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IT life services

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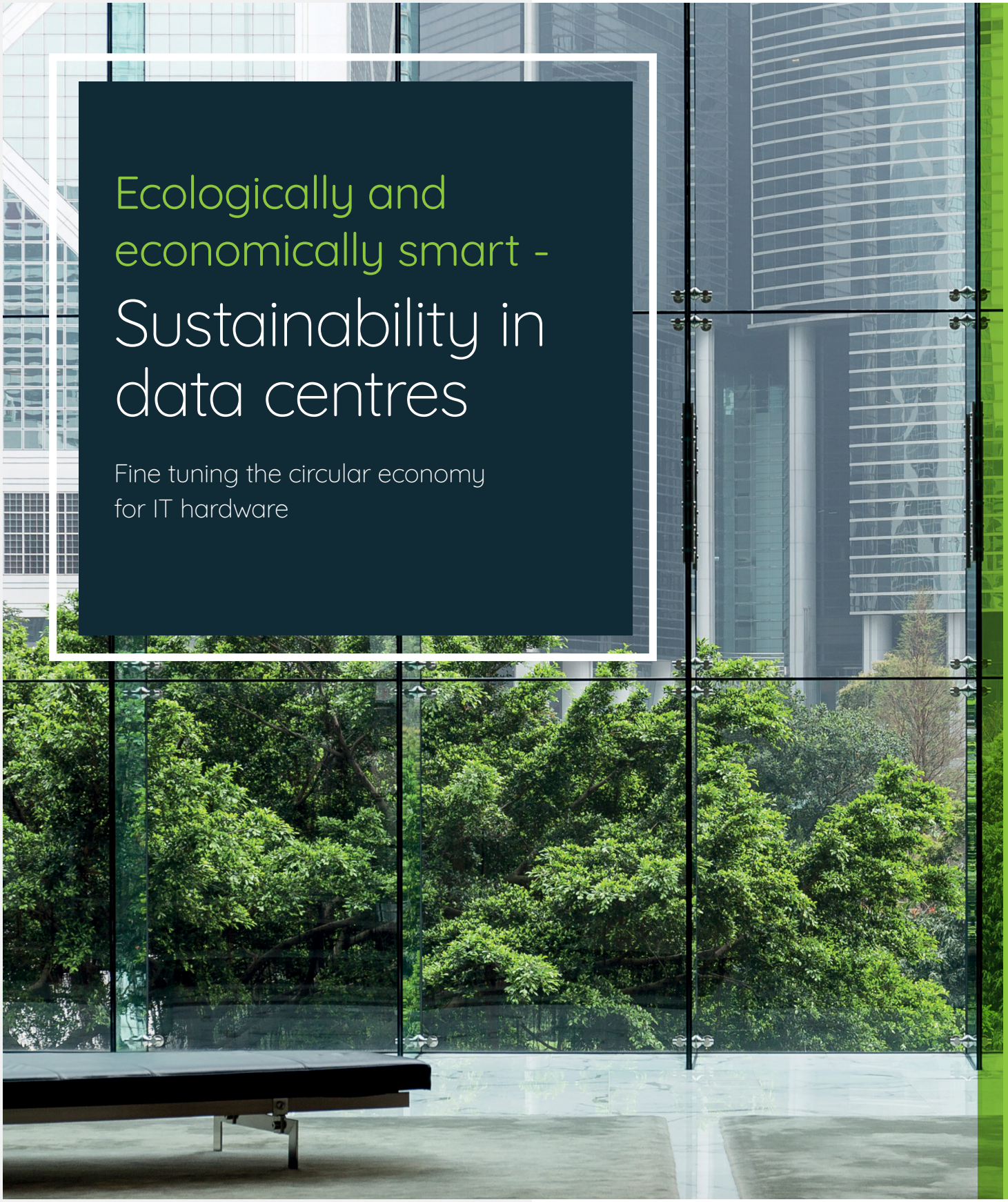


Ecologically and economically smart -

Sustainability in data centres

Fine tuning the circular economy for IT hardware

Sustainability in data centres

Digitisation is creating great new possibilities – with ecological consequences. This means in the future the IT sector will be responsible for more emissions than aviation and shipping put together. As the backbone of digitisation, data centres are rapidly gaining in importance. Between 2010 and 2020 alone, the demand for computing power in German data centres increased ten-fold.[1] In 2021, the energy supplier E.ON is talking about more than 2 million servers in about 53,000 German data centres.[2] Their capacity may soon no longer be sufficient – partly because machine learning and edge computing require a great deal of performance and storage.

