

# SAFEGUARDING EUROPE'S DIGITAL FUTURE

**IMPACT OF THE EU'S GENERAL  
DATA PROTECTION REGULATION  
ON THE COMPETITIVENESS OF  
EUROPEAN INDUSTRY**

POLICY PAPER

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# 1 BACK-GROUND

The digital transformation of business is bringing radical structural transition to European economies. It confronts Europe with huge challenges, but also opens up tremendous opportunities – by connecting existing value chains and creating new, data-driven business models. Gross value added in the eight foremost sectors of Europe's manufacturing industry alone could increase by a total of 1.25 trillion euros over the next ten years. The gap between Europe and the digital superpowers America and Asia can be closed. To do so, however, Europe must act without delay to create a single digital market. Of pivotal importance is how the continent elects to handle data, the raw material of the 21st century. Data are an integral component of both existing and new business models. Without them, the whole machinery of business would grind to a halt. Digital consumers and connected machines and equipment alike are churning out an ever rising tide of data, the intelligent use of which is the key to success in the digital economy.

As data become more and more important at an ever faster pace, it becomes equally vital to find out how to use data properly. That can happen only if the debate surrounding personal data is conducted objectively and with due consideration for all legitimate interests. Consumers must be able to rely on clear rules governing the use of data. At the same time, it is important to remember that the flexible use of personal data is a vital factor of competition, especially for European businesses.

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## Background

That is why harmonized rules governing data protection and data use throughout Europe are absolutely imperative. The introduction of the EU's General Data Protection Regulation (GDPR) is a milestone along this road. Europe's single body of rules will in future take the place of 28 different sets of national legislation, creating a coherent legal framework for the use and protection of all personal data collected within the European Union.

The Council of Ministers, the European Commission and the European Parliament have so far managed to negotiate compromise solutions for two thirds of the articles in the General Data Protection Regulation. Negotiations are slated for completion by mid-December 2015. So before the Council of Ministers ratifies the agreed version next year, we want to critically examine the new Regulation to see how it will impact on Europe's industry and internet economy. We believe this critical review is vital: While the introduction of binding pan-European data protection provisions unquestionably marks an improvement on the status quo, the current GDPR draft has clearly not fully considered the strategic and, hence, industrial policy implications of the new rulings. These provisions will strengthen international platform players at the expense of European sector specialists. In other words, they will weaken data protection precisely where it is most urgently needed.

Our contribution to the debate thus discusses how the proposed General Data Protection Regulation will affect consumer protection, but also how it will impact Europe's competitiveness going forward.

One thing is clear: If Europe is serious about tapping the innovation and growth potential inherent in the digital transformation, it needs to strike the right balance between modern data protection and innovative data usage. If this vast opportunity is wasted by well-intentioned legal frameworks that fail to accommodate the demands of the global competitive situation, the European economy will fall further behind in the race for the digital markets of tomorrow. The result? Digital market leaders from America and Asia will have a free hand to shape our digital society as they see fit.

Furthermore, the current version of the draft underestimates the fundamental discrepancy between what users say about their attitudes to data protection and how they actually handle their personal data (the "privacy paradox"). The rules in their present form will generate a plethora of what are known as "opt-in" inquiries, because users will have to grant explicit consent every time their personal data are processed. As users become increasingly "digitized", that can create a situation in which users generally click "yes" every time they are asked. This in turn would defeat the original object of the Regulation – namely, to protect European consumers in particular.

All in all, the current draft of the General Data Protection Regulation only meets the demands of modern, data-driven business models to a limited extent. It will fuel the distortion of competition to the detriment of European industry and could pose a threat to the digital future of our continent.

# 2 EUROPEAN DATA PROTECTION – CORNERSTONE OF THE SINGLE DIGITAL MARKET

The European Union is the biggest economy in the world. However, consummation of the single European market is an essential precondition if this pre-eminent position in international competition is to be preserved. The planned General Data Protection Regulation is a milestone along the road to a harmonized European economic space. Especially with a view to the digital superpowers in America and Asia, it is critical to have pan-European rules that strengthen trust in the continent's data protection and provide protection for investments. This will also keep Europe attractive to both domestic companies and foreign investors.

