

Cluster Development in Africa and Europe

Similarities and Differences

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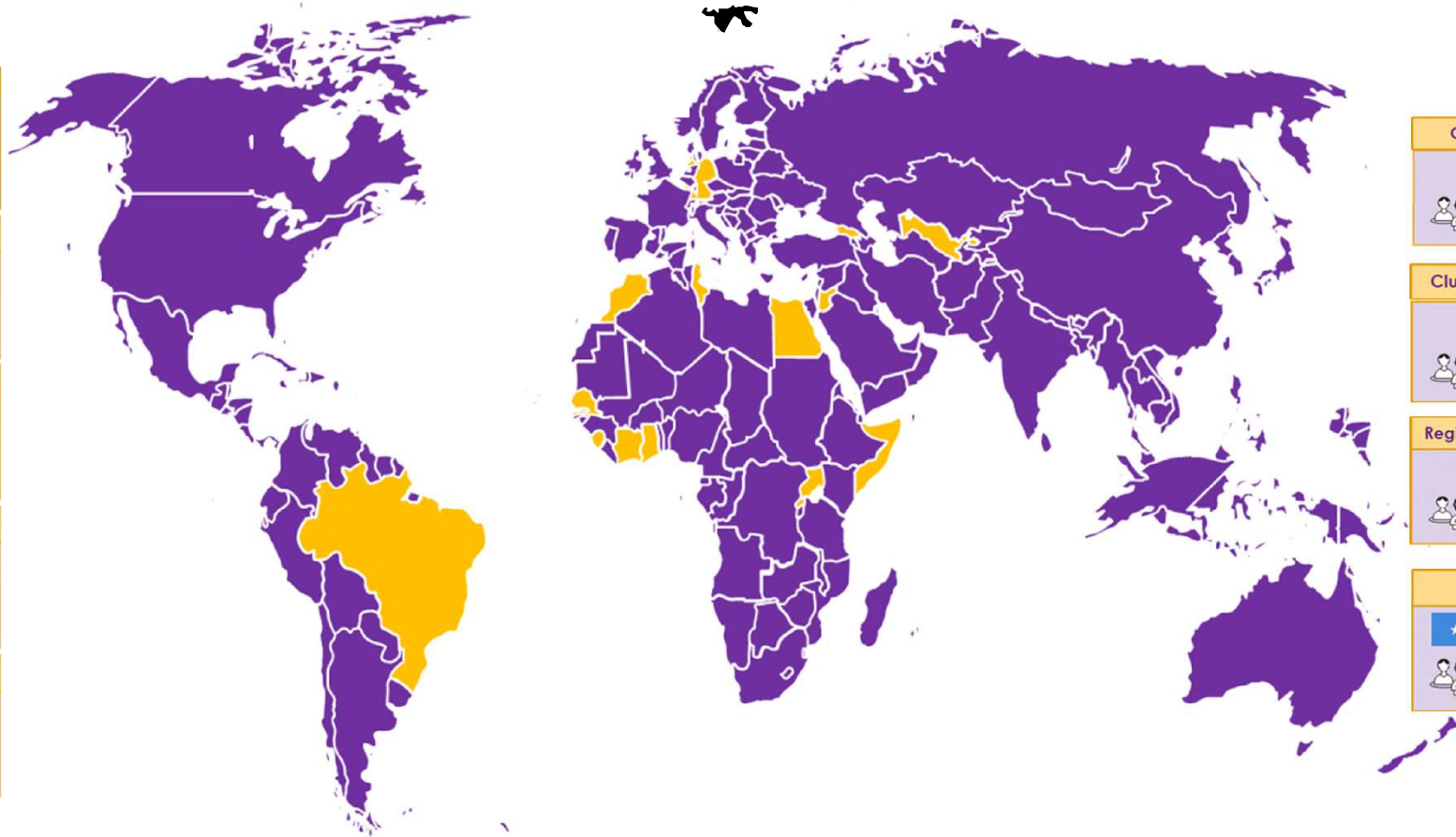


STRENGTHENING INNOVATION CAPACITY IN GERMANY

VDI|VDE|IT

| | |
|--|---------------------|
| Founded | 1978 |
| Shareholders | VDI GmbH, VDE e. V. |
| Turnover 2019 | 65 Mio. € |
| Employees | 600 |
| R&D Budget under management | 1.000 Mio € |

CLUSTER PROJECTS WORLDWIDE



Cluster Observatory Africa

 Volumen: € 880.000
Laufzeit: 2020-2024

Plastic Circularity

 Volumen: € 20.000
Laufzeit: 2021-2022

Luffahrtcluster Tunesien

 Volumen: € 45.000
Laufzeit: 2021-2022

Clusterentwicklung Uganda

 Volumen: € 180.000
Laufzeit: 2021-2022

Fachkräfte Fonds Brasilien

 Volumen: € 6.000
Laufzeit: 2021

GCMC Cluster Georgien

 Volumen: € 200.000
Laufzeit: 2020-2022

Clusterentwicklung Georgien

 Volumen: € 165.000
Laufzeit: 2020-2022

Regionalentwicklung Uzbekistan

 Volumen: € 185.000
Laufzeit: 2021-2023

Connecting Cities

 Volumen: € 83.000
Laufzeit: 2021

THE CLUSTER CONCEPT



Source: Cmpoject / CC BY-SA
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„Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standard agencies, and trade associations) in particular fields that compete but also cooperate.”

(Source: PORTER 2000, S. 16)

CHARACTERISTICS OF CLUSTER...

- Geographical concentration
- The specialisation or common denominator of a cluster
- Cluster actors – the triple helix (Administration – Research – Economy)
- Cluster dynamics and linkages: competition and cooperation
- Critical mass

(Source: ANDERSSON, T., SCHWAAG-SERGER, S., SÖRVIK, J., & WISE, E. (2004). Cluster Policies Whitebook. IKED International Organisation for Knowledge Economy and Enterprise Development-. P29 f.)

