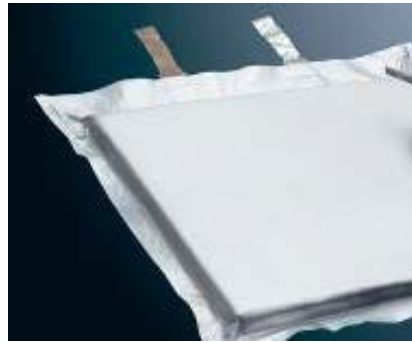


# THE FRAUNHOFER MODEL

BRIDGING THE GAP BETWEEN SCIENCE AND INDUSTRY



German Science Day in Iran | 27 February 2018 | Teheran

Denise Kaske | Business Development Manager | Fraunhofer-Gesellschaft

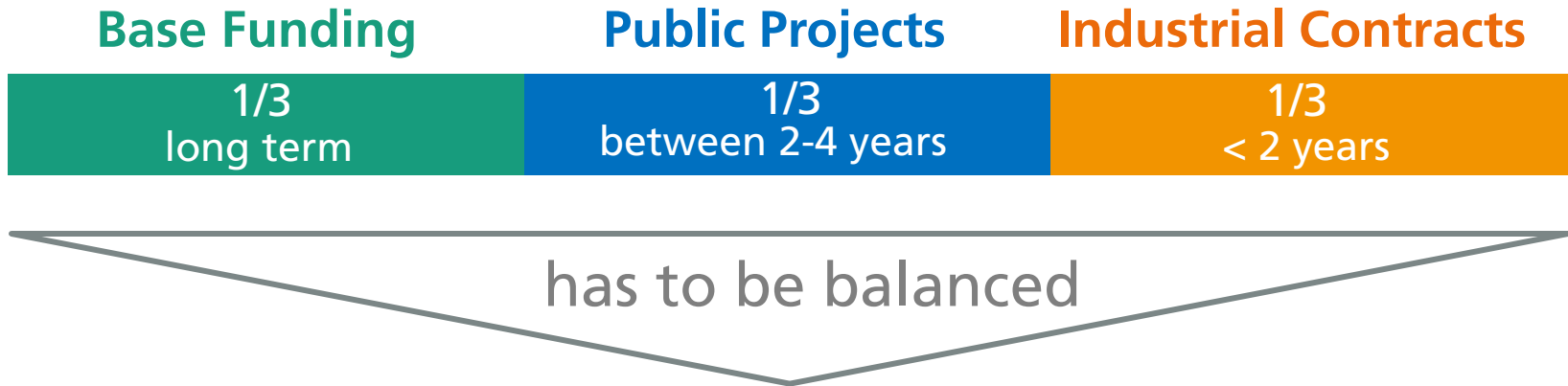
# Fraunhofer-Gesellschaft, the largest organization for applied research in Europe

- Application-oriented research for immediate benefit to the economy and to the benefit of society:
  - Most of the research at Fraunhofer is conducted either directly for industry partners or with relation to industry requirements
- 72 institutes and research units
- 25,000 staff
- €2.3 billion annual research budget totaling. Of this sum, more than €2.0 billion is generated through contract research
  - Roughly two thirds of this sum is generated through contract research on behalf of industry and publicly funded research projects
  - Roughly one third is contributed by the German federal and Countries governments in the form of base funding

