



Innovation and the MENA Region

**TECHNIK ALS BRÜCKE
DER KULTUREN**
ENGINEERING AND TECHNOLOGY
BRIDGING CULTURES

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**EUROPA IM NAHEN OSTEN
DER NAHE OSTEN IN EUROPA**
Europe in The Middle East – The Middle East in Europe
22. Februar 2008, 10.00 – 21.00 Uhr
Berlin-Brandenburgische Akademie der Wissenschaften
Leibniz-Saal, Markgrafenstraße 38, 10117 Berlin

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Koordination Jahresthema 2007/2008

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Jahresthema
2007/08
Europa im Nahen Osten
Der Nahe Osten in Europa
berlin-brandenburgische
AKADEMIE DER WISSENSCHAFTEN

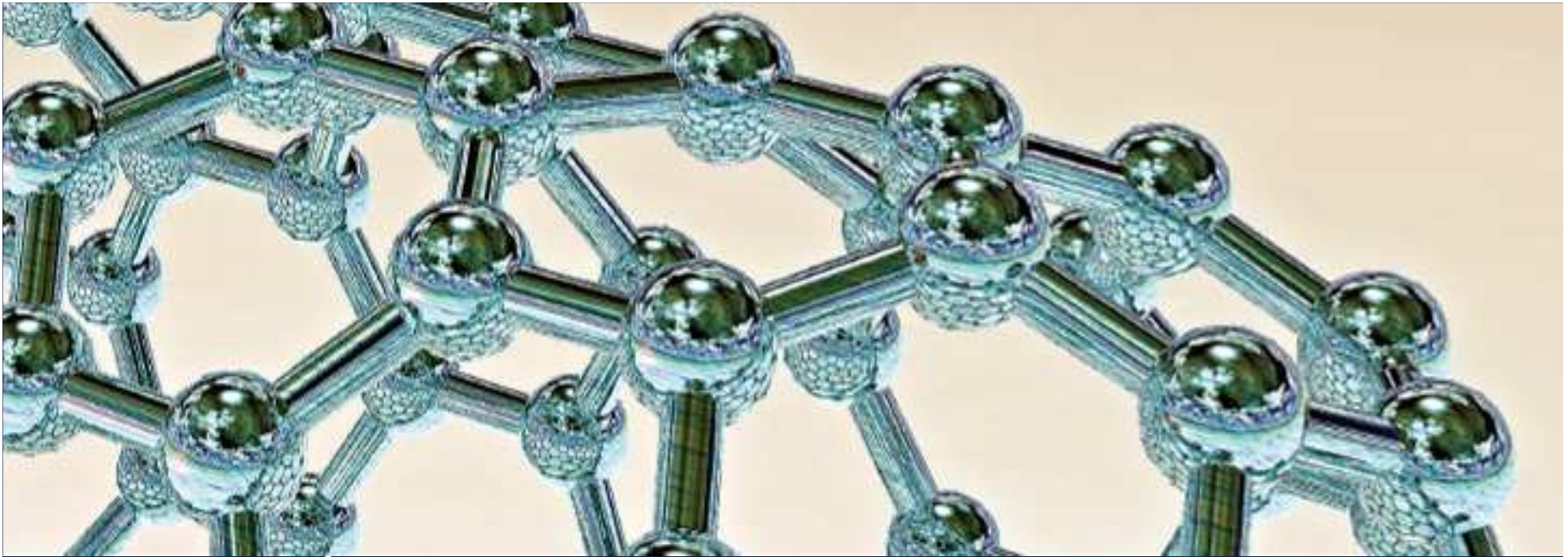


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Innovation and the MENA Region

