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DEVELOPMENT AND CURRENT STATE OF E-GOVERNMENT IN THE FEDERAL REPUBLIC OF GERMANY

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ABSTRACT

The state and its administration have been constantly confronted with profound changes, which they not only faced, but which must be shaped in order to better fulfil their diverse tasks and be able to fulfil their responsibilities. One such modern and fast-moving change is digitalization, which affects every area of life. The potential of digitalization has, of course, also affected the administrative activity of the state, from the design of optimal framework conditions for the economy and society through the improvement of infrastructure to more efficient administrative work. The aim of the article was to identify the key moments in building e-Government in Germany and, in the context of assessing its current state, to identify the main shortcomings of German e-Government. In this context, we have focused on defining and clarifying the nature of e-Government, introducing the positives and negatives. In the second part, we have focused on a brief analysis of the development and current state of implementation of the e-Government concept in Germany. The biggest shortcoming of the German public administration in terms of digitalization is the issue of effective interconnection of online services into one functioning overall system. There is still no central portal in Germany that contains all the information and service offers from a single source. It is still in the process of building. Even public registers, i.e., data collection and office archives, are not sufficiently interconnected. It requires, first and foremost, political will, an attractive range of services, initial investment as a driving force and a source of inspiration, and municipalities and Länder are also key in this process as the first points of contact for citizens

Key words: Public Administration, Informatization of Public Services, E-Government, Germany

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Introduction

The process of digitalization is one of the current topics of today's life with an overlap into several diverse areas. The world is going through the so-called fourth industrial revolution. This will undoubtedly affect all areas of citizens' lives, as well as production, logistics, factory equipment in terms of modernisation and deployment of machinery, artificial intelligence and other technologies, or security in the virtual world, healthcare, online trading, etc. Technological developments also related to the field of e-Government naturally concern the states themselves. We can then combine all these areas under one umbrella concept, namely, digitalization.

Digitalization of public administration or so-called e-Government is a term that has been used in our country for the last few years. E-Government originated in the 1990s in the USA, and subsequently several countries tried to develop this concept in their e-Government programs. Examples include the United States, the Netherlands and Estonia, which are world leaders in e-Government. Advanced e-Government services can now be found in several European countries and other countries in the world, like Australia or Singapore. In the 21st Century, e-Government has become an important tool for change in public administration, bringing higher quality to the overall process of providing services to citizens, better results, and performance in the public sector. However, the proper implementation of e-Government requires the involvement of several levels of public administration (mainly state administration) and horizontal cooperation between agencies in order to strengthen the principles of the so-called well-governed society, including democratization, efficiency, transparency, coherence, and public accountability.

In European countries, there are basically 3 types of public administration bodies that are responsible for managing or coordinating the digitalization of public administration (e-Government). Most often, this responsibility is entrusted to an existing ministry, in particular the Ministry of Finance, Public Administration or Transport and Communications. This category includes Denmark, Estonia, Finland, Germany, Norway, Slovenia, and Spain. In countries such as France, Italy, Austria or the United Kingdom of Great Britain and Northern Ireland, responsibility for eGovernment is entrusted to the Prime Minister or Government Office. The last group are the states that have established a special body for this area (most often a ministry or agency). This is the case in Belgium, Bulgaria, Poland and Slovakia. As e-Government is a new concept that individual states

have gradually applied to their national regulations in order to improve the services provided to citizens, we can include it among the phenomena of the 21st century in public administration.

The trend of putting this phenomenon into practice can also be observed in Germany, where there have been several ongoing projects of digitalization of public administration since the 1990s. In Germany, the Federal Ministry of the Interior is responsible for e-Government. As of January 1, 2008, the Office of the Federal Government Commissioner for Information Technology (Beauftragter für Informationstechnik) was also established. The Commissioner is Secretary of State at the Federal Ministry of the Interior and is primarily responsible for developing the e-Government and Security Strategy for Federal Information Technology (IT), overseeing federal IT security, developing architecture, standards and methods for federal IT, and overseeing the provision of central IT infrastructure. The challenges facing the political and administrative system of the Federal Republic of Germany today are diverse and enormous. Germany simply does not meet public expectations to this day. New information technologies are among the most important tools available to address them. It is therefore not surprising that the most diverse expectations are associated with the concept of e-Government. But now they have taken on dimensions that suggest pious desires rather than rational analysis. The main challenges facing the German public administration in terms of digitalization today can clearly be:

- a question of effective interconnection of online services into one functioning overall system;
- the issue of poor use of e-Government by German citizens;
- a question of the lack of public awareness about the portfolio of e-Government services;
- a question of citizens' concern about the digitalization of services in public administration.

Despite interesting approaches and some successes, it can be predicted that many of the hopes associated with the new e-Government paradigm are not being fulfilled in Germany either. There is even a risk that exaggerated expectations will turn into disappointments and incite general discrediting e-Government. In this context, we will focus on defining and clarifying the nature of e-Government, introducing the positives and negatives. In the second part, we will focus on a brief analysis of the development and current state of implementation of the e-Government concept in Germany. The aim of the article

is to identify the key moments in building e-Government in Germany and, in the context of assessing its current state, to identify the main shortcomings of German e-Government.

Methodology

As we stated in the introduction, the aim of the paper will be to identify the key moments in building e-Government in Germany and at the same time in the context of assessing its current state to identify the main shortcomings of the German e-Government. It follows from the above that the object of the research will be the phenomenon of e-Government in the country we have chosen, and that is Germany. The reason why we chose this country is the fact that Germany is a country that is a model for many countries in various fields (economic, social, political, cultural, etc.), but in terms of public administration and especially the issue of its e-government, we must state that Germany is currently far behind the countries with significantly lower economic power when it comes to the digitalization of public administration. Despite many ongoing projects that have had their potential, the German e-Government is still unable to compare itself with countries such as Sweden, Switzerland or Austria in the use of e-Government services. So, it is a kind of paradox that a country so advanced in many areas is a model for many others, but paradoxically, there is still much to learn in the modernization and digitalization of public administration. Therefore, we consider it interesting to bring the issue closer to the academic community. Paradoxically, Germany is not one of the leaders in Europe in this area.

