

RTOs Relationship Management and Strategic Networking: a key to successful business development

**Incorporating science to practice, to commercialization, to impact:
how Fraunhofer does it**

Dieter R. Fuchs

**Welcome by WAITRO -
the World Association of
Industrial & Technological
Research Organizations !**

**Welcome by FRAUNHOFER -
the largest European
Application- and Industry-
oriented R&D Organization !**



ST-EAP Pretoria November 18, 2009





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

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



Source: mod. from Kienbaum



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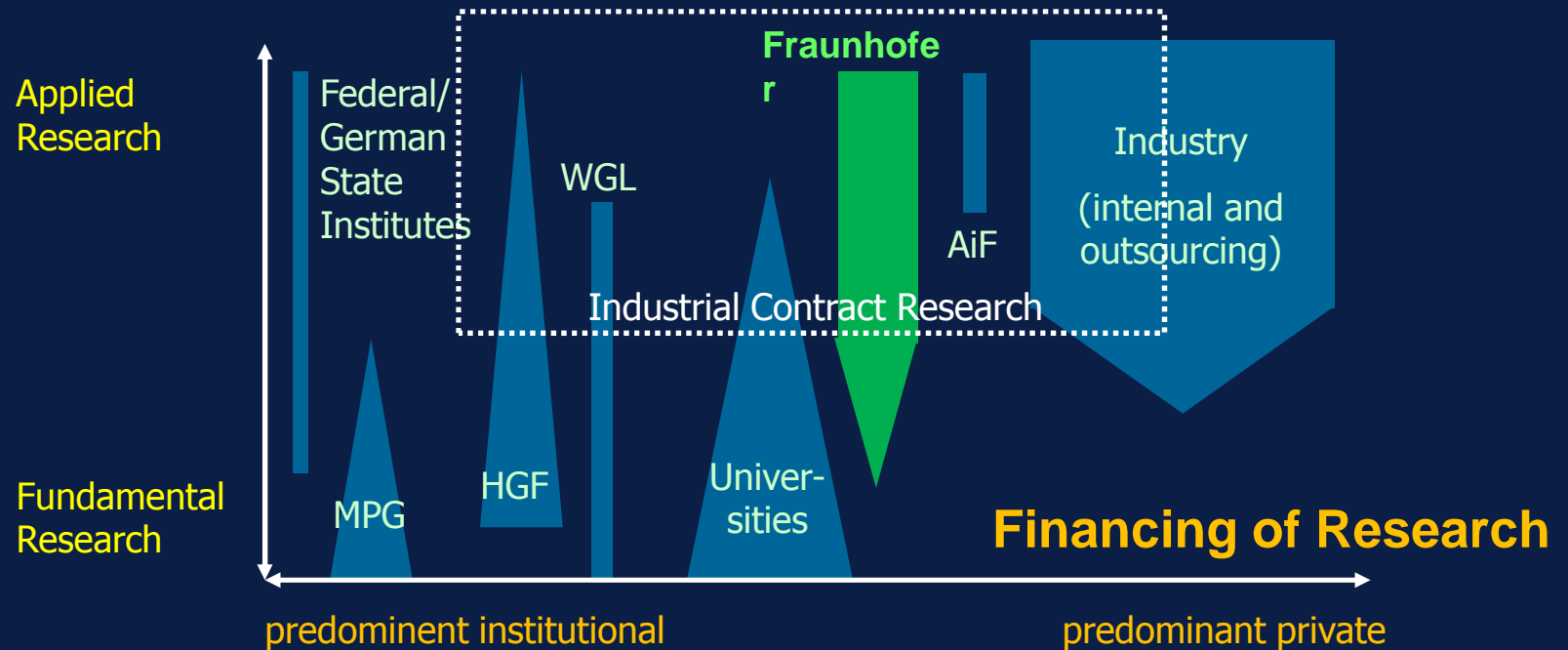
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Research in Germany

Characteristics of Research



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



Fraunhofer Profile in 2009

60 Institutes

17 000 employees

**> US\$ 2.1 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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Principle Understanding

