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Toolbox for Promoting Innovation Systems

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Design processes in a textile-processing establishment, Morocco

About the Toolbox

Background

This toolbox has been developed by the Sector Project 'Innovative Approaches for Private Sector Development' as it has been commissioned by the Federal Ministry for Economic Cooperation and Development (BMZ) to disseminate innovative approaches for private sector development in projects of German Development Cooperation (DC).

The first edition of the Toolbox was published in September 2011. This second edition of the Toolbox has been expanded by further tools from Serbia, Georgia and Namibia.

Objective and selection of tools

This toolbox is a collection of policy instruments and tools for strengthening innovation systems and promoting innovation and technology development. It aims at providing a practical pool of ideas for projects working on innovation system promotion or private sector development in general.

The main criterion for the selection of tools is their estimated benefit for and applicability in typical projects of German DC in the area of private sector development or innovation system promotion. The selection includes:

- tools from both OECD countries and from developing countries – the latter often taken from project experience of German DC – in order to showcase good examples from German DC and at the same time bringing in new ideas;[1]
- tools from projects that have already achieved significant results and impact (such as Innov'Act in Morocco), and tools that have only recently been introduced in projects (such as the Thesis projects in Tunisia).

All tools presented are tools to be implemented by local partner institutions, not by German DC as such. But development cooperation can support local actors in initiating, implementing and further developing these tools through capacity building measures or limited and decreasing financial support.

One note of caution, however: As much as this toolbox wants to present instruments for easy application in different projects, it is clear that any choice of policy instruments depends on the specific objectives and strategies pursued in a country, on the specific socioeconomic circumstances, and on the challenges and gaps in the local innovation system. There are no blueprints for policies, and many instruments are difficult to transfer to other country contexts. Moreover, as innovation processes are highly complex and demanding, a comprehensive mix of policy measures will be necessary. Lastly, in order to employ scant public resources most effectively, any policy measure and policy mix should be embedded in an effective governance system clearly laying out policy priorities and objectives on the basis of sound analysis, providing for effective stakeholder involvement and impact evaluation.[2]

Structure of the toolbox

The toolbox is structured according to the approach for innovation system promotion by German DC, as will be outlined in the introduction: It starts with tools for reinforcing the four subsystems of innovation systems (human and social capital, research capacity, technological and innovative firms, and follower firms and users), continues with tools for building bridges between these sub-systems, and finishes with tools for improving the framework conditions for innovation.[3] The attribution of tools to one of these objectives is not always fully clear-cut – sometimes a tool includes elements of different goals. Nevertheless, a choice has been made to attribute it to one of the objectives.

1 Further innovation policy tools from OECD-countries can be found on the ERAWATCH website.

2 Cf. OECD (2005); OECD (2010).

3 Tools for improving the framework conditions will be part of the next edition of this Toolbox.

The titles of the different sections hint at the objective of the described tools. Again, some tools pursue multiple objectives or can pursue different objectives depending on how they are applied. A choice has been made here, focusing on one of the objectives.

In order to support projects in understanding and selecting the tools, they are presented in a practical, easy-to-understand way, outlining their objective, their key characteristics in terms of partners, target groups, implementing and funding mechanisms, the evidence of impact and success factors, as well as the roles for German DC.

All tools refer to concrete, existent tools as they are implemented in a given context, rather than to abstract, generalised tools. The descriptions of the tools give information on the specific actors involved, actual time frames and impacts achieved, and measures taken for increasing sustainability. Boxes at the end of each tool give links for obtaining further information on the specific measure.

Outlook and feedback

The Toolbox will constitute a living document which is to be expanded upon through different editions.

Do you have any comments on the toolbox, suggestions or inputs for the next edition, or feedback on your application experience? The Sector Project 'Innovative approaches for Private Sector Development' is happy to receive them. Please contact: christina.rosendahl@giz.de.

Tools presented in this toolbox

Traders offering their goods, Nepal

Introduction

Economic development through innovation

Trade liberalisation, the merging of information and communication technologies (ICT) have changed the conditions for economic activity, resulting in new challenges and opportunities for developing and emerging countries. Low costs of labour and abundant raw materials are no longer the distinguishing competitive factors: Knowledge, access to knowledge and its successful use and implementation in innovative products, processes, services and business models are becoming increasingly important to participate in markets and to sustain competitiveness for securing and creating employment and income opportunities. Innovation, defined as the commercially successful introduction or implementation of a technical or organisational novelty, is the main source of economic growth.[4]

Innovation is about more than developing cutting-edge technologies. It includes the adoption, adaptation and diffusion of products, processes, marketing or organisational methods in a new country context and to country- and locally specific conditions *(new to the world, new to the market, new to the firm innovations).*[5] In developing countries, innovation is often more a matter of building the ability to use existing technologies at competitive levels of cost and quality than about developing new ones. As such, it contributes to firm upgrading and allows integration into global value chains.

How firms innovate

Firms are at the centre of the innovation process. They introduce new products or processes in order to outperform their competitors and realise higher profits. In turn, their competitors are forced to follow in order to be able to stay in the market. This process generates a vibrant dynamic that promotes structural change and increases benefits for customers and society.

Due to several market and systemic failures, the innovation process does not enfold automatically: As the outcomes of innovation are highly uncertain, firms and entrepreneurs are often reluctant to invest sufficiently in learning, R & D and technology acquisition. This holds even more for small and medium enterprises (SME). SME managers are often not aware of technology, do not recognise the potential for improvements, or lack the financial, organisational, and managerial capabilities to incorporate new technology or to obtain external advice from consultants.[6] These limitations have a negative effect on their potential for growth and, in many cases, their survival. For this reason, public policies and instruments for promoting innovation and technology are warranted and practiced throughout the world.

Firms, both large and small, do not innovate alone – they are embedded within a broader set of actors and institutions. Their activities are supported by constant interaction with their suppliers and customers, with research and training institutions, and influenced by social and cultural norms as well as government regulations. Innovation is "the result of a complex interaction between various actors and institutions"[7] – the innovation system.

4 Cf. World Bank (2010).

5 The Oslo Manual defines innovation as "the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations". Furthermore, it states that the "minimum requirement for a change in a firm's products or functions to be considered an innovation is that it is new (or significantly improved) to the firm." OECD / Eurostat (2005).

6 Cf. World Bank (2010).

7 OECD (1997); cf. Freeman (1987).

Strengthening innovation systems

Innovation systems consist of three main elements.[8] These are, firstly, (1) the four sub-systems of the innovation system, namely human and social capital, research capacity, technological and innovative firms, and follower firms and users.

The second (2) important element consists of the **bridges and linkages** between these four sub-systems, which allow for constant interaction, exchange of personal and material resources, learning, and feedback loops (such as technology transfer offices, roundtables, dialogue mechanisms and exchange platforms etc.). The intensity and quality of these bridges strongly determines the productivity of the innovation system:

Lastly, (3) **framework conditions** affect the ability of firms to innovate: the quality and accessibility of quality infrastructure, the intellectual property rights regime, information and telecommunication infrastructure, the ability of firms to enter and exit the market, or general social and cultural attitudes towards innovation.[9]

German DC has developed a systemic approach for promoting innovation systems in developing countries. The approach distinguishes between instruments that aim at:

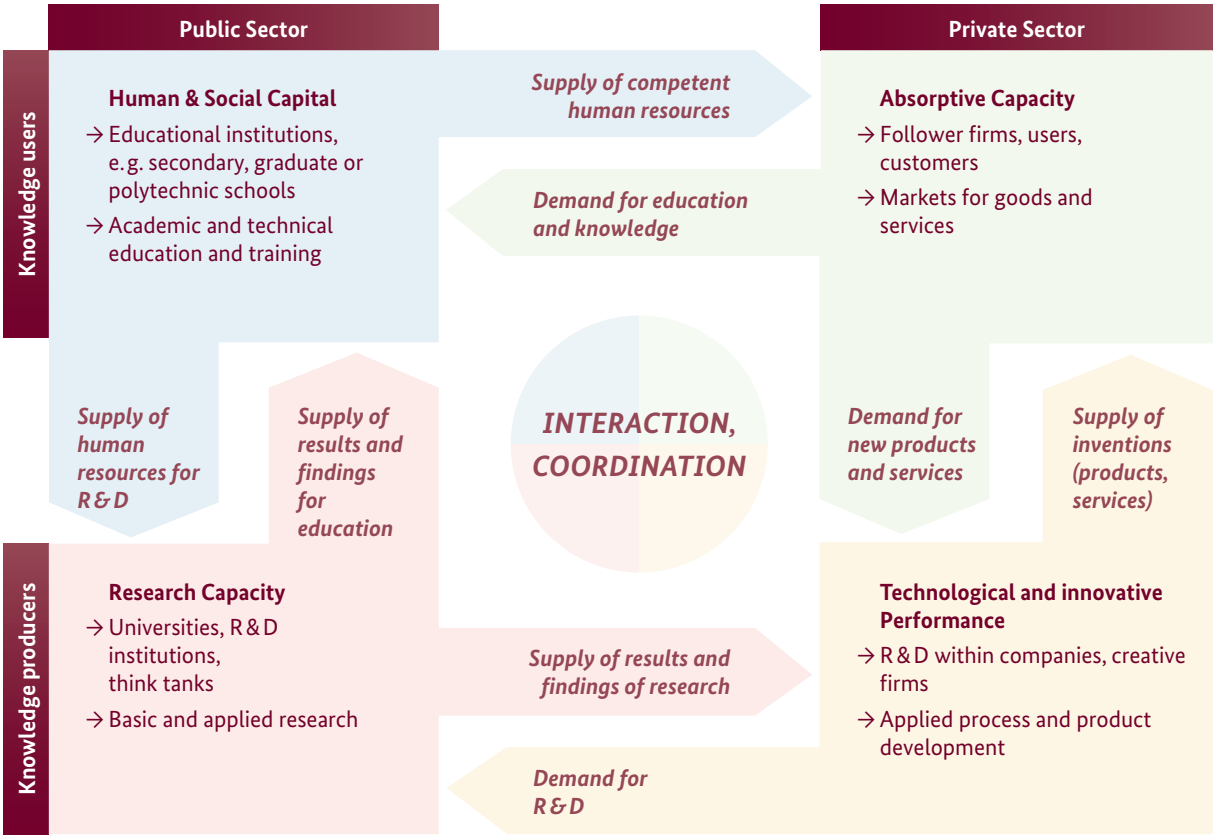
- reinforcing the sub-systems, namely education and qualification sector; research institutions; companies (e.g. promoting innovation management in SMEs, incubators);
- building bridges and links between the different elements (e.g. building innovation partnerships between companies and research, providing platforms for collaboration, promoting university spin-offs);
- improving framework conditions (e.g. designing incentive systems and innovation policies, supporting monitoring instruments).[10]

The following toolbox builds upon this approach by describing individual policy tools that support any of the above three objectives and approaches.