Regarding the methodology and application of methods in the research and evaluation of electronic public administration, there is a lack of guidelines in the professional literature that can facilitate the application of methods of evaluation of electronic public administration. For the research of e-Government and its possible evaluation (which is the aim of our contribution), several tools are proposed, which are based primarily on the practice of its application. These tools thus make it possible to assess the degree of implementation of the elements of e-Government in individual countries and even to compare these countries. However, if we want to evaluate the implementation of elements of e-Government at the level of the countries of the European Union (i.e., Germany also belongs here), we will encounter the absence of suitable tools. Even the European Union itself and its institutions, which incorporate elements of e-Government into practice directly to improve the quality of democracy, do not specify tools for

measuring their effects. For this reason, it is very difficult to clearly define the exact research methodology of this issue. It is such a modern phenomenon that its research is still unfinished and in the process of scientific research.

If we want to outline to the academic community certain methods for evaluating the potential of e-Government, we can mention several types, which, however, have been developed in a different context. The authors A. Chadwick and C. May are based on the analysis and comparison of the current practice of introducing ICT (Information and Communications Technology) into public administration in the USA, Great Britain and the European Union (EU as a whole) and talk about three ideal types of e-Government. According to them, the management model is characterized by effective information provision to user groups, improving and accelerating the flow of information, regulations and new laws to support the "new economy", the absence of questions about the ability of recipients to obtain and interpret information and one-way flow. The consultative model is characterized by voting, voter and stakeholder access to government, advisory referendums, elements of direct democracy (direct contact between government and citizens), focusing on respondent selection problems, technical isolation between citizens and their representatives, and a one-way flow of information. The participatory model of e-Government is found where there is a civil society separate from the state (or another unit), where democracy has already emerged, where voluntary associations and spontaneous interactions are created within cyberspace. Other conditions are a sufficiently broad approach encouraging broad political participation, protection of freedom of expression and the right to expression. Thanks to the logic of the information society, the participatory model of e-Government should prevail over the other two models, according to the authors. It is clear from this division that the way in which e-Government is practiced depends not only on technical possibilities, but also on other prerequisites for public administration. In all monitored cases, the managerial model predominates, although the authors identify several cases of partial application of the other two models. However, the managerial model is characterized by maintaining the previous status quo of an unequal distribution of power (Chadwick, May, 2003). Despite its state-centric view, the typology of A. Chadwick and C. May provides a partially suitable starting point for the evaluation of e-Government in public administration at the European Union level, as it reflects not only specific forms of interaction between actors but also the specifics of the context in which interactions take place. It can also be used with reservations for the needs of this work, especially in the sections dealing with the

assessment of the state of German digitalization of public administration.

As we will also pay attention to the historical development of e-Government in Germany, in this historical theoretical-analytical method we will help the so-called phase models. In the professional literature, several authors have developed their own typologies of e-Government, also reflecting the process of development of this concept. The common denominator of these three-to five-phase e-Government models is the assumption that e-Government has gone through and continues to go through several phases, from simple information provision to an interactive phase usually associated with democratization potential. There are usually five basic phases. The first phase can be described as a "billboard", the second phase is characterized by a partial offer of services, ideally these phases are replaced by a portal phase with fully integrable services and then a continuous phase with fully integrated e-services without administrative boundaries. Potentially the last phase is the phase of interactive democracy, when the line between e-Government and e-Governance is lost. (Wimmer, 2003) In our case, as will be inferred from our contribution, Germany oscillates somewhere between the phase three and four, but even these are not completely perfect.

1. The importance of the phenomenon of e-Government in the 21st Century

The term e-Government emerged in the late 1990s, but the history of computing in government organisations can be traced back to the beginnings of computer history. A literature

on "IT in government" goes back at least to the 1970s. This literature concerns IT use within government, while the recent e-Government literature more often concerns external use, such as services to the citizens. While some earlier e-Government computer issues, such as office automation, may not be highly relevant to research today, many issues are, for example decision making, service processes, and values. All definitions of e-Government go beyond services to the citizen to include organisational change and the role of government. (Grönlund, Horan, 2004)

In the 90s of the 20th Century, there was a so-called period of the new knowledge economy, which meant the transfer of the market economy principle to public administration through the use of new principles. One of them was e-Government. In 1992, a proposal was submitted in the United States called the

National Performance Revue, and a year later it was approved. The USA was thus the first country in which e-Government was introduced in public administration, at that time it concerned a specific area of healthcare. The United Kingdom, Australia, the Netherlands and others followed the United States with the introduction of e-Government elements. The first European country to follow them was the Netherlands, later Estonia, Austria and the Scandinavian countries. (Grönlund, Horan, 2004)

The introduction of information and communication technologies into public administration activities is a natural part of the process of informatization of the whole society. This informatization of public administration has come to be referred to in the professional literature as e-Government. Informatization of society means a gradual transition to the maximum use of information and communication technologies in all areas of social, political and economic life. In this context, we could subsequently define e-Government as the introduction of information and communication technologies into public administration, together with organisational changes, new procedures and skills in an effort to increase efficiency in service delivery, increase transparency and strengthen public policy. E-Government postulates the use of information and communication technologies, especially the Internet, as a means of achieving better governance. (OECD: The e-Government Imperative, 2003) The main goal of e-Government is for public administration to serve the public with the help of the latest technologies, not only externally towards the citizen or also within the internal system.

E-Government contains several processes. It is not just about informatization itself, but also about digitalization and electronization. The term computerization refers to any information that is provided through websites on the Internet. Digitalization is a process in which material things are digitized into electronic form, with the help of Internet portals and websites. Electronization represents services that are provided electronically, the so-called online services. E-Government refers to the activities of public (state) administration made available electronically through information and communication technologies. E-Government is thus essentially a digital interaction on several levels. This means that e-Government issues apply to all levels of government, from local to international.