- **To sell the R&D services of RTOs demands a different approach compared to selling products or less risky traditional services. Normal marketing- and PR routines need to be customized to address the special challenge.**
- **As mutual trust, sharing in-house know-how and very interdisciplinary teams are needed, long lasting relationship and multi-faceted networking processes need to be established.**



**Strategic Networking
is a key success factor for
business development !**



Fraunhofer in Germany

- 60 Institutes and 30 Branch Labs at more than 40 locations
- 17 000 employees close to their regional customers (SMEs)
- Neighbourhood relations possible



Concentrated forces - Shared resources: Innovation clusters as private public partnerships

Fraunhofer Innovation Clusters:

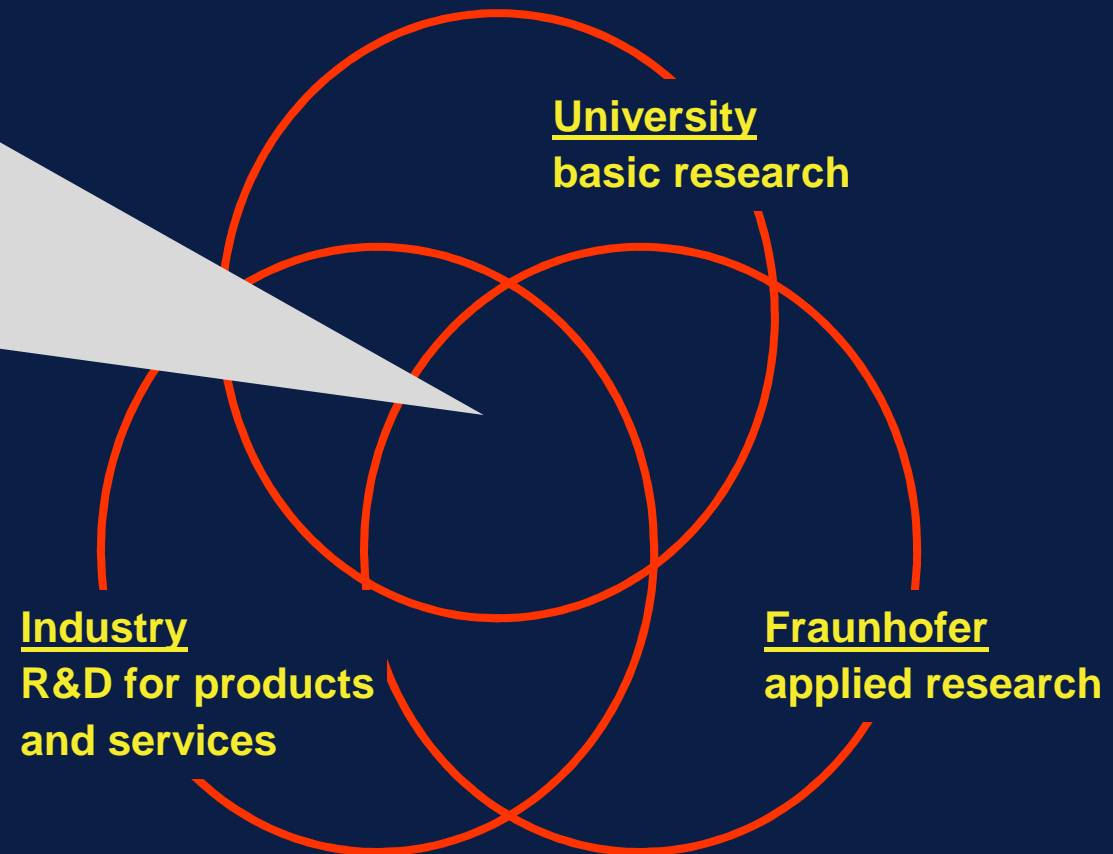
»**Mechatronic Engineering**«
in Chemnitz

»**Optical Technologies**«
in Jena

»**Digital Production**«
in Stuttgart

»**Personal Health**«
in Erlangen/Nürnberg

»**Nano for Production**«
in Dresden



Innovation cluster »Digital Production«



1 Intelligent Products

Assistance and Production systems to individualise the product

2 Digital Production

Adaptive Technologies to improve the quality and efficiency of manufacture and assembling

