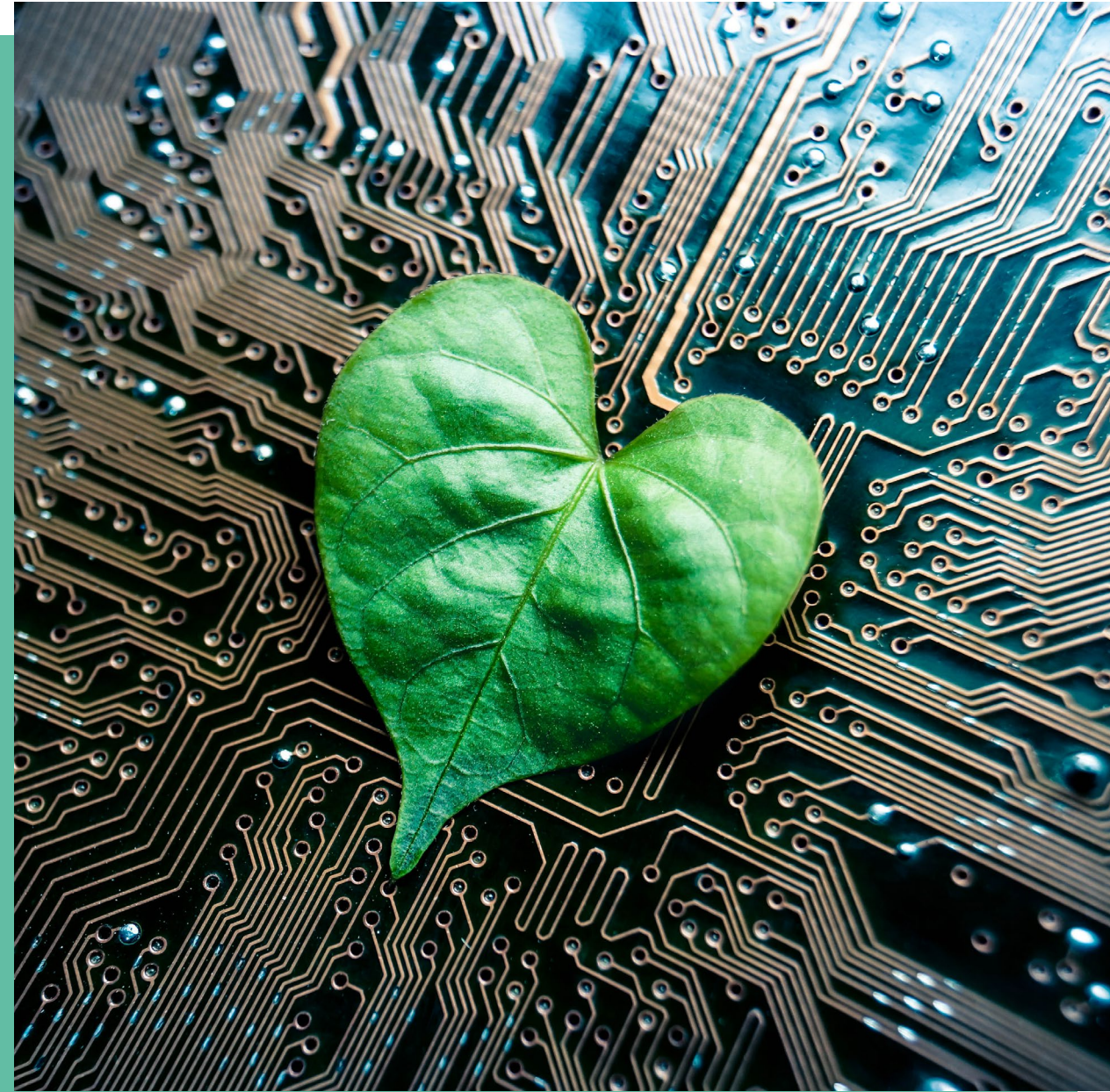# Digitainability
The Digital Sustainable Revolution

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CONSULTING

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_ Digitainability – The Digital Sustainable Revolution

The Industrial Revolution, which began in the late 18th century, significantly changed the way goods were produced and services were delivered. It led to greater productivity and prosperity, but also had negative consequences such as environmental degradation, the exploitation of labor, and increased social inequality. We feel the effects of this today in the form of climate change, social injustice, and unequal economic growth. In today's digital revolution, digitalization and automation are changing how we live and work. The time has now come for us to assess and address these problems.