According to the communicating parties, we distinguish the following "online"

forms of e-Government (Fábryová, 2011):

1. G2C (Government to Citizens) - communication between public administration and citizens
2. G2B (Government to Businesses) - communication of public administration with entrepreneurs
3. G2E (Government to Employees) - communication between public administration and employees of institutions falling under public administration
4. G2G (Government to Governments) - communication between public administration institutions
5. G2A (Government to Administration) - communication between administration and administration
6. C2G (Citizens to Governments) - communication of citizens and public administration bodies

In the implementation of e-Government, it is necessary to consider the following seven main principles, which are (Chrenová, 2020):

- accountability (more accountable, efficient, transparent and open government, such as publishing contracts on the Central Register of Contracts)
- provision of electronic services (public authorities provide online services to citizens, thus cutting red tape and unnecessary paperwork that takes place in offices)
- transparency and fair access (the aim is for all citizens to be involved in the decision-making process, such as e-procurement)
- governance (represents an alternative experimentation with people's electoral approach, such as online elections)
- economic development (in the transitional period, when services are provided electronically and on paper, more people need to be employed in the state administration, which increases the state costs, but this transitional period lasts about 2 years and when the electronic system works effectively, the state costs decrease as redundancies will follow)
- modernization of electronic activities (represents the purchase of constantly new technology, such as computers and software)
- improving ties (with the business community and the media is possible in cooperation between public authorities and the third sector)

We can state that the purpose of e-Government is to streamline, simplify and make transparent the performance of public administration. This new phenomenon represents new possibilities of communication between the public and state and public administration institutions. The introduction of e-Government elements into the public administration system has so many advantages, but it is also necessary to talk about its shortcomings.

2. Positives and negatives of e-Government

The aim of e-Government is to provide information, services and knowledge, to save money and time not only for the state but also for citizens, especially when dealing with official matters. The advantage in this context is the reduction of administrative burdens and easier and faster availability of information for citizens. They do not have to state their data each time they arrive at the office, as the data will be collected from the completed form at one contact point and recorded in the register, which will be displayed to the individual offices due to the interconnectedness of the system. This leads to a shortening of the processing time. (Špaček, 2012) Other positives are the efficiency of the institutions' activities externally (especially towards citizens) as well as the efficiency of their internal functioning (reduction of public administration expenditures). The provision of e-Government services leads to an improvement in the provision of existing services and creates space for the provision of new services. Another advantage is the fact that e-Government acts as a catalyst for reforms, as it helps the reform and modernization processes in public administration. Finally, it reduces corruption and deepens trust between government and citizens. It strengthens confidence by opening and making decision-making processes transparent. It enables greater citizen participation and, at the same time, the liberalization of public services for all. (Šebová, Kmecová, 2006) Thanks to electronic services, the state will also save money, because over time it can reduce the number of civil servants, which is a disadvantage for them and therefore they prevent the introduction of electronic elements. Despite the many advantages that e-Government brings, it is also necessary to mention the disadvantages and eventual shortcomings that are mentioned in connection with the informatization of public services also in other countries.

A factor that can clearly be considered a negative is the high initial costs of creating and implementing these electronic services. On the positive side, the state will also save money through electronic services, as it may reduce the

number of civil servants over time, but we could include the initial increased costs of initial staff training as negative. Costs are also increased by the requirement for interoperability of individual systems, electronic services and data repositories, which would serve to make the systems of different offices and ministries work securely. Insufficient capacity of information and communication technologies or weak coordination between individual levels of central, regional and local government can also lead to inefficient functioning of public administration when implementing elements of e-Government. (Šebová, Kmecová, 2006) Other negatives include the low digital literacy of the population and the conservative approach of people to electronics (especially older generations) who have distrust of modern technologies and think that their personal data can be misused via the Internet. This is also related to the threat of cybercrime or "hacker" attacks. Another problem is the lack of information about the provision of electronic services by the state and the requirements of citizens, as well as insufficient coverage of the Internet connection. For e-Government to work effectively, it is necessary for citizens to be able to use it. However, this is not possible until an internet connection is available throughout the country, and therefore in every municipality. (Špaček, 2012)

As the prevailing view in the professional community is that e-Government should serve to a large extent to streamline and speed up all processes where interactions between citizens and businesses with public administration take place, it is clearly in the interest of every government to consider non-conceptual legislation and insufficient legal framework (as other negatives) and their improvement thus eliminate these shortcomings and prove to citizens of all generations that the system of electronic public administration is the right step forward for the state as a whole. Many countries are currently struggling with these problems. We can therefore say that if e-Government within the EU achieves all its goals and is successfully implemented, it should have several benefits. Electronic public services and the implementation of e-Government are currently a priority for all developed countries. The aim of introducing e-Government is to provide more efficiently, reliably, faster and cheaper public administration services to citizens.

3. Development and current state of e-Government in Germany

3.1 A historical excursion into the process of implementing e-Government in Germany until 2003

At the end of the 20th Century, Germany, like other Western European countries, realized the need to involve new modern technologies in the running of public administration. Following the example of the USA, Germany began to develop strategies for development and modernization. The first step in this direction was the year 1994/5, when the Council for Research, Technology and Innovation was established, which presents the necessity and benefits of the involvement of information and communication technologies in the running of public administration and emphasizes effective communication with citizens. During this period (1996), the Info2000 action program was established as the Forum for the Information Society. The Forum was composed of experts from different sectors of industry and society. Forum Info 2000 was established, gathering around 180 representatives from various industries and organisations as a discussion and advisory forum on Information Society issues. It was Government's first action plan for the Information Society. ICT-enabled change in public administrations is an essential part of the plan, aimed at creating a lean and citizen-oriented State (eGovernment in Germany..., 2006)

We can thus indirectly consider the year 1995 to mark the beginning of the introduction of e-Government in Germany. Indirectly because Germany's overall e-Government has not yet emerged during this period. Nevertheless, the foundations for its creation were laid here. From this period, we can divide the implementation and development of the overall e-Government in Germany into five key stages. The aim of all stages of development was to achieve interoperability, i.e., a state where public administration systems have the ability to cooperate with each other and subsequently transfer this feature into reality. The systems will work together in practice through the exchange of information, availability of services, etc.

The first stage of building and managing German e-Government thus began in 1995 and lasted until 1999. It was characterized by the establishment of the said Council for Research, Technology and Innovation or the Info2000 plan, as well as the creation and standardization of websites and networks. At this stage, the exchange of data between the various public administrations has not yet been a priority. The main effort of the public administration was to establish and

maintain its presence on the Internet. In 1997, the Information and Communication Services Act (known as the "Multimedia Act") entered into force. It was a broad-spectrum legislative package aimed at creating uniform economic conditions for the various uses of electronic information and communication services (electronic signatures, teleservices, etc.). (eGovernment in Germany..., 2006) In 1998-1999 a new project called MEDIA @ Komm focused on the solution of the local electronic public administration, which was subsidized by the federal government. Following a call for proposals, three model regions were selected for the application of innovative and secure aspects of e-Government using electronic signatures. (Kubicek, Hagen, 1999)

With this project, the development of e-Government in Germany entered its second phase (1999-2003). Several projects referring directly to e-Government can already be found in this period, although German comprehensive e-Government did not yet exist at this time. In terms of projects, in addition to the above-mentioned MEDIA @ Komm, the OSCI (Online Services Computer Interface) service was created. This service set the standards and rules for ensuring the electronic and secure transmission of data over networks such as the Internet within the German public administration. OSCI subsequently became an e-Government service for data forwarding. The MEDIA @ Komm project was completed in 2003, but support for the OSCI service persisted and Bremen established its headquarters, which is still in operation today. In this second phase, the conceptual and technical foundations of e-Government, which still exist today, were laid. (Wind, 2011) A new Information Society Forum was also set up in 1999 to continuously replace the Info2000 Forum, established in 1996.

