

FUJITSU

# More than an option

How Fujitsu uSCALE  
helps organizations in  
achieving their individual  
sustainability goals





# IT – a major sustainability enabler

The use of IT tools is always about more efficiency and effectiveness. While still during of digital transformation, sustainability is increasingly important to the business as well. Today, energy costs are becoming a hard economic factor, with

electricity and gas representing the largest unit cost increases. “Digitization & sustainability” must be thought of simultaneously in companies. With this, IT has an impact far beyond its own specialist area.

# IT makes a difference ...

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From what we know today, sustainability goals cannot be achieved if IT does not make a significant contribution. Innovation is not an end in itself, it needs a sustainable business plan. With the current pace of development, companies are faced with the question of when the right time to invest has been reached. Unless they decide on

## Fujitsu is at your side.

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The Fujitsu way is to make the world more sustainable by building trust in society through innovation. We take care to operate responsibly at every stage of the product's lifecycle, given the requirement to enhance sustainability-focused corporate management, fulfilling corporate social responsibility from a global perspective.

With innovative technologies paired with a business model like Fujitsu uSCALE, we actively support our customers in achieving their sustainability goals. This is part of our commitment to continuously look for ways how we can improve both efficiency and effectiveness of your IT.

a business model that is just as flexible as the options that innovative technologies bring with them. A holistic approach to sustainability is therefore closely linked to the right technology and suitable, sustainable commercial options.

**Welcome to Fujitsu uSCALE.**

### Core elements of our contribution

- We support businesses on their way to sustainability by combining key technologies in key innovation areas with business models that are as agile as on demand.
- We are aware of all three dimensions of sustainability. We reduce energy consumption, offer ecologically responsible solutions, and support organizations to master the sustainable digital transformation.
- We will work to achieve zero carbon emissions from our own operations by 2050 and contribute to climate change adaptation as well as a de-carbonized society through technologies supporting digital transformation.



# Data makes the difference!

When it comes to sustainability and IT, the way we handle, process, and store data is key. Be it a workplace scenario where employees are able to collaborate regardless of their location, an IoT scenario where tons of sensor data is processed, or a sales, service, and support organization on the leap to an omnichannel lighthouse. This makes its handling a crucial moment for a company's sustainability strategy. It is clear that digital transformation skills and methods are critical to the successful implementation of sustainability transformation, and that a twin approach linking both aspects together is critical. Both things go hand in hand, and one depends on the other. To take action on sustainability or even make plans based on present and past data, we need technological tools, and databases, to create meaningful and concise data which is easy to read and act upon. So, for that, we need digital transformation.

A good example is the project we recently did with the VELTINS-EisArena in Germany (<https://www2.fujitsu.com/global/customer-stories/cs-veltins-eisarena-winterberg-20230213/>).

The VELTINS-EisArena wanted to save money and become more sustainable.

Using AI, the ice thickness is monitored with sensors and controlled with the help of humidity, temperature, and light intensity, and thus optimally regulated. Considerable savings of up to 10% have been achieved in this way.

## **2.5 quintillion bytes are being produced – every day!**

We are used to sending data back and forth around the world. Not long ago one wouldn't have seen a big deal in this. But every piece of data is equivalent to a small amount of energy. The footprint of an email equals an average of 4g (0.14oz) CO<sub>2</sub> and up to 50g (1.7oz) CO<sub>2</sub> for one with a photo or hefty attachment. This adds up to an unimaginable amount of 2.5 quintillion bytes of data every day – of which only about 32% is ever used. That means the total CO<sub>2</sub> from unnecessarily stored data generated in one European country alone equals 112.500 return flights from London to Australia, according to a recent IET report. Replacing E-Attachments with links to the information in a centralized storage location offers a huge potential for energy reduction.

# Data is not just a pickup item



## Human Centric

Everyone can maximize their potential with dignity.



## Data Driven

Data intelligence increases resilience and generates innovation. Connecting people, things and services safely and securely.



