

BIGS | Policy Paper

Brandenburg Institute for SOCIETY and SECURITY

BIGS
BRANDENBURGISCHES INSTITUT
für GESELLSCHAFT und SICHERHEIT

“Civil Security” and the Private Security Industry in Germany

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Foreword

The Brandenburg Institute for Society and Security (BIGS) and the German Institute for Economic Research (DIW) have worked together on the project „An economic security indicator for measuring security and the private security industry in Germany (WISIND)“. Starting in January 2012, the WISIND research project has been funded by a grant from the German Federal Ministry of Research and Education.

The aim of the project is to measure security in Germany through economic analysis. In this process we try to get a better understanding of security as an economic good, the impact of various threats and how to compensate them with adequate protection. In particular, it is the goal of BIGS to better understand the private security industry in Germany and its contribution to the protection of society beyond the activities of the state. There is, however, little empirical data about this sector nor is there any consensus about the scope and definition of the private security industry.

This report serves as a first contribution in English and builds on work we have already published in German. Since this publication is for a non-German audience, we also try to roughly explain here and there a few German peculiarities that in our experience are important to understand in this context. This is also one reason why we developed our own definition of 'civil security' and the 'civil security industry' and conducted a comprehensive market survey of selected companies with the help of GfK – a professional polling institute. If you are interested in further results, take a look at www.sicherheitsindikator.de or please feel free to contact me.

Tim H. Stuchtey
Executive Director of BIGS

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“Civil Security” and the Private Security Industry in Germany 2012

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TABLE OF CONTENTS

Foreword	2
Introduction	6
1. Homeland Security in the Transatlantic Context	6
2. What is German Civil Security?	7
3. The Private Security Market	8
Demand	10
Supply	10
4. Cybersecurity and German Civil Security	12
5. BIGS Market Survey 2012	13
Methodology	13
Industry Sectors	14
Scope of the Private Security Industry	15
IT security	15
Security Products and Technologies	17
Security Services	17
Employment	18
Allocation of Sales Volume and Sales Trend	19
Key Performance Indicators	20
Geographical Market Data	21
Export share	21
Sectors of End-Users of Security	22
Distribution of Sales to Public Agencies, Private Enterprises, and Households	23
Research & Development	23
Patents	24
Conclusion	25
Footnotes	26
Bibliography	27

FIGURES AND TABLES

Figure 1: Scope of the Private Security Industry	14
Figure 2: Areas of Business Activity	15
Figure 3: IT Security Products	16
Figure 4: IT Security Services	16
Figure 5: Security Products and Technology	17
Figure 6: Security Services	18
Figure 7: Employment in the Private Security Industry in Germany 2011	18
Figure 8: Hiring New Employees in 2013	19
Figure 9: Sales Volume for Private Security Companies in Germany in 2011	19
Figure 10: Geographical Market for Security Products and Technology	21
Figure 11: Share of exports from total sales	21
Figure 12: Sectoral Distribution of End-Users	22
Figure 13: Share of Companies Engaging in Research and Development (R&D)	23
Figure 14: Patents in the Private Security Industry	24
Figure 15: Patents relevant for the security market	24
Table 1: Projections for the Private Security Industry in Germany 2011	14
Table 2: Key Performance Indicators for Sales and Sales Trends	20
Table 3: Distribution of Sales across Public, Private, and Household Sectors	23

INTRODUCTION

Concerns for security have grown in importance as more and more aspects of our everyday lives are confronted by new risks. The globalization of the world economy has not only brought increased trade and exchange, but also enabled the rise of transnational threats like pandemics, terrorism, and organized crime. The digitalization and increasing connectivity of society has also made us vulnerable in fundamentally new ways to cyber crime and breaches of privacy. Therefore, it is not surprising that the question of what constitutes a secure society has been given more attention as have attempts to better understand the political, social, and psychological dimensions of how we go about maintaining security in a complex world.

Today, the concept of security goes beyond the physical protection of private property and must also include the norms, attitudes, and cultural habits that engender trust in society, inspire confidence in the future, and foster resilience when external shocks occur or unexpected dangers emerge. New security policies must also reckon with the economic and personal trade-offs that accompany adjusting security measures to cope with emerging threats and accommodate the desires of citizens to live in an open society as well as protecting fundamental individual rights. Within the WISIND project we have conceptualized security as a function of threat and protection, whereas the later is a societal or individual investment or form of spending to compensate the former.

1. HOMELAND SECURITY IN THE TRANSATLANTIC CONTEXT

Since September 11, 2001 policy makers on both sides of the Atlantic have had to contend with these new threats and vulnerabilities in novel ways. For the United States, this has meant a shift in focus toward a more assertive stance abroad through the "War on Terror" as well as a coordinated focus on defending the country from domestic and foreign threats through the establishment of the Department of Homeland Security (DHS) in 2003. Over the years, homeland security as a distinct area of policy making has expanded to include disaster relief and response, the protection of critical infrastructures, transportation security, as well as bio- and radiological defense. It is also gaining ground as an academic field of study, especially emergency response management.

In Germany, policy makers have undertaken a variety of measures to meet the challenges of this new security environment as well, often using the concept of "civil security" (*zivile Sicherheit*) to describe what is understood in the United States as conventional home-land security. Here it is important to understand how history has shaped both the political and institutional responses in Germany, where the legacy of military aggression and state violence

looms large regarding issues of domestic and national security as well as military action. First, the German constitution puts very strict limitations on the use of the military for domestic purposes. Formally, it means only in times of "severe emergency" can the army intervene to maintain domestic order. In practice it has meant that the German military may assist in emergency relief efforts after natural disasters but cannot cooperate with law enforcement agencies in protecting the country from domestic threats. Second, the German constitution also proscribes firewalls between domestic and foreign intelligence gathering. Both agencies report directly to the German government and are legally prohibited from carrying out preventative operations against its own citizens or foreign nationals.

Since the 1970s when left-wing domestic terrorism confronted authorities with new threats, the Federal Republic of Germany has been particularly careful to enact security policies that balance the need for surveillance with individual privacy protections. Law enforcement agencies were given wider authority to investigate citizens and engage

in dragnets (*Rasterfahndung*) in the wake of terroristic violence by the R.A.F., while many provincial governments enacted privacy laws that sought to protect citizens from the misuse of personal data by government authorities or third parties.¹ It must be kept in mind that German authorities require comparatively high levels of personal disclosure by their citizens—all adults and their dependents are required by law to register at a local registration office and obligated to keep authorities informed of their residence status. As the welfare state in Germany has grown, so too has the government’s scope for information on its citizens, thus adequate data privacy protections have been a major legal and policy concern for close to forty years.²

In addition, the German public has proved extremely weary of using military force abroad, and reservations about the need for new security policies after 9/11 have dominated much of the political debate. The overall pacifist attitude toward military action in the German population has meant

that popular support for security policies are generally only found when they have a decidedly non-military, “civilian” or civil character. Add to that the latently nationalist connotations of “homeland” in German and it is easy to understand why German authorities have tended to eschew any direct equivalence between German civil security and homeland security in the United States.



