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Exportability and internationalisation of services

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Exportability and internationalisation of services

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According to figures issued by the World Trade Organisation (WTO), Germany has risen to become the world's third largest exporter of services. In 2005, services exported by Germany were valued in excess of 140 billion US dollars, thus overtaking France. Only USA and UK exports are valued higher than this. In some sectors, such as e.g. construction or postal services, Germany is even an "export champion". When it comes to transport services, Germany lies in second place with German companies also ranking amongst the most significant global suppliers in sectors such as logistics, financial services and telecommunications.

These days, services determine the economic landscape of advanced national economies, such as Germany, and account for more than 70% of production and employment. Even in developing countries, the lowest income groups meanwhile contribute to more than half the amount of total production. Steady increases are being recorded for the international exchange of services, which at their current level of 20% of total world trade have clearly well overtaken the 7% recorded for agricultural trade.

The course of economic development in the service sector in Germany has been very positive in recent years. Despite holding third place in the export of services, the increase in service exports (compared with economic development across all sectors) has been comparatively restrained. This becomes apparent when looking at the continued trade deficit with regard to services and also when comparing the proportion of Germany's service exports to total exports, which stands at a mere 15%, whereas the figure for the United Kingdom, for example, stands at 30%. According to estimates made by forecasting institutions, export trade will become increasingly important in future for German service providers. According to forecasts, the ratio of export trade to total trade in areas such as computer and business-related services is set to virtually double by 2030. As well as Germany's neighbouring European countries, the markets of up-and-coming national economies such as, for example, China or Brazil are becoming increasingly significant. However stringent regulations are one reason why trade barriers in those areas remain very high. With the specific, intangible nature of services previously being an obstacle to a significant volume of exports, advances made by implementing information, communication and automation technologies, together with the increased mobility of people, knowledge and capital are enabling new forms of trade in services. In order to successfully extend its trade in services on a European and international scale, Germany needs greater innovation in the service sector. By rephrasing questions, research and development can support the innovation capability of the service economy (cf. German Ministry of Economics and Technology press release Germany rises to third place in the export of services, 9.8.2006, Federal Ministry of Education and Research (BMBF) flyer "Exportability and the Internationalisation of Services", 2006).

As a positive supportive measure, the Federal Ministry of Education and Research published the "Exportability and Internationalisation of Services" on 22.1.2004, whose 159 ideas outlined met with widespread approval. This support aims to close the gaps in service research. Overall, the measures should strengthen the competitiveness of the service economy and support the employment situation and the creation of attractive working relationships in service sectors.

As regards content, there are three topics central to the work:

- Basic questions concerning the export of services (e.g. analysis of factors and conditions obstructing or conducive to the successful export of services).
- New models for business organisation, focusing on "management methods", "organisational concepts" and "interaction between organisational and technological design".
- Creation of international networks for participants from training, research and practice.

In order to strengthen cooperation between the various research projects, focus groups have been set up, which concentrate on particular areas of the economy. These include health services, environmental services, industrial and scientifically-focussed

services. A separate group has also been set up for projects with increased participation by or greater subject relevance for small and medium-sized enterprises, since the development and implementation of innovative service ideas and strategies for export in these companies requires scientifically-based knowledge of the successful creation of innovation processes. This group brings together more than 40 small and medium-sized service companies. A new website has been set up at **www.dienstleistungsexport.de** specifically for craftsmen's establishments. As well as networking and the exchange of experiences and results, these focus groups should also increase the external impact of findings and promote sustained use.

The focus of support is being provided to research institutes and companies in six focus groups with 29 joint projects at a level of approximately € 20 million. These are listed in the final chapter.

The EUREKA project "Services Made in Europe" (German section: Services Made in Germany), co-ordinated by the Fraunhofer Institute for Industrial Engineering IAO, marks the beginning of an international project on service export issues. This should result in the construction of international networks of participants, in order to ensure closer integration of German service research with international research. This project also aims to organise a two-day event, which takes place in Stuttgart on 27 and 28 November 2006. The first day is a national, German-speaking event. Representatives of the project for the publication of "Exportability and Internationalisation of Services" will meet other people interested in the topic to present the interim findings of focus groups and to discuss key focus group tasks. Four cross-sectional topics relevant to all focus groups will also be covered in parallel workshops (integration and exchange, intensification and external impact, supporting sustainability, development of recommendations for trade and research). These are known as the elementary targets for focus groups in the "Innovation with Services" programme.

This brochure has been compiled for the first day of the event and presents the work of individual focus groups by way of a comparative illustration. It is categorised by topic and content orientation, description of the focus group's "scope of content ", starting point/status of research, project content, target markets, results and project content.

The second day is an international English-speaking day, for which a separate invitation has been issued. National and international academic and economic experts will be reporting on methods and procedures for internationalisation as well as providing examples of real-life application.

We look forward to your participation and to the interesting discussions which shall no doubt be had.

Bonn, Stuttgart, September 2006

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Focus group for the export of health services

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1. Topic/content orientation

Health services range from the core medical and care services to include health care administration, supply companies, medical technology and drug manufacturers right through to the food, leisure and housing industries. The interaction of these various sectors generates an overall impetus that leads to considerable growth and employment that clearly has the capacity to exceed the basic provision.

With 4.2 million employees and an annual turnover of approximately € 240 billion, the health industry is one of the largest sectors in the German economy. In the past, this sector has seen constant growth in both turnover and employment. Strong growth of the health industry is also likely to continue in future, both nationally and worldwide, on the basis of demographic change and the associated increasing demand as well as on the basis of further development of the range of medical technology, as seen in the area of complementary medicine.

At the same time, large sections of the health industry continue to be organised on a regional basis. Overall development of the international trade of health services remains comparatively low. For an export-orientated national economy such as Germany's, this could prove to be a serious hindrance to growth and development. At the same time, there is a risk of detachment of scientific-technical progress in this sector if there is no active development of international best practice. This is why, against the background of principles for personal services, there is a need for development, in order to develop services and make them internationally marketable, despite the synchronicity of production and consumption of services (uno actu principle).

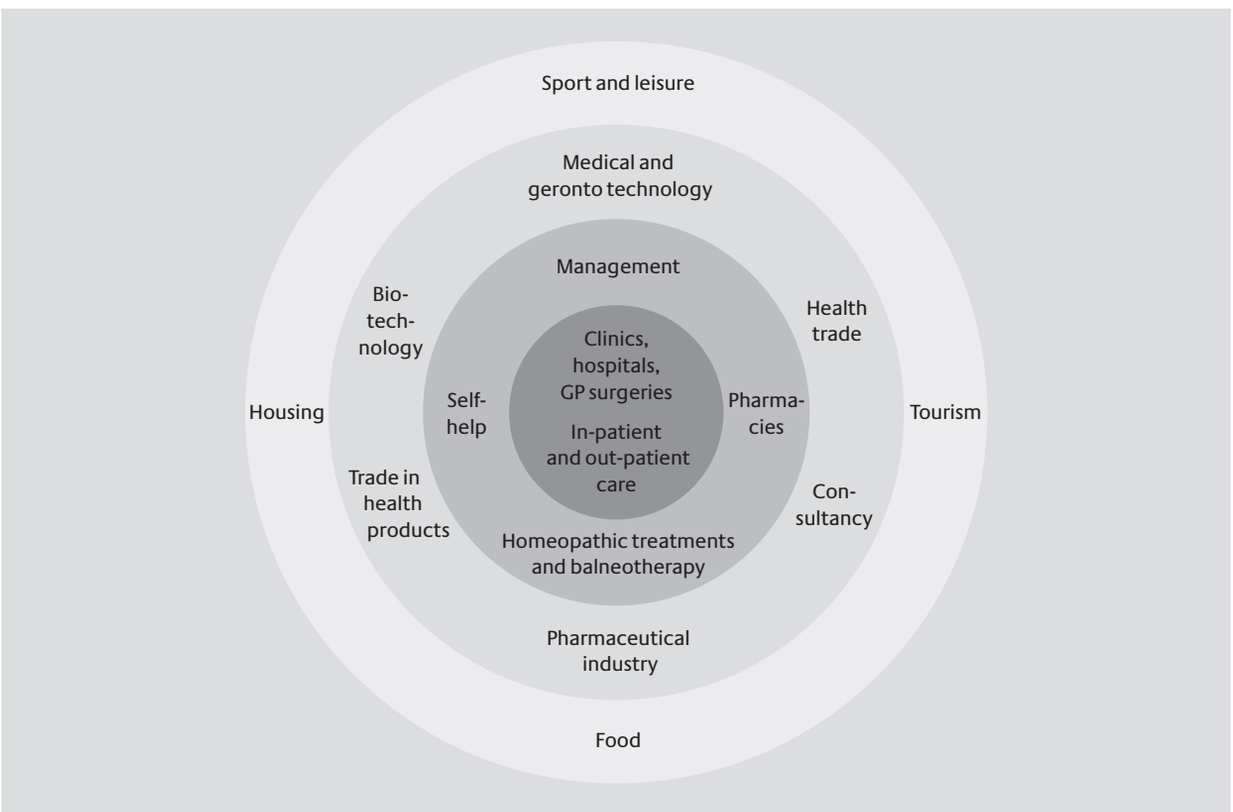

Fig 1: Structure of the health industry

2. Initial situation/Status of discussion

Innovations in the health sector usually take place with close collaboration between interdisciplinary medical know-how, the medical purchasing and supply industry, organisational solutions and with the co-operation of patients. Medical technology can only be developed and distributed where there is close cooperation with medical research, including the development of medical skills. In medicine, as with nursing care, increasing specialisation on the one hand and the need for interdisciplinary collaboration on the other hand, both need to be monitored. At the same time, customer compliance is a key requirement for the benefit of medicine and for the success of innovation. Complex cooperation networks therefore form an essential foundation for successful innovation in the health industry.

It is not only individual facilities in competition with each other that stand to benefit from these innovations. Innovations also ensure a good general service across all areas. Thus there is no need for every hospital to be at the pinnacle of medical-technological development. Many diagnostic and therapeutic procedures have become medical standards and can be performed as "outpatient procedures" at any hospital, and increasingly also at the surgeries of GPs. In this respect, "follow-up" innovations, that adopt and distribute breakthrough innovations, also play an important role. However, scientific progress and pioneering innovations are achieved by market leaders, whose staff need to receive initial and ongoing training, in order to disseminate knowledge on the latest procedures and findings on a wider scale. The interaction and cooperation of suppliers of basic and specialised services (or suppliers with a particular specialism or focus) is thus an essential contribution to ensure that the overall supply remains competitive and continues well into the future.

These once regional networks are now repositioning themselves increasingly at an international level. For medical technology companies, the huge markets in India, China or in the CIS states (countries formerly in the Soviet Union) are particularly appealing from a sales perspective. However this development does not just apply to medical technology or pharmaceutical companies. Due to the close interaction of innovation events, hospitals, for example, are also affected by internationalisation, if they want to maintain their lead on the international stage or further expansion. A high percentage of research and clinical studies will take place where relevant demand exists. This enables specialisation, the formation of skill centres, rapid distribution of new procedures, etc. Those wanting to share in the development of progress in the health industry will therefore need to participate in internationalisation. This can include increasing the number of treatments at home provided to foreign patients and the provision of health services abroad.

The associated progress provides considerable opportunity. Participation in the global development of health services enables people to learn from international best practice as well as to benefit from an increase in the number of cases treated. Progress can be organised wherever optimal conditions exist and results can be distributed more quickly.

Internationalisation also provides better positioning from a financial point of view. Income from international activities also increases the nation's flexibility and creates a degree of independence of national factors of influence, such as health legislation. Furthermore, not only does participation in international health services increase competitiveness as a result of international advances in knowledge in a national context, it also ensures the best possible quality of a nationwide medical service for the long term.

As well as obtaining economies of scale and the organisation of international innovation networks, the health industry also needs to internationalise the entire value chain. Preliminary and follow-up treatment, the organisation of distribution and service structures and information management through to the organisation of cash flow all need to be organised throughout the value chain. Compared with other industries, delays in development in the health industry are already in evidence on a national scale. The internationalisation of value chains thus offers

the opportunity to promote national developments whilst drawing on international resources. In particular, the potential resulting from the implementation of information and communication technology needs to be considered and systematically utilised.

However, these requirements are currently still predominantly idealistic. People involved in traditional forms of health care in Germany continue to be nationally orientated. Value chains are largely fragmented and cross-sector supply remains the exception rather than the rule. With this in mind, national and international development services need to be harmonised with each other and synergies between international and national developments need to be developed. However, only a few of those involved already have suitable international experience at their disposal and other nations such as, for example, Great Britain or the USA are only slightly ahead in matters pertaining to internationalisation.

3. Project content

The focus group for the export of health services considers all preventive steps and the supply of the operational provision, early detection and prevention, the integrated supply systems, the organisation of supplying companies through to core medical and care services against the background of difficulties with regard to the integration of the value chain in the health sector. The information technology services for the various levels each represent a significant component to support the integration of value chains in the health industry.

On the basis of the integration of value chains, the focus group reviews the various start points for the exportability of the health industry. This means that patient flow as well as the flow of goods or service processes and their interaction with both national and international technical developments can be analysed and monitored.

By starting with international patient movements, it is also possible to deal with cross-border health services. Patients in border regions in many cases pursue health services that are being offered in the neighbouring foreign country, which is close to their home. Socio-cultural ties also play a key role in patient tourism. Last but not least, patient flow moves in the direction of those medical services for which the same level of quality cannot be provided where they live.

By and large, this form of patient tourism is not that widespread. On a national scale, the percentage of foreign patients in hospitals is distinctly less than 0.5% of the total number of patients. Nevertheless, these patients provide a perceptible value contribution, as they can be deducted from the budget. An important start point for the support of this development is seen in the use of information technology opportunities for patient acquisition and process support in the area of treatment and after-care.

The management's IT technical support for an integrated service delivery system serves as an important basis for this. Not only does this relate to the integrated supply valuations in the core area of the health system as stipulated by volume V of the Social Security Code, it also relates to subsidised solutions in the area of IT on the fringes of the health industry. From the perspective of prevention and in-house health provision, there is an element of crossover between the sport, fitness and health sectors, whose impact extends into the in-house health provision in other sectors of the nation's economy.

Patient flow, integrated service systems or preventive measures thus reconcile the requirement for standardisation and mapping onto IT platforms as a pre-requisite for exportability. Thus, regional distances can be overcome using IT and the uno actu nature of health services can, at least in part, be spatially extended.

Management of the corresponding value chains and their integration into service strategies is also of paramount importance when it comes to product development, international market development and penetration as well as for biotechnology services and products resulting from medical technology. In this context, product development is no longer an innovation process, but it can only become effective if international markets are correspondingly systematically identified and developed. Thus all stages of the

business model, from the early detection of relevant foreign markets to the management of international services are relevant for innovation conduct.

At last, national service structures in the health industry, from service through to technology can be placed, in an integrated form, on an international level. Thus the focus can be on both nursing care, with an export of nursing services, and also hospitals for acute cases or rehabilitation. As some international companies demonstrate, institutionalised health services are also traded at international level. This can occur in the form of knowledge transfers, staff transfers, direct foreign investments or as part of individual services such as management contracts and international cooperation.

Within the scope of the focus group for the internationalisation of health services, various internationalisation strategies are analysed and best practice models are developed or tested. In this way, additional experience can be gained from the different perspectives of each individual case and systematic knowledge and solutions, with regard to both target markets and the positioning of global players in the health industry, can be developed and disseminated.

4. Target markets

The health industry as a universal industry is, for the moment, of considerable relevance in all regions of the world. Nevertheless, regional preferences exist for the various projects. The US market, in particular, considers that the development of bio and medical technology is of the utmost relevance, since a large proportion of the world market leaders are based in the US. The European point of view considers the integration of health systems, cross-border collaboration and growth markets in accession countries to be of considerable importance. The emerging markets are particularly significant against a background of population and economic growth in countries such as the CIS states, China and India. Turkey and the Middle East, however, are also important as bridges between Europe and Asia. Overall, the health industry is dependent, to some extent, on densely populated regions. With 60% of the world's population, Asia is one of the most important target regions.

Depending on the target region, different strategies are required for the target markets. A fundamental objective of the simultaneous dealing with various target markets thus exists within the scope of a globalisation strategy in the dissemination of international best practice with regard to simultaneous flexibility of bringing relevant solutions into operation.