Another key project was the launch of the "BundOnline2005" project in 2000 under the leadership of the then German Chancellor G. Schröder. It was a federal government e-government program. The aim of the project was to enable (by the end of 2005) the electronic provision of all federal public services. The project was clearly Germany's first more comprehensive e-Government strategy, stating that German citizens would be able to use a total of more than 360 online services. (Wittkemper, Kleindiek, 2008) This strategy also led to the electronic signature project, which has been used in Germany since 2001 as part of the integration of various model online public administration digitalization projects. In addition, another almost 20 model projects were created in order to present possible solutions for specific tasks. Examples are the Arbeitsamt online (Labour Office online as a project under the Federal Ministry of Labour and Social Affairs and the Federal Labour Office), the ELSTER project - Elektronische

Steuererklärung (electronic tax return as a model project under the Federal Ministry of Finance and the Supreme Finance Directorate in Munich and Erfurt) or the Öffentlicher Eink @ uf online project (Public procurement online as a concept falling mainly within the remit of the Federal Ministry of Economics and Energy) and others. (Wind, 2011) Another important milestone in the "BundOnline2005" project was the launch of the "Bund.de" public administration portal (www.bund.de) in 2001, as well as the establishment of the Office of the Chief Information Officer, which brings together the role of the Federal Ministry of the Interior in policy and IT strategy, IT management and IT security. The "Bund.de" portal is still a simplified online access to the portfolio of public administration services and has become a kind of entry point for a citizen or company containing both services and links to various offices.

In that year, 21 online services of the German public administration were available on the Bund.de portal. In 2002, their number rose to about 120. In addition, the portal launched an online forms centre, which began providing comprehensive access to about 1,000 official forms sorted by topic and scope. The system has been designed to allow users to easily find a suitable form. In 2003, almost another 100 new services were added, in 2004 another 120 public administration services were launched, and in the final year of the BundOnline project, the range of services was expanded by another 5 services. (Wittkemper, Kleindiek, 2008) By 2005 (the project aimed to achieve more than 360 online services by 2005), the transformation of more than 400 online public administration services was successfully achieved. According to the Federal Government's Commissioner for Information Technology (established in 2008), "with the BundOnline initiative, the Federal Administration launched more than 440 online services by 2005. As a large part of the administrative tasks are performed by the Länder and the municipalities, they have also developed and successfully implemented their own strategies." (Der Beauftragte der Bundesregierung für Informationstechnik, E-Government, 2021) By 2022, the portfolio of online government services in Germany is to be expanded again by more than 600 new online services under the Online Access Act (Onlinezugangsgesetz) adopted in 2017. We will get to this issue in even more detail in the next part of the article.

At the end of 2002, the e-government portal "Bund.de" was enriched with links to information and services from German cities and towns. The portal thus began to cover the entire German administration on a single internet platform. This cooperation between the association and the countries moved further in

2003 in an effort to create another project for the development of e-Government. (Wittkemper, Kleindiek, 2008) Thus, after the launch of the large project "BundOnline2005", another very important initiative was launched in 2003 in the context of building e-Government, thus entering Germany's third stage (2003-2009) of developing its e-Government.

3.2 Development of e-Government in Germany in the period 2003-2016

The third phase began with the adoption of a document entitled "Deutschland-Online" and lasted until 2009, when there was a change in the German constitution. The aim of the "Deutschland-Online" initiative was to achieve comprehensive cooperation between the authorities throughout the German public administration at all levels. Germany's public administration is divided into three levels, namely public administration at federal level, public administration at Länder level and public administration at municipal level. In the opinion of M. Wind, five key pillars had to be considered for the effective implementation of this strategy (Wind, 2011):

1. The range of online services was to be expanded, with priority given to inter-level services (registration of applications and requests, statistics, etc.).
2. The structures and offers of the different administration portals should be harmonized and interconnected. Among other things, it was planned to establish a kind of navigator function, which would guide the administrative user (citizen) to the right office, i.e., the office necessary for his needs.
3. The changes should also affect the infrastructure itself for easier data flow in order to facilitate the exchange of data and thus avoid duplication of administrative processes - the initiative was thus intended to set up common infrastructure.
4. The interoperability of IT systems should be ensured by common standards, data and process models.
5. In general, this initiative sought to coordinate e-Government projects between federal, state and local administrations in addressing the various issues and public administration requirements of citizens.

Based on practice, it can be stated that the ambitions of the "Deutschland-Online" project would be theoretically successful, but in practice they have proved ineffective and unrealizable in the form in which the project was created. In

addition to low efficiency, the main problems were the lack of work teams, the absence of a budget to finance the project, the overall organisational structure was confusing and communication between the individual working groups also proved to be insufficient. Of course, based on this not very successful project, the development of e-Government in Germany cannot be assessed negatively. Some other projects have been successful in that period.

