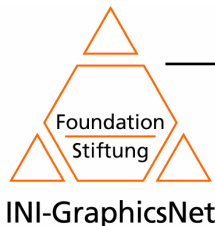

INI-GraphicsNet

Prof. Dr.-Ing. José L. Encarnação

Technical University of Darmstadt
Department of Computer Science
and

INI-GraphicsNet Foundation
Fraunhoferstrasse 5
64283 Darmstadt

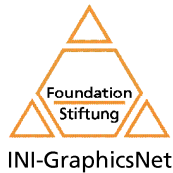
Tel.: +49 (6151) 155-130
Fax.: +49 (6151) 155-599
Email: jle@inigraphics.net
<http://www.inigraphics.net>



Washington, DC, February 15, 2007

Content

- INI-GraphicsNet
- Technology Transfer Bridge
- INI-GraphicsNet Foundation
- From generating Ideas to Exploitation
- Technology Screening (Examples)
- Identifying IPR's with great commercial potential (Examples)
- Successful Spin-offs (SME's)
- Summary



INI-GraphicsNet

The International Network of Institutions for advanced education, training and R&D in Computer Graphics technology, systems and applications Germany (Darmstadt, Rostock), Italy (Villazzano –Trento), Korea (Seoul), Portugal (Guimarães, Coimbra), Singapore, Spain (San Sebastian), USA (Providence, RI; Omaha, NE)

Members of the INI-GraphicsNet Foundation



Spin-offs of the INI-GraphicsNet



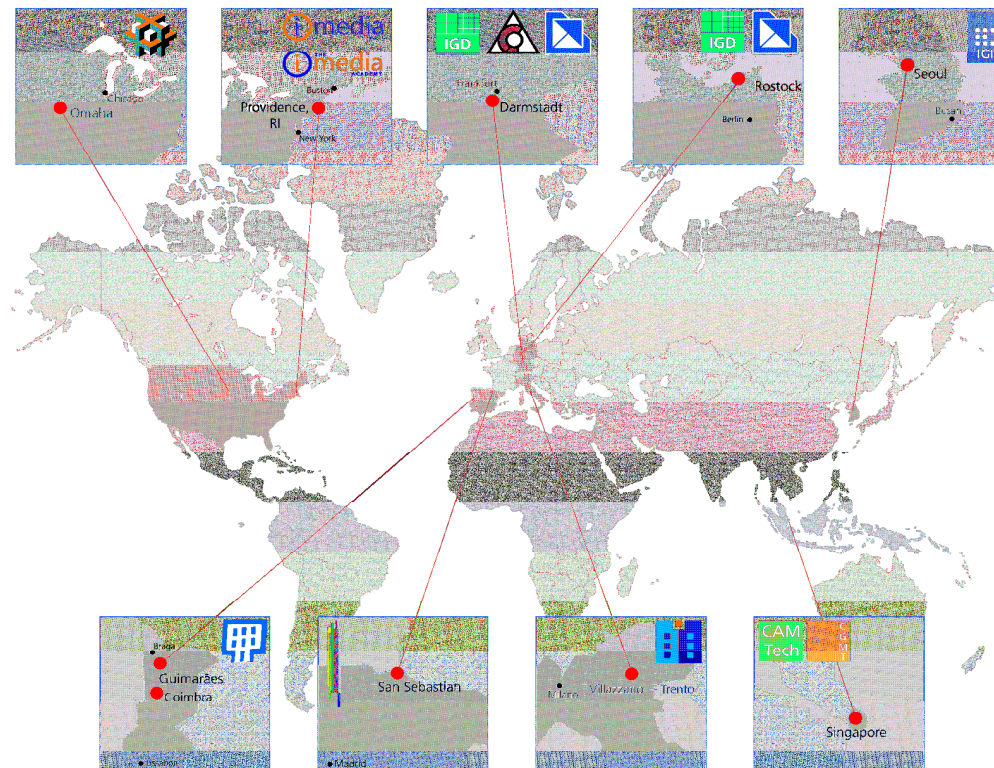
Sponsors of the INI-GraphicsNet Foundation



University Partnerships



Members of the INI-GraphicsNet



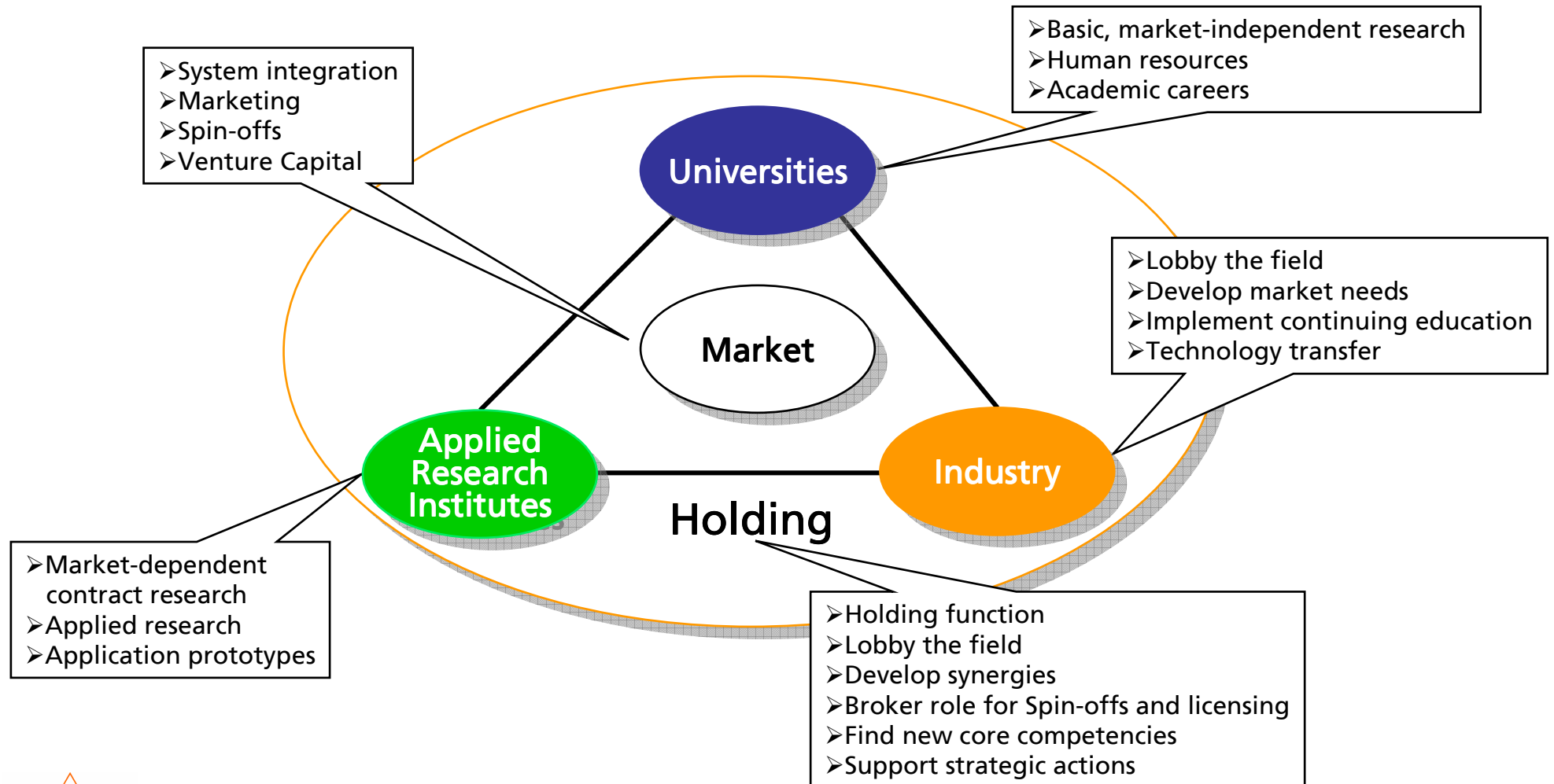


INI-GraphicsNet

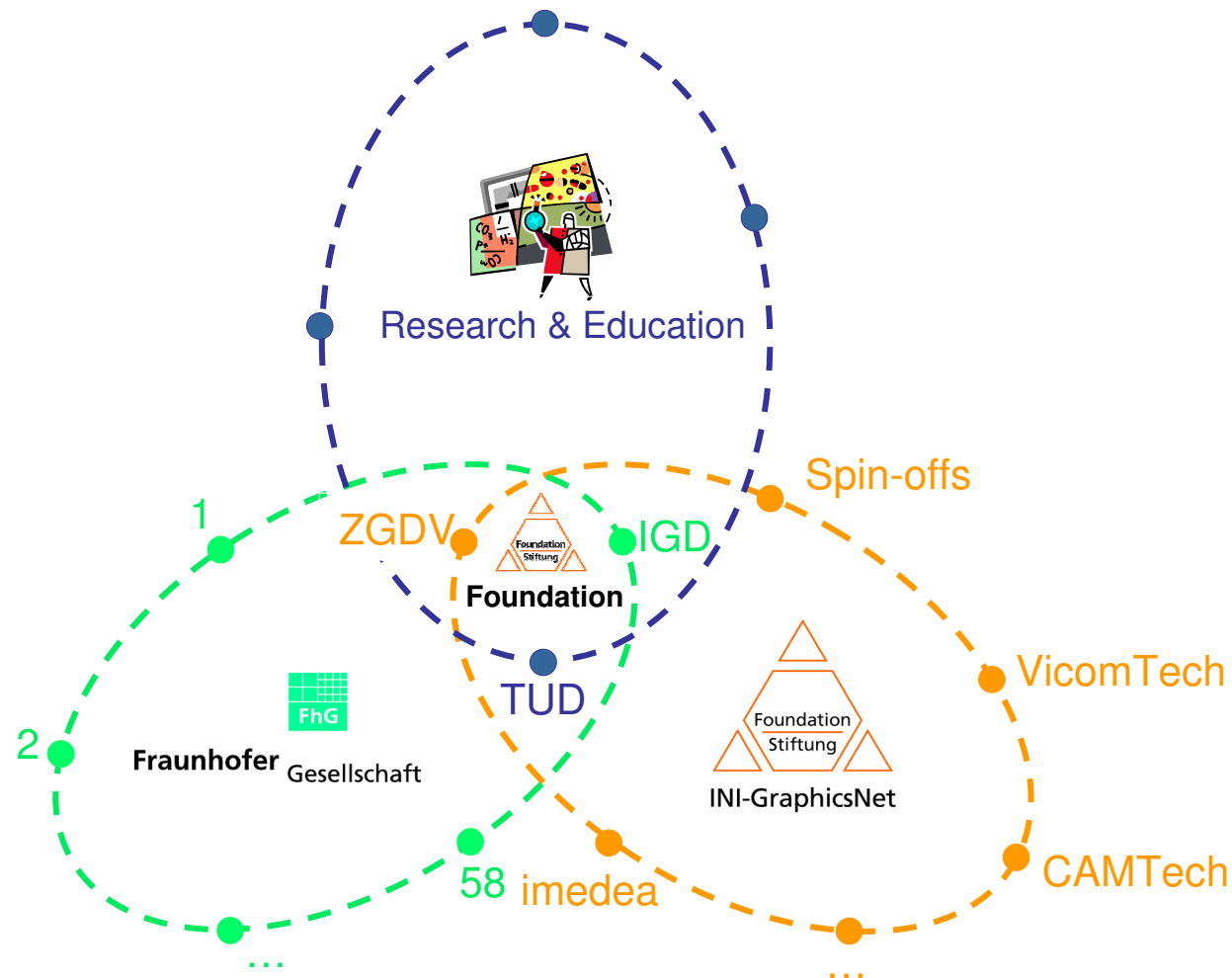
t's a **big**
world.