Apart from regional markets, various target groups fall to be considered by the focus group for the internationalisation of health services. These concern measures for in-house health provision, hospital services, rehabilitation clinics and care facilities, medical technology companies or innovative start-ups in the area of red biotechnology and genotechnology. Where services in the core area of the health industry are concerned, the spotlight is not just on first class or high-tech services. Focus is equally on establishing nationwide service structures in target regions by means of linking offers between local and global suppliers. An important criterion for success thus lies in the linking of revolutionary innovation with the achievement of economies of scale on the one hand and with a local content, as well as social reliability, on the other hand.

At the same time, linking various sectors and regions as target markets requires coordination as regards internationalisation strategy. The aim in all cases is to achieve internationalisation of a range of services. Technical solutions offer good potential for support in this respect.

5. Results

The internationalisation of the health industry is still in its early stages, although it is already clear that "global players" are also emerging in the health industry and becoming successful. Claims to holding leading positions in the health industry will call for commitment in markets, which offer particular prospects of growth on account of demand and condi-

tions. Service providers, as well as medical technology, will become essential elements of competition with economies of scale made possible by globalisation and the international dissemination of best practice.

The health industry will thus be able to benefit from other industries that have clearly made further progress along the road towards internationalisation. In recent years, global players have become increasingly more established in technology-orientated companies and have managed to gain advantages over their competitors. Characteristics of successful global companies include [1]:

- Globalisation as a strategic orientation,
- Establishment of a global brand name,
- Local roots and an image as a local player,
- Flexibility when disseminating best practice combined with local adaptation,
- Standard solutions offered throughout the value chain,
- Implementation of the latest technology as strategy for improvement,
- Integration of information and communication technology in own organisational structure,
- An employee-friendly organisation of work processes,
- Development of emerging markets,
- Social commitment at local level.

Close links with employees, customers, respective local companies, government and investors are all seen as additional factors contributing to success[2]. The systematic care of these stakeholders is proven to be an additional key criterion for the success of a globalisation strategy.

By making the appropriate additions and modifications, these success factors also apply to businesses within the health industry. There is a visible shift in the perspective of the health industry, which is focusing on service as being the key driver of innovation. Innovations in the health sector are promoted via services, which are supported and distributed as a result of technical developments. Whereas the transformation from industrial company to service company was primarily characterised by the move from services to technologies, the health industry, even at international level, will be distinguished by its move from technologies to service. In this sector, technological innovations follow service innovations and can only be developed and distributed with close collaboration. This means that health services need to be distributed as independent variables in order to enable growth for health technologies as dependent variables.

Consequently with globalisation, the future of medical technology will be greatly determined by the development of services. Without an appropriate internationalisation of service, distribution of technical innovation also becomes extremely difficult. Patient movements can even cause a “gravitational pull” towards certain service locations. However, according to internationalisation experience so far, the international dissemination of services is becoming increasingly important. The service follows the customer and not the other way round. This means that there is a particular preference for innovation and diffusion processes in the health sector where a particularly high demand exists together with the appropriate purchasing power. Since 60% of the current world population lives in Asia and growth rates as well as the population and gross domestic product clearly exceed those in western industrialised countries, this is an area to be considered for appropriate development. However, the diffusion of best practice means that even European locations can benefit, as long as they participate in international development. National health facilities also benefit from their skills being marketed inter-

1 Jim O’Neill, Sandra Lawson, Roopa Purushothaman, Getting Globalisation right: Meeting the Challenge of the Century. Goldmann Sachs, Global Economics, Paper No: 95, 2003.

2 Jim O’Neill, Sandra Lawson, Sara Aronchick, GloCo-Motives: Arguing the Case of Globalisation. Goldmann Sachs, Global Economics, Paper No: 141, 2006.

nationally and also because certain first-class medical services cannot be made available throughout the world[3].

In keeping with the "onion" model illustrated at the beginning of this article, the health industry will in the meantime become so globalised that its core will become international as a result of its innovative layers. Thus it is supported by medical and communication technology, whilst these follow the international demand for services and thus support the illustration of the entire health industry value chain. This applies to hospitals and rehabilitation clinics as well as care facilities, which will increasingly follow international demand. On the one hand, this demand can be satisfied by the provision of selective operations in German health facilities. On the other hand, developments in this direction should also be acknowledged, with the construction of health centres, hospitals and old people's homes. Even complete solutions on offer such as integrated care systems or preventive measures, which up to now have been developed as national strong points, can be transferred to the international arena and will improve the dynamics of development. However, development in the health industry is not yet so far advanced that the benefits to be gained from the diffusion of best practice are already exhausted.

6. Active projects within the focus group

Health Care Export: Internationalisation of health services – patient import and service export. Institute for Work and Technology at North-Rhine Westphalia Social Science Centre.

New Market Intelligence: Identification and evaluation of foreign markets for services in "red" biotechnology. University of Potsdam.

ProDiMed: Prospective generation of direct service concepts in medical technology for future markets. Ruhr University Bochum.

Medical Export – Internationalisation of medical services for foreign patients supported by technology. Research Institute for Operations Management (FIR) Aachen.

GESA – Development of an integrated overall concept to increase the exportability of services in the old people's welfare and care sector, using the example of current procedure at the AWO Care and Service Centre, Bremerhaven with regard to the exportability and internationalisation of services. AWO, Bremerhaven.

IMIV – IT-based management of integrated care systems. TU Berlin. Asigned from the announcement. "Integration of production and services".

Export of medical services – Model for the internationalisation of hospitals. Technical University of Berlin.

SPRINT: Systematic design for the integration of products and services – hybrid value in the health industry. Technical University of Munich.

3 Forzi, T.; Rhensius, T.; Schmieder, C.: Technology Enhanced Internationalisation of Medical Services of German health Care Institutions for African Patients. In: IST-Africa 2006 Conference Proceedings, Pretoria, May 2006.

Focus group for environmental services

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1. Introduction to the topic

Environmental protection as a growth market and export driver

For many years, Germany has been seeing a constantly growing and thus increasingly significant trade in goods and services for the protection of the environment. According to definitions and estimated calculations, this sector employs up to 1.5 million people, generating a turnover of € 55 billion, which already corresponds to 5.1% of Germany's entire production of industrial goods (Edler/Blazejczak 2006).[4]

This industry also makes a significant contribution to the fact that Germany has been the world's "e*xport champion*" for many years. In 2003, with the export of goods for the protection of the environment amounting to some € 31 billion and with its share of international trade running at 19%, Germany overtook the USA for the first time and, in all likelihood, could also probably claim to have been in first place in 2004 (Federal Environment Ministry 2006).

According to recent surveys and analyses, *environmentally-orientated services* make by far the greatest contribution to employment in the environmental protection sector: with the number of jobs being in the order of approximately one million (according to Edler et al. (Edler/Blazejczak 2006) approx. 950,000 people in 2004) they account for approximately two thirds of all employment recorded in the sector of environmental protection.

Global dynamics increase export potential

The discussion concerning the international trade of services and the extension of deregulated markets has for many years been a somewhat controversial topic within the WTO GATT negotiations. One very controversial point is the potentially adverse ecological impact of the increased trade in goods and services (Fuchs/Tuerk 2003). In contrast, increased trade in environmental services, particularly with a view to its potential contribution to sustainable global development, is seen as comparatively positive. An international diffusion of environmental services can lead to a "win-win" situation; whilst those exporting environmental goods and services from leading countries such as Germany stand to benefit economically every bit as much as customers in the target countries (e.g. by saving on resource), there are also positive environmental effects to be gained from e.g. the increased efficiency of resources (WTO 1998; UNCTAD 2003).[5]

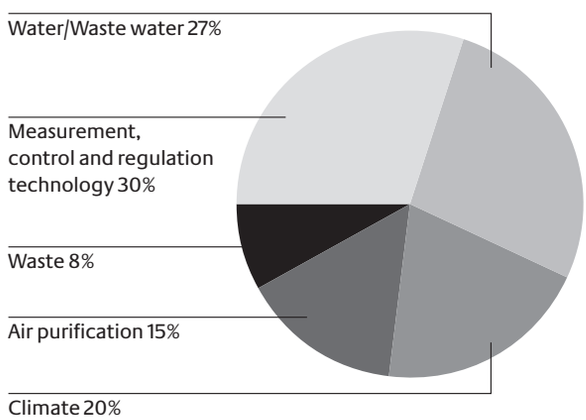

Fig 2: Percentages for the different areas for the export of goods for environmental protection (Issued 2003) (Source: Legler et al 2006)

Figure 2 shows the range of (industrial) goods for the protection of the environment, which also applies for a large percentage of the range of environmental services.[6] It particularly illustrates the high proportion

4 For issues concerning the statistical compilation and categorisation of environmental goods and services see Sprenger et al. (2003) and Rothstein et al. (2004).

5 This type of "win-win" situation certainly does not apply per se for all areas of application and technology falling under the heading of "Environment" or environmental protection, as this heading includes entire sectors at a flat rate, taking no account of their actual impact on the environment. However, for many services and technologies that, for example, improve efficiency, the assessment may apply in comparison with a usually considerably worse status quo.

6 A specific breakdown of services is not available.

and increasing growth in the development of the climate sector, which also includes renewable energy, and the water and waste water sector. One of the reasons for this could be the deregulation processes currently seen in many energy and water markets, making the internationalisation of products and services possible. Another reason could be that energy and water shortages together with poor global provision ensure there is a greater need for efficient, high-performance technology and associated expertise. According to UN data, around half the world's population is suffering with problems relating to waste water, one fifth has no safe supply of drinking water and around 2 billion people have insufficient electricity, or no electricity at all (United Nations 2005; UN Millennium Project 2005).

The path leading from this huge requirement to an appropriate and economically relevant investigation is a long one, although in individual countries such as China and India as well as in some other undergoing transformation and expansion, high-growth dynamics exist as well as the problem of increased environmental pressure, such that major and long-term increased export potential is already anticipated in the area of the environmental goods and services.

The emerging global growth potential can be developed particularly by those actively involved in the economy, who have built an international leading market position (usually in the domestic market) and who consequently have exportable products and services (Beise et al. 2005). The global dynamics described together with Germany's existing leading market position in goods for environmental protection lead to the initial hypothesis, which is the driving force for the three projects undertaken by the "Focus group for environmental services": that against this background, significant marketing and export opportunities are on the cards not only for product and investment-related, but also for independent and indirect environmental services. This applies particularly for the dynamic areas selected by the projects, namely: renewable energy, water supply and waste water services.

2. Topic/Content orientation of focus group

Certain international conditions for export and demand developments can be derived from the initial position outlined for environmental services. These conditions play a part in all three of the focus group's joint projects. Furthermore, similar wording to questions was selected from all or sometimes from two of the three projects, which enabled the development of potential for synergies in treatment through to extensive opportunities for cooperation. The following summary of the joint projects undertaken by the focus group for environmental services gives an overview of the essential results-related common ground and application-related project specifics.

Common wording for questions and topics for the three joint projects

- Analysis of the *international conditions* for the export of environmental services. In addition, completion of an analysis of target country-specific conditions for companies undergoing transformation (China: reform and opening-up policy, Eastern Europe: connection to Western Europe and the establishment of market economies), from which any general common features can be derived.
- Identification of the *export potential of various environmental services*; similar service categories can also be considered, for which comparable recommendations for strategy can in turn be derived. If applicable, integrated water/waste water or water/energy services can also be included.
- *Obstruction analysis* or identification of *success factors* for the export of services: co-operation in the development of empirical designs (particularly harmonisation regarding water/waste water) and exchange on general factors of influence (e.g.: services within the context of infrastructures and

	IÖW Project EXPEED	RISP Project ProWaDi	SOFI Project "China"
Services in areas of application:	Renewable energy	Water supply	Water disposal
Target regions	Established during the course of the project, identification of relevant target countries	East and South-East Europe (Poland/ Bulgaria)	China
Key driver for market dynamics	Increasing energy requirement, climate protection	EU harmonisation	Market potential, environmental situation
Proposed practical outcome	Internationalisation concepts for businesses		
Support concepts for intermediaries/ networks			

Tab. 1: Joint projects undertaken by the focus group for environmental services

networks, localised systems/stand-alone systems, innovation orientation as a factor of success, etc.)

- Comparison of existing *internationalisation strategies* and exchange on recommendations for internationalisation strategies (best practices/ guides). Focus here is on *the recommendation of strategies for SMEs*. Thus it would be meaningful to have an exchange on the success of co-operation and network strategies undertaken (e.g. between SMEs, between manufacturers and service providers, between SMEs and large companies holding the "key to the door", etc.). Potential cross-sector co-operations are also investigated and, if appropriate, developed.
- Analysis of the *role of organisations providing support to exporters* (e.g. agencies, associations, public organisations, consultants, etc.) and exchange through innovative opportunities to provide service providers with export support (export initiatives, provision of information and services, etc.), especially for SMEs.

Difficulties with and barriers to comparability

For the industries and service sectors selected (energy and/or renewable energy, water supply and waste water disposal) the difficulty is predominantly that sectors are distinct, and there are few, if any instances where the parties involved overlap, particularly when it comes to smaller suppliers. Large suppliers for centralised supply systems at multi-utility level are the main exception here, as they sometimes offer integrated energy or fuel supply systems as well as water supply and waste water disposal systems. The extent to which this is relevant for an (integrated) provision of services needs to be investigated further. Where appropriate however, these suppliers could also be

useful as strategic "propagation units or keyholders" for the export activities of SMEs or SME networks.

Current knowledge tells us that many key obstacles and success factors are largely target country specific. This is particularly the case in the project-relevant markets of China and Eastern Europe, in which widely differing conditions and extremely specific obstacles (e.g. culture-related) can be observed. In contrast, the above-mentioned comparable "global" conditions (from WTO/GATT/EU) are probably of negligible significance.

Due to the lack of crossover between target countries and the various industries in individual projects, account must be taken of the fact that a comparison of project results and a joint development of recommendations or even support structures will only be possible to a limited extent. The aim of each project is ultimately to develop practical and appropriate and consequently specific recommendations and implementations for the respective target group or partner in practice.

3. Project content – first steps

From the common wording of questions detailed above, it is possible to derive some *general cross-sectional topics* that can be dealt with in the focus group or through which an intensive exchange of experiences and transfer of results can take place. The outcome of the focus group's projects provides contributions to the export terms, potential and strategies for specific environmental services and for the sector as a whole. Furthermore, the focus group members will also participate in political and stakeholder debates on environmental services and provide input on how the topic should be further developed and handled.

As shown by the above summary table, the *specific application-related content of the joint projects* essentially results from the selected sectors or the technology-specific service received (in part), from the selected target countries and from the respective results envisaged (e.g. general development of guides or actual network foundations).

Joint working

First of all comes input into the current *international debate on the issues concerning registration, categorisation and investigation* in the service sector as a whole and in the areas of environmental and energy services. The focus of this work is based on project EXPEED (under the leadership of IÖW), since in international debates so far, the registration of environmental goods and services has been based primarily on water, waste water, waste and "other" service sectors. Despite subsequent distinctions made within the scope of GATT, the lack of immediate importance and reports of new developments (e.g. concerning renewable energy) has led to a range of recommendations for modification and animated discussion but as yet no decision (e.g.: WTO 2000; Steenblik et al. 2005). The launch of international debates should ensure the possibility of linking together the results of all focus groups, with regard to notions and concepts currently under discussion, from categories through to internationalisation strategies. (*Status: work in progress)*

Secondly comes collaboration with the focus group as regards the communication of relevant *global and international framework conditions for environmental services.* At global and international level, this is done via GATT (under the leadership of IÖW), at EU level, national market directives as well as current discussions on service guidelines play a part. For the water sector, the introduction and implementation of water directives in Eastern European countries is also significant (under the leadership of RISP). Eastern Europe and Russia are key export markets for those SMEs in the water industry that are already geared up for export. In EU member countries and accession countries, the implementation of EU water directives and the promotion of investment in relevant infrastructure lead to export opportunities. At the same time, service export experience can be gained in these countries, which can also be used for countries in Eastern Europe and the former Soviet Union, who are not members of the EU, but who likewise show considerable market potential. In addition, bilateral agreements relevant to environmental services need

to be investigated for selected countries in Eastern Europe. For the target country of China, SOFI (Sociological Research Institute of Göttingen) is identifying framework conditions, and if necessary, bilateral agreements relevant for environmental services. (*Status: work in progress)*

Thirdly comes an exchange on the *export relevance* of various and potentially comparable industry-specific service categories. The largely empirical-based results on potential services are used as the basis for identifying common obstacles and factors of success, which can lead to general conclusions and strategic recommendations. Where appropriate, integrated cross-sector services are also included, for which joint cooperation models and recommendations need to be developed. When analysing service categories relevant to export, a distinction should be made between capital-related and (potentially) capital-independent services. Both areas hold significant potential for the export of environmental services, however theory states that they depend on very different requirements and conditions. There is another theory that the competitive benefits to be gained from capital-independent services are higher, but marketing is more difficult, particularly for SMEs. (*Status: work commenced)*

The *development of internationalisation strategies* for companies and organisations (intermediaries) providing support for exports is scheduled for all projects. The development of joint strategies in this respect is only significant for special cases (and probably the exception, see above) of proposals for integrated services or services offered by integrated intermediaries. Nevertheless, success factors and the development of successful internationalisation concepts for SMEs can, if necessary, be assigned on the basis of service features and conditions (see above) in common. This is where projects aim to learn from each other as regards best practice and if appropriate, create synergies for market development concepts. (*Status: work scheduled for the future)*

Joint focus group activities planned include: joint workshops on general issues and cross-sectional topics, in-house meetings as well as workshops attended by external experts, (at least) one joint publication on the topic of environmental services, probably in the form of an anthology, and a joint larger event on the theme of environmental services dedicated to general considerations.

