

Open innovation **in nano-electronics through a** **global industrial partnership**

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President and CEO

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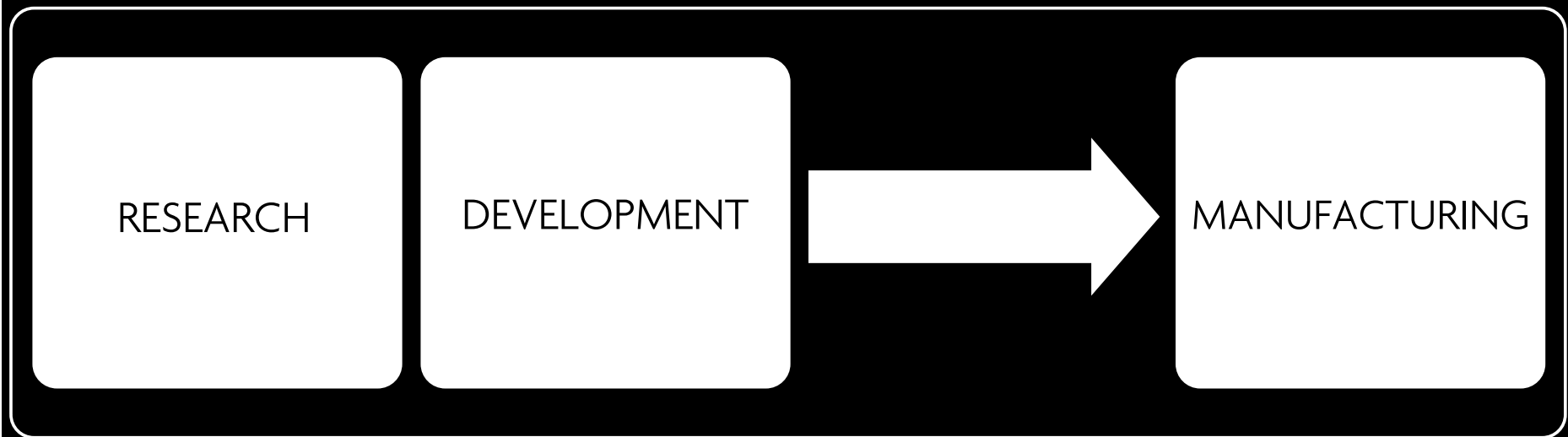
imec international