# Fraunhofer fields of research

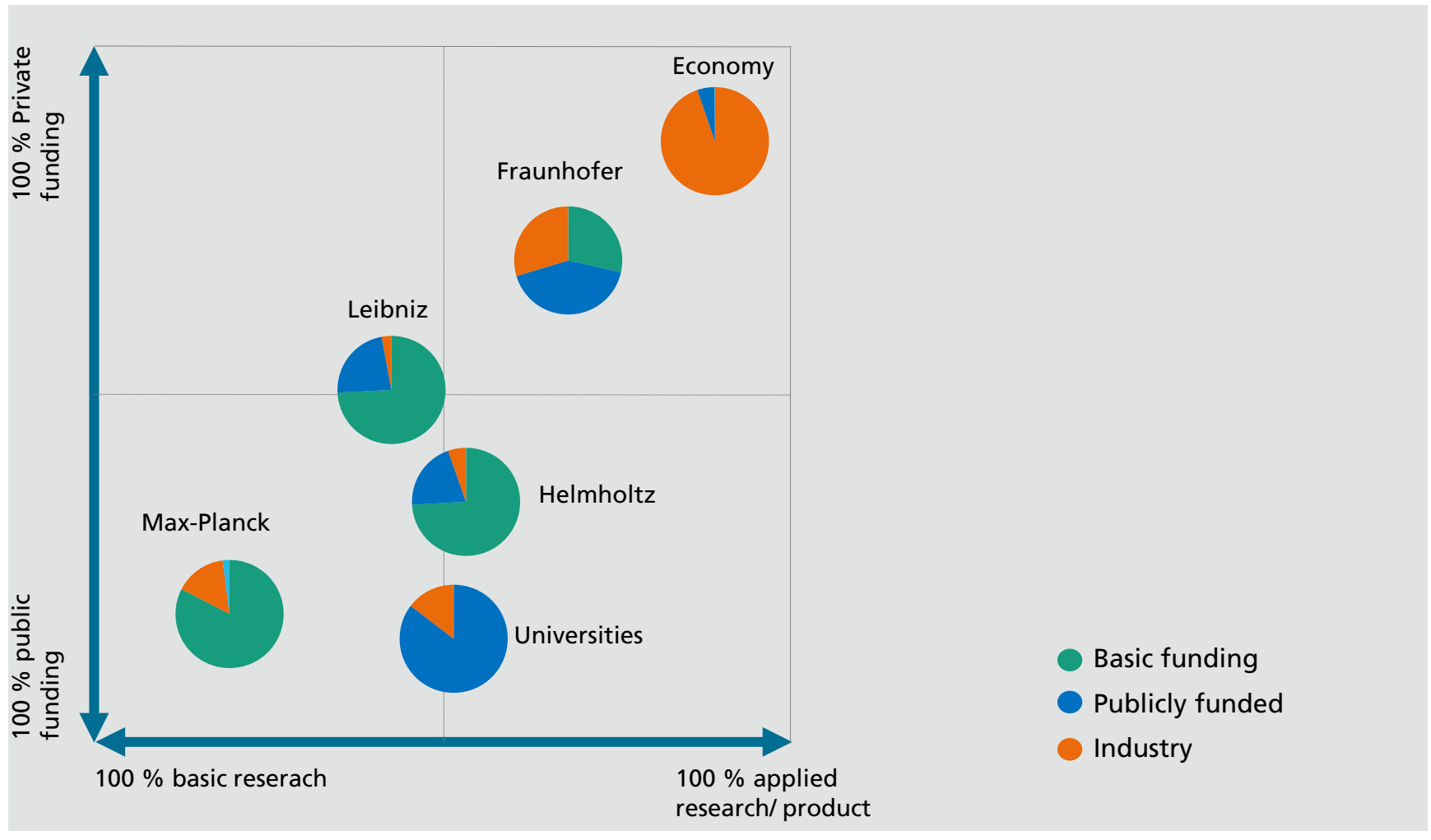


# Fraunhofer Model

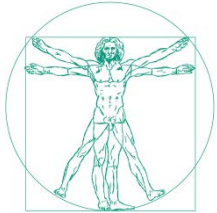


- **Base Funding:** continuity of scientific excellence
- **Public Projects:** precompetitive research (networks)
- **Industrial Contracts:** direct innovation push

# Fraunhofer's position in the German Innovation System



# Fraunhofer Institutes Demands



**Scientific competence**  
proved by the  
recognition of the  
scientific community



**Well-balanced  
financial mix**  
of different  
independent sources



**Market success and  
entrepreneurial  
competence**  
proved by contracts  
with industry and  
government



**Professional  
networking**  
with other Fraunhofer  
Institutes and  
externals

# Cooperation with Universities

**Institutional integration by dual appointment:  
Fraunhofer Institute director = University professor (chair)**

## Fraunhofer Institute

- access to basic research
- recruitment of junior scientists
- recruitment of students (interns, undergraduates)
- opportunities for employees to gain scientific qualification (doctorate, professorship, contributing to the university's curriculum)

## University Chair

- cooperation in industry-oriented projects; opportunities for interns, undergraduates and graduates to gain practical experience
- integration of practical applications into the curriculum
- access to cost-intensive equipment

# Growth in inventions and patents 2012 – 2016

	2012	2013	2014	2015	2016
Active patent families at year end*	6103	6407	6625	6573	6762
Invention disclosures reports per year	696	733	736	670	798
Patent applications per year	499	603	563	506	608

\* Portfolio of active rights (patents and utility models) and patent applications at year end.