8 For a more detailed explanation see Kadura / Langbein / Wilde (2011).

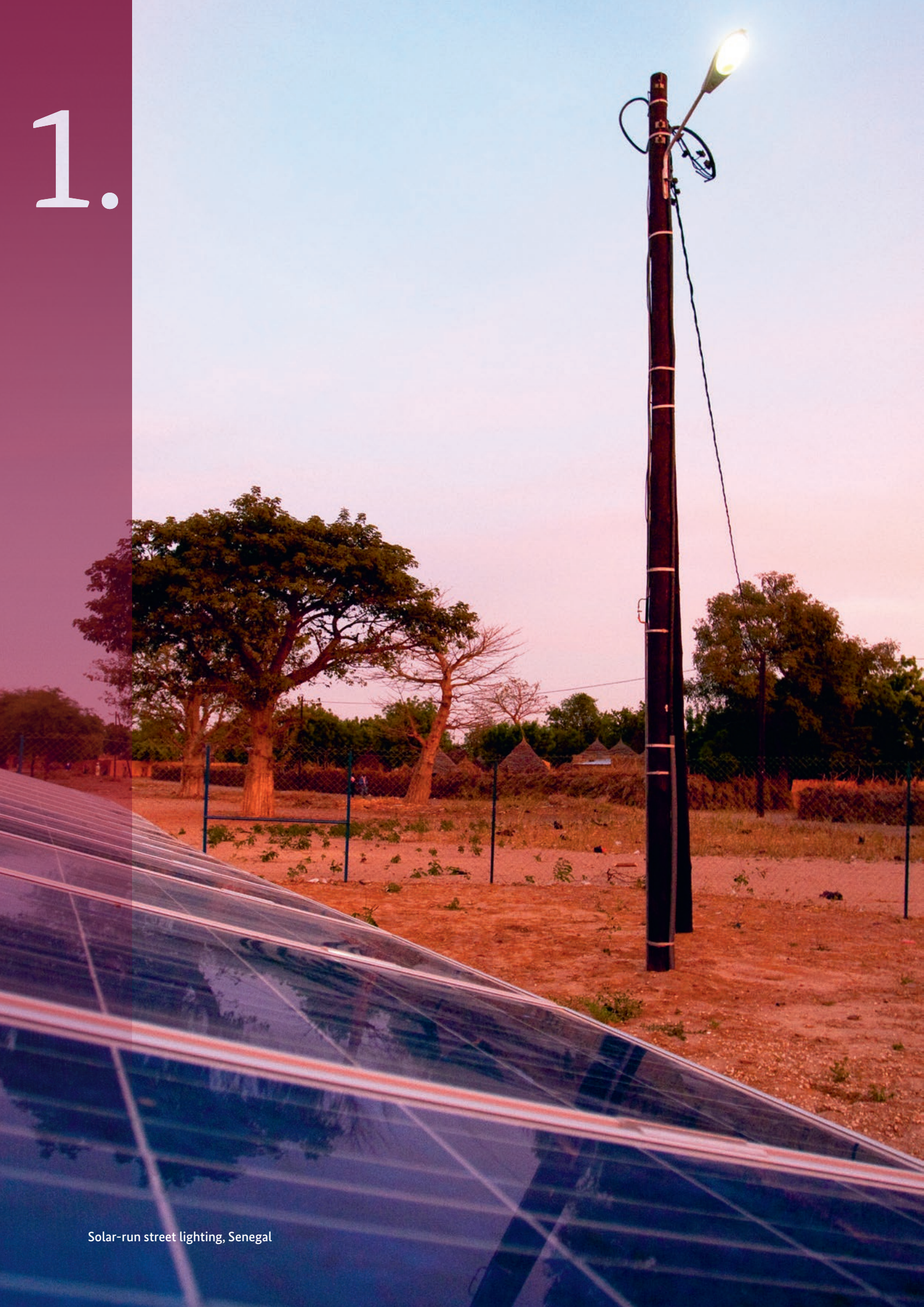
9 For further information on innovation systems in developing countries see Rippin (2008); Janischewski (2008); Lall / Pietrobelli (2005); Altenburg (2009).

10 Cf. Arbeitskreis Innovationssystementwicklung (2010). Other sources distinguish instruments by other categories, for example whether they support the 'supply' or 'demand' of innovation, whether the instrument supports innovation directly or indirectly, depending on which phase of the innovation process is supported (invention, market introduction, commercialisation), or depending on the objective of the instrument (e.g. strengthening entrepreneurial innovation, encouraging technology transfer, developing research infrastructure).



Sub-systems of innovation systems; interaction

1.



Solar-run street lighting, Senegal

Reinforcement

1.1
Supporting innovation in SMEs: **Innovation Management Training Course, El Salvador**

Background and objective

Many SMEs lack the awareness about the benefits of innovation. They regard it is an exercise that is highly costly and risky and therefore does not warrant investing their scarce resources in. They are often not aware of the fact that some innovations – especially process innovations, organisational and management innovations or marketing innovations – are less resource intensive, while highly beneficial. "Innovation management" aims at building the capacity of companies to continuously and systematically identify needs and opportunities for customer-driven innovation with-in their company. It involves harnessing the ideas of a company's employees and bringing teams of employees from different departments together. The process is usually coordinated by an "innovation manager" – a person with strong communication and management skills mandated to drive the innovation processes within a company, applying a range of tools such as Portfolio Analysis, Fast Concept Development, Creativity tools, Road Mapping, Target Costing, Financing Models, etc.

Key characteristics

In 2008, the *Competitiveness and Productivity Centre* of ISEADE, a private postgraduate institute for economics and business administration in El Salvador, decided to introduce a course for innovation management, the "Market-Driven Innovation Management Training Course" (MDIM). As the concept of innovation management was rather new to the El Salvadorian context, ISEADE lacked in-house capacity to develop the course and give the lectures. It formed a partnership with the *Small Enterprise Promotion and Training Programme* (SEPT) at the University of Leipzig for developing the training concept and conducting the seminars and the coaching. The course is aimed at business consultants and managers of SMEs. It consists of two phases conducted in the evenings and on weekends, a theoretical seminar phase of 25 hours and an individual coaching phase of 40 hours. In the coaching phase, the participants develop concrete innovation projects based on real needs of companies.

The course is targeted at all SME managers or consultants with work-experience in SMEs who have a university or equivalent degree. While applicants must be willing to pay for the course, fees were not entirely cost-covering. However, during the three courses that have been conducted so far, the amount paid by participants has steadily increased to currently 900 US-Dollar – about 50 % of the total costs. The remaining costs are borne by ISEADE itself, by supporting institutions such as FUSADES, an El Salvadorian private sector foundation, and by German DC and USAID. In order to decrease the amount of the total costs, ISEADE is planning to use graduates of previous courses as coaches in the future, substituting the partners from the University of Leipzig. In the run up to the fourth course, ISEADE is also forming an alliance with INSAFORP, a Salvadorian professional public training institution: INSAFORP will give scholarships to SME managers and business consultants for participating in the MDIM course. ISEADEs long-term goal is to include the modules of the course into its MBA.

Evidence of results

In the first three courses, 106 SME managers and consultants have been trained, the majority of them consultants. ISEADE has been established as a professional and reputed provider of innovation management courses, thereby allowing for a high level of outreach and sustainability. In 2010 / 2011, ISEADE developed M & E instruments to measure impact at the firm level; results are expected soon.

Success factors

A number of factors have supported the success of the programme. The following three stand out:

- The partnership with the German SEPT programme has allowed ISEADE to build much demanded services that have not been offered in El Salvador before. The partnership now contributes to building up ISEADE's capacity for conducting such courses on its own in the future. The *Competitiveness and Productivity Centre* at ISEADE is well equipped to professionally manage and to further develop the course.
- A diversified group of support institutions provided a stable funding base in the early phase of the programme. The programme is now slowly building up financial sustainability, although it may need to be cross-subsidised by ISEADE for quite some time.
- The involvement of private financial institutions such as *Banco Promérica* allowed to directly link-up participating SMEs with financial institutions in order to implement the innovation projects developed during the course.

Role of German DC

- Support in establishing the partnership with the Leipzig University and in creating strategic alliances with other partners;
- Adaptation of the training modules to local needs;
- Support in setting up M & E system at ISEADE;
- Support in developing the book "Gestión de la Fase temprana de la innovación" *("Management of the Innovation Front End")* in order to disseminate the tools developed to other countries in Latin America;
- Financial support.

FURTHER INFORMATION

The MDIM-course has been supported by the Central American-German Programme "Sustainable Economic Development in Central America (DESCA)", implemented by GIZ on behalf of BMZ.

Website of the course at ISEADE:
www.iseade.edu.sv/?idart=122&idcat=4

Training Course Brochure: www.sept.uni-leipzig.de/fileadmin/sept/media/Downloads/MdIM_english.pdf

Training Course Manuals (Spanish):
https://dms.giz.de/dms/livelink.exe?func=ll&objaction=overview&objid=83420893

Book (Spanish): www.in4in.net/fileadmin/user_upload/Downloads/WorkingPaper_Desafios.pdf

For further information please contact:
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1.2
Supporting innovation in SMEs: **Network of Innovation Management Consultants, Tunisia**

Key characteristics

In Tunisia, the introduction of innovation management for SMEs to the country followed a slightly different path than in El Salvador. While in El Salvador the initiative was driven by an academic institution, the main driving forces in Tunisia were the private Chamber of Business Consultants of the Tunisian Union of Industry, Commerce and Handcraft as well as the public business consultancy institutions. Only at a later stage academic institutions came on board as well.

With the support of German DC, international and Tunisian experts, a training course fully adapted to the Tunisian context was developed. In a series of training modules starting from 2008, over 75 private as well as public consultants were trained on how to support companies in setting up innovation management systems. The course also involved a practical module where consultants applied their newly acquired knowledge and gave advice to companies on innovation management. In addition, forums were organised for the consultants to exchange their experiences on advising the companies.

As a result of the trainings, a pool of consultants for supplying innovation management services to companies has been created. In order to increase the demand of Tunisian SME for such services, a group of public institutions who support innovation in the central region of Tunisia formed a network called "Le Comité Régional de l'Innovation du Centre – CRIC" in order to increase awareness on the importance of innovation management.

The coordination of the committee was given to the Chamber of Commerce. Since 2011 the CRIC has been developing a training programme on innovation management in order to increase awareness on the importance of innovation management and thereby to stimulate demand for further advice by consultants.

In order to make the trainings sustainable in the long run, a partnership with one of the most prestigious universities of Tunisia, the "l'Ecole Nationale des Ingénieurs de Tunis" (ENIT) was established in order to include the innovation management training modules into one of its professional master programmes, Business Creation and Innovation Management.

Evidence of results

After completion of the course, a group of 21 private consultants formed a network of innovation management consultants and created a website in order to better market their services to the customers. The network also makes use of a handbook on innovation management that was developed in the course of the training, as well as of specific software ("login-nov") that helps the consultants in using the panoply of tools and systematising the documentation of their work.[11]

> *"The Tunisian revolution has brought immense opportunities for the Tunisian industrial and service sector – but without innovating it will be difficult to position oneself in the higher parts of the production and service pyramid".*[11]
>
> *President of ID.NET*

The fact that the consultants have formed a network and set up a webpage for advocating their services without any external support shows that they regard nnovation management as a potentially profitable service. And according to a recent evaluation, 90 % of the trained consultants have integrated innovation management in

11 See ID.NET website.

their service portfolio. Up to date, 37 % of them have had at least one request by a company to advise them on the introduction of an innovation management system, 15 % have provided their services.

The companies that were supported in terms of innovation management during the training course – more than 90 in total – were highly satisfied with the consultancy. In total, 71 organisational innovations, 34 marketing innovations, 27 product innovations and 26 process innovations were implemented in the companies in response. As one of the participating companies states:

> *"Through the programme we improved our internal communication and enhanced synergies between the departments of production, quality management and marketing. By doing this, we developed a new product with which we have generated 5 % of our turnover only three months after bringing it to the market".*
>
> *Nacer Ben Jemaa, marketing manager of SORIL, a company in the dairy sector)*

Success factors

The following factors contributed to the success of the network:

- Collaboration with both private and public institutions encouraged consultants to form the ID.NET network and created important linkages between the network and diverse public and private institutions.
- The cooperation with a reputed university guarantees a high level and widely recognised qualification.
- The diversity of the profiles of ID.NET consultants increases their attractiveness to business and reduces competition amongst the members.