Data protection is at the core of consumer protection in the digital age. That is why Europe's citizens will benefit from the proposed Regulation: The GDPR will provide transparency and bolster consumers' trust in the data-driven economy. European and international users of digital channels will no longer have to check up on every firm's trustworthiness with regard to data protection. The rules enshrined in the new Regulation create a legal context in which consumers can trust that their personal data will be dealt with transparently and conscientiously.

Additionally, European consumers will benefit from better and more wide-ranging protection against abuse of their data. The right to delete, demand information about and correct unlawfully processed data on the internet will likewise protect consumers, as will extra rights to information and the ban on passing data on to third countries. Moreover, to ensure that consumers can also enforce their rights, the introduction of the General Data Protection Regulation will be accompanied by the launch of a central authority that oversees the data protection concerns of all EU citizens. This will ensure consistency in law enforcement, keeping Europe well away from the slippery slope that might see member states undercut each other with progressively weaker data protection laws that favor investors at the expense of consumers.

Europe's consumers will not be the only beneficiaries of the General Data Protection Regulation. Businesses too will find the proposed Regulation an improvement on the situation as it stands. No longer will they have to grapple with a plethora of national provisions whose

fit and level of concrete detail vary. Instead, they will have only one set of rules to contend with for the whole European market. The European Commission reckons this alone will save companies around 2.3 billion euros a year. Small and medium-sized enterprises will benefit particularly handsomely.

The Regulation not only creates a uniform legal framework for all EU member states: It also applies to all companies that are resident in Europe and/or that process the personal data of EU citizens. The GDPR thus marks a departure from the supplier's market principle in favor of the sales market principle. The general validity of the Regulation throughout the entire European sales market means that no firm can escape the rules by relocating its headquarters: Companies anywhere that process EU citizens' data are bound to legal compliance. That is a genuine boon to European players, who need not fear being at a disadvantage compared to American and Asian firms.

Especially for small and medium-sized enterprises, a single point of contact also makes it easier to do business throughout Europe. Companies that process the personal data of EU citizens will in future only have to deal with one central data protection authority. By no means least, fewer documentation obligations constitute substantial progress for data processing organizations and will slash administrative costs in the digital economy.

# 3 THE EU'S GENERAL DATA PROTECTION REGULATION – PUTTING THE HANDBRAKE ON EUROPEAN INDUSTRIES?

While seeking to guarantee modern data protection, the proposed General Data Protection Regulation also strives to give Europe's digital economy room to grow and innovate. If we are to weigh up how the Regulation will affect the future of an increasingly data-driven economy, however, we must first understand how digital business models work and what premises they are based on.

## Requirements for innovation in digital business models

In the future, digital technologies will dramatically alter our companies – their strategies, processes, structures, products and cultures. This will also change their potential to innovate and grow. Going forward, humans, machines and resources will communicate with each other directly and in real time. Rigid value chains will be broken up into dynamic value networks. Why? Because value will no longer be added sequentially, with time lags between different links in the chain. Instead, it will be created within an ecosystem of units that communicate constantly, respond flexibly to each other and – to a large extent – organize themselves. Driven by the internet of things, sensors will increasingly be deployed in applications beyond what they have been used for to date. That will give rise to new data sources not only in industrial machinery, but also at the interface to the customer – in vehicles, in smart homes and on mobile devices, for example.

Four distinct levers will be instrumental in effecting the digital transformation brought about by these developments:

- **Digital data:** The capture, processing and analysis of digital mass data can improve both forecasts and decisions.
- **Automation:** Combining traditional technologies with artificial intelligence will create autonomous, self-organizing systems that reduce defect rates, increase speed and cut operating costs.
- **Connectivity:** Mobile and fixed-line connectivity throughout the entire value chain can synchronize supply chains and shorten both production lead times and innovation cycles.
- **Digital customer access:** The (mobile) internet is giving new intermediaries direct access to customers who benefit from maximum transparency and completely new kinds of service.

