
# Analyze the relations and impacts of your products – Drive business value through automated data analysis

# care

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To achieve your company's sustainability and compliance goals, you need to control the complex and dynamic factors that impact them. iPoint provides the transparency you need to simplify compliance, sustainability and risk management. This requires taking 4 steps: **collect** the relevant data, **analyze** the relations and impacts in order to **report** the right information to the relevant stakeholders, and **evolve** the company towards your goals by minimizing risks and enabling collaboration and continuous improvement.

**The CARE principle is the core of the iPoint Suite.**

By applying CARE, companies can, among other things, identify substances of concern or their product's carbon footprint, qualify and approve suppliers, and thus take control of their environmental, social and economic impacts. iPoint supports you on the path to product compliance and decarbonization all the way.







# Analyze the relations and impacts at multiple levels

## 1. Why analyze data?

Considering the immediate impact of analyzing compliance and sustainability data on companies' operations and financial bottom line, it deserves increased attention. Data analysis of products and processes can generate a crucial competitive advantage for a company. It means **gaining knowledge** – about your products, processes, and suppliers as well as about their environmental, economic, and social impacts. And knowledge is power – as evaluation of this knowledge in terms of achieving KPIs or fulfilling obligations and requirements enables better decision making.

**Risks** on the one hand and **benefits** on the other hand can be determined by analyzing product and process data. By having the knowledge about each substance and material used in their products or processes, companies meet all legal requirements and thus, avoid penalties and reputational risk. While ensuring the product's safety, companies also ensure its market access.

**“Data analysis is an important decision-making basis to achieve sustainability and circular economy goals.”**



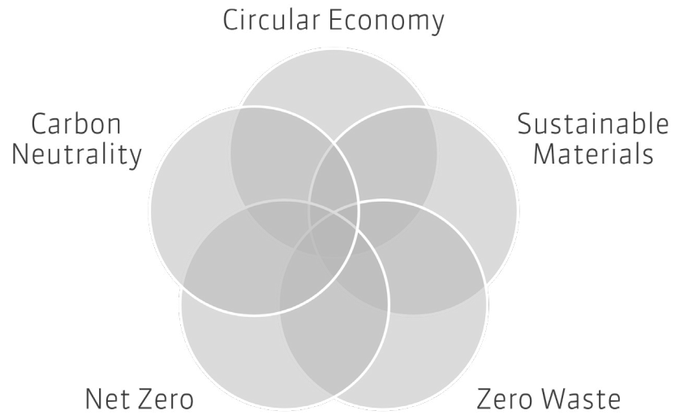


## 1. Why analyze data?

The transition to a **circular economy** increases the requirements for industry regarding product compliance and product sustainability. For example, **net zero** goals can be driven, or product labelling and certification supported by an accurate and automated data analysis. Meeting the investor, stakeholder, or customer requirements in terms of sustainability becomes more important. Especially the automotive, electronics and chemical industry strive for ambitious sustainability goals.

For example, Daimler, Ford, Renault, and Volkswagen Group have announced their future sustainability goals, which include **zero waste**, responsibly sourced **sustainable materials**, and carbon-neutral vehicles. Major high-tech electronic manufacturers like Apple have announced a target of becoming carbon neutral, Microsoft even promised to become carbon negative and Logitech has already achieved full carbon transparency for some of their products. Also, chemical manufacturers are increasingly setting circular economy goals, which BASF, for example, is seeking to meet with its circular economy program. Another example is Solvay who aims to achieve traceability of a product throughout the entire value chain.

To achieve these goals, data analysis is needed to both assess the status quo and identify hotspots. It is an important **decision-making** basis for development and strategy decisions in the area of compliance and sustainability. So, if companies are already collecting and analyzing data, the benefits can only be fully realized when compliance and sustainability are analyzed together.