And we've got
the **network**
to cover it.

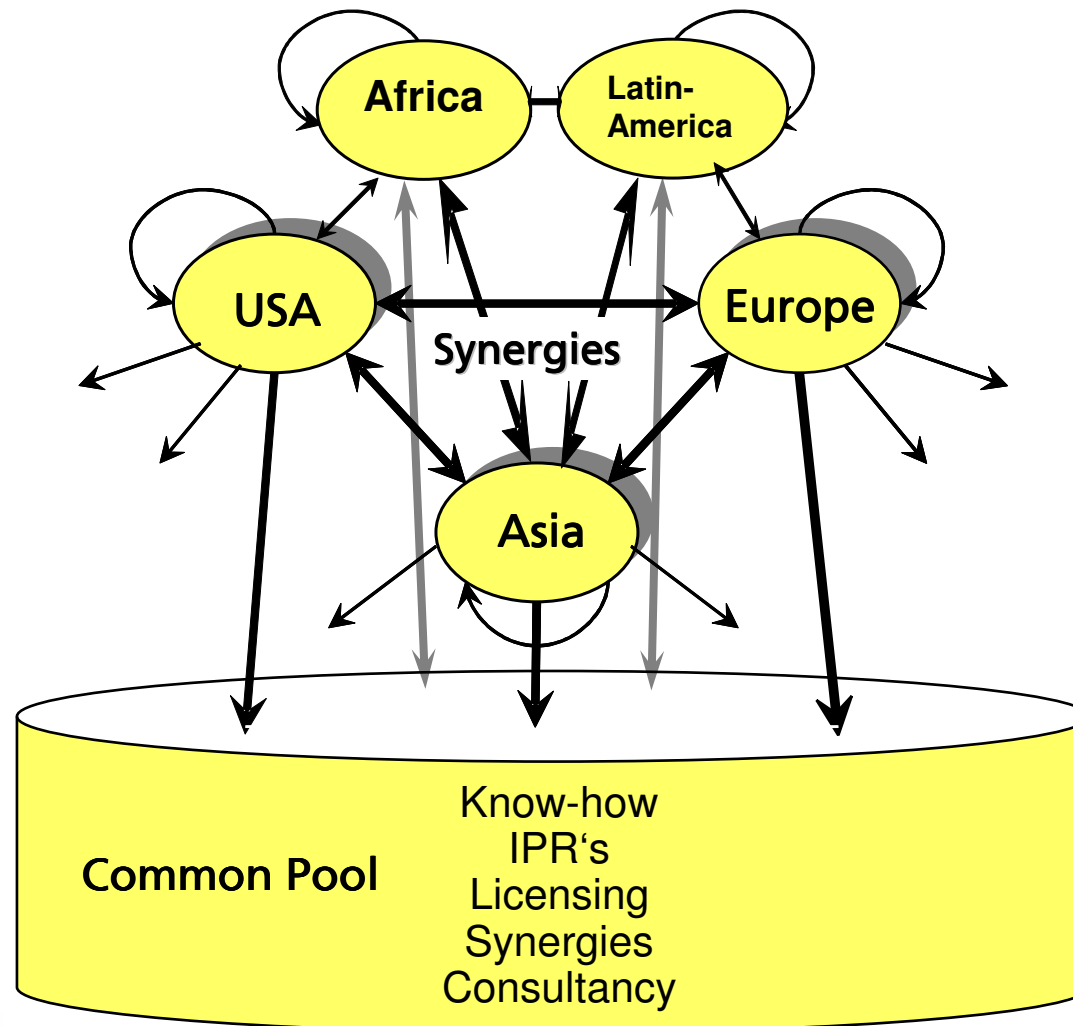
Networking in the INI-GraphicsNet



Networking with the INI-GraphicsNet Foundation




Applied R&D is Global



- local R&D projects &
- global cooperation

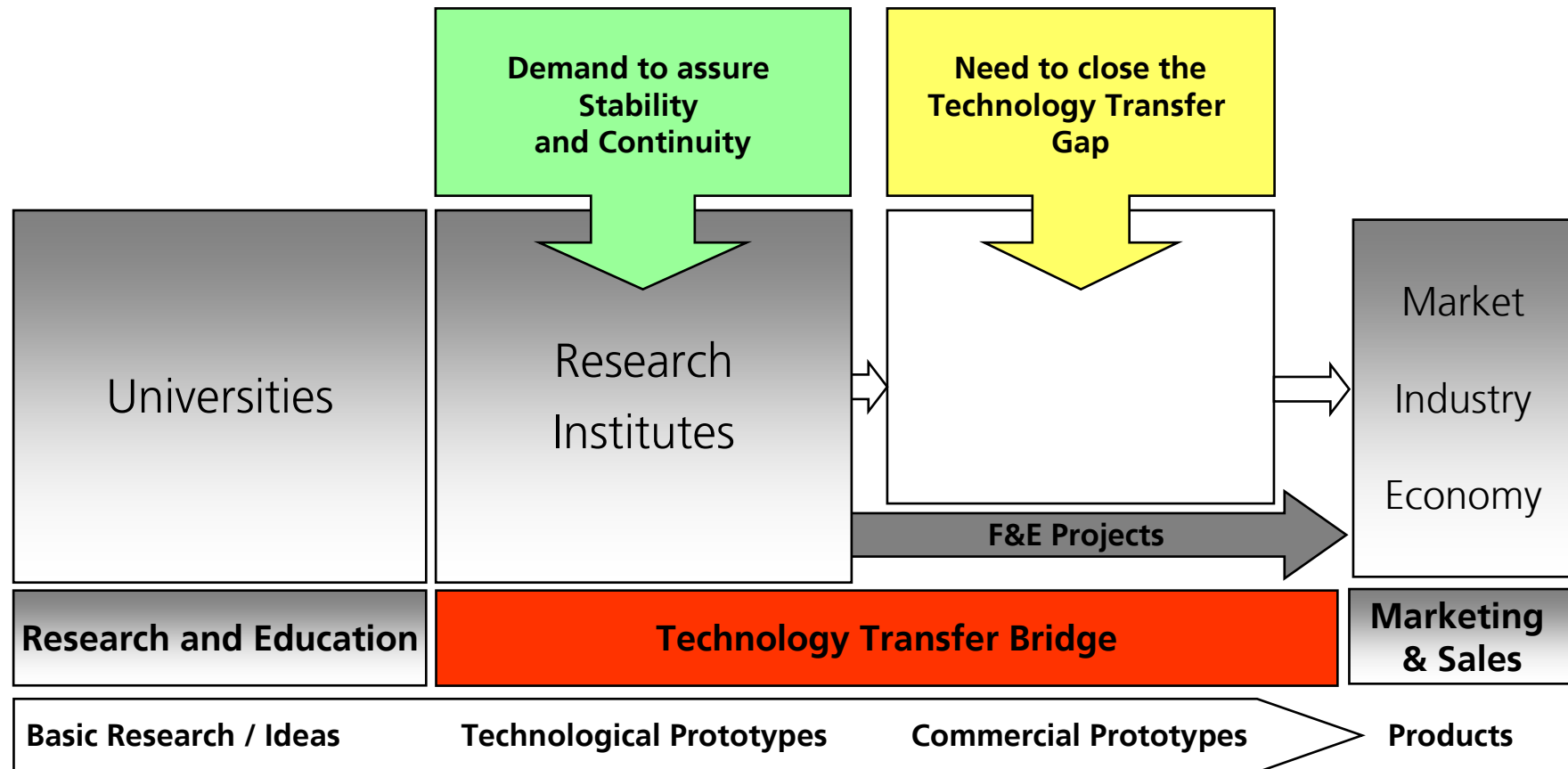
- Economy of Scale
- Time to result
- Time to market