Like the Industrial Revolution before it, the digital revolution is having a massive impact, shattering boundaries of space and time. The energy consumption of data centers and the e-waste generated by the technology have a significant impact on the environment; for example, data centers alone consume around 3 percent of the world's electricity. This consumption is expected to increase annually by 4 percent.[1] And the following figure shows how pressing the problem with e-waste is: 57.4 million tons of e-waste were generated worldwide in 2021.

There is another way. In the past, companies became aware of the effects of their actions and learned from them. Now it is time to do the same in the wake of the digital revolution.

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[1] https://www.aflhyperscale.com/articles/what-makes-hyperscale-hyperscale/

_ Towards a greener and more digital world

The international community has agreed to limit global warming to 1.5 degrees. However, there has been little progress along this path. A study by the investor community Carbon Disclosure Project (CDP) has determined that the business world in none of the industrially strong G7 countries has made a sufficient contribution to achieving the goals of the Paris Climate Agreement. Current policies and corporate targets will cause the Earth to warm by about 2.7 degrees compared to the pre-industrial era. Climate researchers predict this will have catastrophic consequences and make parts of the Earth uninhabitable. Conversely, we can counteract this warming and its consequences through our actions.

The European Union's Recovery Plan (considered the largest stimulus package ever funded by the EU budget) supports a greener, more digital, and more resilient Europe.[2] The strategy focuses on sustainability and digitalization with the aim of laying the foundations to secure the quality of life in Europe for the long term. The overlapping of these issues will play a decisive role in how companies do business in the near future.

Detecon International can be a valuable partner on this journey and can employ its competence in Digitainability to guide companies in navigating the intersection of two megatrends. Detecon defines *Digitainability* as the combination of digitalization and sustainability and supports its clients in developing and practicing holistically sustainable corporate strategies based on digital solutions and data excellence. By prioritizing Digitainability, companies can ensure that their businesses are both profitable and responsible. Besides minimizing negative impacts on the environment and society, they can also benefit from the opportunities presented by the digital revolution.

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[2] https://next-generation-eu.europa.eu/index_de

⎽ Thinking sustainability multidimnesionally

The concept of sustainability has grown increasingly significant in recent years as people around the world grasp more and more clearly the environmental, social, and economic impact of their actions. The idea of the multidimensionality of sustainability goes back to the Brundtland Commission's 1987 report "Our Common Future", which laid the cornerstone for today's understanding of sustainability as a triad of people, planet, and prosperity. In its report, the Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs."

John Elkington, founder of the British consultancy "SustainAbility," went one step further with the development of his "pillar model of sustainable development" in 1994. He assumes that sustainable development can be achieved only if all actors achieve ecological, economic, and social goals simultaneously and equally. Otherwise, the ecological, economic and social performance of a society cannot be secured and improved. The model considers the following dimensions.

1) People/Social
Instead of focusing solely on the interests of shareholders, the interests of all stakeholders, i.e., all those who are affected in some way by corporate decisions, are now included.

2) Planet/Environment
Only as much of the Earth and its resources should be utilized as can be regenerated in the same time. In this vein, companies are diligent in using raw materials economically, lowering emissions, and conserving water, air, and soil as means of slowing down the loss of biodiversity.

