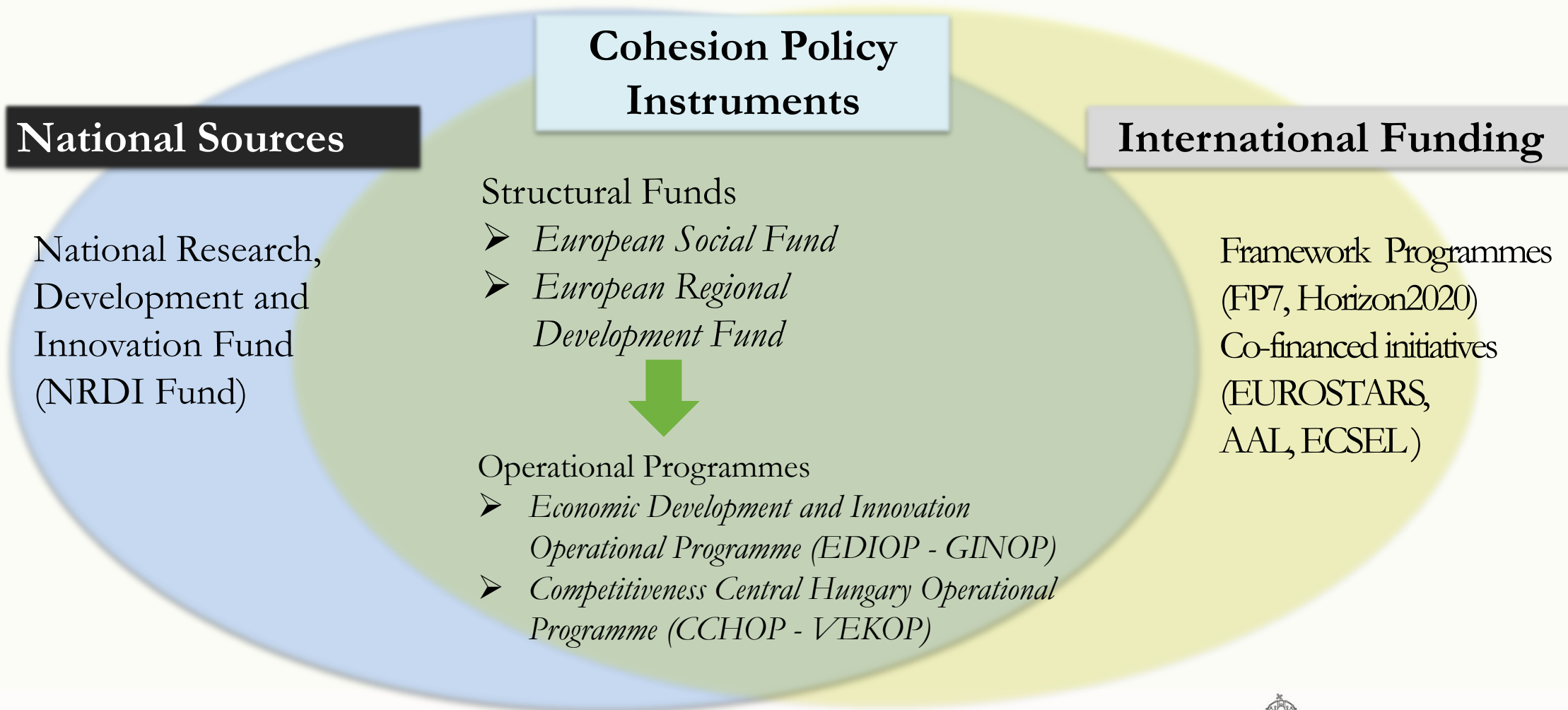
National Smart Specialisation Strategy of Hungary



- R&D target areas and priorities defined in view of the country's capabilities, strengths and opportunities



The Sources of R&D Funding in Hungary



National Research, Development and Innovation Office – the central governmental entity for RDI