Technology Transfer Bridge

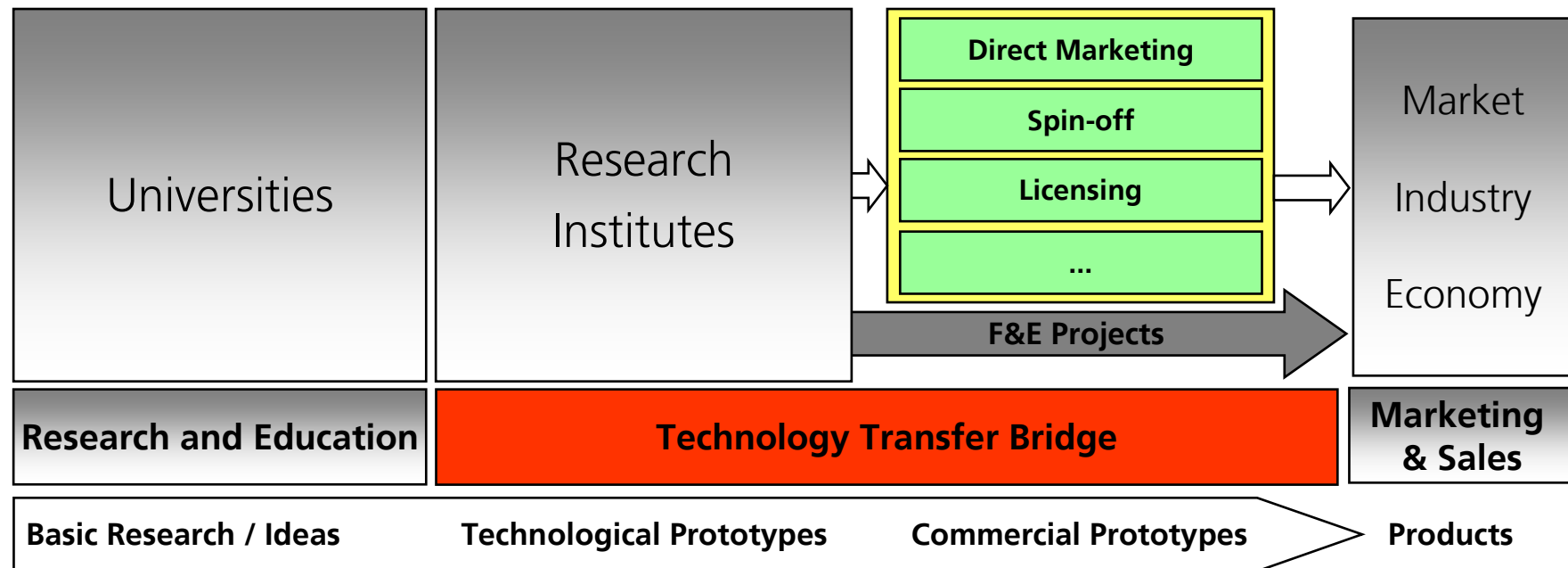


Innovation

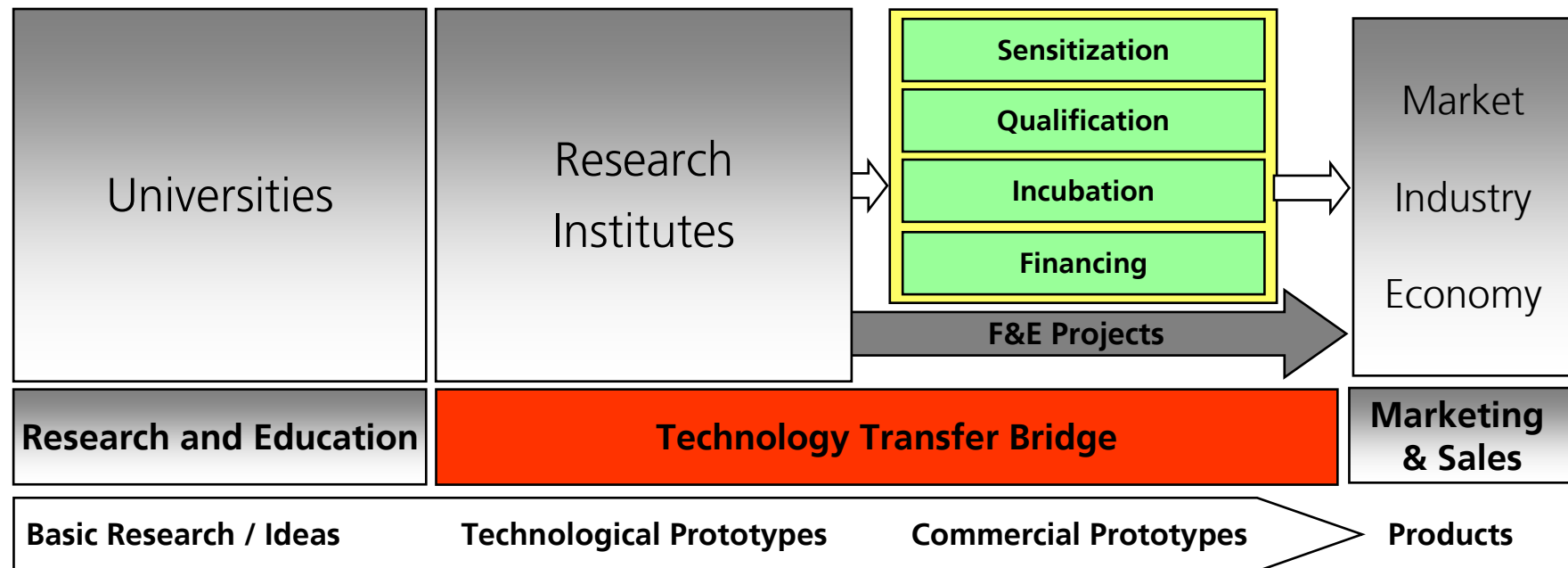
Transfer of Research Results – The Gap




Transfer of Research Results – Instruments



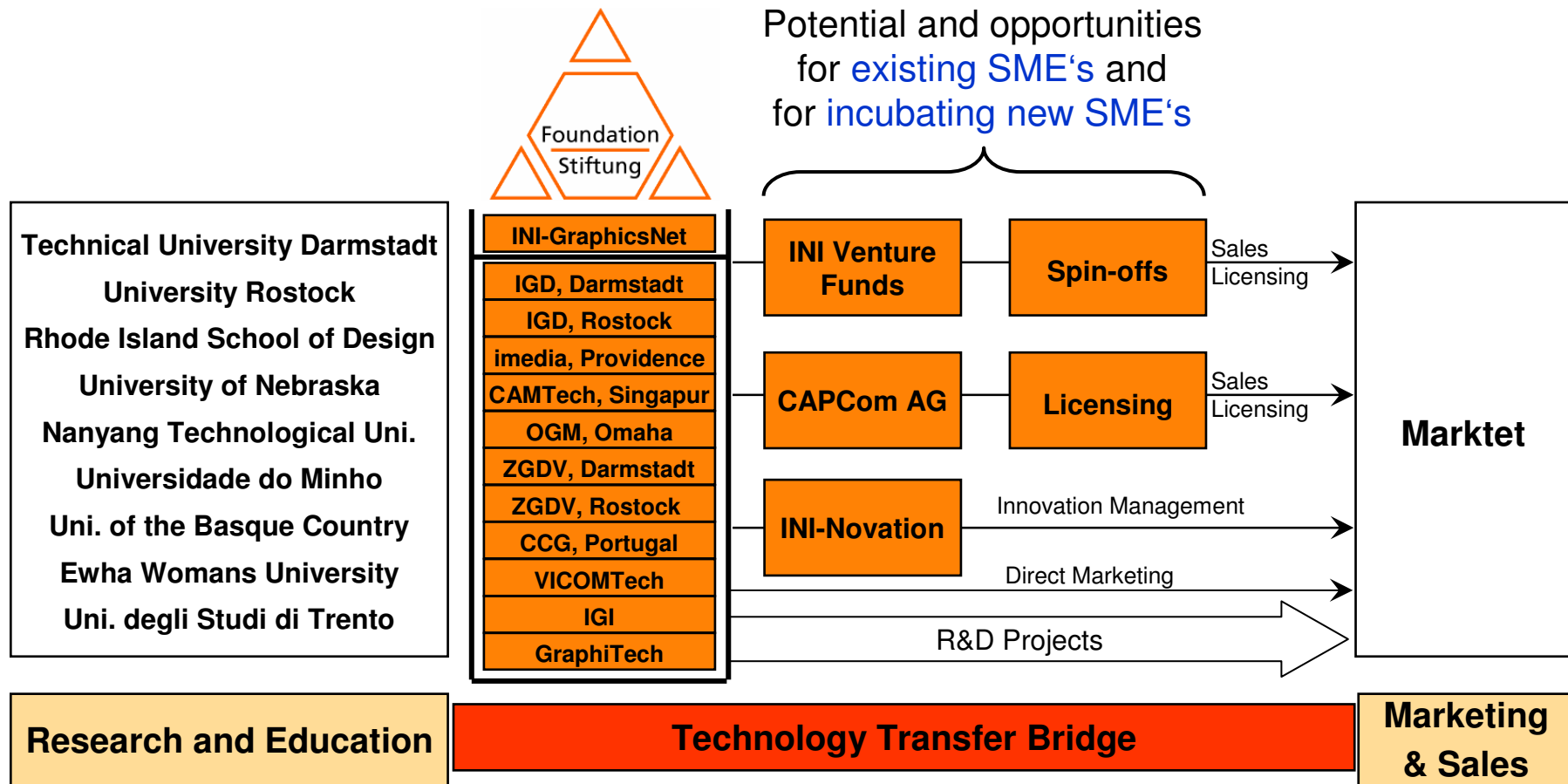
Transfer of Research Results – Measures



INI-GraphicsNet Foundation

The image is a composite graphic on a grey grid background. At the bottom, the top of a man's head with brown hair and blue eyes is visible. Above his head is a large, bright yellow explosion or fireball. Above the explosion is a black cone shape composed of many thin, radiating lines, resembling a stylized rocket or a data stream. The text 'INI-GraphicsNet' is written in a large, white, sans-serif font across the middle of the image, with 'Foundation' written below it in the same style.

The INI-GraphicsNet Technology Transfer Bridge



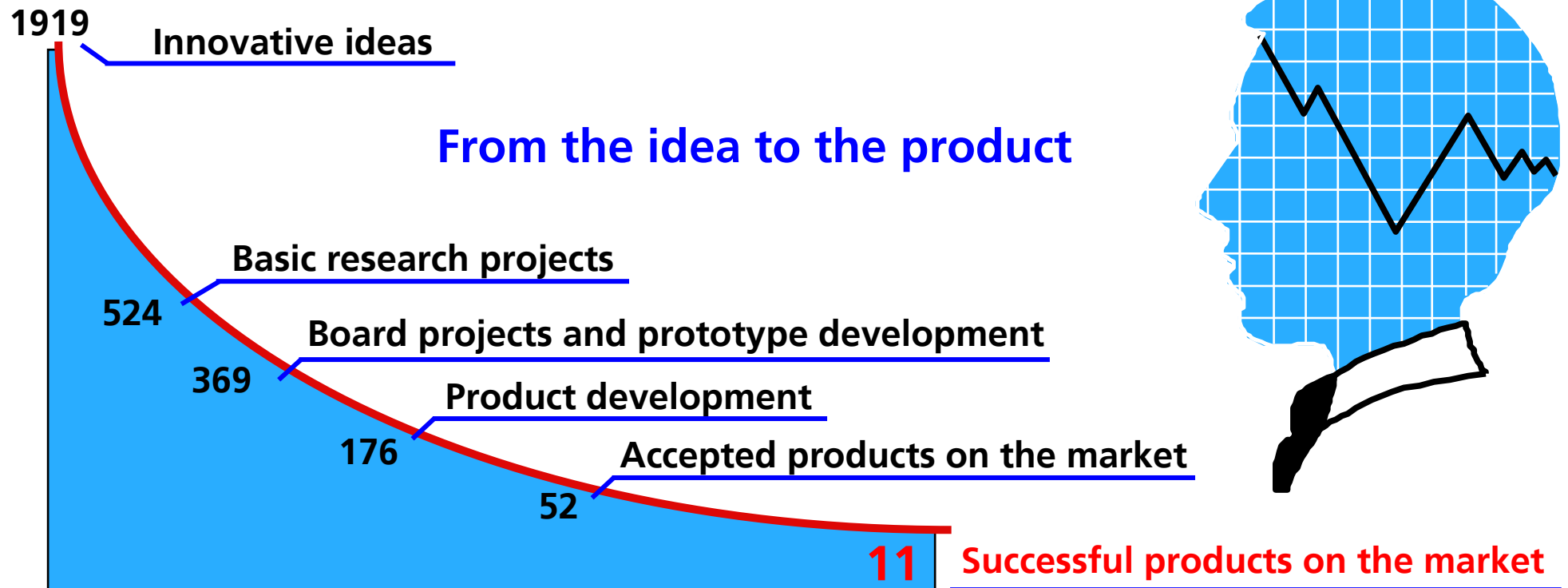
INI-GraphicsNet Foundation

- INI-GraphicsNet Foundation (1999)
 - **Promoting innovation** through **technology screening**, **asset management** und **innovation management**
 - Supporting **technology transfer** and foundation of **spin-offs**
 - Strengthening **collaboration** within the INI-GraphicsNet
 - Developing **synergies**
 - Enhancing **effectiveness** of joint R&D and exploitation efforts
 - Supporting **project acquisition**
 - **Fundraising** for financing R&D co-operations and marketing
 - Participating in national and international research projects to **early plan** and **implement exploitation measures**
 - Cultivating the reputation of **computer graphics** as a whole

Wettbewerb hat
Teilnehmer!