OPERATIONALISATION OF THE CLUSTER APPROACH

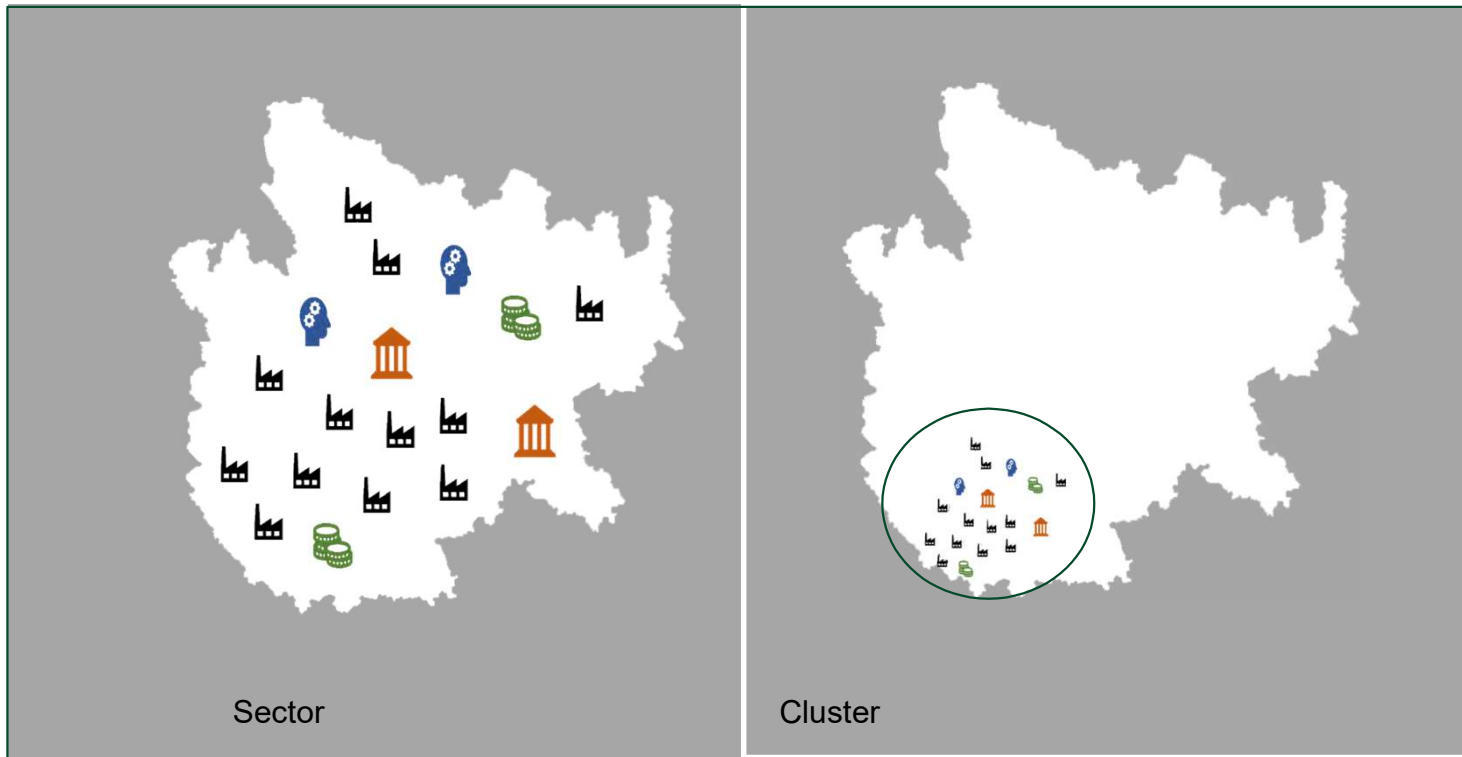
For further considerations, we shall consider **clusters** that meets the following criteria / characteristics

- **Regional focus: 100 – 150 km** (diameter)
 - Practice has shown that agglomeration / clustering effects happen if cluster actors are located in an area of 100 – 150 km.
 - Cluster actors often accept 2 – 3 hours for travelling
- **Sectoral focus**
 - Even in times of industrial transformation cluster effects mainly happen through networking and collaboration within a sector.
 - Broader understanding of sector allowed, e. g. food or light industry
- **Critical mass of firms and other related cluster actors**
 - Practice has shown that at least 50 cluster actors shall be present within the cluster (this value might vary, but shall serve as guiding principle).