2. WHAT IS GERMAN CIVIL SECURITY?

In practice German civil security is also much more modest in terms of scope and reach than homeland security in the United States. Rather than creating new institutions like DHS or broad-reaching reforms of the intelligence community, the German government has tried to improve governance on the margins by strengthening inter-agency cooperation and public-private partnerships. In 2003, for example, a holistic approach to protecting critical infrastructures (CI) between various governmental portfolios and private operators was formalized. In the German context, CI are organizations and institutions of special importance for the country and the population, where failure or functional impairment would lead to severe supply bottlenecks, significant disturbance of public order or other dramatic consequences. After an extensive discussion and consultation process between federal

and state governments, a national strategy was approved in 2009 that divided CI into nine functional sectors (energy, information technology & telecommunications, transport & traffic, health, water, food, finance & insurance, government & public administration, and media) and relies on the Federal Ministry of Interior, the Federal Office for Information Security, and the Federal Office for Civil Protection and Disaster Assistance to coordinate public-private projects designed to protect CI and share information on emerging threats.³

In 2007 the German Ministry of Education and Research (*Bundesministerium für Bildung und Forschung*—BMBF) enacted a federally funded grant program of approximately €375 million to foster interdisciplinary research and public-private cooperation in the field of security

studies and technology. Originally created for a five year period, the National Security Research Program (NSRP) was extended in 2012 for an additional five years.⁴

While the German government has led the way in developing rules and regulations for CI protection and funding research, some controversy has developed about the goals of the NSRP in general. This stems from the general pacifist attitudes in the German population and debates on university campuses about the so-called "civil clause". This rule, which fourteen German universities have already committed themselves to, bans research in areas directly related to military applications. Other universities have rejected commitment to such a clause, citing the principle of academic freedom and the fact that most research can be construed as "dual-use" with applications in both military and civilian contexts. The ambiguity of dual-use technologies is, in turn, used by critics to characterize the NSRP as covert military research.

Student and faculty petitions to ban all forms of research related to military and national security issues on German universities have existed since the beginning of the West

German Federal Republic in 1949, but have gained new momentum following revelations in the German newspapers in 2013 that German universities were receiving research funds from the Defense Advanced Research Projects Agency in the United States.⁵

Beyond the broader political controversy, there is also little academic consensus in Germany on what constitutes civil security as an academic field of research. BIGS has developed a working definition of civil security that includes police, firefighters, emergency response agencies, and other services provided by the state to citizens, as well as private enterprises that protect their employees and property through third party security services and products: At its core, German civil security involves reducing the probability of intentional damage caused to life and property and the risk of unintended losses resulting from natural disasters or technical failures of complex industrial systems. It encompasses emergency preparedness and response to both terrorist and natural disasters, authorities and organizations with security tasks (*Behörden und Organisationen mit Sicherheitsaufgaben*—BOS), as well as the protection of critical infrastructures and the environment.

3. THE PRIVATE SECURITY MARKET

There is little agreement about what constitutes the private security industry, and various definitions have been used over the years ever since the RAND Corporation produced a five volume series of reports that examined the regulation, licensing, and responsibilities of private security agencies and personnel.⁶ RAND defined the private security industry as "all types of private organizations and individuals providing all types of security-related services, including investigation, guard, patrol, lie detection, alarm, and armored transportation".⁷ One common function across most of the services is, according to the study, "crime prevention and detection". A study in 1985 argued that a broader definition of the private security industry that includes physical, information, and employment-related security is a more accurate representation of the roles

and responsibilities of private security, as opposed to the "private police" label applied by RAND.⁸ Bottom and Kostanoski state that private security provides protection against not only crime but also four additional threats: waste, accident, error, and unethical practice.⁹

The Private Security Task Force (PSTF), a group established by the Law Enforcement Alliance of America (LEAA), adopted a definition that includes "those self-employed individuals and privately funded business entities and organizations providing security-related services to specific clientele for a fee, for the individual or entity that retains or employs them, or for themselves, in order to protect their persons, private property, or interests from various hazards".¹⁰ The PSTF also restricted its definition to organizations with a profit-oriented delivery system and excluded quasi-public

police organizations unless they were paid by private funds. Green argued that distinctions based on profit orientation or source of funds are not useful because nonprofit institutions, such as hospitals, airports, and schools, often hire private security. He defined private security as “those individuals, organizations, and services other than public law enforcement agencies, which are engaged primarily in the prevention of crime, loss, or harm to specific individuals, organizations or facilities”. While these definitions are commonly cited, they were criticized in both Hallcrest reports because they are restricted to personnel and businesses, excluding the fast growing field manufacturing, distribution, and installation of security equipment and technological systems.¹¹

The broader view of the role of the private security industry prevails today. For example, American Society for Industrial Security International (ASIS), the largest association of private security professionals in the United States, has defined private security as “the nongovernmental, private-sector practice of protecting people, property, and information, conducting investigations, and otherwise safeguarding an organization’s assets.”¹² ASIS further argued that private security has a role in “helping the private sector secure its business and critical infrastructure, whether from natural disaster, accidents or planned actions, such as terrorist attacks, vandalism, etc.”¹³

In Germany and across Europe, there is also little consensus on a common definition of the private security industry. Due to the divergent definitions and various market segmentations, different approaches have yielded radically different results. In 2004 the OECD described the security industry in very broad terms as defense, counter-intelligence, state police forces, private security forces as well as providers of security technologies.¹⁴ Other studies put an emphasis on conceptual segments, thus structuring the security industry based on areas of application such as “border control”, “aviation security”, and “critical infrastructure”, such as the Ecorys study of 2009. However, this schema leads

to the overlap of both products and services, as all three segments require similar inputs (training, equipment, and other technology) for different applications. Other studies of the security industry in Europe suffer from similar deficits.¹⁵

Our team at BIGS has come up with a definition for the *private security* industry that emphasizes a broad understanding of security as *the sum of all products and services that provide protection from both manmade risks and threats as well as environmental and natural disasters*. We have grouped protection into seven different categories of risk and/or threat:

- the protection of the state borders on waterways, land, and air
- the safety of supply chains
- protection against pandemics and other biological risks
- detection and protection against chemical and radioactive threats
- national and international intelligence activities
- protection against organized crime and terrorism
- research on future technologies with security applications as well as their societal impact

BIGS has also developed a typology for understanding the market for civil security in Germany. We look at both supply and demand from a formal perspective and then offer data from a statistical survey on the private security industry in Germany.



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Demand

On the demand side are the “consumers” of protection. They are responsible for the overall public security of the population or have an economic interest to ensure their own protection or even a legal obligation as they supply a critical infrastructure. This demand structure is divided into three groups.

- *State actors:* A primary task of the state is the security of the population. Therefore, authorities and organizations with security tasks (BOS) form an essential cornerstone of the internal security of Germany. It includes law enforcement authorities and first response and relief assistance during disasters and crises. BOS include the police, customs agency, the Agency for Technical Relief (*Technisches Hilfswerk*—THW), fire departments, and other organizations of the emergency services and civil protection. BOS consume products from the private sector such as firearms, special vehicles, uniforms, and communications systems.
- *Private enterprise:* In addition to public agencies in the rescue services, private companies, and other private institutions are also active providing roadside, emergency automobile, and rescue services. Private companies also play a key role in the protection of CI. Operators of critical infrastructure are charged with protecting against a wide variety of threats and thus require products, services, and system solutions to help them provide for their own security or they entrust a third party with this task. Companies also must protect their property from theft or trespass or their products and intellectual property from counterfeiting and espionage.
- *Citizens:* Individuals bear responsibility for their own safety. The state cannot guarantee absolute safety to all citizens, at all times. According to the willingness to pay individuals, therefore, may purchase a higher level of protection through the use of security products or services. One’s own behavior can also have a significant impact on the probability of occurrence and the extent of damage from unwanted events. Preventative measures such as first aid courses or the use of an antivirus software help mitigate risks in everyday life.