CREATING
**SUSTAINABLE
SOLUTIONS**
TOGETHER

CONNECT
•
COLLABORATE
•
INNOVATE

OLD INNOVATION MODEL

FULLY CAPTIVE MODEL



CAPTIVE MODEL
FOR GENERIC R&D

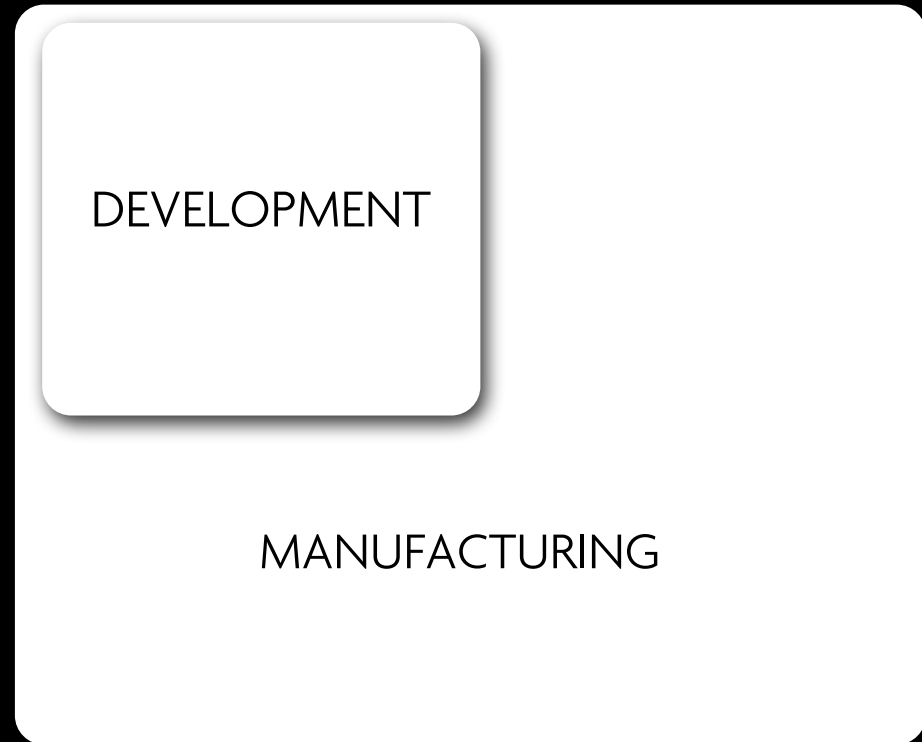
UNAFFORDABLE

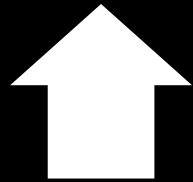
COMPLEXITY **INCREASING**

COST **INCREASING**

NEED FULL **ECO SYSTEM**

PRE-**COMPETITIVE**





RESEARCH

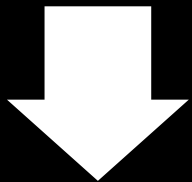
OPEN



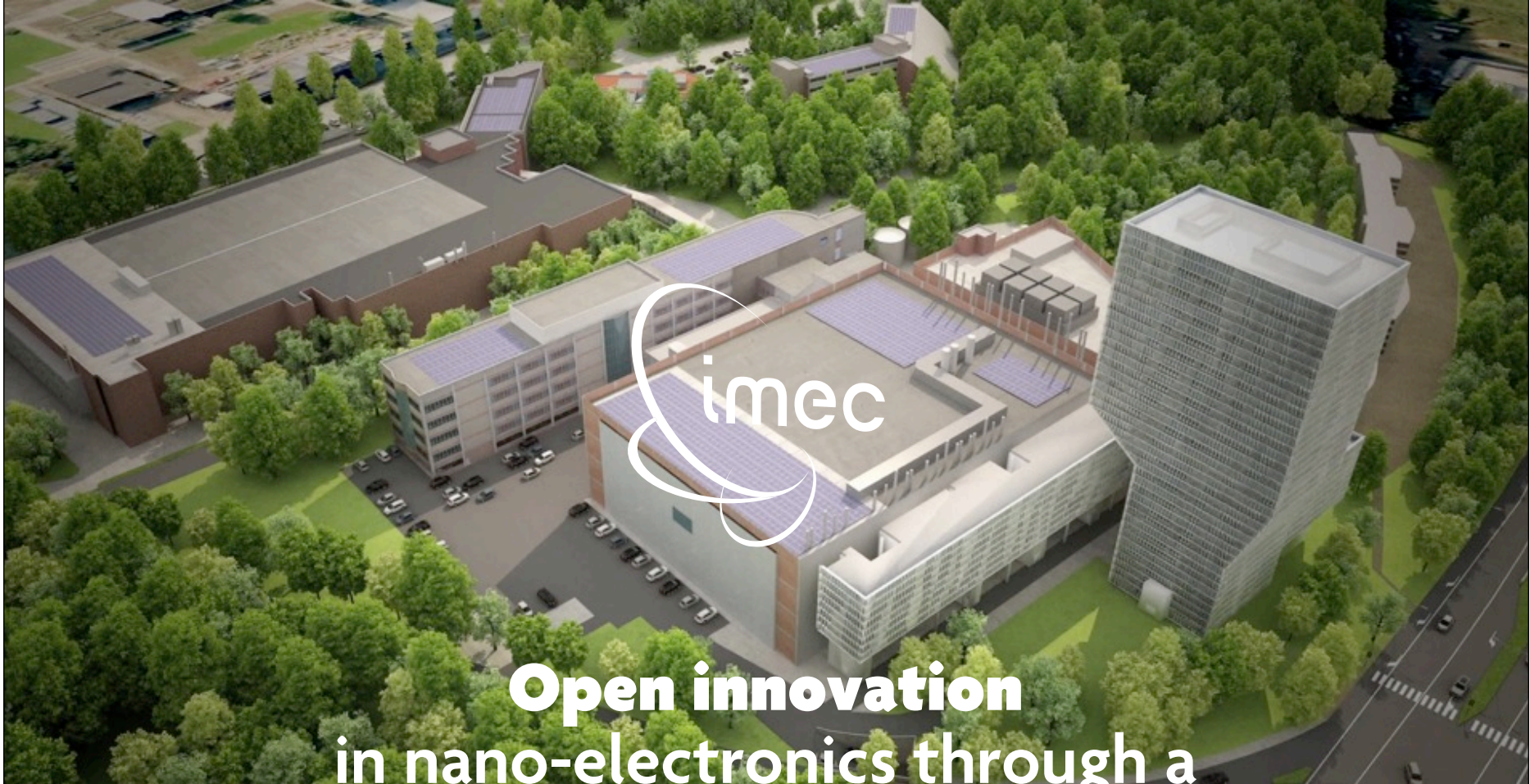
DEVELOPMENT

CAPTIVE

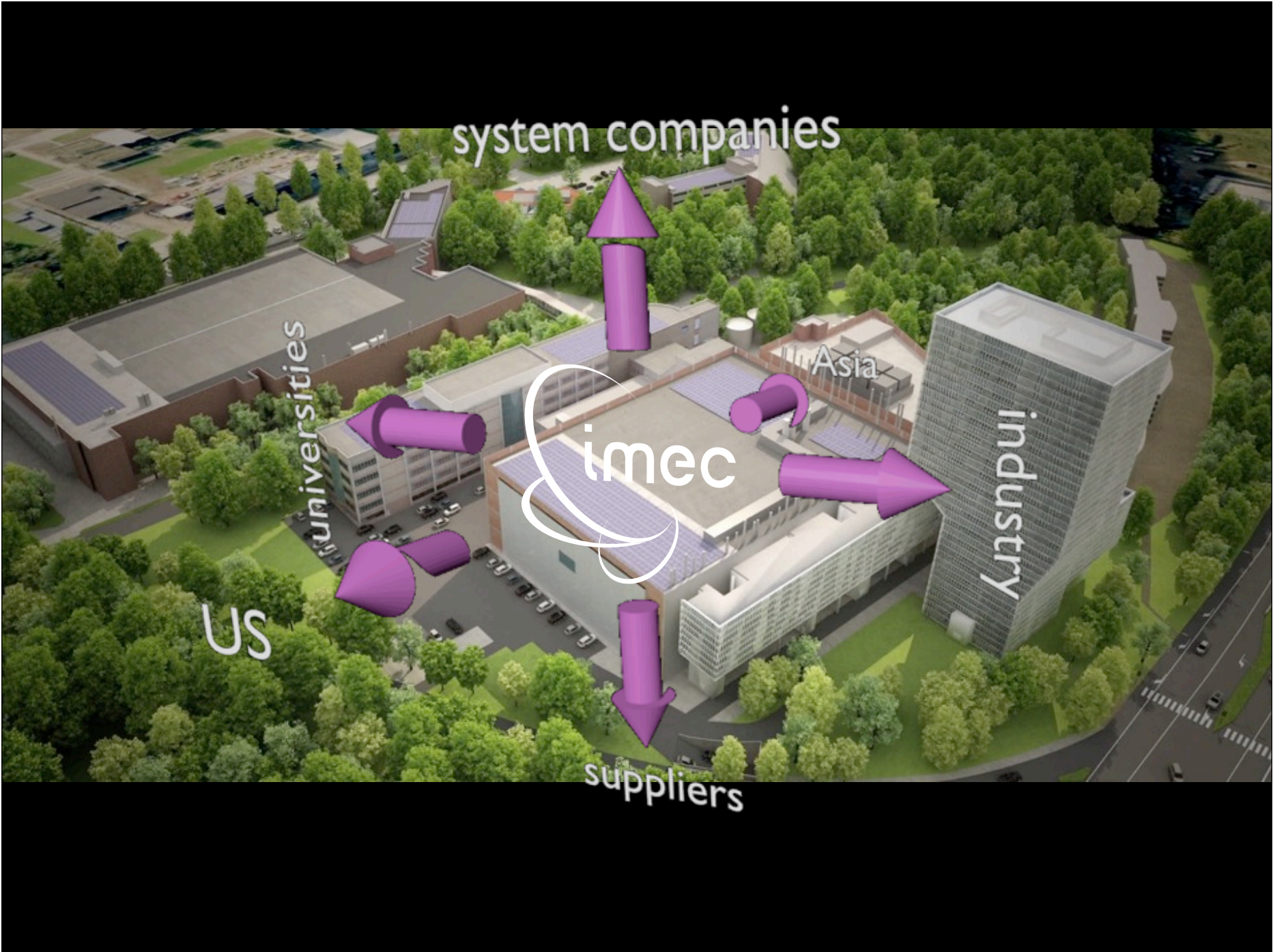
MANUFACTURING



NEW INNOVATION MODEL



**Open innovation
in nano-electronics through a
global industrial partnership**



system companies

universities

Asia

imec

industry

US

suppliers

HISTORY

- ▶ Established by state government of Flanders in 1984