Project-specific, application-related content

This section gives a brief account of work in progress including (preliminary) results from individual projects.

EXPEED: identification of relevant services and main guiding surveys

The first objective of EXPEED is to have a complete record of the range of services in the renewable energy sector based on wide-range screening. A wide-range survey of companies providing services in the renewable energy sector is being conducted, which will also provide initial results on the specific obstacles to export and the target countries of various service providers. Preliminary results are already available for the areas of geothermal and wind energy as well as for the general industrial category (predominantly small facilities in the areas of solar energy, biomass and reverse cycle heating systems) where work has already been completed.

The range of services and the respective market structures reveal substantial differences within as well as between the various areas of renewable energy. Markets are in part already international (essentially as regards high investment services such as deep well drilling in the geothermal energy sector), and in part extremely local (e.g. local craftsmen). Services with a limited requirement for on-site presence are generally regarded as being well-suited to export (principally: planning, project development, marketing, finance) whereas services with a high requirement for materials (drilling, oil changing) are generally seen as being less suitable.

Length of experience and available expertise is recognised as one particular factor of success. Currently however, foreign trade usually only accounts for a very small proportion of the turnover of the organisation in question that is providing the service.

The company's limited size is cited as being a key obstacle to export. Those questioned also see bureaucratic issues, such as the high level of prices commanded by German companies and products, shipping costs incurred, language differences, legal regulations and the cost of building on-site structures, as further obstacles to export. Furthermore, some areas that are currently facing a high domestic demand are restricting their capacity for export activities. Target countries cited so far have been predominantly European. The selection of target countries was also previously somewhat haphazard, as companies' management of internationalisation was not particularly systematic. Foreign trade has thus usually come about as a result of enquiries from the foreign country (sometimes also from manufacturers) or through personal contacts (family, holidays, etc.).

ProWaDi: supporting the entry of German companies into the Bulgarian market

ProWaDi's current project activities relate to the evaluation of a poll of business enterprises, preparation for a business contact exchange for the German water industry in Bulgaria and the development of an Internet platform.
In June 2006, the ProWaDi and "China" projects conducted a joint poll of business enterprises which covered approximately 2,000 businesses nationwide in the water industry. The survey focuses on the export activities of the German water industry, their current significance and their importance for business strategy as well as experience gained and future expectations. The key question for the survey is that concerning the significance of services for export and export orientation. The results of the survey will be available in the fourth quarter of 2006. Initial analyses point to there currently being only a handful of individual segments in the water industry that are export orientated, however pressure is increasing considerably. Partners co-operating with ProWaDi (predominantly SMEs) consider it to be crucial that the project is setting up structures as it develops, that can be used to support export activity.
In this context, ProWaDi is working with the German Water Association to provide a contact exchange for German companies and potential partners from the Bulgarian water industry in Sofia by the end of October 2006. 25 German companies and 200 partners from Bulgaria are involved in the contact exchange. A particularly important task for ProWaDi is to analyse the position of the companies participating in international trade. The analytical and practical project work is supported by an Internet platform, which has been developed and was launched in August 2006. Those interested in obtaining information regarding the project and, more importantly, in gaining access to the export activities of the German water industry should visit www.prowadi.de.

China: awaiting success with bated breath?

Despite the introduction of quality standards and the more rigorous application of legislative provision, as seen with that "for the prevention and control of water pollution and its implementation directives", the Chinese water industry, governed by three Ministries in China (Ministry for Water Resources, Ministry for Construction and the Environment Agency), is still having to contend with considerable shortcomings in the area of water supply and disposal. The demand on sewage works is extremely high. Competition between service providers is strong. Meanwhile, standard hardware components can be supplied by Chinese suppliers, whilst marketing opportunities exist for European companies in areas requiring high-tech and specialist solutions, as in science and technology parks, for example. One problem is that price mechanisms are difficult to enforce by means of fees and taxes charged to consumers, such that longer-term operational solutions (with an appropriate service component) are not particularly attractive to investors. Nevertheless, primarily joint ventures and public-private partnerships in the waste water sector have resulted from large companies (e.g. Suez, Berlinwasser International), such as on-site discussions with suppliers and national agencies at the "IFAT German Water" trade show in Shanghai in June 2006 (trade show focusing on hardware solutions, ranging from SMEs to large corporations). Services offered were either add-on components for specific hardware sol-

utions, specialist software analysis services or consultancy services.

The SOFI survey, undertaken by companies and research agencies within the water industry in collaboration with the German Association for Water, Wastewater and Waste, shows that only a minority of those companies responding have any foreign trade activity and experience of any undertaking with China only exists in exceptional cases. Meanwhile, a second survey has been conducted amongst members of the BEW (Education Centre for the Waste Disposal and Water Industry) together with RISP (ProWaDi, see above), whose results should be available by the end of the year.

4. Target markets

The target markets of the focus group for environmental services have firstly already been established (China project), secondly, these markets represent a region with comparable conditions, in which individual countries are subject to in-depth analysis (ProWaDi: Eastern Europe, EU member states as well as comparable EU accession states), thirdly, relevant target countries are established only after a phase of detailed investigation (EXPEED). The following summarises the details on the selected target countries and/or the relevant selection process and in each case the (anticipated) relevance to the service sector in question.

EXPEED

Qualifying target markets for service companies in the renewable energy sector must firstly have adequate geographic-climatic conditions, suitable market structures and basic conditions conducive to the export of services from Germany. The first step is thus to select those countries for which the literature indicates a high potential for growing renewable energy markets. The preferred target countries for export in the renewable energy sector are currently the 15 EU states, as these offer comparatively favourable political-economical conditions (dena (German Energy Agency) 2005). Potential can also be seen in the "emerging markets" of growth countries such as China, India and some Eastern European countries (F.A.Z.Institute et al. 2002). The second step is to identify those countries whose conditions are conducive to the export of services from Germany. The criteria for country selection are being developed on the basis of general criteria for the export of services as well as on the basis of specific results obtained from the survey of renewable energy service companies.

ProWaDi

ProWaDi targets the regions of Eastern and Southern Europe. These regions have been selected due to the development of potential markets for participants in neighbouring and pioneering countries as a result of the accession of some of these countries to the EU and the consequential pending or active restructuring processes of basic conditions, and consequently conditions relating to the market and infrastructure. This is especially relevant for the water supply sector, which stands at the heart of the ProWaDi project, enabling privatisation processes and adaptation to basic water directives to form the start point for the development of an export market in which German companies can participate. There are several reasons why this market could be of particular interest to SMEs: the geographical proximity of countries, partly the similarities, such as comparable prerequisites in natural conditions, a developing and similar legal framework, etc. and partly the existence of comparatively few differences, e.g. of a cultural nature. These factors in the result may also lead to increased competition, such that unique features on this international market can only be loosely explained and implemented. To what extent these and other factors apply and the strategies derived by companies as a result are analysed within the scope of the project. Results are also expected from the comparison of EU member states such as Poland with candidates such as Bulgaria.

China

With the end of the "Ideology and Economic Reform policy" introduced in 1978 by China's Communist

Party, the People's Republic has seen the start of a trend that has led this country to becoming one of the world's largest and strongest growth economies. In the 10 years from 1996 to 2005, China achieved an annual growth in GDP of 8.6% (bfai (German Office for Foreign Trade) 2005), with the country rising to become the fourth largest economy in the world after the USA, Japan and Germany. It is in this context that China has developed into one of Germany's most important trading partners. In 2004 China ranked 6th and 10th respectively in Germany's import and export countries (bfai (German Office for Foreign Trade) 2005). Many exported industrial goods are highly technical products which have a hardware core, around which sits a range of services, thus making the Chinese market very attractive for hybrid product/service solutions. This applies not least to the export of environmental technologies and services, in which the People's Republic of China is extremely interested given the rapidly growing number of environmental issues as a by-product of economic prosperity. One of the key environmental problem areas is the waste water sector, which up to now has undergone little development. Consequently, only a fraction of waste water accumulating is being treated (at the end of 2004 there were just 708 local sewage works, bfai (German Office for Foreign Trade) 2006) and domestic and industrial sewage is not usually separated. The resulting market potential offers a multitude of opportunities for German companies in the waste water industry, whose challenge is to develop appropriate access strategies and suitable offers for the Chinese market (e.g. in sectors for the planning and operation of facilities or in engineering). However, the specific issues particular to this market, such as the protection of intellectual property, need to be considered and conceptional solutions for internationalisation strategies need to be disclosed.

5. Focus group projects

EXPEED – Export-orientated services in the renewable energy sector (Project Manager and Coordinator of the Focus Group for Environmental Services: Bernd Hirschl, Institute for Ecological Economy Research (IÖW), www.expeed.de

ProWaDi – Environmental Economics and Service Export (Project Manager: Joachim Liesenfeld, Rhein-Ruhr-Institut für Sozialforschung und Politikberatung e.V. [Rhine-Ruhr Institute for Social Research and Advisory Service for Politicians] RISP at the University of Duisburg-Essen), www.prowadi.de

"China" – Opportunities for small and medium-sized service providers in China's environment sector (Project Manager: Dr. Gerd Paul, Soziologisches Forschungsinstitut e.V. [Sociological Research Institute of Göttingen] SOFI at the Georg-August University Göttingen), www.sofi-goettingen.de

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Focus group for industrial services

K. J. Zink, D. B. Eberhard

1. Content orientation

Manufacturing companies in Germany, employing more than one third of the country's total workforce, make a significant contribution to the overall value chain.[7] Consequently, Germany's transition to a "post-industrial" community is proceeding at a much slower pace than in other Western communities, such as, for example, the USA. Consequently, in Germany's service sector, there is still considerable scope for establishing concepts for dealing with product-associated industrial services.[8] Industrial products are usually distinguished by their greater (technical) complexity. For manufacturers, this opens up additional potential for industrial services throughout the entire product lifecycle. In this context, new marketing models should also be investigated. In order to remain competitive at an international level, businesses must therefore have structures that support the ability for constant innovation and adaptation for the provision of the services. As regards the implementation of these developments, continued account should be taken of the turbulent environment, characterised by high rates of innovation as a result of decreasing ability for process planning and the specific competitive position and the associated conditions of the German location. This results in new challenges, necessitating overall thinking in the context of integrated systems as well as the dynamic integration of individual tasks. In addition to the overall consideration of processes, these are:

- Holistic view on the process,
- Optimisation of cost and profit of the development, production and marketing processes.
- Optimisation of customer management,
- Problem solution-orientated product design,
- Flexible cooperation structures,
- Employee qualification *from specialists to generalists*.

The "intersection" between industry and service, understood here as "industrial services" thus concerns both services provided by industry in association with products (so-called product associated services) and services provided by service companies for the industry.

The following integrated projects are assigned to the "Industrial Services" focus group:

- DEXINPRO: Export of services with industrial products,
- ExInnoService: A synthesis of academic and business processes as the basis of export-orientated innovation management for services,
- ExFed: Export remote-controlled services – development of management, marketing and personal development concepts,
- IDEE: Industrial services for successful exporting,
- InProDi: Protection of international competitiveness through integrated product and service development,
- OSS: One-stop services for worldwide industrial production.

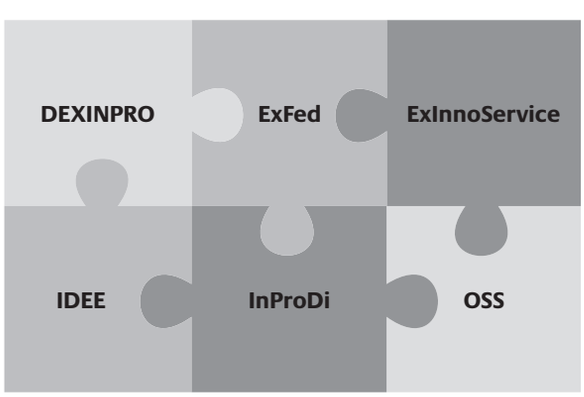


Fig 3: "Industrial Services" focus group

7 BULLINGER, H.-J.; WARNECKE, H. J.; WESTKÄMPER, E. (publisher.): Neue Organisationsformen im Unternehmen: Ein Handbuch für das moderne Management, 2nd edition., Berlin, Heidelberg 2003

8 Schlussbericht der Enquete-Kommission: Globalisierung der Weltwirtschaft – Herausforderungen und Antworten, Berlin 2002

2. Initial situation and status of discussion

The increasing internationalisation of economic relations and the ever increasing strength of competition in the manufacturing sector due to technological expertise becoming ever more widespread are significant, such that the development and manufacture of innovative products (including complementary services) only constitutes a unique selling point for a limited period of time. Foreign suppliers are frequently able to generate the necessary manufacturing know-how relatively quickly and make a considerably more attractive offer to the market based on the often significantly lower labour costs for comparable products. In this respect, German companies are compelled to promote continuous innovation to enable them to compensate for the disadvantages associated with location. There is no sign of a reversal of this trend in the short to medium-term.

The competitiveness of a company, particularly small and medium-sized enterprises (SMEs), is thus critically influenced by the benefits that their products provide to customers.[9] With global improvements in the quality of capital goods, the importance of product-associated services is becoming increasingly important, particularly for the traditional manufacturing companies.[10] The fundamental challenge to German companies will be to develop complementary services alongside high-quality, high-grade products.[11] This innovation process is characterised by the multitude of tasks to be completed as well as by market-related, technical production and staff-related developments and business-specific requirements. The discussion regarding the design of an effective procedure for the development of integrated products and services is of particular importance, especially for German companies, which continue to fall short of the mark as they attempt to move from being purely manufacturing companies to companies that provide services and/or hybrid products.[12] The problem is exacerbated as a result of new and increasingly comprehensive options offered by information and communication technology,[13] the consequence of which is to further reduce the benefits of national location. Current surveys show that German companies are using product and process innovation to respond more forcefully to competitive pressure,[14] although services and product-associated services are only developed retrospectively and intuitively based on actual requirements. The potential for increased customer benefits is consequently not sufficiently exploited in business practice.

The marketing of industrial services in international markets will have a significant impact on the ability of German businesses to survive. With academic debate on this topic remaining comparatively limited, the content of the research project is of enormous practical relevance for a multitude of German companies and especially for SMEs. Also especially because no “standardised solutions” are available for the purposes of trade directives and the cost to develop them could easily overburden an individual company of this size. As small and medium-sized companies often only have access to extremely limited resources, individual establishments can only surmount these challenges with difficulty in the absence of appropriate support. The tools that need to be

9 cf. SPECHT, D.; BEHRENS, S.: Strategische Produktplanung mittels Roadmapping: Ein Konzept für kleine und mittlere Unternehmen, in: MEYER, J.-A.: Jahrbuch der KMU-Forschung 2001: Innovationsmanagement in kleinen und mittleren Unternehmen, Munich 2001

10 cf. WILDEMANN, H.; WEISSENBERGER-EIBL, M. A.: Entwicklung von Serviceprodukten durch Wissensmanagement – Ergebnisse einer Delphi-Studie, in: WILDEMANN, H. (publisher): Moderne Produktionskonzepte für Güter- und Dienstleistungsproduktionen, Munich 2003

11 GRUPP, H.; LEGLER, H.; BREITSCHOPF, B.: Zur technologischen Leistungsfähigkeit Deutschlands 2002, Bonn 2002

12 cf. RECKENFELDERBÄUMER, M.; BUSSE, D.: Kundenmitwirkung bei der Entwicklung industrieller Dienstleistungen – eine phasenbezogene Analyse, in: BULLINGER, H.-J.; SCHEER, A.-W.: Service Engineering: Entwicklung und Gestaltung innovativer Dienstleistungen, Berlin 2003

13 cf. Deutscher Bundestag: Schlussbericht der Enquete-Kommission: Globalisierung der Weltwirtschaft – Herausforderungen und Antworten, Berlin 2002

14 cf. IfM Bonn.: BDI-Mittelstandspanel: Ergebnisse der Online-Mittelstandsbefragung Frühjahr 2005, Bonn 2005

developed as part of the joint research program and tested for their practical applicability are capable of coping with this change in the markets.