Focus Industrial R&D, Focus UAE: Challenges and Initiatives

Dieter R. Fuchs



President

General Manager
Middle East





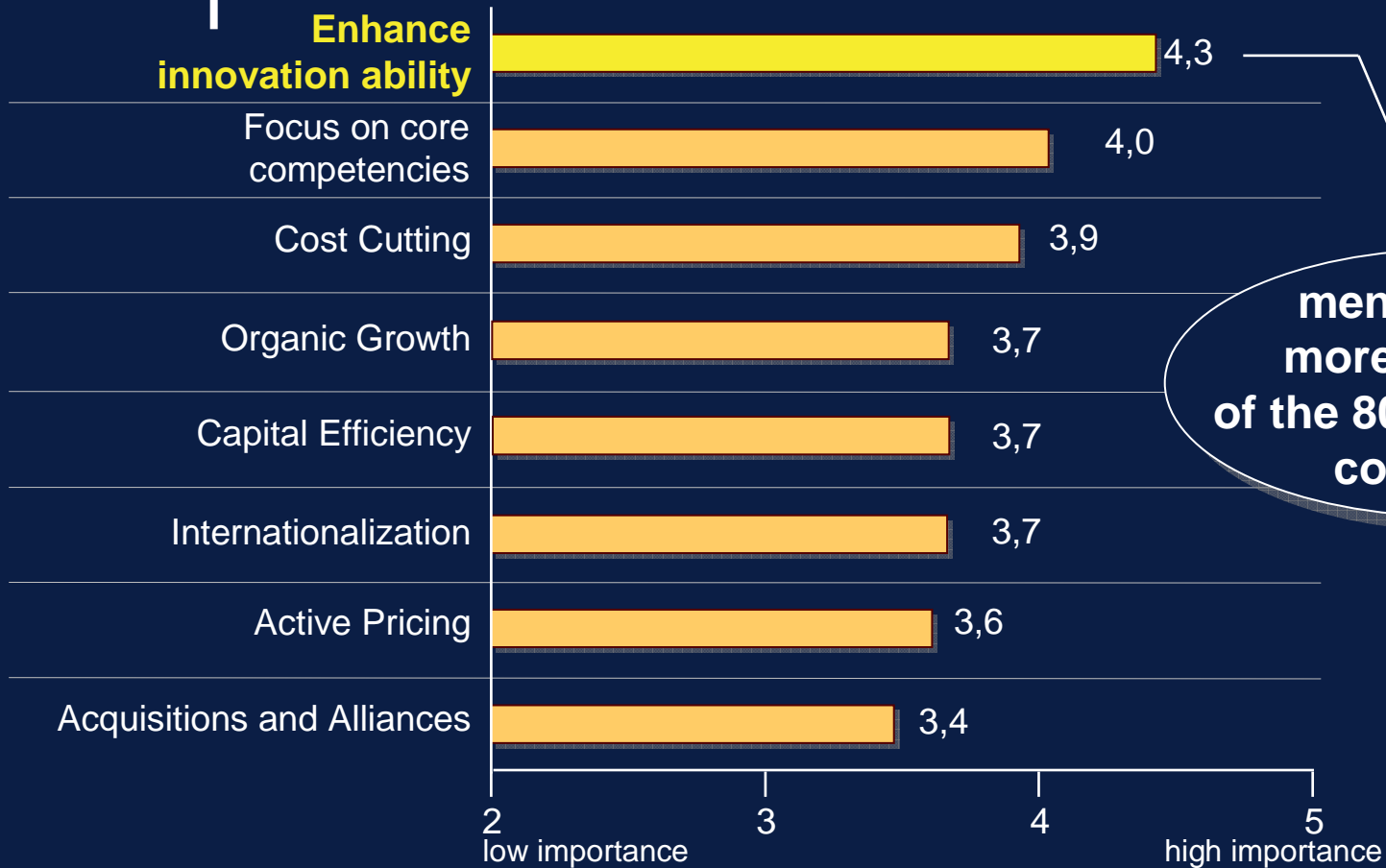
**It is by no means certain
that things will become better
when they change,
but in order to become better,
they have to change.**



Georg Christoph Lichtenberg
German physicist and author
(1742-1799)



Main levers for increased growth and profit



mentioned by more than 90 % of the 800 interviewed companies

Source: Arthur D. Little Innovation Excellence Study 2005



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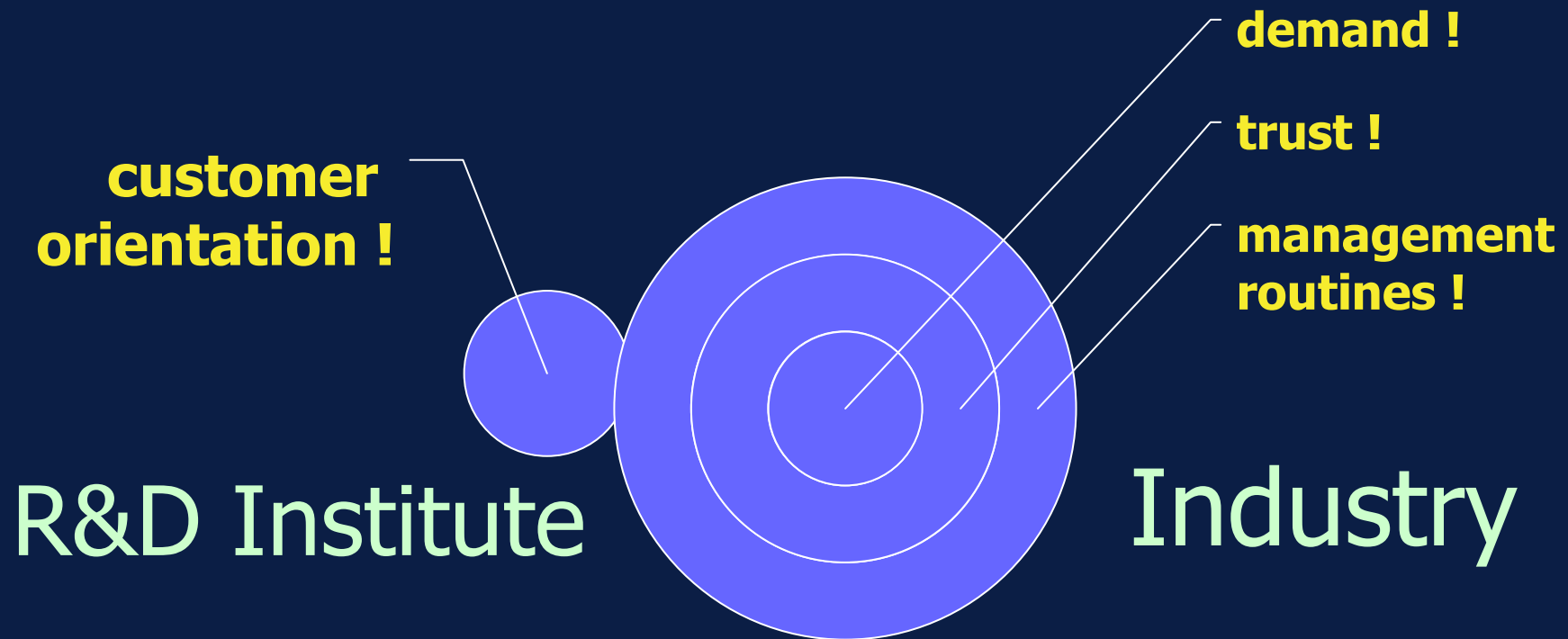
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MENA: A Most heterogeneous Region

