

# DIN/DKE – ROADMAP

## THE GERMAN STANDARDIZATION ROADMAP

### SERVICES

Version 1



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# 1 SUMMARY

Modern national economies are increasingly being characterized by services, and these services greatly enhance a country's competitive ability. Thus, a common framework such as standards and specifications is essential, not only for an internal market such as the European Union, but also for international trade in goods and services. Common standards and specifications help remove technical barriers to trade and help companies open up new markets. In the services sector standardized terminology can lead to better understanding between contract partners, or to a better description of processes, making the services themselves more transparent and comparable. In some areas, qualification requirements can also be standardized, enhancing trust in and the quality of the relationship between service provider and customer.

Stakeholders from the services sector are not the only parties who initiate services standards projects – the European Commission is also very interested in services standardization. An example of this is the inclusion of services in the scope of EU Regulation 1025/2012 on standardization. This German Standardization Roadmap for Services, which has been drawn up with the broad participation of the interested parties, gives an evaluation of the national significance of services standards in Germany.

The highest priority in carrying out standards projects is establishing market relevance and the resulting added value of standards for the services sector. It is only possible to gain wide acceptance for national and European standards and specifications if all interested parties are optimally involved in their development. It is also imperative that national and European legal frameworks be taken into consideration, because the rules and legal frameworks for services vary greatly from Member State to Member State. This applies to standards projects initiated by industry actors as well as to standards work carried out under a European Commission mandate.

The heterogeneous nature of the services sector makes it particularly difficult to agree on a common national position in services standardization. Therefore, this Roadmap divides the services sector into eighteen sub-branches. These branches are described in detail here and correspond to those used in the German Federal Statistical Office's classification system. This subdivision makes it possible to draw up more specific recommendations for action supplementing the recommendations applying to the sector as a whole. The general recommendations emphasize the importance of terminology standards as a basis for cross-sectoral services standards. This Roadmap also addresses the challenges of dealing with different legal frameworks within Europe, as well as the differentiation between services standards and management system standards.

In this Roadmap, stakeholders from each branch give their evaluation of the potentials and limitations of services standards. They discuss the strategic importance of such standards and give concrete examples as to how the application of standards can be beneficial. According to the stakeholders, a focus should be placed on services results and performance characteristics.

The description of processes and interfaces is another area with potential, as this would improve the image of individual branches, who would profit from quantified levels of quality; in this way, standards and specifications give consumers more transparency and comparability. Standards can also enhance the security and quality of services (see Figure 1 “Standards enhance customer satisfaction in terms of transparency, security and quality of services”).

But services standardization often reaches its limits when defining qualifications, competencies and training requirements, especially in Germany, because there are so many rules and regulations that apply in addition to the Federal Vocational Training Act (BBiG), particularly in health, social services and education.

DIN's online “Services Portal” ([www.dienstleistungen.din.de](http://www.dienstleistungen.din.de)) provides an overview of the individual service branches discussed here and lists of existing standards in each branch.

## 1.1 Motivation behind and objectives of this national Standardization Roadmap for Services

This document gives an overview of the current status of services standardization. It also lays down a strategy for the future direction of this standardization in a way that will provide additional benefits that effectively supplement existing national legislation.

The “German Standardization Roadmap for Services” (referred to below as the “Roadmap”) describes both the potentials and the limitations of services standardization, and identifies areas in which standardization has the most strategic significance for the German services sector, also in the context of the European services market. This Roadmap will be regularly revised with the participation of all stakeholders.

The Roadmap also includes evaluation criteria and overall recommendations for action, including assessments made by organizations active in each branch, so that important topics can be identified and dealt with easier. In some branches, no need for action is seen. The German version of this Roadmap also gives an overview of existing services standards and specifications, and of structural data, potential areas for action, existing cooperations and associations, some of the legal framework conditions and strategic recommendations for future areas of services standardization.

This Roadmap is an active contribution by German industry to discussions at European level regarding the further expansion of the European services market and the removal of barriers to trade by means of standards and specifications. It takes into account legislation that has an impact on services standardization, such as the EU Services Directive (Directive 2006/123/EC), the European “Services Package” and the Directive on Consumer

Rights<sup>1</sup>. The Roadmap also gives guidance for the future direction of standards work at European level in CEN and CENELEC.

## 1.2 Scope

This Roadmap covers the entire services sector. It describes the impact standardization can have on specific branches of industry and how this impact can most effectively be used. General recommendations for action are given, as are more specific evaluations of individual organizations taking the particularities of each branch into consideration.

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<sup>1</sup> Directive 2011/83/EU

# 2 CURRENT SITUATION

## 2.1 Economic importance of the services sector

The global increase in the demand for services is opening up new opportunities for businesses and society as a whole. Services are shaping modern economies and contribute greatly to ensuring their competitive ability. Today, the services sector makes a large contribution – about 70 percent – to the gross value added in Germany. Three out of four German employees work in the services sector, and more than 80 percent of all German businesses are service providers.

Because it is so broad, the services sector is very heterogeneous. The largest branches of the services sector are public services, real estate services, business services and commercial services.<sup>2</sup> The services sector also encompasses companies of all sizes. Large companies are mostly active in finance and insurance, in trade, transportation and healthcare. Medium-sized business are often found in the logistics branch, in trade and areas of the public sector such as education, and in health and social services.

However, the services sector is predominantly made up of small businesses with a strong focus on local markets. For example, German service providers typically have fewer than ten employees. In comparison, the average industrial company has four times the number of workers. Nine out of ten service providers are small businesses with fewer than ten employees.

The growing meshing of industrial products and innovative services is a significant trend that makes it difficult to imagine a German economy without services. Every industrial product that comes off the assembly line is the result of a long series of services, ranging from the mechanical maintenance of production equipment to software support. And even more services play a role in bringing the product to the consumer, such as marketing, financing, logistics and repair services. Services make it possible to adjust material goods to the needs of the customer, which helps differentiate the increasingly homogeneous product markets and increases competitive ability on global markets. Over the long term, the German economy will only be able to assert itself if there are productive, competitive service companies. Because services such as consulting, design and planning are often called upon at the beginning of a production process they, too, are important for opening doors to foreign markets. Training in the use of and the maintenance of complex machinery, comprehensive financial services, specialized logistics and waste management services are all part of a modern industrial company's portfolio. To keep up with international competition, more and more companies are offering integrated solutions in addition to the delivery of goods.

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<sup>2</sup> Federal Statistical Office, "VGR 2011" (public services, 26 percent, real estate services ca. 17 percent, business services 15 percent, trade 13 percent).



Over the past years, the export of German services has grown faster than that of German goods, for the most part knowledge-based services such as IT, research and development, patent services and engineering consulting. Today, services make up about 15 percent of all German exports. Internationally, Germany is in third place, making up 6.3 percent of the world's exports in services.

Innovative, competitive and high quality services are also important for the European internal market. Services make up about 70 percent of the gross value added of the EU's 27 countries, and with 70 percent of the European work force, the services sector is an important labour factor for Europe. The EU (EU 27) is responsible for 25 percent of the world's exports in services.

## 2.2 The significance of standards and specifications

Standards and specifications have already been successfully implemented in a number of areas and integrated into many processes.

Being voluntary instruments of industrial self-regulation, standards and specifications can help companies establish themselves on European and international markets. Common standards help remove barriers to trade, open up markets, and enhance economic competitiveness. Standards are also helping to find solutions for facing current challenges such as increasing globalization and technological convergence. They define quality benchmarks and help customers identify the offer that best suits their needs. In this way standards contribute to greater customer satisfaction by ensuring transparency, security and quality (see Figure 1).

*Figure 1:  
Standards enhance  
customer satisfaction in  
terms of transparency,  
security and quality of  
services*

Customer satisfaction		
Transparency of the service	Security of the service	Quality of the service
<p>Example: <b>DIN EN 14804:2005-09</b> Language study tour providers – Requirements</p> <p>Aim: Helping customers make an informed choice through the transparent communication of the details of the study tour, on the basis of quality requirements for the language study, accommodations, care and supervision, leisure activities and provision of information.</p>	<p>Example: <b>DIN 33961-1:2013-05</b> Fitness clubs – Requirements for equipment and operation – Part 1: General requirements</p> <p>Aim: Specifying minimum safety and quality requirements for fitness equipment and management, the qualification of trainers, user-friendly contracts with the customer, emergency management, hygiene and lighting.</p>	<p>Example: <b>DIN EN 12522-1:1998-09</b> Furniture removal activities – Furniture removal for private individuals – Part 1: Service specification</p> <p>Aim: Laying down minimum qualitative and quantitative rules and characteristics of a furniture removal service, including general conditions of contract.</p>

Standards benefit service provider and customer alike, particularly where the relevance and added value of the standards project has the highest priority. Standards are primarily developed by industry for industry. At European level, a greater focus is being increasingly placed on the benefits of a standard, although this attitude is not always reflected in Germany.

For this reason, the DIN Presidial Board issued a decision giving an expanded definition of “market relevance” (Presidial Decision 18/2013). According to the Decision, the market relevance of any new standards project is to be examined by consulting the stakeholders most effected by that project. In addition, standardization may not conflict with existing legislation. However, standards can be used to give more detail to legal provisions. European and national legal frameworks not only form the basis of standards work, they also set limits for this work (see for example clause 7.2.3. “Occupational health and safety” of CEN Guide 15 on services). Determining market relevance is a key element that must be carried out prior to the initiation of any standards project.

This principle of market relevance demands that standards reflect the real situation in a company. It is therefore imperative that the stakeholders who are most effected by a standard – that is, all those who will either directly apply the standard or who are directly influenced by it – be involved in the standard developing process. Of course, smaller businesses have to be taken into consideration in this, for they often do not have the time, personnel or financial resources

necessary to represent their interests in standards projects, especially those carried out at European or international level. Umbrella associations and professional associations play an important part in representing the interests of their members within the limits of their possibilities.

The primary goal of any standards work should not be certification in and of itself, and the aim should always be to limit any costs and bureaucracy to that which is absolutely necessary.

## 2.3 Standardization in the European context

For a single market like the European Union, in which national economies are growing increasingly closer, it is necessary for companies to be active beyond national borders and enter new markets. Common framework conditions are needed for this.