Role of German DC

- Initially, German DC strongly supported the process by designing and sponsoring the training course to private consultants as well as developing the handbook and software. This was necessary as the concept of innovation management was new to the Tunisian context; there existed neither supply nor demand for the service – the typical hen-and-egg-problem. Because of the spill-over effects of innovation, public sector support for innovation management services is justified.
- More and more, DC is taking a less active role, focussing on bringing interesting actors together in order to anchor the service more broadly in local institutions, increase scale and outreach, and further improve the quality of the service by, e. g., introducing monitoring and evaluation tools. For example, it supports the Ministry of Industry and Technology in improving its communication about the existing funding instruments for supporting innovation in SMEs and later on reforming these instruments – something which will help SMEs to make use of the newly created service portfolio and to improve innovation management within their company.

FURTHER INFORMATION

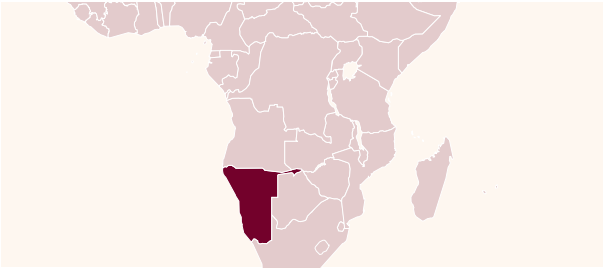
The Network of Innovation Management Consultants has been supported by the Tunisian-German programme "Support to SMEs in the context of market liberalisation", implemented by GIZ on behalf of BMZ.

Website of consultancy network: www.idnet.org.tn

For further information please contact: kirsten.schuettler@giz.de

Note: In Guatemala, the DESCA programme has supported innovation management in a similar way. For further information please contact: juergen.popp@giz.de

1.3
Supporting innovation in start-ups: **Namibian Business Innovation Center, Namibia**



Background and objective

Business incubators are not a new instrument. They were first created in the USA and started to develop in Germany since the 1980s. Incubators provide well-equipped physical space at below-market prices for a limited period of time, access to consultancy and training, to networks, and to finance. Since the early days, incubators have evolved in terms of focus and services: Today's '3rd generation incubators' focus on certain kinds of start-ups – usually knowledge- and technology-intensive start-ups, but also 'social entrepreneurs' or 'green start-ups' – which require highly targeted services. In parallel the qualification of incubators' staff as well as the range, quality and specificity of their services have increased. In Germany, incubators are usually organised as a GmbH (closed corporation) with three partners: the municipalities, banks, and chambers. Investment costs of incubators are carried by public institutions, and most incubators also rely on public funding for operational costs. According to some studies, incubators are not a good tool for generating large numbers of start-ups with strong quantitative employment effects. However, they are a good tool for increasing the number of start-ups in universities, for stabilising young companies and supporting their growth, and for creating high-quality jobs.

In Namibia, the level of entrepreneurship, risk-taking and innovativeness is rather low. According to the 2012 Global Entrepreneurship Monitor (GEM), the share of people in the working age who are in the process of starting a business or who have recently started a business is much lower in Namibia than in other Sub-Saharan Countries (18 % in Namibia vs. 28 % in SSA in general). This would not necessarily be a problem if the economy provided enough productive jobs. This is not the case though. In Namibia, government is the main employer and unemployment is high. This is mirrored in the GEM-findings: Namibians are much more pessimistic than other Sub-Saharan Africans when it comes to job expectations.

Until recently, there were hardly any structures and support programmes for start-up support in Namibia, be they public or private. The initiative of the Polytechnic of Namibia, one of the two universities of the country, to establish an incubator-like Business Innovation Center therefore filled an important gap in the country. The objective of the Polytech's Rector was to offer a new service to his students and to create an innovation space which would eventually feed new ideas into the Polytechnic. In doing so, he was supported by the country's Ministry of Education, the Foreign Ministry of Finland, as well as German Development Cooperation.

Key characteristics

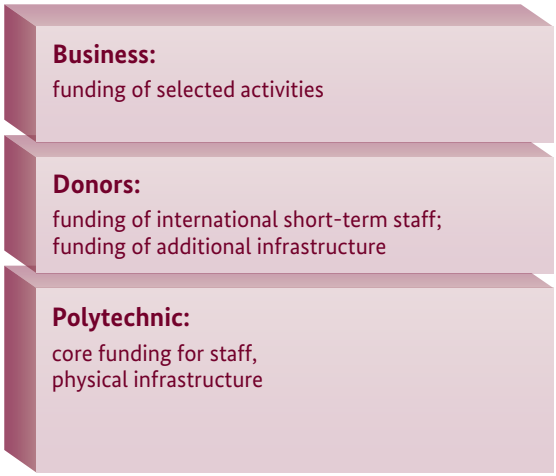
In 2009, these key drivers established the Namibian Business Innovation Center (NBIC) as part of the Polytech of Namibia. This setting had some important implications for NBIC's management, funding, and staff structure:

- NBIC's General Manager is part of the Polytech's management team and has direct access to the Rector.
- On the basis of its own proposal, NBIC receives an annual budget from the Polytech. NBIC has a large degree of freedom in implementing this budget.
- Polytech hires staff based on the suggestions and request of NBIC specifically for NBIC rather than delegating its own staff. This allows NBIC to create a personnel body that is suitable to its needs and the specific requirements of the Center.

In order to create firm linkages with the private sector, NBIC asked leading executives from the corporate sector as well as the Bank of Namibia and the Development Bank of Namibia to form an Advisory Board. The Advi-

sory Board now comes together on a quarterly basis to advise the Center strategically, pledge funds from the private sector and act as a networking platform.

While most of NBIC's activities require some form of co-funding from participants, only few activities are self-sustaining up to now – and some of them, such as the general awareness creation activities among students, never will be. The center therefore has a strong funding base which comes from a unique partnership with the university / government, big national and international corporations, and donors:



Ever since its inception, NBIC has evolved on many grounds:

- **Target group & outreach:** While the center focused initially on students of the Polytech as well as the University of Namibia (UNAM), it quickly broadened its reach to graduates and young people with a couple of years of work experience. Furthermore, it has put in place an elaborate program for reaching out to other cities beyond the capital city of Windhoek. Working together with the local centers of Polytech and UNAM as well as selected local champions such as the Chamber of Commerce, NBIC currently is piloting activities in seven different towns.
- **Staffing & Departments:** NBIC's staff evolved from 3 to 16 in 2013, and from two to three Departments, offering more and more services to young entrepreneurs:
  - The Department *Innovation Marketplace* offers workshops that teach creativity techniques and business model design, in order to stimulate innovativeness and entrepreneurial mind-sets in Namibia.
  - The Department *Entrepreneurship & Incubation* imparts skills on market research, business planning, and starting and growing a business, through a range of service packages which are outlined in more detail below.
  - The recently created Department *Research & Development* offers training and mentoring in social media and mobile applications. It also hosts one of the famous FabLabs: a facility that offers training on product development, labelling, and branding, using on-the-ground equipment for prototyping such as laser cutters and 3D printers.
- **Premises:** Originally situated in a small office at the Polytech, NBCI now hosts several buildings in the Polytech-owned "Innovation Village", which is situated close to the Polytech Campus. The village offers training facilities, an incubation office, a newly-created co-working space and lots of outdoor space for social activities and networking, including eating facilities. In order to generate some additional income for the Center, this space is rented out to third parties when not used by NBIC.
- **Networks:** With time, NBIC has actively searched for and become engaged in a number of regional and international networks, for example the *African Incubator Network*, the International Association of Science Parks (IASP), *AfriLabs*, and the *Southern Africa Innovation Support Programme* (SAIS).

For illustration purposes, some of the services of the Department *Entrepreneurship & Incubation* shall be briefly described:

Entrepreneur-ship Circle	■ 1.5 hour-event held regularly, open to all students and general public free of charge ■ Guest speakers introduce different topics relevant to new business creation, afterwards Questions & Answers, Snacks and networking ■ Some recent topics: Business Registration, start-up finance, social media marketing, Corporate Social Responsibilty, Branding …
BootCamp	■ Held twice a year; sessions spread over a period of two months ■ Open to 10 start-ups per Camp, application through pitching of business idea and selection of best candidates ■ Highly interactive sessions covering the full process of business creation, including presentation skills ■ Sessions held by different partners and local BDS providers, pro bono or on contractual basis ■ Costs: approx. 600 Euro / person, less than 10 % co-funding by participants
Business Plan Competition	■ Conducted on an annual basis ■ Jury of internal and external judges ■ Prize for three winners: much publicity plus some start-up capital, sponsored by banks
Incubation	■ Physical incubation space with office and meeting space, W-Lan and telephone, access to printers etc. ■ Application process: Prove that business is in operation, willing to take part in mentoring ■ Renting period and payment: Maximum three periods of 6 months each, first period: entrepreneur pays 1/3 of market rate, second period: 2/3, third period: full rate ■ Mandatory mentoring sessions every two weeks

Evidence of results

For monitoring purposes, NBIC administers a comprehensive stakeholder list in which it tracks participation in all its events. In addition NBIC conducts an annual survey among BootCamp and Competition participants of the year in question as well as the previous year in order to find out who started a business, who needs what additional support, what helped participants the most etc. These data show for example that since 2010, 40 sessions of the "Entrepreneurs' Circle" have been held with altogether over 1,000 participants. Each year, two out of three winners of the business plan competition and 30 % of the BootCamp participants have actually started their company.

Success factors and challenges

After five years of operation, the NBIC can proudly say that they know their success factors – but also the challenges that they still need to tackle.

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- **Team and Management:** diverse, committed, and working in low hierarchies
- **Partners:** national and international partners, be they business, NGOs, professional networks, or donors, for funding purposes, pro-bono activities, networking - this is one of the most essential assets of a Centre such as NBIC
- **Space:** central location close to Polytech, but much own space for free use
- **Innovation:** continuous innovation and adaptation of services and processes
- **Advisory Board:** keep it small & simple!

–

- **Capacity:** Although NBIC now hosts a team of 16 committed staff, it is still difficult to find committed staff that is professionally experienced, highly motivated and willing to work for the given salary
- **Legal structure:** While NBIC's status as a centre at Polytech has many advantages, it also comes at the cost of autonomy and lengthy bureaucratic procedures
- **Outreach:** ... to different locations in a country with a population density of two people per km²

Role of German DC

German support to the NBIC started off with an integrated expert (CIM-IF) who acted as the General Manager for the first 10 months, before a Namibian staff was hired for this position. Thereafter, the CIM-IF supported the establishment of the R & D Department for a period of two years. In addition, three development workers were also seconded to the center for a period of 2.5 years as well as 1 year each, and supported the Center in strategy and programme development, organisation development, and building linkages with international platforms and donors. In 2012, German development cooperation furthermore sponsored some new infrastructure facilities, such as the FacLab.

FURTHER INFORMATION

"NBCI Practitioner's Handbook. Entrepreneurship & Incubation", a handbook on the structure and activities of NBIC: http://issuu.com/nbicnamibia/docs/entrepreneurship

"CSR for Entrepreneurs", a publication be the Global Compact Network Namibia and GIZ: http://issuu.com/nbicnamibia/docs/csr_for_entrepreneurs

http://nbic.polytechnic.edu.na

https://www.facebook.com/NBIC.Namibia

For further information please contact:
bernhard.rohkemper@giz.de
or the NBIC: nbic@polytechnic.edu.na

1.4 Stimulating innovative ideas: **Best Technology Innovation Contest, Serbia**

Background and objective

Contests and competitions are a popular instrument to promote entrepreneurship culture, start-ups and innovation in established businesses. The idea was first developed in the 1980s at the Massachusetts Institute of Technology (MIT). Since the 1990s, especially start-up competitions have started to boom in Germany, conducted on national, regional and local level. Although each competition is different, they follow a similar idea and logic: To stimulate competition and innovation in the economy, and to work with a number of 'high potentials'. Competitions may award business plans or innovative ideas which have not yet evolved into a business plan; they support students, start-ups or newly created companies. Some competitions have a sectoral focus, while others look only at the innovativeness of the idea, rather than the sector.