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## 2. Challenges of data analysis

After having collected all types of data in the first step, the challenge is to analyze it in terms of different purposes in the next step – not only for compliance, but also to meet broader sustainability and corporate responsibility requirements. Data analysis is quite a complex and challenging task as it can take place for different purposes and at **multiple levels**, of production or product, part, component, or substance level. The scope of analysis can even be extended to the supply chain and product usage. In addition, a high **complexity of data** is provided for data analysis, not only due to the large amount, but also a variety of data types.

This complexity also appears in the variety and quantity of **regulations**, imposed on the product by authorities and institutions, or of the **specific requirements** by customers and stakeholders. Moreover, there is a constant evolution of new regulatory requirements that must be considered in the analysis. In some cases, new requirements are emerging that go beyond traditional compliance procedures for materials and substances. One challenge is to ensure that your analysis is based on current and accurate regulations.

**“Data analysis is a complex task taking place at multiple levels, for different purposes, in various scopes, and with a large amount and variety of data.”**

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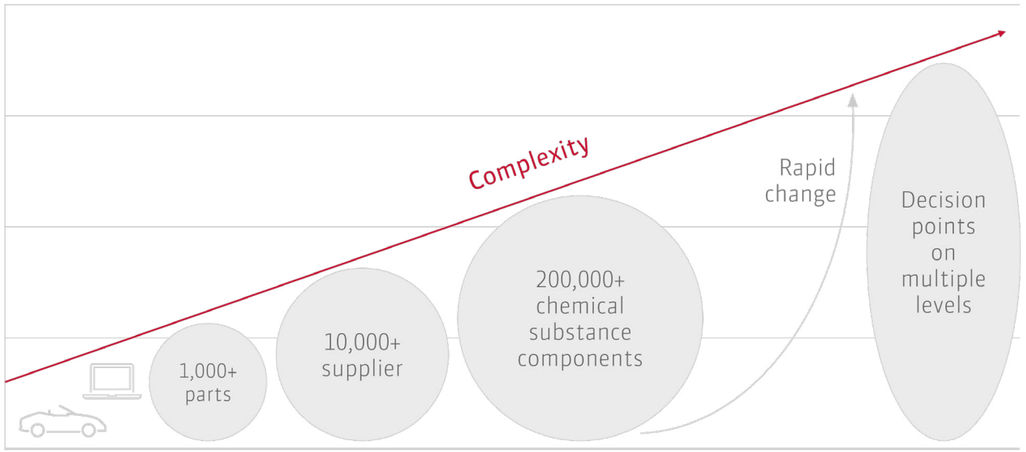
## 2. Challenges of data analysis

But it's not just regulatory changes that need to be kept on track: Changes can also occur within products, processes, and the supply chain and must always be taken into account. Especially if a net zero target is to be achieved, a differentiated analysis at product level is important. The "low-hanging fruit" of emissions reduction at the company level is harvested very quickly. Therefore, it is crucial to accurately assess the product and its emissions. Given the **complexity of today's products**, this is one of the most difficult tasks, but therefore also one with the greatest leverage. And thanks to cutting-edge technologies and intelligent automation, this task can be accomplished.

Due to this complexity, manual data analysis can also be very **error-prone** and **time consuming**. This is especially challenging when results need to be retrieved very quickly. Automation speeds up the analysis and additionally ensures that the results are reproducible and free of errors. Besides, results should be comparable: decisions cannot be made based on standalone results without comparative values. Improvements can only be achieved through comparisons, e.g. between different environmental performances or between the use of different materials.