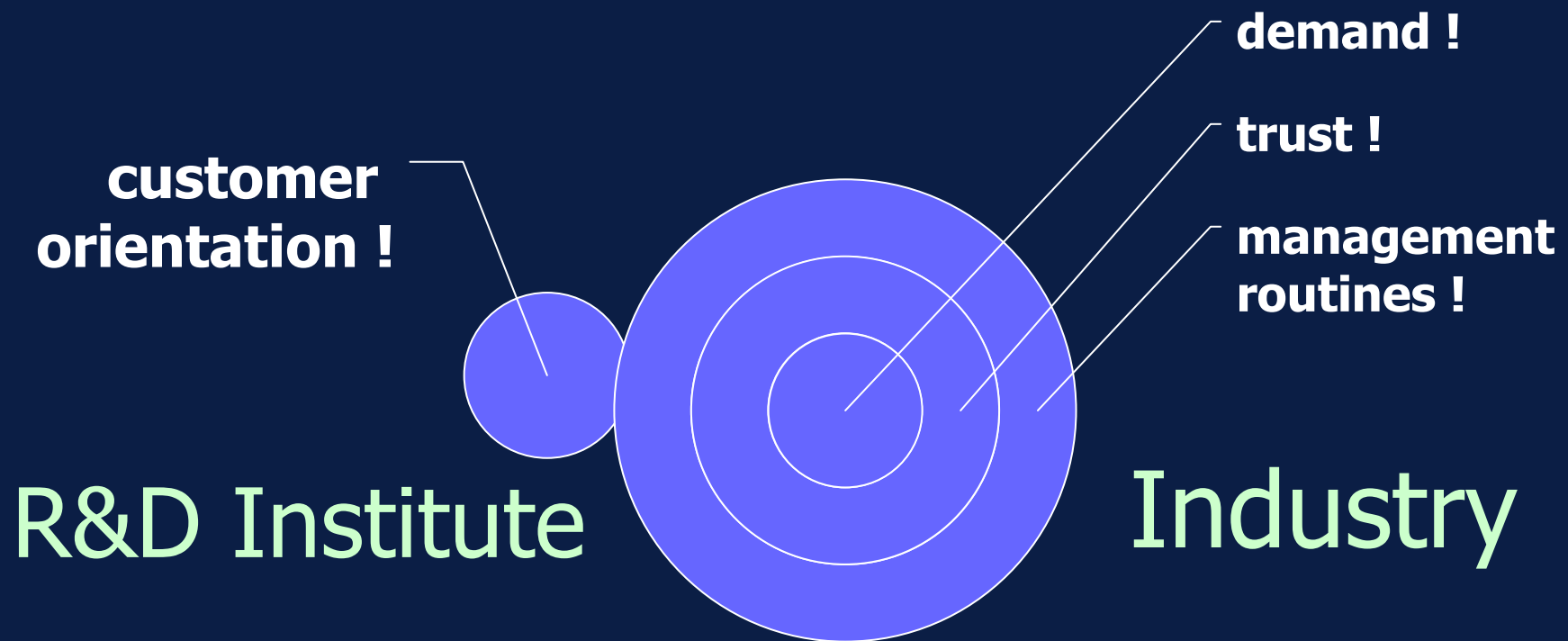


- "Taking risks" does not yet apply for technology:
"To buy proven state-of-the-art at lowest prize" is still a dominating factor in MENA !
- "Quality" in the service sector (so: also in R&D) is seen in a different way !

● ● ● | **Science & Industry: A Team !**
Reality or Vision ?!