As early as 2006, the European Services Directive called for the development of European Standards as a voluntary means of quality assurance. In 2012 the European Commission published its Communication, the **“Single Market Act – Twelve levers to boost growth and strengthen confidence”**. **Lever 5 “Services”** served as the basis for the revision of the European standardization system. The European regulation on standardization, which took effect in January 2013, explicitly refers to services.

This means that there is now a legal framework upon the basis of which the European Commission can issue mandates for developing services standards. The overall goal of the Commission is to provide a new impetus for providing services across borders and for strengthening the competitive ability of smaller service providers. In its annual work programme, the Commission lays down the focus standardization is to take in each coming year. Services already have an established place in these programmes.

The Commission has issued a mandate calling for the “Programming and Development of Horizontal Service Standards” (M/517). The aim is to analyse the European standardization landscape and make proposals for setting cross-sectoral, or “horizontal”, services standards in pre-defined areas such as customer information, contracting details, and complaints management. However, German stakeholders are rather critical of this, because such standards do not adequately reflect the heterogeneous and vertical nature of the services sector.

The Commission is not alone in appreciating the benefits of standardization – economic actors in all Member States (industry, science, consumer organizations and other relevant organizations) see a use in services standardization. Those Member States who do not yet have any legislative or normative regulations in this regard are particularly interested in using European standardization to achieve at least a minimum level. But these efforts often conflict with stricter national laws in other countries, who are in turn concerned about the introduction of legal uncertainty through such standards initiatives.

CEN has set up a **Strategic Advisory Group on Services** (SAGS/CEN/BT/WG 214) who will draw up a strategy and planning for services standardization, and identify the potentials of such standards work. The Advisory Group deals with cross-sectoral topics in European services standardization, consults CEN's Technical Board (CEN/BT), and supports the exchange of information between CEN, the most important stakeholders, and the European Commission. The Group also coordinated the work on Mandate 517 "Programming and Development of Horizontal Service Standards".

In terms of the development of strategic instruments and measures at European and international level, DIN's Coordination Office for Services Standardization (Koordinierungsstelle Dienstleistungen – KDL) ensures the necessary flow of information and works closely with stakeholders and partners at national, European and international level.

# 3 NATIONAL APPROACH TO SERVICES STANDARDIZATION

## 3.1 Special aspects of services standardization

Many existing standards and specifications already cover aspects of services, for example in areas such as maintenance and installation. However, there are currently not very many standards and specifications that deal solely with services or with a specific aspect of services without relating to a product.

Services standardization differs from the standardization of material goods in many ways, primarily because services are immaterial and thus have different characteristics. They are often very individualized and involve close interaction with the customer. Services play a role in almost every branch of industry, with each branch having its own special market conditions and framework.

These special conditions must be addressed in standards and specifications if the needs of each particular branch are to be met. Chapter 4 of this Roadmap discusses these individual aspects in detail.

Standards and specifications for the services sector form the basis for communication between contract partners by specifying the necessary terminology, by making processes more transparent, and by laying down quality criteria. The specific needs for each branch of the sector and the competitive situation are taken into consideration.

In Germany, many branches of the services sector are heavily regulated. In such branches, services standards can supplement the relevant laws, but must not contradict them. Standards cannot replace a well-established legal system that is supported by the social partners. Legislative provisions always take precedence over voluntary standards.

This is an especially important aspect in the European context, because the regulations and framework conditions within the EU Member States vary greatly in breadth and depth. Particularly the quality requirements laid down in services standards frequently conflict with the established standards of German professional regulations. This leads to general uncertainty among service providers.

One solution to conflicting national regulations is the use of “A-deviations” and reference to deviating regulations in the national foreword of a standard. This can mean that when a European Standard is adopted at national level, only parts of it will be applicable in Germany because there are national regulations that govern certain aspects of the standard.

## 3.2 Requirements for the services standardization process

The benefits for industry and the consumer alike play a central role in the evaluation of new standards projects. Determining market relevance on the basis of the criteria laid down in DIN 820-4 and involving the relevant stakeholders is mandatory when deciding whether a project is to be approved or not.

The services sector as a whole is shaped by small and medium enterprises (SMEs) and even by micro-businesses. Companies of this size have very few financial resources for participating in the standardization process. This is why a user-oriented presentation of standards tailored to the specific needs of the user is especially important in the services sector.

But a practically oriented presentation of standards and specifications which have an added value for the user is only possible with the participation of the relevant parties. It is therefore important to give them the opportunity to take part in standards work in a cost-effective way, and in their own native language. This can only be done if the successful national delegation principle is maintained in European and international standardization.

Considering the breadth of the services sector, new topics for standardization will frequently involve several standards committees. These have to be informed early on and be included in the process. Specialist knowledge is necessary for effectively evaluating a new standards project. The relevant stakeholders need to be identified, and it may be necessary to win them over for participation in a working committee. Projects for standards dealing with product-specific or branch-specific services should be developed by existing DIN standards committee(s). For work going beyond that, suitable structures need to be set up in the DIN bodies responsible for services.

### 3.3 The actors in services standardization

#### Stakeholders

The key actors in standards work are always the stakeholders, that is, experts from the relevant companies and organizations. The broad participation of relevant companies and organizations and other specialists is also necessary in services standardization. This way, projects will have a practical orientation, which increases the usability, and thus the acceptance, of standards and specifications. Stakeholders in services standardization include users, experts in occupational health and safety, public authorities, NGOs, industry experts (especially SMEs), those involved in environmental protection and consumer protection, and scientists and researchers.

Considering the breadth and heterogeneity of the services sector, achieving a balanced representation of all stakeholders in the standardization bodies can be a challenge. This is made more difficult by the generally smaller size of companies in the sector who find it harder to participate in standards work. SMEs thus need special groups to help them represent their interests. Such representatives can play an important intermediary role in bundling and passing on relevant information both to the standards bodies and to the companies themselves.

Over the past few years various steps have been taken to improve the participation of stakeholders in standardization. DIN's Commission for Small Businesses (KOMMIT) was set up to do just that: KOMMIT serves as a platform for discussions on the needs of SMEs in standardization and consults DIN's Executive Board. A number of activities have been initiated to help businesses gain access to the standardization process, such as the "virtual meetings" which take place in the form of video or web conferences, saving both time and money. The tables of contents of standards are provided free of charge at the Beuth Verlag webshop, which helps users find the right standard. And at DIN's free Draft Standards portal, users can find out about the newest standards projects and comment on draft documents.

## DIN/DKE

DIN, the German Institute for Standardization, provides a standardization platform for all interested parties as a service to industry, the state and society as a whole. DIN is a private organization which is registered as a non-profit association. Its members include businesses, associations, government bodies, and other institutions from industry, commerce, trade and science.

DIN's purpose is to encourage, organize, steer and moderate standardization and specification activities in systematic and transparent procedures for the benefit of society as a whole and while safeguarding the public interest. According to the 1975 agreement with the German Federal Government, DIN is the acknowledged national standards body that represents German interests in European and international standards organizations.

Today almost 90 percent of DIN's standards work is European and/or international in nature. DIN's staff members coordinate the entire non-electrotechnical standardization process at national level and ensure the participation of the relevant national bodies at European and international level. DIN represents Germany's interests as a member of the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO). DKE German Commission for Electrical, Electronic & Information Technologies of DIN and VDE represents Germany's interests in the field of electrical engineering (within CENELEC and IEC).

DIN's Coordination Office for Services Standardization (KDL) was set up in 2009 to address the complex area of services standardization. It functions as a central office that bundles, systematizes and coordinates all activities within DIN that relate to services, including research projects. The KDL is a point of contact for German stakeholders in all areas, and is itself active among these stakeholders. The KDL also functions as a forum for representing needs and interests in services standardization in strategic developments across all (horizontal) areas in which DIN works.

DIN's Standards Committee Services (NADL) was founded in the same year as the KDL. NADL is responsible for supporting standards work involving business-related and personal services, whether this work is carried out at national, European or international level. To this end, NADL brings together experts from all areas. The work of the Committee is currently divided up among three sections on business services, consumer services and health services. NADL also supports the work of other DIN standards committees where services are involved.



## Federal Government

The standardization policies of the German Federal Government support competitive strength and promote the market introduction of innovative products and services, one of the express goals of the government's "High-Tech Strategy". In its "Standardization Policy Concept" the Federal Government describes the goals it wants to achieve through standardization.

For example, it sees the development of standards and specifications as contributing to Germany's competitive strength as an economy and export nation, as promoting sustainable environmental protection and consumer protection, as facilitating the implementation and dissemination of innovations and research results, and as improving the opportunities for participation on the part of the stakeholders, particularly SMEs.

Within the Federal Government, the Federal Ministry for Economic Affairs and Energy (BMWi) is responsible for the overall concept and financing of standardization within Germany. Other government bodies are responsible for more sector-specific standardization, including its funding: For example, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) has supported DIN's Environmental Protection Helpdesk for over 15 years.

DIN is recognized in an agreement with the Federal Republic of Germany as the national standards body. DIN represents German interests in European and international standardization. To promote innovation through standardization, the Federal Ministry for Economic Affairs and Energy (BMWi) initiated two long-term funding programmes "Innovation with norms and standards" (INS) and "Transfer of research and development (R&D) results through standardization" (TNS). In 2008 DIN's Commission for Small Businesses (KOMMIT) was set up on the initiative of the BMWi with the aim of helping small and medium enterprises (SMEs) gain access to standards, use standards and become involved in standardization.

The BMWi also supports bilateral cooperation with countries of strategic interest to Germany in order to open up (new) markets for German exports. Companies and associations are provided with platforms where they can describe their interests and report any standards-related barriers to the international trade in goods.

### 3.4 Research activities

One major development that the services sector cannot ignore is the increasing digitalization of industry and society. Data-based services, including those that access digital components, are gaining significance. Digitalized “smart services” are currently being discussed. For standards-setters this means that digital services need to be taken into consideration. Key issues that need to be explored include the development of data-based services (particularly the integration of service components), the (ad-hoc) configuration of service systems via platforms and new forms of involving the customer in the service, for example as a “prosumer”, or proactive consumer.