SERVICES

**STRATEGY
AND
PROGRAMME
PLANNING**

**INTER-
NATIONAL
AFFAIRS**

**COMPETITIVE
FUNDING**

Market

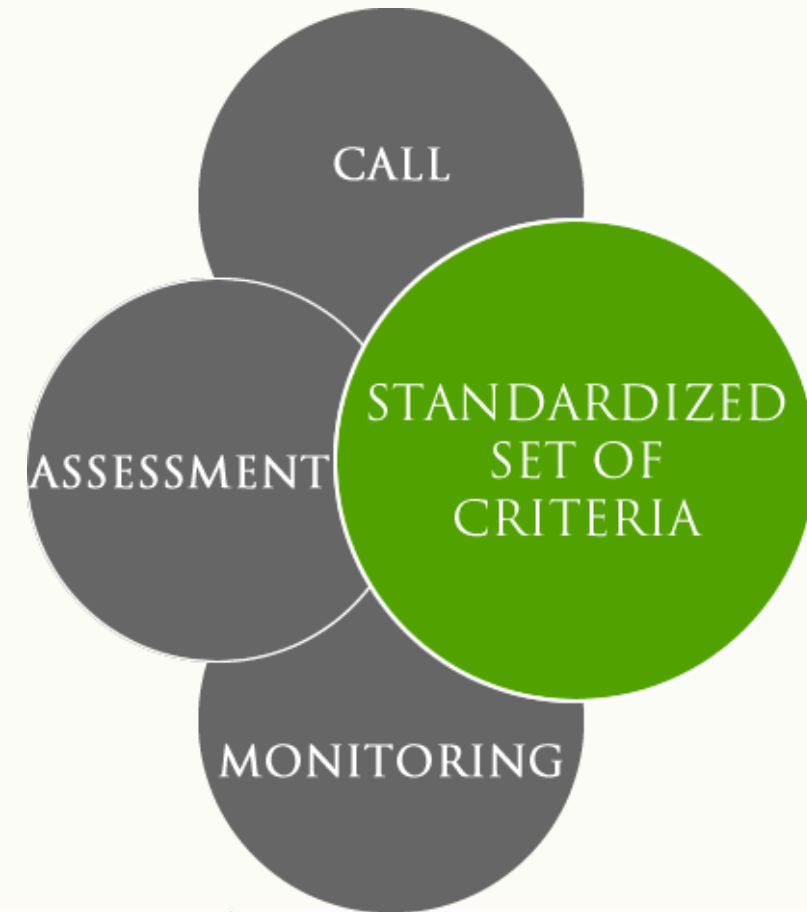
Education
Blue sky research
Applied research
Innovation



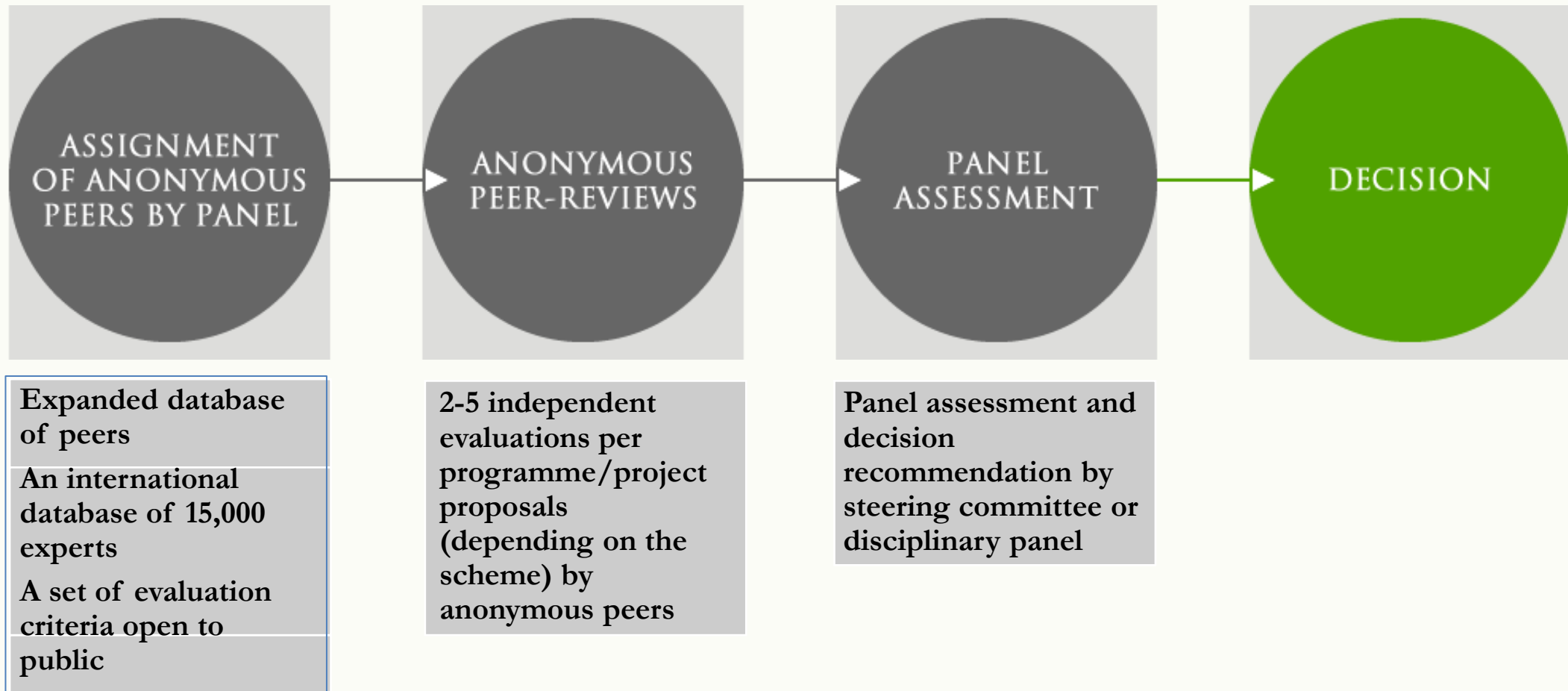
Coordination of resources in a competitive funding system