In future, there will be an increasing demand for services and complementary services that do not fall within the direct scope of material goods. Concepts for companies to be geared towards the optimised development of an integrated product and service model should focus in particular on the following key areas:

- The "entire product" or rather "the problem solution" should be consistently tailored to suit customer requirements.
- Methodological and organisational support must be available to suit requirements.
- Service provision processes must be adequately defined.
- Staff must accordingly qualify (and motivate) requirements.

Implementation of these concepts requires a departure from purely product-related strategies to business-focused strategies, for which the technical product component is an integral part of the problem solution and can be offered in combination with innovative services to international markets. This also requires an approach that enables the restructuring of organisational processes via integrated collaboration within or between companies. As a company's competitive advantage depends on its ability to respond quickly to required changes, as well as on the effectiveness and efficiency of its employees and organisational structures, reorientation requires participation-orientated organisational concepts, in order to thus create the basis for the development of innovative services by means of internal as well as inter-company collaboration.

3. Project content

To maintain their competitive position, companies are pursuing the objective of manufacturing and delivering products and services profitably and in line with deadlines and market requirements, to the level of quality required. With this in mind, consideration should be given to the following:

- Optimisation of customer benefits, customer focus and customer orientation,
- Products and services with a high value potential,
- Control of technically and economically related areas,
- Synergy through integration and cooperation,
- Internationalisation, globalisation,
- Harmonisation of work, technology and environment.[15]

These topics are also reflected in the overall scope of the joint projects of the "Industrial Services" focus group. The following assignment matrix allocates the various joint projects within the focus group to a metalevel according to scientific and business process features and according to the scope of their application. As in figure 4, it should be noted that the attempt at systemisation covers two dimensions: The "integration level" dimension specifies the level of generality of subject focus as regards content. The second dimension differentiates according to the "sector-specific focus" of the implementation projects. However, it is merely an outline of the project scope that is given and is by no means a statement of the importance of the content!

The integration levels can be interpreted as follows:

The top level describes cross-sector approaches, concerned with principles or general question for-

15 BULLINGER, H.-J.; WARNECKE, H. J.; WESTKÄMPER, E. (publisher.): Neue Organisationsformen im Unternehmen: Ein Handbuch für das moderne Management, 2nd edition., Berlin, Heidelberg 2003

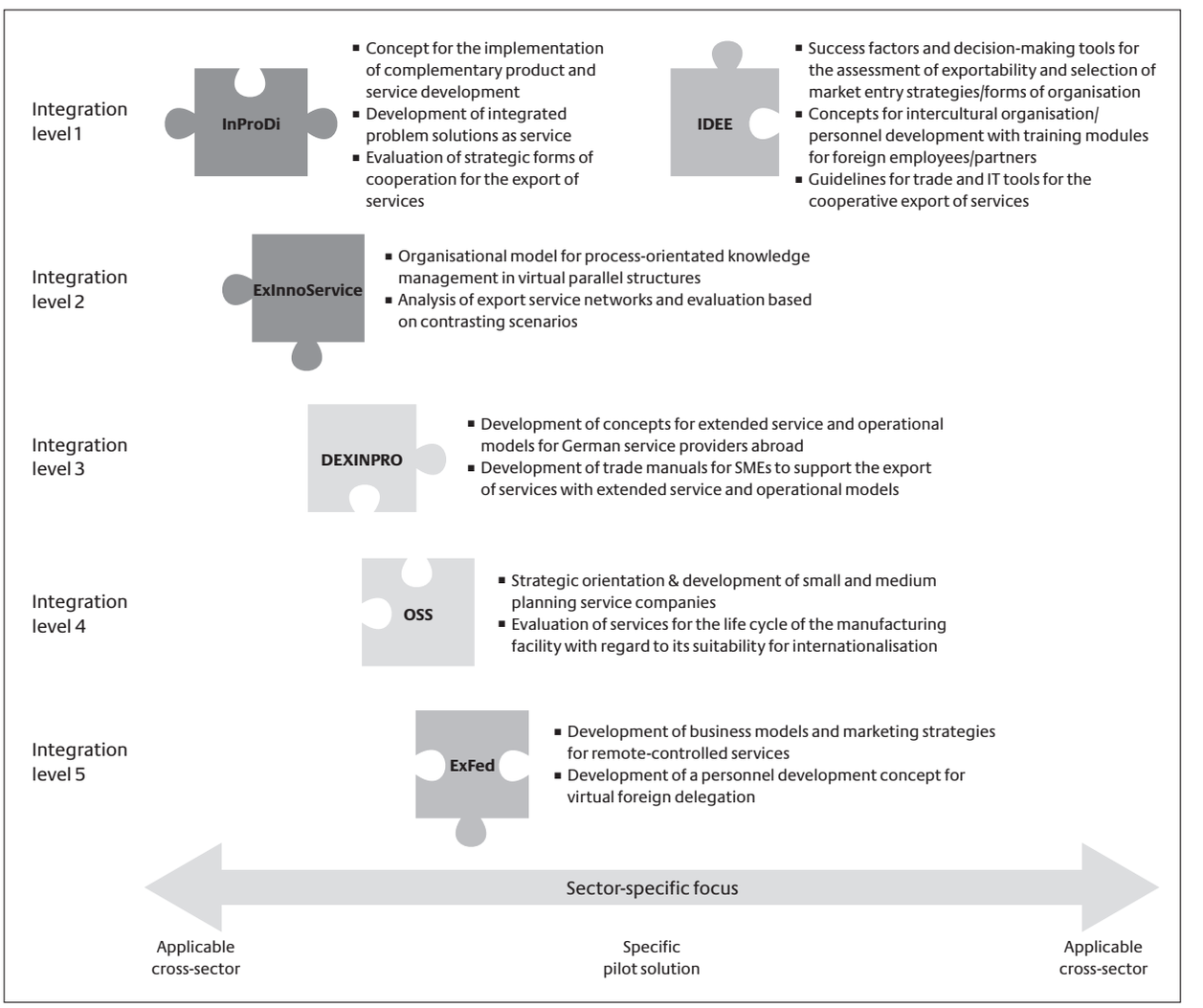


Fig. 4: Assignment matrix outlining the content of joint projects within the „Industrial Services“ focus group

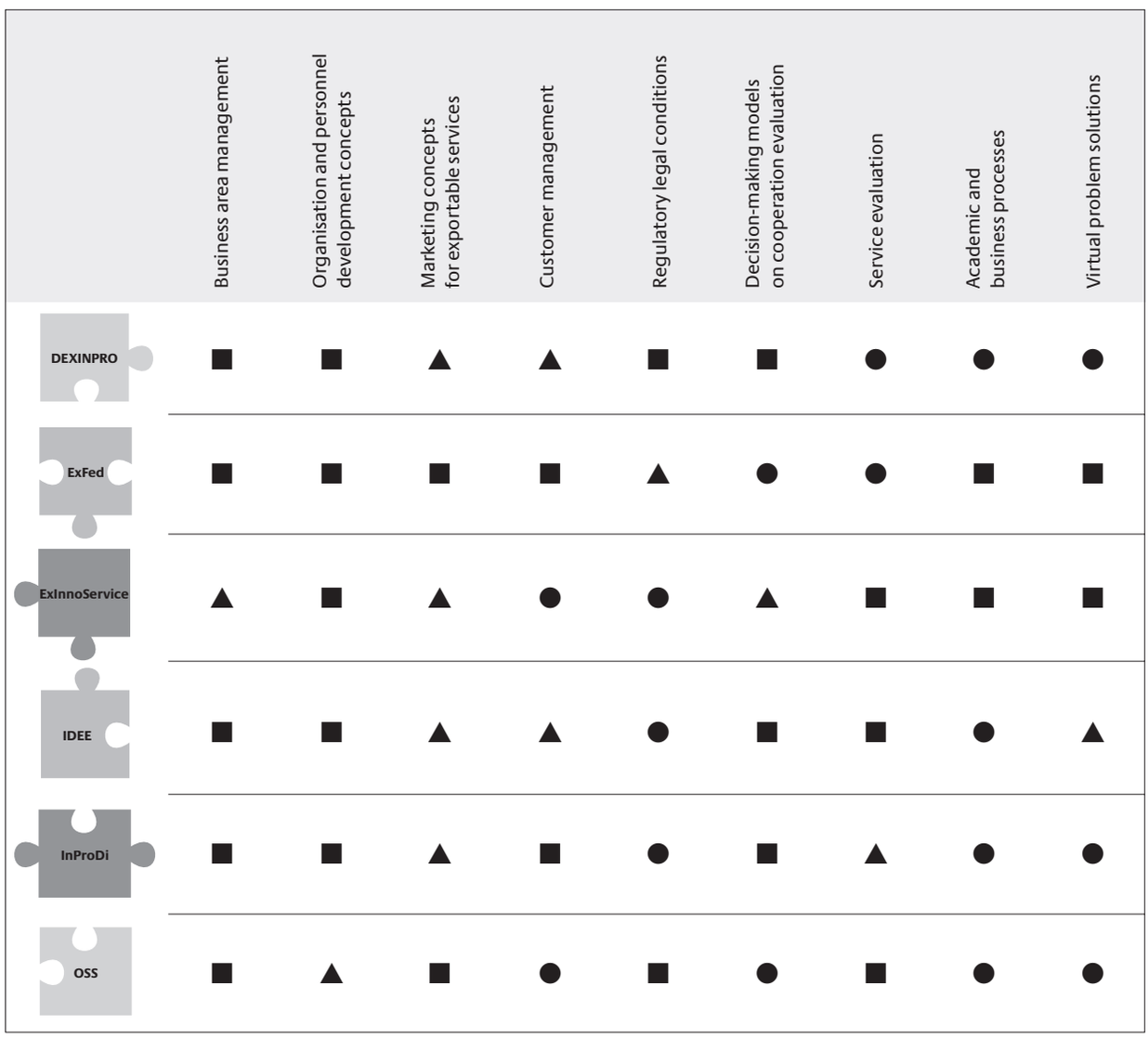
mulation. The InProDi and IDEE projects need to be placed at this level. The degree of generalisation or the extent of the topic's capacity gives way to topic-specific concepts for the benefit of the ExInnoService, DEXINPRO, OSS through to ExFed projects with clear reference to sector.

Nine cross-sectional topics can be identified from the focus of research of individual joint projects as regards the formulation of questions applied, which can provide a basis for the prioritisation of topics dealt with by the "Industrial Services" focus group:

- Business area management,
- Organisation and personnel development concepts,
- Marketing concepts for exportable services,
- Customer management,
- Decision-making models on cooperation evaluation,
- Service evaluation,

- Academic and business processes,
- Virtual problem solution models,
- Regulatory legal conditions.

This table assigns the focuses detailed to individual research projects. At the same time, a distinction is made between which topic areas are directly related to project content and which are of subordinate relevance. This systemisation also shows those cross-sectional topics that are of particular significance for the focus groups' future work. In this context, subordinated topic areas that are relevant in several research



■ Project content
▲ Relevance for focus group
● Additional aspects

Tab. 2: Focus of content

projects offer the potential for a more detailed investigation within subgroups of the main focus group or as part of new research projects.

The following tools are some of those used within the focus group, either directly or indirectly, during the course of work undertaken in individual joint projects:

- An assessment tool to investigate exportability,
- Concepts for the modification of business models,
- An IT-supported tool to support decision-making with regard to the determination of target markets, the compilation of tenders and the form of internationalisation,
- A CSS organisational model for virtual parallel structures in the business or in the co-operative association,
- Tools for planning and implementing enhanced service and operational models in foreign markets,
- A decision-making tool for the evaluation of alternatives in the process of generating industrial services,
- Catalogue of features,
- Guides to trade,
- Training modules for national and international employees/partners.

All joint projects have one common objective, which is to identify factors of success that relate to specific questions regarding the exportability of services. Critical factors of success can be described as those features, conditions or facts that have a major influence on a project or business area and which consequently have a significant impact on success or failure.[16]

16 cf. MULZER, D.: Critical Success Factors of High-Growth New Ventures. Bamberg 1999

The projects aim to determine the factors for success, with particular regard to:

- Cooperative models for the export of services (definition of target market, market development, modification/creation of service offer, forms of internationalisation for small engineering service providers or manufacturing service providers),
- Identification, based on case studies, of success factors for the offer of extended service and operational models in foreign markets,
- Business-specific activities abroad,
- One-stop complete solutions,
- Organisation management, customer management, personnel management,
- Modification/creation of the service offer,
- Identification of new customer groups and distribution channels,
- Marketing of exportable problem solutions.

The focus group can be used as a forum, in order to bring together specific success factors from the projects and consequently to produce a cross-sector collection of essential success factors that can be applied as widely as possible.

4. Different target markets – one common denominator: Innovation

Results of the “Industrial Services” focus group’s joint projects are implemented, used and distributed in close collaboration with the implementation partners, transfer partners and project coordinators concerned. Project results are evaluated in close collaboration with the business partners involved, so that the results of joint projects are geared to the specific requirements of partners bringing the opportunity for the widest possible application and distribution.

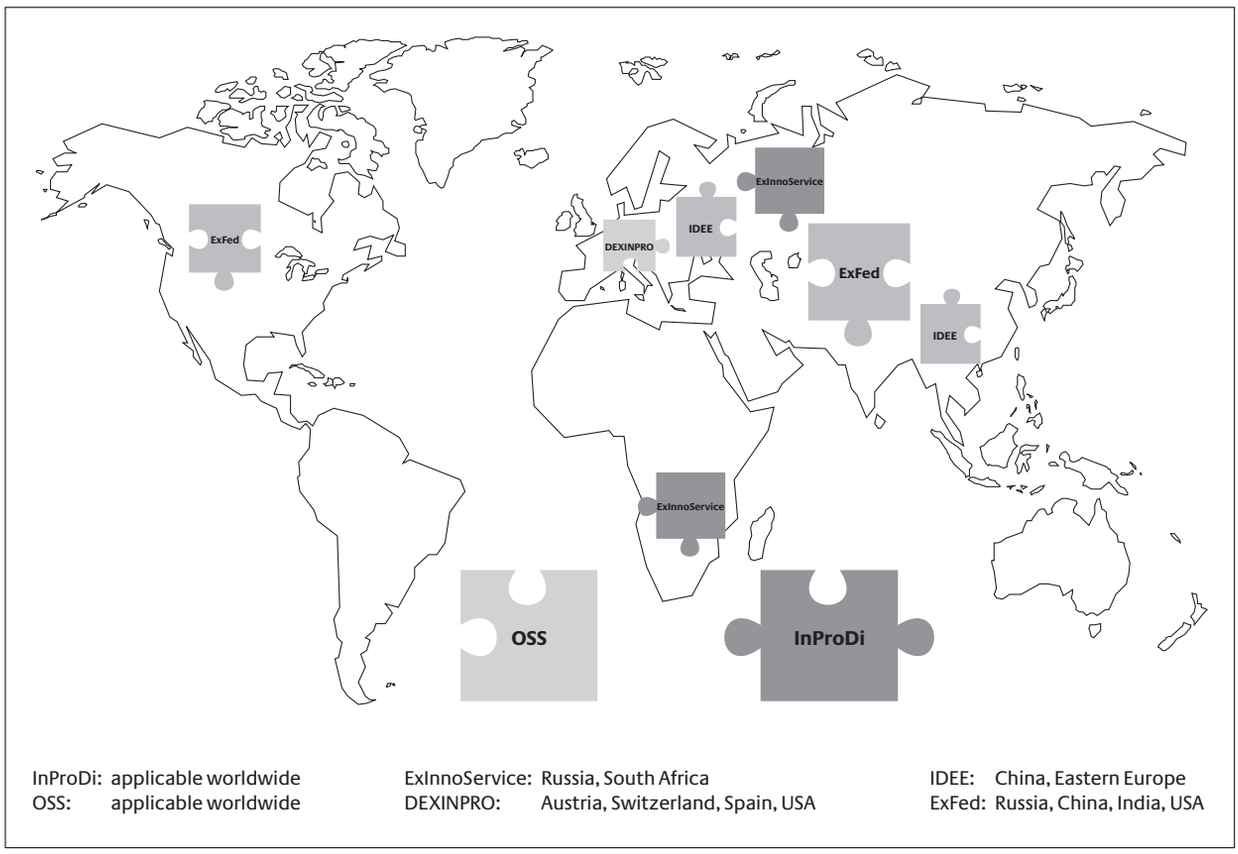


Fig. 5: Geographical target market of joint projects within the IS focus group

Figure 4 shows how the focus group projects are organised in order of urgency with regard to their content orientation and the number of different sectors participating. All implementation partners in the focus projects are production or production-related companies from the mechanical engineering, specialised mechanical engineering, electrical engineering, information technology and chemical industries.