Research is also needed in the form of an analysis of existing and developing service-based business models and the associated drafting of contracts. The aim of such research is to avoid unintentionally disadvantaging any partner. For example, services that promise certain results or availability are gaining importance in technical services. Increasingly, goods-producing businesses require their service providers to assume default risks by guaranteeing a contractually agreed availability or result. This creates the challenge of differentiating the influence quantities that can lead to a reduction in availability or a result, and to agreeing on these in a contract. It is also necessary to identify the cause-and-effect relationship behind each influence quantity, to ensure fair contracts in accordance with the causation principle.

#### **Numerous studies are currently addressing services standardization:**

- Exploiting the potential of Nordic internationalisation of services:  
The possibilities for Nordic service standardisation initiatives (2008)
- CHESSE – CEN Horizontal European Service Standardization Strategy (2008)
- Mapping services standardisation in Europe (2010)
- Study on the implementation of service standards and their impact on service providers and users (2012)
- A study on services certification linked to service standards at national level in Europe (2012)

## **Innovation with Norms and Standards (INS)**

The “Innovation with Norms and Standards (INS)” research programme initiated by the German Federal Ministry for Economic Affairs and Energy (BMWi) makes researchers, industry actors and politicians more aware of the potentials of standardization. The aim is the faster dissemination of R&D results by means of standards and specifications in key trending technologies. Services standardization has been addressed in this programme many times.

### **For example, the results of the Basic Investigation:**

- “Services as a motor for growth and employment: Identifying and using opportunities for services standardization” were used in the development of this Roadmap.

### **Other services-related INS projects include:**

- INS Basic Investigation “Identifying the need for coordination in services standardization and developing a coordination strategy”
- “Interfaces between services legislation and standardization” – one result of this project was the publication of DIN SPEC (PAS) 77226 “Interfaces between service legislation and standards – Guidelines for standardization”.
- “Standards on service catalogues in the service provider/service recipient relationship” (completed in 2014)
- INS Basic Investigation “Use of services standards in public procurement” (project due to end in 2015)

# 4 STRUCTURE OF THE SERVICES SECTOR

## 4.1 General

The services sector is extremely heterogeneous. In order to effectively “map” the German services sector, a special committee of DIN’s Coordination Office for Services Standardization (KDL) divided this sector into 18 sub-branches. These branches correspond to those used in the German Federal Statistical Office’s classification system laid down in 2008.

The 18 branches of the services sector are shown below.

*Figure 2:  
Division of the services sector  
into 18 branches*



Each of these 18 branches is described in detail below.

## 4.2 Educational services

Educational services accompany us not only in childhood but throughout our entire life: Beginning with early childhood care and family services, such services include adult education, vocational training and other forms of further education, as well as structural aspects of the education system.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “educational services” include the following:

WZ 2008 number	Designation
85	Education

## 4.3 Business services

Business services are primarily used by companies, rather than private individuals.

It is not always possible to make a clear separation between these two categories, however, because many providers offer services not only for the business sector but also for private households. Nevertheless, according to a study carried out by the BDI Federation of German Industries and IKB Deutsche Industriebank AG, German official statistics primarily list as “business services” organizations providing services for companies. This covers most of the services required by companies.<sup>3</sup>

In the broadest sense, business services include a wide range of freelance services such as tax consultants, company management services, translating services, advertising, market research, call centres, employment services, temporary employment services, cleaning services and private security services, for example.

<sup>3</sup> IKB/BDI Study “Unternehmensnahe Dienstleistungen – wachstumsstark und beschäftigungsintensiv im Verbund mit der Industrie” – August 2008

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “business services” include the following:

WZ 2008 number	Designation
69	Legal and tax consulting, financial auditing services
70	Management and business consulting
73	Advertising, market research
74	Other freelance, scientific and technical activities (e.g. translating, interpreting, design)
75	Veterinary services
78	Job placement services
80	Security services, private detectives
81	Building management services, gardening and landscaping
82	Office administrative, office support and other business support activities

## 4.4 Professional services/liberal professions

Professional services (also called “liberal professions”) are offered in every sector, including healthcare, engineering, science, publishing and the arts.

The German Partnership Act (Partnerschaftsgesellschaftsgesetz) gives a legal definition of the “freie Berufe” (liberal professions): “In general, the liberal professions involve the personal provision – on the basis of a specific professional qualification or creative ability – of higher level services, autonomously and professionally independently, in the interests of the client and society as a whole.”

In its preamble (recital (43)), European Directive 2005/36/EC “on the recognition of professional qualifications” gives a legal definition of “liberal professions” for Europe: “To the extent that they are regulated, this Directive includes also liberal professions, which are, according to this Directive, those practised on the basis of relevant professional qualifications in a personal, responsible and professionally independent capacity by those providing intellectual and conceptual services in the interest of the client and the public. The exercise of the profession might be subject in the Member States, in conformity with the Treaty, to specific legal constraints based on national legislation and on the statutory provisions laid down autonomously, within that

framework, by the respective professional representative bodies, safeguarding and developing their professionalism and quality of service and the confidentiality of relations with the client.” Here, the Directive is basing its definition on a judgement of the European Court of Justice (ECJ Case C-267/99, Adam).

Professional services are cross-sectional services which are also listed under Chapters 4.1, 4.2, 4.6, 4.10, 4.13 and 4.14 of this Roadmap.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services include the following:

WZ 2008 number	Designation
62 (01 and 02)	IT services
69	Legal and tax consulting, financial auditing services
70	Business consulting
71	Architects, consulting engineers, technical, physical and chemical testing
73	Advertising, market research
74	Other freelance activities
75	Veterinary services
85	Education and teaching
86	Human healthcare
88	Social services
90	Creative, artistic and entertainment activities

## 4.5 Services of interest groups and other organizations

Organizations within the meaning of this branch are membership organizations whose main purpose is to represent the interests of their members or external clients. They therefore do not exist mainly for profit, as do companies and businesses, but are non-profit organizations. In Germany, typical legal forms for such companies are the registered association (e. V.), private foundation (Stiftung) and non-profit limited company (gemeinnützige Gesellschaft mit beschränkter Haftung, gGmbH), and they normally function as intermediaries in the services sector.

Such organizations include trade associations, social and/or cultural associations, self-help organizations, charities, environmental organizations and animal protection organizations. Interest groups are supported by their members in order to bundle and represent the interests of those members more effectively. Common to all of these groups and organizations is the task of generating, aggregating and articulating interests.<sup>4</sup>

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services include the following:

WZ 2008 number	Designation
94	Activities of membership organizations (business, employers and professional membership organizations, trade unions, religious and political organizations etc.)

## 4.6 Financial services

Financial services are not only offered by banks and other financial institutions, but also by insurance companies. Today, sophisticated information and communications technology is used to help customers meet their needs. Financial services range from consulting customers on which financial products to choose to complex financial planning and insurance brokerage.<sup>5</sup>

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “financial services” include the following:

WZ 2008 number	Designation
64	Financial service activities, except insurance and pension funding
65	Insurance, reinsurance and pension funding, except compulsory social security
66	Activities auxiliary to financial services and insurance activities

<sup>4</sup> von Velsen-Zerweck, B. (1998): Dynamisches Verbandsmanagement, pp. 23 ff.; pp. 34 ff.

<sup>5</sup> For example, as defined in Gabler’s “Wirtschaftslexikon”.



## 4.7 Research and development services

Research and development services are performed, for a fee, by many types of providers (e.g. private companies, and public sector organizations such as research institutes, non-profit societies, or universities and colleges) for an external client. The objective of such services is either to gain new scientific findings, or to use existing findings and practical experience to achieve new or improved products, services or processes. R&D services are offered in areas of pure research as well as in applied and experimental research. As with many knowledge-based services, these types of services are extremely heterogeneous and address a number of different areas.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services include the following:

WZ 2008 number	Designation
72.1	Research and development in natural sciences, engineering, agriculture and medicine
72.2	Research and experimental development in law, economics, the social sciences, and the humanities

## 4.8 Health services

Health services include all services in the healthcare sector.

This includes services in public health care which involve monitoring, assessing and maintaining the health of the general populace. It involves consultation by public health authorities, including planning and organization, health promotion, and health care, public hygiene, public health surveillance, and the prevention and treatment of disease.

According to the official World Health Organization definition, “health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (Preamble to the WHO Constitution which entered into force on 7 April 1948).

Health services are provided by a number of different organizations such as hospitals, clinics, rehabilitation centres, nursing homes, doctors' offices, and a wide range of health care professionals, including pharmacists. Associated services include those found in the pharmaceutical industry and medical technology, as well as in wholesale and retail and the trades.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “health services” include the following:

WZ 2008 number	Designation
75	Veterinary services
86	Human health services

## 4.9 Trade services

Trade services are provided by companies who acquire goods from various manufacturers and producers, put them together to form a product portfolio and sell them. Retail services involve the selling of goods to the end customer. Wholesaling is the sale of goods to commercial businesses and other retailers. There are three main categories of wholesaler: (1) merchant wholesalers (who “take title to”, or own, their products and sell them to resellers, retailers, distributors and other wholesalers), (2) manufacturers’ sales branches, and (3) agents and brokers (who do not “take title to”, i.e. own, the goods). Other types of wholesaler include the speciality wholesaler (who carries only a narrow range of products) and the discount wholesaler.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “wholesale and retail trade services” include the following:

WZ 2008 number	Designation
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
46	Wholesale trade, except of motor vehicles and motorcycles
47	Retail trade, except of motor vehicles and motorcycles

## 4.10 Services in the skilled trades

The skilled trades is an important branch of industry in Germany – within Germany there are 41 skilled crafts that require a permit, 52 that do not require a permit, and 54 professions that are “similar” to the skilled trades (“handwerksähnliche Gewerbe”). Ranging from traditional manual crafts such as carpentry to high-tech skills such as precision mechanics, the German skilled trades sector is largely made up of small businesses. German “Handwerker”, or skilled tradesmen, have to be very flexible and oriented towards the individual needs of their customers.