> Since 2010, demand for computing power has increased ten-fold
>
> Source: eco study: Data centres guarantee sustainable digitisation in Europe

However, in parallel to demand, awareness for more sustainability in data centres is also growing. The previous focus had been on electricity supplies and on energy efficiency that are as “green” as possible, or better said, optimised power usage effectiveness.

But there are far more effective and budget-friendly opportunities for reducing CO2 emissions!

The aim must be the holistic protection of resources. On the one hand, by conserving sources of raw materials and energy. On the other hand, by minimising environmental pollution when extracting and refining raw materials, and during manufacturing, transport and waste disposal.

1 Study from eco, Association of the Internet Industry: Data centres guarantee sustainable digitisation in Europe
2 Green internet - our solutions for the future of data centres (eon.com)

Recycling as the path to more sustainability

An important and simultaneously neglected method of fine-tuning sustainability in data centres is the life cycle extension of IT hardware. Hardware can be used for much longer than specified in the manufacturers' end of service life - without any losses in performance or security.

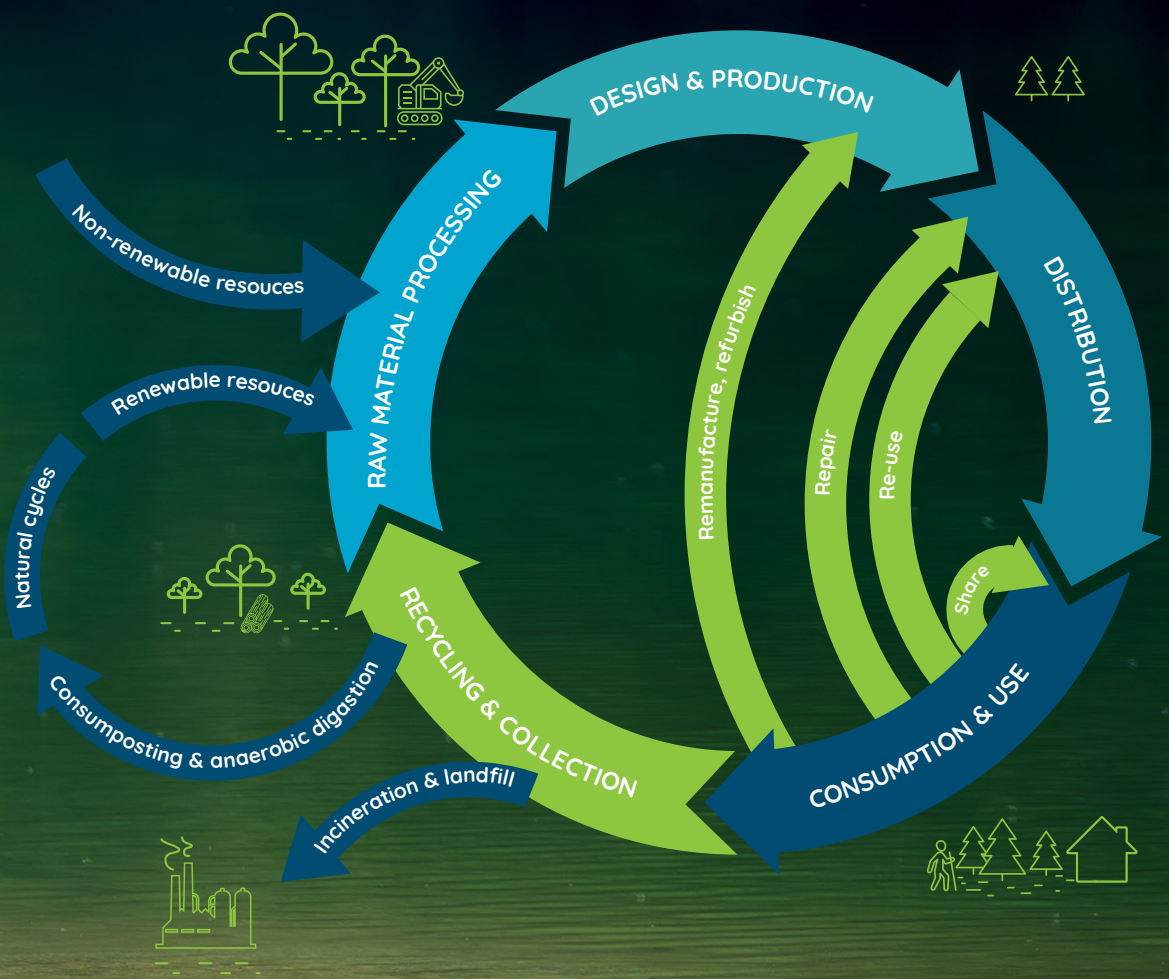
If hardware is reused securely and performantly, entire generations of equipment can be saved. And with these, the emissions for the production and supply chains of this hardware. In addition, old hardware will not be disposed of prematurely. An important contribution made to a comprehensive circular economy.