Future developments on international markets, as regards the marketing of industrial services, will have a major impact on the ability of German businesses (especially SMEs) to survive. The focus of the joint projects InProDi and OSS is to analyse the marketing of product-related or industrial services, initially in Germany and then to market services internationally by using the available partnerships. For this reason, the content is not orientated towards definite target markets.

The geographical target markets of the other joint projects are:

- ExInnoService: Russia, South Africa
- DEXINPRO: Austria, Switzerland, Spain
- IDEE: China, Eastern Europe
- ExFed: China, Russia, India, USA

The following illustration shows the geographical arrangement of focus group projects with regard to the project-specific target markets.

5. Results

In future, manufacturing companies in Germany will be able to offer improved product-related services to international markets. The experiences from individual joint projects should be incorporated within the scope of work undertaken within focus groups, in order to generate new awareness so as to:

- fill any gaps in service provision research with regard to the design of management systems with an appropriate strategic orientation of construction, process and management organisation in respect of product-related services.
- increase the competitiveness of manufacturing companies by means of a stronger innovation and service orientation, which aims to improve customer benefits in the long term and which consequently contributes towards an improvement in the employment situation.
- use the qualification concept to empower the employees of manufacturing companies and, if necessary, companies' partners to make changes driven by innovation in the area of the entire socio–technical systems, in order to provide academic and service work.

In order to achieve this objective, success factors are being developed within the scope of joint projects, which focus on responding to specific questions through the research focus of individual projects. An integration of aspects, that are the focus of several projects, thus permits a cross-project approach within the focus group.

The cross-project work of the focus group can thus ensure that these success factors provide cross-sector and cross-country knowledge that goes some way to answering the basic questions regarding the export of industrial services.

6. Active projects within the focus group

DEXINPRO
Export of services with industrial products
The aim of this joint project is to generate pilot solutions for the offer of operational models in foreign markets and to develop tools to support planning and implementation.

ExFed
Export remote-controlled services – development of management, marketing and personal development concepts
The aim of this project is to bring about a comprehensive understanding of remote-controlled services through success factors and future prospects, which enables the use of remote service technologies to provide services regardless of the supplier's physical location.

ExInnoService
A synthesis of academic and business processes as the basis of export-orientated innovation management for services
The aim of this joint project is to develop and test a system for establishing technology-orientated services in various export markets.

IDEE
Industrial services for successful exporting
The aim of this joint project is to develop and test the strategic bases for decisions, forms of organisation and management tools.

InProDi
Protection of international competitiveness through integrated product and service development
The aim of this joint project is to develop business models for integrated product and service development for the provision of integrated problem solutions.

OSS
One-stop services for worldwide industrial production
The aim of this joint project is to develop resources to strengthen the internationalisation ability of German service providers by developing tools for businesses to construct an attractive offer for the international market.

www.industrielledienstleistungen.de

Focus group – Export of knowledge-intensive services

1. Topic/content orientation

Knowledge-intensive services are a growing part of the service sector and represent a substantial opportunity for German service companies. The underlying impetus is considered to be the increasing complexity of the business processes and the opportunities and risks of globalisation.

Knowledge-intensive services are aimed at generating or using new knowledge – often involving intense cooperation with the service customer and partner/s within a cooperation network. Highly qualified staff, an extremely good infrastructure and close cooperation between business and academia are jointly central factors for bringing about these often very complex services. Competitors find it hard to imitate knowledge-intensive services, which means that they offer great potential for acquiring and holding onto international market shares.

The focus group therefore places the successful internationalisation of knowledge-intensive services at the forefront of its research activities. Investigations are carried out into issues from various self-perpetuating perspectives.

- Empirical bases are worked out which include, amongst other things, investigating the current status of internationalisation for selected industries and services. Examples of successful internationalisation are also determined in order to identify success indicators for internationalisation. This process reveals ways in which a business is failing to act effectively and prepares a transfer process with specific targets. Examples of successful internationalisation also serve to identify services offered by German companies which represent good practice both inside and outside a particular industry. Finally, investigations are also made into the differences between companies operating internationally and nationally. The focus group is also analysing the possible effects of internationalisation on the development of businesses with international operations. Innovative, knowledge-intensive services such as practical knowledge forecast markets are also being established within the focus group.
- Models and methods are also being developed to deal with the key challenges involved in acquiring new sales markets and securing global customers for knowledge-intensive services. The models and methods seek answers to questions such as:
- How can companies gauge which of their knowledge-intensive services are internationally feasible and whether they could improve their internationalisation and export capabilities by consolidating knowledge-intensive services with products?
- How can strong service brands and innovative forms of coordination such as franchising be transferred to foreign markets?
- Which parts of complex service packages can be unified or centralised on an international scale in order to achieve cost benefits or to protect expertise?

As well as generally applicable models and methods the focus group concentrates on information technology (IT) services plus involvement with the target regions of Central and Eastern Europe.

Testing and evaluating research results with business partners enables results to be validated and ensures that those outcomes are practicable. Targeted transfer processes with competent and established transfer partners helps to disseminate the results throughout industry and academia.

2. Point of departure/state of the discussion

The significance and opportunities of the internationalisation of services are most relevant to service providers in the information and communication technology (IDCT) sector. The taxable turnover of information technology service providers in Germany

rose by 27%[17] in between 1998 and 2001. In 2001 alone this business sector contributed 8.5% to Germany's gross national product. The use of innovative, particularly Internet, technologies enables ICT services to be carried out irrespective of location. This has resulted in the falling away of both national and international trade barriers. The resulting world market for ICT services requires service providers to adopt an increasingly international outlook. This includes the realisation of cost benefits due to the increase in advance payments from abroad and the opening up of new international sales markets.

Against this background, German service providers are required to develop sustainable internationalisation strategies which enable them to survive international competition and also capitalise on the opportunities of internationalisation. All the more so because service providers are also facing an increasingly saturated and correspondingly competitive domestic market. They are also confronted with the challenge of following their customers abroad. Internationalisation strategies should help to reduce uncertainties inherent in new business relationships or to reduce or reshape the acceptance of services in new markets.

The strategy of replicating services in a foreign market which are successful in a domestic market is therefore rarely successful. Obstacles include regional peculiarities in demand, national legislation, institutional trade and branch registrations and the differing location conditions in each market. Other strategies and methods are required for successful exporting.

Companies also need to consider that many other companies who have already taken the first step into internationalisation have done so unsystematically and often on an ad-hoc basis – compelled by one or more external factors. This has resulted in a primarily less-than-optimum structuring of the service portfolio, the business and/or corporation and the processes which significantly hinders success abroad.

17 Vanberg, Margit (2003), Die ZEW/Creditreform Konjunkturumfrage bei Dienstleistern der Informationsgesellschaft, ZEW Dokumentation, 03–09, Mannheim.

This problem is perceived by companies as a great stumbling block for continuous growth through expansion abroad.

The challenge for German companies is therefore to exploit the actual benefits of knowledge-intensive services and to select and implement the correct strategies. The opportunities and risks of internationalisation need to be controlled on the basis of identifiable success indicators. Service provision needs to be tailored as rapidly and efficiently to the respective target markets while optimally employing domestic resources to provide the services in the foreign market.

The aim of the projects of this focus group is therefore to develop, test and make available a set of methods, processes, tools and success indicators for the successful internationalisation of services. To ensure an interdisciplinary approach and interdisciplinary problem solving, the process builds on the existing research of those partners involved in the areas of service engineering, market research or consultancy research.

3. Project content

The interdisciplinary approach of the secondary projects and their specific aims enable a broad investigation into the export of knowledge-intensive services. The focus group concentrates on supporting the opening up of new sales and procurement markets abroad.

Several elements are required for a successful internationalisation of services. Based on the aims of the exporting service provider, available resources in the country of origin and the target country and the prevailing market characteristics need to be taken into account and used effectively by means of adaptive internationalisation strategies. Internationalisation strategies thus present an important and fundamental research issue within the focus group. The group identifies successful internationalisation strategies, investigates the causes of their success and defines generally applicable recommendations in the form of "good practice". Since knowledge-intensive

services often rely on cooperation networks, internationalisation strategies also take into account the selection of partners as well as establishing value-adding networks.

It is often said of services that it is not possible to appraise quality in advance. The establishment and maintenance of service brands which communicate certain quality characteristics and therefore strengthen consumer trust is therefore essential for internationalisation. The development and management of such brands is a further research issue for the focus group.

Service companies must be able to develop strategic and practical solutions for the export of services for the international market. It is also necessary to be able to investigate and evaluate the suitability of attractive or potential target countries and locations. Local sales markets, particularly local procurement markets, play a central role in this. The process of internationalising services involves identifying the requirements for adjustment to these local circumstances and defining suitable actions to address these requirements. Knowledge-intensive services, for example organisation consultation, also involve a considerable amount of methodological work. For successful export, these methods must be evaluated to ascertain their suitability before being transferred. This transfer process in the internationalisation of services is another research issue for the focus group.

Quality assurance and market research are further important criteria for exporting services. Forecast markets are therefore being investigated as an attractive and effective way of determining the value connotations of potential service customers and utilising this for service engineering.

Empirical quantitative and qualitative sociology research methods are used. As well as standardised surveys of businesses and stakeholders, qualitative case studies and expert interviews and action research projects are carried out in individual businesses.

Empirical primary enquiries and evaluating internal business databases are also used for descriptive and econometric analyses.

In short, the focus group investigates different aspects of the internationalisation of knowledge-intensive services, while acknowledging that these aspects can be combined and integrated.

4. Target markets

There are two basic focal points within the focus group: export into Central and European countries and the internationalisation of IT services.

Saturated local markets and the globalisation of the service sector present service companies with new challenges. This fundamentally changes the environmental conditions for employment, work and competitiveness for the German service industry. To stabilise the growth potential in this business sector in the long term and to maintain or even increase qualified employment, the skill of creating services within international structures is becoming increasingly relevant.

Particularly IT service companies have a lot of experience in increasing the export capability of services. There are numerous examples of good practice concerned with developing suitable concepts and strategies whose general feasibility needs analysis and testing. The group therefore investigates the internationalisation strategies of successful IT companies. The outcomes and particularly the identified examples of “good practice” form the basis for pilot transfer to different target groups within the IT industry itself and also for comparable service industries.

The focus is on Central and European countries because of their direct significance for German companies and because of the opportunities and risks of the eastward expansion of the European Union. In commercial terms, the focus on Eastern Europe is significant insofar as this is currently a highly attractive market for German companies. Several studies in cooperation with Grey Global Group Middle Europe GmbH und Co. KG and Axel Springer Poland are investigating, amongst other things, the status of internationalisation for these countries.

The intended funding of German companies wanting to internationalise promises to generate growth and secure workplaces. German companies nevertheless face the problem of not knowing the kind of market behaviour displayed by Eastern European consumers or in what form internationalisation should take place. The focus group therefore considers specific markets identified on the basis of state-of-the-art service and internationalisation research benchmarks and success indicators and also delivers practical expertise on how to become successful internationally.

The projects also focus on testing research outcomes on the Central and Eastern European market. Particularly for German companies there are opportunities to participate successfully in the growth of these markets using systematic tools and strategies. Participating partners are active particularly in Poland, the Czech Republic, Hungary etc. which means there is guaranteed access to the field in these places.

5. Findings

The point of departure of the research work of the focus group is an analysis of the conceptual knowledge to date. For instance, past internationalisation theories are investigated against the background of export into Central and Eastern European countries in order to focus and adapt these theories for use in the target countries. Recommended actions, methods and tools are developed on the basis of this theoretical work and then put to the test in practice. The findings enable systematic and reproducible planning, implementation and control of the export of services.

A fundamental outcome is the systematisation of knowledge-intensive services. In this respect in particular a wide-ranging empirical survey was carried out in conjunction with the chamber of industry and commerce of North Rhine Westphalia. It identified the current status of internationalisation of companies and also the effects of success and the extent of their influence on the success of the internationalisation. The characteristics of IT services are being empirically investigated furthermore in order to define criteria for the commercial potential of IT services. Initial outcomes of a survey from one of the focus group's 2006 projects show that around three quarters of the German ICT service providers are also selling their services abroad. However, currently around one third of businesses employs services from abroad. The evaluation of secondary data such as the balance of payment statistics shows an absolute and relative increase of Germany's income from the export of ICT services. The relationship between foreign activities and business development (e.g. productivity) of ICT services has also been determined. IT service providers with foreign involvement are on average bigger and often more productive compared with exclusively national companies. A taxonomy has been produced on the basis of this classification and extensive expert interviews, which shows the relationships between features of software service packages, business characteristics and characteristics of foreign target markets. This model can be used to analyse potential export programmes.

The focus group is also developing action recommendations for internationalisation strategies. It is investigating, for instance, existing internationalisation successes within the IT service sector. These examples of "good practice" are being analysed and used to develop general action recommendations. They are being prepared for pilot transfers for various target groups within the IT industry itself and also for comparable service industries. In this case actual action recommendations are being devised for two groups of IT service provider: outsourcing and software service providers. For outsourcing providers, the examples indicate which services are particularly suited to being outsourced to external suppliers at home or abroad and which technical variations such as Application Service Providing and On-demand Computing can vary the appropriateness of outsourcing. The project is also analysing which types of services suppliers in high wage-earning countries like Germany can specialise. They show how software services can be differentiated from their national and international competitors and how to support the process of forming consolidated service packages.

Success indicators for foreign business are also being identified in order to increase the export capability of German software companies. A software application is being developed to make industry-specific predications which will enable internationalisation programmes to be controlled with a scorecard. This tool puts companies into the position of being able to monitor the internationalisation process and to manipulate the situations if the discrepancy between the reference and the actual position necessitates it. This enables the monitoring and control of a variety of internationalisation programmes and internationalisation strategies.

Furthermore, strategies for the use of innovative coordination forms (e.g. franchising) are being developed for implementation of new services into new markets which will ensure the presence and availability of services. A guide to establishing service brands is being produced. Based on several panel studies, Delphi rounds and individual studies this industry-specific guide will consider various types of services. This consumer view of the branding process and the business networking operation is extended by linking qualitative questioning and real success variables. It is thus possible to be able to predict which "screw to turn" using statistical processes. This is the first time that innovative statistical processes have been used in the field of internationalisation.

The transfer of services to international markets also requires a systematic selection of countries and sites and identification of the adjustments will be required for specific locations. Service companies need the necessary information to align their own commercial criteria with the needs of the customer. A method is therefore being developed which consists of a country analysis and a service analysis. The country analysis enables a systematic selection, evaluation and subsequent comparison of potential countries based on an indicator catalogue. Based on this information a service analysis can be performed which reveals the adaptation requirements and underlying processes for the specific site. This information can then be used to evaluate potential sites in different countries within the context of an analysis of existing and planned processes.

This can then be used to define actual measures to enable services to be adapted and transferred. The modularisation of services, i.e. breaking them down into standardised modules, appears particularly promising. Assembling the modules into a service architecture enables an effective and also customer-specific development of services. At the same time, standardised modules also enable companies to determine the requirements of prospective new locations efficiently and how to adapt them specifically to new markets. Modelling tools are integrated and adapted in order to support efficient modularisation of existing service portfolios. The integration of different services in the form of general solution proposals – so-called integration models – e.g. sub-contractors, is a particular consideration to support the transfer of services. The indicator catalogue for evaluating countries and sites and defining requirements for adaptation of services to new locations is being developed, tested and evaluated particularly for Central and Eastern European countries.