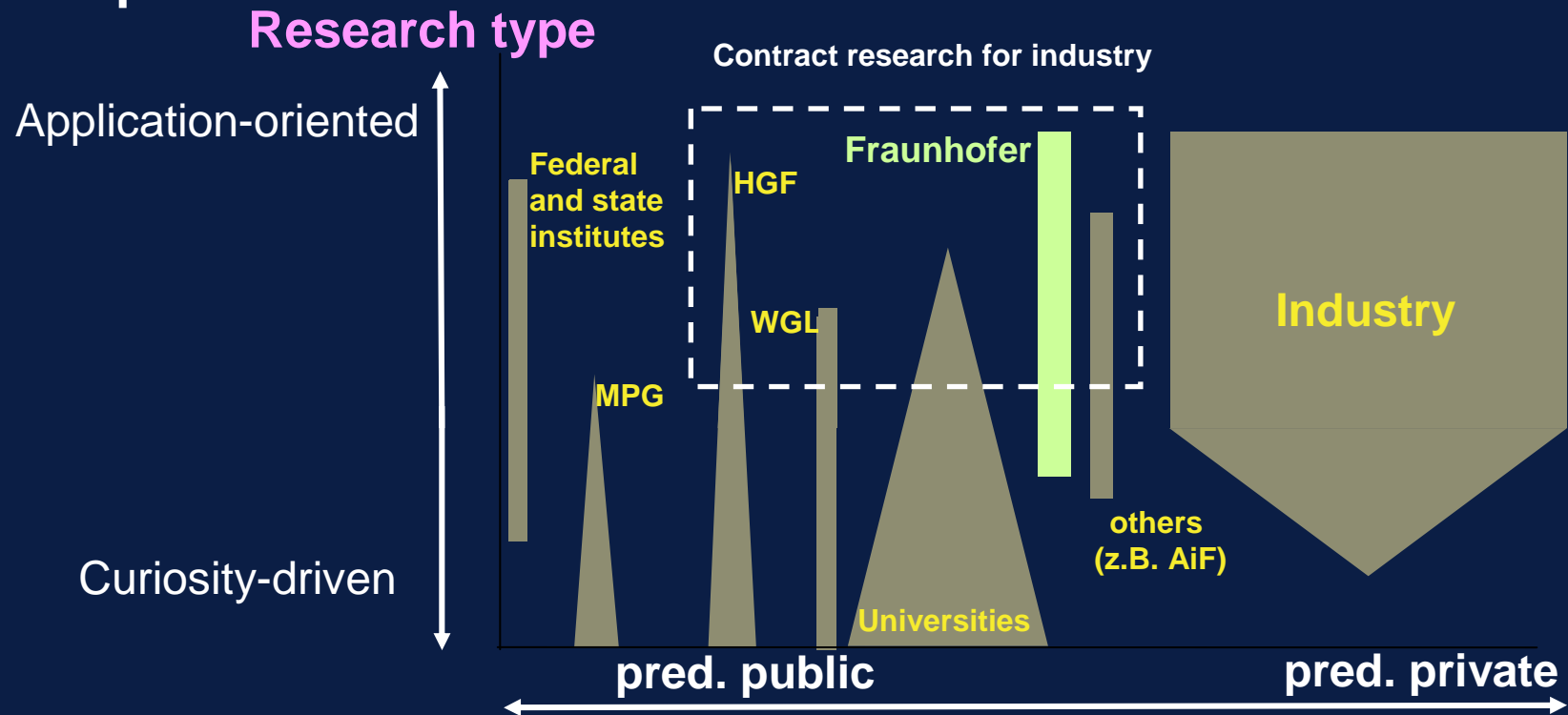
● ● ● | **Science & Industry: A Team !**
Reality or Vision ?!



no gap, but many challenges !!



The German research landscape



HGF Hermann von Helmholtz-Gemeinschaft
WGL Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz
AIF Arbeitsgemeinschaft industrieller
Forschungsvereinigungen
MPG Max-Planck-Gesellschaft



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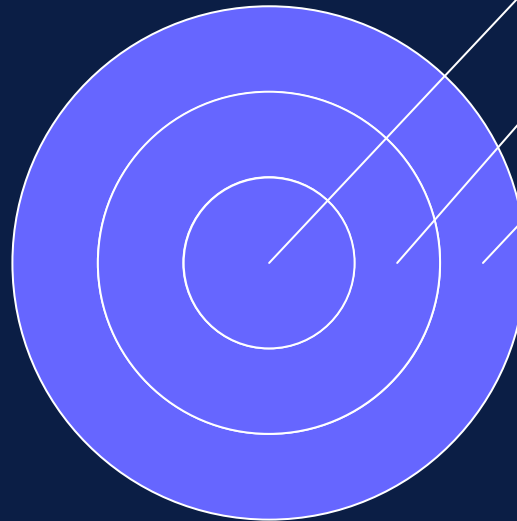
● ● ● | Science & Industry in MENA ?

R&D services ?

education !



"Science" !
Research ?



needs !

?

?

Industry





Dubai

Visions became reality !



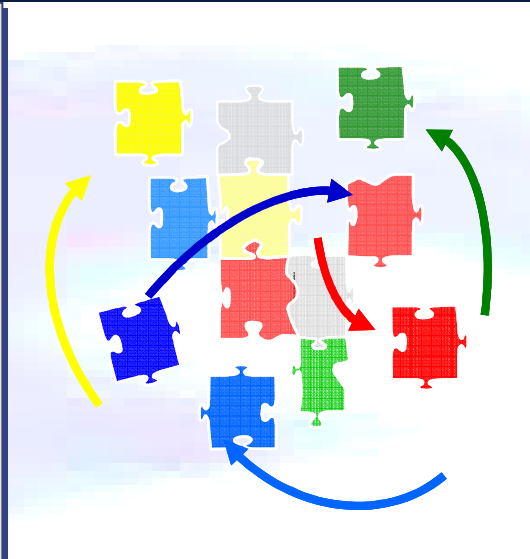
- Infrastructure
- Diversification
- Branding
- Think big !