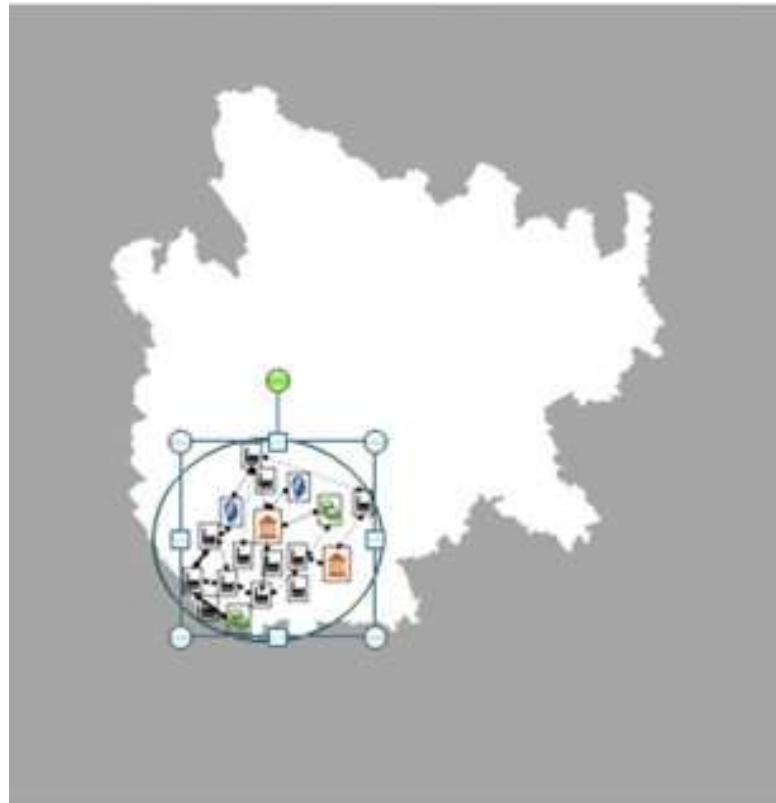
THE CLUSTER APPROACH

Country Level

Regional Level

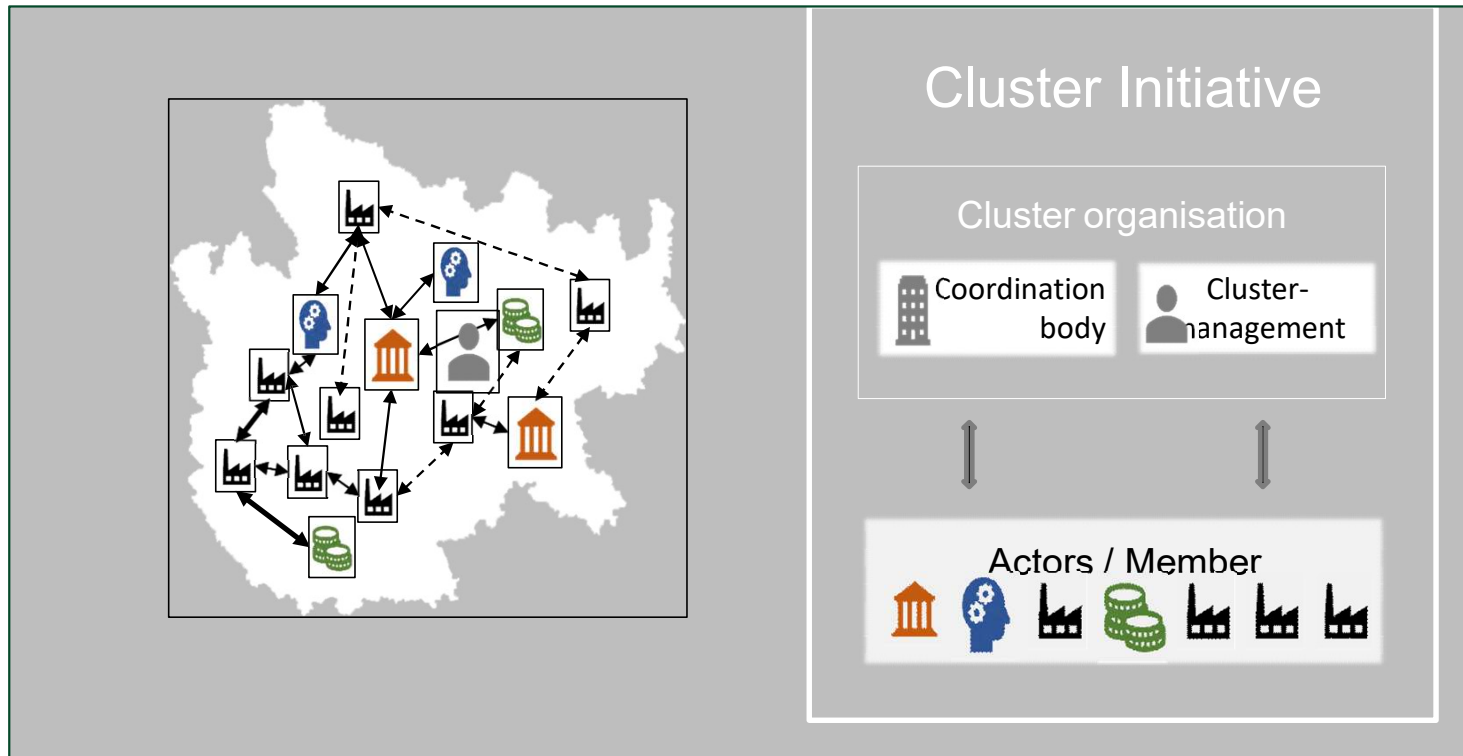


THE CLUSTER APPROACH



- Regional Network
- Special Economic Zones
- Technology and Business Parks
- Industrial Parks
- Cluster Initiatives

CORE ELEMENTS OF CLUSTER INITIATIVES

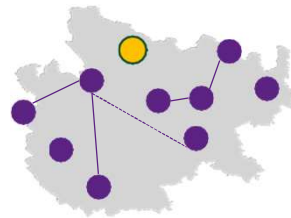


DEVELOPMENT STAGES OF CLUSTER INITIATIVES



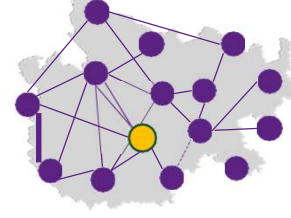
Initiation Phase

- 🎯 There is likely a critical number of cluster actors in a given location operating disconnected from each other.
- 🎯 Cluster actors represent a given sector or have specific competences.
- 🎯 An instigator appears.



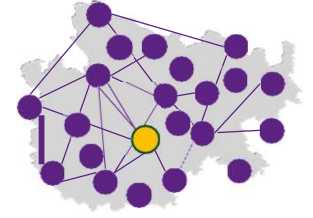
Establishment Phase

- 🎯 Critical number of cluster actors with regional focussed exist.
- 🎯 One or several cluster actors act as driving force.
- 🎯 Cluster organisation or coordinator/instigator is established.
- 🎯 First services offered by the coordinator lead to networking and trust building among the cluster actors



Operationalisation Phase

- 🎯 Cluster coordinator becomes important driver for networking and trust building.
- 🎯 More sophisticated cluster services are embedded.
- 🎯 Triple Helix well represented.
- 🎯 More cluster actors join the cluster to benefit from creative milieu.