- Coordinated management, flexible planning, complex portfolio of calls
- Well-balanced support to discovery research, experimental development and innovation
- Novelty, applicability, marketability, international competitiveness, sustainability
- Challenge-oriented funding
- Practical applicability of RDI results

The power of excellence



Evaluation system of innovation projects

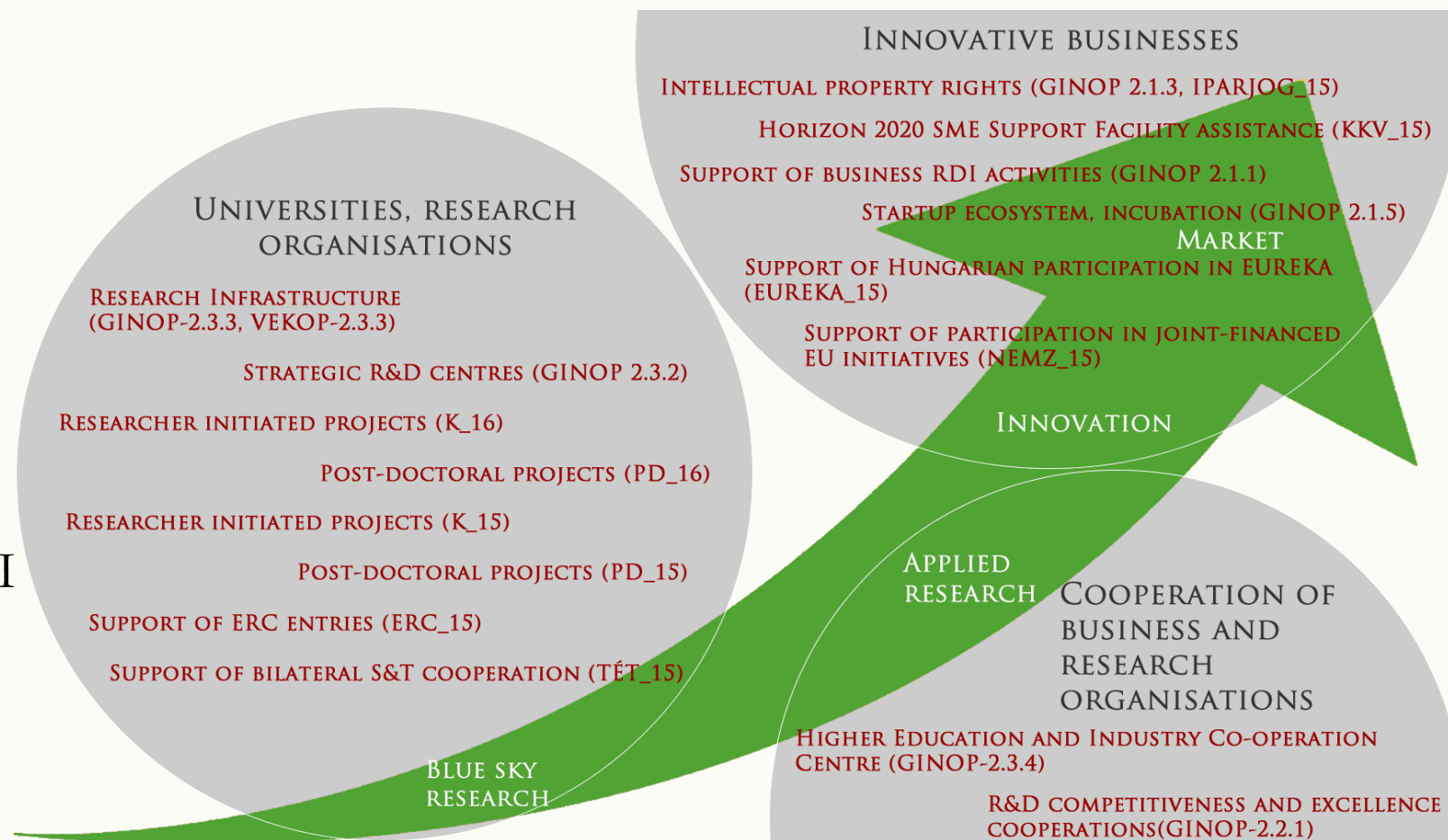


TRANSPARENT, COMPREHENSIVE EVALUATION PROCESS



Funding of all major RDI target groups

- During the 2014-2020 period, a total of HUF 1200 billion (EUR 3,9 billion) is available from European and domestic sources to promote research, development and innovation;
- The strategic objective of the portfolio of calls is to strengthen the Hungarian RDI ecosystem and to sustain its momentum beyond 2020.



Exportable innovative product development to support innovation-driven export expansion (GINOP 2.1.6)

- Aim: to enhance the competitiveness and the unexploited RDI potential of Hungarian businesses;
- Budget: HUF 5 billion (nearly EUR 16.5 million);
- Funding: non-refundable grants from HUF 200 million to 450 million (EUR 650,000 to 1.5 million) up to the amount of available funds;
- Applicants are expected to
 - develop products, services and technologies with high novelty and the potential of fast market penetration, through the achievable R&D results of the project proposal;
 - increase the proportion, within the enterprise's export, of cutting-edge products and technologies containing significant added value and competitive know-how; and
 - to ensure a sustainable (commercial) exploitation of the enterprise's achievements.
- Eligible for individual funding: industrial research and development.
- Eligible applicants: micro, small and medium-sized enterprises and large companies in the less developed regions, meeting the requirements of the call for proposal.



Business RDI, combined with loan (GINOP-2.1.2-8.1.4)

- Aim: to stimulate Hungarian RDI activities, resulting in the development of new, marketable products, services, technologies as well as prototypes of intellectual added value.
- Budget: HUF 120 billion (EUR 390 million) – HUF 80 billion (EUR 260 million) non-refundable, HUF 40 billion (EUR 130 million) refundable.