3) Prosperity/Economy
A general economy can be successful in the long term solely if all three aspects of sustainability are balanced. Concentrating on economic success alone ensures that the other two pillars will be exploited until the limits of sustainability have been reached. This may mean, for example, that ecological resources will run out. The target is on

long-term investments that will secure the most effective operations possible while giving due regard to sustainability. This is usually expressed in monetary terms (e.g., efficient use of resources, lean processes, organic sales/profit, cost savings, and product benefits).

The model has changed the understanding of how a company's impact should be measured. It indicates that companies can survive in the long term solely if they pursue the three points described above with equal intensity. Sustainability is not limited to ecology; its broader sense concerns the harmony of economic, social, and ecological action and is the basis for sustainable development criteria.

_ The potential of Digitainability 1/4

Digitalization and sustainability are two megatrends of our generation that are essential for shaping a better, safer future for all. These two trends should go hand in hand to make the future greener and safer for everyone. Ultimately, the combination of the two will have a greater impact than merely the sum of the two parts. Their integration will produce innovative solutions that can help to monitor, carry out, and promote sustainable development in good time that will create economic, environmental, and social benefits.

Managers around the world have recognized that bringing digitalization and sustainability together creates great opportunities for innovation.[3] Many companies have been responding to these developments for years by initiating both active and reactive measures. Nonetheless, most of these measures, both operational and strategic, focus on only one of the two aspects. The exponentially growing use of digital solutions has negative environmental, social, and long-term economic impacts, however, if the sustainability concept is ignored, so more sustainable digitalization is essential for the mitigation of negative impacts in the future.

Digitalization can lay the foundation for data intelligence, which fosters better understanding of the complex, interrelated trade-offs and synergies of sustainable action. Data-driven approaches provide companies with concrete insights they can exploit to improve their sustainability efforts. If the sustainability aspect is missing, however, digitalization has a negative impact on the environment, society, and the economy in general, which is why digitalization and sustainability must go hand in hand.

[3] Apply Digital to Sustainability for ESG Success (gartner.com)

_ The potential of Digitainability 2/4

Detecon uses the concept of Digitainability[4] to tap the potential of digitalization for conscious growth and mindful development — promoting sustainable economic growth, minimizing negative environmental impact, and assuming social responsibility.

Detecon Digitainability Advisory:
driving sustainability through digitalization and data excellence

Digitalization
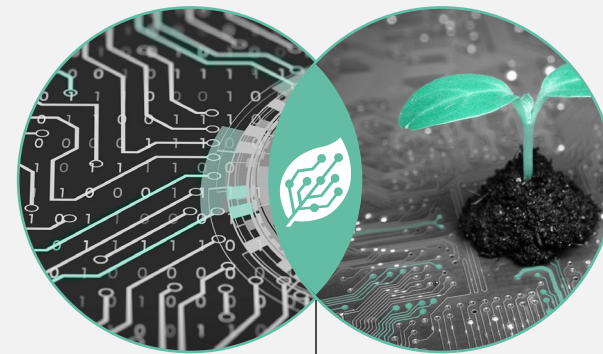
Sustainability

Digitainability...

... is the ability to utilize digitalization to foster sustainability by encouraging the **mindful application of digital technologies** and hence improving resource efficiency and reducing negative environmental, **economic and social impacts.**

[4] https://doi.org/10.3390/su14053114

_ The potential of Digitainability 3/4

Digitainability can help to usher in a new era of sustainable development:

Data-driven decision-making

Collecting and analyzing data on a large scale with the aid of digitalization enable informed decision-making. Decisions based on context-related information contribute to broadened sustainability.

Connected cities

Digital technologies with a focus on sustainable values help to create sustainable smart cities that are more energy-efficient, barrier-free, economically viable, and environmentally friendly. Technologies such as sensors, big data analytics, and automation can optimize resource consumption and waste reduction.

Green ICT

Companies can take advantage of services that aid them in the more sustainable and environmentally-friendly use of ICT. They can help to mitigate negative environmental impacts of ICT activities by reducing energy consumption, generation of e-waste, and production of carbon emissions.