3 Versatile networks of enterprises

Intelligent business processes for cooperative development and production

4 IT as Enabler of digital production

Systems and technologies to support digital production

5 Management of digital Production

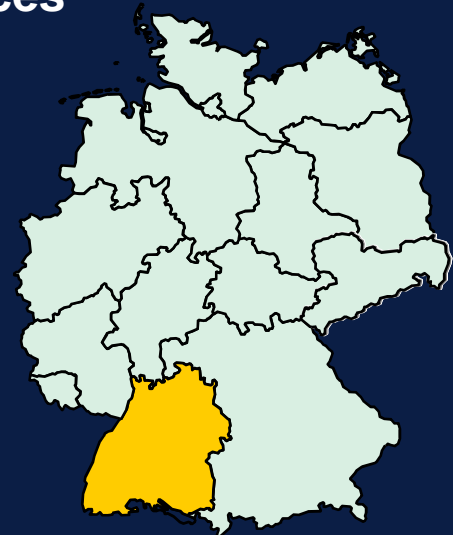
Strategies, Methods and ways to best-in-class Production



Innovation cluster »Digital Production«

Quality of the location through excellent products,
efficient processes and excellent resources

→ Close cooperation between State Government Baden-
Württemberg, Fraunhofer-Gesellschaft and Industry:



+ Chambers, NGOs, Associations,
Universities, TT Agencies,
Science Parks, Incubators,



Real PPP Public Private Partnership



Core strength of research....

**Knowledge
Scientific Excellence
Project Management
Interdisciplinarity
Creativity
Facilities**





... is pre-requisite !

**Knowledge
Scientific Excellence
Project Management
Interdisciplinarity
Creativity
Facilities**

Scientific Community



● ● ● | Routines

- **staying in the same professional „circles“**
- **science-centered thinking**
- **running for the quick cash**
- **following the old tracks**
- **comfort vs. risks and new, unusual steps**





Thinking out of the box ...

Business Community

**Market Knowhow
Service Mentality
Confidentiality
\$ & Time Awareness
Exclusivity**

.....

**Innovation vs.
Invention Approach**

**Knowledge
Scientific Excellence
Project Management
Interdisciplinarity
Creativity
Facilities**

Scientific Community





Thinking out of the box ...

Business Community

**Market Knowhow
Service Mentality
Confidentiality
\$ & Time Awareness
Exclusivity**

.....

**Innovation vs.
Invention Approach**

Social Community

**Integration
Transparency
Social Responsibility
Value Creation**

.....

**Knowledge
Scientific Excellence
Project Management
Interdisciplinarity
Creativity
Facilities**

Scientific Community





Complementing Linkages

RTO to:

**Universities
Basic Research
Funding Bodies
Foundations
IPR Agencies
TT Intermediaries
Science Admin
Science Journals**

.....





Complementing Linkages

RTO to:

**Ind. Associations
Ind. Consortia
Ind. Companies
Ind. Lobbyists
Economic
Agencies
Facilitators
Finance
Organizations
Investors
Startup Networks**

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RTO to:

**Local Admin
NGOs
Social Players
Schools
Media
Journalists
Clubs
.....
.....**





Guidance, Freedom and Encouragement

- **Professional management and framework to set such enlarged interactions into reality (special initiatives on corporate and organizational levels, earmarked budgets, adapted internal and external communications)**
- **Not only allowing individual engagement in such sense, but even encouragement of the staff on all levels that these additional activities are welcome and promoted**
- **Offering concrete programmes and including the individual performance in this broader sense into the evaluation and career procedures**



Boards of Fraunhofer

Supervision :

Assembly of Members
(formal)