Supply

On the supply side are private enterprises that offer products and services, which in turn are required by the needs of public agencies and other carriers to perform their duties. Research and training are also included and the structure of supply can be divided into five groups.

- *Physical protection service companies:* The primary focus lies on prevention and management of petty crime. This segment is characterized by the transferability of security practices and technologies used over different market segments. Due to a relatively high level of standardization of services, there are only small market entry barriers. However, due to economies of scale in this market and the partially required certification the supply side of this market may be highly concentrated. Thus one finds in this segment, companies

of all sizes, from small and medium-sized enterprises that are active in only one region, to global and highly specialized companies.



- *Technology companies:* Sophisticated technology is an essential part of physical security today. Therefore, some technology companies are increasingly seen as part of the security industry and offer technical solutions for new as well as traditional threats and challenges. Products come from both small and medium companies that offer partial solutions in terms of targeted technologies, as well as integrated solutions from large companies that offer equipment as well as comprehensive consulting and other services. The demand side often consists of a concentrated and limited number of customers that usually have detailed specifications and regulatory requirements. In many cases, state institutions and BOS are the end-consumers (i.e. critical infrastructure protection, border control, secure communication systems, biometric identification systems).
- *Classical defense industry:* Traditional defense contractors develop technologies and solutions for the military that can also be used for civil security purposes. These can include applications from communication technology and unmanned aerial systems, monitored with the help of control centers.
- *Cybersecurity:* The vulnerability of information systems has increased enormously by the increasing digitization of business processes and of social relations in recent years. Cyber-security includes both the security of IT systems, data storage, and the security of electronically processed information and sensitive commercial and industrial secrets. Attacks on information infrastructures have become more numerous and more complex in recent years. With cyber attacks originating both at home and abroad, states engage more frequently in this space, building defensive and offensive skills and using private companies as contractors, who have the requisite skills and technological know-how. Cybersecurity therefore includes all companies that offer information security as well as strengthen the confidentiality, availability, and integrity of data. This sector is diverse and heterogeneous, ranging from individual consultants to a large international firm or spin-offs of large technology and traditional defense companies.
- *Educational and academic institutions:* A standardized and qualitatively high level of training is an important part of a first-responder's professional development and has a long tradition in Germany. The interdisciplinary involvement of academic research institutions is still a relatively new development. Systematic research on security and safety-relevant discoveries, new technical solutions, and the social and economic effects of new technology or security measures has become an important part of the security architecture. The NSRP is the German government's premiere program in this regard.



Diagram 1: The Private Security Industry in Germany



4. CYBERSECURITY AND GERMAN CIVIL SECURITY

Cybersecurity has many national security and military implications. Because of political sensitivities to military action as well as institutional firewalls between military and civil security in Germany, it is important to look more closely at the concept and how it is understood. Cybersecurity has been defined in a variety of ways: in the most narrow sense, it encompasses the ability to monitor and control network systems and the information contained within it; increasingly it has come to refer to the broader interest in protecting "cyberspace" as the public, businesses, and the military rely on computer and network technology for the functioning of day-to-day operations.

The belief that a lack of proper provisions could have deleterious and wide-ranging consequences for the economy, the state, and society have led concerns for cybersecurity to become a top national security priority in the United States and elsewhere. In 2007 the Estonian government experienced a large-scale cyberattack on its networks, leading nine other nations in the EU—including Germany—to adopt national cybersecurity strategies in 2008. The North Atlantic Treaty Organization (NATO) was also quick to develop and implement a policy on cyberdefense, creating a management authority for the issue as well as a center of excellence in Tallin in 2008. In 2010 the US Army established the US Cyber Command, and in 2011 the Department

of Defense published a new cybersecurity strategy known as Cyber 3.0.

The German national cybersecurity strategy builds on the domestic inter-agency civil security initiatives such as CI protection that have emerged over the last ten years. Led by the Federal Ministry of the Interior and working together with national agencies such as the Federal Office for Information Security, the German Foreign Office, the Federal Ministry of Economic Affairs and Energy, as well as European agencies such as the European Network and Information Security Agency (ENISA), the strategy envisions strengthening and securing IT systems across private industry and public administration. At the national level, a National Cyber Response Center was established to work together with the German domestic intelligence agency and law enforcement authorities and coordinate information sharing so that weaknesses and vulnerabilities can be monitored and possible perpetrators identified. Also, a National Cyber Security Council was created in 2011 as a forum of coordination at the highest levels of the German government to develop important preventative tools for maintaining cybersecurity. It remains to be seen exactly

how the Council performs or what value-added it provides to German cybersecurity, as there is hitherto little public data or track record.

At the European and global level, the German strategy envisions a multilateral approach where German cyber policy is coordinated and pursued through international organizations such as ENISA, the United Nations, the Organization for Security and Cooperation in Europe, the Council of Europe, as well as the OECD and NATO. Germany is working through these institutions and others such as the International Telecommunication Union to establish a general code for state conduct in cyberspace.

It should be noted that the German cyber strategy has a decidedly non-military character to it. The Ministry of the Interior is the central political portfolio for the German cyber strategy and complements German efforts in civil security to maintain broad capabilities across a range of civilian institutions. It is unknown what role the German army plays in German cyber defenses, although as a member of NATO, Germany is a party to integrating cyber defense into a common multilateral defense planning process.

5. BIGS MARKET SURVEY 2012¹⁶

Due to insufficient primary data on the German security industry, a research team at BIGS conducted a market survey on the private security industry in Germany in coordination with the market research company GfK. Based

on an assessment of the private security industry, projections were made for the entire German market for security products and services.

Methodology

The market survey was conducted in the period from early October to mid-November 2012 through computer-assisted telephone interviews (CATI). Based on our definition of the security industry a sampling frame of 10,906 corporate addresses were collected

and specified as a selection of companies that could be part of the security industry. From this sampling, 696 companies were randomly chosen to be interviewed. The analysis of these interviews is presented in the following sections.

Important Facts at a Glance

Table 1: Projections for the Private Security Industry in Germany 2011¹⁷

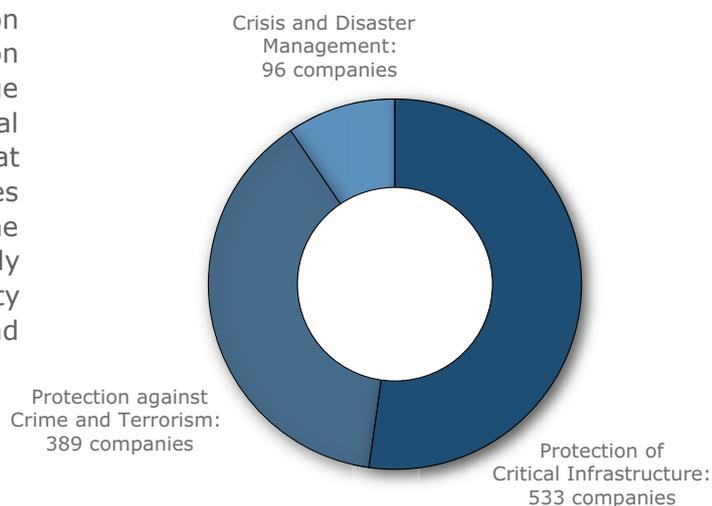
Projections	
Total turnover by the security industry in Germany (2011)	€ 35 billion
Employees in Germany	approx. 450.000 employees
Average sales growth (2011)	3.85 %
Average assessment future sales (for 2013)	4.16 %

- 16 % of the surveyed companies produce their equipment and offer services for authorities and organizations with security tasks (BOS) and other public agencies.
- A large portion of the client-base is in heavy industry and construction, accounting for roughly 20 %. In addition, services make up a 16 % share.
- Only about 21 % of security companies market their security equipment internationally.
- More than half of the security companies generate at least 50 % of their turnover in the industrial sector.
- On average, companies generate about 24 % of their sales in the public sector, 60 % in the industrial sector and about 16 % of their turnover is due to sales to private households.
- Many security companies see clear trends in the area of IT security, electronic security systems, security solutions, and other technological issues which are becoming more prominent.
- Therefore, data protection, data security and the protection of intellectual property (IP) are becoming increasingly important.
- The industry is facing classic business challenges in Germany, such as labor costs, price pressure, and the importance of standards for international sales of security products and services.
- Dealing with Intellectual Property (IP) was also seen as a key requirement for success in international markets by surveyed companies.