Market Access (demand-oriented)

From generating Ideas to Exploitation

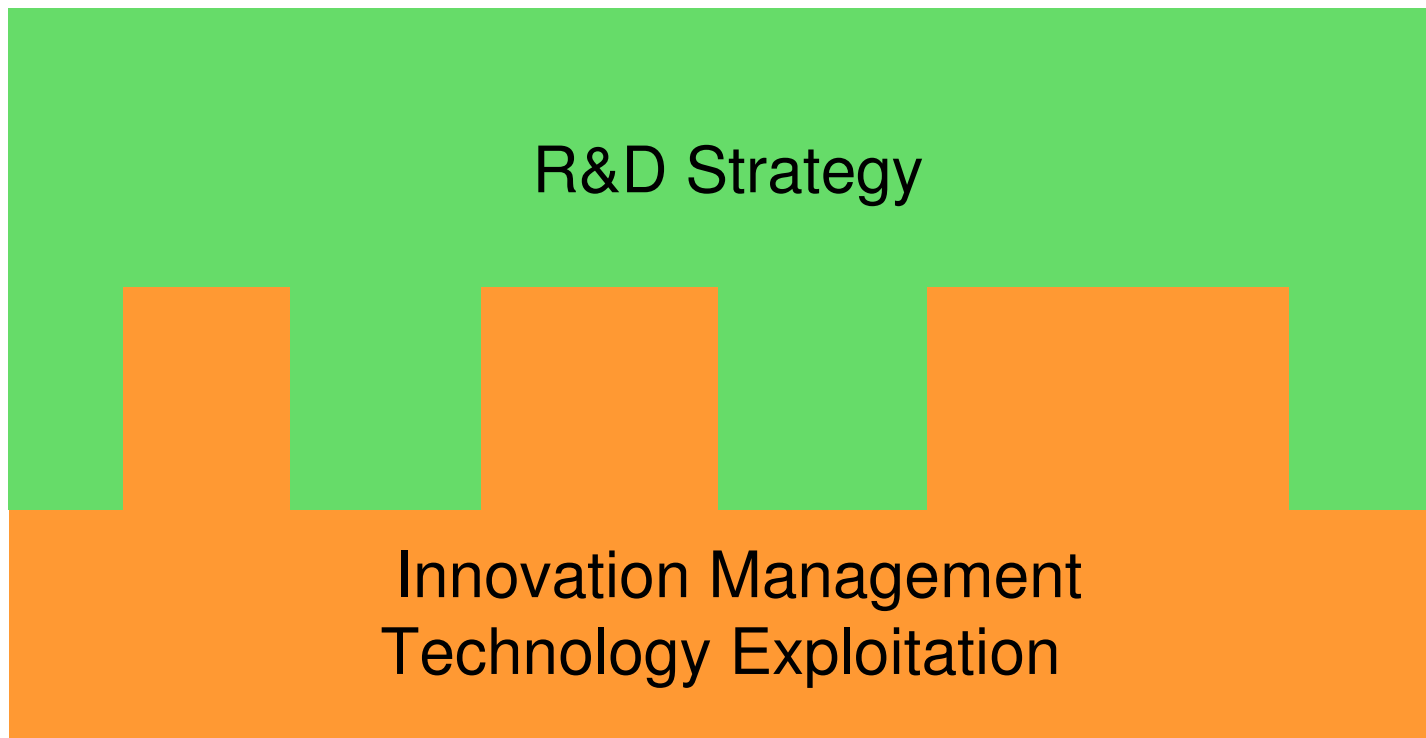


**You have to kiss many many frogs,
to find the one and only prince!**

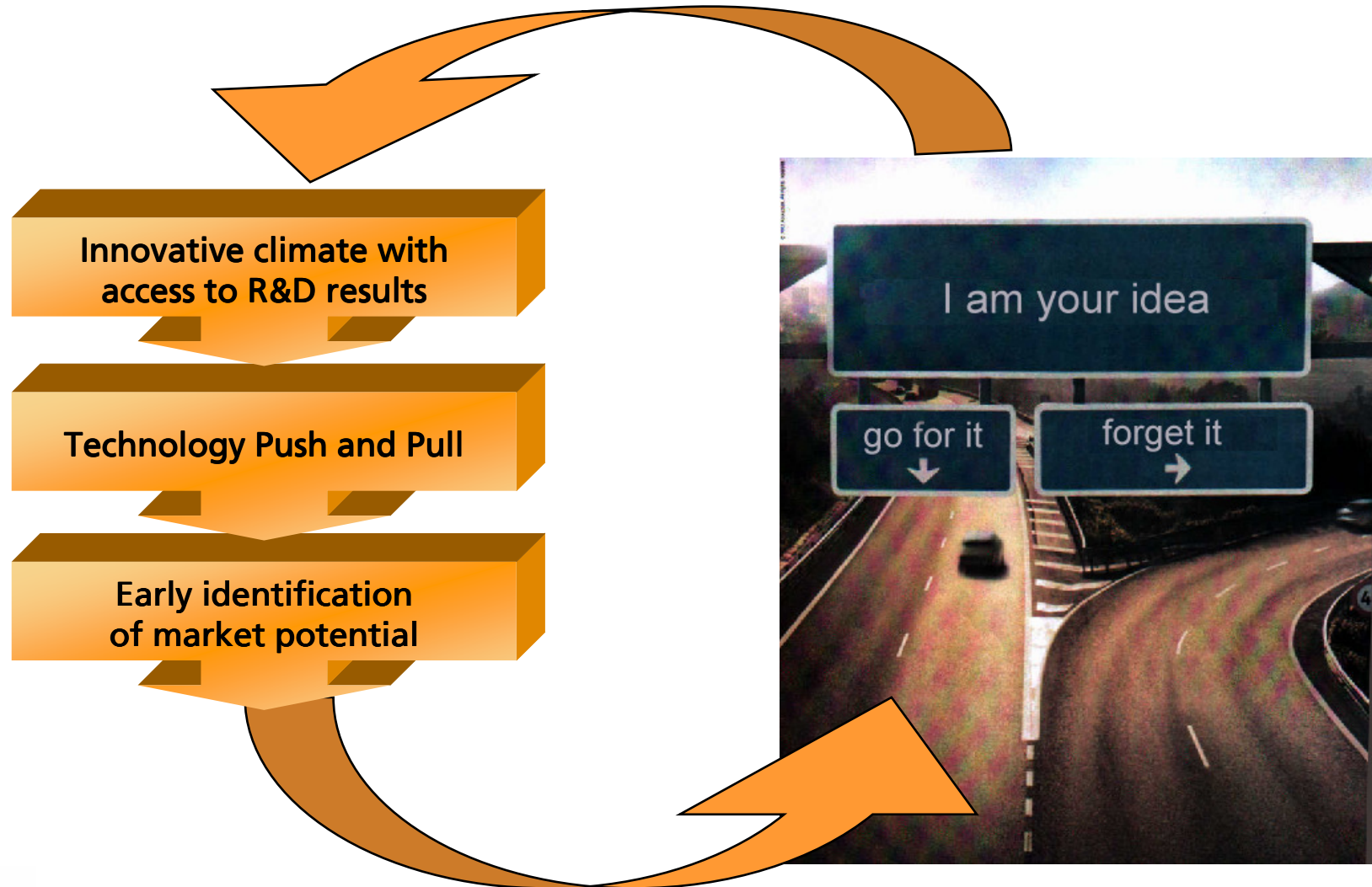
Arthur Frey, 3M, Inventor of Postit

Source: Kienbaum

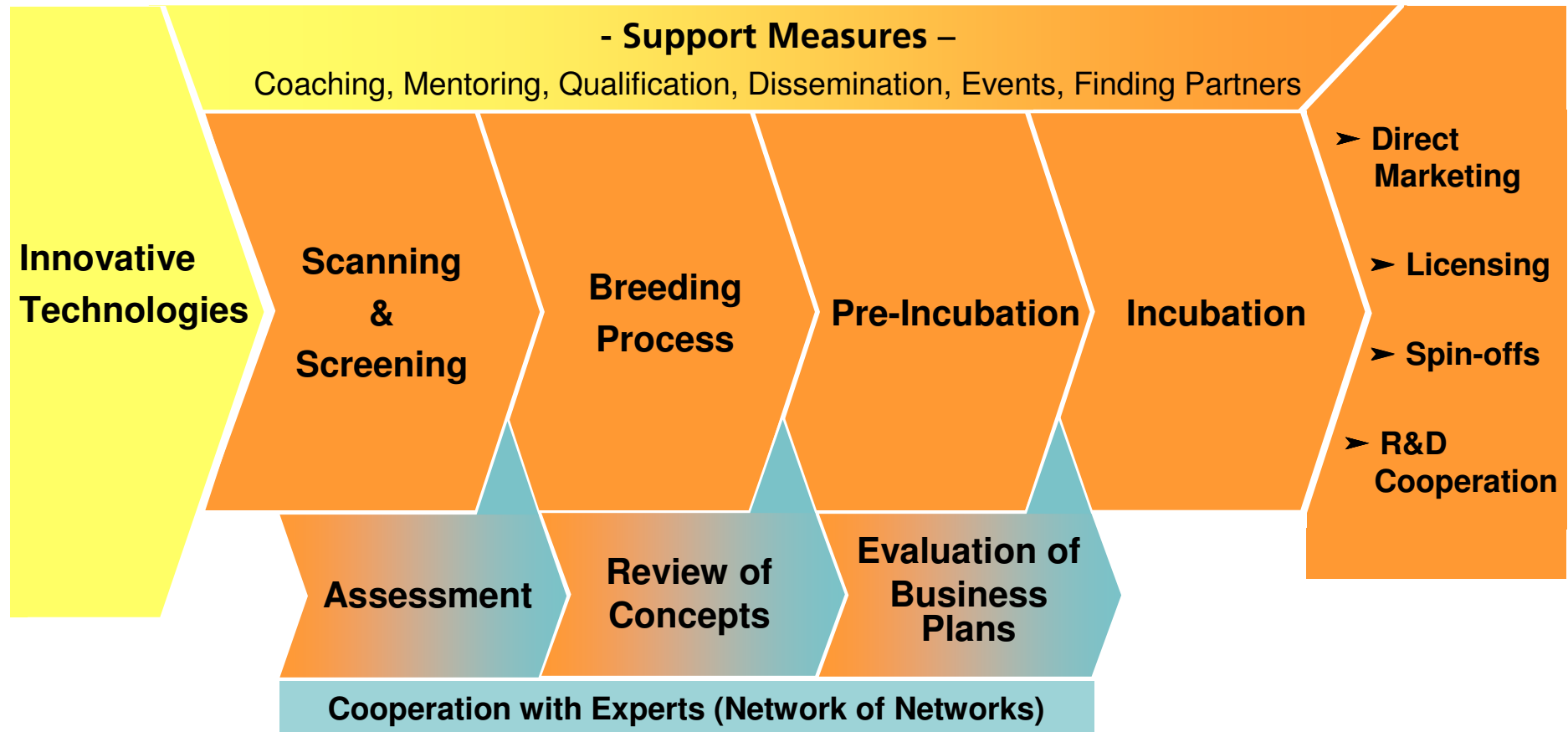
From generating Ideas to Exploitation



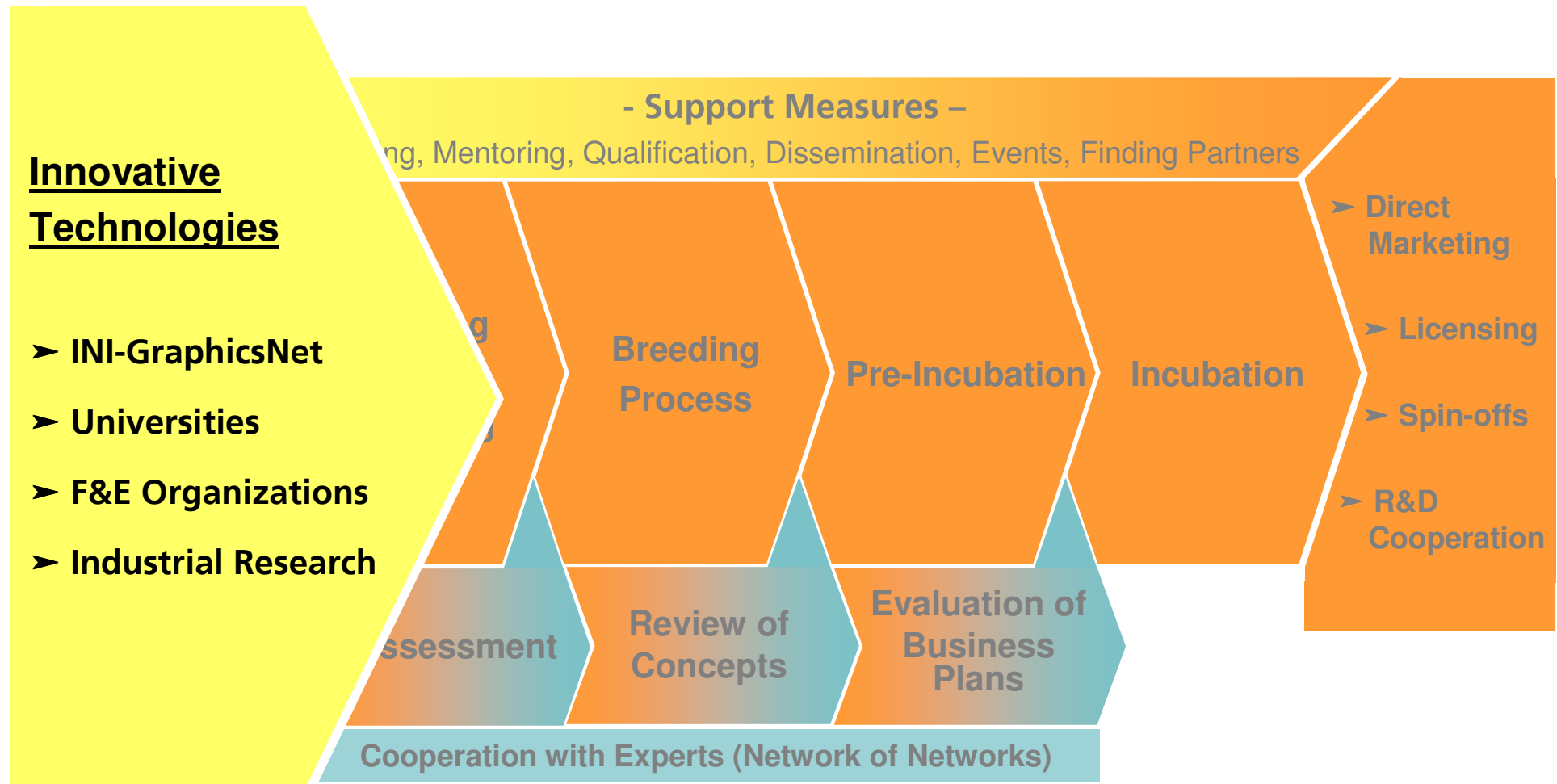
From generating Ideas to Exploitation



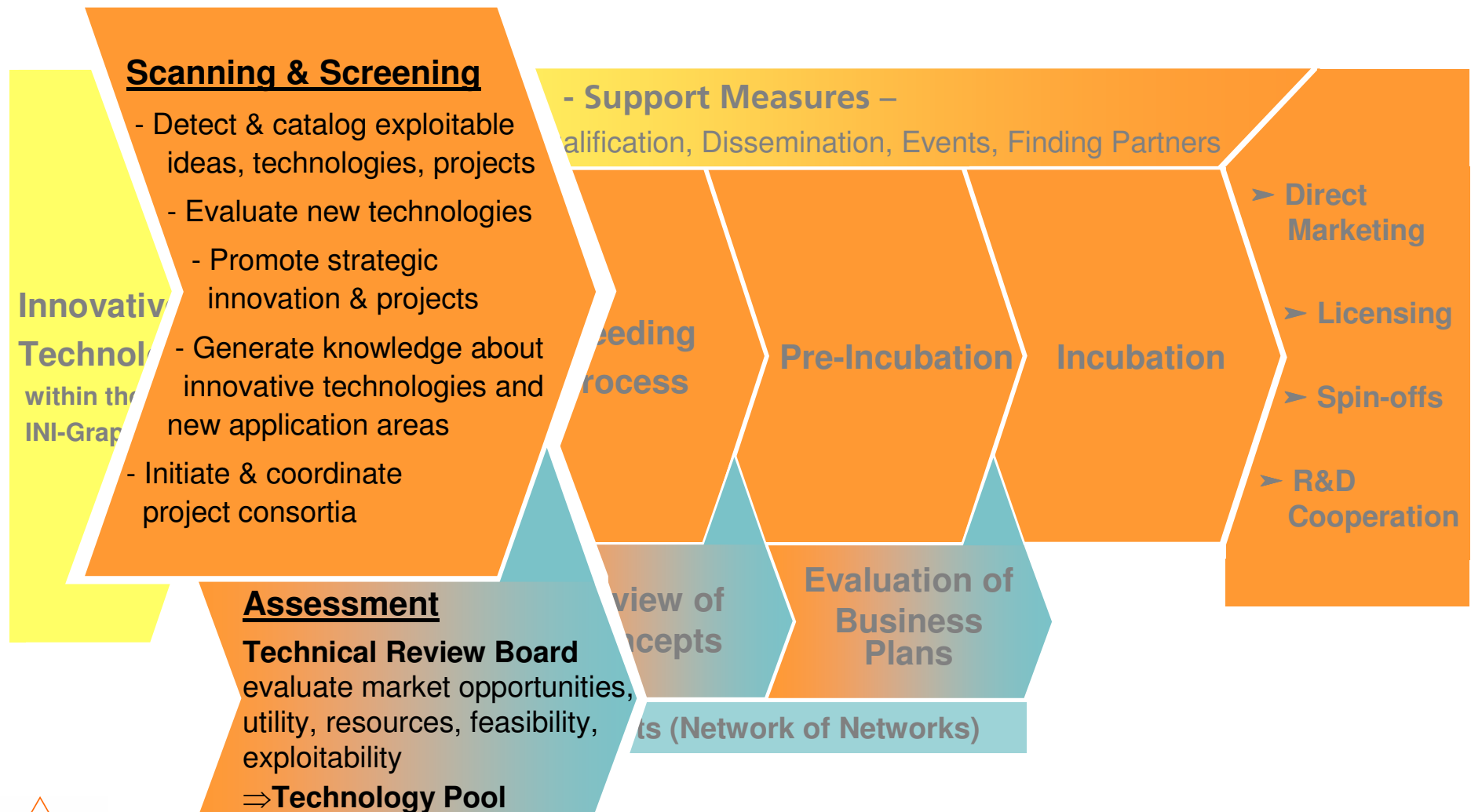
Integrated R&D Exploitation Process



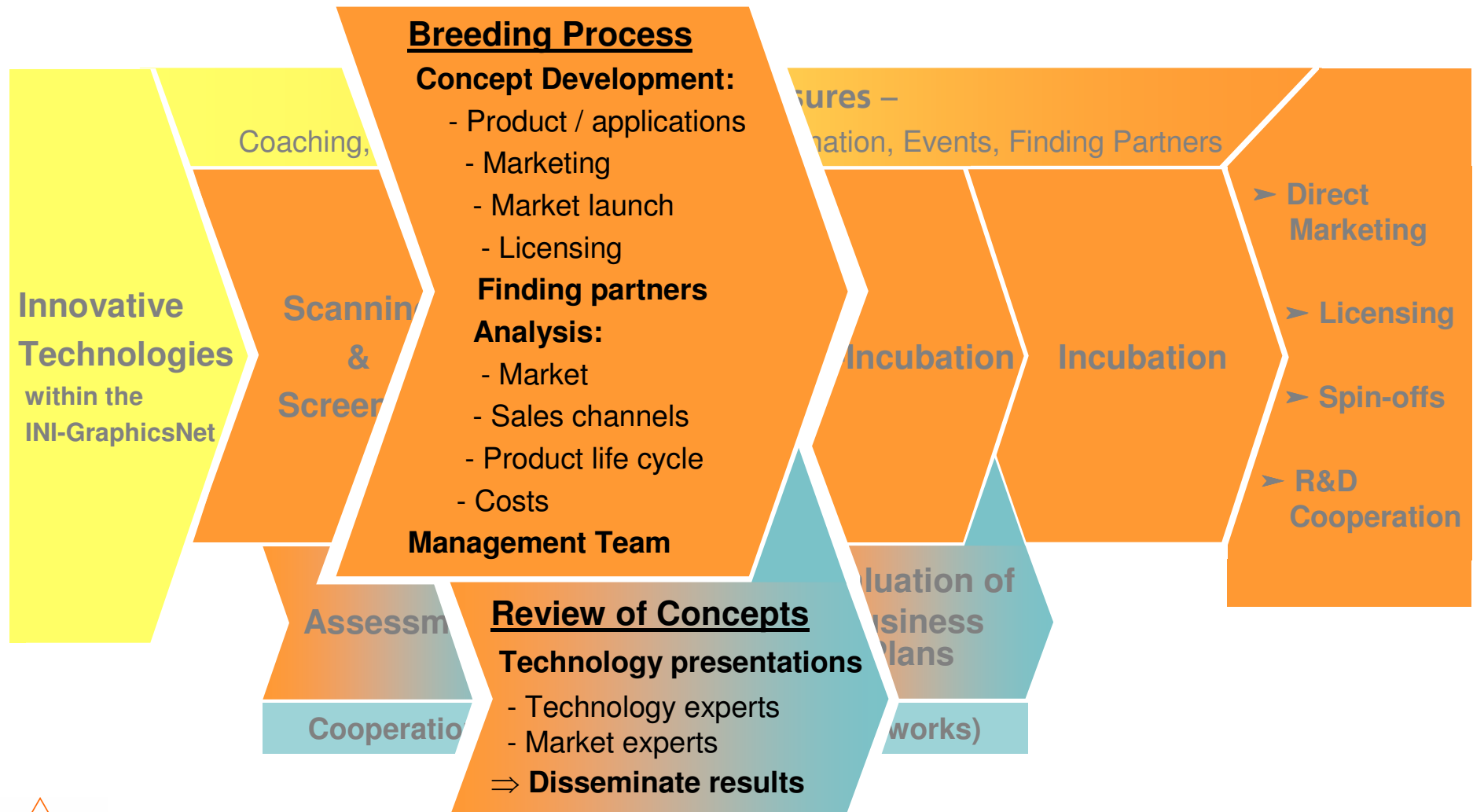
Integrated R&D Exploitation Process



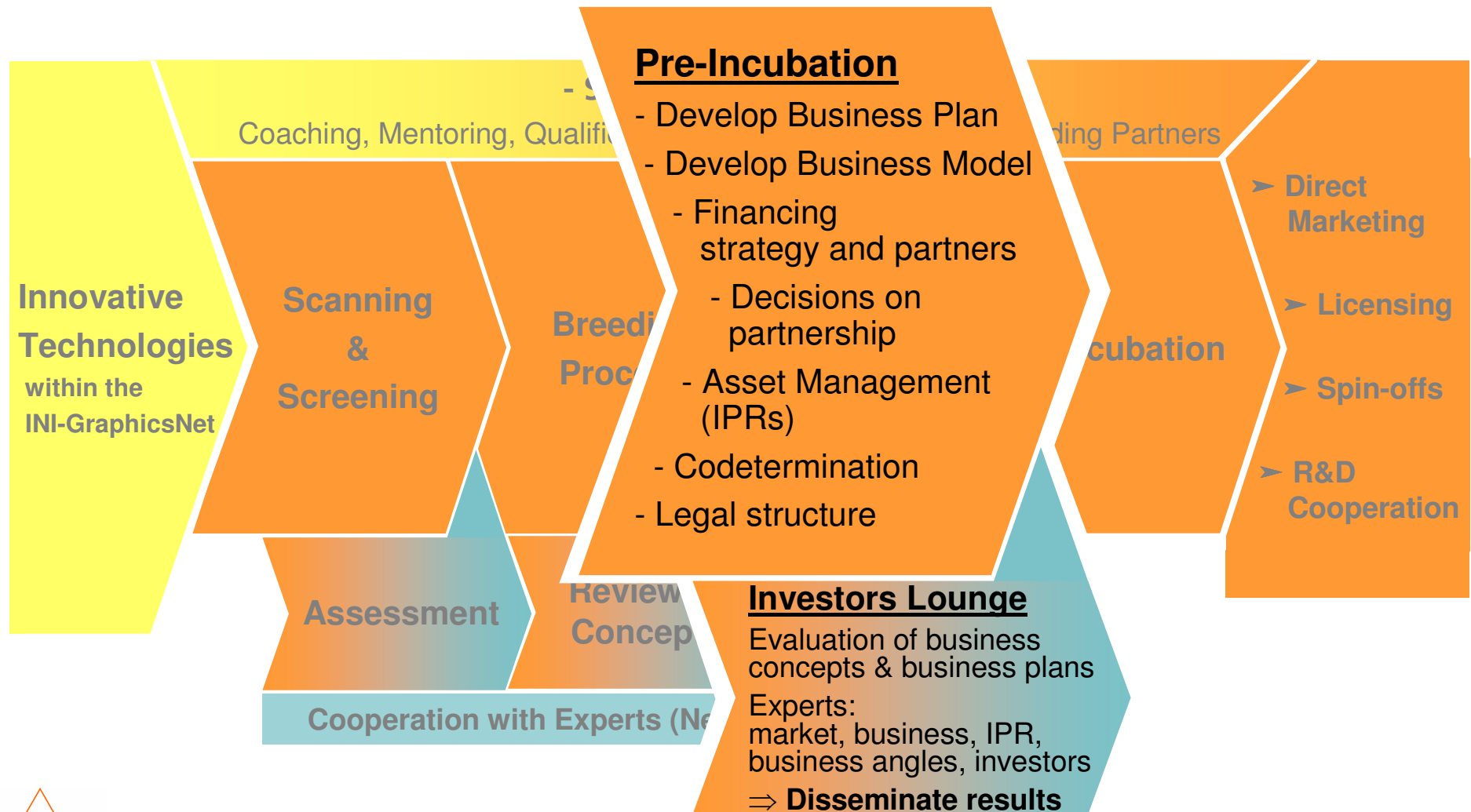
Integrated R&D Exploitation Process



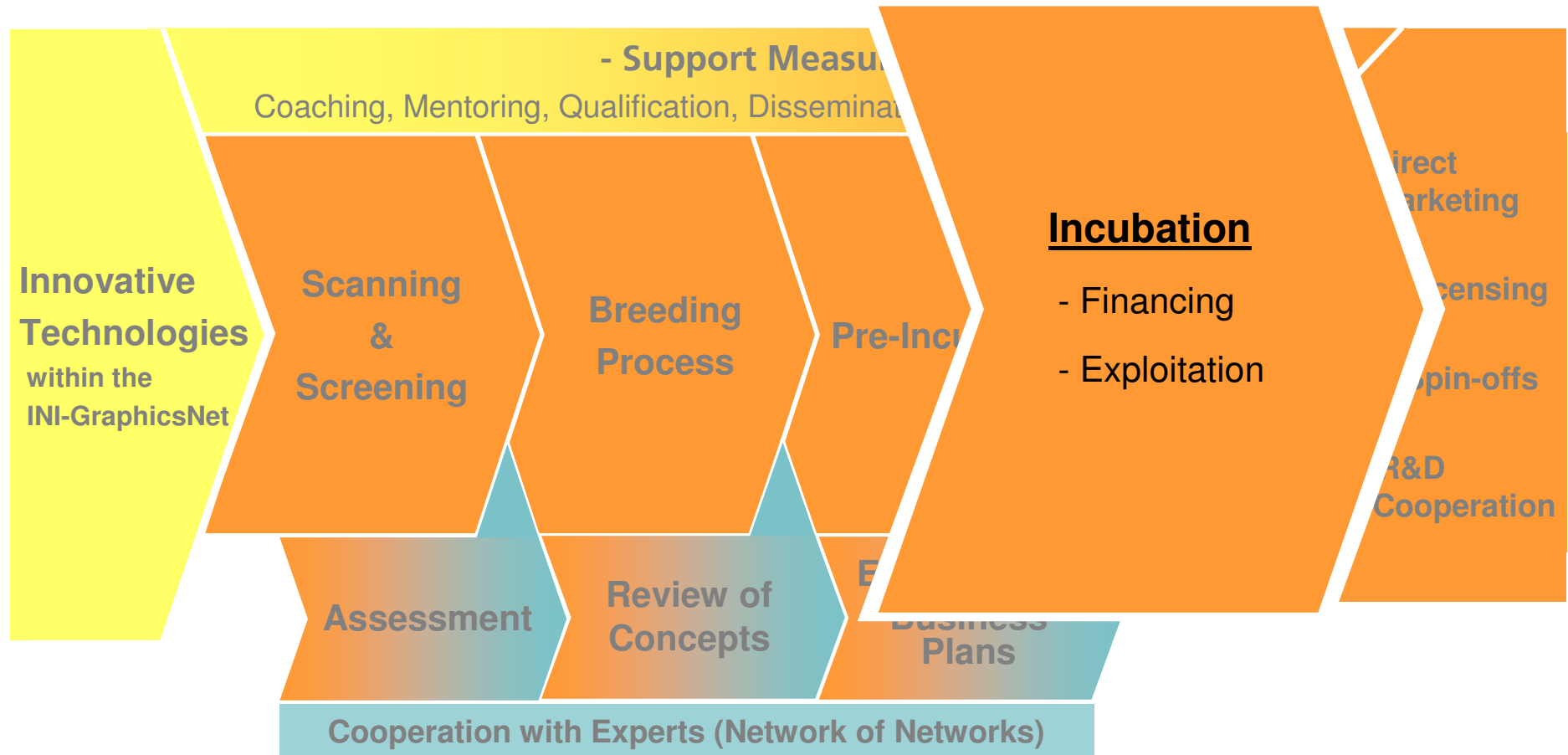
Integrated R&D Exploitation Process



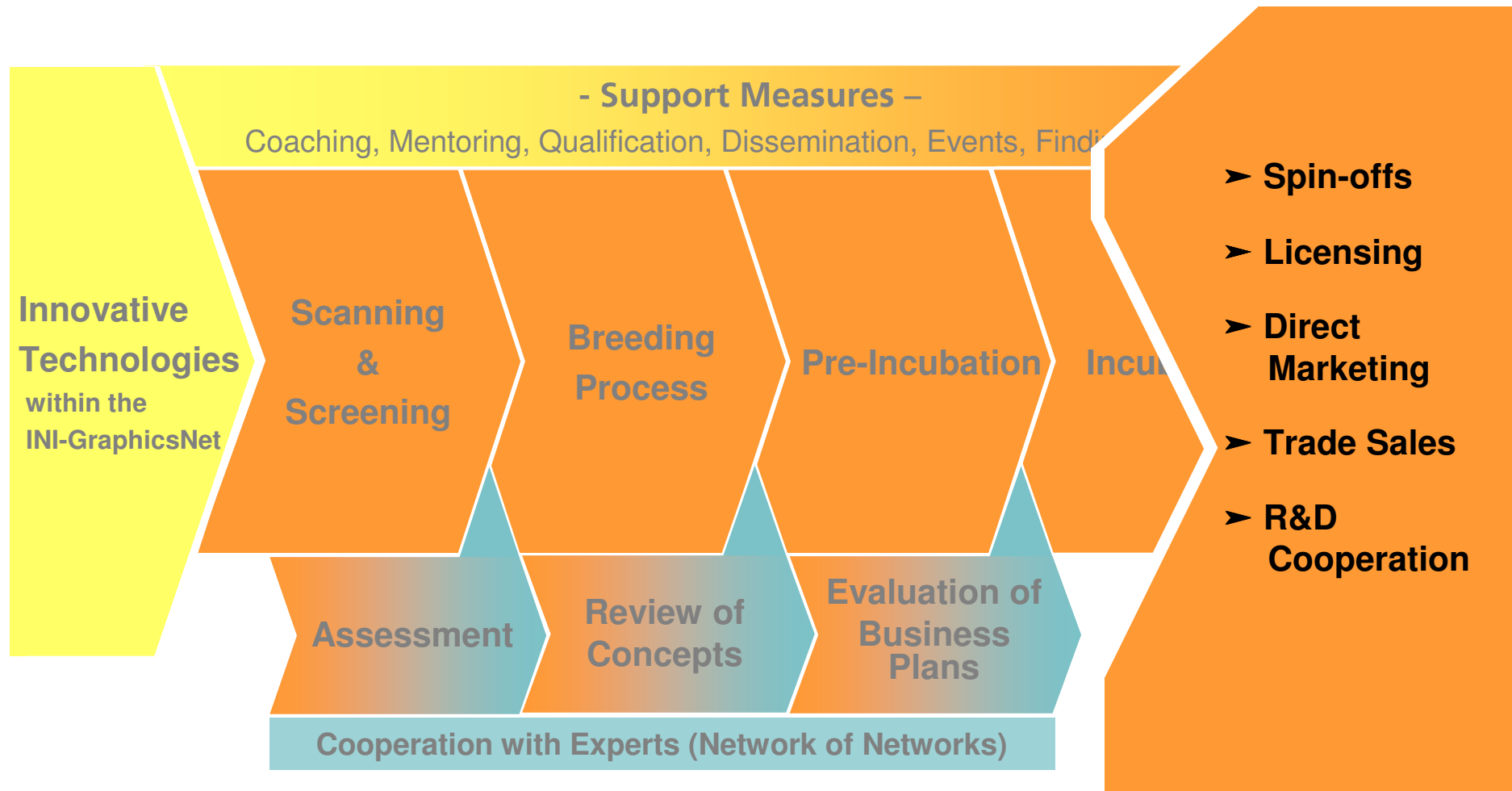
Integrated R&D Exploitation Process



Integrated R&D Exploitation Process



Integrated R&D Exploitation Process





**Discover
the special.**

Technology Screening & Evaluation (Examples)

Example: Technology Evaluation in South Korea

- **Technology Assessment**
of 40 Companies in