As an example, we can mention e.g., Government Site Builder. As part of the "BundOnline 2005" initiative, the first "Government Site Builder" - based website was successfully launched at the end of 2003, representing a new content management system that was to become a national standard. It is one of the basic components of the national e-government infrastructure. (Paraskew, 2006) At the end of 2003, for example, the government presented a new "Information Society Germany 2006" action plan, which aimed to further develop the country's ICT capabilities. In the field of e-Government, one of the key priorities is to build a secure infrastructure for the provision of online transactional services based on the use of electronic signatures ("eCard" strategy adopted in March 2005), which has enabled citizens to use an electronic health card since 2005. online tax returns, etc. (Informationsgesellschaft Deutschland 2006.., 2006) The end of 2003 brought another novelty, the Arbeitsagentur.de portal, which started all government-related employment activities. The portal links supply and demand in the training and labour markets, provides access to job and jobseeker databases, and includes an innovative comparison application that helps jobseekers identify opportunities more easily. Another sophisticated functionality that is only available to employment office employees is the "job robot", which searches the Internet and collects job advertisements. (Wind, 2011)

In 2004, the "MEDIA @ Komm-Transfer" project was launched, replacing the aforementioned "MEDIA @ Komm" initiative of 1998 (it helped to develop a standard for the data exchange of the aforementioned OSCI e-Government). The project focused on identifying and developing e-government solutions for German local and regional authorities. The project aimed to support the development of integrated e-Government services at regional and local level and was to harmonize the development of local e-Government and implement it throughout the country. (Richter, 2005) This year, the first pilot project in the field of healthcare, the German electronic health insurance card, was launched. Rhineland-Palatinate has become a pilot country. (Wittkemper, Kleindiek, 2008)

In 2005, the Federal Parliament passed an electronic file management law to enable the German judiciary to process legal files and documents electronically

and pave the way for a paperless judicial system. At the beginning of 2005, the German government presented the joint "eCard" strategy, which aimed to provide a common strategic framework for a number of e-Government initiatives with smart cards in the areas of citizen identification, social security information and health insurance services. The joint strategy coordinates various federal e-card initiatives (such as the e-health insurance card, the e-card and the work card), as well as access to important social security and tax databases and services. A big news at the end of 2005 was the issuance of biometric passports in Germany. The new German travel document called "ePass" contains a built-in chip to identify the radio frequency, which stores personal information such as name and date of birth, as well as the digital image of the holder's face. In the second phase, from March 2007, the passport also began to hold a scan of the holder's left and right index fingers. (eGovernment in Germany, 2006)

As the "trial" period of the "BundOnline2005" project ended in 2005, we can state that the said project can be evaluated positively. The number of services available online by the end of 2005 clearly exceeded the originally planned 376 services. Between 2000 and 2005, more than 440 online services were launched in federal government agencies. Of these, 244 online services are focused on companies, 265 services are also available to citizens via the Internet. Until then, however, most of the administrative services in Germany were not provided by the federal government, but by the federal states and municipalities. Users of e-Government services generally did not distinguish between administrative levels. New demands for further expansion of e-Government began to come from 2006, when entrepreneurs and citizens expected a unified and consistent offer of e-government.

In September 2005, after the parliamentary elections, Ms. Merkel replaced Mr. Schröder as Federal Chancellor. With the new government, the development of e-Governance in Germany continued. In 2006, Angela Merkel's first government drew conclusions from the failed "Deutschland-Online" strategy and, with a new action plan, sought to relaunch the process of modernizing public administration. The original and failed "Deutschland-Online" program was reworked into the "E-Government 2.0" strategy, which ran from 2006-2010. The literature also refers to it as the "second phase" of the "Deutschland-Online" program. In some points they agreed, in some points they differed. Key objectives can be advised (E-Government 2.0, 2006):

- Building and improving the offer of e-Government services at the federal level
- Electronic cooperation between public administration and the economy in order to reduce bureaucracy costs
- Introduction of a new ID card and e-identity development (chip card)
- Secure communication infrastructure for German citizens

In 2005/2006, the EU Initiative i2010 (European Information Society for growth and employment) also provided guidance on how to further expand e-Government services in Europe. The EU's i2010 initiative was intended to make Europe more attractive for investment and innovation in terms of knowledge goods and services. Its goals included user satisfaction with online services, reducing the administrative burden on citizens and businesses, unified identity management and the inclusion of all sections of the population, as well as transparency. The time horizon of this program expired in 2010 and in this context another strategy called Europe 2020 was adopted. In this context, the federal government adopted the iD2010 program (Information Society Germany 2010), which supports the EU in implementing the i2010 initiative.

The responsibility for e-Government in Germany lies with the Federal Ministry of the Interior. A novelty in 2008 was the Office of the Federal Government Commissioner for Information Technology (Beauftragter für Informationstechnik). Markus Richter has been the current Commissioner since May 2020. The Commissioner is the State Secretary at the Federal Ministry of the Interior. According to the government's decision, the commissioner is responsible for developing an e-Govenrment and security strategy for federal IT, overseeing federal IT security, developing architecture, standards and methods for federal IT, overseeing the provision of central federal government IT infrastructure. The Commissioner chairs the IT Council and the IT Steering Group and is the Federation's representative on the IT Planning Council. It also participates in the decision-making process on all relevant IT legislation. The IT Council is the central entity of interdepartmental governance at the federal level. Each government department establishes the function of chief information officer. The IT Council is composed of the Chief Information Officer of the individual departments and decides on all strategic issues, including the e-Government strategy and IT security. All resolutions of the IT Council are adopted unanimously. (Employee of Information Technology, 2021)

The IT Steering Group is the highest federal IT management body. The

members are the Federal Government Commissioner for Information Technology, the State Secretary for Budget of the Federal Ministry of Finance, the State Secretary of the Federal Ministry of Economics and Technology and a representative of the Federal Chancellery. The IT Planning Council is responsible for managing and coordinating interdisciplinary e-Government projects involving both the federation and the individual Länder. The members of the IT Planning Council are the Federal Government Commissioner for Information Technology and representatives of all 16 Länder (usually the Secretary of State, to which IT is responsible). The Federal Commissioner for Data Protection and Freedom of Information and three representatives of the federal governments then take part in an advisory vote. The presidency of the council alternates between representatives of the federation and the federal states. (Employee of Information Technology, 2021)

One of the most important years in the context of building e-Government in Germany was 2009. This year also represents, in terms of importance, the beginning of the fourth stage (2009-2016) of its development, as important legislative and constitutional changes have taken place in Germany. The key moments in this phase were the reform of the Basic Law in 2009, the adoption of the e-Government Act in 2013 and the new state administration digitalization program "Digital Administration 2020" from 2014.

As for the reform of the German constitution, we can say that Germany became one of the first states to integrate information technology provisions into its constitution. Specifically, we are talking about the addition of a new Article 91c, which is included in Part VIII of the Basic Law governing administrative cooperation. These new regulations applied to cooperation between the association and the Länder in the field of the use of IT, and as is clear from the Constitution, there are specifically 5 paragraphs.