Particularly for knowledge-intensive services it is argued that these should undergo a test phase for quality assurance purposes, similar to software development, before market introduction. This is actually happening in the piloting of the forecast markets as knowledge-intensive services within the context of the "Football world championship exchange 2006", which is concerned with the use of information exchanges as an innovative forecasting instrument. Tools are being developed to test and improve the quality of forecasting services in the area of market and opinion research. This is of central importance with respect to the internationalisation of forecasting services because the cultural background of the exchange participants has a considerable influence on their commercial behaviour as well as affecting the quality of the forecasting. The technical implementation of a suitable software platform is a primary condition for providing market and opinion research services based on forecast markets. A generic information exchange platform was developed within the context of the "Football world championship exchange 2006" which can now be used to run forecast markets for practically any field. The services

can also be offered internationally as the trading system is multi-lingual. This will appeal particularly e.g. to developing countries in which there is no tradition of market and opinion research.

Investigations as to the effectiveness of different consultation concepts and into the establishing of new approaches for organisational consultation cover a wide range of knowledge-intensive services. Empirical consultation research is linked to evaluation research and concepts for strategic project management in order to improve the evaluation of knowledge-intensive consultation services. Amongst other things, this involves a reflexive consultation concept. Summaries of consultation and evaluation concepts also contribute to better market transparency in this area, supported by the development of action recommendations for the selection, control and evaluation of knowledge-intensive consultation services. Investigations are also carried out into strategies and possible barriers to the internationalisation of consultation services. Areas in which German consultancies lead on an international scale are particularly worthy of attention. Studies into the development of the consultation requirement – above all in Central and Eastern Europe – and into the relationship management of medium-sized consultancies, their market entry and networking strategies (network building) and the development of in-house consulting for international companies enable the compilation of action recommendations for the internationalisation of consultancy services. These results are being collated in a guide to the internationalisation of consultancy services.

To summarise, the focus group is building on theoretical advances in the conceptualisation of services and their export. The result is the development and testing of a set of recommended actions, methods and tools for the export of knowledge-intensive services.

The transfer of these research results ensures that the methods developed and the knowledge obtained is correctly communicated to decision makers in the service industry therefore ensuring the sustainability of the research work. The documentation and the transfer of results takes place via publications in noted academic and professional journals.

The results are being disseminated across a wide range of disciplines thanks to the partners integrated into the project community, for instance, chambers of commerce and industry associations, and thanks to the fact that professional associations and their working parties are also involved in all projects. Partial results are also being used at two universities, for example, for the development of masters courses in consulting. The implementation of the research results in different software tools also makes it easy to make practical use of the results.

6. Projects within the focus group

Export-IT – Success indicators for internationalisation and the export capability of IT-services. Institut für Sozialwissenschaftliche Forschung e.V. (ISF Institute for social sciences), Munich.

INTERDIG – Internationalisation for service providers in the information business. Berlecon Research GmbH, Berlin.

IMADI.NET – International branding in service networks. Westfälische Wilhelms-University Münster.

MARIS – Modular architectures and assessments for the systematic internationalisation of services. Technical University, Munich.

OBIE – Organisational consultation– import or export for German business? Technical University, Chemnitz.

STOCCER – Football world championship exchange 2006 – an integrated international market for forecasts. University of Karlsruhe (Technical University).

Focus group – Export capability of SME

Ewald Heinen, Joachim Hamburger, Institut für Technik der Betriebsführung im Deutschen Handwerksinstitut e.V., Karlsruhe (itb, Institute for operational management technology)

1. Topic/content orientation

This focus group involves those projects within the "export capability and internationalisation of services" programme which concentrate on internationalisation strategies relating to the development, organisation, financing and marketing of the services of particularly the smallest, small and medium-sized companies. Irrespective of their economic significance, only a fraction of these companies are involved in the export success enjoyed by German business. One cause, but not the whole one, is the size of these companies and their scarce personnel and financial resources.

However the relatively few examples show that even companies of this size can make a success of business abroad. The focus group represents a broad cross-section of business classes in terms both of the size of the companies at the centre of the respective research programmes and of the industries to which they belong. Therefore according to the EU definition both 'medium sized' as well as the 'smallest' companies are the focus of the research groups represented. As well as individual industries (logistics), the trades and skills of various industries are represented as well as the more general problem of financing and structuring the processes of foreign businesses. Even though the majority of research programmes are working specifically with skilled operations, the research programme is an almost optimal representation of the 'small and medium-sized companies' category.

The combined aim of all research programmes is the successful expansion and marketing of services abroad and therefore the necessary strengthening of the international competitiveness of small and medium-sized companies in this age of globalisation. There are two useful approaches here: firstly, businesses can redesign or adapt their services for the export market or they can restructure to make themselves "exportable". At the 'service' and 'business' levels, the key aspect is process-structuring which, on an international scale, equates to becoming competitive in a particular environment.

Success is of course more likely if a unified approach is adopted at all levels. This is the case in the majority of research programmes represented in the focus group. While individual research projects foreground one aspect or another, e.g. the development of niche products or the standardisation of process elements, looking at the overall picture it is possible to see that the different aspects complement one another within the focus group.

The research programmes under the focus group umbrella are preparing the ground which will provide a wider ranging and more successful basis for the as yet insufficiently-explored field of SME and the export of services. Despite the obvious differences between the participants, the focus group umbrella reveals a number of identical problems and other similarities which not only make any interchange easier but actually essential. Many of the differences of the different research programmes also indicate aspects lacking in the research programmes themselves.

2. Point of departure/state of the discussion

The work within and between the projects in the focus group has quickly revealed that to address the topic successfully requires that certain principles must be mutually understood. There is no mutual definition, for instance, of the core topic of 'services'. Other terms, e.g. 'exportability', also require clarification and/or the agreement of a mutually acceptable name.

Various publications offer help in entering foreign markets. However these are generally highly specific and the content is rarely coordinated. Specialists have emerged amongst support services whose knowledge is only minimally exploited. Coordination and unification are absolutely essential for transferring information to as many companies as possible and also to a broader circle of support services. The focus group needs to provide help as far as possible here.

The 'companies' and 'service (development)' (analytical) levels given in the previous section offer

various potential aspects for development. Due to the relatively narrow research background there is a lack of experience in providing companies with empirical success indicators and this is particularly the case with small and medium-sized companies. While a few key areas have crystallised, these are still far from being well established.

Individually these are approaches which identify unique selling points for services offered on the international market or which enable market strategies to be sounded out. This area even lacks cooperative relationships or networks. This includes export-orientated organisational and management concepts, which particularly allow the question of the extent to which specific organisational units can be consistently standardised. Another issue often neglected by SMEs is brand strategy. This not only concerns how to successfully place the brand abroad but also the legal aspects. It is finally worth noting the ways in which products/services arrive abroad: should they be produced at home and delivered to the destination country or should businesses work with production and service partners abroad?

A lot depends on the willingness of the businesses to develop strategies and visions. It is important to send these messages to the majority of operations. It is therefore essential to develop decision-making principles and instruments which the companies can use.

Employees in the companies themselves need training in intercultural issues. This aim can be achieved with suitable training and professional development starting with language training, information about the cultural background and specific legal, tax and other barriers. The training can be adapted to resolve small and medium-sized enterprise-specific resource bottlenecks.

Service provision often suffers from the fact that services are perceived as a part of the product and the customer is never invoiced separately for them. This is a problem which requires the understanding of services on the part of both the provider and the customer. This causes problems for marketing or in a more general sense, marketing aspects which in turn affect the strategy. Knowledge is also required, particularly in the international field, related for instance to questions of financing and suitable financial structures within the finance chain.

3. Project content

Certain topics affect all the project research programmes represented in the focus group, which the combined marketing and business approach makes clear. These are, depending on the service/industry:

- Analysing the current situation
- Defining success indicators
- The need to analyse requirements, often relating immediately to the business itself and the resulting organisational concepts and information processing measures,
- plus the transfer of results and appropriate publication work.

Many of the methods used differ from project to project. However, there are numerous tiny overlaps which are worth looking at in terms of content exchange.

When looking at the current situation for instance, suitable analysis instruments are of interest and some of the projects are working on this. The knowledge obtained by these methods may be redundant or useful since the different foreign markets at the centre of investigation are being examined from particular perspectives. The result is SME-orientated ‘National manuals’ produced according to industry and topic. This means that both the method of obtaining information and the information itself is of mutual interest as is further processing of the information.

The same applies for the resulting definition of barriers and success indicators. It shows that the processes within the focus group are primarily homogenous. While this first area affects the target market and also external factors in relation to the business, it is also concerned with the structuring of the internal factors affecting the business that is required for the successful positioning of the service in a foreign

market. External factors have to be collated, prepared and made available in a suitable format. Internal factors (may) need to be developed.

The starting point for development and structuring approaches is first and foremost the comparison with the defined success indicators, the requirement analysis in other words. The organisation of companies is often the first point to address. To guarantee the feasibility and reproducibility of developed solutions, the 'reduction of complexity' plays an important role. I.e. the organisational structure must be kept as simple as possible. This is achieved by standardising service provision processes wherever possible and appropriate information management. Both question an issue which has been highlighted by individual research programmes within the focus group, the structuring of reliable payment processes. The need to create networks or enter partnerships are aspects which precisely these highly interdependent small and medium sized companies need to consider and which is therefore highlighted in many of the projects within the focus group.

Similarly further aspects can be added: questions of personnel development or modules for qualifying for export are the focus of many research programmes. Marketing aspects, market entry strategies and brand marketing questions plus brand management are also of general interest.

SME-orientated action manuals, control tools and other handouts are being developed for companies and support services in nearly all the research programmes. Mutual support avoids duplication and offers a simple way of expanding on each issue.

The transfer of results and publications are an intrinsic part of all research programmes. It makes sense to direct this to the industry-specific target group at both the business and support levels. Both incur overlaps which can be very useful. A central information system is therefore required, to which all participants have access. There are also plans for a joint newsletter and links between each of the project Internet sites. There will be references for individual issues of interest to project partners with the emphasis on mutual collaboration in the form of experience or knowledge exchange.

The focus group also hopes to hold periodic meetings to focus on key issues and discussions.

4. Target markets

The target markets cannot be geographically defined. In fact there is not really a target market as such. The research programme is more concerned with the development of services and the adaptability of the service to the process. Depending on the services on offer, there may be a preference for EU or Eastern European countries. Global approaches are also examined in some cases.

The industries represented in the focus group cover a broad spectrum of small and medium-sized companies. The key areas of trade and manufacture are well represented. They include the following:

- Logistics/haulage
- Textiles
- Mechanical engineering
- Industrial maintenance
- Production operations e.g. electrical engineering, interior design, building etc.

5. Findings

Since the targets in the individual projects tend to be very project-specific, only some of the findings are transferable. While all projects plan to produce series of recommended actions, guides and/or qualification modules, these are very specific. At best, standardisation elements (where available) might be integrated into processes. However, these findings, which are based on individual companies' internal factors, are basically specific to the research object. Other exceptions include personnel development measures and qualification measures with e.g. intercultural competence as their topic.

It is otherwise preferable to concentrate on external factors. The basic conditions in the target countries are of interest for all research programmes. Activities in target export countries can thus be effectively monitored with a central SME-orientated information system.

For this reason alone it is worth exchanging project results and coordinating publication work within specific parameters. Possible joint activities might include adapted workshops/seminars on key issues with carefully selected and suitable companies from different focus groups. The "host project " for each key issue could invite participants from other projects. It would make sense to document these events and publish proceedings.

Joint talks/presentations of current project findings would also make sense.

6. Projects within the focus group

The "Export capability of SME" focus group combines 6 joint research programmes with a total of 8 secondary research programmes. It is coordinated by the Institut für Technik der Betriebsführung (institute for operational management technology, itb) – research post in the Deutsche Handwerksinstitut (German institute for skills, DHI) e.V. The joint research programs are as follows:

HWE-DL – "Internationalisierung handwerklicher Dienstleistungen zur Sicherung und Ausweitung der Beschäftigung" (internationalisation of skilled services for the securing and expansion of employment)

Int-PEM – "Internationales Performance Measurement im Rahmen der Internationalisierung von KMU-Logistikunternehmen" (international performance measurement in the context of SME logistics companies)

IMADI-net – "Internationale Markenführung in Dienstleistungsnetzwerken" (international branding in service networks)

KMU-Finanz – "Stärkung der internationalen Wettbewerbsfähigkeit von KMU durch Internationalisierung von Finanzdienstleistungen" (strengthening international competitiveness of SME by internationalising financial services)

Standard-IS – "Dienstleistungsstandards in erfolgreichen Internationalisierungsstrategien" (service standards in successful internationalisation strategies)

China Star – "Deutsche Dienstleister auf dem Weg nach China" (German service providers on the road to China)

Focus group, Eureka project

Walter Ganz, Bernd Bienzeisler, Christian van Husen

1. Topic/content orientation

The strengthening of the service industry is not just a national but also a European matter. The European Commission recently asserted that the growth aims formulated in Lisbon will be achieved only if the innovation and employment potential in the area of Business Related Services can be better exploited.

The Eureka project is therefore working on "SERVNET – a modular set of instruments for the support of service innovations in the field of Business Related Services". The aim of the project is to develop a modular toolbox which will provide an array of practical methods, procedures and tools for the development of new business related services. Project work will focus on the entire value chain – from the service product through to the organization of service processes and the management of complex service systems. Particular importance is attached to the transferability of the resulting tools for use in foreign markets with the aim of promoting the internationalisation of service innovations.

Linked to this EUREKA initiative along with other research programmes from European partners, is the German joint research programme "Services Made in Germany". The research programme has been commissioned within the context of the "Export capability and internationalisation of services" and is concerned with the issue of service innovation and development, particularly in the light of internationalised services. The joint research programme "Services Made in Germany" thus not only addresses the internationalisation of services but also functions as a platform for the international networking of service research.

The German project builds on the "Made in Germany" model which has long been the seal of high-quality products from Germany. The project is based on the concept that many aspects of this model can be transferred to areas of the service industry. The research project therefore aims to create methodological bases for the internationalisation of the German service industry. Products provide the terms of reference: high quality services – like high quality products – must be continuously adapted to customer requirements, market conditions, profitability considerations and technological advances. Project partners are therefore developing approaches to adapt the services to the international market from the design stage to the market launch.

The objective of the "Services Made in Germany" research project is to lay the scientific and methodological foundations for the internationalisation of the German service industry. The key focus is on the development of joined-up concepts and instruments for the engineering, roll out and launch of high quality services on international markets. The research programme concentrates on the area of business-related services which is immensely significant in economic terms as it is undergoing major growth and has the potential for major international penetration in the globalisation of business. The research programme plans to achieve the following:

- To establish a central "Services Made in Germany" model particularly for business-related services from Germany
- A systematic investigation of success factors and barriers for the internationalisation of business-related services using qualitative and quantitative empirical analyses.
- To develop methods and processes for engineering, roll-out and market launch of services to be offered on the international market,
- To pilot and evaluate potential solutions in real businesses with experience of successful internationalisation,
- To develop a curriculum for the internationalisation of services, to be piloted at lectures and seminars at participating educational and training facilities.

2. Point of departure/state of the discussion

The point of departure for the Eureka research project focus group is significant from two perspectives. A

key aspect in terms of the focus of the overall Eureka project is innovation in business related services. In addition the particular orientation of the German research programme means that the current status of the internationalisation of services is an important factor. We now examine both perspectives therefore.

As value adding processes are transformed, business related services are assuming an increasingly central role and already constitute the most important sector of the European economy. By 2001 almost 55% of the gainfully employed population in the European Economic Area worked in this sector and the share of aggregate economic output accounted for by business related services was almost 54% – a figure which is likely to be even higher today.

The economic significance of Business Related Services results above all from the positive contributions made by these services to the productivity trend of the overall economy. These productivity contributions are reflected in new, more efficient business processes, new business and organisational models and in more intelligent and higher performing products and produce/service combinations. Against this background the business-related services sector is acting innovatively to push against its own boundaries.

At the same time it is apparent that far fewer resources are invested in research and development in the field of business related services than in the manufacturing sector, and that far less is invested in Europe than in the USA, for example. One significant reason for this state of affairs is a lack of knowledge about and understanding of the cause and effect relationships influencing service innovation and the dearth of service-specific development instruments. Product development methods are, for instance, frequently transferred to the service sector 1:1 even though they are often entirely inappropriate for the special requirements associated with services.