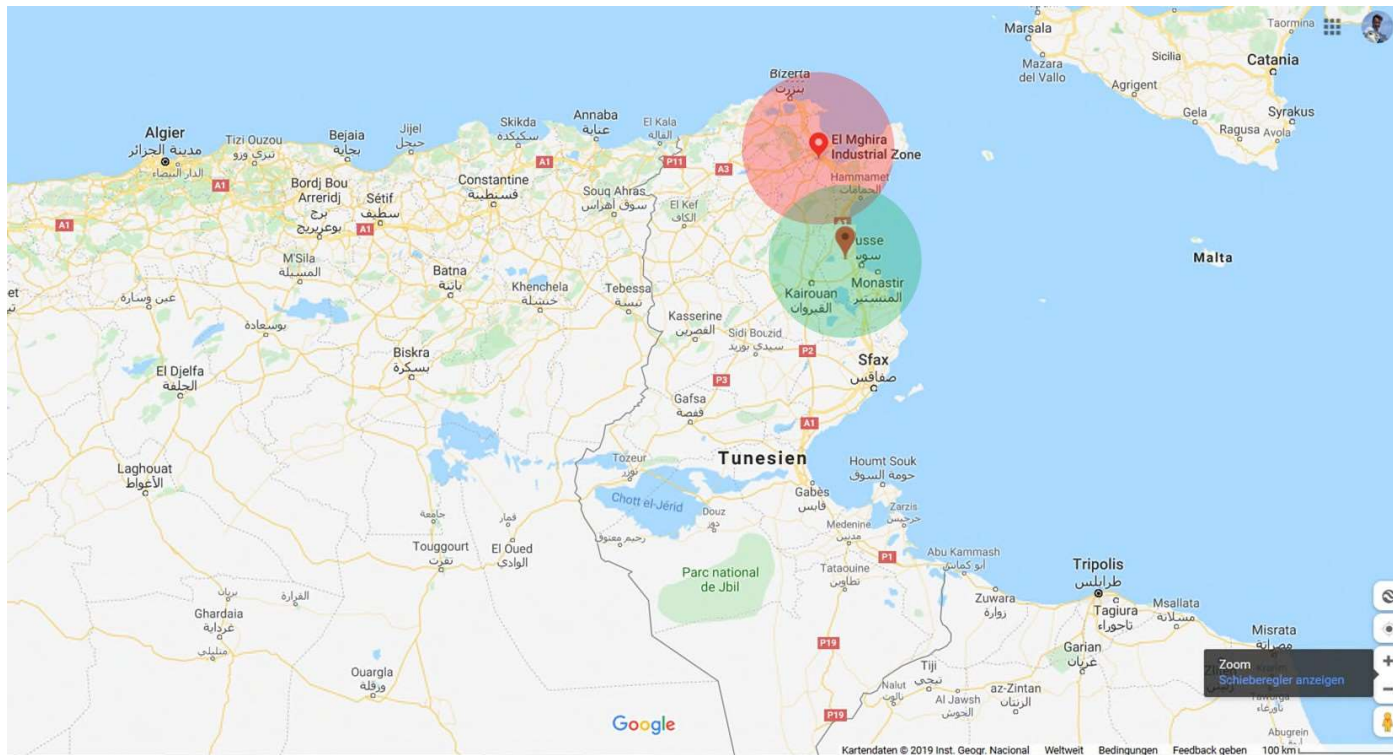
Transformation Phase

- 🎯 Cluster organisation becomes professional driver for new topics and services to be implemented.
- 🎯 Focus moves to more assure future competitiveness.
- 🎯 International visibility and cooperation gains high importance.
- 🎯 Cluster becomes driver for regional change and strategic regional development.

APPLICATION OF THE CLUSTER DEFINITION TO TUNISIA

Proposed clusters (with 150 km diameter)

- Aviation cluster, around on L'Aéropôle de M'Ghira (red circle)
- Automotive cluster, around the Technopole de Sousse (green circle)



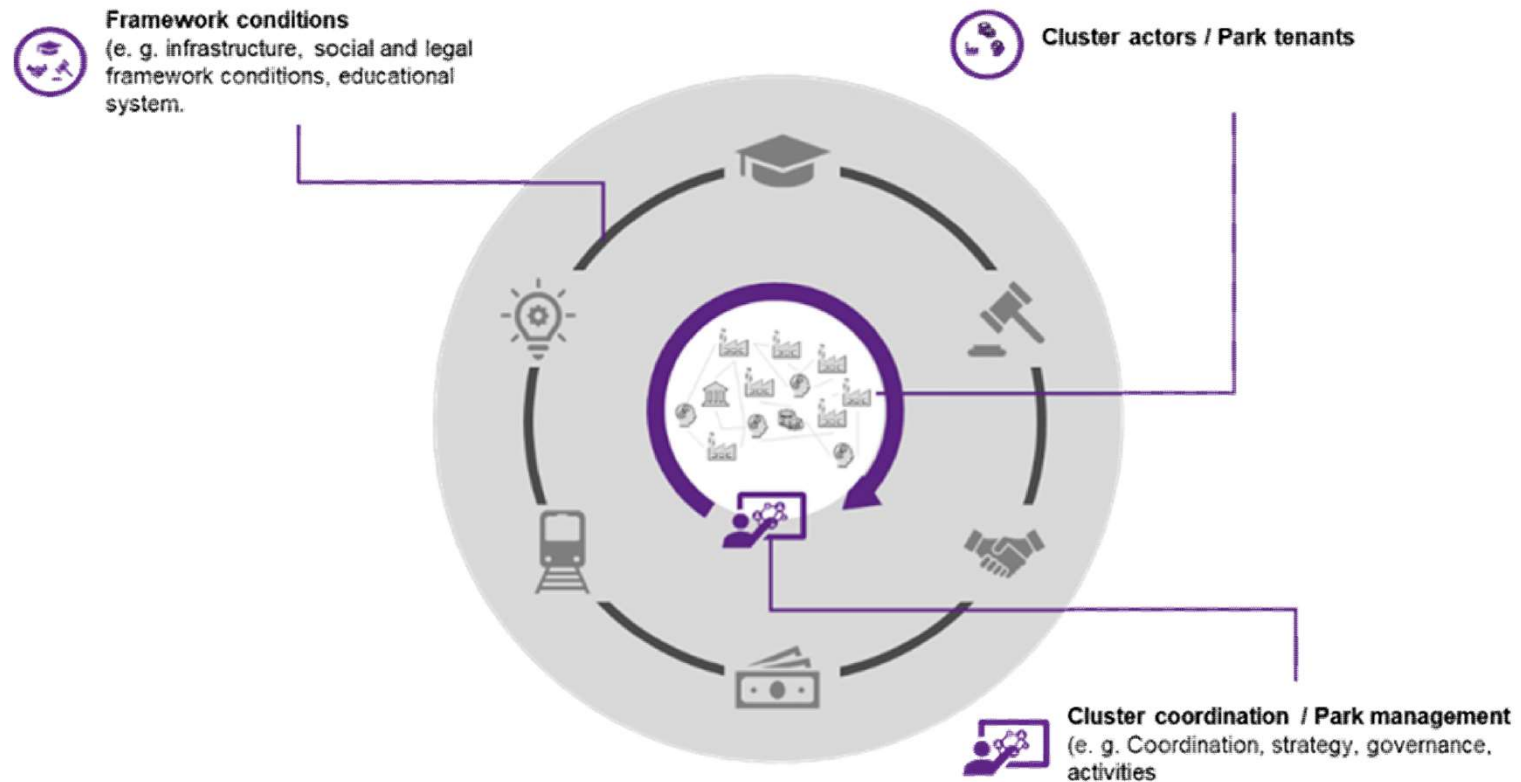
APPLICATION OF THE CLUSTER DEFINITION TO SENEGAL

Proposed clusters (with 150 km diameter)

- Agribusiness cluster, around Yeasal Agrihub / Thiess (greencircle)
- ICT cluster, around Dakar (red circle)