Specifically, §1 provides for the possibility of cooperation between the Länder in matters of planning, setting up the operation of information systems necessary to fulfil obligations. Overall, the article focuses not only on systemic cooperation, but also on agreements regarding the setting of standards or security requirements (§2). Both parties can make use of this possibility, but this aspect is also regulated, subject to the approval of a qualified majority of the Federal Assembly and the representation of the people in the context of the Länder, as they also take part in the vote on the overall matter. §2 of the new article of the Basic Act informs about this possibility. Pursuant to §3, the Länder may also agree on the joint operation of information technology systems and the

establishment of specific facilities. §4 determines the association to establish a network with the aim of connection, or rather interconnection of information and technical networks of the federation and the Länder. The last section (at the time this section did not exist, it was added only in 2017) contains final provisions emphasizing that comprehensive IT access to administrative services provided by federal and federal governments is regulated by federal law (the so-called Online Access Act) with consent Federal Council (Second Chamber of Parliament). (Grundgesetz für die Bundesrepublik Deutschland, Art. 91c, 1949)

In practice, however, it was necessary to regulate this cooperation in order to have a structure. This was to be helped by the newly established IT-Planungsrat (IT-Planungsrat), the coordinating body for IT cooperation between the federal and the Länder. In addition to coordination, it still aims to manage assigned e-Government projects and monitor IT security standards. One of the examples of e-Government projects under the auspices of this Council is the eID-Strategy, i.e., an identity card with a chip. (Wind, 2011) As the name implies, the concept focuses mainly on the use of electronic identification and signature in the context of e-Government. The strategy is to ensure that these technologies are used both in public administration and by citizens or businesses. In practice, the IT Planning Council wanted to ensure that each citizen would have their own user account with which they identified for all e-Government services. It does not matter whether this citizen has established it at the level of the federal state or the federation. The project and visions were presented in 2013. It was planned to bring it to reality by the end of 2021, when the Länder and the association were to link user accounts for citizens.

As follows from the development of e-Government presented so far, Germany understood the necessity and advantages of IT and tried to clearly use the development of IT for the benefit of public administration. However, the problem remained that e-Government lacked coherent, nationwide strategic control. The federal government has acknowledged the urgent need and acknowledged the need for its responsibility. Therefore, on its initiative, a law on e-Government was adopted in 2013, which was to support the possibility of electronic communication with the administration. The aim was to implement greater IT support into service and support processes, facilitate electronic communication with the administration and enable the federal, state and local government to offer simpler, more user-friendly and more efficient electronic administration services. (Molavi, Lahmann, 2018) The law subsequently "anchored" in practice in the new government program "Digital Report 2020" adopted in the year 2014.

The aim of the "Digital Administration 2020" program was to create uniform binding standards of digitalization for all public administrations, to strengthen the development of digitalization of state administration, to support authorities and state institutions in implementing digitalization measures and to simplify citizens' contact with state administration. Specific projects planned under this program include, for example, making public administration services available to citizens and businesses via the Internet, introducing electronic files (E-Acts), receiving and processing electronic invoices, digitizing government purchases or inter-ministerial digitalization of the legislative process. (Digitale Verwaltung 2020 - Regierungsprogramm 18. Legislaturperiode, 2014) Some of these projects have already been implemented. These include the adoption of the above-mentioned Act on E-Government, which defines the basic conditions for the digitalization of state administration, the operation of the secure communication tool De-Mail, enabling access to the services of individual offices via the Internet or electronic payments with the authorities. Other projects were of a longer-term nature and had completion dates up to 2020. The reason was, among other things, the need to reconcile the significantly different starting situations of many different state offices at several levels. These mostly long-term projects mainly concerned central technical infrastructures, which make it easier for citizens to get in touch with the administration. One of the most significant individual projects of this program is the so-called Portal Network (Portalverbund). With this, federal and state governments should link their administrative portals to offer citizens central, easily and securely accessible access to the network's administrative services. (Molavi, Lahmann, 2018)

The new legal framework for the development of e-Government can be seen again after 2016, when the Basic Law was amended, the Online Access Act (OZG), the Act on the Coordination of the Development and Use of New Tax Administration Software (KONSENS Act) or the cards for citizens of the Union and members of the European Economic Area with the function of electronic identity card (eID-Karte-Gesetz), etc.

3.3 Current state of e-Government in Germany

If we look at the latest developments in e-Government in Germany, in 2017 the German parliament approved a comprehensive package of laws legislatively reflecting the political agreement reached in autumn 2016 by the federal government and regional governments on the financial settlement of the federal states. The basic political line of unification (more money from the federal

government, more rights for the federal government) will be implemented through 11 amendments to the Basic Law and several simple pieces of legislation. These changes have also affected public administration information technology, in two key areas.

The first area is the tax administration, where the amendment to § 108 of the German Constitution and the so-called The KONSENS Act created a new system for the joint development and joint use of information technology for the tax administration, in which a selected group of Länder, together with the Federal Government, takes over responsibility and all other Länder take over these solutions (they must). (Schallbruch, 2017)

In the second area, in the field of online services and the so-called portal network (mentioned Portalverbund) is an amendment to § 91c of the Basic Law and the adoption of the Online Access Act (OZG). On this basis, the federal and state governments undertake to offer their administrative services online through portals within 5 years. All portals should be connected to a portal network with a single user account. The federal government has very extensive powers through statutory regulations to determine the technology to be used, as well as interoperability and safety standards. By amending the constitution in the form of the extension of § 91c, the federal government has significantly strengthened its position. Article 91c, created in 2010 for the cooperation of federal states in the field of information technology, has been supplemented by paragraph 5 since 2017, which grants the federal government the exclusive legislative power to regulate comprehensive access to information technology for the administrative services of the federal and state governments. Along with this change, the Online Access Act (OZG) was adopted in one package. (Schallbruch, 2017)

The law to improve online access to administrative services obliges federal, state and local governments to offer their administrative services digitally through administrative portals by the end of 2022. In total, almost 600 administrative services for OZG digitalization (so-called OZG services) were identified. In the so-called OZG implementation catalogue, the benefits of OZG are grouped in 35 life and 17 business situations and assigned to 14 overarching thematic areas (e.g. "Family and Child" and "Corporate Governance"). The OZG implementation catalogue is not based on official obligations, but on the user perspective of citizens and companies. With a view to 2022, the success of digitalization programs will not only be measured by whether all administrative services are available online, but above all by the level of acceptance and use by citizens and businesses. With the implementation of OZG, there is a paradigm shift: the target

image of OZG is focused on users. (Online access law, 2021)