Renewable energy

Optimizing the use of renewable energy sources such as solar and wind power through digitalization accelerates the reduction of carbon emissions, supporting the transition to a low-carbon, green economy.

Environmentally-friendly procurement

Companies can reduce their environmental impact by procuring environmentally-friendly, sustainable materials and products. Digitalization offers to companies effective tools for the measurement and evaluation of the sustainability of their supply chain during their search for sustainable suppliers and products.

Circular economy

Digitalization can give rise to a circular economy. In this type of economy, optimization of consumption and tracking of resources contribute to the minimization of waste and greater recycling of resources. These factors can reduce negative environmental impacts in the life cycle of products.

_ The potential of Digitainability 4/4

E-Commerce

Data intelligence can play its part in strengthening sustainable consumer behavior as it opens the door to the development of e-commerce platforms providing access to sustainable products and services.

Education and awareness

Fast digital communication technologies, when used mindfully, can help to disseminate important information rapidly. This increases transparency, raises awareness, and educates people about the decisions and actions required for the development of a sustainable future. Raising awareness is also an element for the creation of a culture that leaves no one behind. It is indispensable for the genuine realization of the sustainability concept.

Digitainability represents a new era of sustainable development in which rapid digitalization and innovation can contribute to the development of a more sustainable digital future. We will discover and unlock new opportunities for growth, innovation, and progress that are crucial for business resilience.

_ Combining digitalization with sustainability

Most companies will be confronted by profound changes in the coming years. Speed will be a decisive element for maintaining competitiveness during these changes. Digital technologies can make a major contribution to instituting change that will quickly and comprehensively lead to a more sustainable economy. Simultaneously, however, digital applications entail significant risks for our society. Their responsible use with due regard for our values and all stakeholders is crucial to avoid undesirable consequences and a polarization of our society.

High-quality data have become the most valuable asset, and not all companies are mature enough to keep up with rapid market changes and regulations. Managing and protecting data are just as important as protecting the resources on which a business is dependent. Using sustainability data to drive transformation is there-

fore an important step that ensures corporate actions in accordance with the goals and capabilities of the enterprises. Only a sustainable approach to technology can accelerate economic, environmental, socially responsible, and governance results on a major scale while offering new ways to create real business value.

Using digital technologies and data-driven approaches to implement sustainable policies for businesses, governments, and society is important. Implementing Digitainability measures in a company requires a cycle of interactions. While digitalization can support the capture, structuring, and evaluation of data and give due regard to transparency and security requirements, its implementation brings benefits to all pillars of sustainability. It strengthens a company's resilience, enables faster responses, and transforms risks into optimization opportunities.

Digitainability is a means for companies to combine the benefits of digitalization and sustainability to optimize resource consumption, create transparency, and develop resilience strategies. Collaborative efforts result in the creation of innovative solutions that address the greatest sustainability challenges, meet customer expectations, improve stakeholder value, and set a business apart from the competition.

Detecon supports companies in becoming pioneers for sustainability with the assistance of digital transformation and in being "digital with purpose." We call on companies to embrace Digitainability and integrate it into their operations, products, and services. By doing so, companies act as pioneers for a more sustainable future while at the same time realizing economic benefits and creating competitive advantages.