Industry Sectors

Companies were initially asked whether they offer products and services for the protection of critical infrastructure, for the protection against crime and terrorism, or to manage crises and natural disasters. The statistical analysis of the first question indicates that around 77 % (533 of 696) of the companies offer their products and services for the protection of critical infrastructures. Only about 14 % of the companies produce security products and services to manage crises and disasters.

Figure 1: Scope of the Private Security Industry



Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

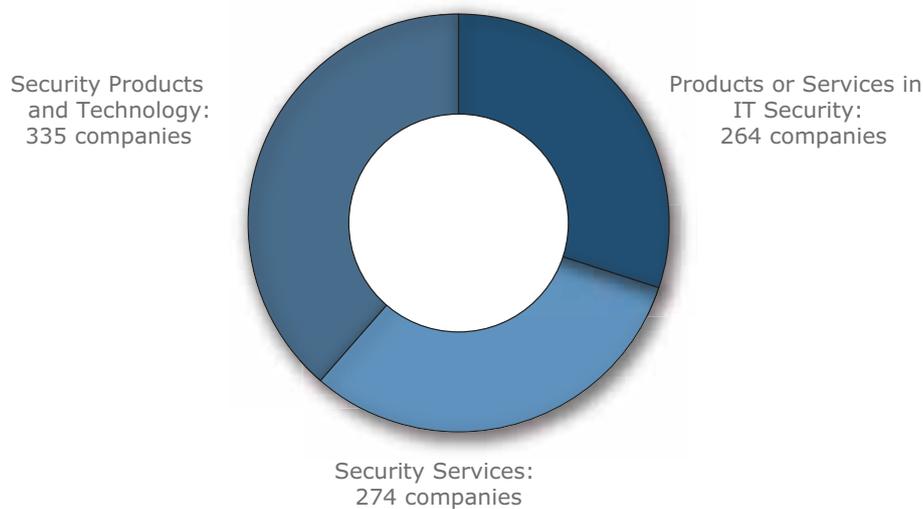
Scope of the Private Security Industry

We have organized the market on the basis of product categories that map the diverse and heterogeneous sectors into a meaningful market overview. We inquired about the range of products and services companies offered and divided them into three main categories:

- IT Security (Products & Services)
- Security Products and Technologies
- Security Services

Multiple answers were possible both in the three main categories as well as in the following sub-categories. The portfolio of some companies includes both products and services that can be assigned to multiple categories. The figures given below are the absolute number of companies that are active in the respective top categories.

Figure 2: Areas of Business Activity



Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

IT security

IT security is listed separately in light of its status as a transformational technology across sectors, and for its applications in areas of classical security products and services. It is

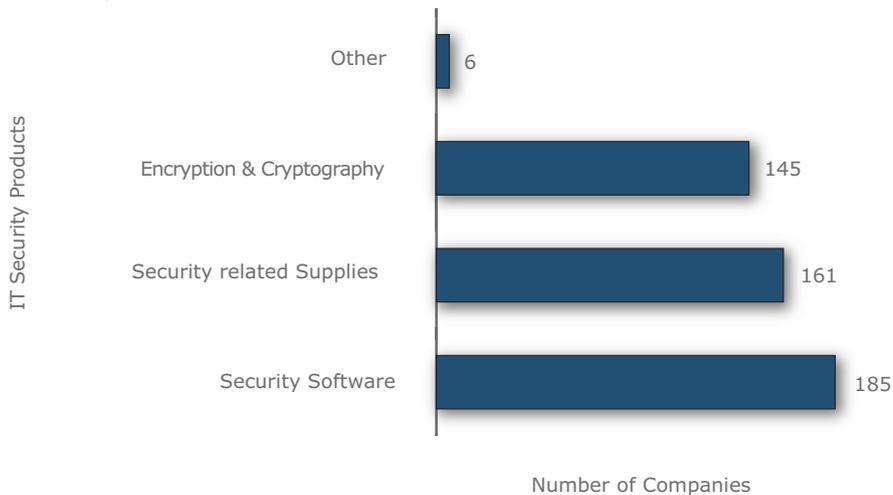
important to stress that IT security comprises more than a third of all activities of the private security industry in Germany.

IT security products

Software takes up a prominent position with 185 responses, including anti-virus programs, firewalls, tracking and recovery programs. 161 companies named accessories such as server cabinets, computer locks, and system

solutions for hardware security. Encryption & cryptography include the production and distribution of software and hardware, which are listed as business activity by 145 companies in the survey.

Figure 3: IT Security Products



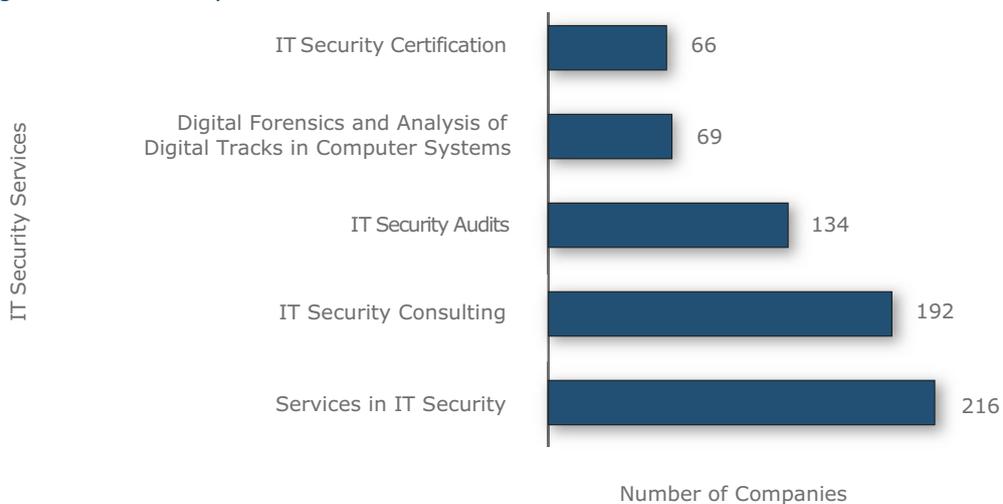
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

IT security services

IT security services comprises 216 firms in data protection, network security, operating system security, data recovery, and IT security management programs. IT security consulting ranks second and includes the creation of conceptual security models, risk analysis and safety training. IT Security Audit involves the review of existing security systems and processes, while digital forensics involves

the study of suspicious incidents involving IT systems as well as the determination of offense and offender through detection, evaluation and analysis of digital traces. Companies that offer certifications in the field of IT security both according to ISO standards and to other norms make up the smallest category in this group.