Artisans and other members of the creative industry also fall under this category. Services are provided to private individuals, businesses and public procurers.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, trade activities that involve skilled trade services include the following:

WZ 2008 number	Designation
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastic products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment

28	Manufacture of machinery and equipment
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31	Manufacture of furniture
32	Other manufacturing
41	Construction of buildings
42	Civil engineering
43	Specialised construction activities

#### 4.11 Real estate services

Numerous services have to do with real estate, including property development, building construction and management, and the buying and selling of properties.

This also involves the financing of properties, both residential and commercial.<sup>6</sup>

Persons who provide such services include estate agents, housing associations, property management and facility management companies, and mortgage banks.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “real estate services” include the following:

WZ 2008 number	Designation
68	Real estate activities

<sup>6</sup> See the German Wikipedia for a description of real estate services in Germany.

## 4.12 IT services

IT services primarily involve the maintenance and operation of existing IT systems. However, this area also covers software development and programming, web design, multimedia applications and other forms of software development. It also includes the design of multimedia applications (CDs, videos, films) and other forms of software development where these are not carried out on the basis of a service contract.

Other typical IT services are:

- IT consulting services
- IT and network security services
- IT service management
- IT forensics (preservation of evidence in cybercrime cases)
- data processing services (not only in data centres but also cloud computing services, including printing and shipping services)
- third party data processing facilities, such as servers
- electronic archiving and microfilming
- other IT services.<sup>7</sup>

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “IT services” include the following:

WZ 2008 number	Designation
61	Wired telecommunications services
62	Computer programming, consultancy and related activities
63	Information service activities

<sup>7</sup> See also the “NACE code” (Statistical Classification of Economic Activities in the European Community).

## 4.13 Logistics and transportation services

This area encompasses a number of services, including the transport, storage, procurement and distribution of goods, persons, money, information or energy.

A differentiation is made between the transportation of people and of goods. Passenger transportation takes many forms: private and public, via railway, car, or taxi, and car rentals. The transportation of goods includes logistics, postal and courier services and package delivery services.

In Germany, the main fields of logistics are as follows:<sup>8</sup>

- procurement logistics
- warehouse logistics
- production logistics
- transport logistics
- replacement part logistics
- maintenance logistics
- distribution logistics
- contract logistics
- disposal logistics
- information logistics

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “logistics services” include the following:

WZ 2008 number	Designation
49	Land transport (incl. via pipelines)
50	Water transport (shipping)
51	Air transport
52	Warehousing and support activities for transportation
53	Postal and courier services
77	Renting or leasing moveable goods

<sup>8</sup> [http://www.logistik-berufe.de/downloads/Kap\\_01\\_Logistik.pdf](http://www.logistik-berufe.de/downloads/Kap_01_Logistik.pdf)

## 4.14 Testing, certification and conformity assessment services

In many sectors the confirmation of a third, neutral party that

- a product meets requirements,
- a service has been properly performed, or
- legal provisions are complied with

is a prerequisite for market access and enhances the safety of persons and goods. Testing services can involve simple measurements or analyses, or the release of complex safety-related software (e.g. for high-speed trains).

Because this service branch involves a number of different activities, it encompasses not only many small companies but also large globally active testing and certification bodies.

Testing, certification and conformity assessment service providers often must demonstrate their competence to a governmental body or a private accreditation body (which is itself a “testing service provider”).

This is done on the basis of the ISO/IEC 17000 family of standards, and in some cases the ISO 14000 standards, the relevant standards of which have been adopted as harmonized European Standards. These standards specify requirements to be met for the various services carried out by these bodies (testing, calibration, inspection, certification, validation, verification) as well as by accreditation bodies.

In almost all sectors, testing, certification and conformity assessment services are either required or voluntarily used to enter the market.

Certification to national or international product certification schemes, personal certification/qualification schemes and quality management systems gives the end consumer more safety and security and helps avoid the waste of materials and resources.

Requirements for certification schemes for products, processes and services are also standardized at international level. For example, DIN EN ISO/IEC 17067 “Fundamentals of product certification and guidelines for product certification schemes” specifies that information on such schemes is to be made public and the stakeholders are to be involved. Standards are frequently used as the basis for certification, e.g. for test methods used in certified laboratory services.

Most accreditations are granted on the basis of international technical rules and legislation, and help ensure the free movement of goods, not only within Europe.

Conformity assessment is a cross-sectional service branch which is found in all of the branches discussed in this chapter.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services are found in the following areas:

WZ 2008 number	Designation
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastic products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment
29	Manufacture of motor vehicles, trailers and semi-trailers



30	Manufacture of other transport equipment
31	Manufacture of furniture
32	Other manufacturing
33	Repair and installation of machinery and other technical equipment
35	Power supply
36	Water supply
37	Wastewater treatment and disposal
38	Waste collection, treatment, disposal and reclamation
41	Construction of buildings
42	Civil engineering
43	Specialised construction activities
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
46	Wholesale trade, except of motor vehicles and motorcycles
47	Retail trade, except of motor vehicles and motorcycles
49	Land transport (incl. via pipelines)
50	Water transport (shipping)
51	Air transport
63	Information services
70	Management and business consulting
79	Travel agencies and other reservation services
82	Office administrative, office support and other business support activities
84	Public administration, defence, social security
85	Education
86	Human healthcare

87	Nursing homes, residential care homes etc.
88	Child care services
93	Services relating to sports and recreation

## 4.15 Social services

Such services include the care of the elderly (e.g. retirement homes), the ill (e.g. nursing homes), services for the disabled, child care services and other consulting services (e.g. family planning services, services for the homeless). With household services, help is provided in daily activities such as shopping or going to the doctor. These services are primarily provided to persons who are not yet dependent on nursing care.

Social services are primarily intended for the weaker members of society and aim at improving their living conditions. Such services involve a number of activities such as counselling, treatment, care and education – in the context of social care – and usually involve direct contact with the “clients” (i.e. persons receiving the services).<sup>9, 10</sup>

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “social services” include the following:

WZ 2008 number	Designation
87	Residential care activities
88	Social work activities without accommodation

<sup>9</sup> For more information see Trukeschitz 2006: 28 f./Trukeschitz, Birgit. 2006. Im Dienst Sozialer Dienste – Ökonomische Analyse der Beschäftigung in sozialen Dienstleistungseinrichtungen des Nonprofit-Sektors.

<sup>10</sup> EQUAL EntwicklungspartnerInnenschaft Donau Quality in Inclusion

## 4.16 Sport, recreational and cultural services

This area involves services carried out in numerous venues such as museums, theatres, zoos and botanical gardens, concert halls, as well as those related to sports and recreation, such as sports halls and arenas, marinas, amusement parks, cinemas, spas, holiday parks and camping sites.<sup>11</sup>

Cultural aspects include architecture, publishing, design, film, art, the music industry, gaming and marketing.<sup>12</sup>

Often these services are performed by freelancers such as journalists, writers, directors, musicians, photographers etc.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services are found in the following areas:

WZ 2008 number	Designation
58	Publishing
59	Entertainment industry (film, television, radio, music)
60	Radio
90	Other cultural and artistic endeavours
91	Libraries, archives, museums, botanical gardens, zoos etc.
92	Gambling and lotteries
93	Services relating to sports and recreation

<sup>11</sup> See also the Duale Hochschule Baden-Württemberg.

<sup>12</sup> See also the German website <http://www.kultur-kreativ-wirtschaft.de>.

## 4.17 Technical services

Technical services are performed by companies on technical objects belonging to commercial or private customers.

Technical objects cover a wide range, from complex production plant (e.g. in the chemical industry) to small household appliances (e.g. microwave oven, water cooker, refrigerator). These services can either be provided to other businesses (B2B) or to the end consumer (B2C).

Technical services can be provided by the manufacturer of the technical object or by another company. Service provider and service recipient can be two legally independent entities or belong to the same company. Thus, technical services can be performed within a company (e.g. as part of internal maintenance).

Technical services cover the entire life cycle of a product and can be differentiated as activities prior to the use of the product (e.g. product development, feasibility studies, installation, commissioning), during the use of the product (e.g. maintenance, inspection, repair, remote monitoring, improvement, training and consulting) and after the use of the product (e.g. disposal, decommissioning, modernization).

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “technical services” include the following:

WZ 2008 number	Designation
33	Repair and installation of machinery and other technical equipment
95	Repair of computers and other consumer goods

## 4.18 Tourism and travel-related services

Tourism and travel-related services cover a wide range including accommodation and catering, travel agencies and tour guides. Other related areas include traveller transportation services, retail services and the automobile industry.<sup>13</sup>

<sup>13</sup> For more information see the website of the German Federal Ministry for Economic Affairs and Energy (BMWi).

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, “tourism and travel-related services” include the following:

WZ 2008 number	Designation
55	Accommodations
56	Gastronomy
79	Travel agencies, tour operators and other reservation services

## 4.19 Environmental and infrastructure services

Environmental services comprise those that minimize environmental pollution and other risks and increase the efficient use of resources. Environmental and engineering consultants are involved, as are environmental auditors and providers of technical development services. These help develop sustainable solutions in core environmental areas such as the consumption of water and energy<sup>14</sup> and the efficient use of energy and resources.<sup>15</sup>

Infrastructure services are largely found in the public sector, including defence, social insurance and activities of a sovereign nature. These include the making, interpreting and enactment of laws and regulations and other forms of public administration such as defence, civil security and civil order, immigration and the administration of other governmental programmes.

The planning, erection and maintenance of some types of infrastructure is the task of the state or other public bodies as a public service. Infrastructure services include:

- a) technical infrastructure services
  - the supply of energy, electricity, gas, heating, filling station networks
  - communications: radio, internet, landline and mobile telephone networks
  - provision and disposal of material resources: waste disposal, waste recycling, waste water management, drinking water supply
  - transportation infrastructure: public transportation on land, water, rail and air, airports, streets, navigation radio transmitters for aeroplanes and water vessels, and for private transport, streets, bicycle paths, hiking paths etc.
  - currency systems

<sup>14</sup> For more information see the iöw – Institut für ökologische Wirtschaftsforschung.

<sup>15</sup> See also Press release no. 331/07 of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

b) social infrastructures

- educational system, schools, libraries, colleges, universities, research institutes etc.
- child care, nursing, home care services etc.
- health care system, hospitals, rescue services
- cultural institutions, exhibition spaces, libraries, museums etc.
- civil security, public safety, police, defence etc.