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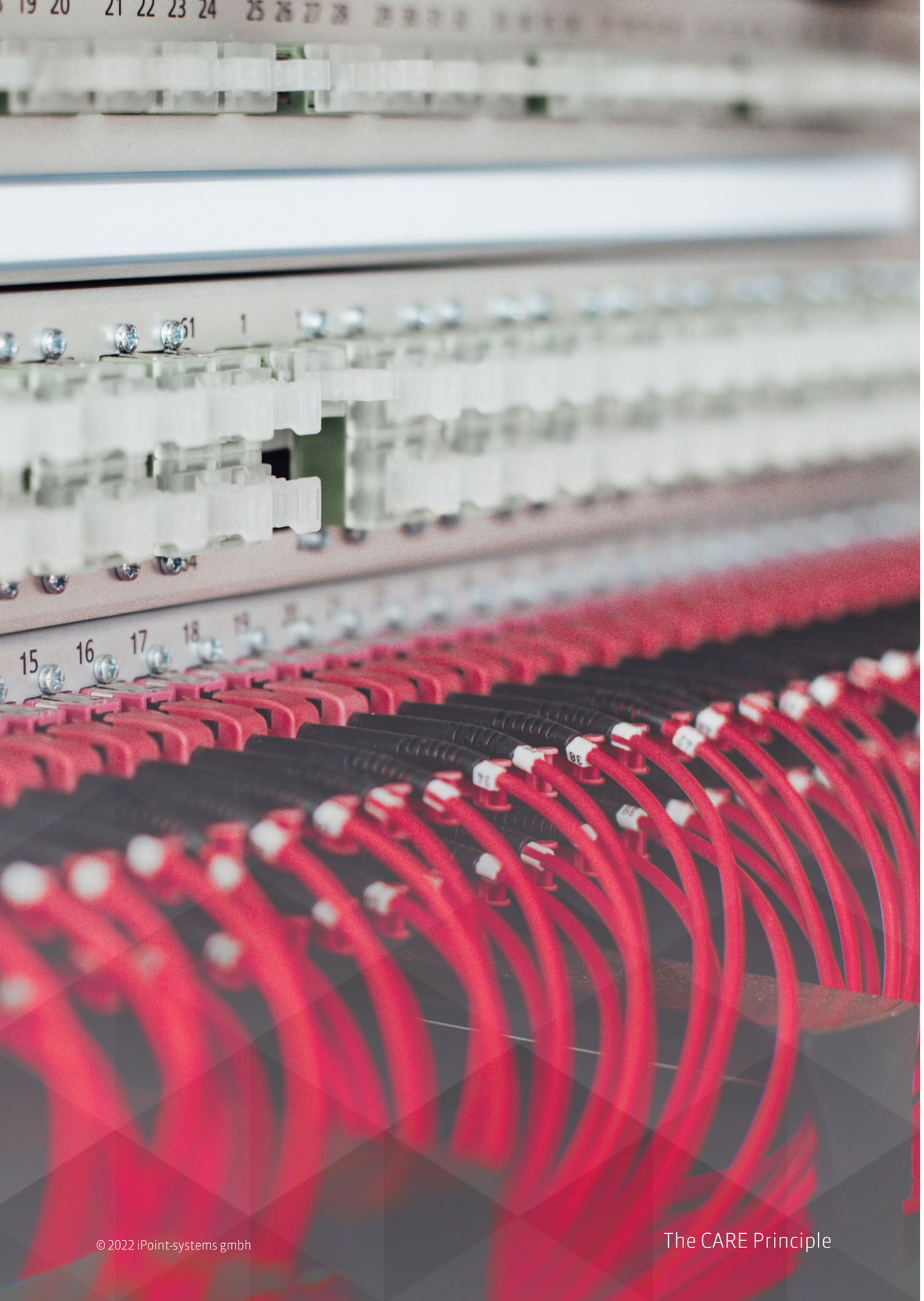






## 3. Possibilities of data analysis

What types of compliance and sustainability analyses can be performed on product and process data?

An important and necessary analysis for market entry is the **compliance analysis**: Is the product compliant or not? And will it still be compliant in the next 3, 6, 12, etc. months? Depending on the export countries, country- and region-specific regulations should be observed, such as EU ELV, REACH, RoHS, EU Conflict Minerals, or the US Dodd Frank Act, California Prop. 65, but also China REACH and UK REACH, etc., as well as new emerging regulations, e.g., per- and polyfluoroalkyl substances (PFAS). Within the iPoint Suite, the lists of restricted substances are kept up to date by iPoint's specialists. This enables automation of substance compliance analysis, and complete alignment of approval processes for all types of materials and chemicals across business units and departments. **iPoint's Compliance and Substance Inspector (CSI)** allows flexible compliance checks against diverse regulations and restrictions, even offering the possibility of creating customized checks. The CSI replaces manual processing and reduces the risk of errors and duplications. Customers may also choose to include their suppliers and customers in the approval process.