- ▶ Independent non-profit organization
- ▶ Worldwide reach
- ▶ Initial investment: 62M€
- ▶ Initial staff: ~70



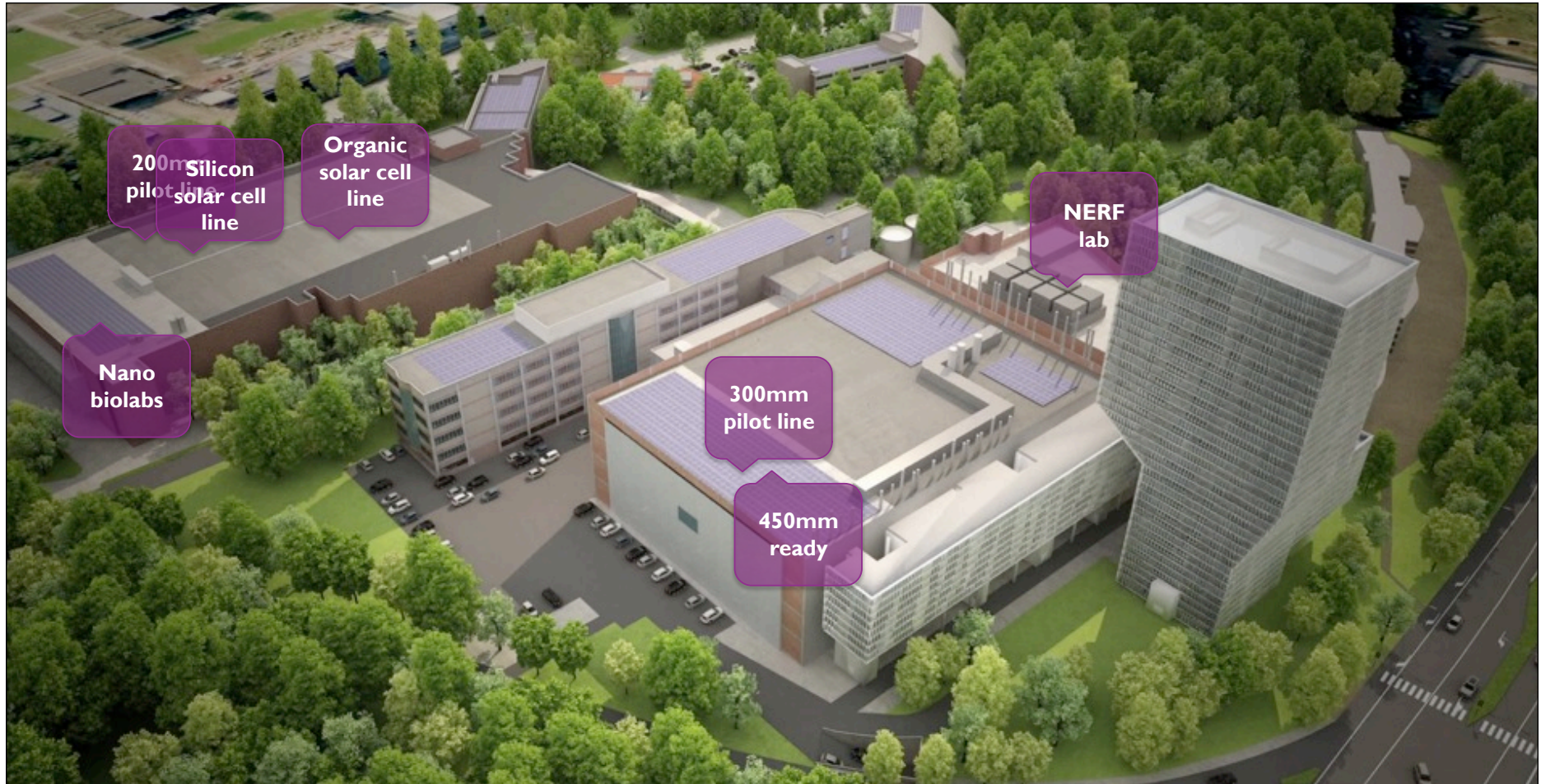
MISSION

- ▶ World-leading research in **nano-electronics**
- ▶ Scientific knowledge with innovative power of global partnerships in **ICT, healthcare and energy**
- ▶ Industry-relevant technology solutions
- ▶ **International top talent** in a unique **high-tech environment** committed to provide building blocks for a better life in a sustainable society



FACTS & FIGURES

- ▶ Total revenue in 2011 of 300M€, a growth of 5%
- ▶ 1,773 publications R&D related in 2011
- ▶ 132 patents awarded and 133 patents submitted in 2011
- ▶ Collaboration with 600 companies & 208 universities
- ▶ 600 residents