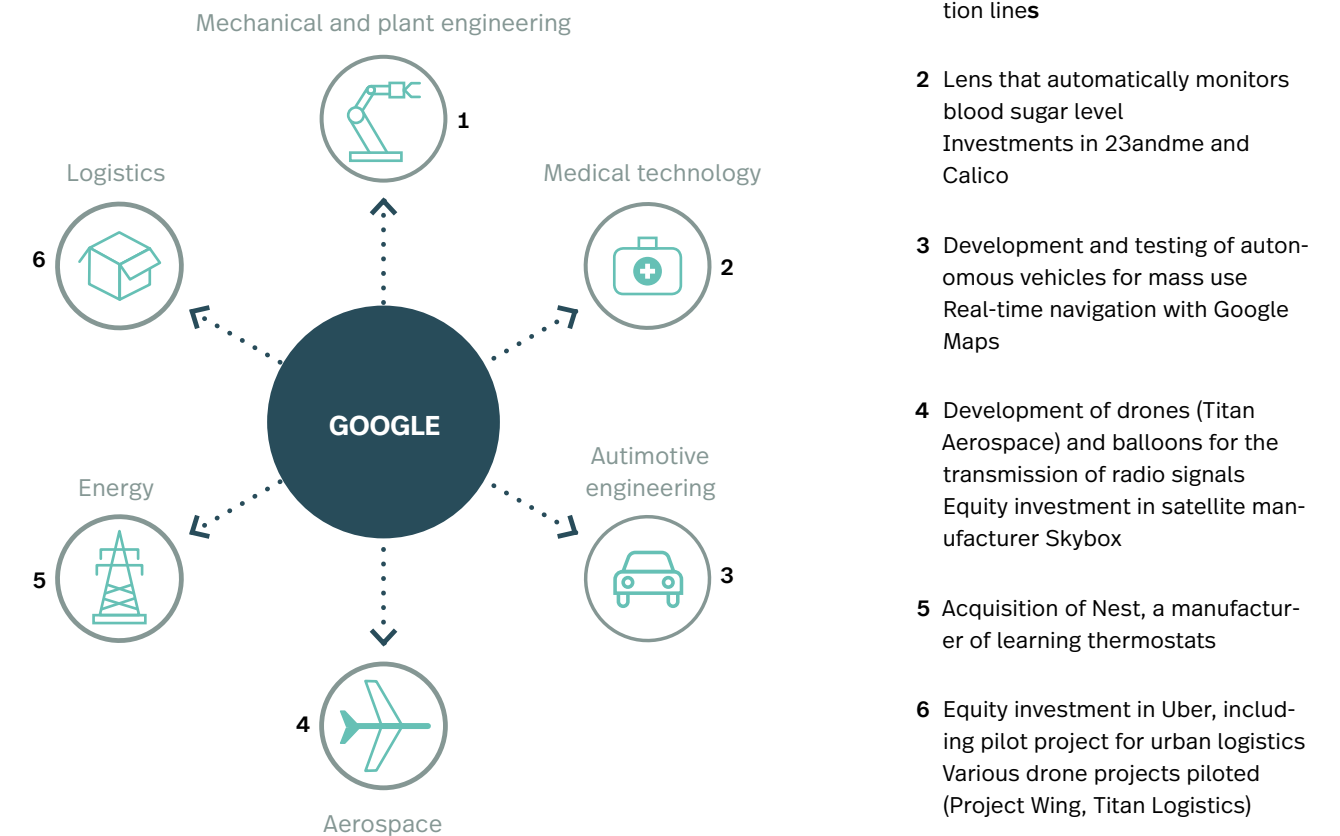
The potential afforded by the digital transformation can be tapped not with any one of these levers in isolation, but only when they are activated in combination. Given the customer orientation that underpins this dynamic value chain, access to personal data and the ability to analyze them is key to optimizing existing business models and sharpening companies' competitive edge.