Three R-principles are the basis of a comprehensive circular economy:

- Repair
- Reuse
- Recycle

This can be achieved through:

- Third-Party Maintenance (TPM)
- Using refurbished Hardware
- Recycling reusable raw materials



Third-party maintenance allows you to use hardware longer

Hardware that is used longer and is replaced by new equipment later has a positive effect on the CO2 footprint, the production of waste and the social consequences of extracting raw materials – and is economically sustainable into the bargain:

Ecological	&	Economical
• reduced emissions thanks to avoided manufacturing and supply chains • minimised production of electrical scrap		• avoided new investments • better contractual conditions

The manufacturers' end of service life has served its purpose as a relevant date for exchanging hardware. As long as the performance and function of hardware is secured, an extended life cycle of ten years or more is possible without any problems. If manufacturer support ends, a provider of cross-manufacturer maintenance can take over and offer highly-qualified service for almost all equipment from one source.

This concept is supported by the EU Ecodesign Regulation 2019/424, which came into force in March 2021. This regulation demands that server manufacturers provide firmware updates long term. This makes it easier to operate IT hardware securely and sustainably for longer and, with maintenance independent of manufacturers, helps conserve resources.

Refurbished hardware protects the environment and your budget

The trend is irreversible. We want to and must develop away from a throw-away society towards a reuse society. It is by no means necessary to use newly-produced equipment wherever additional servers, storage and network components are required. Using refurbished hardware is much more sustainable.

Instead of being thrown away, professionally overhauled and checked equipment has its life cycle extended by a meaningful loop with a new user. Their use conserves resources – without requiring any sacrifices in quality, function or performance.

Financial sustainability also speaks in favour of continued use. Used equipment and complete systems are up to 50 per cent cheaper than comparable new ware. And while current models and their spare parts suffer from disrupted supply chains, overhauled equipment and (replacement) components are available at short notice.

Recycling: More than the last step

Reusing and continuing to use valuable raw materials or parts is a smart classic of sustainability.

To make recycling IT hardware from data centres succeed, companies can send their old equipment for professional recovery and refurbishment. Parts and substances that cannot be reused will be disposed of properly and professionally. This prevents pollutants getting into the water or air – for example, from leaching out of open waste disposal sites or from unfiltered incineration.

Professional recovery also reduces the social and ecological problems caused when extracting new raw materials.

It also offers companies financial benefits. Many minerals and other raw materials also have value in the recycling circuit and can be resold. The proceeds make a contribution to a partial ROI for the original investment.

Make your IT greener!