What is more, small and medium-sized enterprises tend to be overrepresented among providers of business related services in Europe; these firms seldom have sufficient R & D capacity of their own and are only likely to engage in service innovation on an "ad hoc" basis, if at all. Service innovation is also more sluggish in Europe owing to the greater salience of cultural differences in the European single market than in the US market – particularly bearing in mind the fact that such cultural differences play a much more important role in the development of new services than new products.

It would therefore be reasonable to assume considerable market potential in the European Economic Area for the use of a modular-based set of instruments for the development of business related services which would enable companies to develop new services in the action fields of "customers", "employees", "organisation" and "technology" which are tailored to specific market and customer segments.

In addition to this service innovation perspective, the internationalisation of services plays an important role at the outset on increasingly global markets. The competition in many home-grown service markets has increased dramatically in recent years. Markets that used to be sluggish have transformed themselves and new players have come onto the market: there is no question that the marketplace is becoming more dynamic. When one considers the causes for the more intense competition, the following factors apply in particular (see Meyer, Blümelhuber 2001):

- Increasing market saturation
- Strategic overcapacities,
- Increasing deregulation and denationalisation,
- The entry of new competitors who are often new to the sector
- Multiplication of successful service concepts.

Against this background, service companies are no longer able to raise their profile simply by emphasising cost, image or quality advantages. On the contrary, differentiation through innovative service packages is developing into a key unique selling point for businesses to set themselves apart from their competitors. The central challenges compel them above all to offer continuously improved and new services in the marketplace, to always remain one step ahead of the competition and at the same time to comply exactly with customer needs and expectations.

However, many companies are today facing the problem that their present structures and processes become unsuitable both for developing new services efficiently and for positioning them in the marketplace. Moreover, adequate instruments for operative planning of processes to develop services are lacking. Very often the roots of the difficulties lie in the fact that the services offered by the companies are not clearly defined, i.e. there are no clear descriptions of what the service entails, the relevant processes and the resources required (cf. Bullinger, Meiren 2001).

In contrast to the highly marketing-oriented New Service Development "Service Engineering" within academia entails applying the know-how established in the field of conventional product development to the development of services. Service Engineering can thus be defined as the systematic development and design of services using suitable models, methods and tools. A lot of work has been carried out in this area in recent years. There is at present a huge array of models, methods and software tools available with which to develop new services. However, certain aspects of internationalisation have not played any role so far. There has been in particular a lack of investigation into how to develop and adapt services for international markets. The following deficits are evident for example in the internationalisation activities of German businesses (see Bienzeisler, Meiren 2005):

- Cultural training for affected employees
- Adaptation of processes on site,
- Adaptation of service levels,
- Separate marketing concepts and actions
- Involvement of extra cooperation partners.

The "Services Made in Germany" projects starts at this point and aims to fill the current gaps in business strategies for developing and launching services for international markets.

3. Project content

The Eureka project focuses on action areas which are relevant to the development of new services: "customers", "employees", "organisation" and "technology". Solutions are elaborated in each of these action areas – and subsequently integrated in the overall concept – by drawing on a mix of basic research and practical methods.

During the first project phase the FRAUNHOFER IAO will lay the scientific foundations for the development of a modular set of service development instruments. The objective is to create morphologies, taxonomies, catalogues of criteria and heuristics for the analysis and design of various types of business related services. Service development concepts, procedures and tools for the action areas referred to above are elaborated, tested and evaluated in the ensuing development phase.

In the **"Customers"** action field, the UNIVERSITY OF LEIPZIG is focussing on new opportunities and ways to integrate the customer into the process of service innovation and development. Concepts and procedures will also be developed which permit a greater parallelism of product and service development but which also ensure a high degree of integration of the product/service development. The development and conception of suitable procedures and methods for the customer-orientated adjustment of new services to international markets is a further objective.

In the **"Employees"** action field, FRAUNHOFER IAO is developing new HR strategies and instruments to enhance the use and management of the innovation potentials of highly-skilled employees. One of the objectives of this project is to develop a cultural competence scorecard as a tool for the accounting and management of service competence in multinational companies.

In the **"Organisation"** action field, the FRAUNHOFER IAO is also working in parallel with OCE PRINTING SYSTEMS on strategies, procedures and methods for the development and rollout of hybrid services. The objective is to develop a business instrument for the management of resources in the context of an expanding service portfolio. Work is also being

undertaken on behalf of multinational service providers on a requirements analysis (due diligence) concept designed to support the development of new markets and areas of business. In this action field SC-RESEARCH is focussing on the issues involved in "business model analysis" taking service-specific activities in the area of research and development into particular consideration. SC-RESEARCH will be working together with several Finnish partner companies. Key aspects of service-orientated innovation processes are to be modelled on a commercial basis in order to draw conclusions on how to improve service innovation processes.

In the **"Technology"** action field, the UNIVERSITY OF LEIPZIG is working on an Internet forum aimed at supporting collaborative service developments in a virtual setting. FRAUNHOFER IAO will also create a spatial and technical infrastructure that will enable new services to be developed, tested and simulated under quasi laboratory conditions using virtual reality methods. For this purpose the IMG Group is supplying a process documentation method which enables strategy, processes and IT requirement areas to be observed and modelled in the development phase of new services.

The results and secondary results obtained from the individual action fields are used by the ESADE BUSINESS SCHOOL to develop new training and professional development modules. The aim is to raise the profile of service innovation in academia and to strengthen the contact between services researchers and the service industry in the university environment.

During the final integration phase of the project the reproducibility of the potential solutions elaborated in each of the action fields by the FRAUNHOFER IAO and the UNIVERSITY OF LEIPZIG will be reviewed and individual modules prepared for integration in a toolbox which will be made available on an Internet-based information platform.

The German material will be integrated into the "Services Made in Germany" research project. The project is concerned with the development and management of international services and relies heavily on existing knowledge in the area of Service Engineering. The project is thus more directed at overall issues than individual applications. The basic overall issues show a connection with the aforementioned European activities. The following questions are addressed more specifically in each application research programme:

- Structuring the service provision for international markets,
- Development and roll-out of hybrid products,
- Development of a modular service concept for systems business,
- Developing strategies to secure the experience and knowledge of international employees
- Developing concepts to strengthen employees' intercultural competence.

Foundation work is carried out in relation to the general issues. This is followed by conceptual activities focusing on four areas.

The academic foundation work involves clarifying terminology, working out a typology and establishing a model "Services Made in Germany". Empirical investigations in conjunction with the overall project are starting at the same time. The first qualitative studies identify current problems and requirements for action. These will form the basis for a wide-ranging quantitative investigation closely linked to the conceptual work packages. The study will conclude with a qualitative investigation which will be used in this case to define case studies and comparison with international "best practices".

The conceptual work will involve defining requirements in the first instance. A requirements analysis will be carried out in order to determine the general need for action to internationalise services and also to pinpoint specific concept and action requirements for the businesses that will apply those actions. These requirements will form the basis for the work packages in which the academic partners will develop suitable models, methods and processes together with the directly participating businesses for the development and adaptation of services for international markets.

A key objective is to develop a model for the internationalisation of services. This involves developing a commercial model for the internationalisation of services, to work out strengths and weaknesses in selected service areas, to investigate forms of internationalisation, particularly appropriate market entry forms for German companies and to investigate forms of international business-to-business cooperation.

The project also spotlights models and processes for the development of exportable service products. This involves concepts for redeveloping services for international markets with the definition of suitable structures and processes for the internationalised service development, the description of services with the aid of a basic model comprising integrated product, process and resource models, the expansion of this basic model in order to include additional internationalisation elements (e.g. legislation, language, cultural variances) and support via information and communications technology systems both for service engineering and to coordinate development. This focus also covers the provision of concepts for the roll-out of new services on international markets, i.e. defining suitable structures and processes for rolling out services on international markets and concepts and instruments for rolling out new service products.

The third focus is on the adaptation ("customising") of existing services for new international markets. In this case concepts and instruments are developed for processes for determining the service requirements of international customers, customising strategies in order to adapt services to the needs of differing international markets, breaking down services into modules as a middle way between standardisation ("efficiency") and personalisation ("customer proximity") and the consolidation and packaging of hybrid services for international customers.

Finally, the latter conceptual focus can be used to analyse existing interaction processes between customers and employees and introduce improvements. New services can also be used to conceptualise and test the customer-employee interaction. This involves developing a process for designing interfaces and interaction with international branches and customers, developing a concept to simulate services ("Service Theatre"), developing a process for the analysis and design of different cultural settings and increasing competences for international service employees with different levels of education.

4. Target markets

The Eureka research project "SERVNET" is primarily aimed at supporting innovation in the service sector. Suitable instruments are therefore provided for use in European businesses. The German project "Services Made in Germany" covers specific aspects of internationalisation. In terms of industry or specialism, it is aimed towards producers, technical service providers and engineering service providers. Its parameters are confined to B2B (Business to Business) services. As the project is focused on basic underlying issues, there is no geographical limit to the target group. The spotlight on business models for internationalisation, however, is directed towards the growing markets in Central and Eastern Europe.

5. Findings

The EUREKA project "SERVNET" is currently in the construction phase. The project is expected to start officially in 2006. Therefore there are as yet no reliable integrated project findings. However, the first results are already available from current secondary projects. Partners Fraunhofer IAO, the University of Leipzig and océ Printing Systems GmbH are inputting results from the ongoing research programme "Services Made in Germany" – the development and management of internationalised services – into the SERVNET project. The following results are expected in the context of this secondary project:

- A typology of international services
- A "Services Made in Germany" model which locks onto the strengths and traditions of German industry

- A short study of expert interviews in German companies
- A study of results from the empirical investigation,
- A comparison of international "Best Practices",
- An action guide for businesses dealing with business models for the internationalisation of services,
- A configurable reference model for the development and roll-out of internationalised services,
- A configuration method for the production and management of service modules for requirement-orientated customising and
- a joined-up concept for structuring interaction with international customers.

The first results from expert interviews carried out in 16 German companies are already available. They show that those businesses export drastically fewer services than products. The phrase "Services Made in Germany" was linked with engineering expertise, systematic processes, reliability, experience and punctuality. The enhancement and consolidation of success indicators has enabled the development of a "Services Made in Germany" model which delivers basic structural recommendations for services. The business representatives complained of a lack of clear processes and methods for the preparation and planning of international business activities. The international services provided are therefore rarely adapted for the requirements and conditions of the target markets. Instead, the product offered on the domestic market is often transferred abroad unchanged.

The importance of communications via the customer interface places heavy demands on employees. Employees in situ receive enquiries, define services with the customer and support the service provision. Astoundingly few businesses prepare their employees for this important strategic role. There is often a lack of information exchange between the central and local business arms although internationally distributed knowledge forms the basis for innovation and global learning. There are fundamentally different processes for internationalisation in practice due to the extremely varied range of services. Some businesses offer a very standardised service portfolio while others tailor their services fully to suit individual customers. Some companies therefore export their services from their main headquarters and therefore operate with relatively highly concentrated business activities while others operate in more than 50 national markets with completely different market entry and market management methods. The rate of personalisation or standardisation also affects the structure of the service development process and interaction. As personalisation increases, so does interaction with individual service customers. Differentiation in the critical area between standardisation and personalisation is achieved by customising services.

6. Projects within the focus group

The following are involved in the German "Export capability and internationalisation of services " programme:

"Services Made in Germany" – the development and management of internationalised services

The following partners are also involved in the Eureka project "SERVNET":

ESADE Business School, Spain
Personally financed participation

IMG-Group, Switzerland
Personally financed participation

SC-Research, Finland
Participation via international research project

Project summary[18]

Focus group, Export in the health sector

MEDICAL EXPORT – Internationalisation of medical services for foreign patients supported by technology.

Aims
The "Medical Export" project aims to develop a unified and integrated instrument to open up the business field of "medical services for patients from abroad". By integrating Service Engineering, Organisational Structure and Technology Management the project aims to develop more effective tools to structure an international service provision.

Outcomes
A prototype is being developed for an overall information technology platform that can also be tailored for individual suppliers. The project will systematically support health facilities to secure and expand employment with the treatment of foreign patients and to acquire and improve methodological and information technical expertise. You can find more information about the product at www.medical-export.de (German) and at www.medical-export.org (English).

Involved partners
Forschungsinstitut für Rationalisierung (FIR) e.V. an der RWTH Aachen
Siemens AG Medical Solutions
MUL Services GmbH
Universitätsklinikum Aachen
Universitätsklinikum Düsseldorf
Universitätsklinikum Köln
Katholische Stiftung Marienhospital Aachen
Krankenhaus Düren
Rehabilitationsklinik an der Rosenquelle Aachen
Allgemeines Krankenhaus Celle
Krankenhaus St. Josef-Stift Celle
Klinikum Peine
Europa-Institut für Technologien in der Medizin
Fachverband Biomedizinische Technik e.V.

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New Market Intelligence: Identification and evaluation of foreign markets for services in "red" biotechnology.

Aims
An intelligence system is being developed for medical applications ("red biotechnologies") for biotechnology SME, with which to identify and evaluate new services and foreign markets. The first stage involves defining new Biotech services and possible foreign markets. Methods of early detection are being further developed and an empirical stock take is being undertaken of early detection and strategy development best practices in biotech SME. Existing business models and internationalisation strategies are being tested and evaluated.

Expected result
Development and implementation of a New Market-Intelligence System for SME with participating companies.

Involved partners
Evotec Technologies GmbH
GALB GmbH
Biogenes GmbH
Schering AG

18 Within the announcement "Exportability and Internationalisation of Services", 29 network enterprises are being promoted. The below presented project survey contains 31 network enterprises, as two enterprises from the announcement "Integration of Production and Service" have joined the focus group "Export in the Health Sector".

DECHEMA/VBU
BioTOP Berlin-Brandenburg
Universität Potsdam, Institut für Biochemie und Biologie
Glykostrukturfabrik Berlin
University of Sussex, SPRU, Brighton, UK
Yokohama National University and National Institute of Science & Technology Policy (NISTEP)Tokyo,
Beijing University of Aeronautics and Aerospace,
The School of Economics and Management, Peking

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ProDiMed – Prospective generation of direct service concepts in medical technology for future markets

Aims
The aim of ProDiMed is to analyse and evaluate the requirements and obstacles for product-related services in medical technology in future markets.

Outcomes
The aim is define ways of providing pragmatic help in the form of tools for successful orientation and organisational structuring of medium-sizes service structures in order to improve the competitiveness of German medical technology businesses.

Involved partners
Dr. Hein GmbH, Nürnberg
Schölly Fiberoptic GmbH, Denzlingen
zebris Medical GmbH, Insy im Allgäu

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GESA – Development of an integrated overall concept to increase the exportability of services in the welfare and care of the elderly sector, using the example of current procedure at the AWO Care and Service Centre, Bremerhaven with regard to the exportability and internationalisation of services

Aims

- To analyse structural approaches, strategies and standards for long term export of care services (Service Engineering) based on a case study of a health organisation.
- To develop and test reference processes and organisational structures taking into account transferability to other areas in the elderly care sector and to other sectors in conjunction with international partners and with academic support.

Outcomes
Integrated overall project to increase the export capability of services in the elderly care sector. Recommendations for transfer to other sectors.

Involved partners
AIB Universität Bremen
AWO International, Berlin
International partners in: Armenia, Azerbaijan, Bosnia/Herzegovina, Bulgaria, Croatia, Moldavia, Poland, Romania, Russian Federation, Turkey, Serbia, Ukraine

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Health Care Export

Aims
Health services should be as internationally orientated as possible in order to take part in the scientific advances (heavily influenced by international demand) and the international implementation of best practice.

Outcomes
The internationalisation of the health services forms the starting point for a very promising development. However, success factors for internationalisation are already proving to be a basis for future top positions.

Involved partners
Institut Arbeit und Technik
Sozial- und Seniorenwirtschaftszentrum (SWZ)
VVA Health Marketing

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Export of medical services – Model for the internationalisation of hospitals.

Aims
To develop management concepts for the initiation and execution of strategic transfer processes and a guide for the actual internationalisation of hospital services

Outcomes
Empirical study of success factors of the hospital innovation system
Derivation of success models and management instruments for export

Involved partners
Technische Universität Berlin
Professor of Technologie- und Innovationsmanagement (Prof. Dr. H. G. Gemünden)

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SPRINT – Systematic Design for the Integration of Product and Service

Aims

To develop methods/models/tools for the systematic design of hybrid products
To conceive and pilot a hybrid product for the sport and health sectors

Outcomes

Systemised success factors/best practices/guide to the development of hybrid products
Hybrid products for in-house health provision

Involved partners

Technical University, Munich.