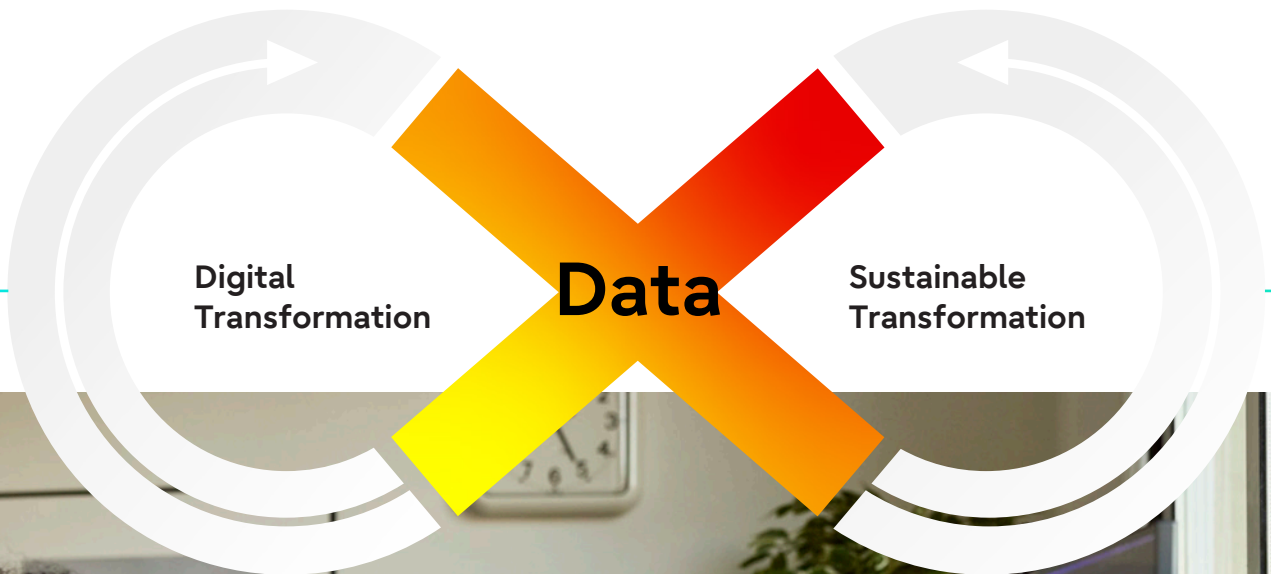
## Connected

An ecosystem connecting people, things and services safely and securely.

Long-term visibility of the planet and neutral equipments

A balanced economic progress

Enhancing the ability of future generations to meet their future needs



**50g CO<sub>2</sub>**  
average footprint  
of an email with photo

**4g CO<sub>2</sub>**  
average footprint  
of an email

# How behaviour influences consumption

## May 4th, 2023

... is earth overshoot day at which the human demand for renewable resources exceeds the supply and the capacity of the earth to reproduce these resources in that year.

## 8%

... is the amount that ICT will consume of the world's electricity demand by 2030, compared to 2% in 2020.

## 120g CO<sub>2</sub>

... is the amount of CO<sub>2</sub> that 1 GB of data generates within the entire lifecycle

## 50g CO<sub>2</sub>

... is the amount of CO<sub>2</sub> that is typically produced by an email with attachment.



# Innovation that helps reduce the carbon footprint.

With every new generation of our hardware IT infrastructure portfolio, we seek to optimize the three layers of sustainability: to make it faster, reduce the amount of energy needed, and enhance the business opportunities for you, our customers. One example of our ongoing effort is the comparison of the latest Fujitsu Server PRIMERGY M7 systems with its predecessor models.