With Innovations towards success and growth

Technological Innovations

Investment in research and development for the creation and launch of new products and services



Structure and process innovations

Development and implementation of creativity supporting environments for

- working,
- learning, and
- living

Innovations in Society and Politics

Creation and implementation of sustainable location factors for mobilizing individual and collective engagement

Innovation initiatives in Germany

- **“Partners for Innovation”**

Engagement of more than 400 experts in 15 working groups, advancing Germany’s innovation system by creating specific projects



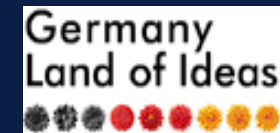
- **The campaign “Du bist Deutschland”**

To create an atmosphere of enthusiasm



- **The campaign “Germany – Land of Ideas”**

To strengthen the positive German image abroad



- **The High-tech Strategy for Germany**

Research focus on 17 High-tech Sectors (2006-2009)



- **Invest in Germany**

Promotion of Germany’s advantages as an excellent business location



Advertisement at Bank Station in London and Grand Central Station in New York



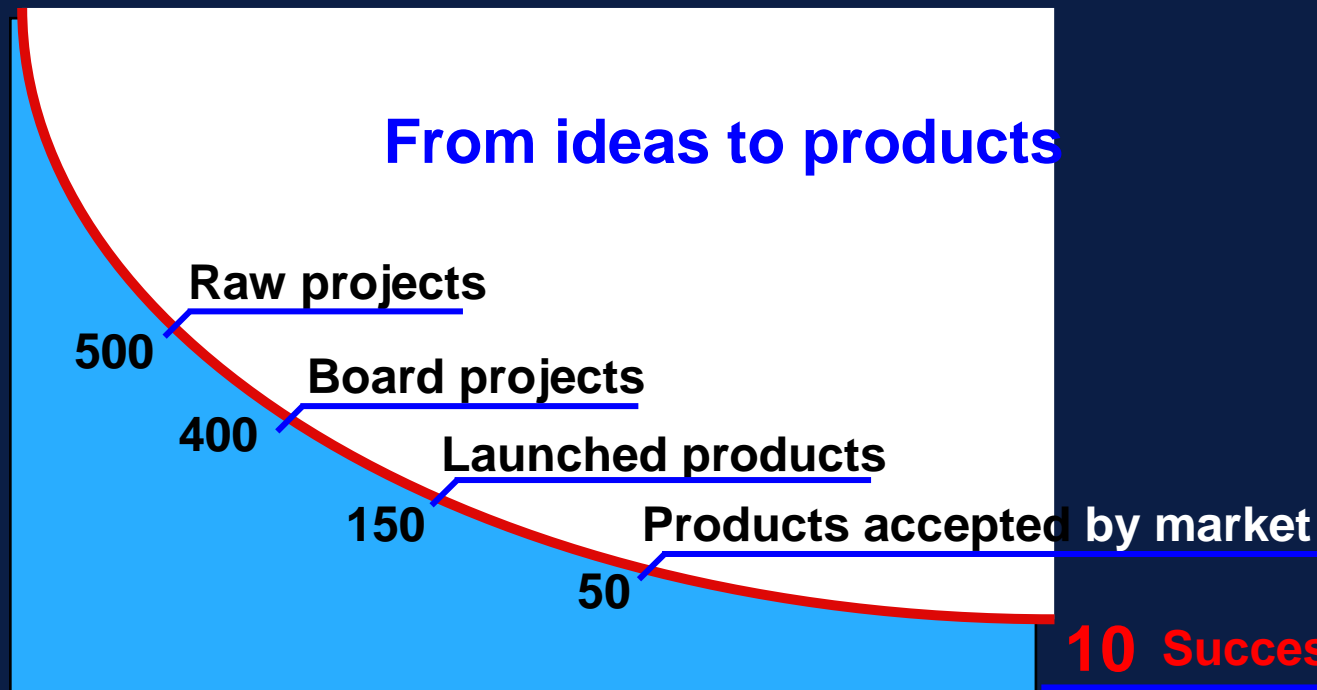
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**You have to kiss many frogs,
in order to have one prince!**

Arthur Frey, 3M, inventor of the post-it notes

2000 Fixed initial ideas



Source: mod. from Kienbaum

zusatz aus dem vakuum

1

weniger gewicht - weniger material

2

halbes preisziel realisieren

3

Lebenszyklus von der Entwicklung bis zur Produktion

4

Chemische Prozesse in der Produktion

5

Materialfluss, die sich selbst erfinden

6

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www.fraunhofer.de
 Over 15.000 contracts and projects every year for more than 7.000 companies and clients

Material für die Konstruktion

9

Materialien für die Konstruktion

10

schwebende aus dem raum

11

schwebende aus dem raum

12

wenn das Leben in einem neuen hing

13

Lebenszyklus von der Entwicklung bis zur Produktion

14

Wie kommen die stoffe in die anwendung

15

schwebende aus dem raum

16

schwebende aus dem raum

17

wenn das Leben in einem neuen hing

18

Lebenszyklus von der Entwicklung bis zur Produktion

19

Wie kommen die stoffe in die anwendung

20

Fraunhofer Profile in 2008

56 Institutes

12 600 employees

> US\$ 1.5 billion
research budget

Key Areas and Alliances

- Microelectronics
- Production
- Information and Communication Technology
- Materials and Components
- Life Sciences
- Surface Technology and Photonics
- Defense and Security Research