# Support for spin-offs from Fraunhofer Venture

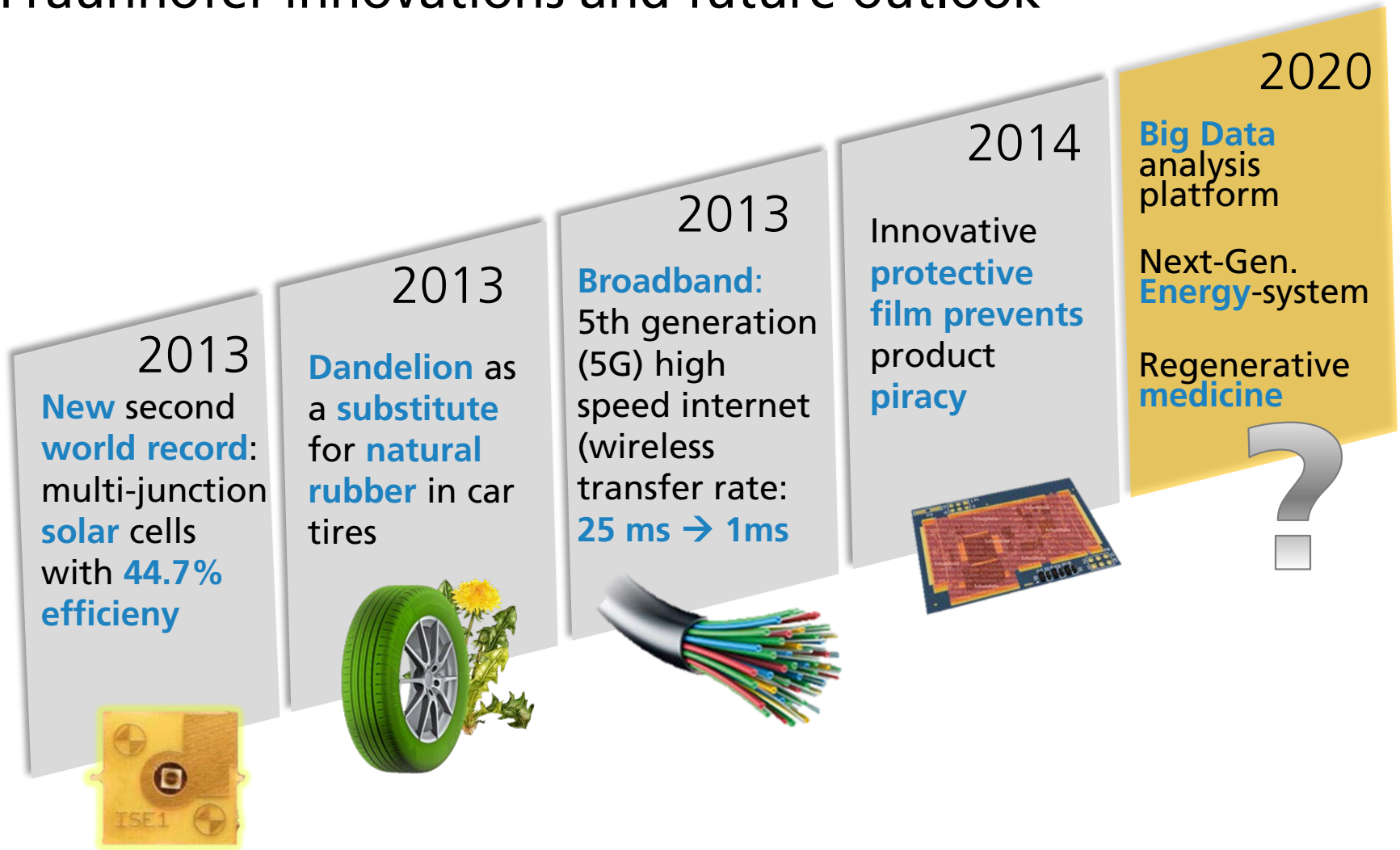
## Services

- Central point of contact for all Fraunhofer Institutes and founders in questions of business or law
- Analysis of proposals for founding new companies and help in developing budgets and business plans, as well as in setting up contracts
- Two internal funding programs, Fraunhofer Fosters Entrepreneurship (FFE) and Fraunhofer Fosters Management (FFM), amounting to around 2 million euros a year
- Network of financing partners
- Management of all Fraunhofer equity investments
- Establishment of a spirit of entrepreneurship at the Fraunhofer Institutes through FFI – Fraunhofer Fosters Innovation



# It does not happen without vision

## Fraunhofer innovations and future outlook



# Fraunhofer in a Nutshell



University

 **Fraunhofer**

Industry

- strong integration with **academia**
  - demand driven **research** combined with **scientific excellence**
    - professional R&D services for **industry**

**autonomy** of institutes + simple corporate rules and **strong branding**

# Fraunhofer international cooperation

## ■ Goals

- Scientific added value for Fraunhofer and partner organization
- Positive Effects for both: Germany and partner country

## ■ Topic areas

- Energy, resources and environment, including water and waste management
- Cultural heritage: Digitalization

## ■ Possible cooperation models

- Participation in bilaterally funded public projects (Germany, Iran)
- EU calls that allow participation of Iranian partners
- Fraunhofer as partner of German industry that together cooperate with Iranian organization



# Fraunhofer

**Working for the future.**

Denise Kaske | Business Development Manager | [denise.kaske@zv.fraunhofer.de](mailto:denise.kaske@zv.fraunhofer.de)

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# Fraunhofer in a Nutshell

- ▶ professional R&D services to industry
- ▶ demand driven research combined with scientific excellence
- ▶ strong integration with academia
- ▶ autonomy of institutes combined with simple corporate rules and strong brand
- ▶ working in networks