LEVELS THAT IMPACT THE PERFORMANCE OF CLUSTERS AND CLUSTER INITIATIVES

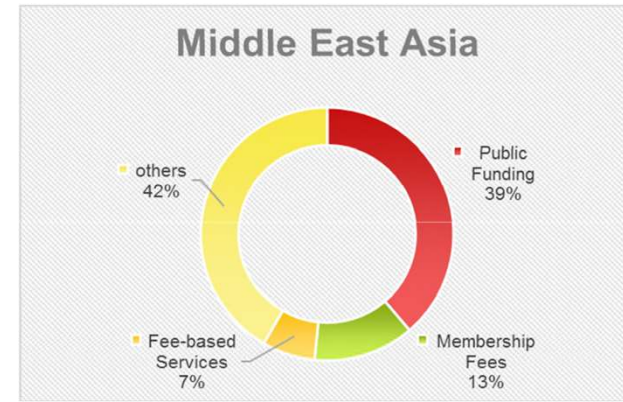
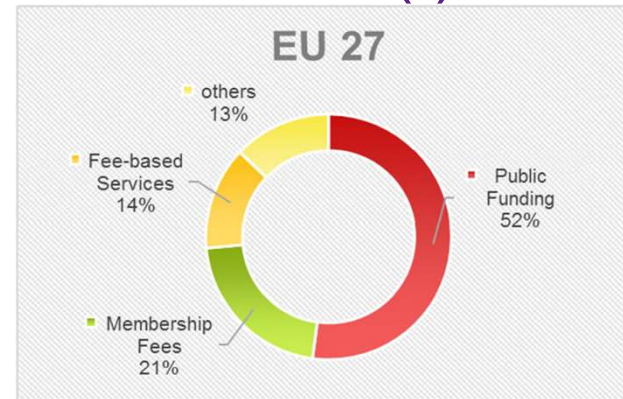
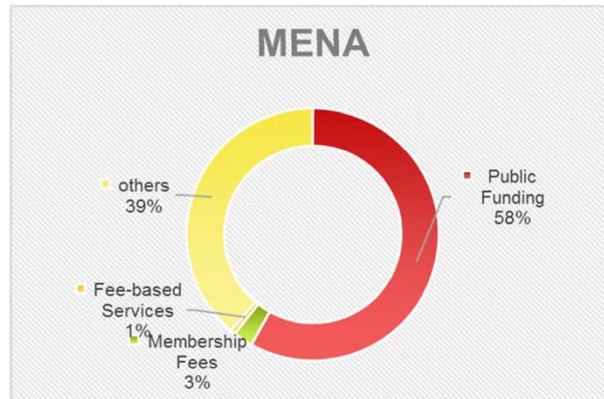


QUALITY AND INTENSITY OF SERVICES PROVIDED CLUSTER MANAGERMENTS MAKE THE DIFFERENCE



Source: Lämmer-Gamp, Meier zu Köcker, Christensen, Clusters are Individuals, 2011

FINANCING PATTERNS OF CLUSTER INITIATIVES AROUND THE WORLD (I)

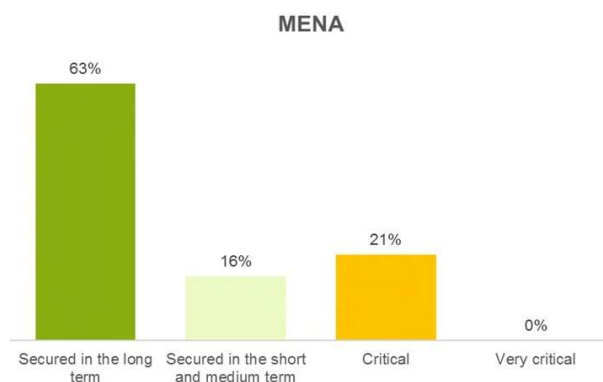


TIME PERIOD: 2017 – 2020, NUMBER OF CLUSTERS OBSERVED IN TOTAL: 420

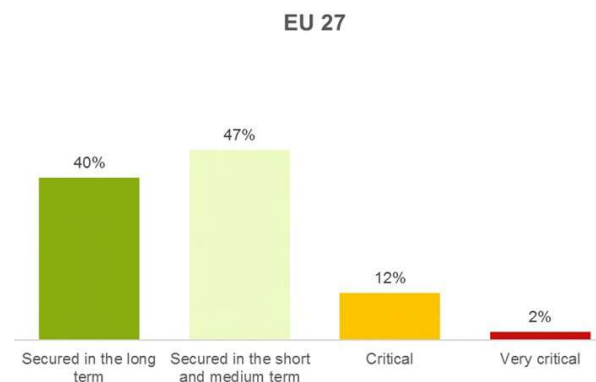
Source: Recent findings from European Cluster Secretariat and VDI/VDE-IT, unpublished

FINANCING PATTERNS OF CLUSTER INITIATIVES AROUND THE WORLD (II)

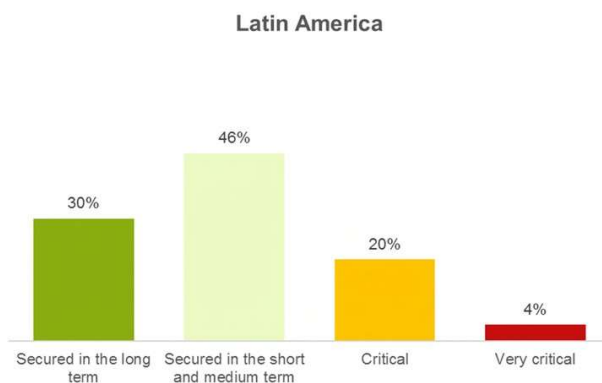
TIME PERIOD: 2012 - 2019
NUMBER OF CLUSTERS MEASURED: 16



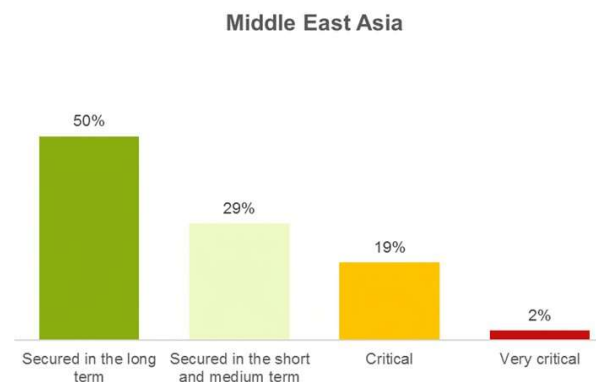
TIME PERIOD: 2010 - 2020
NUMBER OF CLUSTERS MEASURED: 945