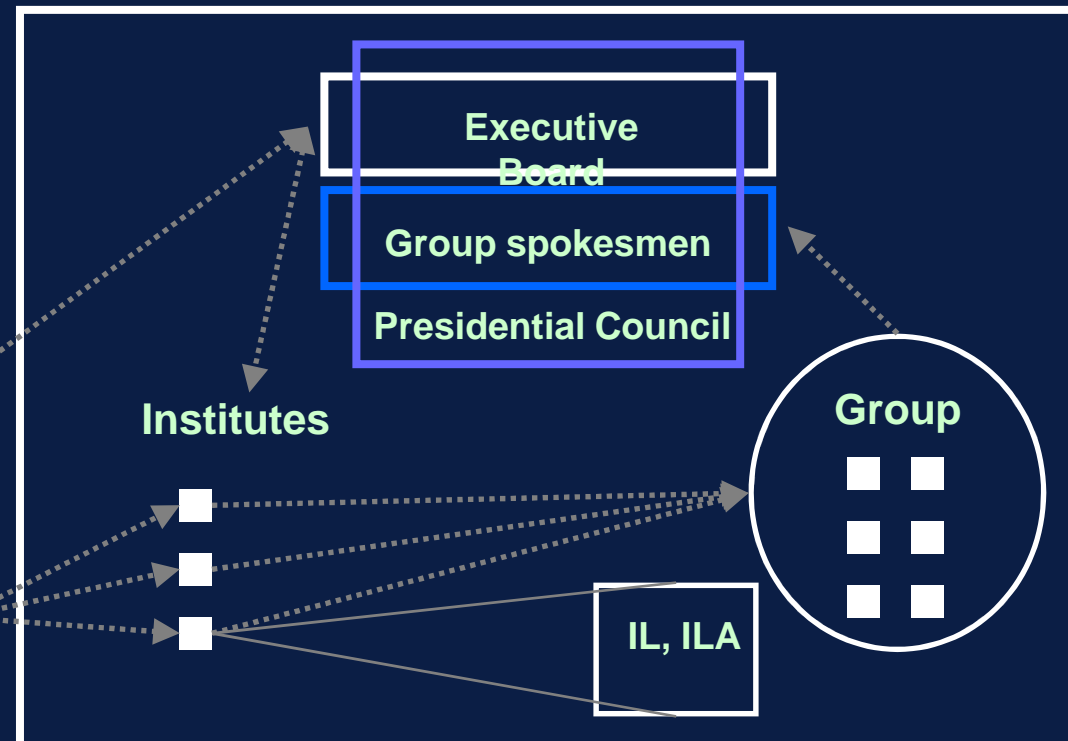
Senate
(strategic)

Policy
Committee
(financial)

Advisory Boards:

Scientific and Technical
Advisory Board (WTR)
Main Commission
of the WTR (HK)
(internal)

Boards of Trustees
(external)





Portfolio Process

Technology trends in 14
international Foresight Studies



Strategic information from
15 industrial global players



46 Clusters
Basis of a
Fraunhofer-
internal
discussion



R&D strategies of 5
European Contract
Research Organisations





Ways to extend relationships



Professional Training
at own Academy

Transfer
of people

**Fraunhofer's
Promotion of
Innovation**

Contract
Research

Formation of Companies





Fraunhofer Academy

adding value by training



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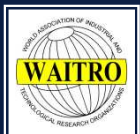


Fraunhofer Academy

Provides excellent professional training for business leaders and experts of our customers



- Is based on the advanced applied research know-how of our Fraunhofer Research Institutes
- Is a contribution of Fraunhofer to the federal Initiative for Research and Innovation since 2006



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Fraunhofer Academy

target groups for professional training

	Technology Specialists	Business Specialists
Management	»business awareness«	»business update«
Technology	»technology update«	»technology awareness«



Focus of Academy





Motivation for our Academy



- Stronger recognition of Fraunhofer as the driver of Technology and Business Innovation
- Tightening the network of Fraunhofer with decision makers of the industry
- Strengthening the Fraunhofer brand name
- Developing additional channels for Fraunhofer contract research projects