Today, most competitions involve different phases, giving some form of support in each phase, before selecting the final winner. In these cases, the focus is less on the prize money for an individual winner, but rather on supporting a larger number of applicants in the process of preparing their innovative business by providing training, advice and networking opportunities. There are two reasons for doing so: First, a larger group of – potentially innovative, high-growth – entrepreneurs can be reached with advice. Secondly, experience has shown that while students and researchers may have very good and innovative ideas, they often lack decisive entrepreneurship and presentation skills, business contacts and access to financiers. Only by putting them through a more intensive preparation process will they be able to start a business with a viable chance of survival and growth.

Key characteristics

The Serbian *Best Technology Innovation Contest* was launched in 2005 with the triple aim of promoting the entrepreneurship culture among Serbian people, innovative start-ups, and high-tech and non-high-tech innovation within existing companies. Its target group therefore includes

- students,
- emerging start-ups, and
- existing companies that have an innovative idea or need support in implementing their innovation project.

The contest is managed primarily by the *Faculty of Technical Sciences* of the *University of Novi Sad* and supported by a larger consortium comprising the Ministry of Education and Science, the Chamber of Commerce, the National Television and Serbia's Institute for the Protection of Intellectual Property. While the Faculty manages and implements the contest, all other partners contribute in terms of conducting public relations activities (Chamber, TV), supplying training facilities (Chamber), providing expertise (Faculty, Institute) and sponsoring prize money (Ministry).

The contest involves six main steps:

1 *Announcement*	■ The contest is being announced through the Serbian Chamber of Commerce, Universities, as well as through TV and radio
2 *Application*	■ Students, start-ups and companies apply through the web portal hosted by the Faculty at Novi Sad ■ In 2011 and 2012, approx. 100 applications were received.
3 *First Round of Selection*	■ Evaluation of applications through selection committees consisting of firm managers, sector experts and academics. ■ The evaluation criteria include business model, feasibility, market readiness, degree of innovativeness, profitability. ■ Usually about two thirds of the applicants pass the first selection round and proceed further.
4 *Trainings and Coaching*	■ Sessions for those who passed the first round of selection, on topics such as 'Understanding and well defining the novelty of innovation', 'Finding customers and developing markets for innovative products / services', 'Designing a business model', 'Preparing for market entrance'. ■ Trainings and coaching sessions are delivered by teachers from Novi Sad as well as companies and former participants of the contest.
5 *Second Round of Selection*	■ Evaluation of the business plans prepared during the training, through industry experts familiar with the topic and situation of the participant.
6 *Semi-Finals and Finals*	■ Live presentation of the business plans by the participants in a fixed time format. A jury then selects the participants for the finals, which is broadcasted live on the national TV. At the end of the final, six winners or winning teams receive a prize sum between 2,500 and 13,000 Euro.

Evidence of results

The results of the contest are rather impressive:

Awareness creation and entrepreneurship culture:
The competition final broadcasted on national television reached about 600,000 viewers in 2012.

Entrepreneurship development:
In the past few years, more than 3,900 researchers, high-tech companies and students were trained and 500 teams created business plans within these training sessions.

New business and employment creation:
According to the feedback given by winners to Novi Sad, 70 high-tech start-ups in the ICT, food, agro and chemistry industries were established as a result of the contest, with about 200 jobs created.

Moreover, a database of 5,000 innovators and innovative companies in Serbia could be generated, hosted by the faculty (contact details, sector, year of establishment, business plan), and being used for other activities and project calls.

Success factors

- Start from the ideas and existing concepts of partners, and add technical expertise only where needed
- Bring in as many private sector actors as possible (e.g. for the jury, as trainers and coaches etc.) because of their better knowledge and practical experience. In the case of Serbia, this is even more important as students do not trust in the capability of academics and government when it comes to questions of "how to do business"
- Be transparent about the selection criteria and process
- Formulate a clear exit strategy for donor support with a clear vision of sustainability and further support incentives ("bridging the gap" & "paving the way" to EU Innovation support projects)

Role of German DC

The role of German technical cooperation in supporting the competition consisted of technical input to the development of the competition concept, as well as technical and financial support to the development and implementation of the trainings and coaching. Moreover, German partners took care to secure the financial sustainability of the competition by paving the way for future financing through national and EU innovation programmes.

FURTHER INFORMATION

The Best Technology Innovation Contest has been supported by the Serbian-German Programme "ACCESS – Economic Development in Serbia", implemented by GIZ on behalf of BMZ.

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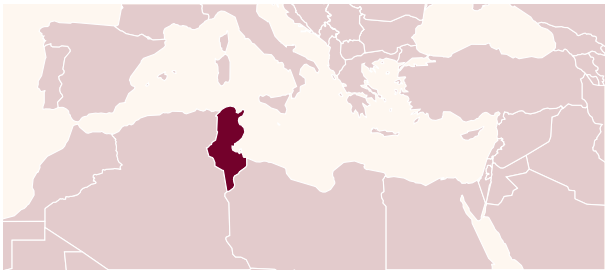
1.5 Stimulating innovative ideas: **Business Idea Competition, Tunisia**



Objective and rationale

The objective of the Business Idea Competition in Tunisia is to invite alumni of universities to develop innovative business ideas. While at university students are trained in the *financial* aspects of preparing business plans, stimulating creativity regarding their *content* is not part of the lessons. Business start-ups, especially in regions of high unemployment where there are few alternatives to self-employment, are often based on copying and imitating existing businesses – resulting in strong competition and low profitability of business. The Business Idea Competition aims to counter this tendency by stimulating creative ideas and comparing one's own business idea to others.

Key characteristics

The instrument is implemented in cooperation between local universities in the Northwest and Southwest (Gafsa) of Tunisia and the regional network of Local Development and Employment Agencies (Centres d'affaires). It consists of three elements: Stimulation of business ideas through awarding a price, elaboration of these business ideas through individual coaching and consultancy, and improved basic and advanced seminars at the university on doing business and marketing for all students.

In order to attract as many students as possible, the network of the Centres d'affaires designed a simple and target group-adapted marketing and application process. It distributed fashionable postcards at university premises and hotspots for students, asking them to send it back with a short note on their business idea.

In a first round of filtering, a committee of representatives from several business development agencies invited by the Centres d'affaires selects those ideas that appear serious and asks the students – via email – to turn in a more detailed concept. Of those concepts that are submitted in turn, the committee selects a group of students for an oral presentation and final selection in a public event. Selection criteria for the awards are the coherence and estimated economic feasibility of the idea, the uniqueness of it at the regional level, and the personal performance and persuasiveness at the oral presentation. During the whole process, applicants are able to receive individual feedback on their concepts through the Centres d'affairs.

Apart from a small financial price winners are awarded free personal coaching sessions and tailored consultancy for further developing their business concept into a bankable business plan.

Evidence of results

While it is planned to conduct the competition on an annual basis, so far only the first competition round has been completed. For this reason, the impacts of the competition on the creation of profitable businesses and employment cannot yet be observed. What can be said, however, is that the competition has been met with enthusiasm by students: 458 alumni handed in their initial applications, 80 of these turned in detailed proposals, and 17 proposals have been awarded the price.

In order to continuously improve the competition, an evaluation designed as peer review was carried out by a German expert in business plan competition. The evaluation recommended to optimise the IT-tools and database and to more actively involve the partner institutions of the Centres d'affaires.

Success factors

The success factors of the instrument can be summarised as follows:

- Strong cooperation between local actors from academia, government agencies and business community;
- Combination of short-term intervention – the award – with long-term improvements in university curricula;
- Marketing and dissemination method designed to reach and attract the target group.

Role of German DC

In this first round of the competition, the role of German DC was relatively strong. It related to initiating the process, capacity building within the Centres d'affaires and their partnering organisations as well as financial support for the awards and the engagement of coaches who were previously trained in a series of German DC initialised sessions. The costs for the awards and coaches were shared equally between German DC and the Centres d'affaires. In the future it is intended to decrease the contribution of German DC while increasing the contribution of the Centres d'affaires.

FURTHER INFORMATION

The Business Idea Competition has been supported by the Tunisian-German Programme "Support to SMEs in the context of market liberalisation", implemented by GIZ on behalf of BMZ.

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1.6
Access to finance for innovation in SMEs: **Vojvodina Cluster EU Project Office, Serbia**

Background and objective

The European Union's Research Era encompasses a wide range of programmes and tools available to companies, researchers and public bodies, both inside and outside of the EU. These programmes are grouped together in the newly launched Horizon 2020 instrument, running from 2014 to 2020 with a budget of just over 70 billion Euro. With Horizon 2020, the EU has even broadened its approach to international cooperation, giving access to all countries to the instrument while at the same time targeting specific countries and research fields in particular. One of the instruments that is highly important for SMEs is the COSME programme, with a budget of 2.3 billion Euro. The programme is expected to benefit 40,000 companies through access to finance, business support services for innovation, internationalization, promotion of eco-innovation, amongst others.

While these programmes are highly attractive, the application processes are quite demanding – although Horizon 2020 has made an effort to simplify processes compared to its predecessor programmes such as FP7 and CIP. This is why many business support organizations, incubators and technology transfer centers such as Steinbeis in the EU offer services to companies related to applying for and managing these funds.

Serbia's track record with regard to application for EU Innovation funds and programmes is rather bad: In 2011, there were only 41 applications in which Serbian partners participated. Especially SMEs are struggling to access available programmes, lacking awareness, information and capacities to scan for calls, develop projects, set up project consortiums, and deal with complicated bureaucratic procedures. Hence there is a need for supporting SME and research institutions in this process.

The Serbian ICT sector is highly dynamic and promising. Since 2010, ICT SMEs as well as research, education and regional development institutions located in Vojvodina, in the north of Serbia, have been joining together in a cluster. *Vojvodina ICT Cluster* (VOICT) employs a director and a project office that together render a range of services to its members, many of them still relying on donor support. The German-Serbian Programme ACCESS saw this as an opportunity to develop a service unit within VOICT for facilitating access to and participation in EU innovation programmes, thereby rendering the companies more competitive. At the same time, the service unit contributed to further objectives:

- **Strengthening VOICT as a cluster:** The new service increases the attractiveness of the cluster and helps to generate new sources of revenue, independent of donor support.

- **Strengthen the local innovation system:** As most EU programmes require collaboration between companies and research institutions, the funds contribute to strengthening the linkages between enterprises and research institutions in the region, thereby creating a positive dynamic of spill-overs and mutual learning effects.

- **Improve the national innovation system:** Through its experience in working intensely with innovation-active SMEs, the service unit is able to act as a dialogue partner for the Serbian government, giving advice on obstacles encountered in the framework conditions for innovation.

Key characteristics

The set-up of the service unit followed several phases, spanning over a period of three years. First, VOICT needed a competent person who would be able to render the service. The project team decided to train one of the existing VOICT staff members on this issue, rather than to recruit one of the expensive consultants for this purpose. Here the challenge was to create an environment and an incentive structure that would allow VOICT to retain this staff member, as consultants for EU funds are in short supply on the Serbian market and therefore well paid. In this first phase, the newly-built service unit focused on the acquisition of projects with direct involvement of and benefit for the cluster itself, in order to render the cluster more effective. After one year, the project team conducted a cost-revenue and a cost-benefit analysis of the new service unit as well as an assessment of the lessons learnt. In turn, they included the service costs in the membership fee of VOICT members and developed a pricing model and marketing plan for external clients. By then, the service portfolio included the following activities:

- Screening of and supply of information on national calls, bilateral funds, and EU calls
- Provision of a database on successful projects
- Coordination and consortium building between parties
- Project development and proposal writing, project implementation support and monitoring, project management
- Lobbying and awareness with national authorities regarding national implementing procedures for calls
- Training for proposal writing

In the third year, the unit was able to offer the service to clients on a financially sustainable basis. From the fourth year onwards, the unit even generated extra profits.