TIME PERIOD: 2012 - 2019
NUMBER OF CLUSTERS MEASURED: 53

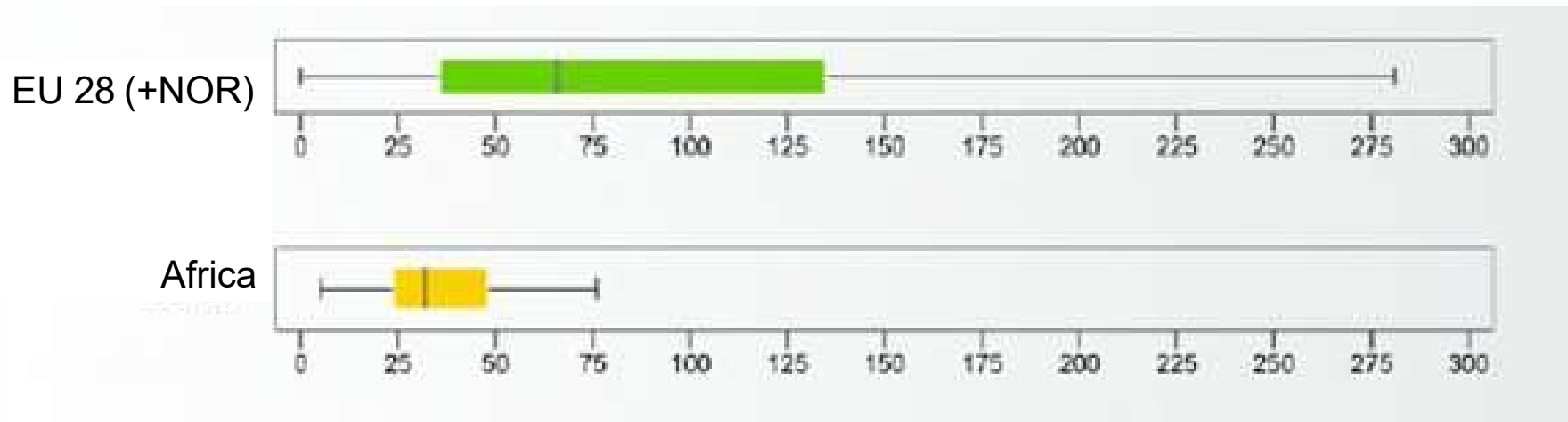


TIME PERIOD: 2012 - 2019
NUMBER OF CLUSTERS MEASURED: 44



Source: Recent findings from European Cluster Secretariat and VDI/VDE-IT, unpublished

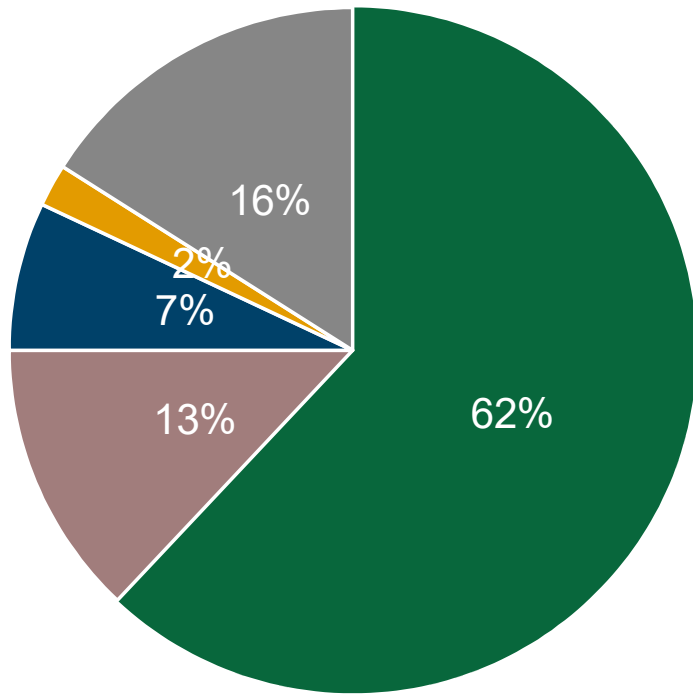
SIZE OF AFRICAN AND EUROPEAN CLUSTER INITIATIVES



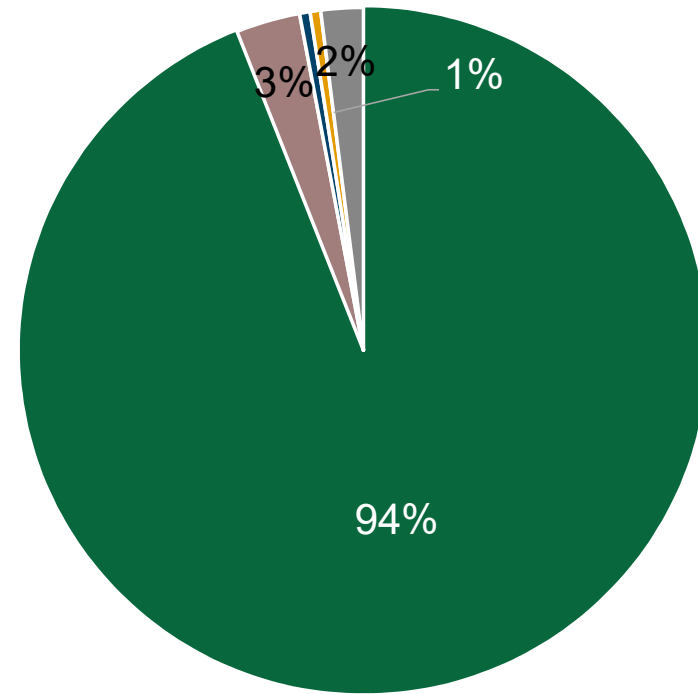
Source: Recent findings from European Cluster Secretariat and VDI/VDE-IT, unpublished, 900 cluster initiatives from Europe and 20 from Africa