Figure 4: IT Security Services



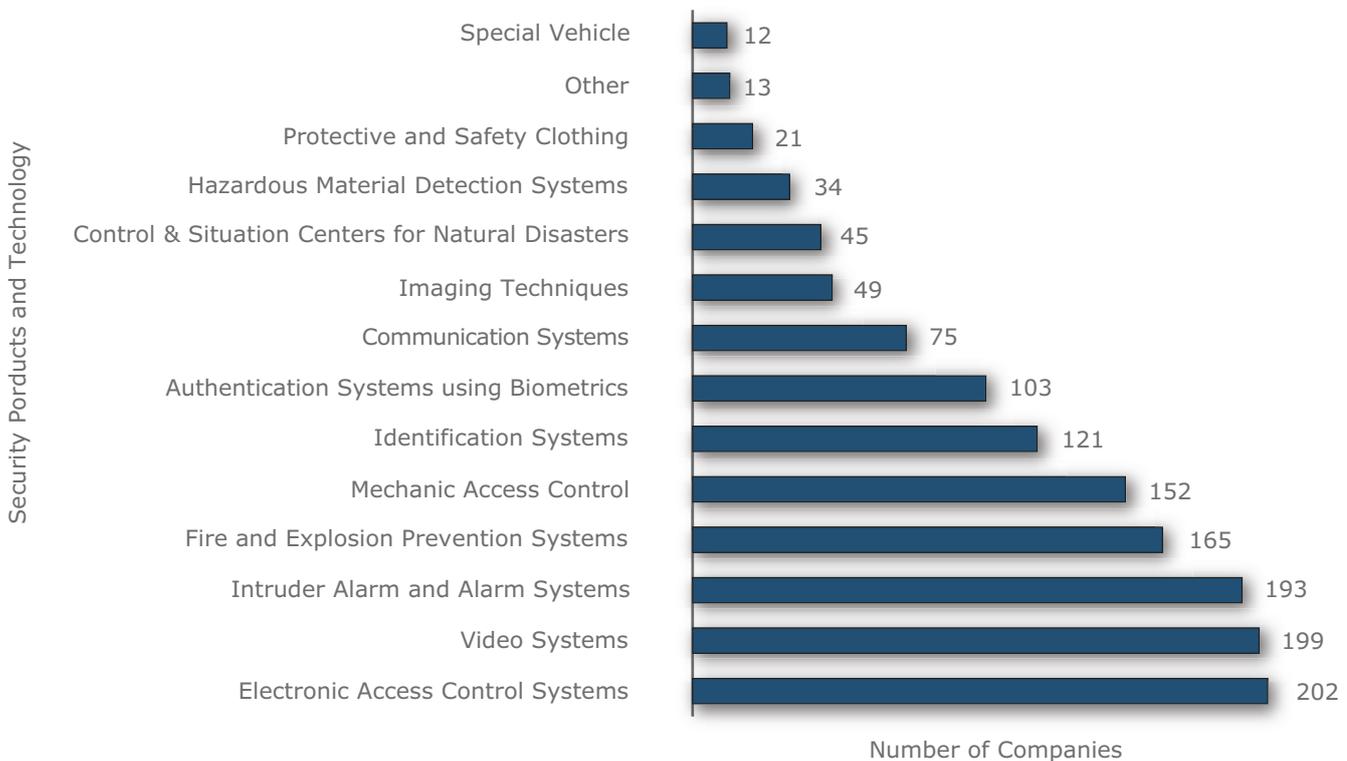
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Security Products and Technologies

In Figure 5 you can see the importance of access control systems in the security industry. These systems include access to buildings and sites as well as access to transport infrastructure and electronic ID systems. Video surveillance systems are made by 199 firms and intrusion detection and alarm systems account for 193 firms. Fire and explosion protection systems include products such as smoke detectors, fire extinguishers, fire doors, and gas warning devices and were recorded in the survey with 165 nominations. The category "mechanical access control" lists

with 152 nominations locks, locking systems, fittings and barriers. Identification systems and RFID radio tags were recorded with a total of 121 nominations. Imaging techniques include X-ray machines and computer tomography (CT), while hazardous substance detection is concerned with CBRN-hazards as well as chemical, biological, radioactive, and nuclear hazards. Vehicles and protective clothing are converted to or manufactured for police, fire brigade, federal agency for technical relief (THW) as well as other security services.

Figure 5: Security Products and Technology



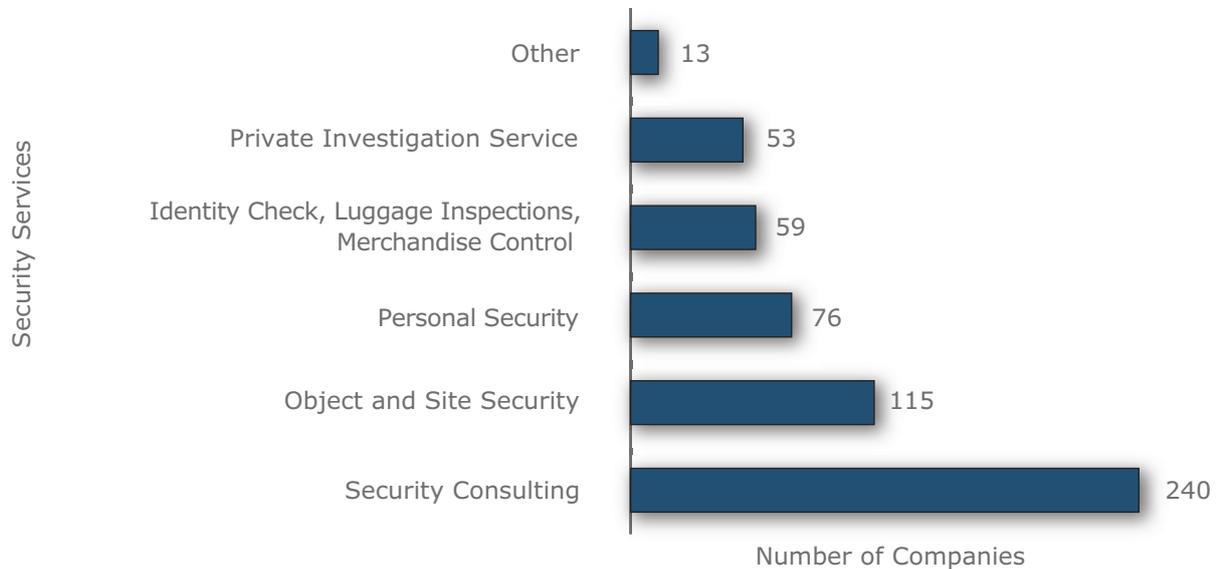
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

Security Services

Security consulting includes all companies that offer security audits, risk assessments, advice on technique and safety management systems and the development of security concepts. Property protection and site security services account for 115 entries with

regard to the protection of buildings, plant, compounds, transport infrastructure and the transport of funds by staff. The remaining categories include the labor-intensive economic dimension of security, in which the employment of people is required.