We also need to be aware that the digital transformation is not restricted to the internet economy alone: In the future, it will sweep over every branch of industry. German automotive OEMs and their suppliers, for instance, are already in the throes of transformation and are working on numerous data-based applications such as highly automated and autonomous driving.

In this context, the following questions are critical to the success of efforts to establish forward-looking business models: Who will control the digital communication interface to drivers and vehicle owners? Who will own data that are created in and by automobiles? What in-vehicle software standards will be established? What new models of individual mobility will become standard practice? Access to personal data is crucial if successful and competitive answers are to be provided to these questions. If these answers are not forthcoming, the danger is that companies from other industries that operate fully data-driven business models will corner large chunks of the value chain for themselves. In the auto industry, for example, it is perfectly conceivable that intermediaries will soon step into the ring, occupying the interface to customers and providing vehicle insurance and car rental services, coordinating refueling stops and producing very detailed travel information. In many cases, the competitive race is won by the player that most quickly succeeds in building a large base and discreetly eliciting customers' consent to the use of their data at a very early stage in the digital lifecycle.

Internet companies from Silicon Valley have long since woken up to this fact. Google is a prime example: Founded in 1998, the data specialist has already developed initial industrial business models (Figure 1). These may focus on end customers to begin with, and many are still in the launch phase. Yet even they clearly show that internet giants have long since discovered manufacturing as a growth market for themselves. To incumbent manufacturers, this verticalization is disruptive: Business models are being redefined on the basis of data as a core competency coupled with access to end customers.

**Figure 1: How internet companies are verticalizing into different manufacturing sectors**



- 1 Purchase of eight robotics firms and testing of automated production lines
- 2 Lens that automatically monitors blood sugar level  
Investments in 23andme and Calico
- 3 Development and testing of autonomous vehicles for mass use  
Real-time navigation with Google Maps
- 4 Development of drones (Titan Aerospace) and balloons for the transmission of radio signals  
Equity investment in satellite manufacturer Skybox
- 5 Acquisition of Nest, a manufacturer of learning thermostats
- 6 Equity investment in Uber, including pilot project for urban logistics  
Various drone projects piloted (Project Wing, Titan Logistics)

Source: Roland Berger

Entire value chains are thus being exposed to digital disruption as innovative firms map successful digital business models onto whole new sectors of industry. With the benefit of hindsight, it becomes apparent that each step is a logical consequence of the preceding one. And extensive data sets of the kind already amassed by internet giants in many areas of everyday life can quickly put incumbents and start-ups alike at a competitive disadvantage. Google, for example, has snapped up a series of robotics companies. Deploying these players' robots in production generates ever more data which the company can then translate into monetary gain. If Google were to standardize the operating systems and software for its robotics products and combine these with its other services (for data analysis, etc.), the Californian behemoth could in future gain control not only of automation technology, but of industrial production as a whole.

What makes things even more difficult for Europe is that internet giants in the USA are regulated with a comparatively light hand. At the same time, companies in the USA and Asia can rely on a broad base of support from the business, scientific and political communities as they strive to acquire, analyze and make use of data. On this score – as in so many areas – Europe's position is far weaker and less strategically minded.

Even just in the medium term, data and the innovative analysis thereof will already be integral to many business models in all branches of industry. Companies' ability (or otherwise) to create central databases and make flexible use of them will become the decisive factor of competition. Not just since "big data" hit the headlines, more and more firms have begun to realize that customer relationships go far beyond managing master data and leads. Complex customer profiles and a wealth of information are contributing to the development of modern business models and individualized offerings for customers. At the same time, we must understand that the value of data – like the purpose for which they can be used – frequently comes to light only after they have been gathered. This is a fact that already requires a highly flexible legal framework regarding the use of data.

### Three issues that must be addressed

We believe that the proposed General Data Protection Regulation does not fully do justice to data-driven business models, as restrictions on the use of personal data pose a threat to the very essence of dynamic value chains. It is therefore essential to reassess the following three points to avoid jeopardizing Europe's digital future.

# 1

The failure to draw a distinction between pseudonymous data, which requires no protection, and personal data, which does require protection, leaves European companies in a weaker competitive position than firms that operate in other regions.