COMPOSITION OF EUROPEAN AND AFRICAN CLUSTER INITIATIVES

Cluster Initiatives in Europe



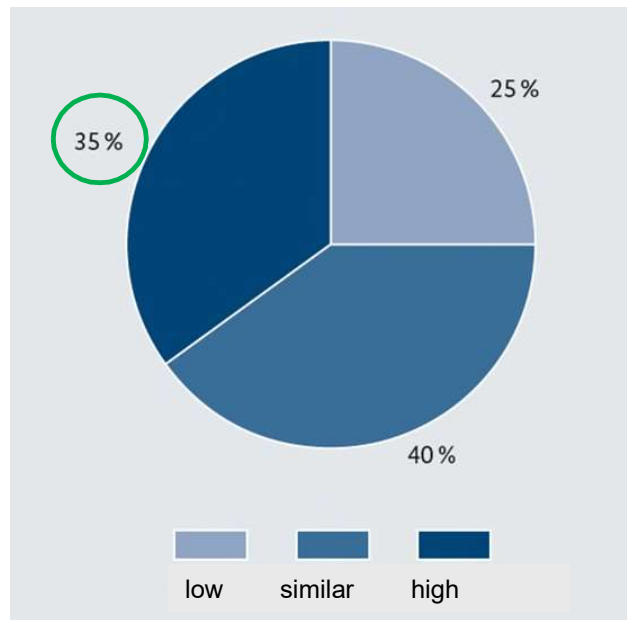
Cluster Initiatives in Africa



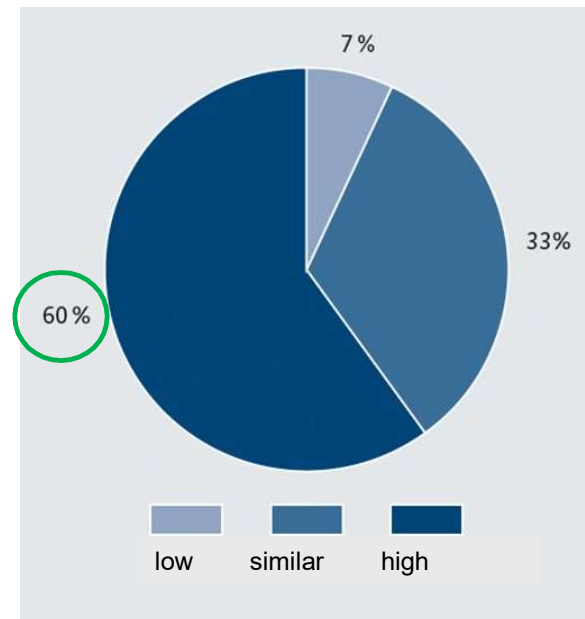
■ SME ■ non SME ■ R&D ■ Training providers ■ others

Source: Recent findings from European Cluster Secretariat and VDI/VDE-IT, unpublished, 900 cluster initiatives from Europe and 20 from Africa

HIGHER INTENSITY OF COOPERATION WITHIN CLUSTERS LEADS TO HIGHER MONETARY ADDED-VALUES



All actors



Actors that cooperate more intensive than others

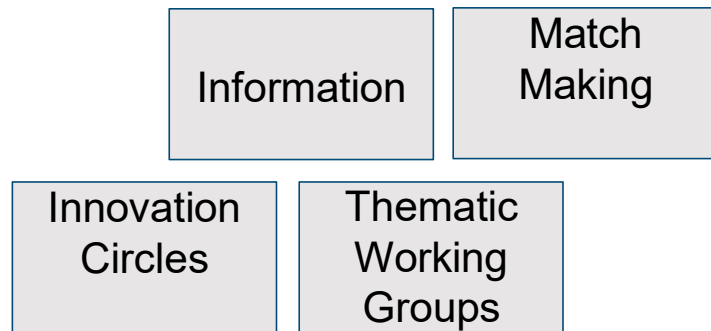
Cluster Monitor Germany, July 2012, 50 Cluster representing about 5000 company

SERVICES CURRENTLY OFFERED BY A CLUSTER INITIATIVE IN MOROCCO

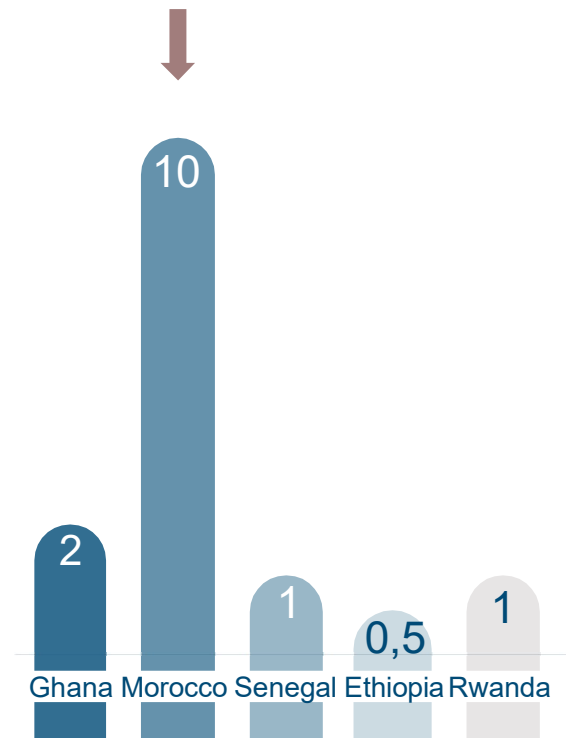
Objectives of the cluster management

- Strengthening economic performance of the tenants
- Provision of support towards innovation
- Development of regional infrastructure

Current services offered



Innovations developed in the cluster initiatives within the last 12 months



BENEFITS OF CLUSTERING

- Improved ability to innovate and diversify
- Improved competitiveness
- Improved visibility
- Improved frameworks conditions for doing business



GEORGIAN APPAREL AND FASHION CLUSTER

Challenge:

Until 2015, Georgian apparel SME produced mainly for the local market. The potential for export was untapped. Producers lacked access to international markets, were unable to document their adherence to international standards and lacked sales power and experience in presenting and marketing their products.



© GIZ (Office Georgia)

Cluster Objective:

Integration of the industry into global apparel value chain with a focus on sustainability, branding “Made in Georgia” as a quality seal for sustainable clothing and fashion.



THE BUSINESS MODEL CANVAS FOR CLUSTER INITIATIVES



ADDED VALUES OF CLUSTERS

Stimulation and Facilitating Innovation and Transformation

| Stimulating | Creation of Demands | Creation of ideas | Turning ideas into common actions | Commercialisation |
|--|--|--|---|---|
| <ul style="list-style-type: none"> • Awareness raising • Innovation awards • Good practices | <ul style="list-style-type: none"> • Awareness raising • Roadmapping • Capacity building for innovation • Brainstorming measures • Networking • Scenario workshops • University meets industry events | <ul style="list-style-type: none"> • Open Space Innovation Arenas • Match-Making Events • Cross-Clustering • Brainstorming • Speed Dating • Entrepreneurial Discovering Events | <ul style="list-style-type: none"> • Single company RTI project support • Collaborative RTI project support • Innovation Platforms • Cross-Cluster Challenge (Matching) | <ul style="list-style-type: none"> • Commercialisation support • Platforms • TechTransfer Measures • User-supplier matching |

THE PERFECT CLUSTER SERVICES PORTFOLIO

| Economic Performance | Services | | | |
|-----------------------------|----------------------|-------------------------|---|-----------------------------|
| Public Relation | Presentation of Park | Presentation of Tenants | Communication of Unique Selling Proposition | |
| Business Development | B2B Meetings | Thematic Events | Matching with Partners outside the Park | |
| Skills Development | Training Academy | TVET Cooperation | Workforce Recruitment | |
| Innovation & Digitalisation | Thematic Events | Working Group | Digital Skills Agenda | Transparency & Traceability |
| Networking | Park Meets Tenants | Networking Events | Akquisition of new members | |