According to the German Classification of Economic Activities, 2008 edition (WZ 2008), published by the German Federal Statistical Office, such services are found in the following areas:

WZ 2008 number	Designation
35	Power supply
36	Water supply
37	Wastewater treatment and disposal
38	Waste collection, treatment, disposal and reclamation
39	Other forms of treatment and disposal such as environmental remediation activities
84	Public administration, defence, social security
96	Other personal services

# 5 POTENTIALS OF SERVICES STANDARDIZATION

Because individualization is a key characteristic of many services, any effort to standardize them must take this into consideration. Service providers should always consider the extent to which standardization offers solutions that meet their specialized needs and can help them achieve their goals.

Participation in the standardization process is a strategic move for any company. This decision affects the profile and structure of the provision of services and the market position of the company. Taking part in the standardization process requires a substantial investment when considering the hours of work by experts, travel costs and the overall costs of participation.

The following factors influence a company's decision to take part in the standardization process:

- the size of the market
- the competitive environment
- the type and diversity of services offered
- the company's position in the (legal) system or network
- cost considerations

The motivation for taking part in the standardization process is tied to the service provider's goals. These are to:

## **Goal 1: Gain access to global markets**

It is much easier for service providers to enter global markets if there are relevant standards. For example, they make it easier to assess potential partnerships with a client and ensure compatibility and quality for the customer.

Harmonized European Standards can also contribute to an improved functioning of the internal European market.

## **Goal 2: Enhance quality**

Qualified staff and well-defined performance characteristics are the core competencies of a service company. Describing minimum requirements for the qualification of service providers and the service process in order to supplement existing legal provisions can raise the level of quality in a way that meets the expectations of the service recipient and helps in evaluating the quality of the service provider.

### **Goal 3: Increase economic efficiency**

Using standards can lower costs. When comparing offers and invitations to tender, the description of service processes is as essential as they are useful. Standardized process descriptions can save time in drawing up extensive specifications for tender and reduce the documentation needed.

Compatibility standards and interface standards can lead to lower internal costs as well as lower transaction costs. The safety and security of services can also be increased through standards, which results in more trust on the part of the service recipient and lowers liability risks.

### **Goal 4: Achieve greater security**

Standardization addresses fundamental issues of safety, health and environmental sustainability. This creates trust.

Standards also lead to legal security: Standards are not in themselves regulatory in nature and their use is voluntary. They can, however, play an important role if they are referred to in contracts, giving greater detail to the subject matter of the contract. Thus, standards can help avoid ambiguity.

Furthermore, the use of a standard can become binding if it is cited in a law or regulation. Courts also refer to standards in liability cases, which also makes their use binding, at least indirectly. This subject is dealt with in the DIN Specification DIN SPEC (PAS) 77226 “Interfaces between service legislation and standards – Guidelines for standardization”.

### **Goal 5: Create transparency**

Standardization increases confidence in the relationship between service provider and recipient because it lays down standard terminology and process descriptions, thus enhancing comparability in the tendering process. This creates transparency for all involved.

### **Goal 6: Promote innovation**

Standardization can have a positive impact on the entire innovation process, from fundamental research to the development of new service activities. The economic success of an innovation lies not only in its scientific soundness but also in the way it is translated to the market. Because of their wide acceptance, standards and specifications help innovations quickly become disseminated and established on the market.



# 6 RECOMMENDATIONS FOR SERVICES STANDARDIZATION

## 6.1 General recommendations (potentials and limitations)

The heterogeneity of the services sector poses a major challenge to establishing a common position on the potentials and limitations of services standardization. To get a better picture of the viewpoints of the various branches in the sector, DIN held a services standardization workshop on 14 March 2014 which was attended by experts from 14 branches. Titled “Service made in Germany – What opportunities does standardization offer?”, the workshop provided a platform for an open dialogue on the opportunities and challenges, the drivers and barriers brought by services standardization in various fields.

In four specialized workshops, some 120 experts exchanged views regarding the ways in which standardization can be of use in their respective areas.

The following topics were identified by the majority of workshop participants as being important for facilitating the development and application of services standards, and for increasing market acceptance:

### ■ Define terminologies

It was suggested that the term “service” be defined and that the content of a “service standard” be described. The description of a person-related, activity-related or product-related service can be very different, depending on the branch and business model. Therefore, the description of performance characteristics and service results was considered as a key element of services standardization to ensure the quality levels of the services are comparable. For some branches, describing processes and interfaces in the interests of transparency and operability is considered to be very relevant. On the other hand, descriptions for qualification, competencies and training are only recommended for areas which are not regulated.

Terminology is seen as an important basis for communications between service providers and their customers, to be specified in both cross-sectoral and branch-specific standards and specifications. Terminology should thus be taken into consideration at the beginning of any standardization project.

### ■ Differentiate between services standardization and management system standardization

Services standards are often deemed very similar to – or even the same as – quality management standards. The precise difference between these two types of standard, and their interrelation and benefits, are often not clear for the stakeholder. For this reason, the different characteristics and benefits of services standards and quality management standards need to be identified and disseminated so that the stakeholders can have a better understanding of the development and use of the right kind of standard. CEN Guide 15, Clause 6 contains useful information on this matter.

According to DIN EN 45020:2007, a service standard contains requirements that are to be fulfilled by a service. The aim of these requirements is to establish the fitness for purpose of and set standards for the service in question. This means that the use of a service standard can have a direct impact on the service provider-customer relationship.

However, a quality management system comprises the overall planning for the structure of an organization and its processes, including all quality aspects thereof. All organizational levels are taken into consideration, and quality objectives, responsibilities, processes, documentation measures and implementation tools are determined. Quality system standards thus specify internal processes that have only an indirect impact on the customer.

Quality system standards prescribe general procedures that are relatively abstract and which need to be modified by a company to suit the situation in the relevant branch. This can lead to high adjustment costs and requires extensive knowledge on the part of those responsible for implementing the system. Drawing up branch-specific guidelines or standards on the implementation of quality standards such as the ISO 9000 family can be of great help, especially for small and medium enterprises (SMEs).

#### ■ Differentiate between qualification and vocational training

In Germany, **vocational training** (“Berufsausbildung”) covers both the theory and practice knowledge needed to practice a profession. This training encompasses structured training courses, the aim of which is to impart a broad understanding of the profession and all necessary skills and knowledge, and to provide the necessary professional experience. In Germany the Vocational Training Act (Berufsbildungsgesetz) governs the apprenticeship part of the dual education system (“Duales Ausbildungssystem”), advanced training and re-education. In this regulated field, which lies within the authority of the German Federal Government and the Länder, standards are counterproductive and not only would lead to uncertainty within the service industry and among educational and training providers, but would also lead to higher costs.

Although the European Qualifications Framework (EQF) was formally implemented in Germany in 2013 as the German Qualifications Framework (DQR), there are still some open questions as to how qualifications in the two frameworks correlate. Although it has been agreed that an evaluation of the correspondence between the two frameworks will be carried out by 2017, it has not yet been decided whether every kind of qualification can or should be included in the DQR. This applies especially for non-formal or informal qualifications. Therefore, at present it is not expedient for standardization to specify qualification requirements and attribute them to the DQR or EQF. However, information on existing standards can be used by those who are to carry out classification to the DQR or EQF. In addition, the allocation of qualifications to the EQF (via national qualification frameworks) is solely the responsibility of the EU Member States and is thus of differing quality, which can also make standardization in this area difficult.

**(Professional) Further training**, or “Berufliche Weiterbildung”, in Germany is any form of training or education that extends and builds on existing vocational training. It can take the form of organized learning, for example. “**Betriebliche Weiterbildung**” is further training carried out by the company or organization in which the learner is active, and specifically within the context of that company or organization. On the other hand, “**Fortbildung**” is the designation in German for any further educational measure available to the general public, and that is regulated by the State and carried out by responsible bodies, including some form of testing.

There is also a market for professional further training and adult education related to vocations; on this market, there are educational offers for individual persons as well as for companies on current topics and developments. Standards in this area should thus allow for a very flexible design of services, to leave room for new media and technologies and new subjects.

**Competence** is related to individuals and is not standardized. “Competence” refers to both professional and personal skills. There are many variables in measuring competence and the development of competence that are difficult to grasp. However, the method of determining competence can be standardized, although there are many different schools of thought regarding this. Assuring the competence of individual persons is expedient in the area of safety and security-related services, as with electronic and other technical systems. This is also important in terms of consumer protection.

Educational services are increasingly being supported and accompanied by technical processes. This includes, for example, searching in publicly accessible databases for suitable offers regarding learning management systems, as well as adaptive learning systems. Depending on the need, these systems can benefit from a procedural standard in terms of technical format, usability, or data exchange. Here standards can bring added value.

CEN Guide 14:2010 “Common policy guidance for addressing standardization on qualification of professions and personnel” should be used when drawing up requirements for professional and personnel qualification.

#### ■ Review legal framework conditions

One principle of standardization is that standards and specifications may not conflict existing legislation (see also Chapter 5, Goal 4). It is not always easy to develop a standard or specification that takes all legal provisions into consideration, especially in the case of common European Standards and specifications, because legislation in the EU Member States varies widely in breadth and depth. This means there is more potential for standards and specifications in some countries than in others.

This affects German stakeholders especially in sensitive areas such as healthcare, social services and education. These areas are governed by a dense web of laws, regulations and subordinate legislation, and are heavily regulated by state systems involving the social partners, which limits the added value of standards in these areas considerably.

The possibility of introducing “A-deviations”, i.e. national exceptions made to reflect national legislation, is a practical tool that is often used in heavily regulated areas.

The stakeholders are faced with an abundance of deviations from national legislation that they have to bring together as completely and in as much detail as possible. But just how practical and useful is a standard if the number of national deviations is greater than the scope of the actual standard?

In terms of added value and market relevance, this cannot be a goal of successful standards work. It is therefore very important that all valid laws, regulations and subordinate legislation be considered not only when reviewing a standards proposal, but also throughout work on a standard. Proposals should be judged on the basis as to whether a standard or specification has sufficient potential and is a suitable instrument for the purpose at hand.