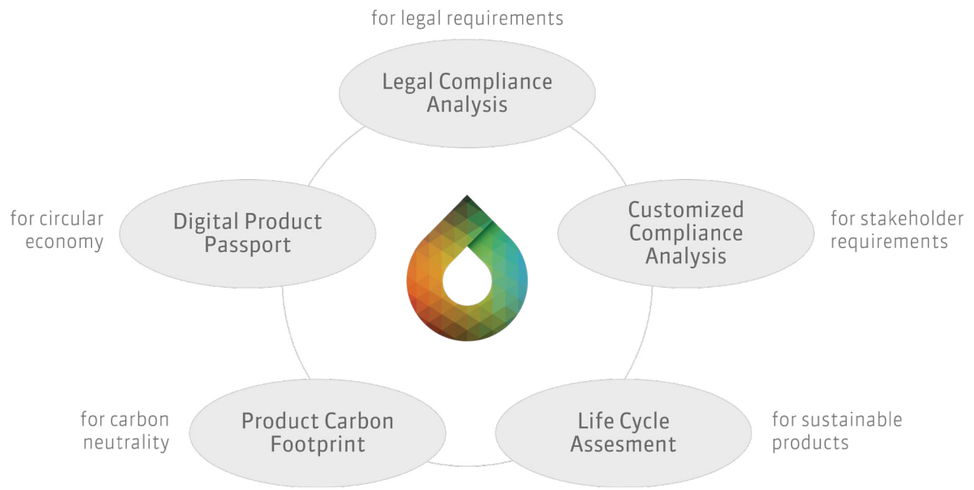
The **Product Carbon Footprint (PCF)** is the best-known method to analyze the climate impact of a product in order to reduce or avoid greenhouse gas emissions. Therefore, it is an important analysis for carbon neutrality and net zero targets. For example, PCFs are one of the main pillars for Logitech's carbon transparency strategy. Together with iPoint as a software partner, BASF has even developed its own digital method for companies in the chemical industry to calculate and monitor product-related carbon footprints.

With the iPoint Suite, the PCF can easily be extended by more environmental impact categories at any time and hence conduct a full **Life Cycle Assessment (LCA)**. Automatized and integrated life cycle assessments enable to identify and compare environmental performances and impacts throughout of different life cycle stages of a product. Thus, products can not only be optimized in terms of their environmental performance but can also be planned and developed sustainably in advance.

## 3. Possibilities of data analysis

The results from the environmental impact analysis can be used for a subsequent **hotspot analysis**: it enables to quickly identify environmental hotspots, i.e., the highest environmental burdens along the product life cycle, in order to analyze them in detail. This provides the basis for evaluating options for product design optimization. Beyond that, a **scenario analysis** can additionally be used as a foundation for an optimal decision. Various scenarios can be calculated to answer the question of how the environmental impact will change if, for example, a change of supplier or substitution of a material takes place. These can then be compared and evaluated and provide significant support for decision-making.

An emerging concept for the digitalization of product life cycles is the **Digital Product Passport (DPP)**. It is a set of data collected at all phases of the product life cycle and can be used to optimize design, production, use, and disposal. The idea of a digital product passport has already been discussed, among others, under the term digital twin: an adaptable virtual model of a physical product enabling to establish traceability of materials, components, parts, and products from the design to the reuse and material recovery phase.




The iPoint Suite allows you to start with the analysis that fits to your organization's strategy, evolve with your company's requirements, and even combine analysis.