## Fujitsu Server PRIMERGY M7

Servers are the number one energy consumers in IT. It's worth considering a technical refresh because modern servers are not only more powerful than older systems but also much more efficient. A single current-generation server can take over the tasks of several older systems at the same time, reducing the footprint of your data center and contributing to significant savings in power consumption. The comparison of the SpecPower benchmark results shows that the PRIMERGY M7 models consistently deliver double performance at the same CPU loads as the predecessor systems. This means that you now only need one M7 server for a workload that previously required two M6 servers, which presents a server consolidation potential of 2:1 saving data center space and budget for energy. More detailed information can be found here (white paper: Driving sustainability in the data center with PRIMEFLEX)

## The latest technology, without additional costs

For several years now, innovations have been developing faster than IT budgets have been increasing. Unless IT is one of the core competencies, companies often find it difficult to continuously allocate new funds for IT modernization. New, innovative business models, such as Fujitsu uSCALE help to solve such contradictions. This as-a-service business model combines the use of modern hardware IT infrastructure solutions with the required services - based on an individually calculated requirement plus transparently determined

## Savings over five years with uSCALE

12%

49.341 KWh

20,72t CO<sub>2</sub>



## Technology continues to evolve – as does sustainable progress

In the search for economic savings and the reduction of your environmental footprint, it is worth looking at the following graph. There you will find a comparison between a traditional CAPEX model and a flexible consumption-based uSCALE business model. The calculation assumes a continuous increase in annual demand of 16% over a five-year horizon (divided into seven intervals). Additional capacity is made available every nine months. With an average utilization of 70%, you save at least 20,72 tonnes of CO<sub>2</sub> - without having to constantly buy new hardware.



## Traditional CAPEX purchase vs. Fujitsu uSCALE

Time	uSCALE power consumption (kWh)	uSCALE performance value (70%)	Traditional CAPEX performance value per server	CAPEX power consumption (kWh)	Difference
Interval 1	30.090	44.949.230	44.949.923	47.079	36%
Interval 2	37.612	56.186.538	5.618.654	50.739	32%
Interval 3	45.135	67.423.846	6.742.385	54.602	17%
Interval 4	52.657	78.661.153	7.866.115	58.860	11%
Interval 5	60.180	89.898.461	8.989.846	63.387	5%
Interval 6	67.702	101.135.768	10.113.577	68.050	1%
Interval 7	75.225	112.373.076	11.237.308	75.225	0%
<b>Total</b>	<b>368.601 kWh</b>			<b>417.942 kWh</b>	<b>12%</b>

# Achieving more with less – that’s a compelling efficiency formula

When operating at low loads, data center equipment is inefficient. The industry is currently experiencing utilization levels of approximately only 25%, indicating that a significant portion, three-quarters, of IT resources remain underutilized. Consequently, this inefficiency results in unnecessary expenses and resource wastage.

With Fujitsu uSCALE, modern IT solutions and the services required for operation come together.

Fujitsu uSCALE delivers flexible, monthly billed on-premises IT infrastructures “as-a-service” solution based on an in-depth review of customers’ needs. We, therefore, appoint a dedicated Customer Success Manager (CSM), starting on day one of our engagement. Delivering an optimum level of compute, storage, network, etc. with the lowest energy input possible through ongoing service reviews, and provisioning of data related to your consumption, forecasting and planning. This helps to right-size and optimize your IT infrastructure as well as to lower the energy required to power and cool equipment.

## Energy savings beyond belief? Check the facts.

Energy savings is one of the most common KPIs when it comes to sustainability. Make sure you don't compare apples with oranges. This applies both to the initial scenario and to saving rates over time. We recommend to ask for a realistic scenario for both a traditional calculated model as well as for an innovative energy-saving model.