Figure 6: Security Services



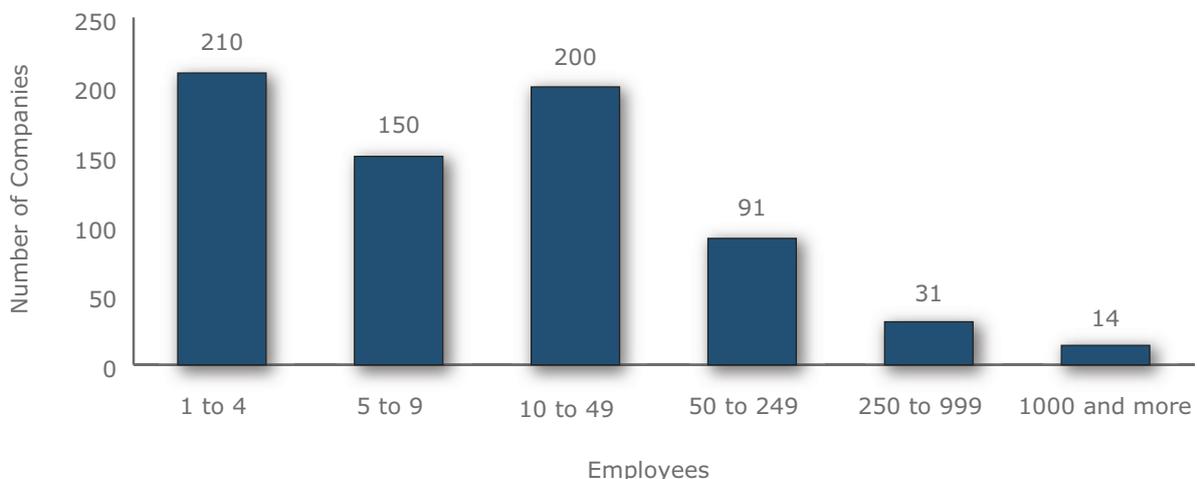
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Employment

Based on a series of questions about employment the distribution of employees is given in Figure 7. More than half of the companies surveyed have fewer than ten employees. The results of the market study confirm that the German security industry is

characterized by many small and medium-sized businesses, at the same time, however, some large companies are represented in the industry as well. In particular, these large companies here have a diversified product portfolio.

Figure 7: Employment in the Private Security Industry in Germany 2011

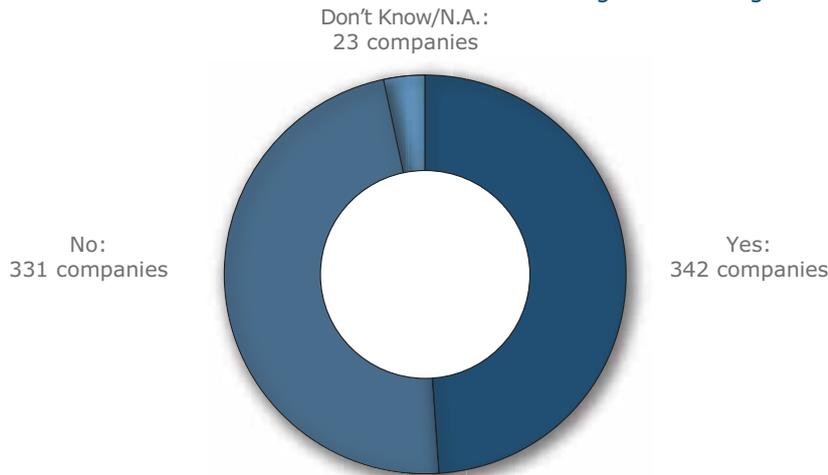


Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Almost half (a total of 342 companies) of the security companies want to hire new employees in the next twelve months. The number of planned new hires varies greatly depending on the company size. The figures range from one new employee to up to 500 new ones.

Overall, 342 security companies are planning to hire new employees for 2013. Furthermore, all companies were asked whether they had difficulties in finding suitably qualified personnel. Approximately 64 % answered yes.

Figure 8: Hiring New Employees in 2013



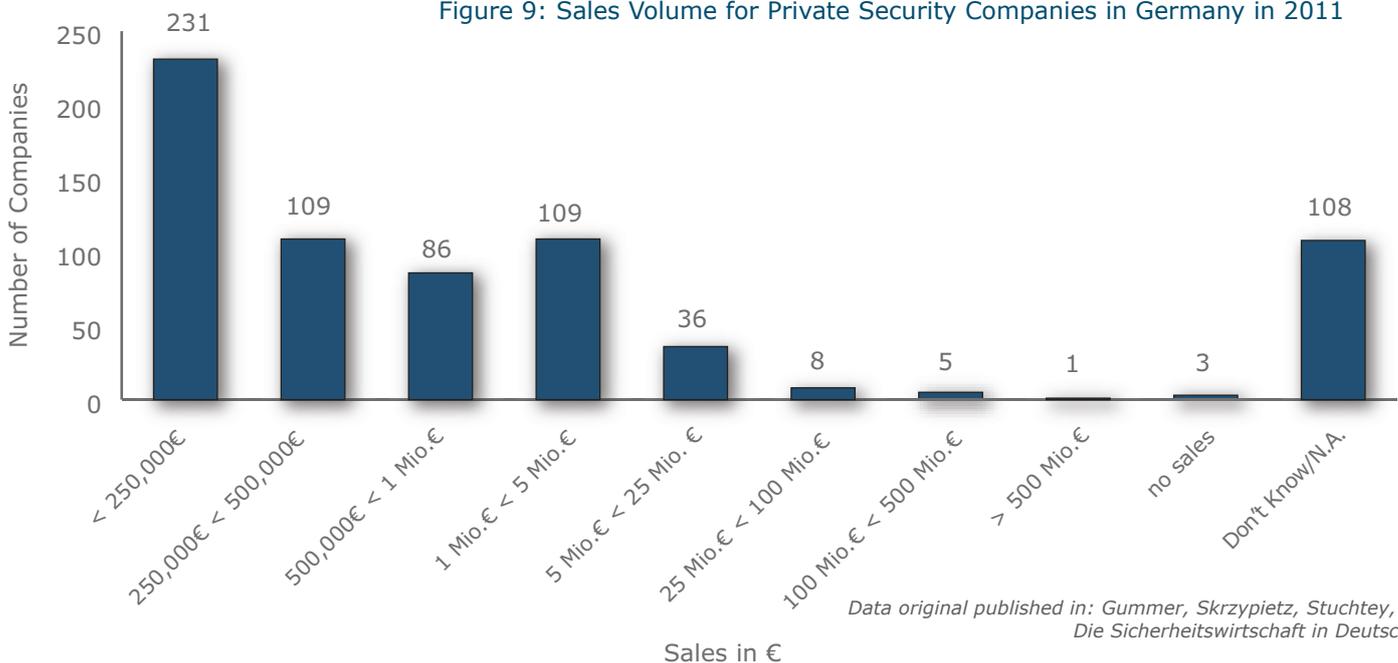
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Allocation of Sales Volume and Sales Trend

The determination of actual sales figures in business-to-business surveys is fundamentally difficult because not all companies talk openly about this issue. Nevertheless, in order to generate some information on sales of

security companies in Germany, survey used eight scales for sales figures, which can be seen in Figure 9. Companies were asked about their sales in 2011 with security products and services in Germany.

Figure 9: Sales Volume for Private Security Companies in Germany in 2011



Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Almost half of the companies generated a turnover of less than 500,000 € in 2011. A total of 50 companies generated more than 5 million Euros in sales with security products and services in Germany in 2011. A more detailed analysis of the 50 companies with the largest turnover shows that 44 % (22 of 50 companies)

marketing their services internationally. It is also noteworthy that of these 22 companies operating internationally - 17 offer security products and technology in their portfolio. The overall conclusion is that among the 50 largest companies, most offer either products or technology.