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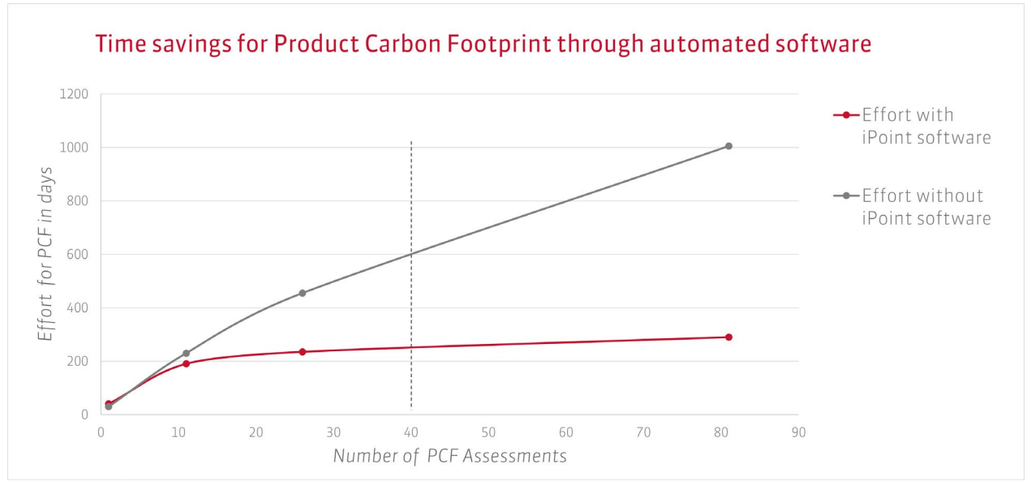
## 4. Key capabilities

To meet all the challenges and to fully realize the possibilities, it needs a toolkit of capabilities.

Automation and **digitalization** are key to reduce the manual time-consuming and error-prone process of analyzing a product's material compliance, carbon emissions or other environmental impacts. By automatically mapping existing data from Bills of Material (BOM), the ERP system, or existing compliance data in IMDS the manual effort for the analysis is reduced immensely. The automated aggregation of collected data enables to build a digital representation of product and process, which is the basis for the Digital Product Passport.

Thanks to intelligent **automation** and analysis an immense amount of time and effort can be saved for environmental assessments. A calculation based on a customer experience from the electronics industry showed that the assessment for 40 product carbon footprints could be reduced from 600 to 290 days thanks to the software solution.

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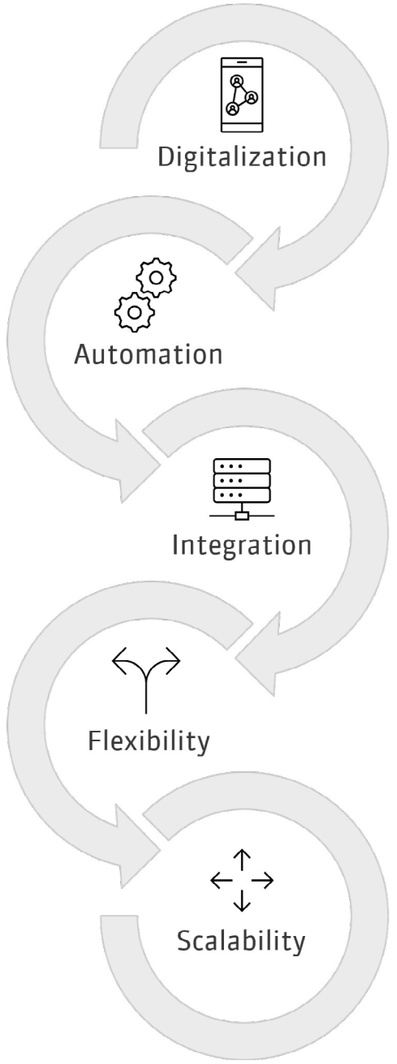
## 4. Key capabilities