Daedok Valley
- Qualification for
preparing
Business Plans
- **Contact matching**
with interested
partners in Europe



Example: Omaha, USA

- Assessment of a
Business Plan for a
Medical Training Laboratory
- Assessment of
Medical Imaging Technologies



Example: Mecklenburg-Vorpommern, Germany

“Gründer Flair” (Founders Support Program)

- Building up an **innovation process** within the state universities
- **Screening and Coaching** of researchers in MV
- Concept for a state-run **“Best Idea Award”** (for universities and research institutes) and member of the jury



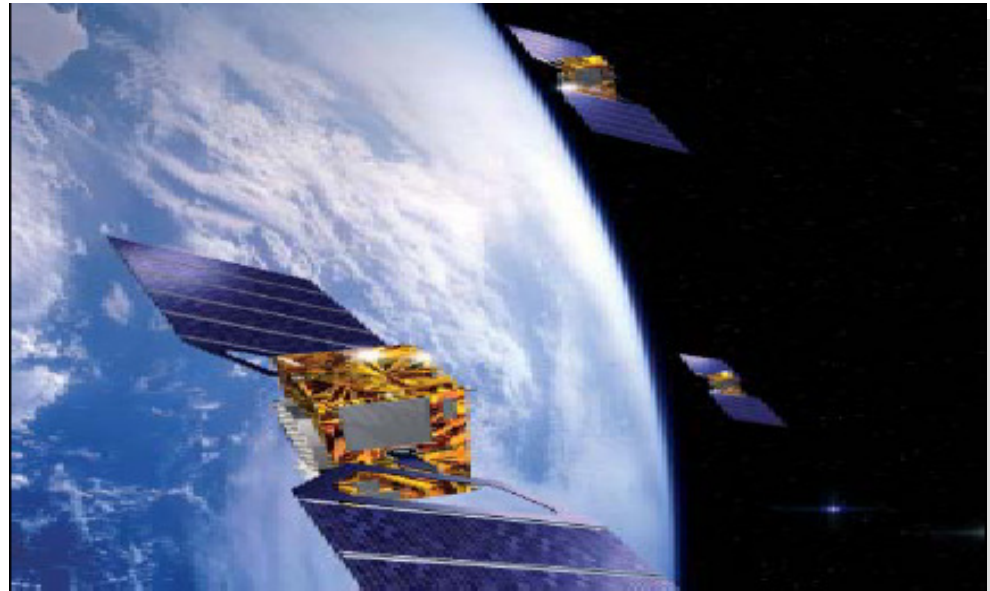
Example: Universities of Porto & Minho, Portugal

- **Benchmarking**
successful innovation systems
in research institutions
- Development of a
customized concept
for an innovation system at the
University of Porto
(accepted by all 14 faculties)
- Support of **Scanning and Screening**
Activities at UPIN
- Similar activities ongoing at the
University of Minho



Example: Galileo-Center for ESA/ESOC

- Feasibility Study for the establishment of a **Galileo Space-Incubator** in the State of Hesse, Germany