## 6.2 Evaluation of each branch of the German service sector

Please note: In this chapter, the potential of and need for standards and specifications are evaluated for each sub-branch (see Chapter 4) from the point of view of stakeholders and other interested organizations in that branch, or based on the results of discussions carried out in the workshop on services standardization. The author(s) of each evaluation is/are indicated in brackets.

### 6.2.1 DIN's Consumer Council

#### **Situation:**

The consumer is affected directly or indirectly by (almost) all service branches. Therefore, DIN's Consumer Council already represents consumer interests in standards work in a number of service branches.

#### **Evaluation:**

For many years now, DIN's Consumer Council has used a tried-and-true evaluation procedure for basing decisions as to whether to participate in a new standards project or not. The procedure is based on certain key factors relating to consumer relevance. The Consumer Council welcomes services standardization because it can increase the transparency of services in terms of scope and quality, making it easier for customers to compare them. The Council does

not reject standardization in any particular service branch. Even where there is no need for standardization at national level, for example due to strict, detailed national legislation, it can nevertheless be relevant to consumers where the service goes across borders. This is the case, for example, when customers travel abroad in order to receive the service. We do not consider it possible to make a general assessment for each of the 18 branches due to their heterogeneity. Therefore, we always review and evaluate each project individually before we decide to participate.

*[Author: DIN's Consumer Council]*

## 6.2.2 Educational services

### General

#### **Barriers to standardization:**

In formal education, there is very little free room for standardization, because the formal education system is centrally governed by the Federal and Länder governments in a clear legal framework, e.g. constitutional law, school laws, the Vocational Training Act, and regulations on training schemes.

#### **Benefits of standardization:**

The potentials of standardization lie almost solely in non-formal education. This can take into consideration specific Länder regulations on educational programmes such as those for adult literacy, extra-curricular basic education for children, life skills, job skills and cultural knowledge. In the area of non-formal education, a standardization need is primarily seen in ensuring the transparency of course offers and content and in terminology.<sup>16</sup>

#### **European and international standardization:**

As regards standardization activities carried out under a mandate of the European Commission, recital 12 of EU Regulation 1025/2012 on standardization expressly refers to the distribution of competences between the Union and the Member States, including vocational training. At the same time, companies from all EU Member States – through their national standards bodies – can initiate European standards projects in education as well. Although standards and specifications cannot cancel out legal provisions, standardization in formal education is nevertheless seen as being not unproblematic, considering the existing prohibition of harmonization.

*[Author: Federal Ministry for Economic Affairs and Energy (BMWi)]*

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<sup>16</sup> Results of the workshop on services standardization held on 14 March 2014.

## Area: Further education

### Situation:

The market for educational services is very comprehensive and extremely fragmented. It ranges from government regulated services to services support by public funding to services in the private sector. People of all ages use educational services, from children (e.g. day care centres, schools) to young adults (e.g. universities and other academic institutions) to adults (e.g. adult education). While the education of young people is largely organized and financed by the state, education at later stages is predominantly in the private sector. Thus private companies and public agencies are two very different quantities having different characteristics and focuses. There is an international standard on “Learning services for non-formal education and training”, DIN ISO 29990, which so far has not been applied by very many companies.

### Evaluation:

One major challenge for standardization in this branch is certainly the central question: “What is education?” Is education merely the imparting of knowledge or is it also the development of an individual personality, the understanding of global, interdisciplinary connections, the ability to come up with solutions etc.? Answering this question is important for standards work, so that a clear scope can be drawn up and limited from other services. Existing technical rules (e.g. DIN ISO 29990) and legal provisions need to be taken into consideration, to avoid duplication of work. A focus should also be placed on quality, results orientation and practical application, Because this market sector is so diversified, the focus should also be placed on the situation as a whole and less on the smaller details, so that aspects overlapping all educational areas and the objective of education as a whole are suitably dealt with.

*[Author: PREALIZE GmbH]*

## 6.2.3 Business services

### General

#### The “High Level Group on business services”<sup>17</sup>

A high level working group made up of stakeholders from European and national business service providers, science and industry, and the public sector was set up by the European Commission in 2013. Its aim was to address the expansion of the Single Market to enhance economic growth and the competitive ability of the European business services sector.

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<sup>17</sup> [http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/hlg-business-services/index\\_en.htm](http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/hlg-business-services/index_en.htm)

The Group gives a high priority to the development of European standards rather than national standards in order to support international business services, including those relating to public procurement.

*[Author: European Commission; for further information please contact Joanna Zawistowska, Mihail Adamescu, DG Internal Market and Services or Peder Christensen, DG Enterprise and Industry, ENTR-HLGBS@ec.europa.eu]*

#### **Area: Call centres**

Recommendations have been given regarding this area of business services (call centres) saying that standardization is a suitable means of self-regulation before legislators lay down regulations. This will allow more transparent descriptions of services, a valuable basis for contract partners.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

### **6.2.4 Professional services (“liberal professions”)**

#### **General**

##### **Situation:**

Freelance services provide clients with individualized, creative solutions. But a generalized description of a creative process that is tailored to specific needs is not possible without reducing the quality of the result. Thus, the standardization of such services would undermine the objective, which is to ensure quality and promote consumer protection. The standardization of processes serves to increase comparability and harmonization. This is countered by the diversity and individuality characteristic of professional freelance services.

##### **Evaluation:**

Professional services are often concomitant services. Laboratory reports, measurements and surveys can form the basis of such services. Standardized processes are frequently a quality criterion for such services. Standardizing processes can thus contribute to ensuring quality.

*[Author: Bundesverband der Freien Berufe (BfB) (Federation of German Independent Professionals)]*

## Area: Architects

### Situation:

The majority of companies in this area are micro businesses. 90 percent of architectural firms have only up to five staff members. Most of their activities are regional or national. Their services are largely intellectual services of a creative nature carried out for one individual task. For architects, there is a close network of regulations at Länder, Federal and European level. Building and planning legislation is laid down by national governments, and this also governs the necessary structures of the service provider. These structures differ from region to region and therefore these services are very heterogeneous.

### Evaluation:

Standards must not be in conflict with the legal framework. Any existing legal framework conditions are to be compared with the interests of the standards setters so that gaps in the regulation can be filled while still avoiding a duplication of work.

Standards specifying requirements for the structure or building site itself also lay down the type, scope and quality of the planning. Each service is determined by the structures (e.g. assigning parts of the service to different service providers), national legal framework conditions, and the individual planning task. Standardizing the performance characteristics of the service provider by means of services standards would conflict with this. Unifying terminology for services in the construction sector, however, would be helpful for mutual understanding and would facilitate access to European and international markets.

The entire process of planning and construction should always be kept in focus. Fragmentation into individual service areas due to standardization is to be avoided, also to ensure the overview for the client/consumer.

*[Author: Federal Chamber of German Architects (BAK)]*

## 6.2.5 Services of interest groups and other organizations

### General

### Situation:

Interest groups are normally not organized as for-profit companies, but as registered, often non-profit, associations comprising a large number of volunteers. They are often not profit-oriented or oriented towards a concrete business interest, but instead represent a specific public interest. Their activities and organizational structure are governed by statutes or, in the case of chambers, are governed by law. The work methods and range of services of interest groups are largely defined by the opportunities and abilities of their members as a whole.



**Evaluation:**

Interest groups always have individual, immaterial specified goals. Voluntary work is characterised by a free decision outside the typical client-service provider relationship. These principles are decisive for services standardization. Possible topics include guidance for membership management and data protection.

*[Authors: Federal Chamber of German Architects (BAK),  
German Confederation of Skilled Crafts (ZDH)]*

## 6.2.6 Financial services

**Area: Financial consulting****Situation:**

Financial services is a branch of German industry that does not have the highest of reputations. The wish of politicians to improve the quality of financial consultations, thus increasing trust, focusses on better qualifications and documentation. For consultants, these necessary measures are increasing the amount of necessary administrative work.

At the same time, the income of companies and individual consultants is capped, and certain remuneration models, such as commissions, are being questioned. The gap between expenditure and income can thus be very wide. This development must lead to a concentration within the branch in the mid-term.

However, many consultants are fighting against this because in large organizations they consider themselves as being exposed to rules that are not consumer-friendly. The current trend in the branch is thus moving more towards isolation than a bundling of resources, despite the framework conditions. For this reason, there is a serious problem in attracting new talent for this area.

**Evaluation:**

The only solution to this dilemma is the introduction of standards and specifications like DIN SPEC 77222. Standardized processes ensure expectations on quality are met, while they are made more simplified and more efficient at the same time. This makes it profitable to offer holistic and more consumer friendly financial services for the average consumer. This focus on quality will attract new target groups for financial consultants.

This is why the branch is increasingly becoming aware that generally recognized standards and specifications which exude competence are extremely helpful for creating transparency, clarity, and reliability, and are thus a foundation for customer trust.

*[Author: DEFINO – Gesellschaft für Finanznorm mbH]*

## 6.2.7 Research and development services

### General

#### Situation:

In the light of increasingly shorter innovation cycles, a growing complexity of products, technologies and services, and the increasing division of labour are forcing companies to rely on the external knowledge and specialized competencies of R&D service providers. However, in the cooperation between external companies and other organizations, especially in research and development, there is often a considerable amount of uncertainty on the part of the service recipient, for example as regards the flow of critical knowledge, the comparability of various offers, and the ability of the provider to provide a solution to problems. Standardization should thus aim at reducing uncertainty on the part of the client, and enhancing the performance and competitive ability of German companies by making it easier to consume specialized R&D services.

#### Evaluation:

Standards and specifications can help build mutual trust and a common understanding between customers and providers of R&D services. For example, providers can use standards to better communicate their integrity and competence in the form of staff qualifications or performance descriptions. Standards work in this field should be carried out not only at national but at European level as well, so that companies can gain as much access as possible to scientific findings.