We can say that Germany is not one of the leaders in Europe when it comes to digital governance. While citizens and businesses today are accustomed to being able to shop, conduct banking transactions and cancel subscriptions online with just a few clicks when it comes to administrative services, it still usually means running to the offices and waiting. However, digital governance should benefit all stakeholders. Online application processes can be designed to be more efficient and less error-prone, required forms and contact persons can be easily found outside offices using search functions. This ultimately saves time and resources on all sides. Earlier e-government programs were mostly designed on a smaller scale, but with the Online Access Act (OZG) in force since 2017, the federal and state governments now have the mechanisms to handle the large-scale national administrative digitalization project. The Act on Improving Online Access to Administrative Services obliges federal and state governments to offer their administrative services electronically through administrative portals by the end of 2022. Specifically, it involves two tasks: digitalization and networking. On the one hand, 575 administrative services at federal, state and municipal level need to be digitalized, and on the other hand, an IT infrastructure needs to be created that will allow each user to access administrative services with just a few clicks. User orientation has the highest priority in the implementation of OZG, which means that all digitalization processes are ultimately focused on the greatest possible user friendliness.

On the other hand, we must emphasize that national administrative digitalization is generally a relatively complex process. This is especially challenging for countries like Germany because it is organized on a federal basis. Each country has its legislative and enforcement powers. On the one hand, federalism promotes diversity and strengthens the autonomy of countries, on the other hand, there are also many laws, services and IT infrastructures that exist in parallel. In addition, the Länder and municipalities often do not have the resources to manage digitalization plans and projects quickly and on their own. This makes the nationwide digitalization project, which should ultimately lead to equal offers for all citizens and businesses (regardless of where they are located), extremely complex and time-consuming. For the last big projects, which we will mention in our contribution, we can advise the Act on eID cards (eID-Karte-Gesetz), the OPTIMOS 2.0 project or the so-called Citizens' terminals.

The eID card law entered into force at the end of 2019 and introduces a card for Union citizens and members of the European Economic Area with an

electronic identification function. The law allows nationals of a Member State of the European Union or a Contracting State to the Agreement on the European Economic Area who are not German nationals to apply for and use an electronic identification card (eID card) in Germany. The aim of the law is to provide the group of beneficiaries with better access to German digital administrative services (e-Government services). The online identity function required to use the services under the Online Access Act was previously only available to German citizens and holders of electronic residence permits who are not citizens of the EU or the European Economic Area. This ID card function can be used by anyone who has an ID card. However, this also means that those who cannot obtain an identity card cannot use this function. This excludes anyone who is not German from using this feature, because only Germans can obtain an identity card (see § 1 (4) PAUSwG). This is where the law on the eID card comes into play. The eID card ensures that some people who cannot obtain an identity card can continue to use the electronic identity card function. (Die eID-Karte für, 2021)

The project called "OPTIMOS 2.0" represents an ecosystem, a platform that aims to enable the citizen to use their mobile phone in the identification of various services, or service providers, such as in the areas of e-Government, car sharing, public transport, etc. OPTIMOS 2.0 will further create the infrastructure, communication channel, for mobile phone security control and for data transmission between the citizen's mobile device and a specific service provider. It was within the framework of OPTIMOS 2.0 that the citizens of the Federal Republic of Germany had the opportunity to store their identity card in their "smart" mobile phone since the autumn of 2021. This eliminates the need to have a physical document with you, just a phone and PIN. The federal government wanted to simplify the whole identification process, because the solution with the need to own and use an ID card device deters many potential users, citizens, as well as proves the numerical values of citizens' activities in activating and downloading the software needed to make full use of the ID card. A mobile application called "eID-App" should also be created for this purpose. (Keuper, 2021) We can say that this project will have a very positive impact on the use of technology in e-government by citizens. Its successful completion should increase the share of the use of online services associated with an electronic ID card.

The Citizens' Terminals (Bürgerterminal) project also represents a new opportunity for interaction with e-government in Germany. The terminal is located, for example, in the buildings of offices, service centres or banks. This facility

provides online access to the city's public administration portal. The terminal consists of a screen, touch screen, keyboard, like a computer mouse and SID-Box, which serves as a reader for the electronic ID card, i.e., for citizen identification. Subsequently, the Bürgerterminal can also include a document or code scanner, a printer, a USB connection or even a webcam. However, not every device is the same, the municipality can choose which components it will consist of. (E Bürgerterminal um Behördengänge, 2021)

3.4 Evaluation of e-Government in Germany

The aim of the article is, in addition to identifying the key moments of building e-Government in Germany, to evaluate its current state and identify its main shortcomings. Germany is a country that is a model for many countries in various fields (economic, social, political, cultural, etc.), but when it comes to public administration and especially the issue of its electronification, we must say that Germany is still far behind the countries. with significantly lower economic power. Despite many ongoing projects that have had their potential, the German e-Government has not been able to match the use of e-Government services with other countries such as Sweden, Switzerland or Austria. Paradoxically, Germany has many winning projects in various e-Government competitions. The problem is that, as individual initiatives, they are at a high level, but they cannot be effectively combined into a functioning overall system. There is still no central portal in Germany that contains all the information and service offers from a single source. It is still in the process of building. Even public registers, i.e., data collection and office archives, are not sufficiently interconnected. As a result, citizens and businesses submit new documents to each office. Even many e-Government offerings are still not fully digitally available, i. e. the user cannot completely process their request on the computer but can first put it on paper for certain work steps and then digitize it again. This is also one of the reasons why the use of e-Government in Germany is less intensive on the part of citizens and companies than in other countries.