- Funding: grants from HUF 50 millió (EUR 164,000) up to 500 HUF million (EUR 1,6 million) non-refundable, as well as low rate loans from HUF 25 million (EUR 80,000) up to HUF 250 million (EUR 800,000) up to the amount of available funds.
- Applicants are expected to
 - enhance the RDI activities of their business with the implementation of the project;
 - develop new scientific and/or technological achievements, representing intellectual added value as a result of the initiated project.
- Eligible for individual funding: experimental development.
- Eligible applicants: micro, small and medium-sized enterprises and large companies in the less developed regions, meeting the requirements of the call for proposal.



Support for export oriented R&D activities of domestic businesses (NRDI Fund EXPORT_17)

- Aim: to enhance the competitiveness and NRD activities of domestic businesses;
- Budget: HUF 10 billion (EUR 3,3 million);
- Funding: from HUF 200 million (EUR 650,000) up to HUF 450 million (EUR 1,5 million) non-refundable grants up to the amount of available funds.
- Applicants are expected to
 - develop products, services and technologies with high novelty and the potential of fast market penetration, through the achievable R&D results of the project proposal;
 - increase the proportion, within the enterprise's export, of cutting-edge products and technologies containing significant added value and competitive know-how; and
 - to ensure a sustainable (commercial) exploitation of the enterprise's achievements.
- Eligible for individual funding: industrial research or experimental development.
- Eligible applicants: economic enterprises in Central Hungary meeting the requirements of the call for proposal.



Further constructions supporting international marketability

- GINOP-1.1.4-16 Identifying, examining, motivating and supporting small enterprises with high growing and innovational potentials in processing industry in order to enhance their international competitiveness and networking ability.
- GINOP-1.3.1-15 – Enhancing the marketability of micro, small and medium-sized enterprises.
- GINOP-3.1.2-8.2.4-16 Supporting the international marketability of products and services developed by micro, small and medium-sized enterprises in the field of infocommunications.



www.nkfi.gov.hu/english