*[Author: Federal Ministry of Education and Research (BMBF)]*

## 6.2.8 Health services

### Area: Medical services

#### Situation:

In health care, there are many different types of organization offering patient services, each having completely different structures. The spectrum ranges from large university clinics with over a thousand employees to small doctor's offices or other self-employed persons. Patient care is primarily regional in nature. There is also a strong division in health care between inpatient and outpatient services. In the health care sector, services are mostly provided on a freelance basis, and are characterized by individuality, sensitivity and therapeutic freedom. Health care involves direct contact with the patient and is highly individualized in nature. In Germany, the healthcare sector is tied directly with the social system and is therefore governed by a dense web of laws, regulations and subordinate legislation. The health care sector does not fit into the classic market structure. Health services are not equivalent to services performed in a purely commercial context. This is why health services are not included in the scope of Directive 2006/123/EC on services.

### **Evaluation:**

The standardization of health services is rejected, except for the standardization of medical devices or quality management systems. The standardization of health services lacks market relevance and added value. It is in the public interest that the quality and performance of the healing professions be self-regulated and guaranteed by the relevant professional organizations. These ensure that quality requirements, ethical requirements, professional rules, treatment methods and quality assurance be defined and implemented with the necessary expertise. Standardization is neither a necessary nor a suitable instrument for ensuring or improving the quality of such services. Rather, it tends to create legal uncertainty and considerable friction with national professional and liability legislation, and lastly with the health-related political mandates of the European Union. Aside from that, services in such an individualized relationship with the patient cannot be standardized, since the patient is not a standardizable object, but normally a full partner in the performance of the health service. Standardizing health services cannot take adequate account of their special aspects, especially the expertise and social competence needed and their importance for the individual.

*[Author: German Medical Association (BÄK)]*

### **Area: Services in alternative medicine (“Heilpraktiker”)**

In Germany, practitioners of alternative medicine (“Heilpraktiker”) are freelance professionals licensed on the basis of the German Alternative Medical Practitioners Act (HPG). As such, it is not an official German apprenticeship trade (“Ausbildungsberuf”) and does not require academic qualification. According to the HPG, permission from the responsible health authority is required before someone can practise as a “Heilpraktiker” in Germany. Such persons must pass a written and an oral test of the necessary knowledge and skills to ensure the person can practise without putting patients or the general populace in danger.

According to German law, “Heilpraktiker” are permitted to practise certain forms of alternative therapies (e.g. homeopathy, herbal medicine, acupuncture, massages, neural therapy chiropractic, osteopathy etc.) and can use or prescribe all pharmaceuticals and medical products that do not require a doctor’s prescription.

Alternative medicine in Germany is governed by regulations such as pharmaceutical laws, legislation on medical devices, the Protection Against Infection Act (IfSG) (including all Federal and Länder laws and regulations relating to surgery hygiene), patient’s rights laws, laws on the advertising of medicinal products, and all laws and regulations regarding employment in the health care sector.

In most cases, “Heilpraktiker” work on a freelance basis. Many work alone or with only a few colleagues (1 to 3) in an office, whereby staff are usually either trained healthcare professionals (nurses, medical technicians etc.) or have other occupations.

Any standardization of health services performed in alternative medicine must take both Federal and Länder legislation into consideration. Standards would also have to take the economic situation into account because as freelancers, practitioners of alternative medicine would suffer under the economic burden of additional bureaucracy. Thus, the necessity and usefulness of any standardization should be carefully considered.

From the point of view of the “Heilpraktiker” in Germany, we do not see any need for additional rules in terms of health protection, occupational health and safety, or service for the patient.

*[Author: Fachverband Deutscher Heilpraktiker (Association of German alternative medicine practitioners)]*

## 6.2.9 Trade services

### General

In Germany, the “Commercial Code” (HGB) lays down the legal framework for all trade services. Trade fairs and exhibitions provide platforms for branch-specific exchanges of information, as do trading platforms. Representatives of this branch present at the workshop do not see any need for standardization in this area.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

## 6.2.10 Services in the skilled trades

### General

#### Situation:

Companies in the skilled trades perform a number of diverse services and activities in the public and private sectors (e.g. municipal authorities and other public authorities, industry clients and end consumers). Because skilled trades are incorporated into industrial value added chains and in complex services structures, much experience has been gained in standards and standardization in this area. Products and materials that are produced – sometimes in combination with individual services – by companies in the skilled trades, and the processes for which they are responsible, are governed mostly by European or international standardization. Neither a lack of nor need for specific services standards has been identified for areas in which skilled tradespersons are active, increasingly across borders (e.g. services for end consumers, installation, maintenance, repairs, renovations, restorations).

The skilled trades are very diverse and have very specific job profiles. The high qualification of tradespersons in Germany – from apprentice, to journeyman, to master – is the guarantee that their products and services are of a high quality and bring customer satisfaction. Quality requires qualification – this is the motto of this service branch. Standards cannot in any way replace laws and social systems, such as the dual education system (“Duales Ausbildungssystem”), with its professional codes and holistic, trade-oriented job profiles. Quite the opposite: European Standards would result in the fragmentation of professional qualification, a lowering of the level of qualifications in the industry, a separation of simple tasks, and less transparency as regards qualifications and the quality of work.

**Evaluation:**

Services standards can contribute to reducing the differences in the information available to the provider and recipient. In this sense they can help simplify the tendering phase, the comparison of offers and the standardized definition of services. This requires improved information for the customer. Services standardization can contribute to a more transparent market.

*[Author: German Confederation of Skilled Crafts (ZDH)]*

## 6.2.11 Real estate services

At present, there are no evaluations for this branch.

## 6.2.12 IT services

It is important that standardization activities for IT services be carried out not only at national, but also at European and international level. The exchange of services across borders (e.g. logistics, data transfer) is extremely important in this connection. Furthermore, fast-paced developments in the IT sector require a great amount of flexibility and speed in standards work.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

## 6.2.13 Logistics and transportation services

A logistics standardization roadmap is being drawn up in DIN and is expected to be published in February 2015. This roadmap will examine the potential need for standards and specifications in logistics and transportation services. For more information go to [www.logistik.din.de](http://www.logistik.din.de).

*[Author: DIN – Logistik (DIN-Logistics)]*

## 6.2.14 Testing, certification and conformity assessment services

### **Situation:**

Companies in this horizontal service branch range from individual technical experts to large, globally active corporations.

The task of all of these service providers lies in checking and evaluating whether or not requirements (e.g. in laws or standards) have been met. These services are performed in all sectors and involve test laboratories in the medical and electrotechnical fields, calibration laboratories, the certification of persons, products or management systems, and the inspection of installations or plant. In addition, conformity assessment and the involvement of a suitable service provider are required by many national and European legal frameworks.

### **Evaluation:**

Conformity assessment is carried out on the basis of the ISO/IEC 17000 family of standards, and in some cases the ISO 14000 standards, the relevant standards of which have been adopted as harmonized European Standards. These standards specify requirements to be met for the various services carried out by conformity assessment bodies (testing, calibration, inspection, certification, validation, verification) as well as by accreditation bodies.

Because the impact, activities and results of conformity assessment organizations are international in nature, the use of International Standards is essential. To ensure that there is no conflict with European legislation, during the development of such International Standards, the responsible European body (CEN/CENELEC/TC 1) checks to make sure there are no conflicts with the relevant legislation and takes the necessary measures.

Because information on a certification scheme is made public and the stakeholders are involved, standardization is a good instrument for specifying a certification scheme for services. Here it is necessary that any requirements and specifications be formulated as criteria that can be checked and evaluated.

*[Author: DIN Standards Committee Quality Management, Statistics and Certification (NQSZ) (NQSZ 3), NA 147-00-03 AA]*

## 6.2.15 Social services

An added value is seen in the standardization of social services. Reference is made to a current project which is dealing with requirements for information, consulting and placement processes in personal and household services, and which addresses services providers of the above-mentioned processes. The goal here is to make the interfaces between service provider and service

recipient transparent. Up to now, this market – which is mostly locally organized – has not been transparent with its diverse offers, possibilities and legal regulations. Standardization can help make these areas transparent without having to set up parallel legal structures.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

## 6.2.16 Sport, recreational and cultural services

### General

In the area of sport, recreation and cultural services, great significance has been attached to the quality of these services, particularly the events sector. In this branch, service providers normally do not have a second chance. Defined minimum standards, especially regarding the drawing up of offers, will help make these more comparable and bring a true added value for this branch.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

## 6.2.17 Technical services

### Situation:

Technical services are performed by companies on technical objects belonging to private (B2C) or commercial customers (B2B), or to clients in the public sector. Technical objects cover a wide range, from complex production plant (e.g. in the chemical industry) to sophisticated technical equipment and machinery (e.g. in medical technology, server networks, lifts and escalators, machine tools etc.) to small household appliances (e.g. microwave oven, water cooker, refrigerator).

Technical services can be provided by the manufacturer of the technical object or by another company. Service provider and service recipient can be two legally independent entities or belong to the same company (e.g. as part of internal maintenance). Today, a small number of companies (16 percent<sup>18</sup>) offer technical services as stand-alone sales products, while the majority (84 percent<sup>18</sup>) offer such services together with the product or as a combination thereof. The majority of technical services are performed on the company's own products (45 percent<sup>18</sup>) or on their own product and products of other companies (44 percent<sup>18</sup>). Only a small percentage (11 percent<sup>18</sup>) of companies only offer services for external products.

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Technical services cover the entire life cycle of a product and can be differentiated as activities prior to the use of the product (e.g. product development, feasibility studies, installation, commissioning), during the use of the product (e.g. maintenance, inspection, repair, remote monitoring, improvement, training and consulting) and after the use of the product (e.g. disposal, decommissioning, modernization).

The impact of globalization is clearly reflected in the international orientation of the technical services offered by German companies. This requires an increasingly global approach. Although being situated in Germany continues to be a selling point for companies, there is a growing number of countries in which these companies have service offices or are represented by distributors. More than half of all companies (57 percent<sup>18</sup>) have 100 employees or more in global service, and 40 percent<sup>18</sup> of these have more than 500 international employees.

#### **Evaluation:**

The service sector is the largest economic sector in Europe. However, Germany's employment share in this sector is one of the smallest in Europe. In addition, up to now the export of services has grown slower than that of goods, which has grown considerably. One reason for Germany's lead in terms of the export of investment goods is the extensive involvement of German industry in standardization. Standardization is thus an important aspect of successful internationalization strategies. Services standardization can increase the exportability of technical services and further the internationalization of service providers.