Phase 1 **July 2011 – July 2012**	■ Establishment of service unit ■ Training of staff
Phase 2 **July 2012 – March 2013**	■ Financial analysis, lessons learnt assessment ■ Inclusion of service in membership fee, development of business model and marketing plan for external clients
Phase 3 **April 2013 onward**	■ Services offered to members and non-members on financially sustainable basis, service unit becoming profit centre for the cluster

Evidence of results

As both the cost-benefit and the cost-revenue analysis show, the results are clearly positive: After 21 months of activity, the service unit had acquired approximately 227,000 Euro for its clients and for itself – corresponding to an investment of 13,000 Euro and 23 man days on the part of ACCESS.

Success factors

A range of factors were responsible for the success of the activity.

Factors related to project partners:

- Commitment of VOICT management and members, high level of transparency between VOICT and ACCESS
- Compatibility with the strategic interest of VOICT: orientation towards knowledge, innovation, collaboration and internationalization
- Availability of internal staff resources of the BMO for setting up the unit

Factors related to project management:

- Development of a realistic business plan, focus on financial sustainability, development of exit strategy for both VOICT and ACCESS
- Separation of the service unit from general VOICT structures
- Selection of staff that is industry-oriented rather than technocratic or academic
- Creation of a positive environment and incentive structures to retain the newly-trained staff
- Coaching of staff on the job after completion of staff training

Role of German DC

The role and investments of German DC included financial and technical support in the first two years of the existence of the unit. German DC supported the training and coaching of the staff member and covered its staff expenses for that period. Furthermore, it supported VOICT in the development of the business plan, its review and assessment.

FURTHER INFORMATION

The Best Technology Innovation Contest has been supported by the Serbian-German Programme "ACCESS – Economic Development in Serbia", implemented by GIZ on behalf of BMZ.

http://vojvodinaictcluster.org

http://ec.europa.eu/research/horizon2020/index_en.cfm

http://ec.europa.eu/cip/cosme

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2.

Masai woman with mobile phone, Tansania

Bridging

2.1 Joining up SMEs with knowledge providers: **Technology Transfer Center, Georgia**

Key characteristics

Georgian SMEs predominantly rely on low tech solutions, outdated equipment from abroad and low labour cost. They generally lack an innovation culture. At the same time Georgian researchers by and large seem to sit in their 'ivory tower', producing results that have little relevance to the local industry. Communication between technology seekers and producers is quasi absent. Hence it does not come as a surprise that Georgia ranks extremely low in international rankings on innovation issues: While it is ranked 3rd (out of 139) on "time to set up a business" in the Global Competitiveness Index 2010, it's "university-industry collaboration" ranking is at 134, "company spending on R&D" at 132 and "company capacity for innovation" at 112 in the ranking. For this reason, the Government of Georgia decided to set up a national Technology Transfer Center (TTC).

Technology transfer centers, in contrast to technology parks and incubators, cater not to a small set of highly R&D intensive, possible young enterprises, but to the large group of SMEs that are in need of a wide range of services to upgrade their technological level. While sharing this main characteristic, centers around the world differ with respect to their objective and orientation, their legal form and shareholder structure, their service portfolio and their financing model. This makes sense, as the structure of service demand and supply, the institutional conditions, legal framework conditions etc. differ in each context.

In Georgia, the initial situation was characterized by a total absence of technology transfer structures in the country and, at the same time, a high political leadership of the Prime Minister's Office regarding the set-up of a national TTC. The Prime Minister's Office appointed the Georgian Patent Office *Sakpatenti* with the task of setting up the new center and acting as its host institution.

The process of setting up the TTC lasted two years. At first, policy makers and other stakeholders conducted a study tour to German technology transfer centers in order to learn about best practices, possible models, and common challenges of technology transfer centers. After the study tour, the process of setting up the TTC was launched. Based on a workshop and numerous talks with stakeholders from policy, research and business, an international expert drafted a business plan for the TTC. The business plan had the following purposes:

- Discuss the market needs for technology transfer in Georgia
- Outline the business concept of the TTC based on recognized success factors
- Suggest an organisational structure for the TTC and personnel requirements
- Draft a concrete and need-based service portfolio
- Prove the mid-term financial viability of the TTC
- Outline necessary resources and contributions from future TTC owners
- Motivate potentially interested parties to become owner of the TTC

While leaving open some questions for further elaboration, the business plan clarified certain key issues: The TTC was to be set up as a non-commercial entity, so that it would be open for third party funding; it would be hosted and owned by Sakpatenti in the short term, but with the goal to spin-off from Sakpatenti in the future; and it would encompass a tripartite shareholdership from government, academia and the business community, amongst other issues.

After drafting a legal statute for the TTC, job descriptions, and action plans, the Center's operational activities were kick-started with two measures for raising the awareness about the Center while learning about the needs of the participants at the same time:

- **INNO|GEORGIA Technology Transfer Competition**
  - Objective to position the TTC in the market, gain clients and learn hands-on about technology transfer needs of Georgian SME
  - Targeted to all Georgian SMEs with technology transfer needs and concrete project ideas for joint R&D projects
  - Jury selected five winners who received technical and financial support by TTC for period of up to six months, with a maximum of 20,000 Georgian lari / ~9,000 Euro (max. 90% of project costs)
- **Innovation Management Trainings**
  - Two 3-day trainings on innovation management for 20 companies each
  - Conducted by German consulting company active in the field

Based on the competition and the innovation management trainings the TTC was able to define its service offer, both for the immediate future as well as for the more long-term future:

Immediate service offer

- **Technology matching:** Connecting SMEs with technology providers, nationally and internationally
- **Technical assistance:** Organization of the know-how transfer process
- **Access to local and international patent databases** and consultation on specific patents
- **Legal advice** on intellectual property
- **Negotiations** with technology providers and drafting licensing contracts

Medium-term service offer

- **Technology audit:** Assessment of the potential technological improvement of the company
- **Intellectual property valuation**
- **Product commercialization**

Evidence of results

The TTC still has a long way to go before becoming a fully functioning entity that provides a comprehensive range of high-quality services on a self-sustaining basis. Nonetheless, it seems to be well on the way: One year after its establishment, the TTC has had contacts with about 180 companies that have participated in its competition and trainings or asked for counselling sessions with the Center. An important task for the future will be to establish a monitoring and feedback system that not only measures firm contacts and services rendered, but also client satisfaction with the services and their impact on clients' performance.

Success factors and challenges

TTC stakeholders have learned some important lessons during the process of establishing the center: The model of a TTC carried by a stakeholder group from the private, public and academic sectors is beneficial because it establishes links to important sources of information and networks. At the same time, the model has some drawbacks: The TTC is highly dependent on *Sakpatenti* as its hosting institution and main financier; TTCs staff members are seconded by *Sakpatenti*, and therefore the TTCs director does not have full disciplinary authority over his staff members. It will therefore be important for the Center to reach some level of autonomy in the future.

Role of German DC

Direct support for the TTC through German DC included technical advice in the form of a study visit and intense short (5 days / month) and long term expertise (1.5 advisers) for advising the development of the center's business plan and setting-up selected services. In addition, the Program advised the Georgian Government on the design of its national innovation and technology transfer system and policy.

Success factors for technology transfer centers – international perspective

- Clearly defined scope and mission
- Professional management and governance
- Experienced, industry-oriented staff
- High customer and demand orientation
- Sustainable financing
- Appropriate legal form, independency from political influence
- Excellent network on regional, national and international level
- Bottom-up approach, but high commitment from policy level
- Strong backing of the main stakeholders
- Strong Monitoring & Evaluation-System

Source: Presentation by Dr. Gerd Meier zu Köcker, VDI VDE IT, 27.06.2013

FURTHER INFORMATION

The establishment of the TTC has been supported by the Georgian-German Programme "Private Sector Development Program Georgia", implemented by GIZ on behalf of BMZ.

Website of the Technology Transfer Center of Georgia: www.ttcg.ge

Documents on the TTCs Business Plan, the INNO|GEORGIA Competition and the Innovation Management Trainings are available for download in the GIZ-Product "Innovation and technology development" or received directly from: christina.rosendahl@giz.de

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2.2 Joining up SMEs with knowledge providers: **Innov'Act, Morocco**

Background and objective

Constantly engaging in learning and innovation is important for SMEs to stay competitive. However, in contrast to large companies they cannot afford to establish R & D departments in-house. Furthermore, because of the high costs and uncertain outcome SMEs are often reluctant to engage external knowledge providers such as research institutes for innovation projects. The objective of measures to join up SMEs with knowledge providers is therefore to overcome this barrier by demonstrating to them the positive economic effects of linking-up with knowledge providers.

At the same time, these measures help to match the demand for and supply of knowledge in a local innovation system. Linking up knowledge providers such as universities and research institutes with companies supports technology transfer and incentivises knowledge providers to re-orient their focus from basic research to applied research and commercialisation of research results. It helps research institutes to learn more about what industry needs and to adapt their activities more towards market demand.

Across OECD and non-OECD countries there is a large variety of measures geared at joining up SMEs with knowledge providers. The following sub-chapter introduces four different tools which, in one way or another, support the employment of researchers or graduates within companies or allow firms to hire knowledge-intensive, innovation-oriented consulting services. Each programme furthermore has its own specific or additional objectives it aims to achieve.

Key characteristics

The aim of the Moroccan Programme "Innov'Act", implemented by the Agency for SME Promotion (ANPME) in cooperation with the Association for Research and Development (R & D Maroc), is to build innovation partnerships between SMEs and Moroccan researchers. R & D Maroc is a private sector association of well-known business enterprises and national champions trying to promote innovations in Moroccan SMEs by supporting applied research. In the short run, the innovation partnerships shall result in concrete innovations being implemented in SMEs. In the long run, SMEs shall be convinced of the economic benefits of innovation and incentivised to cooperate with Moroccan research institutes.

Interested micro, small and medium enterprises and groups of companies from all sectors can apply for support. ANPME supports applicants in finding and selecting a suitable research partner from the public or private sector, and in drafting a project proposal. After having selected a partner institution and a researcher, companies submit a detailed project proposal to R & D Maroc.

The proposals are reviewed by a committee consisting of Ministry for Industry, Commerce and New Technologies, Ministry for Scientific Research, ANPME, and R & D Maroc. Criteria for selection include the degree of novelty of the innovation, the feasibility of the project, and the prospects for commercialisation. If a project is accepted, Innov'Act incurs the costs of the salary of the researcher up to a maximum of the equivalent of 600 Euro / month for a maximum duration of two years. In addition, it provides a financial contribution of max. 18,000 Euro for conducting the project. Micro enterprises must match this amount with a contribution of 50 %, small and medium enterprises 60 % and groups of companies 65 % of the amount.

Evidence of results

The programme has become fully institutionalised as part of the Moroccan innovation system: In the first pilot phase Innov'Act was funded by German DC, IFC and R & D Maroc. 20 companies benefitted from the programme. Since 2010, the Moroccan Ministry for Scientific Research has provided a budget for the Programme; German DC

and IFC no longer contribute. At the beginning of 2011, the Ministry for Industry, Commerce and New Technologies announced that it is considering making additional funds available for the programme. While in the pilot phase only few companies were able and willing to submit the detailed project proposals required for eligibility, in the current phase R&D Maroc has received already around 100 applications.