Key Performance Indicators

Based on the findings of the methodological report from GfK and the present results of this market study, a prospective base population of the security economy was calculated to consist of 5,790 companies in Germany. This number of enterprises is the basis for the extrapolation with respect to the total turnover of the security economy in Germany, which can be seen in Table 2. With regard to

the questions for future sales development, it is important to note that companies expect sales growth for the German market in general to be significantly higher in 2013 than the growth of their own business. Additionally, their own medium-term growth prospects are rated with 4,68 % worse than the estimates for the current year.

Table 2: Key Performance Indicators for Sales and Sales Trends

Projections	
Total turnover by the security industry in Germany (2011)	€ 35 billion
Average sales growth (2011)	3.85 %
Average assessment future sales (for 2013)	4.16 %
Average mid-term assessment future sales (3-5 years)	4.68 %
Average assessment sales growth for German security industry in general	5.79 %

Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.¹⁸

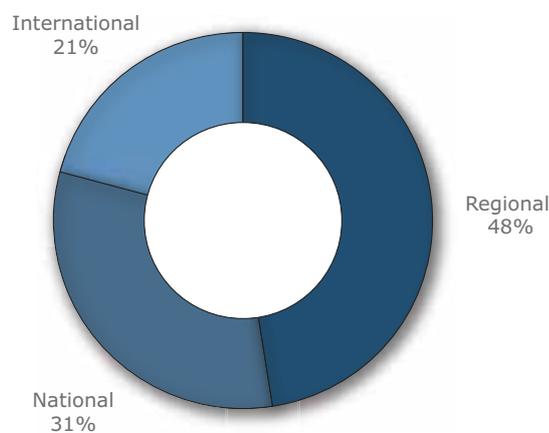


Geographical Market Data

The Market for Security Products and Services

Security companies were asked whether they market their security products and services regionally, nationally or internationally. This question allows for the analysis of the market space in which companies are active. Overall, 79 % of companies are active on national markets. Only about 21 % of security companies market their security equipment internationally. These 21 % consist of 149 companies of the market structure survey. With regard to these companies, results concerning export shares of their turnover can be presented.

Figure 10: Geographical Market for Security Products and Technology

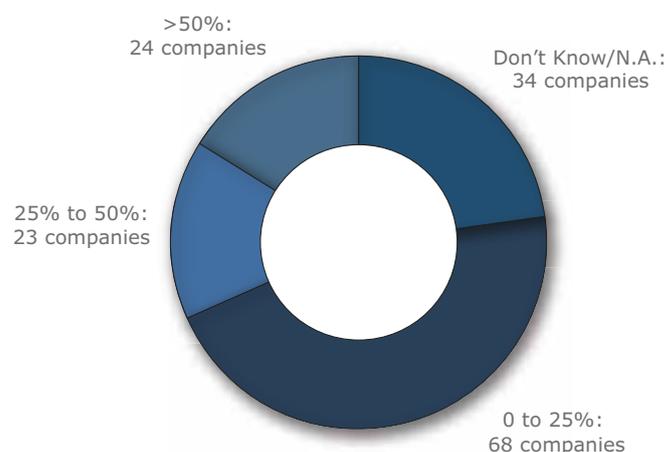


Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Export share

It is worth noting that for most companies, sales generated by exports make up only a small share of their total turnover. Only 24 of the companies surveyed have an export share of over 50 %. Looking at all the companies surveyed, only about 3 % generate more than half of their revenue from abroad. Thus, export seems to have no great relevance to the revenue for most of the companies in the security industry in Germany.

Figure 11: Share of exports from total sales



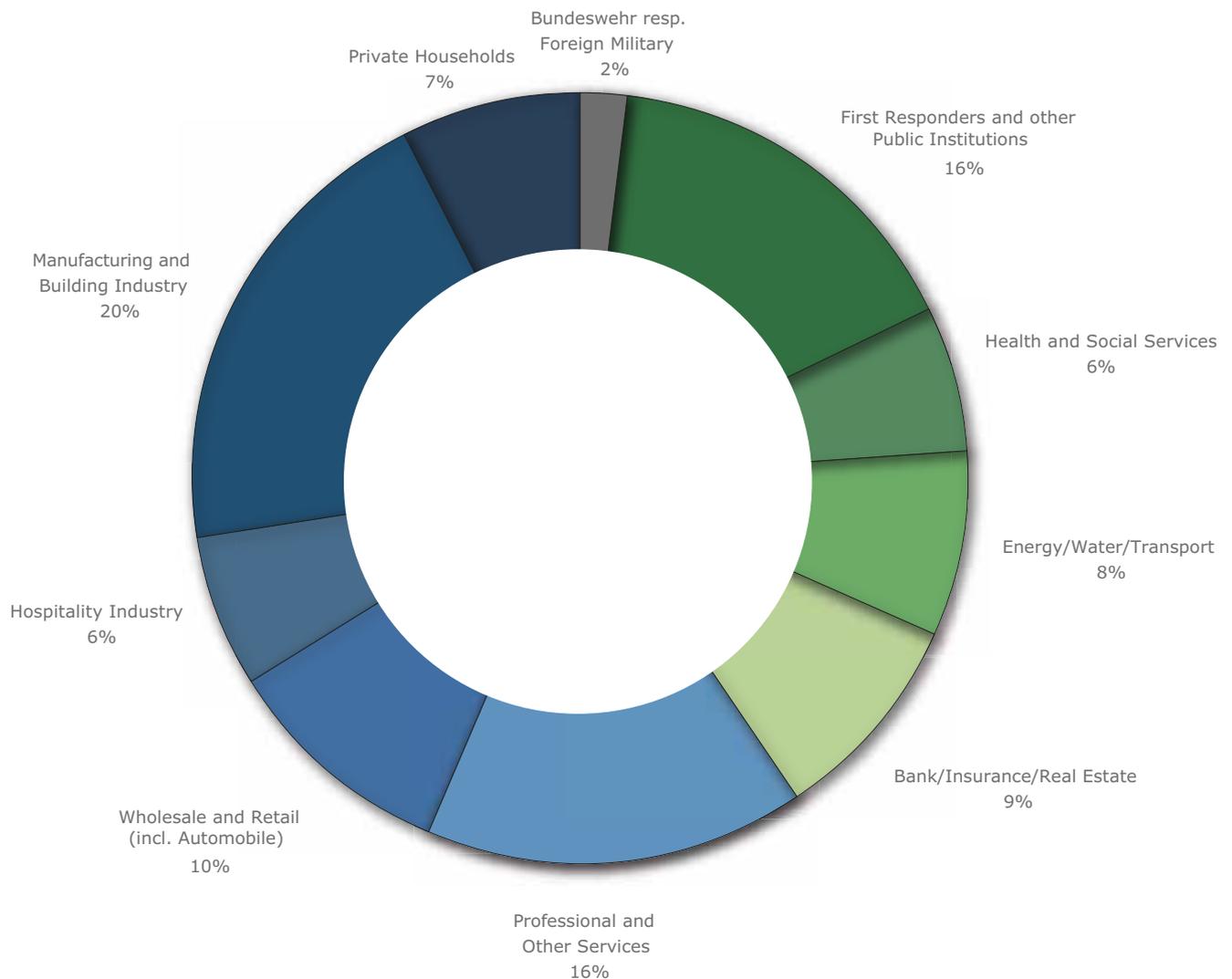
Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, Die Sicherheitswirtschaft in Deutschland.

Sectors of End-Users of Security

Companies were also asked about the sectors to which their customers belong. The results show a diversified picture. A total of 16 % of the surveyed companies produce their security equipment and services for BOS and other public institutions. Compared to the other customer sectors, the state plays an important role as a consumer in the security market. A large customer segment is the

manufacturing industry with 20 % and the construction industry with 16 % of the service sector. With a 2 % share of the industry distribution, the armed forces or the foreign military seems to play a subordinate role as buyers from German security companies. This result, however, is grounded in the survey design, as the survey ruled out any companies that are active in the defense sector alone.