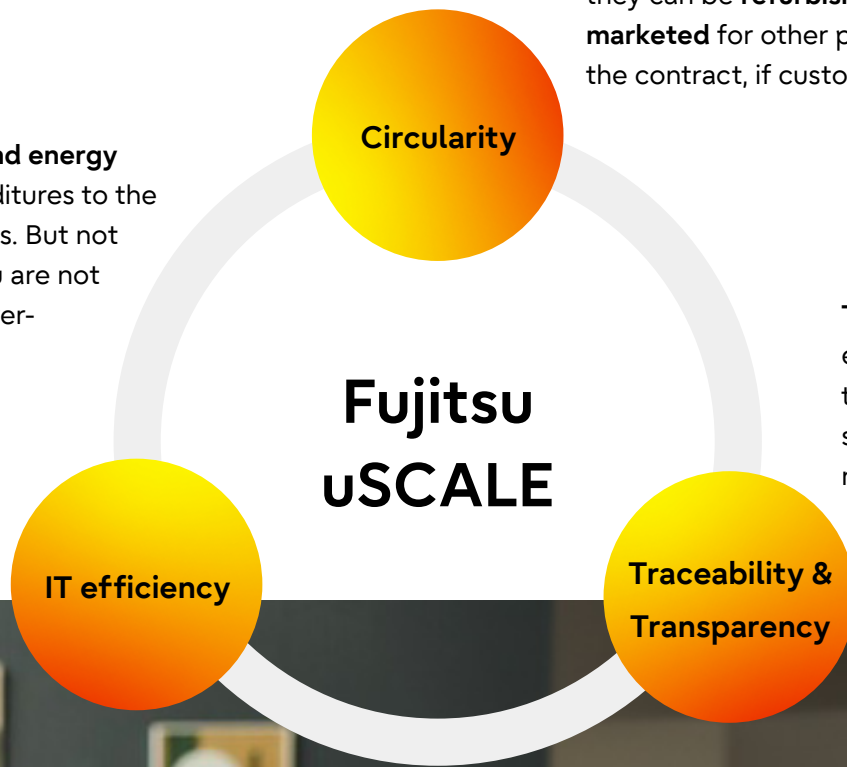


# Fujitsu uSCALE is one of the rare business models

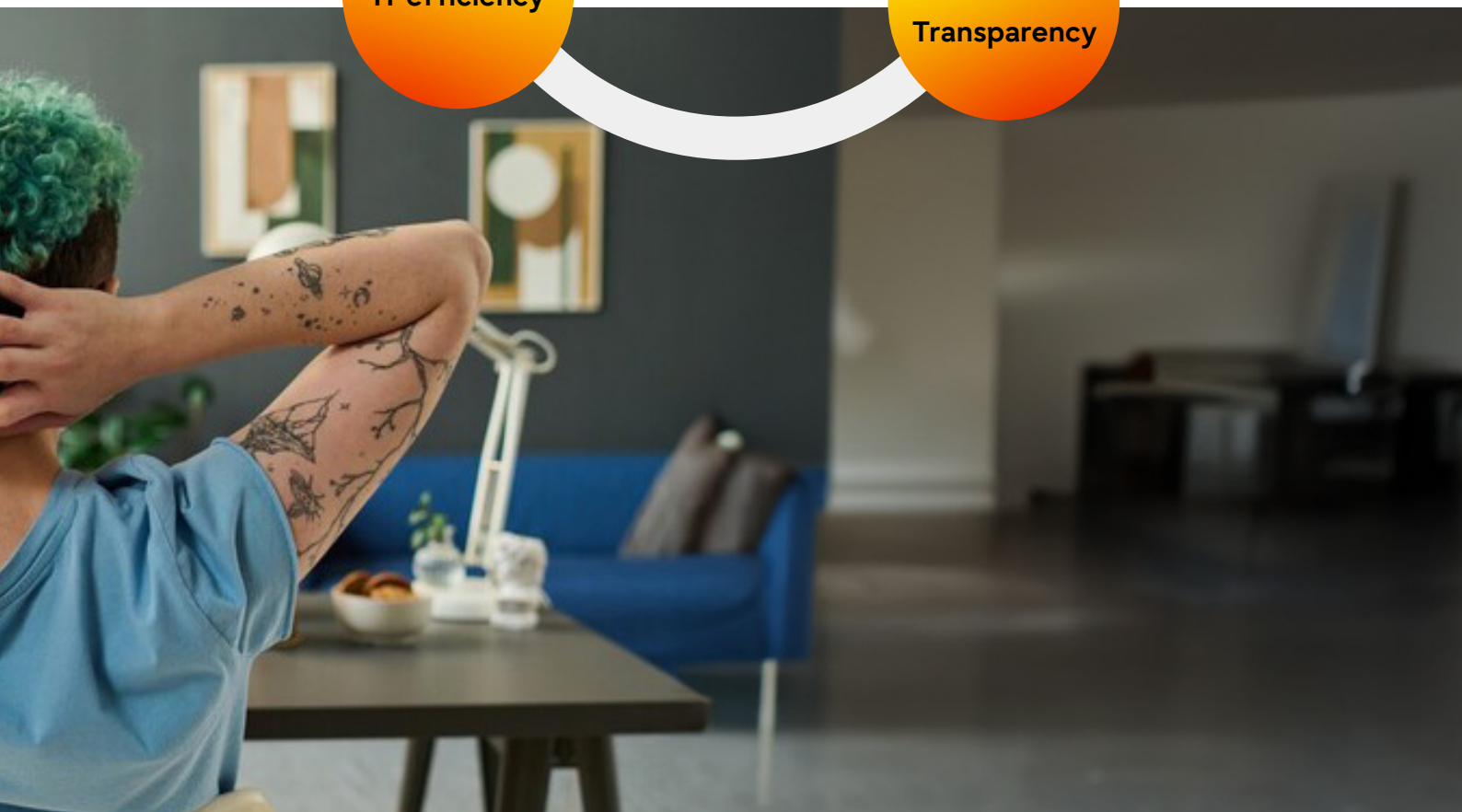
In addition, Fujitsu uSCALE manages the entire lifecycle of the IT equipment. The cloud-like as-a-service model makes it possible to extend the product lifecycle to conserve natural resources and reduce emissions. Fujitsu ensures that the infrastructure is refurbished or recycled at the end of the contract period. Customers do not have to worry about recycling, etc.