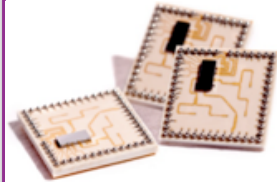
STATE-OF-THE-ART RESEARCH FACILITIES

RESEARCH PROGRAMS FOR FULL ECO SYSTEM



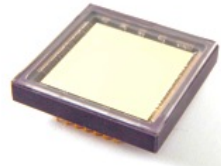
Human++

BAN
Life Sciences



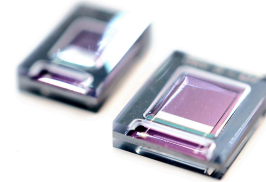
Green Radio

Low power
wireless
communication



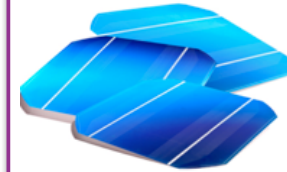
Imaging

Image sensors
& vision systems



Sensor systems

for industrial
applications



Energy

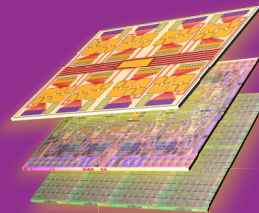
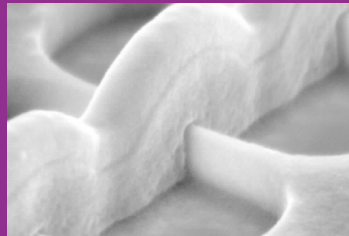
Photovoltaics
Power devices
LEDs

Core CMOS

Lithography

Devices

Interconnects



CMORE

MEMS, Sensor
Photonics



Organic electronics



GLOBAL NETWORK

SYSTEM COMPANIES

MEMORY IDM

LOGIC IDM

FOUNDRIES

FABLITE

FABLESS

**EQUIPMENT
SUPPLIERS**

**EQUIPMENT
SUPPLIERS**

**SOFTWARE
SUPPLIERS**

300mm PILOT LINE

- ▶ Investment > 1B\$
- ▶ Unique lithography cluster centered around ASML equipment
- ▶ Advanced equipment and preproduction tools
- ▶ Ballroom type of cleanroom
- ▶ 4,800m² class 1,000 area



300mm PILOT LINE:

- ▶ Silicon pilot line for (sub-)22nm
- ▶ Semi-industrial operation - 24/7, process monitoring, short cycle time