- Concept for the **management** of such a Space-Incubator
- Support activities to **match available technologies** in the R&D system **with the demand** in the future Galileo market



**YOU DON'T HAVE TO BE
BIG TO DELIVER
POWERFUL PERFORMANCE.**

Identification of IPR's with Great Commercial Potential (Examples)

**JUST
DEDICATED TO
THE TASK.**

IPRs currently in the Exploitation Process – Some Examples

AvaSynch



Lip Synchronization to Animate Virtual Characters

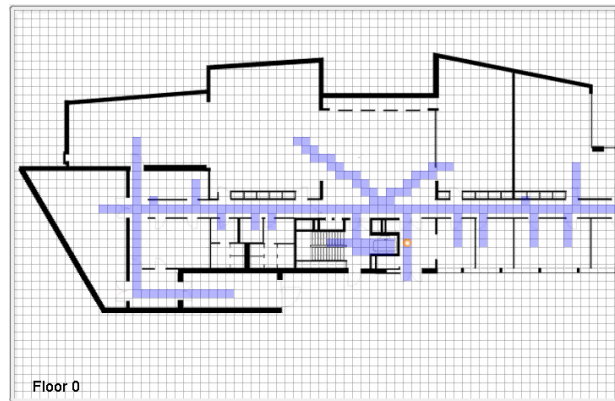
The speaker's voice is analyzed to simultaneously synthesize facial & lip movements of an animated virtual character.

VicomTech, Spain

AvaSynch

imedea, RI, USA

Visitor Guidance System



Easy to edit and intuitive to use way finding and navigation system for buildings, structures and sites.

AR Telescope XC-01

Fraunhofer-IGD, Germany

Telescope superposing a real sight by virtual objects.

Visualizes real time localized information in application areas like archeology, architecture, construction, etc.