Align your budget and energy consumption expenditures to the actual business needs. But not overprovisioning, you are not overspending and over-consuming energy.

Allow assets to be given a **second life**, as they can be **refurbished, recycled** or **re-marketed** for other purposes by the end of the contract, if customers wish to do so.



Track CO<sub>2</sub> emissions & energy consumption. track, report & share sustainability related KPI's.





Let's meet in our  
unique CX Lab



A green Fujitsu uSCALE device is shown in a grassy field. The device is a small, cylindrical unit with a white top and a green body. It is surrounded by green grass and some small plants. The background is a blurred green field with a building and a car visible in the distance.

**Fujitsu uSCALE the  
business model designed  
for sustainability**

# Direct benefits for your daily business

## Avoid intensive IT hardware oversizing

Many companies struggle with capacity planning of their IT resources. Statistics show that overprovisioning of 30% in IT production environments is not uncommon. This not only leads to unnecessary investment and operating costs. It also has a negative impact on energy, space, and cooling requirements.

Fujitsu uSCALE is different: providing reliable, flexible, monthly billed on-premises IT infrastructures „as-a-service“ solutions, based on a thorough review of customer requirements.



### Stay flexible

Through measuring & monitoring, we make utilization transparent and deliver a good foundation for customers to decide whether or not to scale – up or down.



### Simplify operations

Our Fujitsu uSCALE contracts allow you to increase or decrease capacity. It is designed that you may even extend an entire installation without extensive paperwork and negotiations.



## Increase efficiencies

Delivering an optimum level of IT infrastructures with the lowest energy input possible and increasing IT processing power and storage capabilities with fewer IT assets.



## Reduce carbon footprint

Invest your CAPEX into core competencies without sacrificing performance and innovation. Fujitsu uSCALE gives you access to the technologies, which typically consume less power than the previous generation.




## Reduce waste

At the end of the usage of hardware we, will either refurbish your hardware or recycle it.

An aerial photograph showing a large solar farm installed on a steep, forested hillside. The solar panels are arranged in neat rows, following the contours of the slope. The surrounding area is covered in dense green trees, and a dirt road is visible at the top right. The overall scene suggests a harmonious integration of renewable energy with nature.

**The environment  
can't wait –  
neither should you.**





Fujitsu uSCALE will be individually designed to your business needs, starting with your current status, including your growth aspiration. Let us demonstrate how the flexible scalable, yet cost-effective, and sustainable IT Infrastructure for your business could look like. Invite your IT leader to this discussion too!



**Check the uSCALE  
Price estimator**