The current draft of the planned Regulation defines all data that are not completely anonymous as personal data that must be protected. This understanding places what are known as pseudonymous data in a category of information that requires protection. However, unlike personal data, pseudonymous data cannot be used to identify an individual data subject without referencing additional data records. Pseudonymous data are created by separately collecting information that identifies a user and storing the relevant data under a pseudonym. This method enables providers of online services to display offerings to visitors in the right language, for example, without users having to disclose their personal data by registering explicitly with online services.

Generating individualized offerings on the basis of pseudonymous data is common practice in the international internet economy. As such, it is a central element in keeping every digital business model competitive. It is therefore hugely important for the planned Regulation to define and make provision for pseudonymous data as a separate category of personal data. Only then can it be ensured that pseudonymous data are not subject to the same need for protection as personal data that can be used to identify users directly.

Another reason why this issue is so sensitive is that European companies often operate in those realms of the internet economy in which logins are unusual – i.e. which do not require personal data, but only pseudonymous data in order to individualize offerings. By contrast, the widespread platforms that are based primarily on operating systems (such as Android and iOS) and the login-data-based services provided by American firms have no need for pseudonymous data. This is because their deep market penetration combines with strong customer loyalty to give them all the personal data they need to individualize their offerings.



# 2

The intention to make explicit consent to the processing of pseudonymous data compulsory raises an inordinate barrier to new players and cements the dominance of existing platform providers.

The current draft of the Regulation envisages the need to grant explicit consent every time personal data have to be processed. The reasoning is that the individual's right to informational self-determination must be upheld. This approach is also known as the "opt-in" method.

Since the General Data Protection Regulation plans to give pseudonymous data the same protected status as personal data, the logical consequence is that explicit opt-ins would also be compulsory for the processing of pseudonymous data.

In light of the current market situation, this would very significantly impair the potential of the European digital economy to grow and innovate. Companies with European roots would have far less chances of generating opt-in consent than their international rivals. The logic is simple: Opt-in obligations favor providers that can either

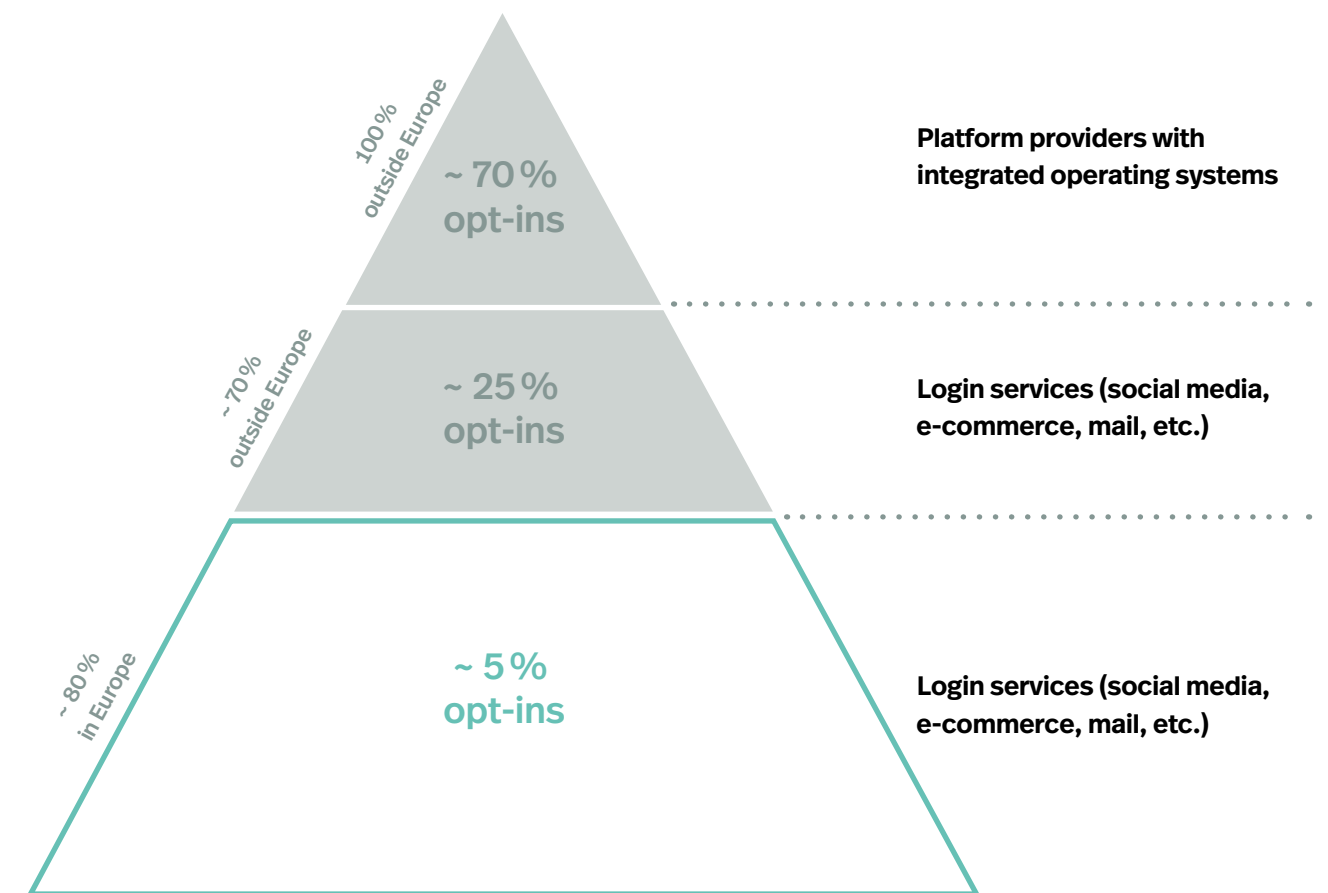
promise end customers universal offerings from a single source in return for particularly extensive consent, or that target users early in the digital lifecycle.