Constantly growing offering

Fraunhofer Technology Circle	Part-time courses of study	Certificate programs	Fraunhofer series of seminars
The exclusive series of seminars for technology decision-makers	Master Environmental Sciences	Industrial bonding technology	Knowledge Balance Sheet – Made in Germany
	Executive MBA for Technology Managers	Non-destructive testing	Hygrothermal component + room climate simulation
	Online Master of Building Physics *	Environmental sciences	Usability Engineer
	Master Software Engineering for Embedded Systems	Fiber-composite technology	Surface Engineering and Nanotechnology (SENT)
	Diploma in Logistics Management	Technology Management – Chief Innovation Manager – Strategy Development Manager – Lean Six Sigma Manager	
	Bachelor of Science Logistics Management		





Master Software Engineering



»Engineers for embedded systems need to master mechanics, electronics, and – increasingly – software.

In this course, experienced engineers will learn state-of-the-art software engineering for embedded systems.

- Cooperation between Fraunhofer IESE and TU Kaiserslautern
- Distant Education Program in English
- Four semesters with 3 classroom sessions in the Fraunhofer Labs
- Offers 2 tracks:
Engineering focus or
Management focus

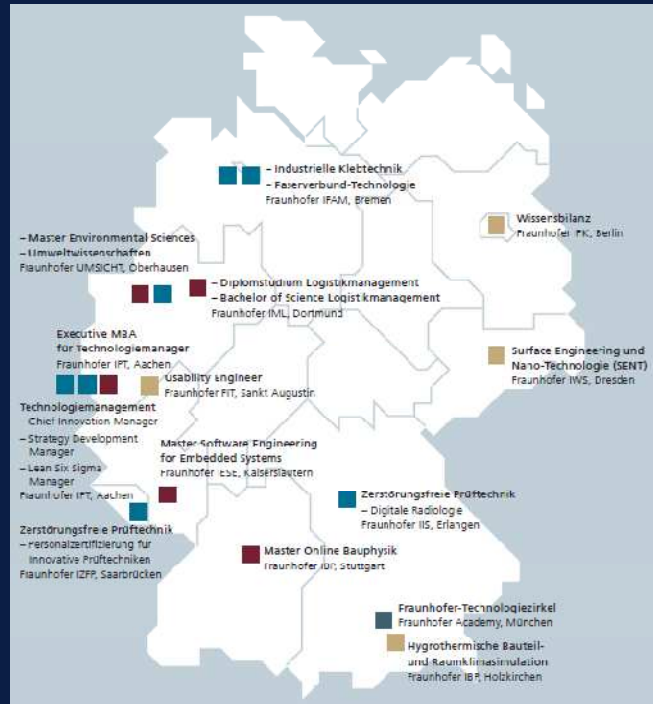


Prof. Rombach





Organizational Model



■ Establishment of regional »Colleges«

- lead by Fraunhofer-Institutes in cooperation with external partners

■ Supported centrally

- Head quarter of the academy is Munich
- Marketing





Partner Universities



- Together with our partners we offer Degree Programs with 2 or 4 semesters length.
- The Fraunhofer Institutes add the practical experience of our applied research to the program content.
- The universities compliment the programs with interdisciplinary skills in areas like business administration or law.





Fraunhofer attracts the bests

The most favored employers chosen by the best 25 percent of the German students

Universum Student Survey 2009



Natural Scientists	IT Specialists	Engineers
1. Max-Planck-Gesellschaft	1. Google	1. Porsche
2. Fraunhofer-Gesellschaft	2. IBM	2. Audi
3. Bayer	3. SAP	3. BMW
4. Roche	4. Fraunhofer-Gesellschaft	4. Robert Bosch
5. BASF	5. Microsoft	5. Daimler
6. DLR	6. Apple	6. Siemens
7. Novartis	7. Porsche	7. Fraunhofer-Gesellschaft
8. Merck	8. Audi	8. EADS
9. ESA	9. Siemens	9. Volkswagen
10. McKinsey	10. Max-Planck-Gesellschaft	10. DLR

Quelle: Universum Communications, Stand Mai 2009



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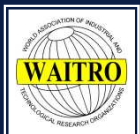