Figure 12: Sectoral Distribution of End-Users



Data original published in: Gummer, Skrzypietz, Stuchtay, 2013, Die Sicherheitswirtschaft in Deutschland.

Distribution of Sales to Public Agencies, Private Enterprises, and Households

Especially with respect to the intention of building a security indicator for Germany and being able to analyze who provides protection for society and who finances said protection, it is of great interest to know about the distribution of sales between public sector, industrial sector, and private households.

Table 3: Distribution of Sales across Public, Private, and Household Sectors

Percentage of total sales	Number of Companies		
	Households	Private Industry	Public Sector
0 %	313	35	216
> 0 to 25 %	198	58	219
> 25 to 50 %	133	212	193
> 50 to < 100 %	40	295	49
100 %	12	96	19
Total	696	696	696

Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

The results reveal that the public sector is of minor importance as a purchaser especially in relation to the industrial sector. More than half of the security companies generate at least 50 % of their revenue from the industrial property sector (295 + 96 companies), whereas only 10 % of companies achieve the same by the

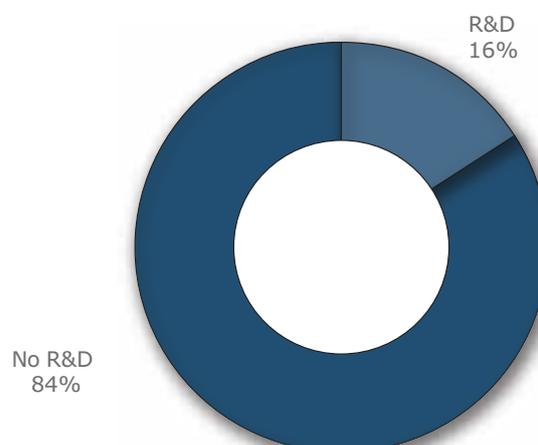
public sector (49 + 19 firms). At the same time, all three sectors make up important markets. On average, the surveyed security companies generate approximately 24 % of their sales in the public sector, about 60 % in the industrial sector and 16 % by private households.

Research & Development

Research and development (R&D) is an important aspect of innovation in any industry. New technology, processes, and organizational concepts also change products and services of the security industry and increase their productivity.

The security industry in Germany is characterized by an intense need for personnel and long-established practices in which R & D plays a relatively minor role. In this sector around 16 % of all businesses are actively involved with R&D as shown in Figure 17. 16 % refers to 114 companies in the present study.

Figure 13: Share of Companies Engaging in Research and Development (R&D)

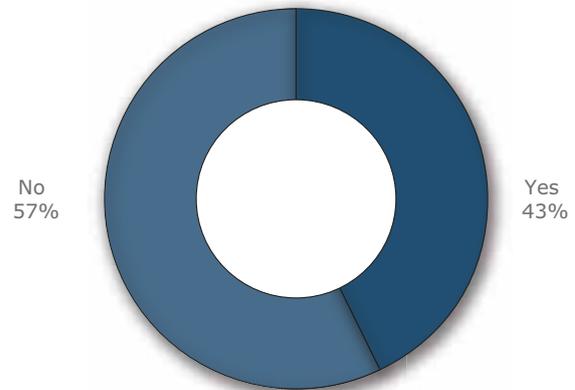


Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

Patents

Out of the group of companies doing research, 43 % have patents pending. This includes the collection of 49 security companies that are trying to protect their innovations legally. It draws attention to the important role of technological advances and new methods for research-based security companies.

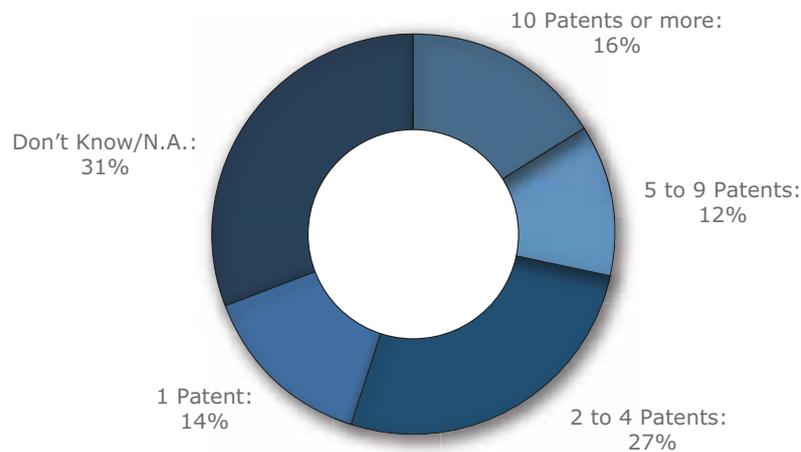
Figure 14: Patents in the Private Security Industry



Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

Relevance of the Patents for the Security Market

Figure 15: Patents relevant for the security market



Data original published in: Gummer, Skrzypietz, Stuchtey, 2013, *Die Sicherheitswirtschaft in Deutschland*.

For those security companies investing in research and who do file for patents, the relevance of patents is considerable. Almost a third of all companies in this category indicate that they have registered at least 5 patents.

Based on the research and administrative burdens, it is not surprising that the majority of companies sign several patents in order to effectively use their resources.

Private security organizations play a number of important roles in Germany, ranging from guard and investigative services to alarm monitoring, armored transport, security consulting, and cyber security. The growth in private security has been driven in part by the increasing level of outsourcing of security functions in areas including commercial security, the privatization of certain policing functions, and infrastructure protection. The security industry is characterized by a heterogeneous composition of companies that offer both expertise and capital-intensive, but also labor-intensive products and services. The industry's growth in 2011 was slightly higher than the general economic growth in Germany, so that our examination may confirm the above-average growth for the security industry as is also argued in other studies.

The survey contributes significantly to our knowledge base of German civil security and the private security industry and provides

the first ever holistic analysis of the security sector in Germany. Based on a broad and cross-associational definition of the security industry, we were able to extrapolate key figures for this emerging industry in Germany. Our goal is to create a better empirical foundation to promote a dialogue between the state, industry, and society about the role of security in Germany, as well as to establish an instrument that helps the security industry itself to facilitate future decision-making.

Our objective is to further develop the existing data set and establish a time series in the coming years by conducting periodic surveys. We are also working towards providing comparable data for similar European markets in order to enable an international comparison. In particular, we aim to analyze the impact of different regulatory frameworks. This will allow us to make an important contribution to the debate on the security policy and the security industry in Germany and Europe.

Dr. Tim H. Stuchtey studied economics at the University of Münster and completed his doctoral degree at the Technische Universität Berlin in the field of economic and infrastructure policy. In 2010 he became Executive Director of the newly-founded Brandenburg Institute for Society and Security (BIGS) in Potsdam. His research focuses include the economics of security, transatlantic economic relations and classical regulatory policy.

Dr. S. Chase Gummer worked as Senior Research Fellow at BIGS from 2012 until 2014. He earned his B.A. from the University of Texas at Austin and completed his M.A. and Ph.D. from Georgetown University. He has written on issues relating to international economics, economic history, as well as the security industry in Germany. Dr. Gummer now works for the Wall Street Journal in Germany.

FOOTNOTES

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17. Adjustments have been made to the original figures published in 2013.
18. Adjustments have been made to the original figures published in 2013.

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