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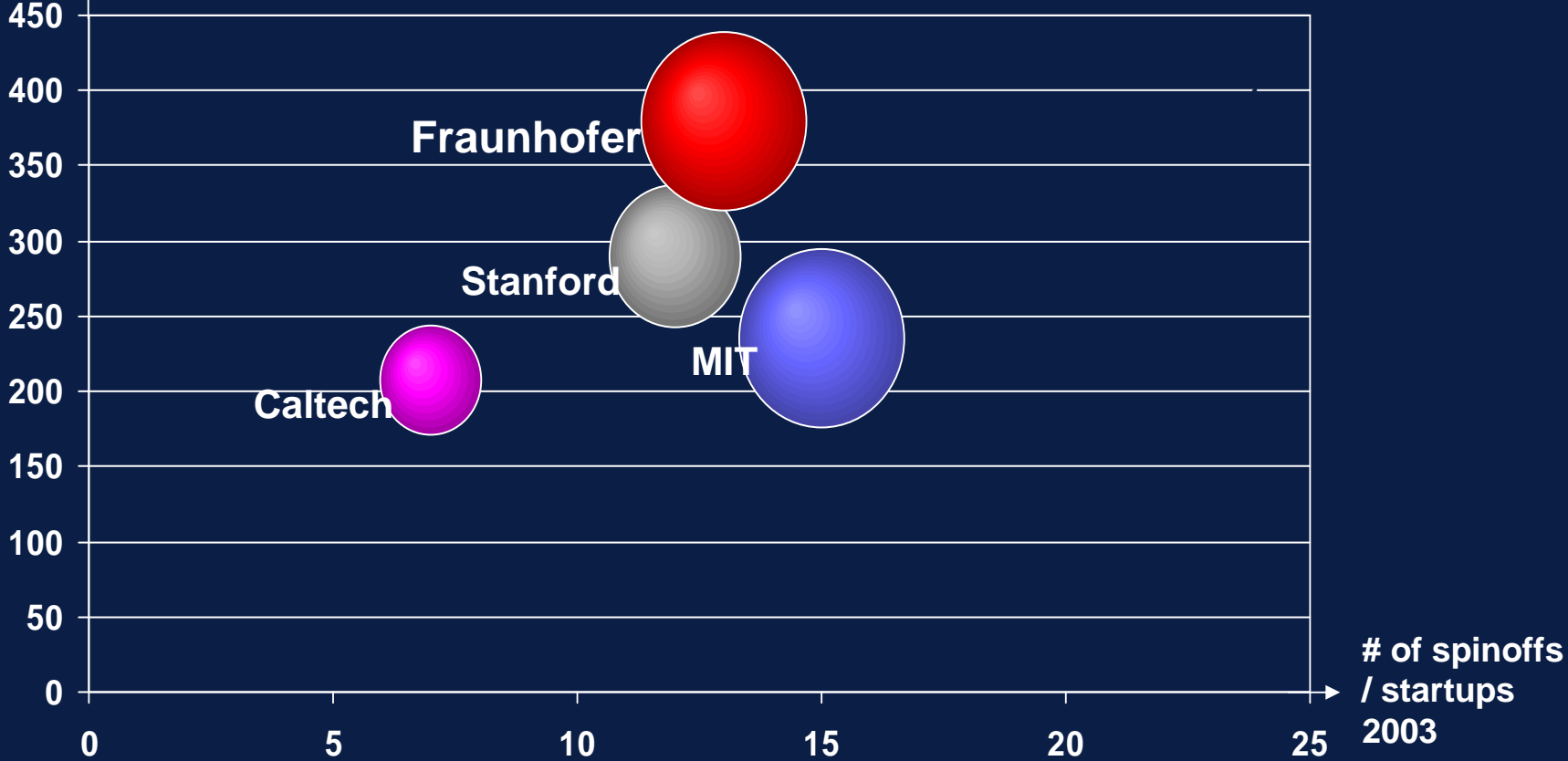
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Fraunhofer Benchmarks



Size of bubbles: Research expenditures 2003

of patents issued 2003



Source: Fraunhofer Venture Group, 2005
MIT Technology Review, March 2005



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Fraunhofer in Middle East

- Extend partnerships and test the market
- Participate in regional development
- Create additional business for German Fraunhofer Institutes
- Link local demands to international experiences and services



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Outstanding achievements in renewable energy



Strong activities in the following sectors:

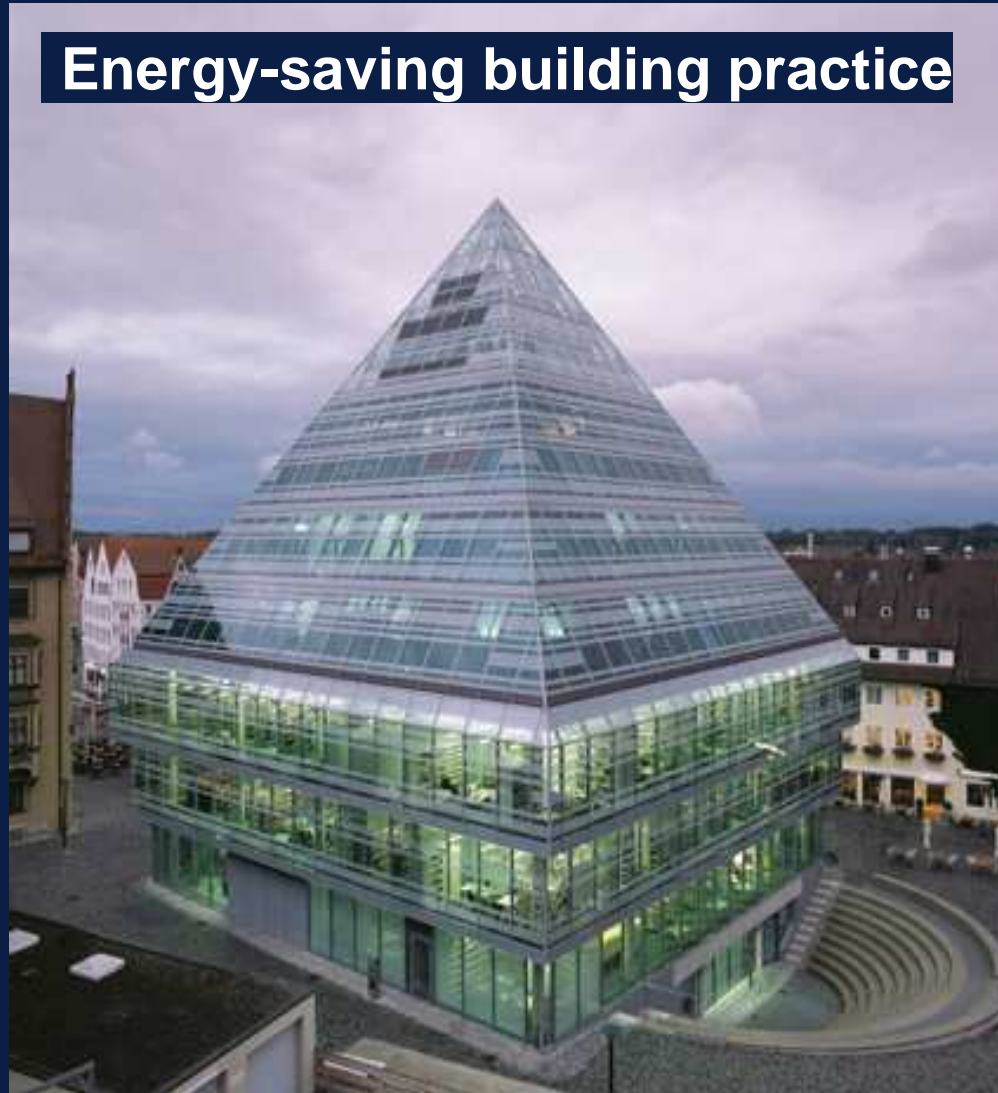
- photovoltaics, solar thermal heating and cooling and solar thermal power generation
- biomass, biogenous gases and alternative fuels
- wind power





Energy-saving building practice

The new public library in Ulm: Scientists determined the probable temperatures, airflow and daylight conditions with the aid of computer programs for light, heat and airflow measurement. Working hand in hand with the planners, they developed strategies for reducing energy costs and increasing comfort as means of optimizing the building's user-friendliness.



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A new multi-sensor inspection system

The sewage systems have to be inspected regularly to prevent leakage and reduce maintenance costs. Damage to the sewers is detected autonomously by sewer robots for example by the snake-like MAKROplus.





Dubai

Infrastructure Development



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Strategic Alliances

AME Info

The ultimate Middle East business resource

The readership of AME Info is independently audited by ABC ELECTRONIC

Unique Users: 883,984



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Posted By:	Anne-Birte Stensgaard (annebirte@ameinfo.com)
Published:	United Arab Emirates, Wednesday, February 06 - 2008 at 11:33 (GMT+4)
Media Value:	US\$ 3,250 (based on reach of audited readership)

TechnoPark signs MoU with WAITRO for cooperation with member organizations

TechnoPark, the science and technology facilitator of Economics Zones World has announced today that it has signed a Memorandum of Understanding with World Association of Industrial and Technological Research Organizations (WAITRO), on the establishment of a structured framework for