After the completion of the pilot phase, an independent consulting company evaluated the programme. It analysed the strengths and weaknesses of the programme as well as its impacts, from the point of view of all parties to the programme – the programme administrators, beneficiary companies, research institutes and the individual researchers seconded to the companies. On balance, all programme partners were highly satisfied with the programme. In terms of results it was found that:

- The majority of projects supported resulted in management innovations, followed by product- and process innovations.
- Companies expect these innovations to result in increased quality of their products, increased market share and new markets to be developed, reduction in production costs and reduction in production delays.
- Most participating companies have employed 1 – 2 project staff in addition to the researcher in order to support the research project. More than half of them have announced to employ them permanently even after the termination of the project.

Success factors

According to the evaluation, the main strengths and success factors of the programme are:

- The project is fully geared towards the weaknesses of the Moroccan innovation system: lack of innovation culture within SMEs, limited knowledge of SMEs about benefits of services by knowledge providers, lack of practical mechanisms for bringing research and companies together.
- Supporting the companies in selecting partner institutions and preparing project proposal is seen as highly important, as companies lack the capacity to formulate detailed project proposals and often are not willing to make such up-front investments under conditions of insecurity about funding.
- Quarterly and biannual reports to be submitted by companies help to regularly review the progress.
- The programme itself is constantly open to adapt its own strategy and processes according to new insights gained and learning experiences.
- The selection of projects through a multi-disciplinary commission as well as through on-site visits at the company allows for a well-balanced and professional selection of projects.

Room for improvement was seen in the marketing of the programme, which should be reinforced and which should build on chambers of commerce and industry. Moreover, it was felt that project proposals should be reviewed constantly, rather than en bloc, in order to better adapt to companies' needs.

Role of German DC

Within this Programme, German DC's role consisted of financial contributions as well as technical assistance concerning the concept of the innovation promotion programme Innov'Act.

FURTHER INFORMATION

Innov'Act has been supported by the Moroccan-German Programme "Support to Micro, Small and Medium Enterprises", implemented by GIZ on behalf of BMZ.

For more information on the programme by R&D Maroc:
www.rdmaroc.com/programme-innovact.html

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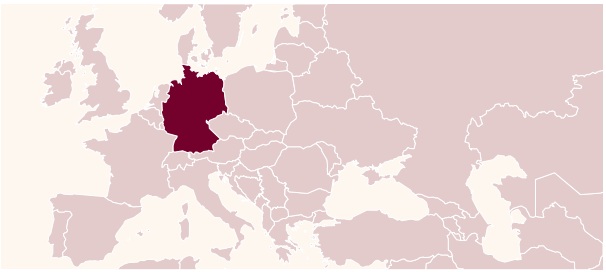
2.3 Joining up SMEs with knowledge providers: **Innovation Assistant, Germany**



Key characteristics

In addition to the general objectives described in the introduction, the specific objectives of the Programme "Innovation Assistants" in the state of Saxony, Germany, are to retain skilled graduates in the region, diminish regional 'brain drain' and create highly qualified sustainable jobs.

The Programme was initiated by the Saxony State Ministry for Economic Affairs and Labour. It supports the employment of young, high-skilled graduates from universities and technical colleges in local SMEs. The support provided consists of a 50% contribution to the assistants' salary, capped at a certain limit, for a period of minimum one and maximum two years.

Interested SMEs must have a specific innovation and technology-oriented project for which they intend to employ the assistant. They are able to search for a suitable graduate through an internet-based forum. If they find a suitable and willing person, the company applies for the grant with the Development Bank of Saxony, the main implementing institution. In order to prevent fraud and substitution effects, companies have to prove that the assistant is not already employed in the company, does not substitute a regular employee, and is not a relative of the company owner.

Each company may apply for two assistants only. There is, however, a reward for successful projects: If previous assistants have gotten a permanent job in the company after the termination of the programme or if at least two further jobs were created in the production departments of the company as a result of the programme, further assistants may be granted.

Evidence of results

An evaluation carried out by external evaluators regularly measures whether the programme's objectives in terms of job creation have been achieved. So far, it has been highly successful. In the period between 1995 and 2006, 592 assistants were employed. As a result of the programme, participating SMEs created 1,614 new jobs within their companies.

Success factors

Important success factors and challenges include:

- **Communication strategy:** It is important to clearly communicate the benefits of the programme to both companies and universities. For communication to companies, chambers of commerce and technology stations should be won as partners.
- **Low bureaucracy:** In order to reduce the administrative costs and barriers for SMEs, design the application procedure and treatment as simple and transparent as possible.
- **Matching:** Companies must be able to select and interview their assistants themselves. Nonetheless, both parties – company and assistant – must be able to finish the contract before the official termination period, if the match does not turn out as suitable.

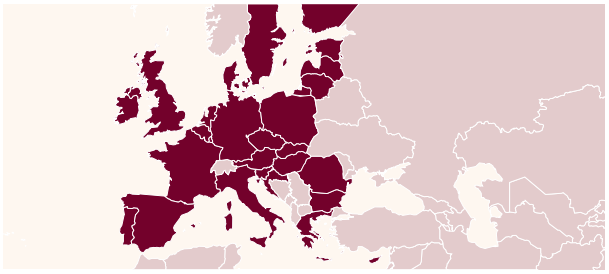
Possible roles for German DC

Possible roles for German DC may include supporting implementing organisations with setting up of the scheme, designing mechanisms for matching between enterprise and graduate, designing the communication strategy, and setting up a system for evaluation.

FURTHER INFORMATION

Description of the tool: www.zenit.de/d/service/download/EUROPEER_SME_READER.pdf

2.4
Joining up SMEs with knowledge providers: **Innovation Vouchers**



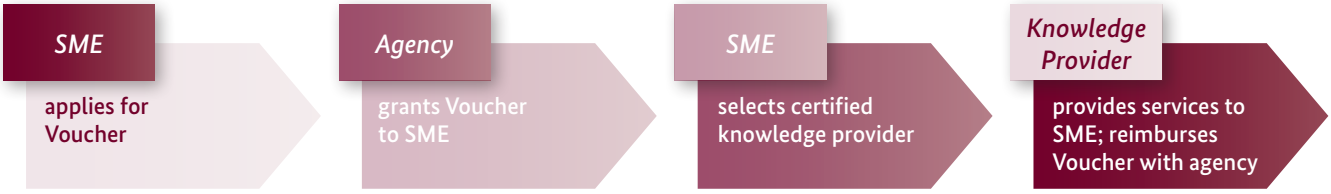
Key characteristics

Although voucher systems as such are no novelty to private sector development, innovation vouchers are a fairly new, and highly popular, demand-driven instrument for promoting innovation in SMEs and facilitating the access of SMEs to external knowledge. They also serve to increase competition among knowledge providers, thereby increasing providers' quality as well as specialisation of services. There are at least 25 different innovation voucher schemes in operation today in EU member states.[12] Their main advantage is seen in their comparatively low administrative effort and fast application, approval and reporting process.

The schemes are usually implemented by a public or publicly-authorised regional or national agency working for industry and business development. They may be open to all or restricted to certain sectors, depending on the specific context and objective. In a fast and lean process, SMEs apply for the voucher with the agency – application forms need not be longer than 2–3 pages, and approval is generally given within few weeks. This makes the scheme attractive to small enterprises that are unwilling and unable to engage burden-some bureaucratic processes. Qualified applications are handled on a first-come-first-serve basis.

Services eligible for support vary from scheme to scheme: They may cover the full range from idea (innovation audit, feasibility studies) through development (technology assessments, technical development and testing, product development) to realisation (project management, staff training). After receiving the voucher, businesses select a service provider from which they want to "buy" the desired service and enter into a service contract. A pool of eligible service providers are usually predefined, based on transparent criteria that promote competition. In some countries, both public and private providers can deliver the services if they have been able to proof their quality and get accredited with the implementing institution. Other countries only allow public institutions such as universities to act as knowledge providers. They do so in order to incentivise public research institutions to focus more strongly on the knowledge and technology needs of businesses and market demand. Furthermore it reduces the burden of accrediting private providers, while on the other hand limiting the choice for specialised providers for businesses.

The grant amount of the voucher may vary with the size of the company and the objective of the programme. In Europe, the smallest vouchers are 500 Euro, the largest one 25,000 Euro. Importantly, most vouchers – apart from



12 For the following analysis see Schade / Grigore (2009).

some very small ones for very small companies – require up to 50 % co-funding by the businesses. Co-funding increases the accountability of service providers towards their clients, the businesses, rather than towards the funding institution. Furthermore it helps to allocate public resources more efficiently: If businesses have to contribute, they will make sure that the services received do actually match market demand.

Upon completion of the service, the service provider can reimburse the costs with the implementing agency, together with a proof that the services have been performed according to the contract and that the SME has produced the co-funding. An additional report by the SME on the project conducted and impacts achieved serves for evaluation purposes.

Evidence of results

A number of innovation voucher schemes in the EU have been evaluated by independent evaluators. Evaluation results from the Dutch and Scottish voucher schemes showed that the voucher stimulated many SMEs to cooperate with knowledge providers who had never done so in the past and who would not have done so without the voucher – or only much later and at a much smaller scale (criterion of 'additionality'). The Dutch evaluation concluded that out of every ten vouchers, eight are used for a project that would not have been assigned without such a voucher, one is used for a project that would have been assigned anyhow, and one voucher is not used.[13] A Finnish evaluation also showed that a large proportion of companies continued to cooperate with knowledge providers afterwards.

In order to evaluate the true impact of the programme, success indicators should be determined when designing the scheme and evaluated at regular intervals. Such success indicators could include:

- number (#) of participating SMEs, # of participating SMEs who have never used an external knowledge provider before, # of participating SMEs who use external knowledge providers after reimbursing the voucher;
- # of participating SMEs who have started and successfully concluded an innovation process due to the voucher;
- additional revenue generated by the innovation initiated through the voucher.

Success factors

- **Preventing fraud:** As with all voucher schemes, there is a risk of fraud. SME and service provider may enter into complicity and share the value of the voucher, without any service being delivered. Although this risk cannot be fully eliminated, it is important to have rigorous checks and balances in place as well as a capable implementing organisation able to detect and sanction frauds as far as possible.
- **Demand for services:** In many developing countries, SMEs are not aware of the benefits of engaging with external knowledge providers. They do not demand such services, even if they are partly subsidised. Support programmes therefore often have to be accompanied by a good communication campaign in order to inform SMEs – also outside the capital – of the available opportunities and convince them of their benefit. Intermediaries that are trusted by and physically close to SMEs can be very helpful in this regard.

13 Cf. Cornet / Vroomen / van der Steeg (2006).

- **Choice of high quality service providers:** On the other hand, there are often few service providers available who are able to provide high quality services fully tailored to the needs of SMEs. Universities are often focussed on basic research rather than applied research and technology transfer; other providers may not exist. Support programmes might therefore have to be accompanied by measures to raise awareness for the needs of SMEs as well as institutional and organisational reforms in universities. Alternatively, capacity building programmes can support service providers.

- **Transparent market place:** SMEs should be able to make an informed choice about their preferred service provider. This choice should be based on transparent information about providers' skills and experience of service providers. Accreditation of qualified suppliers, expost evaluation of suppliers through SMEs and instruments such as web-based platforms – containing the results of SMEs' evaluation – may help.

- **Competent implementing agency:** In order to manage the process of reviewing applications, reporting and administration of funds effectively and efficiently, a competent implementing agency must be available. Again, complementary capacity building might be important.

- **External evaluation:** Voucher programmes – like essentially all other public support programmes – should be regularly evaluated by external organisations. In addition to "output indicators" (how many firms have benefitted, what kind of firms have benefitted etc.), "outcome and impact indicators" on the level of increased productivity, product quality, revenue, or jobs created should be measures. These indicators must be defined by the political institution under which the implementing organisation is acting. Supporting partners to set up systems for evaluation – setting clear goals and indicators, data collection systems, sourcing out evaluation, feeding back results of evaluation into programme design – are important parts of capacity development.

