



# 



# IN THE SPOTLIGHT: SOFTWARE

STORIES, FACTS & FIGURES

# kontron

### Kontron AIS GmbH





SEMI-compliant equipment integration in semiconductor fabs: SECS/GEM, GEM300 and EDA



Published by Silicon Saxong e.V. Manfred-von-Ardenne-Ring 20 F 01099 Dresden Phone: +49 (0) 351 8925 888 redaktion@silicon-saxony.de www.silicon-saxony.de

Layout Ostsüdost Editorial office Silicon Saxony e.V.

Print addprint® AG

Publication date June 11, 2024

Images SHUTTERSTOCK.COM Titelseite, P. 6, P. 22/23: Gorodenkoff, P. 16/17: symbiot

CANVA PRO P. 4: Koyu/Getty Images, P. 5: 4X-image/Getty Images, P. 12/13: WLDavies/Getty Images, frank600/ Getty Images, Osckar/pixabay, simoneehmannphotos, P. 20: XH4D/Getty Images Further Images

P. 7: Tobias Ritz, P. 8: tracetronic; P. 11: DevBoost/SQL Projekt AG/Silicon Saxony, P. 14: Bundesregierung/Bergmann, ChatGPT/Image generator, P. 15: Pixabay\_Vlad Aivazovsky, P. 16: Bundesverband IT-Mittelstand, P. 17: KI Bundesverband/elevait/ Silicon Saxony, P. 18: FSD-Fahrzeugsustemdaten GmbH Zentrale Stelle nach StVG, ZEISS Digital Innovation, SYSTEMA, Kontron AIS, DUALIS, P. 20: Conversion Junkies, P. 20: TU Dresden, P. 21: intap network, P. 23: Silicon Saxony, P. 24: DiAS, iStock/marchmeena29, P. 25: Fotolia\_61240130, P. 26: Silicon Saxony

### Dear Readers,

The Saxon software industry is experiencing rapid growth, developing innovative and often highly specialized solutions in a dynamic environment. However, the challenges are not unique to Saxon players: companies that neglect generative AI and other trending topics, or are unprepared for regulations like the EU AI Act, risk being left behind. Products, business models, teams, compliance, and securing the urgently needed talent must be continually rethought and adapted.

**Software is eating the world**\* – and this issue of NEXT showcases exciting success stories that illustrate why.

Enjoy reading, **Prof. Dr. Frank Schönefeld** 

Deutsche Telekom MMS & Executive board member, Silicon Saxony

### **Table of Content**

- **4** Software an introduction
- **6** Software in Saxony
- **10** Software and programming
- **12** Development and scaling
- **14** Generative Al
- **16** German and European regulations
- **18** Applications of software
- **20** Skilled workers
- 24 Excursus: IT security
- 25 Excursus: Cloud
- **26** Silicon Saxony offers





## What is Software?

From the operating system that manages hardware to the applications we use, software covers a wide range.

To date, the term software typically refers to the collection of scripts, programs, and applications that make computers, computer networks, and various devices and machines functional and controllable. Software not only enables the execution of tasks and data processing but also optimizes the performance and usability of these systems.

Learn more about the types of software on page 10



- 1. Microsoft (211)
- 2. Oracle (52,51)
- 3. Salesforce (34,86)
- 4. SAP (31)
- 5. CDW Corporation (21,38) By turnover in billions of US dollars

#### Insights

### Drivers for artificial intelligence

- Generative Al in companies
  92% of the "Fortune 500" use generative Al
  The glorious seven
- These tech companies are driving Al development: Alphabet, Amazon, Apple, Microsoft, Meta, Nvidia and Tesla
- Top Al players in Germany
  Aleph Alpha, DeepL, LMU Munich, Fraunhofer IAIS (Dresden, Sankt Augustin)

# Software trends

Read the study here: Gartner Top 10 Strategic Technology Trends for 2024

times of Al.



investments, harness the power of many and deliver value. These trends (according to Gartner) help to achieve business goals faster in of Al.

Protect

Companies that apply trust, risk and security management (TRiSM) will be able to eliminate up to 80 percent of incorrect information.

► By 2026, around 80 percent of software vendors will set up platform teams to optimize productivity and user experience through platform engineering.

By 2027, more than 70 percent of companies will use Industrial Cloud Platforms (ICPs), which combine software, platforms and infrastructure (SaaS, PaaS, IaaS services) into a single offering. Cloud computing and open source will democratize generative AI (GenAI). 80 percent of companies will therefore use GenAI in production environments (APIs, models, applications) by 2026. By comparison, 2023: < 5 percent.</p>

By 2027, 80 percent of CIOs will have performance metrics tied to the sustainability of the IT organization.

# *The niche as a recipe for success*

In an interview with Prof. Uwe Aßmann (Chair of Software Technology, TU Dresden), we talked about Saxony's strengths, missed opportunities, necessary measures and the power of InnoTeams.