Would you like to find out how you can achieve more ecological and economic sustainability with a clever hardware life cycle in your data centre? Our experts will be pleased to show you paths and opportunities.

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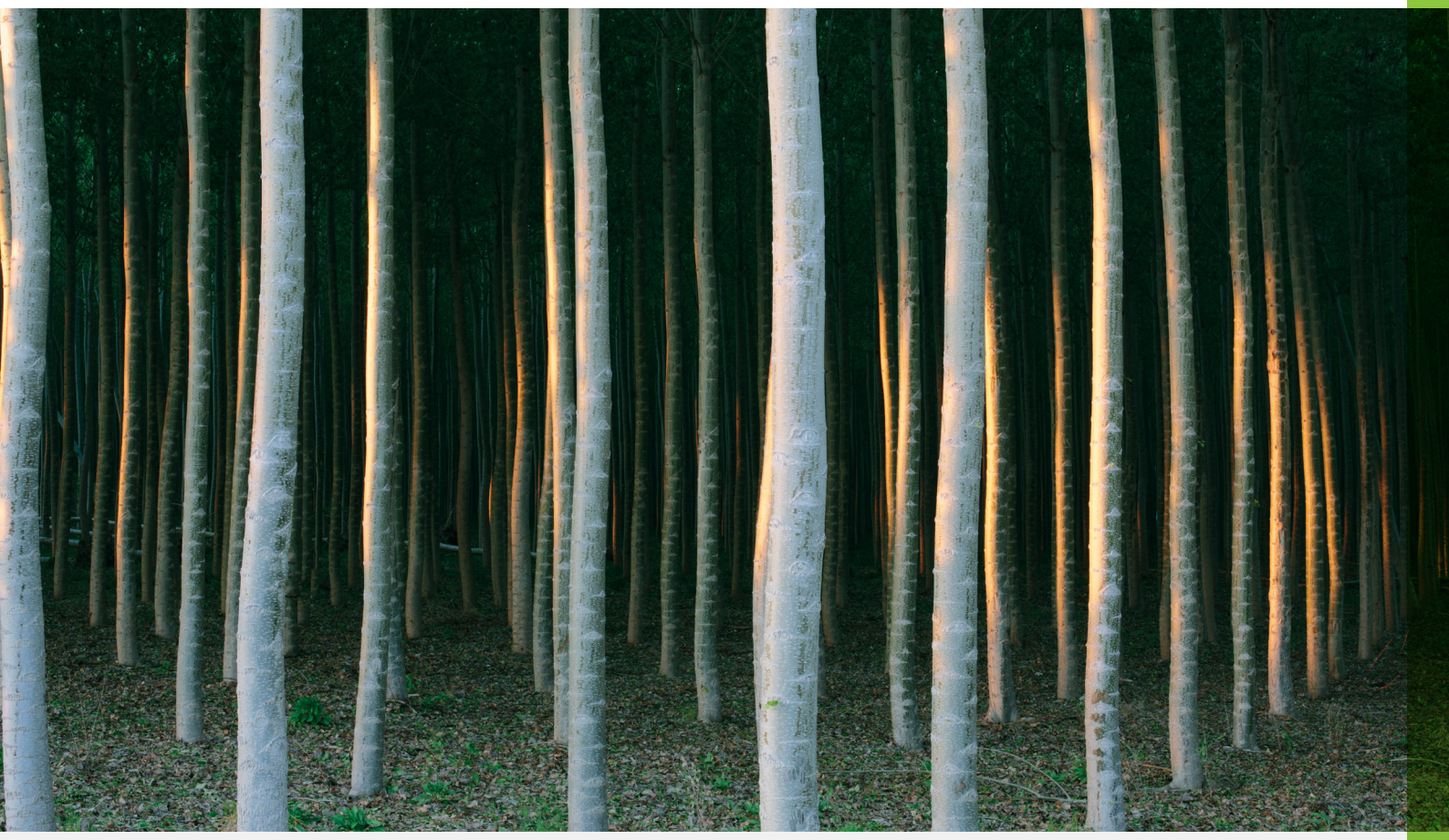

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