- Lehrstuhl für Wirtschaftsinformatik
- Lehrstuhl und Poliklinik für Präventive und Rehabilitative Sportmedizin
- Center for Digital Technology & Management
- Handelshochschule Leipzig
- CLIC – Center for Leading Innovation and Cooperation

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IMIV – IT-based management of integrated care systems.

Aims

To develop, prototype and evaluate a reference model for IT-based management of medical care networks

Outcomes

Empirical study of management success factors for virtual service networks in medicine and modelling of necessary management information systems
Development, implementation and evaluation of the reference model

Involved partners

TU Berlin: Prof. Dr. H. G. Gemünden
Technologie- und Innovationsmanagement
TU Braunschweig: Prof. R. Haux
Institut für Medizinische Informatik
OFFIS e.V.: Prof. Dr. H.-J. Appelrath
Oldenburger F & E-Institut für Informatik-Werkzeuge und -Systeme

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Focus group, Export of environmental services

EXPEED – Export-orientated services in the renewable energy sector

Aims
To perform a fundamental collation and classification of services in the renewable energy sector
To analyse export potential, specific obstacles and success factors and relevant target countries for the export of services in the area of renewable energies

Outcomes
Internationalisation concepts for companies for the improved exploitation of export potentials
Development of support concepts for foreign trade-related intermediaries and strategy recommendations

Involved partners
Institut für ökologische Wirtschaftsforschung gGmbH (IÖW)
Institut für Marketing und Dienstleistungsforschung, Universität Rostock
Deutsche Energie Agentur GmbH (dena)
RE-NEXT (Regenerative Energien – Netzwerk für Export und Technologie)

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Environmental Economics and Service Export

Aims
To analyse the export potential of the German water industry, strategy development
To promote network-building between export-orientated companies

Outcomes
Water industry services typology
Water industry initiatives in Eastern and Southern Europe
Internet platform

Involved partners
RISP
BEW
FernUniversität Hagen
SVT e.V.
Dr. Krätzig Ingenieuergesellschaft mbH

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The opportunities for small and medium-sized service providers in the environmental sector in China

Aims
To investigate the export of environmental services in the wastewater sector to China. To identify typical obstacles for successful service export in this area.

Outcomes
References to models and technological capacities of the Chinese environmental sector and possible solutions for a successful technology and knowledge transfer to benefits both China and German businesses.

Involved partners
Soziologisches Forschungsinstitut (SOFI) an der Universität Göttingen
Institut für ökologische Wirtschaftsforschung (IÖW)
InterTraining – Institut für Training und Consulting GmbH

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Focus group, Export of industrial services

ExFed – Exporting remote-controlled services – development of management, marketing and personal development concepts

Aims
To develop business models and marketing strategies and identify success factors for customer management in remotely-controlled services
To manage contact and build trust within international virtual service relationships
To identify the needs of virtual employees relocated abroad
To develop and implement a personnel development concept with adequate seminar workshop and training programme for staff and management.

Outcomes
Reference models
Value-adding concepts
Product innovations
Process innovations
Qualification concepts

Involved partners
TU München, Lehrstuhl für Dienstleistungs- und Technologiemarketing
Lehrstuhl für Internationales Management, Universität Erlangen-Nürnberg
Asentics GmbH & Co. KG
carat robotic innovation GmbH
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ExInnoService – A synthesis of academic and business processes as the basis of export-orientated innovation management for services

Aims

To create system for establishing technology-orientated services for mechanical and systems engineering in various export markets, using cases studies of Russia and South Africa. Explicit focal points:

- To build 'Concurrent Service Structures' (secondary and parallel structures) in companies or in cooperative networks to map and implement customer needs in the value adding chain.
- To develop differentiated strategies to communicate knowledge based on the segmentation of knowledge intensive (hybrid) services according to their degree of potential for standardisation,
- To work out personnel development concepts

Outcomes

- Flexible modular organisation model for process-orientated knowledge management.
- Reusable organisation concepts and action plans for network management and service expertise transfer
- Generalised and transferable organisational solutions for the service export of system service providers.

Involved partners

Academic and industry partners
ATB Arbeit, Technik und Bildung GmbH
WHZ – Westsächsische Hochschule Zwickau
Fachbereich Maschinenbau und Kraftfahrzeugtechnik Institut für Produktionstechnik
Professur Arbeitswissenschaft
IMK engineering GmbH
ERMAFA Sondermaschinen- und Anlagenbau GmbH
Transfer and value partners
Interessenverband Chemnitzer Maschinenbau (ICM) e.V.
Kooperationsverbund IT-Dienstleister Südwestsachsen e.V.
Deutsche MTM-Vereinigung e.V.
REFA Landesverband Sachsen e.V.
TZP Transferzentrum Produktionstechnik im Maschinenbau e.V.
ERMAFA Apparatebau GmbH
ERMAFA Kunststofftechnik GmbH & Co. KG
HÖRMANN-RAWEMA GmbH
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IDEE – Successful export of industrial services

Aims

To analyse, develop and test strategies, organisational forms and management instruments to strengthen the export capability/internationalisation of industrial services
To achieve sustained improvement of the exportability and internationalisation of industrial services from German businesses.

Outcomes
IT-cooperation platform -"IDL-Export"
Action guide – IDL-Export
Assessment tool to appraise the export potential of IDL
Decision-making tool to evaluate strategic alternatives
Training module for foreign employees/partners

Involved partners
Z & P Zangemeister & Partner Systemforschung und Innovationsberatung
RKW Rationalisierungs- und Innovationszentrum der Deutschen Wirtschaft e.V.
Privatdozentur für angewandte Informatik (PDAI) der TU Dresden
TÜV Rheinland Akademie GmbH
TÜV Rheinland Management Systems GmbH
Marketing-Department, Freie Universität Berlin
GARBO mbH, Berlin

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InProdi – Integrated product and service development

Objectives
To create concepts for implementing a complementary product and service development process
To develop integrated problem solutions as a service
Offshoring – to evaluate a strategic cooperation platform for the export of services

Outcomes
Basis of product, service and process innovations, participatory implementation concepts or an integrated product and service development, integrated problem solutions and offshoring, diagnosis and evaluation tools, qualification concepts, action guides and examples of best practice

Involved partners
Industrie- und Handelskammer für die Pfalz, Dienstleistungsstelle Pirmasens/Dienststelle Ludwigshafen
Institut für angewandte Arbeitswissenschaft
Hager Tehalit GmbH Heltersberg
LITEF GmbH, Freiburg
Pallmann Maschinenfabrik GmbH & Co. KG
Fa. Schoen + Sandt Maschinenbau GmbH
Abbott GmbH & Co

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OSS – One-stop services for worldwide industrial production

Aims

- To develop measures for improving the ability of small and medium-sized providers of production-related services in Germany to go international
- To identify success factors for the internationalisation of the service portfolio described

- To develop a framework, methods and recommended actions that are suitable for increasing the success potential of one-stop services
- To support companies striving to build up an attractive portfolio in international markets
- To develop an action guide for one-stop services that can be used to support the portfolio in the international service market

Outcomes
Action guide
Design of the service depth in an international context
Consortium agreement with comments
Development of long-term partnerships
Methods for extended service engineering
Project website

Involved partners
Fraunhofer-Institut für Fabrikbetrieb und -automatisierung IFF
Institut für Fertigteiltechnik und Fertigbau Weimar e.V.
Institut für Arbeitswissenschaft der RWTH Aachen
Institut für Arbeits-, Sozial- und Wirtschaftsrecht Dr. Endemann und Partner – Rechtsanwälte –
ReloConsult OHG
T & O Unternehmensberatung
Vollack Sachsen
Kohlbecker Architekten & Ingenieure
Dürr Systems
Institut für Arbeitsmedizin, Sicherheitstechnik und Ergonomie e.V. (ASER)
Precis Maschinen und Anlagen Service GmbH

Contacts

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DEXIINPRO – Export of services with industrial products

Aims
To develop concepts for extended service and operator models for German providers abroad
To develop action guides for SMEs to support the export of services with extended service and operator models

Outcomes
Typical market-specific portfolio concepts
Models for cooperation ventures with partners
Organisational solutions for controlling
Qualification requirements and qualification offerings to fit employees for service and operator models in international markets

Involved partners
Fraunhofer-Institut System- und Innovationsforschung
Reinisch AG
J. Wagner GmbH
Wuppertaler Stadtwerke AG
Deutsches Institut für Wirtschaftsforschung (DIW)
Baden-Württemberg International

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Focus group – Export of knowledge-intensive services

Maris – Modular architectures and assessments for the systematic internationalisation of services

Aims
To select countries and sites systematically and identify requirements for the adaptation of new sites

Outcomes
Integrated method based on a modularised service architecture that supports exports by systematically utilising valuable resources in the home country for export purposes while at the same time permitting the necessary flexibility for innovation and country-specific adjustments

Involved partners
TU München
Uni Bochum
Uni Erfurt
twenty4help Knowledge Service AG
VCS AG
M+W Zander DIB GmbH
IDS Scheer AG
Voith AG
TÜV Nord, TÜV Thüringen

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Orga-Beratung – Organisational consulting– import or export for German business?

Aims
To analyse current trends in the consulting market (intervention approaches, evaluation concepts, client strategies) as well as internationalisation strategies of consulting companies and the conditions influencing the successful export of knowledge-intensive consulting services; to better market transparency

Outcomes
Criteria for selecting, controlling and evaluating consulting portfolios and services; Overview of intervention and internationalisation concepts; studies of trends in consulting requirements, especially in the countries of Central and Eastern Europe (country dossiers) as well as trends in in-house consulting in international companies. *Guide* "Going International" for SMEs in the consulting business

Involved partners
TU Chemnitz, Lehrstuhl BWL9
Universität Oldenburg
SOFI Göttingen
Participating partners: BDU, RKW, etc.

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STOCCER

Aims
To evaluate various design parameters with regard to the quality of forecast markets
To examine cultural factors influencing behavioural patterns in electronic markets

Outcomes
Development of a flexible, internationalisable trading platform for operators of forecast markets.

Involved partners
Institut für Informationssystem und Management, Universität Karlsruhe (TH)
Lehrstuhl für Electronic Commerce, Universität Frankfurt

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Export IT – Success indicators for internationalisation and the export capability of IT-services

Aim
To examine the internationalisation strategies of successful IT companies and analyse the general feasibility of these strategies
To process the findings to facilitate the target group-specific transfer within the IT industry itself and also for comparable service industries

Outcomes
Development and generalisation of *best practice solutions* for exporting services in the form of reflective knowledge that has been processed for specific target groups

Involved partners
IDS Scheer
Inosoft
Input Consulting
SAP AG
Software AG
T-Systems
ZVEI
VDMA
IG Metall
Verdi

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INTERDIG – Internationalisation for service providers in the information business

Aim
To analyse the export opportunities and internationalisation strategies of German IT service providers

Outcomes
Specific recommended actions for strengthening the competitiveness of companies and expanding their international presence

Involved partners
Berlecon Research GmbH
Universität Mannheim
Rheinisch-Westfälisches Institut für Wirtschaftsforschung e.V. (RWI)
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Global strategies – Global strategies of service companies
Configuration – coordination – customer integration

Aim
To derive recommended actions for designing the international configuration, coordination and customer integration of international service companies

Outcomes
Decision support system for identifying and evaluating relevant factors influencing the configuration, coordination and customer integration of international services.
Typology of international service companies based on standard internationalisation strategies

Involved partners
Universität Dortmund, LS für Marketing und Juniorprofessur für DL-Management
GfK AG
Log-IT Club e.V.
Star Alliance Services GmbH
Aconsite AG

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INGBÜRO – Service exports by engineering consultants – Innovative financing models and networks

Aim
To improve the exportability of German engineering services. Existing obstacles to export are systematically examined. The aim of the research project is to obtain a clear picture of the conditions that restrict the potential of German engineers to export their planning and consulting services. In close harmony with relevant players such as VBI, financial accounting tools, new financing products, an information platform and measures to support risk hedging are developed with a view to securing a lasting improvement in the export situation.

Outcomes
Internet platform for information, risk analyses, contractual arrangements and contacts
Financial accounting tools
Development of financing products in line with market requirements
Support for risk hedging during the acquisition and execution of projects
Provision of informative literature to engineers

Involved organisations
Universität Regensburg
Verband Beratender Ingenieure (VBI)

Contacts

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Focus group – Export capability of SMEs

KMU-Finanz – Strengthening international competitiveness of SMEs by internationalising financial services

Aim
To strengthen the international competitiveness of German SMEs by providing efficient financial services in line with market requirements

Outcomes
Methods and procedures for identifying financial service needs
Consulting concepts to support the design of secure payment processes
Concepts for integrating services provided by different service partners

Involved partners
Commerzbank
HypoVereinsbank
abaXX Technology
Wirecard
IHK Regensburg
7 SMEs in Eastern Bavaria

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Standard:IS – Service standards in successful internationalisation strategies

Aim
To improve the exportability of services through standardisation
To improve the internationalisation of service companies through standardisation

Outcomes
Internal and intercompany standards
Recommended actions for dealing with standards in the context of internationalisation

Involved partners
DIN Deutsches Institut für Normung e.V.
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DIW Deutsche Industriewartung AG

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HWE-DL – Internationalisation of skilled services for the securing and expansion of employment

Aim

To improve the competitive chances of skilled trades in Germany when it comes to exporting services
To process the know-how and experiences of traditional exporting companies and impart this information to newcomers to exports
To implement and publicise the outcomes in the skilled trades

Outcomes

Description of factors conducive to or obstructing international activities
Management methods and procedures for service export
Organisational concepts for companies
Qualification measures for providers of skilled services and consultants
Shared information pool and exchange of experiences

Involved partners

Heinz-Piest-Institut für Handwerkstechnik (HPI)
Volkswirtschaftliches Institut für Mittelstand und Handwerk (ifh)
Syneco Unternehmensberatung

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Int-Pem – International performance measurement in the context of SME logistics companies

Aim

To support small and medium-sized providers of logistical services in the context of international contract logistics activities (market entry, processing of contract logistics projects)
To qualify the employees of small and medium-sized providers of logistical services in line with market requirements

Outcomes

Industry-specific performance measurement toolbox for implementing corporate strategies
Personnel development and organisational concepts for implementing international contract logistics

Involved partners

Universität Duisburg-Essen
24plus-Systemverkehre GmbH & Co. KG, Haunek-Unterhaun
Servicegesellschaft Spedition und Logistik mbH, Frankfurt
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IMADI.net – International branding in service networks

Aim
To increase the preference for German services abroad (branding)
To increase the availability of German services abroad (network management)

Outcomes
Benchmarks and best practices for the internationalisation of knowledge-intensive services
Guidelines for internationalisation, particularly including international branding

Involved partners
Institut für Handelsmanagement
Internationales Centrum für Franchising und Cooperation
GREY Global Group
Brandsboard

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China Star – German service providers on the road to China

Aim
To support the entry of German service companies into the Chinese market by developing a reference approach. This approach will comprise all steps from the initial deliberation of market entry until the operative start-up of service business in the local market. To provide SMEs planning to export services with a suitable instrument for procuring information, making initial contacts and exchanging experiences.

Outcomes
Procedure model for exporting services to China that can be abstracted and applied to other markets.
Flexible knowledge platform that makes the accumulated know-how and practical experience of the implementation partners available to others.

Involved partners
Fraunhofer Institut für Produktionstechnologie IPT
Professur für Information Systems Engineering
Prof. Becker GmbH
ECS Europe China Solutions GmbH
RHIEM Services GmbH
IBS AG

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Focus group, Eureka project

Services made in Germany – Development and management of internationalised services

Aim
To develop a central model for "Services Made in Germany" as well as joined-up concepts and instruments for the engineering, roll-out and launch of high-quality services in international markets.

Outcomes
Typology of internationalised services
Model for "Services made in Germany"
Action guide for businesses
Reference model for development and roll-out
Configurator for customising modules
Concept for interaction design

Involved partners
Fraunhofer IAO
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Zwick GmbH & Co. KG
ATB Arbeit, Technik und Bildung GmbH
IWKA PACKAGING SYSTEMS GmbH
Drees & Sommer AG
Océ Printing Systems GmbH