PREPARING 450mm

- ▶ Funding Flemish Government
- ▶ Towards Europe's innovation engine



IMEC OPEN INNOVATION OFFERING

Open innovation in nano-electronics through a global industrial partnership

Services

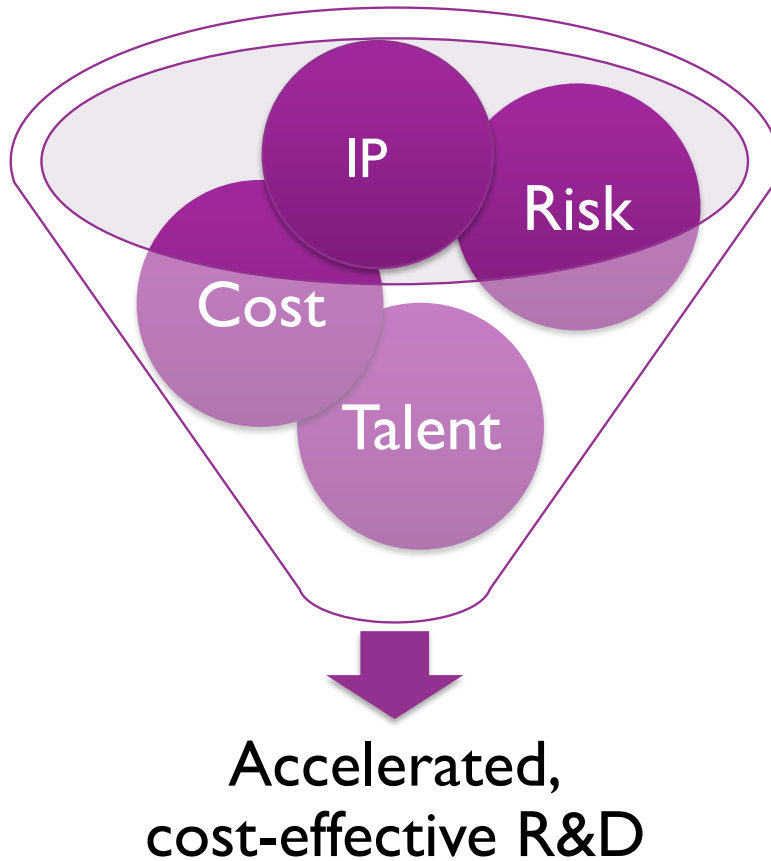
Training

Spin-offs

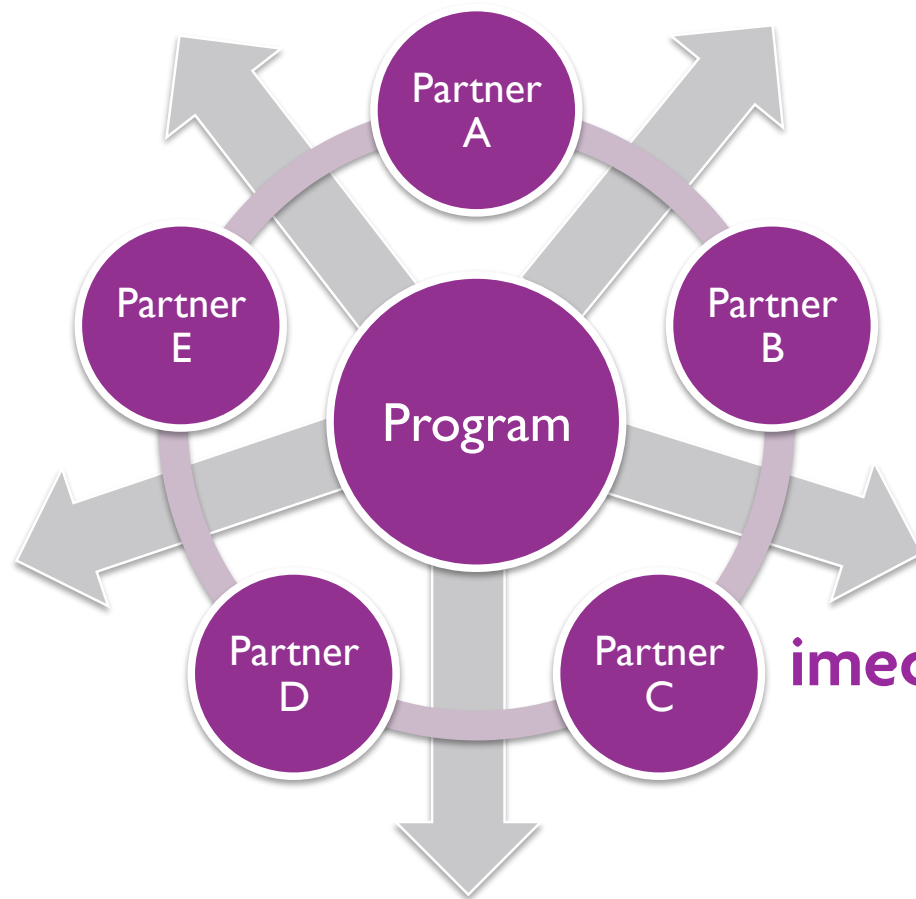
Transfer
& licenses

Joint R&D

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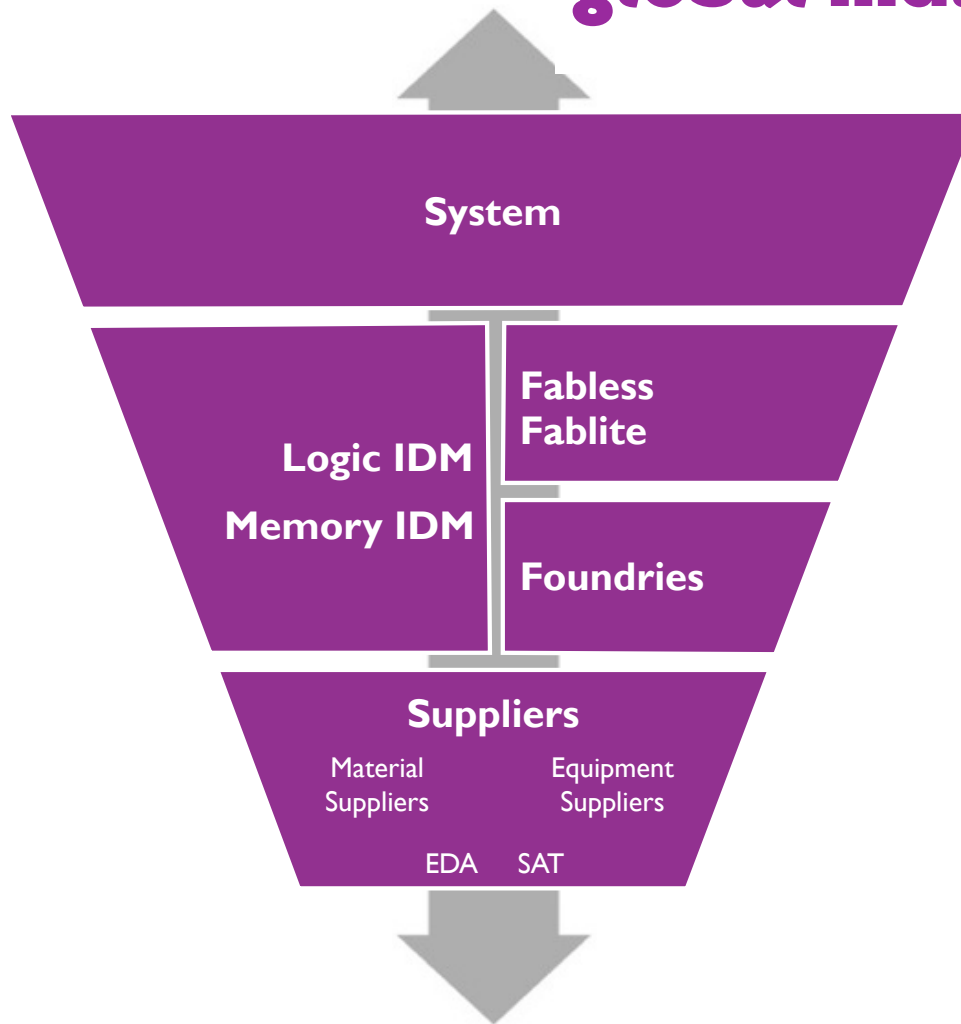