The standardization of technical services can be categorized into service potential, the service provision process, and the service result. Basically, approaches can be identified for standards activities in each of these categories. Branch-specific aspects also need to be taken into consideration.

*[Author: Kundendienst-Verband Deutschland e. V. (KVD) (German Customer Service Association)]*

#### **Situation and evaluation:**

The German mechanical engineering sector achieves roughly 20 percent of all revenues through services. In Germany even small and medium enterprises (SMEs) manufacture abroad, with branches in Europe and beyond. About half of these companies have European service centres, and more than two-thirds (70.3 percent) of German companies in mechanical engineering have service centres abroad (Source: VDMA Kennzahlen Kundendienst 2014).

Over the past years, companies in this sector have been addressing the issue of services standardization. At present, neither the customers nor the manufacturers in the German mechanical engineering sector see a necessity for developing standards on technical services.

However, they do feel pressured by the EU to expand services standardization and by third-party stakeholders (such as consultants, standards institutes, certification bodies).



The German mechanical engineering sector is already very involved in the development of standards. Companies in this area work intensively at national, European and international level on the revision of relevant standards on the safety of machinery, and are bearing the cost of this themselves, which increases the costs of their machinery.

German investment goods have a good international reputation in terms of their product characteristics and safety. Their machines are normally adjusted extensively to meet the needs of the customer and are thus highly efficient, specialized machines. This is a better explanation for the market success of German machinery than is standards work in this area.

The high cost of German and European production compared to that of international competitors presents a considerable market risk. Reducing costs is thus absolutely essential for protecting German and European production. Therefore, all expenses that the manufacturing companies deem to be unnecessary are to be avoided.

The EU Machinery Directive already regulates the information necessary for services performed on machinery, and the requirements for this are laid down in the standards on safety of machinery; thus, there is no need for further standardization here.

The standardization of technical services in mechanical engineering would require the necessary knowledge of the product, in addition to sectoral know-how, otherwise there could be considerable risks to safety. Thus, standards on technical services must always be drawn up in the relevant technical committees.

The majority of quality systems in European machinery companies – in Germany about 85 percent – are certified to DIN EN ISO 9001 (Source: ISO Survey 2013). These certified quality systems also cover the service activities of the company, so that there is also no need for standardization here, either.

Further work on the standardization of technical services in the mechanical engineering sector is rejected on the grounds of clarity. Today, overlapping and, in some cases, even contradictory standards are already reducing the consistency of the standards collection and are increasing friction within the sector.

Unnecessary standardization activities in technical services threaten the efficiency of European mechanical engineering and are raising costs in the face of global competition.

To sum up, according to information currently available we have not established any market need for standards on technical services in mechanical engineering.

*[Author: VDMA German Engineering Association]*

## 6.2.18 Tourism and travel-related services

### General

This is a very heterogeneous market (regional to international) and the object of the services (hotels, restaurants, travel agencies) can vary greatly. Because terminology in this area has already been standardized, at present there is no need for further standardization. Workshop participants feel that a standard should only be developed where there is a market need.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

### Area: Hotel industry

#### Situation:

The direct contribution of the tourist industry to the national gross value added in Germany is 4.4 percent, and is thus considerably greater than that of the automobile industry (2.3 percent) or the banking industry (2.5 percent). Tourism in Germany brings a gross value added of EUR 97,0 billion through its direct effects alone (e.g. airline and train tickets, or hotel reservations). If one includes preliminary services and induced effects, then the tourism branch brings a total gross value added of EUR 214,1 billion, or 9.7 percent of the entire gross value added of the German economy. The direct contribution of tourism to employment in Germany of 7.0 percent lies between the employment share of the retail industry (9.2 percent) and in education (5.9 percent).

The hotel and other accommodations industry is a major part of the tourism sector which is characterized by small and medium enterprises (SMEs). 61 percent of all lodging establishments and 46 percent of all hotels and small hotels have fewer than 20 rooms, while only 7.9 percent have 100 or more rooms. A differentiation by sales revenue clearly illustrates how the German accommodations industry is characterized by small businesses: 43.1 percent of all establishments have an annual turnover of less than EUR 100,000, while 68.8 percent have less than EUR 250,000 and only 7.8 percent have a turnover of over EUR 1 million.

#### The potentials of standardization:

One good example of international standardization is the terminology standard DIN EN ISO 18513:2003 “**Tourism services – Hotels and other types of tourism accommodation – Terminology**“, which is widely used in the sector and makes it easier for very different market partners to work together. This standard is a very fundamental work.

Standardization most certainly has potential wherever purely sectoral standards cannot be effective due to international interrelationships and/or imbalances on the market. For example, the hotel industry expressly supports the project initiated within ISO/TC 290 “Online Reputation”,

because setting the standard for fairness in this age of user-generated content will be faster and more effective than laying down national or European legislation.

Standardization can also support accessibility in tourism, for example in the CEN workshop mandated by the European Commission, “Universal Design of Tourism Services”.

#### **Limitations of standardization:**

Nevertheless, the last few years have seen several attempts at standardization that were not welcomed by the hotel industry, as they were initiated “from top down” within ISO/TC 228 “Tourism and related services”, where standardization was expressly carried out without the support of – and in some cases, against the wishes of – the relevant tourism branch. This contradicts the nature of standardization as a form of self-regulation by industry. Tourism industry associations strongly oppose standards projects, for example on quality criteria for accommodations or safety and risk management, which are promoted by certification companies for obvious reasons. Furthermore, such global standards normally set a quality which is lower than that given by existing high German standards.

*[Author: German Hotel Association (IHA)]*

## **6.2.19 Environmental and infrastructure services**

### **General**

The benefits of the standardization of infrastructure services such as water supply is considered to be very high, in terms of support for legislation, and also because it increases the comparability of repairs and maintenance of water supply networks in Europe. Here, standards should clearly define minimum requirements.

*[Author: DIN – Result of the workshop “Service made in Germany – Success through standards?”, held on 14 March 2014]*

#### **Situation:**

The environmental sector is cross-sectional, comprising all companies who offer environmental protection goods and services. This sector is a growth driver, both in Germany and globally. The demand on international markets for innovative products, methods and services that are environmentally friendly and efficient is greater than ever before.

During the past few years, employment in this area has continually increased. As early as 2008 almost two-thirds of all jobs in environmental protection had to do with environment-oriented

services. This reflects the great importance services have for the environmental sector. Altogether, there were more than 1.2 million jobs that performed services related to the environment.<sup>19</sup>

Although environmental services cover a wide range of services, they can be divided up roughly into three categories.

**Primary environmental services** have a direct relation to the environmental sector (e.g. consultants in lead markets such as energy, water, recycling and waste management, sharing models etc.).

**Added value chain environmental services** support specific value creation stages in the environmental sector (e.g. development service providers support the innovation of products and processes, logistics companies assist production by providing primary products, and installation companies carry out maintenance on end products such as wind turbines).

**Management-related environmental services** are offered to the company as a whole and are not limited to individual stages in the value-added chain (e.g. strategic consulting regarding opening up new areas for the export of environmental protection goods). Currently, there are already recognized standards for quality certification in the form of management system standards.

#### **Evaluation:**

In this highly innovative business area, standards can be a very important voluntary instrument for combining social/corporate responsibility with economic growth.

Over the past decades, the standards organizations have already developed a number of standards for improving the environmental performance of companies. But voluntary standards would not be very expedient in areas where environmental services primarily have to do with health protection – and for which there are already a number of legally binding standards. For example, in radiation protection standards should not be instrumentalized to undermine legal provisions. However, standardization at national and European level can be a good approach to setting up a consistent foundation for monitoring the success of environmental services.

*[Author: Federal Ministry for the Environment (BMU)]*

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<sup>19</sup> UBA (German environmental protection agency) publication of 09.09.2013.

## 6.3 Recommendations for research and development

As explained in Chapter 4, services are provided in a number of different branches. With this in mind, it is important that possible attempts at standardization be critically reviewed first in order to determine whether they are suitable for all branches or only for a few.

The standardization of services can be categorized into service potential, the service provision process, and the service result. Basically, approaches can be identified for standards activities in each of these categories. Branch-specific aspects also need to be taken into consideration.

Specifying service potential, for example in the form of certificates, is only expedient if certification can truly ensure the performance quality of the service provider and will help the service recipient in selecting a provider.

In terms of the service provision process, it is possible to develop standardized reference processes. Companies can use such reference processes as models for setting up their own processes, can facilitate the involvement of other partners, and can help to reduce/avoid discrepancies between the expected and the actual service provision process. It is important to differentiate between reproducible, i.e. standardizable, and individualized process elements. Standardization activities are particularly useful for areas in which several partners are involved in providing the service, or where a common understanding of the service provision process can be assumed.

Standardization activities relating to the service results help make it easier to compare and find services. Here it is important to bring particular attention to the individuality of the service, especially where the customer is personally involved, in the form of objects or information. A practical methodology for determining the standardization potential of service results is thus essential. The objective of any standardization efforts must be to achieve a high level of transparency as regards the scope of the service and its content, as well as a high level of quality.

## 6.4 Outlook and implementation of the Roadmap

This Roadmap gives a comprehensive overview of the various interests within the German services sector as regards standardization. Some branches, such as health services, do not see a potential added value in services standardization because their area is already highly regulated. In other areas, such as technical services, financial services, business services, sport, recreational and cultural services, the stakeholders see a potential benefit in standardization. Standards and specifications can also stimulate competition in the social services and educational services, but only where these standards do not conflict with national legislation. Consumers also see services standardization very positively, wherever it is relevant to consumer interests. DIN therefore intends to invite stakeholders in the above areas to a more in-depth dialogue.

Specialized workshops can be set up to discuss the potential need for standardization in more detail.

DIN will represent the interests of the German stakeholders at European level by presenting this Roadmap – including the division into 18 service branches, the general recommendations for action, and the evaluations of the individual branches – to the European standards organization, CEN, and possibly to the European Commission as well, as the basis for a European roadmap for services standardization.

The results of this Roadmap can be used to concentrate services standardization activities in those branches for which a need for standards work is seen. The Roadmap will be revised as the standardization landscape in the services sector develops.

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