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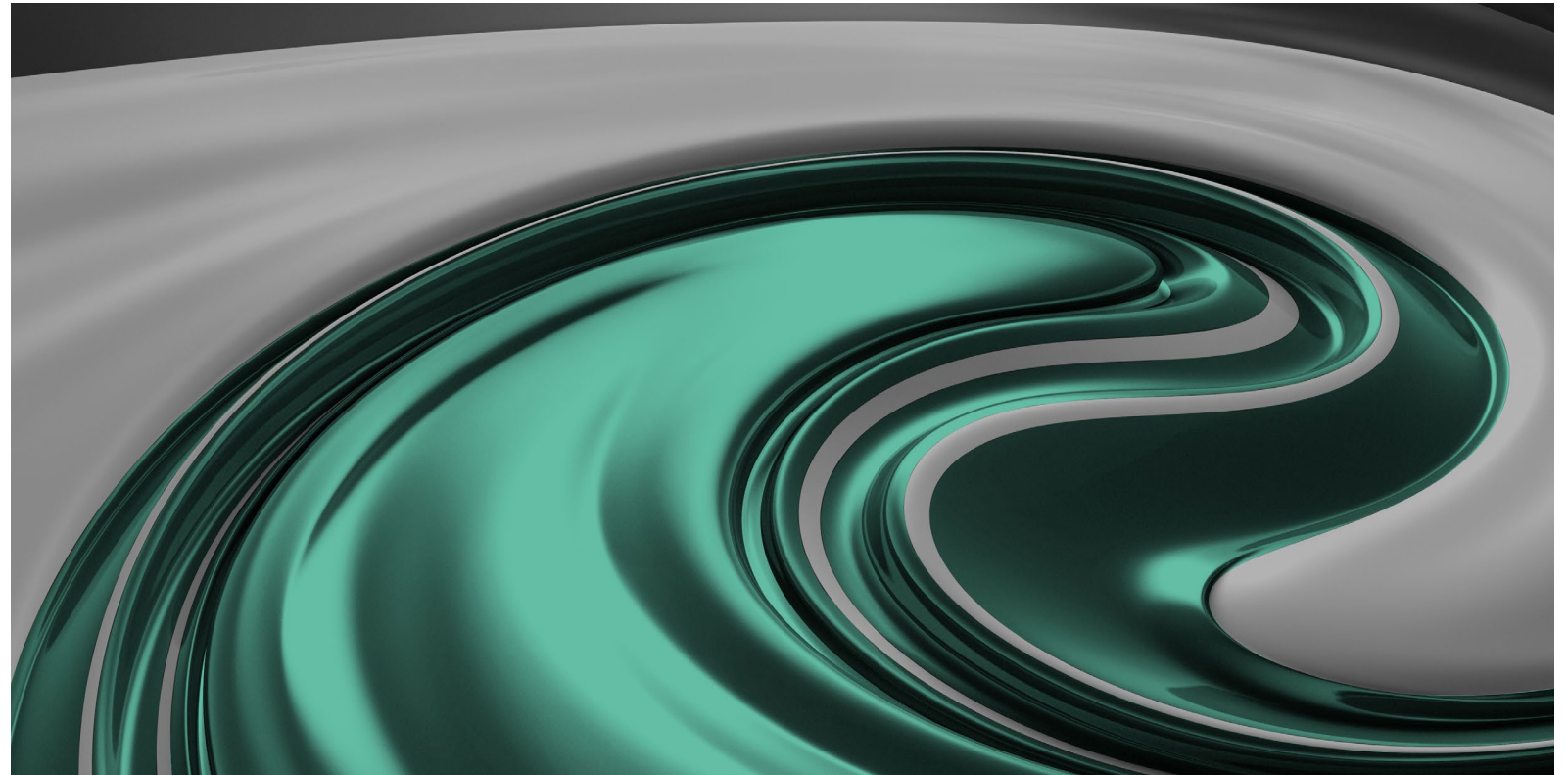
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_ About Detecon International

We here at Detecon are concerned with nothing less than the future — and the journey there. Employing innovative consulting approaches at the interface between management and technology, we pave the way into the digital age for companies from all industries. What drives us: our fascination with the question of how technology can change our everyday lives for the better — but above all, our curiosity to hear the answers.

Our consulting approach enables us to serve the entire spectrum of digitalization, from innovation and prototyping to the implementation of smart solutions. And so we encourage our clients as they take a fresh look at added value. At the level of products/services and processes, yes, but in terms of the underlying business models as well.

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