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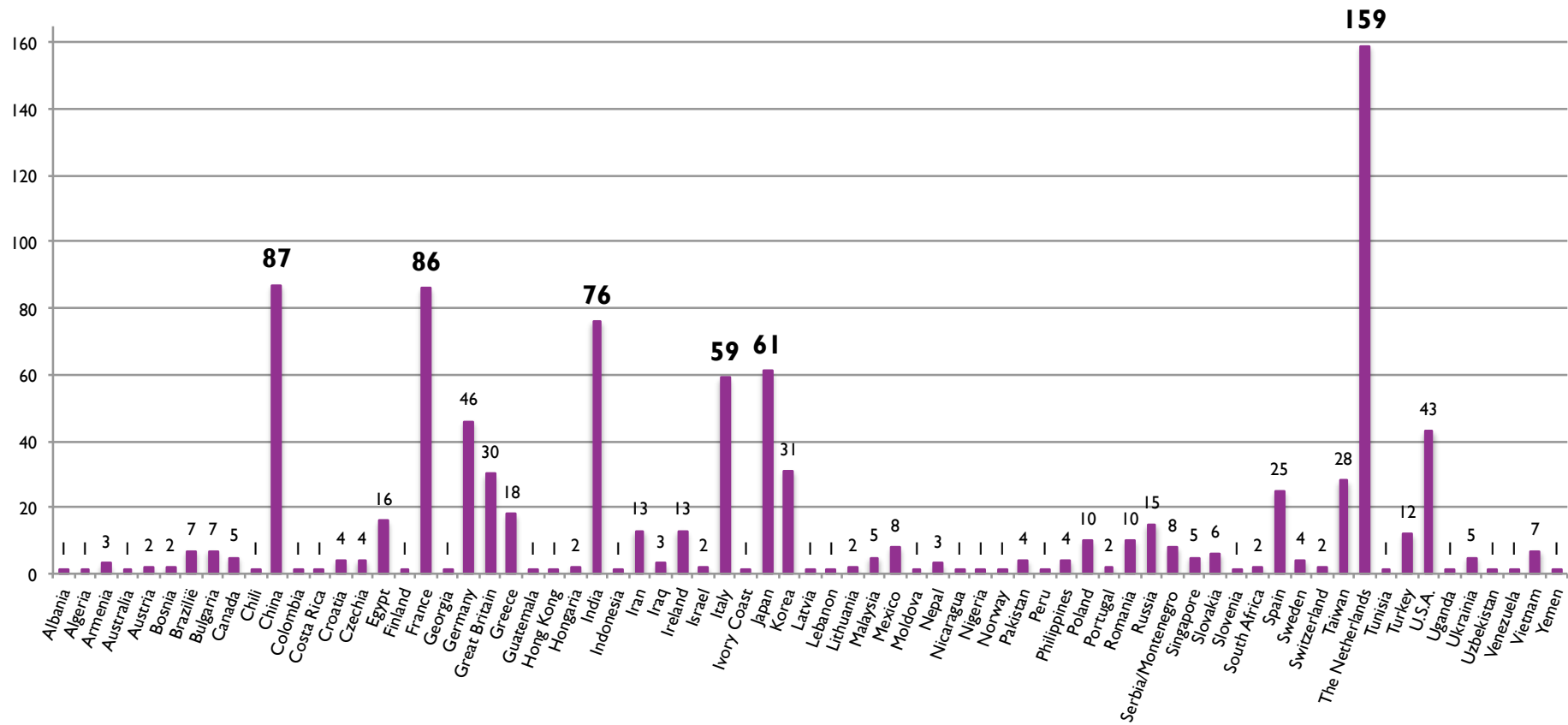


imec industrial affiliation program
customized programs
demonstrators
low volume production

Open innovation in nano-electronics through a global industrial partnership



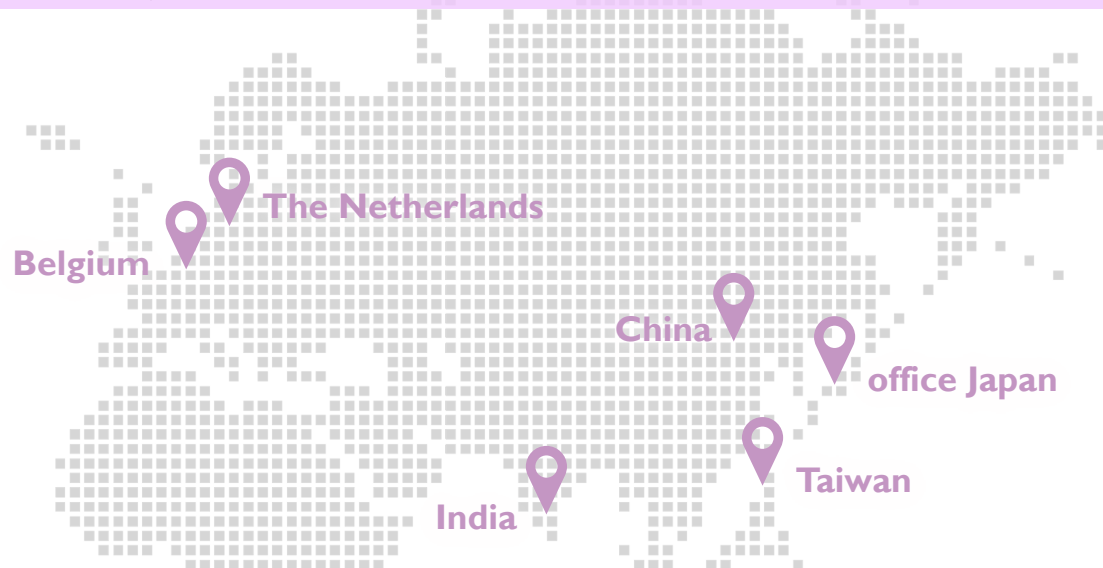
Open innovation with global talent



Open innovation in nano-electronics through a global industrial partnership



International network of R&D sites and representation offices
Unity of IP policy and IP use in programs
Unity of management through imec International