HOW AGRI-PROCESSORS CAN BE SUPPORTED BY CLUSTER MANAGERMENTS -TRANSPARENCY -



Source: Anteja Africa

Personal Recruitment

Example: AIRstudent
BodenseeAIRRea



Kontakte | Erlebnisse | Karriere

AIRstudent

Dein Trip in die Luft- und Raumfahrtregion

18. - 20. April 2016
Friedrichshafen | Bodensee

Für Studierende der Fachrichtungen:
Luft- und Raumfahrttechnik, Elektrotechnik,
Informatik und Maschinenbau ab dem 4. Semester

Future-Workshop | Karriere-Dinner | Firmenbesuche | AERO Messe

EUROAVIA
Aachen
Berlin
Braunschweig
Dresden
München
Stuttgart

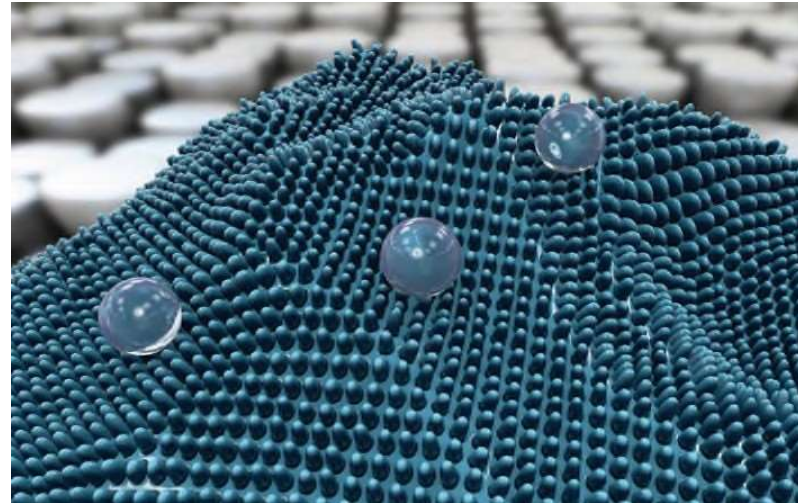
Anmeldung unter
www.AIRstudent.de



- 3 days Recruitment -Event in Friedrichshafen with 100 students und graduates from 6 German universities. Workshops, Company-Dinner, Company visits, Aviation-„Tent-City“ or Talent-Camp
- Companies booked sponsoring packages, students paid small fees

PUBLIC RELATION FOR CLUSTER ACTORS

Examples: HighTechComm
Cluster Nanotechnology or
Munich Biotech



- Cluster Managements support SME in PR and communication manners. This includes
- Analyses (What exists? What is needed?)
 - Communication / Marketing Strategy development
 - Dedicated PR activities / Website development /maintenance

MATCHING SUPPLIER - BUYERS

Example: Samsung
Innovation Days
Silicon Saxony



- During Samsung Innovation Days members of the Silicon Saxony Clusters get direct access to Samsung Management and buying agents.
- Members are selected and trained for face-to-face meetings
- High successrate

JOINT BOOSTS AT TRADE FAIRS

Hochform: Joint boots at trade fairs

"Hochform" is a cluster initiative for specialists in precision technology from the Pforzheim area. For example, it organizes a joint stand for its members at the Medtec medical technology trade fair. This relieves the companies of the organizational burden, and the stand is also more cost-effective and attracts more attention than if each SME had its own stand.



Meet & Greet Science Meets Business

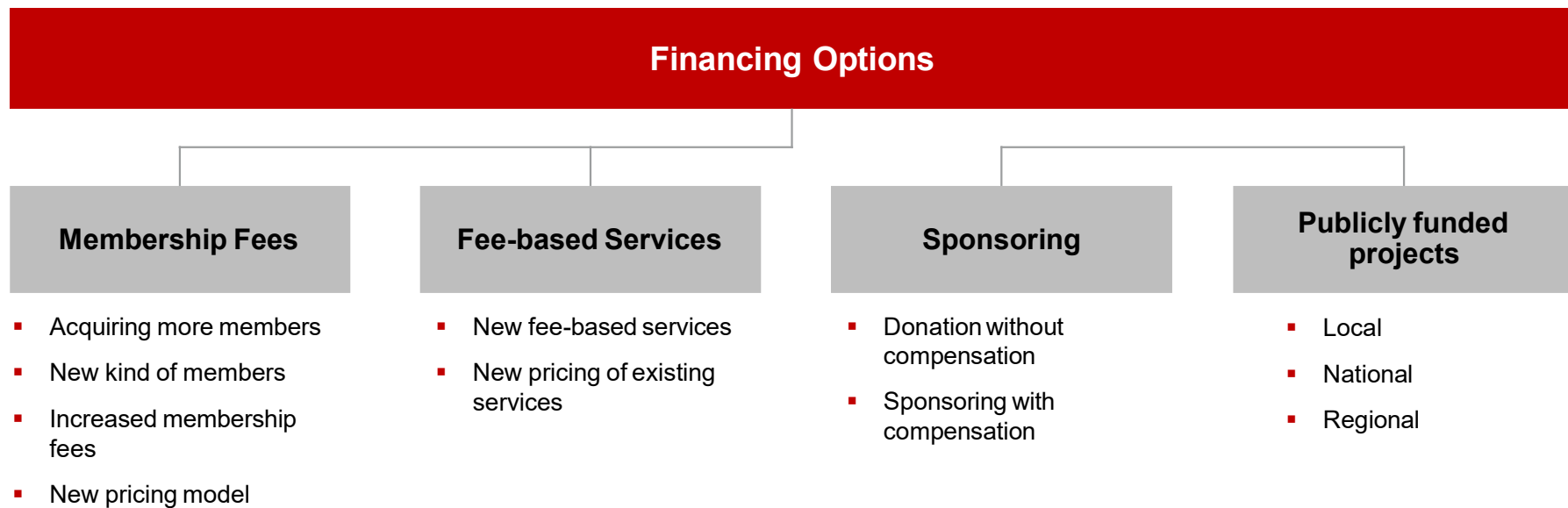


SHARED INFRASTRUCTURE

Packaging Valley Germany – Joint VRCenter Schwäbisch Hall



DETERMINANTS TO ENSURE SUSTAINABLE



ENSURING SUSTAINABLE FINANCING

- AUSTRIAN EXAMPLE -