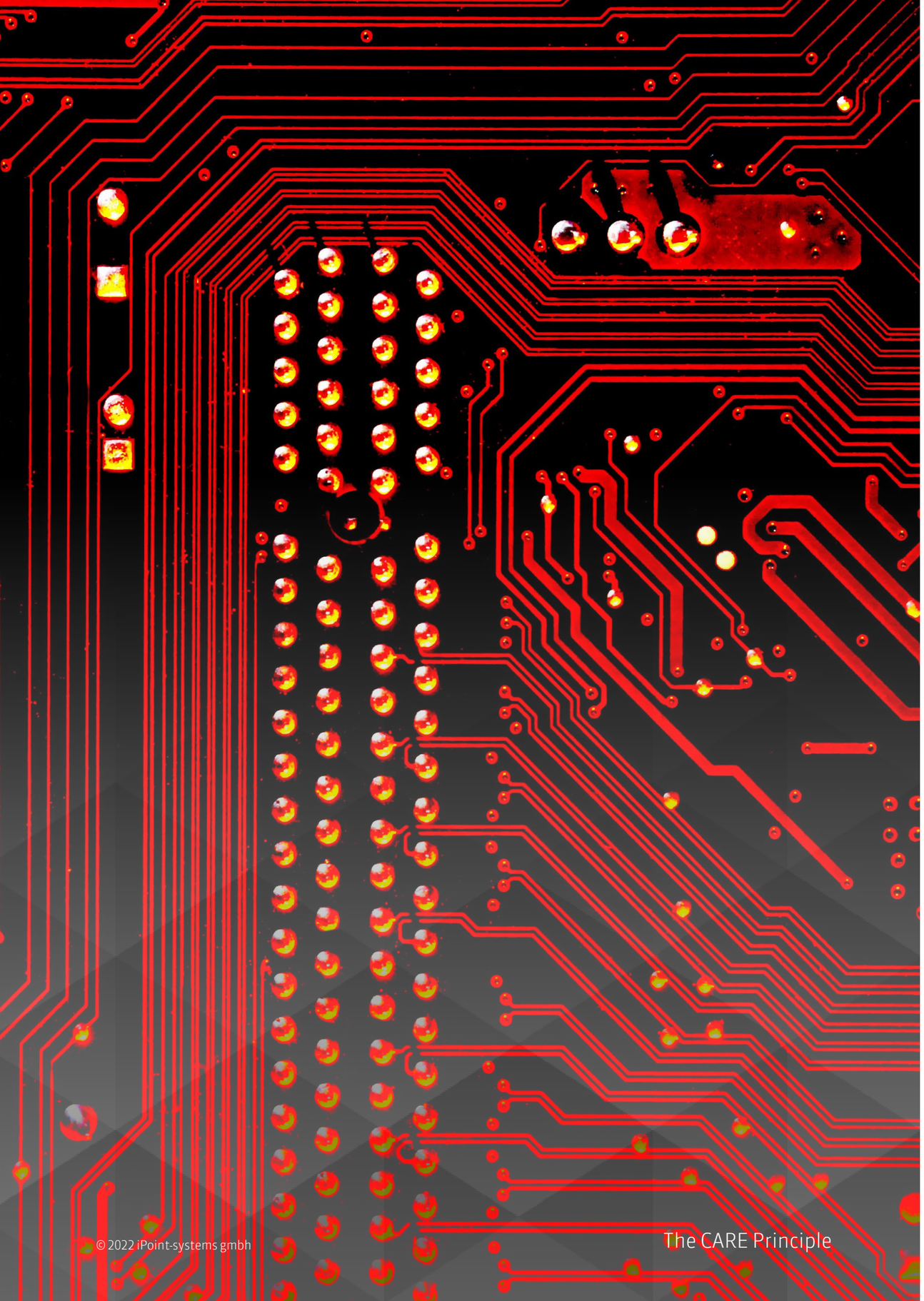



The ability of **integration** into systems makes the tasks of managing the complete material life cycles much easier. Another benefit of having integrated processes and tools is that they remove the need to build complex interfaces between different vendors' tools and databases. This makes analysis and reporting more accurate, and it reduces the risk of errors and, more importantly, of non-compliance.