Possible roles for German DC

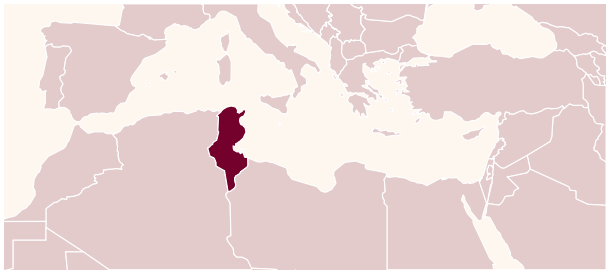
German DC can support partners in setting up systems for innovation vouchers in a variety of ways, as can be seen from the above: Advising political institutions in defining goals and impacts and steering implementing organisations, advising implementing organisations in designing and administering voucher schemes, capacity development for service providers or communication campaigns are all possible and important areas of support.

FURTHER INFORMATION

Programme "Go Inno" by German Ministry for Industry and Technology: www.inno-beratung.de/foepro/go/index.php?navanchor=1710006

Dutch innovation voucher programme described by ERWATCH: http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/nl/supportmeasure/support_mig_0033

2.5 Bringing academics closer to industry: **Thesis projects with companies, Tunisia**



Objective and rationale

The general objective of the instrument is to promote an entrepreneurial spirit among and employability of Tunisian students. This is necessary because a large number of highly-qualified Tunisian students are unable to find a suitable job after graduation. They are left with the alternatives of becoming unemployed or opening up their own business – something for which many of them are not prepared.

Ideally, students, companies and universities benefit from this instrument: Through working on questions that are of immediate relevance to companies students gain first-hand experience on business matters and thereby improve their entrepreneurship skills and employability. Furthermore, they establish first contacts to potential employers even before finishing their studies. Partnering companies, mostly SMEs, for their part, receive potentially high-quality solutions for problems that affect their business or innovative ideas that increase their competitiveness – advice that they wouldn't have been able to buy on the market due to low profit margins. In addition, universities are able to position themselves as competent, industry-related knowledge providers for companies. Through closer cooperation between higher education and industry, university curricula become more attuned to practice and studies better geared to the needs of the job market.

Key characteristics

The instrument currently takes the form of a pilot. It is the result of a bottom-up, local initiative by the University of Jendouba and the regional network of Local Development and Employment Agencies that was driven by the University's vice-president and some lecturers who are representing members in the regional network of Local Development and Employment Agencies. At the University of Jendouba, the instrument consists of three main elements: matching students with companies for writing their thesis, individual coaching for selected thesis projects, and long-term introduction of entrepreneurship education in universities.

The following steps form the core of the instrument:

- Aided by an external facilitator, students in their final year and lecturers come together with local companies to conduct an analysis of the region's economic potentials. Based on the results, the students form thematic working groups. Each of them links up with one of the companies involved in the exercise. They collaboratively define a thesis project of interest to both the company and the student, which is then implemented by the student together with the company.

- In addition, final-year students present their thesis projects in a public university contest to their fellow students. A jury consisting of professors, private sector representatives and representatives of the network of Local Development and Employment Agencies awards ten thesis projects that are being implemented together with companies, that are focussing on the regional economic potentials and that are of highest scientific quality. The winners are granted five hours of additional coaching and training, facilitated by the Centres d'affairs – an agency that is member of the regional network of Business development and Employment Agencies.

Evidence of results

Since the pilot has not yet been completed, it is not possible to measure the impact of the instrument. Once the pilot has been completed successfully, it is planned to implement the instrument in different universities across the country.

Role of German DC

The role of German DC in this first pilot included facilitating advice to the University of Jendouba through the University of Leipzig, which implements a similar instrument at its own university; training of coaches and sponsoring trainings through the coaches to the selected students.

FURTHER INFORMATION

The Thesis projects have been supported by the Tunisian-German Programme “Support to SMEs in the context of market liberalisation”, implemented by GIZ on behalf of BMZ.

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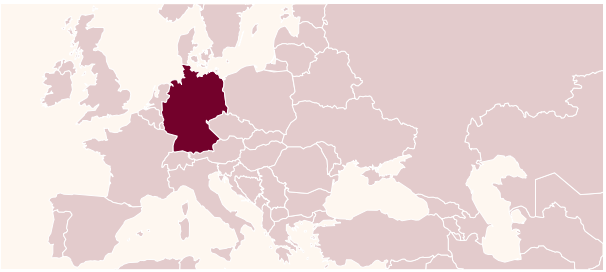
2.6 Supporting the commercialization of knowledge through academic spin-offs: **EXIST Programme, Germany**



Background

Since the 1980s, OECD countries have seen a rising number of academic "spin-offs". Such spin-offs are generally understood to be small, technology-based firms, founded by graduates or scientists from research institutions and making direct use of scientific knowledge created at the institution. Along with their rising number, public policy attention to academic spin-offs in OECD countries has increased considerably. This is because spin-offs are an important channel for commercialising scientific knowledge that would otherwise remain untapped. In contrast to many other small firms who engage more in user-driven innovation and adaptive learning, academic spin-offs contribute to science-driven, cutting-edge innovation. They may give rise to novel markets, the development of high-technology clusters and eventually contribute to growth and long-term employment creation.

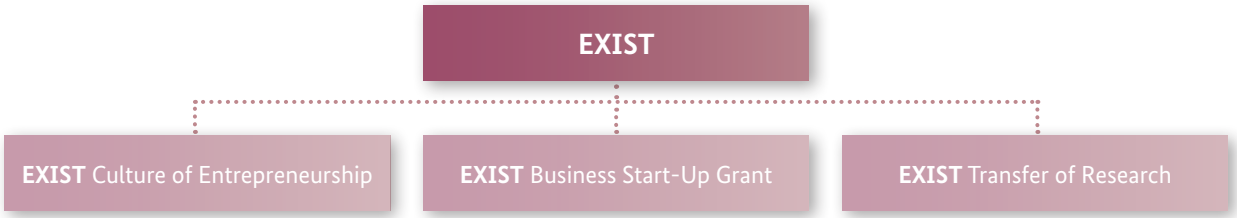
Academic spin-offs are confronted with a range of specific challenges. Amongst them are problems of access to finance, as spin-offs need time to fully translate research results into marketable products, while having little or no collateral on offer. Moreover, graduates and researches may be excellent in their specific sphere of expertise – but usually they are not the type of people who know much about developing convincing and realistic business plans, market studies, marketing concepts and distribution channels. For this reason, governments and universities have developed a range of different tools in order to help them overcome these challenges, ranging from incentive mechanisms over counselling to financing tools.

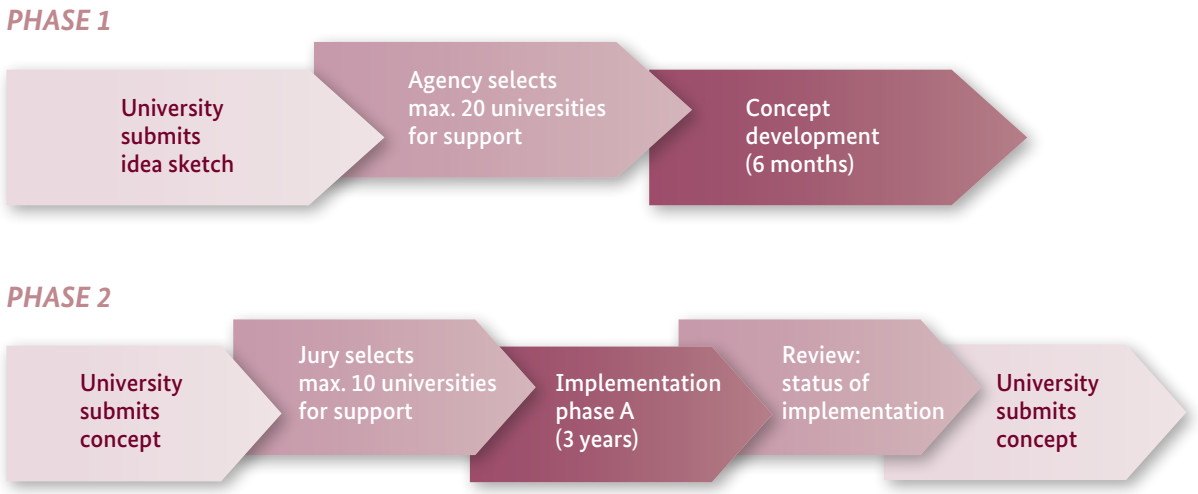
Objective

Overall, the aim of the programme is to improve the entrepreneurial environment at German universities and research institutes, to enforce the commercialisation of research results and to increase the number and quality of innovative and technology-based company start-ups. It is hoped that this will result in the creation of new, competitive and secure jobs in line with the requirements of structural change.

The programme consists of three sub-programmes focussed on universities and research institutes, each with its own specific objective.

- Sub-programme 1, **"EXIST Culture of Entrepreneurship"**, aims at improving the framework conditions for start-ups and establishing a culture of entrepreneurship at universities. In Germany, only few graduates start a business after graduating from university.





EXIST Culture of Entrepreneurship; Phase 1 and 2

Those who are interested in becoming an entrepreneur cite deficits in terms of business and commercial skills as an important barrier. It is therefore necessary to continuously sensitise, qualify and support students in order to raise the number of "opportunity entrepreneurs" coming from universities.

- Sub-programme 2, **"Exist Business Start-Up Grant"**, directly supports innovative business start-up projects as university spin-offs.

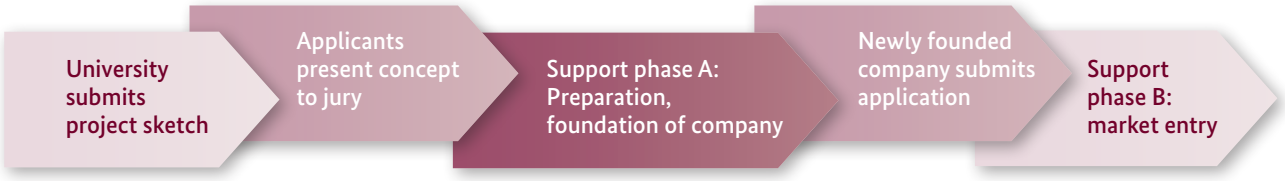
- Sub-programme 3, **"EXIST Transfer of Research"**, in a similar vein, aims at increasing the number and success of technology-based business start-up projects through direct financial support over a long-term period. This is based on the experience that much of the potentially relevant knowledge generated at universities and research institutes gets lost for lack of transmission channels to entrepreneurs willing to take up the task of commercialisation.

Key characteristics

EXIST is a support programme of the Federal Ministry of Economics and Technology and is cofinanced by the European Social Fund (ESF). It is a component of the High-Tech Strategy, a long-term strategy of the German government that integrates all innovation-related support programmes of the different ministries and levels of government. The programme has been initiated in 1998 and amended several times since then.

- **EXIST Culture of Entrepreneurship:** This sub-programme is designed in the form of a competition among universities. The competition consists of two phases. In the first phase, universities receive an allowance to develop a concept within a period of six months. The concept should lay down the university's strategy for establishing a culture of entrepreneurship and improving the framework conditions for start-ups at their respective institution. Such a strategy should refer to reformed administrative regulations and structures, services and internal incentive mechanisms and contain a system for quality control and monitoring. In order to receive funding, interested universities must submit a short "idea sketch" to the agency administering the programme and pledge a co-funding of 20 %. The agency then selects a maximum of 20 universities to be admitted. After completion of the first phase, an independent jury selects a maximum of 10 universities for admission to the second phase. This phase consists of support for implementing the strategy into practice. It includes a co-funding by universities and lasts a maximum of five years, with a review and a decision for continuation after mid-term.