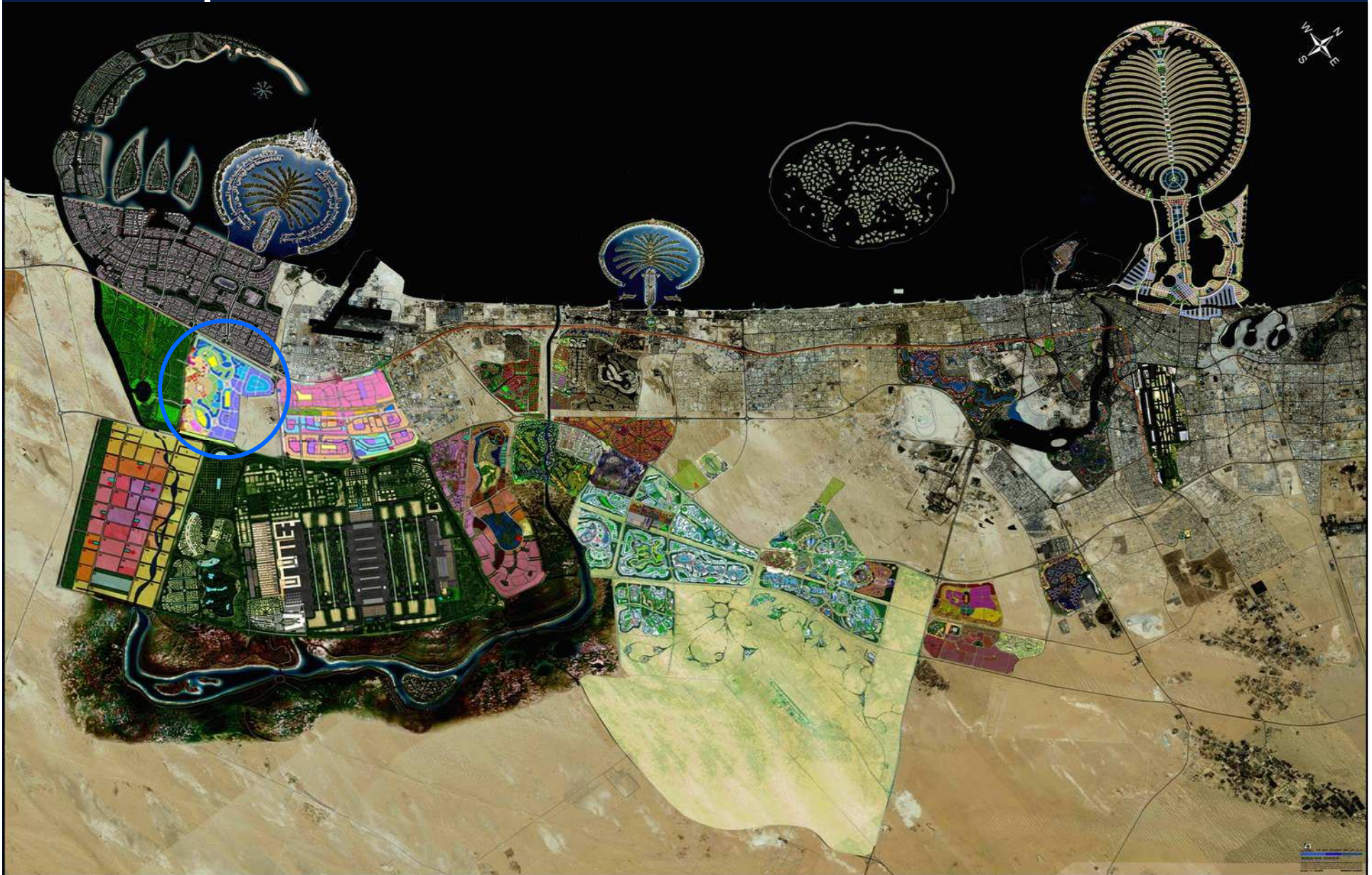


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New Dimensions

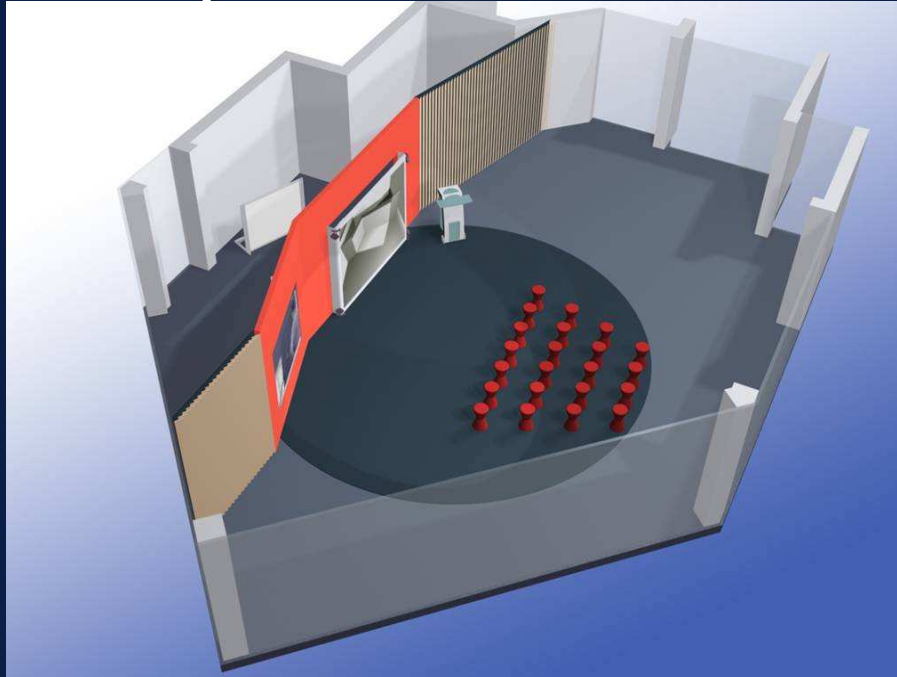


Networking



Service Engineering: ServLab –

Test environment for next generation services



ServLab



Source: Fraunhofer IAO

Technical Equipment:

- VR-Stereoscopic Projection Technology
- »Service Theatre«
- Rapid response auditorium



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Virtual Reality in Dubai

- Power Wall for innovative planning, design and demonstration
- showcase and service centre
- capacity building and training



Fraunhofer

Representative Office
Middle East

من بين الشركات المبتدئة
SS LOOTAH INTERNATIONAL

g r o u p
ONE



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New Initiatives in the Region



مسابقة

صنع في الوطن العربي



First Round of "Made in the Arab World" Competition Finals
November 3-4, 2007, Arab Republic of Egypt

الدورة الأولى لنهائيات مسابقة "صنع في الوطن العربي"
٣-٤ نوفمبر/تشرين الثاني ٢٠٠٧ - جمهورية مصر العربية



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Succeeding through innovation

**International
Partnership is a key !**