A man and a woman are performing a high wire act against a blue sky with clouds. The man is on the left, leaning back with his arms outstretched, and the woman is on the right, leaning forward with her arms outstretched. They are both wearing white leotards. The background is a blue sky with white clouds. The image has a halftone or dithered texture.

For many,
performance means taking risks.

We say it depends primarily
on the partner you choose.

Successful Spin-Offs (SME's) (Examples)



Securing and authenticating digital images and printed documents

- MediaSec LLC, USA, founded in 1996 and received exclusive licenses for watermarking technology from Fraunhofer in 1997;
- MediaSec GmbH, Germany, founded in 1999;
- MediaSec sold to Thomson in 2005.

Watermarking
Encryption
Electronic Signatures

...

CyberMDx

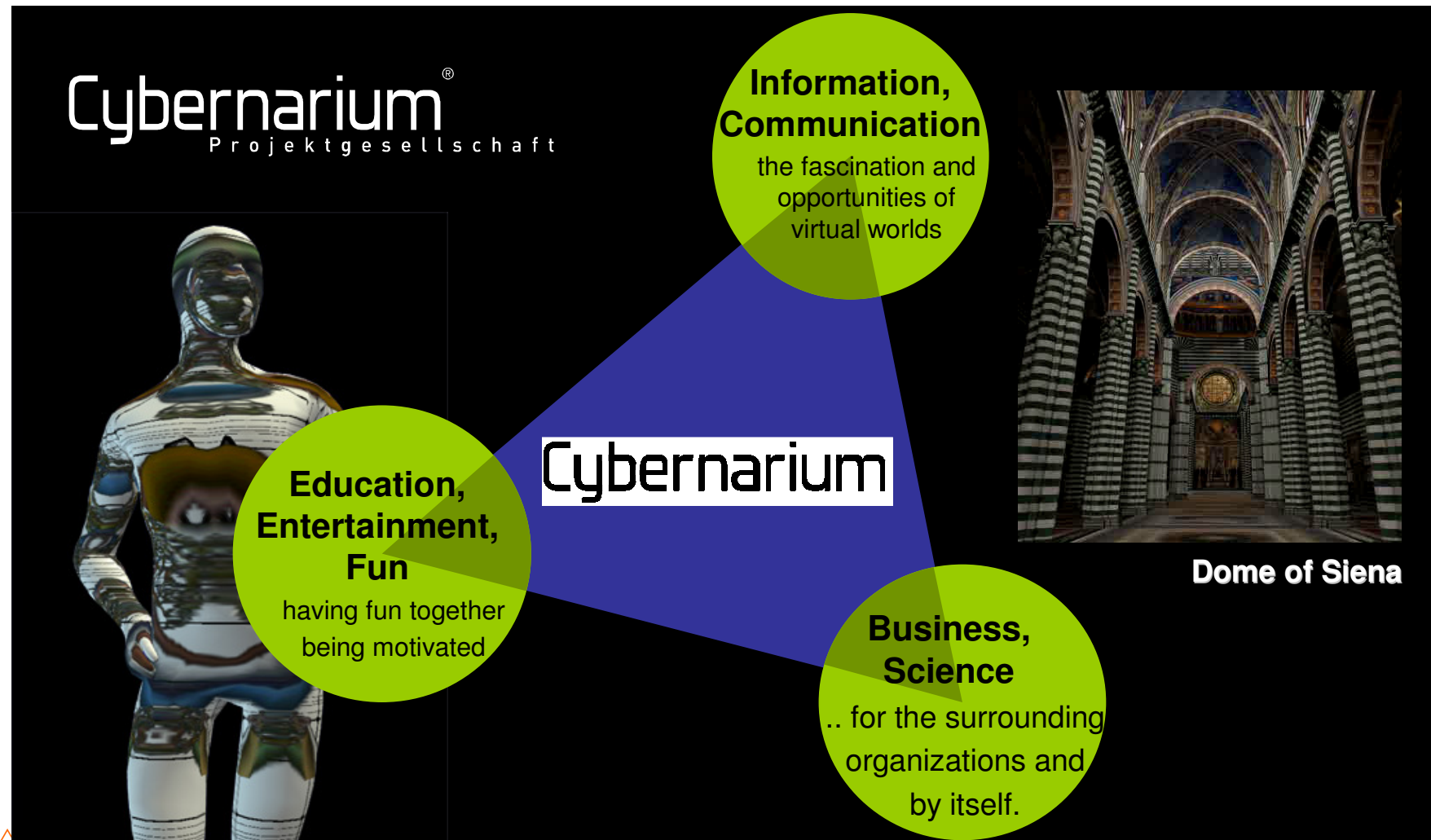
cyberMD_x



Telehealth Systems

- Providing **diagnostic services** for patients in **remote** or medically under served areas;
- Developed in cooperation with NASA;
- **Field-tested** on the Space Shuttle, and in Bosnia respectively.