- **EXIST Business Start-Up Grant:** This sub-programme supports small teams of students, graduates and



EXIST Transfer of Research

researchers in developing business plans for their innovative, knowledge-based start-up ideas. In order to receive support, the team must seek the backing of their university, create links to the local start-up network and be willing to take part in mentoring activities. The university, on the other hand, has to pledge to support the team in the form of mentoring, a work space and free access to its physical infrastructure. It is also the university who submits the application in the form of an idea sketch to the administering agency. Successful applications are supported with funds for living expenses, materials and equipment and extra coaching for a period of one year.

- **EXIST Transfer of Research** consists of two phases, but otherwise shares many features with the Business Start-Up Grant. In the first phase, small teams of researchers receive support for preparing a proof of concept, technical prototypes and a business plan and for actually founding a new company. In the second phase, the young companies are supported in bringing their products to the market and securing follow-up financing. In contrast to the Business Start-Up Grant-Sub-programme, support is provided for a longer period and the start-ups supported involve a much higher level of risk. For this reason, applicants have to first submit an idea sketch and, after positive review, formally present their project idea to an expert jury.

Evidence of results

From the beginning, the Federal Ministry has set up a system for rigorous monitoring and evaluation through an independent research institute. The tasks of the institute included the following:

- Evaluation of programme concept and impact logic;
- Evaluation of programme implementation;
- Quantitative ex-post evaluation of success of supported projects and comparison with startups not supported by programme;
- Detailed analysis of specific aspects such as experiences of participants of newly established entrepreneurship education-courses at universities;
- Benchmarking programme against other international programmes for supporting startups;
- Feeding back results to the Ministry and other stakeholders through regular workshops;
- Recommendations to Ministry on necessary programme adaptations.

Impact evaluation was not easy, since the measures of the sub-programme "Culture of Entrepreneurship" is rather long-term in nature and its impacts will only become visible in a number of years. Moreover, sub-programmes 2 and 3 are rather young and a comprehensive evaluation has not yet taken place. All in all, earlier evaluations suggest that the programme seems to have mostly achieved its objectives in motivating students to become entrepreneurs and in increasing the number of university spin-offs.

FURTHER INFORMATION

Website of EXIST-Programme: www.exist.de

Flyers in English: www.exist.de/imperia/md/content/pdf_sonstiges/exist_business_start_up_grant.pdf

www.exist.de/imperia/md/content/pdf_sonstiges/exist_transfer_of_research.pdf

2.7 Providing platforms for collaboration: **Technical Innovation Roundtable, Honduras / Guatemala**

Objective and rationale

The objective of the Technical Innovation Roundtables in Honduras and Guatemala is to improve interaction, exchange and cooperation between academia, the private sector and responsible government actors. As a result of increased trust, knowledge about the diverse needs and challenges and common initiatives, the Honduran and Guatemalan innovation systems are to be developed and continuously improved.

Key characteristics

Based on an external analysis of the National Innovation Systems in Honduras and Guatemala, key stakeholders from the business community decided to follow the recommendations of the analysis and initiate, with the support of the German-Central American Programme Sustainable Economic Development in Central America (DESCA), a Roundtable for collaboration on issues concerning innovation. In a short period of time public sector institutions such as the Ministry of Economy and the Intellectual Property Agency, private sector representatives (chambers of commerce, industry associations), universities, and several cooperation partners such as national foundations and public development banks joined the initiative.

Meeting on a monthly basis, the Roundtables started off with activities for getting to know each other and sharing information. After a certain level of trust was created amongst participants, the Roundtables focussed on (a) advice to government policies and strategies for improving the National Innovation Systems, and (b) strengthening existing and designing new, practical initiatives to foster the visibility of the Roundtables, create awareness of innovation and test promising approaches for future scaling-up.

In order to do so, the Roundtables – consisting of 15 to 20 member institutions each – have created lean and efficient working modalities and steering structures.

- Based on an agreed Action Plan, activities are implemented by varying groups of members who then contribute resources in terms of capacities, time and finance to these activities. Thus, no member is forced to participate in each activity or to allocate a certain annual budget to the Roundtable. Nonetheless, each activity that is carried out is promoted by the Roundtable as an institution.

- Each Roundtable has chosen a coordinator who coordinates the Roundtables initiatives for one full year and represents its members in other events or meetings. Each session is prepared and facilitated by one of the members, with all members taking turns. There is thus no need for a fully-fledged secretariat or complicated steering structures.

Evidence of results

Created in 2009, the Round-tables have managed to achieve a range of results and impacts. Among these are:

- Initiation and institutionalisation of a *National Innovation Award* in Honduras and Guatemala;

- Adoption and implementation of the platform *First Tuesday*, which brings together start-up entrepreneurs with other companies, investors and business service providers in Honduras;

- Development of training services and capacities in innovation management for the private and academic sector in Guatemala and creation of an innovation manager network (Fundación I);

- Development and submission of proposals on Innovation Policy, such as on the creation of new investment funds / financial instruments (FOEX FONDEPRO) and Innovation and Technology Centres.

In general, the Roundtables have fostered closer interaction and stronger trust between the public, private and academic sectors in the two countries, resulting in numerous bilateral activities of the participating stakeholders.

Success factors

The success factors of the Roundtables can be summarised as follows:

- **Realistic planning:** The combination of long-term and pragmatic short-term activities helps to "get things done" and achieve a common feeling of success, thereby increasing members commitment.
- **Flexible working modality:** Small groups for implementing activities increase efficiency, but making a joint appearance in the public increases visibility and legitimacy.
- **Corporate identity:** Through a range of measures such as creating a common logo and slogan for the Roundtables (Unidos Innovamos!), members have soon developed a 'corporate identity'.
- **Ownership and capacity building:** While on the one hand Roundtable members have full ownership of the process and are fully responsible for it, German DC supports them with capacity building measures whenever necessary. In addition, these capacity building measures create an incentive to participate actively in the Roundtable.

Role of German DC

In the beginning, German DC served as the coordinator of the tables, sending out invitations, preparing agendas and facilitating the meetings. Later on these tasks were fully handed over to the members. German DC now supports the Roundtables through individual capacity building efforts, such as sponsoring trainings on moderation skills to the members or bringing in consultants to help in drafting the action plans.

FURTHER INFORMATION

The Technical Innovation Roundtables have been supported by the Central American-German Programme "Sustainable Economic Development in Central America" (DESCA), implemented by GIZ on behalf of BMZ.

Website of Roundtable in Guatemala:
www.innovacion.org.gt

Download analysis of the National Innovation Systems (via www.vdivde-it.de/publikationen/studien):
http://bit.ly/1ay6aOc

www.innovacion.org.gt/content/estrategia-de-sistemas-nacionales-de-innovacion-para-honduras-y-guatemala-hacia-una-agenda-d

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2.8 Forging ties with highly-qualified nationals living abroad: **Honduras Global, Honduras**

Background and objective

In many developing countries, the most talented students leave their home country to take advantage of educational or professional opportunities in developed countries. Traditionally, this has raised fears of a 'brain drain' obstructing the development process, especially since the share of highly skilled and tertiary educated people in developing countries still remains low. Recently there has been a paradigm shift in this regard: More and more it is recognised that many migrants return home, constantly move back and forth between their country of origin and their new location, or engage in vibrant diaspora networks from their countries of destination. Aided by faster and cheaper transport and ITC opportunities, this kind of 'brain circulation' is mutually beneficial for both countries. In the diaspora, migrants acquire new, cutting-edge technical and professional know-how, knowledge about markets and economic institutions, exposure to ideas that are innovative in the countries of origin, or experience with entrepreneurship and business management; they establish new professional contacts to research institutions and business partners. Furthermore, due to their familiarity with language and culture on both sides they possess the ability to operate in both 'worlds', the developed world and in their home country, and to act as brokers between them.

For this reason, many governments and non-governmental institutions are now trying to take advantage of these opportunities by establishing contacts with diaspora communities and facilitating channels for exchange. In Honduras, according to estimations of the Honduran Central Bank, about 10 % of Hondurans – about 1 million people – live abroad, amongst them a significant percentage of highly qualified migrants. Many of them are eager to share their knowledge and experiences with scientists, students and business people living in Honduras.

At the end of 2008, the Honduran Science, Technology and Innovation Council (COHCIT, now SEPLAN), the National Association of Industrialists (ANDI) and the Salvador Moncada Foundation for the Advancement of Science (FSM) – founded by Sir Salvador Moncada, one of the most distinguished Hondurans living abroad – joined efforts to create the network Honduras Global. The objective of Honduras Global is to serve as a bridge between Honduran scientists and business people living abroad – the Honduras Global "members" – and those at home in order to promote knowledge transfer and innovation and encourage scientific, technological, and entrepreneurial development in Honduras.

Key characteristics

The network is built on a public-private institutional structure with the members living abroad and the Executive Committee composed by SEPLAN, ANDI, and FSM, at its core. Furthermore, a Consultative Council composed of Universities, Research Centers and Companies serves as a sounding board to the Executive Council.

Honduras Global offers a range of standard services, amongst them:

- **Conference, courses and seminars** given by Honduras Global members to a select audience of students and / or businessmen and –women in their specific areas of expertise contribute to knowledge transfer and innovation.

- **Leadership lectures** given by Honduras Global members to outstanding students in Honduras about their careers contribute to entrepreneurship development.

- Honduras Global members offer spaces for **traineeships** in their companies to support and encourage human, technological, and entrepreneurial development amongst Honduran enterprising youngsters and students of excellence.

- Honduras Global members support young, innovative entrepreneurs with business opportunity identification and development, business implementation advisory and foreign contact facilitation (**Mentorship Programme**).

In June 2011, the network was legally established as a foundation, with the three national organisations of the Executive Committee and the members abroad as founders. This will allow Honduras Global to become more financially sustainable and to set up a professional office including full-time staff responsible for delivering the standard services.

Evidence of results

Today, Honduras Global has 55 members who are actively engaging in the network's activities on a long-term basis. Four members of Honduras Global have offered internships to Honduran students of excellence, some of them offer several internships per year. The Foundation has conducted 35 events with about 3,000 participants altogether, often in partnership with donors such as USAID or private partners. Many further activities and services by Honduras Global are currently in the pipeline. For example, the Foundation has just elaborated a Strategy and Business Plan for a new "Innovation and Creativity Center" for young technology based start-ups. The Center will offer a Co-Working Space, creativity center, training courses, incubating and accelerating services, and international business connections though the members of the network.

Success factors

- **Public-Private approach and firm orientation:** As a public-private network and foundation, Honduras Global is able to tap the resources and networks of all participating institutions. ANDI as one of the founding members guarantees a strong business orientation and non-bureaucratic approach, FSM brings the science community on board, and SEPLAN serves as a bridge towards government.
- **100 % Commitment:** Highly-qualified and successful members with interest to support the development of sustainable productive and academic sectors, willing to contribute their time, expertise, contacts, skills and knowledge form the heart of the foundation.
- **Efficient Network Management and tangible results:** Provided by the foundation through matching between what Honduras Global members may offer and what the sectors of potential intervention in Honduras demand.

Role of German DC

Since the beginning, German DC through the programmes PROMYPE, study and expert fund (SFF) and DESCA has supported Honduras Global in becoming institutionally sustainable and creating the legal structure of a foundation. From February 2012 to February 2014 furthermore an integrated CIM-expert has supported Honduras Global In further enlarging its service portfolio and implementing an effective monitoring system.

FURTHER INFORMATION

Email address: info@hondurasglobal.org

Website: www.hondurasglobal.org

Chile Global: First, well-established and successful Talent Network in Latin America, website: www.chileglobal.net/english-version

Toolbox MITOS on how to leverage migration for private sector development (GIZ, 2011): https://dms.gtz.de/livelink-ger/livelink.exe?func=ll&objId=63029787&objAction=browse&viewType=1

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