Contribution to regional economy

PERFORMANCE INDICATORS

International excellence: Leading international R&D partnership

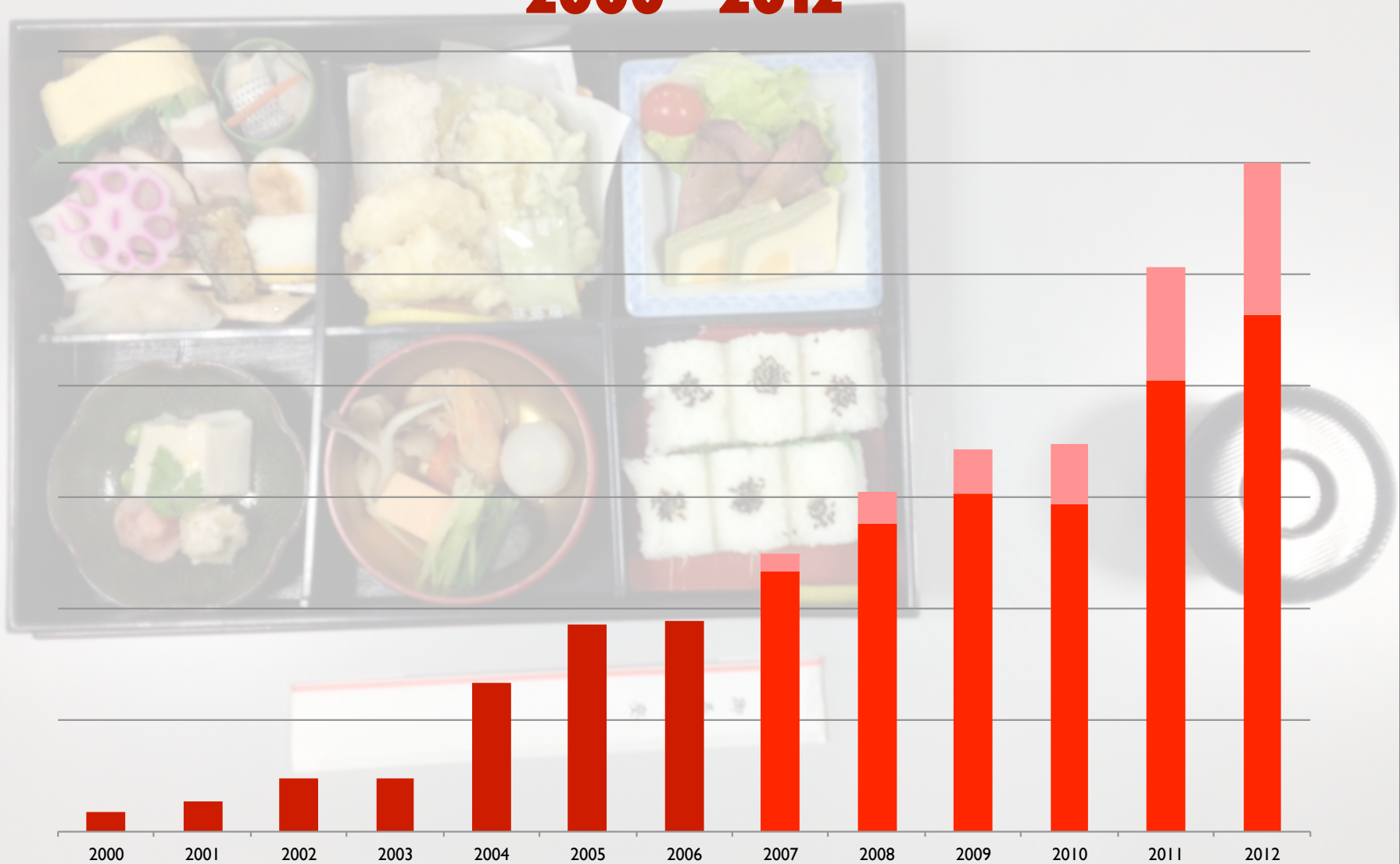
Long term vision: university collaboration and teaching