Most of the beneficiaries are platform providers with integrated operating systems (such as Google, Apple and Microsoft). Permanent dealings with users and their identity gives these companies all kinds of ways to elicit users' opt-in consent and create a personal data profile. This competitive advantage is then further reinforced as platform operators verticalize into adjacent levels of value creation. A second group of beneficiaries includes login services (such as e-commerce providers, on-demand video platforms and e-mail providers), for whom customers' daily demand again creates good opportunities to secure opt-in consent. On the other hand, sector specialists in traditional industries – essentially the backbone of the German economy, which is still in the early stages of digitization – have little chance of persuading users to grant them far-reaching consent (Figure 2). If the worst came to the worst, this could lead to a situation in which European sector specialists are forced to buy opt-ins from the major platform operators.

If Europe's economy is to successfully leverage the growth potential afforded by the digital transformation, companies based here must not be put at a structural disadvantage. That is why pseudonymous data – unlike personal data – should not be classified as in need of protection. Instead, it should be subject to an opt-out method in which users have the right to revoke providers' authorization to use the pseudonymous data they generate.

The EU's General Data Protection Regulation – putting the handbrake on European industries?

Figure 2: Vertical content and industrial companies are increasingly losing their share of opt-in generation



Source: Roland Berger



# 3

Tying the use of data to specific purposes undermines the potential of big data and will stifle the development of a competitive European digital economy.

The current draft Regulation states that data can only be used for the purpose for which they were originally collected and to which users have explicitly consented. The first risk associated with this provision is that even the "production" of pseudonymous or anonymous data might have to be tied to a given purpose, and that using it would then be illegal without users' explicit consent. Anonymization and pseudonymization would then be impossible – although they are precisely what the Regulation should be encouraging, not restricting.