International Dimension

- Platforms needed for **cross-cutting issues**, to facilitate **open exchange** of management experiences, sharing lessons learnt
- Networks with **multi-faceted members basis**, **mixed profiles** and framework conditions, **cross-cultural** experiences



WAITRO
- the global innovation family





Example Middle East



Fraunhofer



- entering a new market
- positioning Fraunhofer in a growth region of high competitiveness and attraction
- networking and strategic partnerships
- business development as a newcomer



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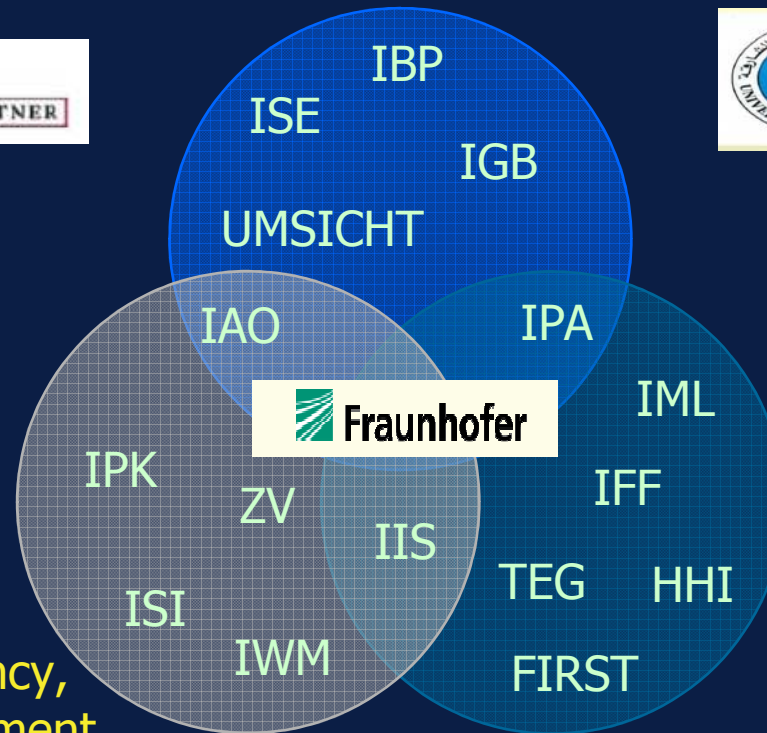
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Fraunhofer in Dubai 2009: Priority Fields and Partners

Green Buildings, Energy Efficiency,
Environmental Technology, Solar Energy



Innovation Consultancy,
R & D Management



Logistics, VR,
Robotics, ICT



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● ● ● | Strategic Alliance: SS Lootah

- Consultancy
- Factory Planning
- Smart Buildings
- PV, Solar
- Virtual Reality
- Training
- Testing
- Marketing
- Students



● ● ● | Innovation Culture Programme

- Partners:
SS Lootah
Zayed University
Fraunhofer
- Study visit to Germany
- Lectures



Strategic Partner: Dubai TechnoPark

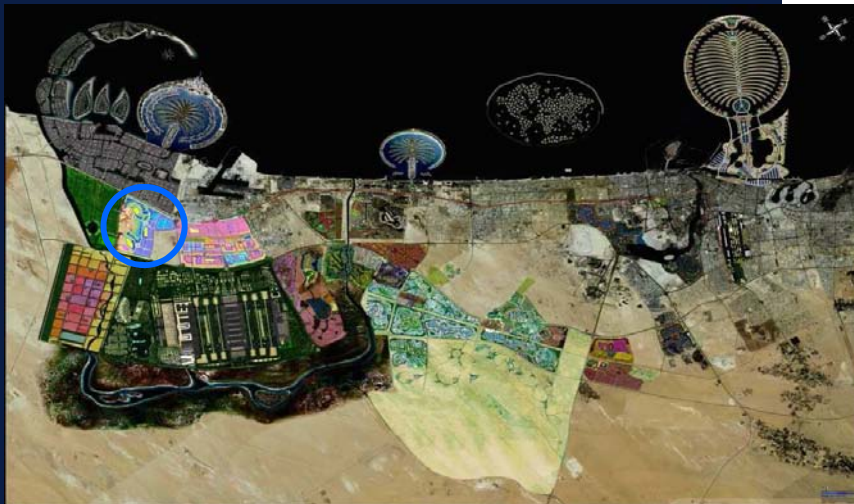


- Consultancy in RTO Management
- DIT
- Events
- R&D
- RFP-WAITRO

AME Info
The ultimate Middle East business resource

The readership of AME Info is independently audited by ABC ELECTRONIC
Unique Users: 883,984

