

WORKING PAPER

**In the spotlight:
Industrie 4.0 – Issues surrounding data**

Main issue

Machine data is indispensable for any *Industrie 4.0* application and one of the pivotal factors when it comes to improving competitiveness. This is true for large varieties of data from a wide range of sources and which can be used to obtain very different kinds of information. Data about the machine itself (e.g. data from its parameterisation) can be just as useful as data that is accumulated while the machine is being used. In many cases, it is only once the different data sets have been correlated with one another (big-data analytics) that they provide an added value. Systematic analysis of this data allows companies to gain new insights into how to improve manufacturing, thus enabling them to increase their competitive edge.

In future, many business models will centre on the analysis and evaluation of machine data. This means that such data can be very valuable in economic terms, which raises the question of legal protection for this data. Currently, there are no specific legal provisions on machine data and the rights to this data.

When it comes to applications in which personal data is used, companies must ensure that they comply with data protection law, which is, however, not specific to *Industrie 4.0*.

The key questions

- Does the law adequately protect machine data used in value chain networks from third parties?
- Are there any gaps in legal protection for machine data that need to be closed?

- What should happen to valuable sets of machine data in the event that a company becomes insolvent?
- Would it make sense to enact new legislation that would assign particular machine data to specific market participants, similar to granting them ownership rights to this data?
- How can personal data be protected but still be used in a meaningful way?

Initial assessment of the potential need for further legislation

1. Data sovereignty

Existing law does not provide for any comprehensive, absolute rights to a certain piece of data per se. Depending on its kind and nature, data is, however, already protected by a complex network of different forms of national and international legislation (copyright law, patent law, database law, commercial and business secrets, data protection law, criminal law etc.).

Several of the sub-working groups in the Working Group on the Legal Framework are currently assessing the existing legal framework by applying it to the various usage scenarios developed by the *Plattform Industrie 4.0*.

What is striking is that, often, legal protection for an individual piece of data is conferred to this data at the level of its content or context, rather than in regard to the data per se. Take an item of sensor data such as '18 degrees Celsius', for instance, which, without a specific context, is treated as a fact of nature and therefore not protected by law. However, if a timeline indicating vari-



ous changes in temperature is saved and is linked to a measurement point in a particular installation, this data takes on contextual meaning that could also represent a business or company secret, for example. This shows that, as a general rule, the extent to which machine data is protected will depend on the context in which it is found.

The Working Group therefore started by looking at the question as to whether there is a need for new legislation which, as a first instance, would assign particular machine data to clearly defined market participants similar to granting them ownership rights (meaning that these market participants are granted control of that data).

The members of the Working Group are of the view that the legislator should act with restraint and, above all, not too hastily. First of all, it is **questionable whether the countless number of possible constellations in which data can be assigned to a particular party could be suitably addressed by a single piece of legislation**. The current discussion among legal experts is in flux and needs to con-

sider the various interests of existing and potential stakeholders. Also, it is likely to continue evolving dynamically – especially given the many yet unknown usage scenarios as much as new business models that may develop in the future.

Any legislation that would mechanically or hastily assign certain rights in data in order to protect certain stakeholder interests could hamper innovation as well as result in an unwanted legal fragmentation of global markets.

An intervention by the legislator on behalf of certain ‘data stakeholders’, beyond the principles set out in existing legislation, court rulings and legal doctrine could possibly automatically deprive other stakeholders of their rights. This could result in preventing European businesses from developing new business models which are hoped to generate growth and competitive advantages even globally, such as in the field of data analytics. By the same token, companies that apply business models of

this kind without being afforded the adequate level of legal protection might suffer unfair disadvantage.

Any action taken by the legislator, regulators or public administration on this issue should be guided by an assessment of these two different positions and seek to strike a balance between the two. This requires **providing room for innovation** and countering undesirable developments in a targeted manner only where market participants' legitimate interests are systemically harmed, or where such harm is impending, particularly with regard to proper and fair competition.

If, at a later stage, there should be signs of a concentration of power on particular markets which benefits only a limited number of corporations that are amassing huge amounts of data, this situation would have to be addressed under competition law. To this day, there are no clear indications of such concentration yet happening across the industrial sector. In this sector, unlike in the consumer area, the notion of the 'particular individual market participant in need of protection' does not apply. The industry is strongly aware of its need to protect sensitive business data.

Over the past decades, this awareness has led to the widespread adoption of largely standardised **confidentiality agreements and agreements restricting the use of data within the industrial sector**. This provides a strong basis for a self-regulating market which relies on the continued development of sustainable data usage agreements, including as applicable within the frame of *Industrie 4.0* ecosystems.

Companies that are involved in exchanging machine data will therefore conclude related **data usage agreements** or will incorporate clauses to this effect into their contracts. This option would not require any legislation assigning

legal rights to machine data in a way that is similar to ownership rights.

2. Protection of personal data in innovative business models

Wherever possible, the legislator should work towards achieving better **international harmonisation** of the regulatory framework.

Wherever companies running *Industrie 4.0* applications use data that is directly or indirectly tied to a specific person, they will be subject to the EU's General Data Protection Regulation (GDPR). It is therefore in the interest of developers of innovative *Industrie 4.0* applications that the GDPR should apply as uniformly as possible across all EU Member States. In this context, it is important to ensure that technical solutions such as the **anonymisation and pseudonymisation** of data are harnessed in a way that both allows for the protection of personal data and for the provision of services based on big-data analytics. Defining the relevant criteria is a task that, in the future, lies with the European Data Protection Board under the GDPR, which ought to work with the industrial sector on drafting a set of guidelines that provides **legal certainty** for companies wishing to provide such services.

3. Standard contracts based on German law

The legal uncertainties that exist in the legislation governing General Terms and Conditions in Germany need to be eliminated. It is likely that the networked value chains within *Industrie 4.0* will result in even greater use of standard contracts. At the same time, we live in a globalised world in which the contracting part-



ners are free to choose the governing law of contract. In that context, however, German law on general terms and conditions (GTC law) is characterized by a disproportionate number of restrictions applying to contracts between businesses. This constitutes a factor of uncertainty under

German civil law, which puts parties at a disadvantage especially where they implement contractual provisions for innovative business models such as the ones applied within *Industrie 4.0*. The legislator should seek to eliminate these disadvantages, as reasonably possible.

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