Local impact: enhancing regional participation and innovation

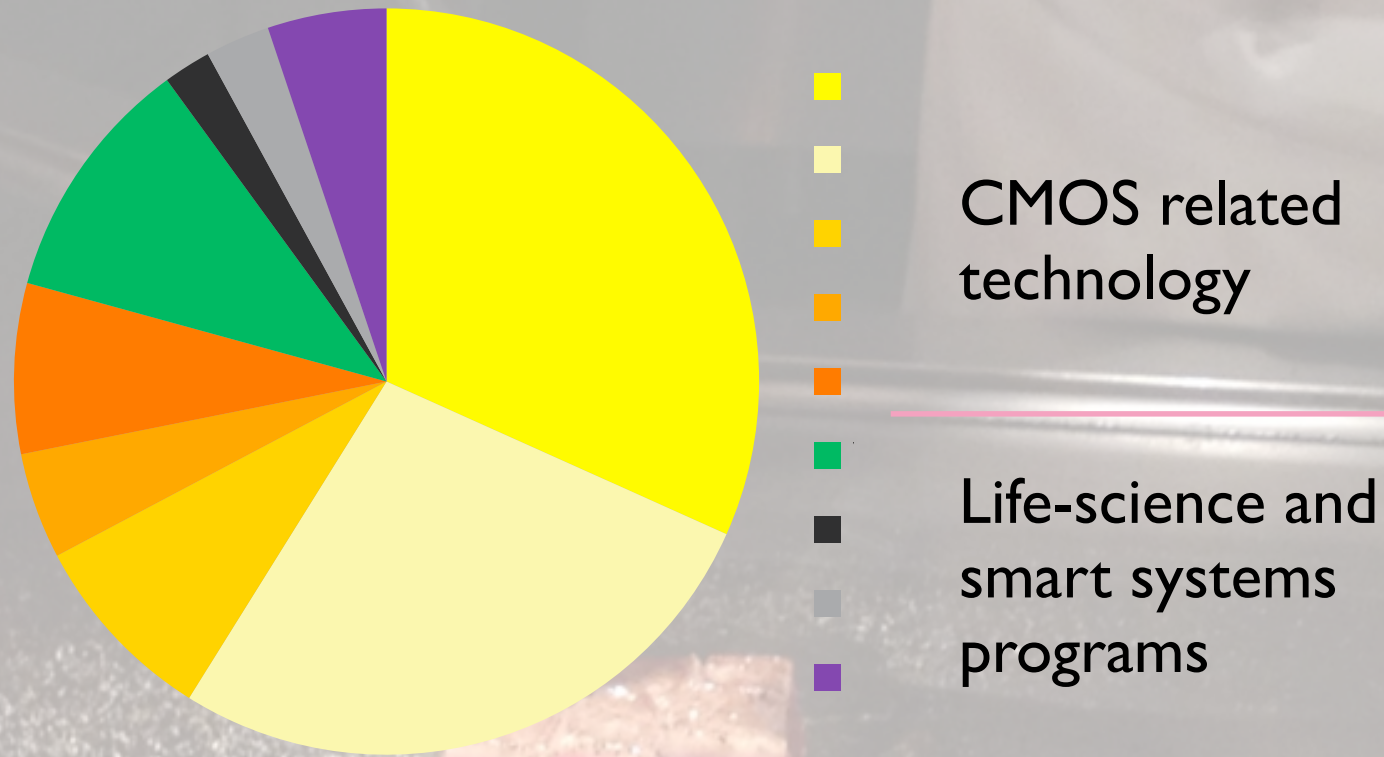


imec in Japan

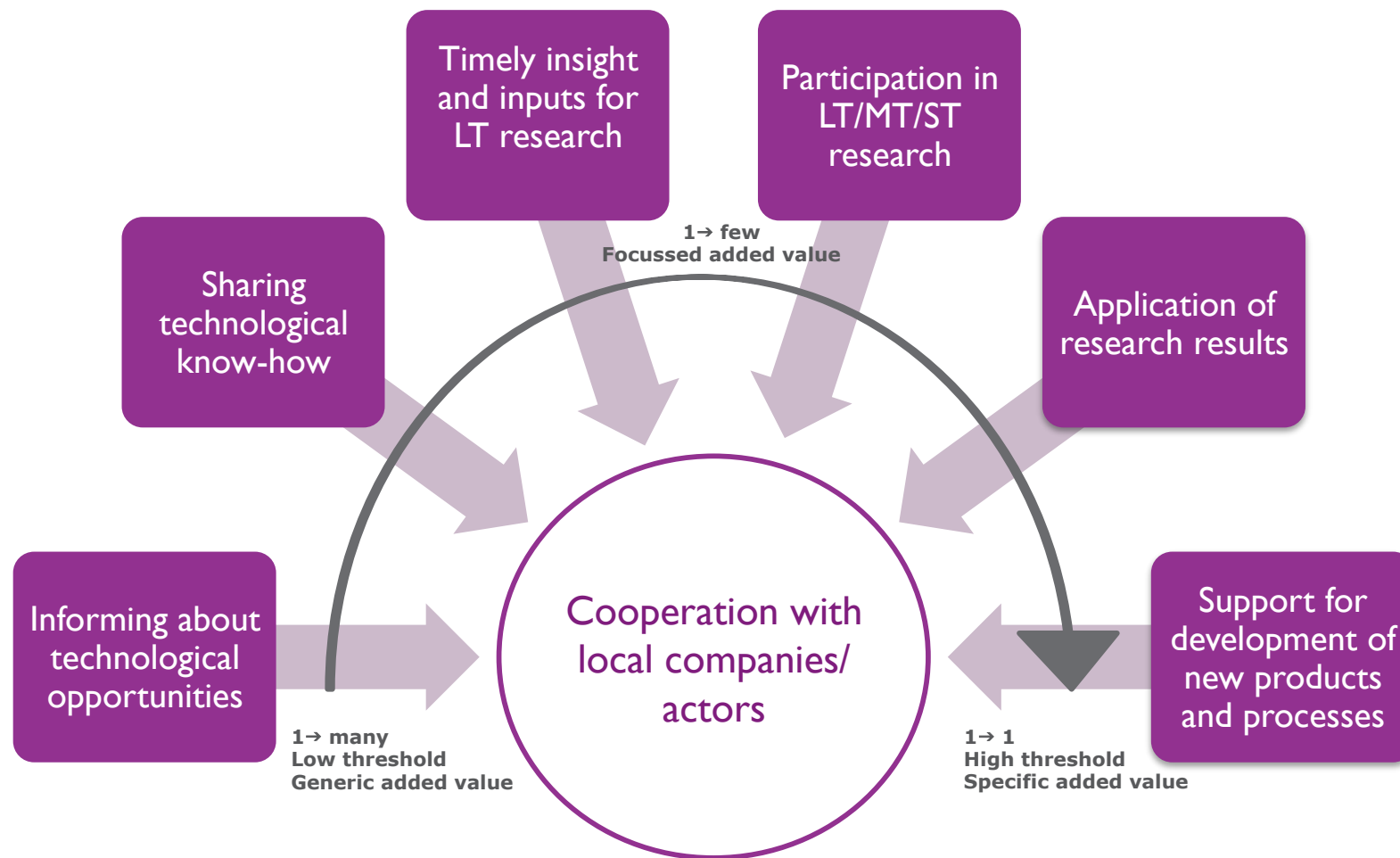
imec partnership with Japanese companies 2000 - 2012



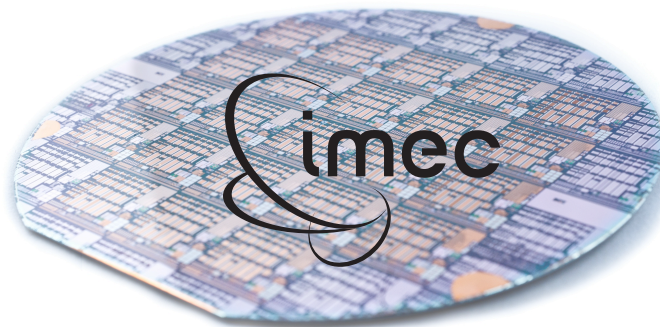
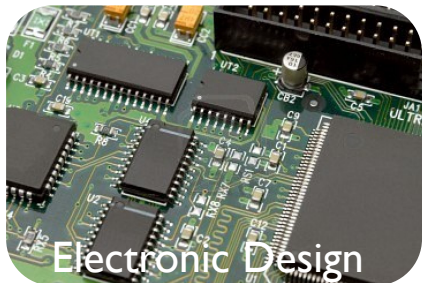
imec partnership with Japanese companies 2000 - 2012



COOPERATION WITH LOCAL COMPANIES/ACTORS



EXPANSION MODEL FOR LOCAL INDUSTRY: MICROELECTRONICS FOR BENEFIT OF OTHER SECTORS



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THANK YOU