Company:	Techno Park
PR Contact:	Yasir Saeed Zubair (yasir.zubair@dubaiworld.ae)
Posted By:	Anne-Birte Stensgaard (annebirte@ameinfo.com)
Published:	United Arab Emirates, Wednesday, February 06 - 2008 at 11:33 (GMT+4)
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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



World Association of Industrial and Technological Research Organizations

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WAITRO Congresses

- 16th Biennial Congress on *The Role of Research & Technology Organizations in the Globalized World.*
8 - 14 September, 2002, Porto Alegre, Brazil
- 17th Biennial Congress on *Technologies for Sustainable Development.*
5 - 11 Sept, 2004, Nairobi, Kenya
- 18th Biennial Congress on *The Business of Innovation.*
8-10 August, 2006, Saskatoon, Canada
- 19th Biennial Congress
2008 in Kuala Lumpur / Malaysia
- 20th Biennial Congress
2010 in Dubai !



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Strategic Alliances: Techno Park Dubai Institute of Technology

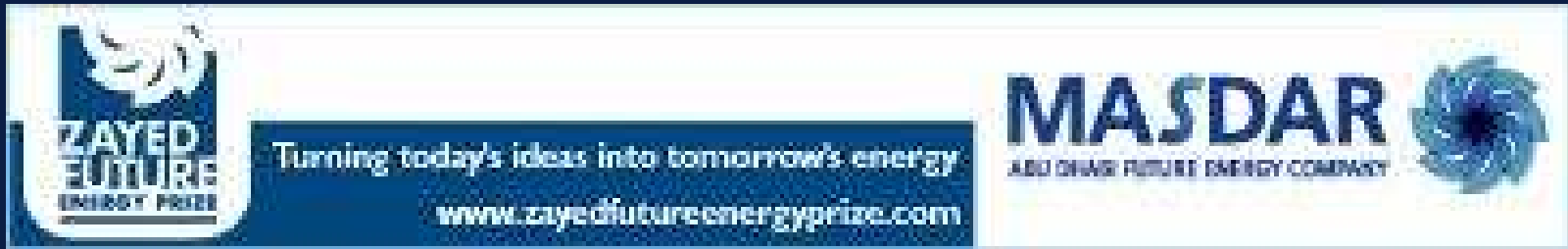
- Management setup by Fraunhofer IPK
- Business Plan Development
- Framework conditions
- Implementation Strategy



**DIT is WAITRO RFP MENA
and a significant customer
of Fraunhofer**



Strategic Partner: Masdar City



- Consultancy
- Sustainable City Concepts and Buildings
- Technology Evaluations
- Solar Power
- Transport Systems
- Virtual Reality Tools



● ● ● | Branding through Commitment



Cairo



Teheran



Berlin



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Associations Collaboration

WTA and IASP are WAITRO Partners



Welcome Addresses from:

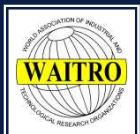


Salma Ali Saif Bin Hary
Chief Executive Officer
Jafza & Economic
Zones World



Hamad Al Hashemi
Managing Director
Dubai TechnoPark

THE 5th WTA TECHNO-MART



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Additional Activities

- German Days at Universities
- Alumni Initiative
- Bachelor - and Master Theses
- Internship
- Summer Schools



The German Day At Ajman University Network



DAAD

Deutscher Akademischer Austausch Dienst
German Academic Exchange Service



Fraunhofer



GOETHE-INSTITUT
GERMAN LANGUAGE CENTER DUBAI
مركز تعليم اللغة الألمانية دبي



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Thank You



Fraunhofer