Cybernarium

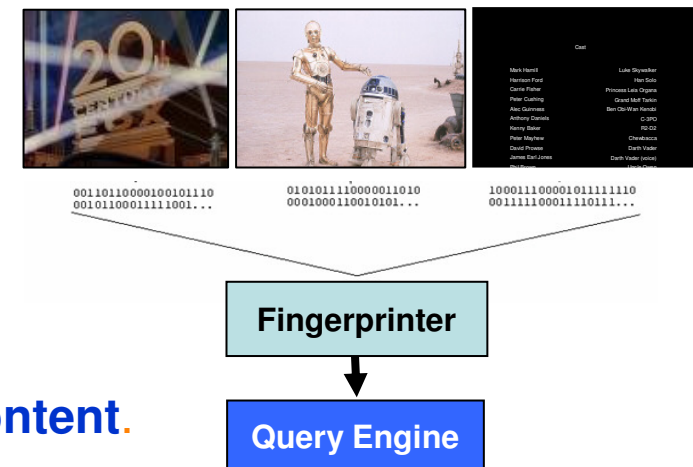


iPharro



Video Content Detection and Recognition

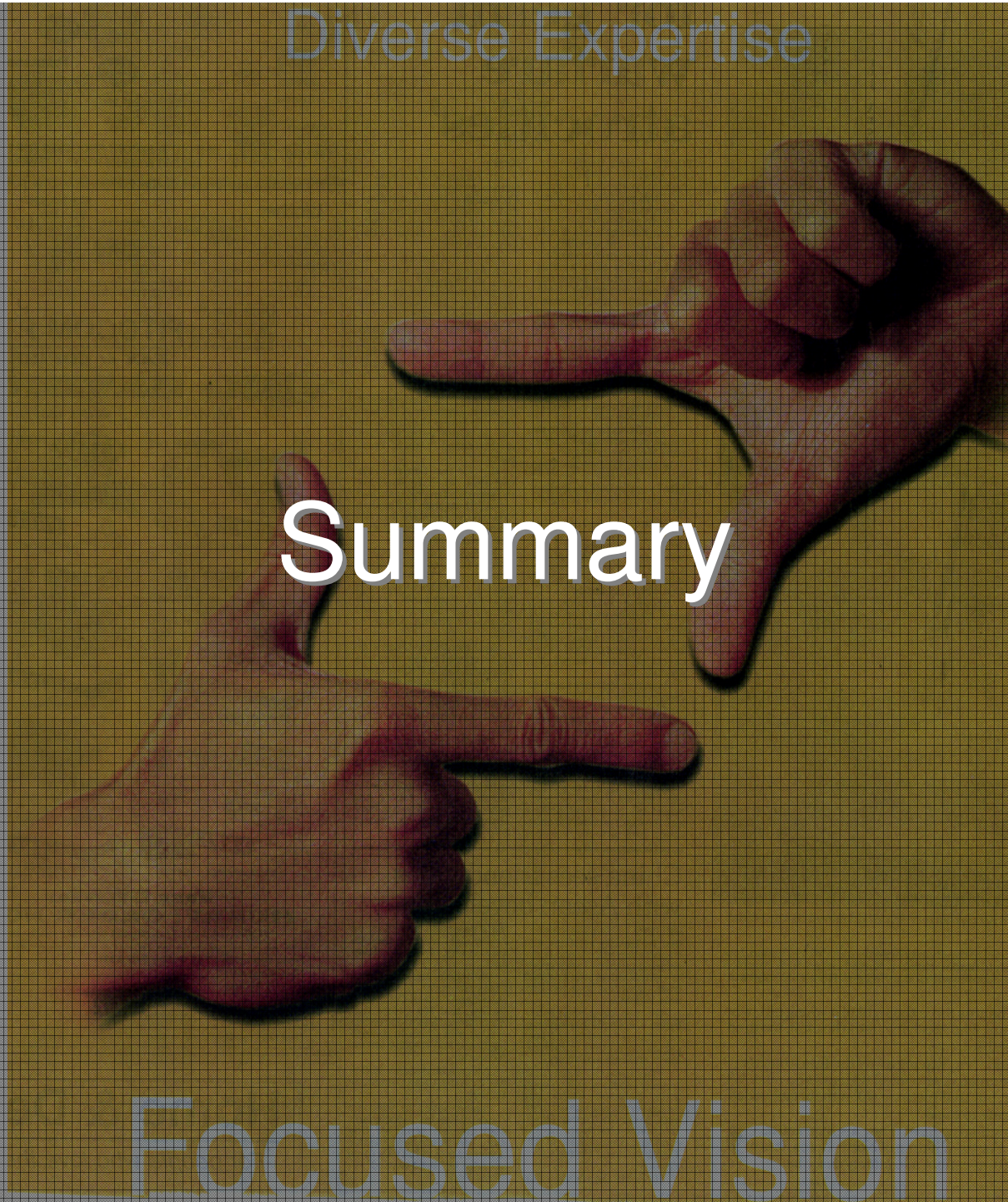
- iPharro has recieved \$5.1 million in funding from Triangle Ventures.
- Core technology **identifies video content** more quickly than possible with the human eye.
- iPharro will revolutionize the world of **Digital Asset Management** :
 - Will enable user-generated content sites and P2P video sharing networks to **automatically ensure authorization of content**.
 - Will enable studios, producers and others to monitor and **protect their most valuable asset: content**.
 - Will fully **automate digital rights management** procedures for television networks.



Diverse Expertise

Summary

Focused Vision



Summary 1

- **Global Cooperation in R&D** opens opportunities for **Economy of Scale** and shortens **Time to Result** and **Time to Market**.
- **INI-GraphicsNet Foundation** builds a **Bridge** and closes the **Technology Transfer Gap**.

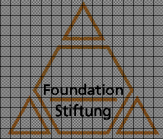
Summary 2

- **Developing Potentials and Opportunities** for **existing SME's** and for **incubating new SME's**.
- **Innovation Management** and **Technology Exploitation** have to be implemented in parallel and complementary to the **R&D Strategy** of ongoing projects.

Summary 3

- The **INI-GraphicsNet Foundation** offers a structured and integrated **R&D Exploitation Process**.
- Successful examples in **Technology Screening**, identification of **IPRs** with **Great Commercial Potential**, and **Starting of Spin-offs** **proof the Need for the INI-GraphicsNet and its Foundation**.

INI-GraphicsNet

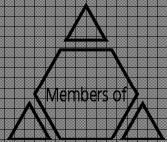


INI-GraphicsNet

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Members of the INI-GraphicsNet Foundation



INI-GraphicsNet

Fraunhofer
Institut
Graphische
Datenverarbeitung
Darmstadt, Rostock, Germany

GraphTech
Villazzano - Trento, Italy

**Centre
Advanced Media
Technology**
Singapore

**Centre
Graphics & Media
Technology**
Singapore

**Zentrum für Graphische
Datenverarbeitung e.V.**
Darmstadt, Rostock, Germany

Institute for Graphic Interfaces
Seoul, Korea

imedia
Providence, RI, USA

imedia
Providence, RI, USA

UNCLARO
Omaha, NE, USA

VIGOR Tech
San Sebastian, Spain

Spin-offs of the INI-GraphicsNet

Allic

Travis
Digital Image Tools

CAPCOM

cyberMDx

Cybernarium

emmedica

INNOVATION

INCUBATOR

INI novum

**INI-Graphics
Foundation**

EDCOM

MediaSec Technologies
The Media Security Company

meticube

VR Systeme

PartMaster

POLYGON
Technology

Semotix

vilau

VRcom

3D SALES
Presentation System

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State of Hessen, Germany

T-Venture
T-Venture, Germany

**Landesministerium für Wirtschaft und
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State of Mecklenburg-
Vorpommern, Germany

University Partnerships

**Technische Universität
Darmstadt, Germany**

**Universität Rostock,
Germany**

**Rhode Island
School of Design,
Providence, RI, USA**

**THE PETER KIEWIT
INSTITUTE**
The Peter Kiewit
Institute,
Omaha, NE, USA

**University of Nebraska,
Omaha, NE, USA**

**Universidade Nova de Lisboa
Portugal**

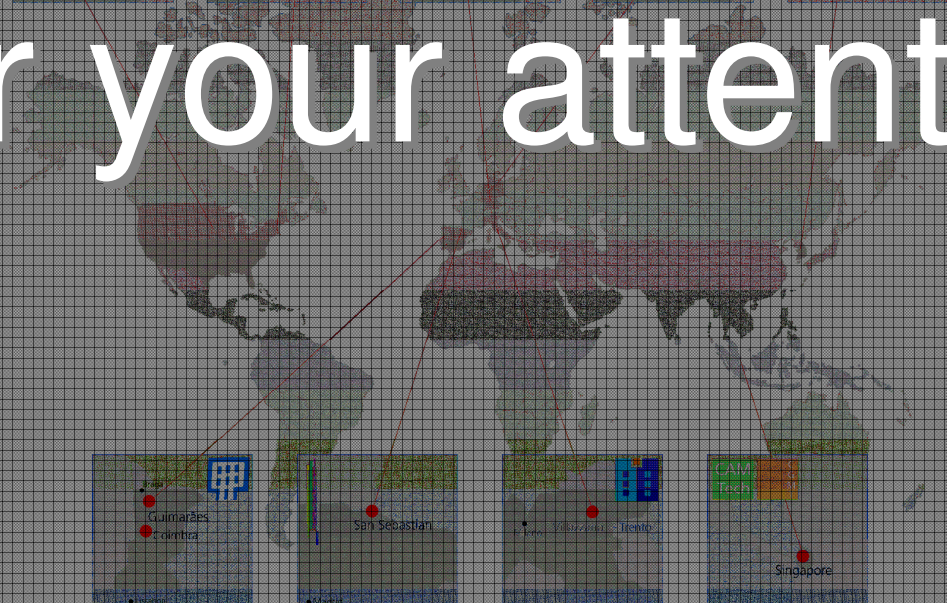
**Universidad del País Vasco
Euskal Herriko Unibertsitatea
The University of the
Basque Country**

**Università degli
Studi di Trento,
Trento, Italy**

**Ewha Womans
University,
Korea**

**NANYANG
TECHNOLOGICAL
UNIVERSITY**
Nanyang Technological
University,
Singapore

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Thank you
for your attention