**Flexibility** in the analysis is a basic requirement that enables a forward-looking analysis in order to easily react proactively to emerging regulations. For example, if a law has already been announced, then it is possible to proactively check whether products will still be compliant in, e.g., 3 months.

Flexible models, on the other hand, also allow for **scalability** of the analysis. Parameterized metamodels, for example, do not require the creation of a Product Carbon Footprint (PCF) or Life Cycle Assessment (LCA) model per product, but one can calculate various products with a flexible model and is thus much easier to scale.

Additionally, the ability of different detail levels ensures that the results offer a value for experts as well as non-experts. Hence, everybody in the company can use the results to make more sustainable decisions. In this way, it enables **collaborative use** of analysis: From a detailed analysis for an LCA expert, for example, to an aggregated analysis with sustainability KPIs for management. The output of the analyses should always be reusable for other purposes.







## 5. Sustainability and compliance analysis in combination

Data analysis is the backbone of material compliance and sustainability processes. Whether you are looking to phase out certain substances or parts containing banned and/or restricted substances, if you want to identify environmental hotspots, increase recycled content, or calculate the carbon footprint of your product, an automated data analysis is crucial.

The key information for both product compliance as well as product sustainability analysis lies within the material information of a product. Having the information on one provides the basis for the evaluation of the other. **Synergy effects** can result from the combination of compliance and sustainability analyses, and **corrective measures** can be taken at an early stage. An evaluation of new product designs takes place at all stages of the development process. Sometimes environmental impact is also considered in terms of regulatory compliance. Life cycle assessments, however, are often not conducted until the product is already on the market. Yet, indicators for circular economy and sustainability should already be included in product planning and design in order to be able to monitor the actual sustainability benefits of the products.

There is increasing interest in doing more with collected data and going beyond just compliance analysis. The **digital product passport** can provide information about the product itself, the materials, and substances it contains, and simultaneously about its environmental footprint, social impact, etc. Thus, it could enable the adoption and upscaling of the circular economy closing the gap between concept and practical implementation. The value of the data set within the DPP is increased as it allows a combined analysis that gets as much out of the data as possible and addresses a wider range of issues. At the same time, the data collection effort is reduced, as also described in the Collect Paper, if the data is analyzed for multiple purposes. They can then be reported to multiple stakeholders for different purposes in the next step.

**“Benefits can only be fully realized when compliance and sustainability are analyzed together.”**

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## 6. The iPoint Suite

The iPoint Suite not only ensures faster global market access for your safe and compliant products but also enables better positioning though sustainable products since customers and investors increasingly consider environmental factors. By automating processes and creating transparency, the iPoint Suite enables procurement, engineering, and design teams to make better decisions and to speed up innovation cycles. It provides long-term strategic support, for instance in tracking and achieving your decarbonization targets. The iPoint Suite reveals opportunities to save cost, energy, time, and effort while minimizing ecological, social, and economic risks by delayed market access, penalties, and recalls.

The iPoint Suite supports you in data analysis by replacing time-consuming manual efforts with **automated** and **integrated** processes of substance compliance analysis or the calculation of hazardous substances, recycling percentages, the carbon footprint, etc. Thus, the iPoint Suite **reduces time-to-market, costs, and risk** of errors, duplications and, more importantly, of non-compliance and penalties. Its **flexibility** of analysis allows proactive reaction as well as the **scalability** of analysis. With the ability to analyze at multiple detail levels, the iPoint Suite enables collaborative use. By means of **digitization**, the iPoint Suite simplifies the evaluation of knowledge about your products, processes, and suppliers, as well as their environmental, economic, and social impacts and supports **decision-making**. The iPoint Suite allows you to choose the entry point depending on your organization's strategy and gradually evolve with your company's requirements and even combine analysis.

iPoint Suite

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The CARE Principle