The far greater problem of tying data to a given purpose, however, is the impact it will have on the analysis of big data. The secret of the success of big data is rooted in the use and interconnection of data sets that are as large and heterogeneous as possible, and that were originally collected for other purposes. Plans to tie data use to a particular purpose would prevent the intelligent combination of data, so big data analyses would not be able to use this as a platform for new, innovative busi-

ness models. To do so, the explicit consent of all users would again have to be elicited. The outcome of tying data to specific uses could be that new business models emerge not in Europe, but – as they do today – in other regions of the world, once they have been developed and made market-ready. Even if European firms were to offshore big-data-based research and development work, that would see Europe deprived of both capital and, above all, knowledge. To avert such negative scenarios, data processing organizations should be allowed to use data for purposes other than those for which they were originally collected within the framework of legitimate interests.

## European industry lagging behind

Overall, the proposed General Data Protection Regulation aims to provide harmonized and enforceable protection for personal data throughout Europe. However, even as different regions of the world strive to corner the digital markets of the future, the current draft of the Regulation limits freedoms that European companies desperately need.

The provisions discussed above pose a threat not only to Europe's existing digital economy, but also to opportunities linked to digitized manufacturing. Innovators in the leading European industries will be put at a huge competitive disadvantage. Data-driven start-ups will suffer the same fate. One possible consequence is that tomorrow's digital innovations will be developed outside Europe. Our continent will merely be driven by the digital transformation, but will not participate in the potential benefits.

Over the next ten years, Europe's manufacturing industry could thus see value-added potential of as much as 1.25 trillion euros slip through its fingers. Europe would fall even further behind the digital superpowers America and Asia, which together account for all of the world's top 20 internet companies. Nor is that all: The competitiveness of key branches of German industry in particular would be endangered. Digital, data-driven business models are only now being developed and ramped up in these areas. To now put them at a disadvantage relative to the digital economy's big players would be singularly unwise.

# 4 WHAT WE MUST DO NOW TO SAFEGUARD EUROPE'S DIGITAL FUTURE

Digital platforms are bringing fundamental change to the way we share our lives and experience community. They are also creating enormous economic value. Europe will only be able to shape the digital transformation and play a part in it if it takes its powerful industrial base forward into the digital future and builds a successful internet economy of its own.

For this reason, all regulatory decisions in this area must be made with due consideration for how they will affect the strategic freedoms enjoyed by Europe's digital industry and its ability to compete. Accordingly, it is necessary to rethink the course that will be charted by a small number of material points in the EU's proposed General Data Protection Regulation.

We must understand that data are a critical success factor that will determine the future of both Europe's economy as a whole and the manufacturing base that is especially strong in Germany. If this understanding is reflected in the EU's General Data Protection Regulation, we will have laid a solid foundation on which to fight against monopolization by the platform operators that already dominate the market, and on which to keep Europe's digital economy competitive in the long term.

This paper identifies three key issues that will be instrumental in safeguarding Europe's digital future:

**1**

**Pseudonymous data should be defined as a separate category of personal data that does not require protection.**

**2**

**An opt-out rule should apply to the collection and use of this pseudonymous data in place of the opt-in method that is currently planned.**

**3**

**The digital economy must – subject to clearly defined conditions – preserve the option of using existing data sets for purposes other than those for which the data were originally collected, in order to enable us to reap the benefits of big data analysis.**

## Our platform for digital transformation: Terra Numerata™

The challenges of digital transformation can only be mastered if we work together. That is true at both the European level and in the corporate community. Roland Berger set up the Terra Numerata™ platform to demonstrate the support that can be provided for corporate connectivity and the digitization of companies' business models. A focus on networking and innovation and the platform's commitment to open source highlight how Europe's innate diversity can be put to good and profitable use. To this end, Roland Berger establishes partnerships with major technology providers, digital agencies, investors, start-ups, incubators, indeed the whole spectrum of digital experts and market players. Terra Numerata™ will thus play an important part in cultivating a shared understanding of the needs and challenges associated with the digital transformation.

## Internet Economy Foundation

The Internet Economy Foundation (IE.F) was established with the goal of being an inquisitive think tank, an independent advisor and a competent dialogue partner in the dynamic digital environment. It aims to be an impartial organization and a pioneering voice for politics, the economy and society, providing information about the latest developments and defining the interests of the German and European Internet economy in a global context.

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