One of the other key problems resp. Germany's e-Government shortcomings are clearly the lack of public awareness of the e-Government services portfolio. Citizens' ignorance and concern is certainly a major factor in why Germany is lagging in developing e-government, especially compared to other European countries. In a 2016 study in which the European Commission assessed the state of e-Government in EU member states, Germany ranked 20th out of 28. According to the EU Commission, Germany was also one of the countries that has not

achieved e-Government infrastructure in recent years and made virtually no progress. Only about 50% of the German population uses digital administrative services in Germany (until 2017 it was at the level of 35-40% - an increase is recorded). However, compared to Austria or Switzerland, this is a much lower percentage. In Austria it is about 75% and in Switzerland about 60%. These large differences are due to the quality and availability of the offer. The offer of digital services in Germany simply does not meet public expectations to this day. (E-Government MONITOR, 2021)

In the context of these problems, we must, of course, assess the very positive adoption of the above-mentioned Online Access Act (Onlinezugangsgesetz) in 2017, in which the federal government stipulated that by 2022 all e-Government services would be available online (575 services) at the level of the federation as well as the Länder, or also the interconnection of public administration portals into one portal network system. Given the large number of services, it is questionable whether Germany will be able to complete the project on time. If e-Government is to be successful in Germany, it is necessary to break the vicious circle of unattractive offers and low use of its services by citizens. E-government will only have its mitigating effect if the administration creates an offer that is truly accepted by the general public. To do this, it is necessary to address all identified success factors (access, usability, benefits, commitment, cooperation, common components and law) and to create a wide range of offers. It requires, first and foremost, political will, an attractive range of services, initial investment as a driving force and a source of inspiration, and municipalities and Länder are also key in this process as the first points of contact for citizens.

Conclusion

The state and its administration are responsible for the cornerstones of our socio-political, social and economic life. Through political initiatives and laws, they determine the framework conditions for business and society, control compliance with the legal framework and sanction non-compliance. Public infrastructure guarantees economic activity, social coexistence and political life. In addition to these diverse roles, the state and the administration have repeatedly managed throughout history to stimulate, accelerate and guide social, economic and technological development or to direct it in a positive direction. They also counteracted negative trends, ensuring a balance for society as a whole and preventing data misuse.

In conclusion, however, we can state that the state and the administration are also confronted with profound changes, which they not only face, but which must be shaped in order to better fulfil their diverse tasks and be able to fulfil their responsibilities. One such change is digitalization. The administration must not only communicate in several languages, but must also seize opportunities for skills acquisition, democratization and cohesion and act as a platform for social engagement. The digitalization of administration goes far beyond the ability of citizens and businesses to communicate with it online. In general, public tasks can be performed in new ways. Digital administration can more accurately identify the needs of citizens and businesses, create target-specific offers, and achieve government goals more effectively. You can more accurately predict your own workload and use resources more efficiently. It can simplify processes and automate interfaces. Intelligent data analysis and targeted preventive measures can better prevent the abuse of government services. They can invest more in infrastructure and, finally, make work more attractive and relieve staff of monotonous and repetitive work. Overall, digitalization offers public administrations the opportunity to better fulfil their diverse roles for the benefit of the economy and society. We can state that the digital transformation of governance is an important challenge for each modern state and each one faces it individually. This also applies to the Federal Republic of Germany, which has been our primary research target.

If we were to identify the key moments in building e-Government in Germany, we would divide them into several main stages in the article. Among the most important milestones of building e-Government in Germany we can include the establishment of the Council for Research, Technology, the Info2000 Action Program and the so-called MEDIA @ Komm together with the OSCI service (1990s). The launch of the "BundOnline2005", the Bund.de portal, the ELSTER project and the establishment of the Office of the Chief Information Officer (2000-2001) were a positively evaluated project. In 2003, the initiative "Deutschland-Online. Although it was evaluated as very unsuccessful, the paper highlighted many other successful projects in the period (strategy "eKarta, MEDIA @ Komm-Transfer, portal Arbeitsagentur.de, ePass," "E-Government 2.0", the establishment of the Office of the Federal Government Commissioner for Information Technology). One of the most important moments is clearly the reform of the Basic Law of 2009 (addition of a new Article 91c), the adoption of the e-Government Act of 2013 or the new program of digitalization of state administration "Digital Report 2020" of 2014 (e.g., the introduction of electronic

files E-Accounts, receipt and processing of electronic invoices, digitalization of state purchases, interdepartmental digitalization of the legislative process, Portalverbund and others). Of the current period, it is necessary to mention the adoption of the Online Access Act (OZG) in 2017, the Act on the Coordination of Development and Use of New Tax Administration Software (KONSENS Act) or the Act on the Card for Union Citizens and European Economic Area Members with Electronic Evidence identity (eID-Karte-Gesetz). As for currently interesting projects, it is the OPTIMOS 2.0 project or the so-called Citizens' terminals.

As for the evaluation of the current state of the German e-Government and the identification of its main shortcomings, we have devoted a separate section to this issue. Thus, we can state that although Germany is a country that is a model for many countries in various fields (economic, social, political, cultural, etc.), in the field of public administration and its electronification it is still far behind countries with significantly lower economic power. Paradoxically, although Germany excels in technology, its e-government does not achieve such positive results. The federal governments have been working on the digitalization of public administration since the 1990s, but to date this phenomenon has not been successfully completed. The Federal Republic of Germany clearly excels in theory in terms of strategies, concepts and various initiatives. However, we must state that theory does not equal practice. Practice is key for the whole society that interacts with e-Government. The Federal Republic of Germany is not yet a state that could be taken as a model for e-Government for the surrounding countries. In this context, modern projects such as OPTIMOS 2.0 or the Bürgerterminale are certainly the right step towards improving practice, as they enable the federal government to address the citizen directly and to facilitate their interaction with e-Government.

The article concluded that the biggest shortcoming of the German public administration in terms of digitalization is the issue of effective interconnection of online services into one functioning overall system. There is still no central portal in Germany that contains all the information and service offers from a single source. It is still in the process of building. Even public registers, i.e., data collection and office archives, are not sufficiently interconnected. As a result, citizens and businesses submit new documents to each office. Even many e-Government offerings are still not fully digitally available, i.e., the user cannot completely process their request on the computer but can first put it on paper for certain work steps and then digitize it again. This is also one of the reasons why the use of e-Government in Germany is less intensive on the part of citizens and

companies than in other countries. This fact is also complicated by the federal element of the state organisation. Another major problem pointing to Germany's lack of e-Government is clearly the lack of public awareness of the e-Government services portfolio. The Act to Improve Online Access to Administrative Services, which obliges federal, state, and local governments to offer their administrative services digitally through administrative portals by the end of 2022, could resolve the situation. With a view to 2022, the success of digitalization programs will not only be measured by whether all administrative services are available online, but above all by the level of acceptance and use by citizens and businesses. It is therefore necessary to monitor how Germany manages to achieve this goal.

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