InnoTeams create the bridge between research and everyday business life and enable knowledge and head transfer as well as new products

### SOFTWARE IN SAXONY



industry in Saxony. Saxony's players are particularly strong in niches such as cloud, web services, security and energy. They occupy markets with a great deal of entrepreneurial skill and thus generate a major impact. The interaction between research instituti-

By 2030, more than 50,000 people will be working in the software

ons and companies promotes innovative and exciting solutions and applications. In particular, the work in so-called InnoTeams brings knowledge from teaching directly into companies and is an excellent pool for new specialists. Prof. Uwe Aßmann explains in clear terms why all that glitters is not (yet) gold, why and where university teaching is not sufficiently geared towards the needs of Saxon industry, what To the full opportunities we have missed interview in recent years and what concrete measures are needed to provide sufficient IT specialists for Saxon companies.

Early STEM

basic research

in Saxony



"Perhaps it is the unique characteristic of the Saxon entrepreneur, who, despite limited venture capital resources, has achieved a remarkable market position for his company through entrepreneurial skill and innovative strength."

Prof. Uwe Aßmann (Chair of Software Technology, TU Dresden)

Figures

### Software ecosystem Saxony

### 35,801

Employees subject to social insurance contributions in information technology\*

 Statistics of the German Federal Employment Agency 03/2023
 Statistical Office of Saxony, Saxon State Ministry for Science, Culture and Tourism

### Around 1/3

of these are women employees are (11,331 employees)\* expected by 2030

### 25 percent

50.000

of companies in Silicon Saxony come from the software industry



"Our chips are a

Key Enabling Technology

(KET), but so is software. It

is therefore Saxony's second

great opportunity and we

should seize it."

Prof. Uwe Aßmann

### 1,297

computer science alumni from Saxon colleges and universities \*\* Key demands from Silicon Saxony's position paper on software.

### TEM tion Increase in training numbers Stronger anchoring of

What does Saxony need to expand its role as a strong software location?

You can find Silicon Saxony's demands in our position paper



### SOFTWARE IN SAXONY

# Customized solutions for hidden champions

How Saxon software providers digitize technology companies.



Everyday work at tracetronic in Dresden Source: tracetronic

Saxon software providers assist technology companies in their digital transformation with customized solutions. This process involves more than just digitizing production; it also requires the reorganization of work processes and internal communication to ensure quality and innovation through seamless, collaborative, digital workflows. What unites most digital transformation projects led by Saxon software companies is that they often address processes so unique and specialized that



Read the full article here





Staffbase GmbH Software for corporate communication

💭 Staffbase

Schöneck

**GK Software SE** Store management systems and software for the retail sector

**¥G**K

The software landscape of Saxony in twelve examples



### Saxony's software landscape From highly specialized to globally important



article here

nor solely focused on factory automation. In recent years, Saxony's software landscape has become astonishingly diverse. The scope ranges from "highly specialized" to "globally important", the range from technological depth to brilliant user interfaces. A dozen examples of Saxon software companies will illustrate this.

Saxony's software companies are neither small



# Types of software

Software can be divided into different categories depending on its function and usage.

The two main areas include: **System software**, which is responsible for communication between application software and physical components (hardware) as well as **Application software**, which fulfills specific tasks. These include database systems, office applications (e-mail, text, calculation), web browsers or games.

Programming software helps to develop applications, customized software is tailored to the user.

There is also network software (network operating systems, security management software, network monitoring tools) that helps manage networks, database software that enables data to be stored, modified and retrieved efficiently (MySQL, Oracle Database and Microsoft SQL Server) and utility software that performs specific, limited tasks related to the management of computer systems.



### System software

Middleware / cloud & infrastructure software	WebSphere Application Server, Fusion Middleware
Operating systems	iOS, Windows, Ubuntu
Firmware (integrated in hardware)	BIOS

Article The importance of programming languages in 2024

Types of software

Programming languages are crucial in the context of artificial intelligence, machine learning, cloud computing, platforms, and more. Will Python remain at the top position?





Silicon Saxony Podcast "Hallo Zukunft" (German) Low Code & No Code

### Hype or Holy Grail? Find out in our podcast with Tobias Nestler (DevBoost) and Stefan Ehrlich (SQL Projekt AG).

Listen Now

### DEVELOPMENT AND SCALING

# The basics of software development

Customized or commercial? Waterfall or agile? Modern software development does not just follow one concept and one approach.



Programming, coding, and software development involve various professions working together. The approaches to each development process are equally diverse. Is the project being developed for a specific customer (customized) or for a broader market (commercial)? Does it progress towards its goal in clearly defined stages, like a

waterfall, or in smaller, iterative steps, like agile? For a long time, software development followed the assembly line method developed by Henry Ford. With the introduction of agile concepts in 2001, both the speed and possibilities of software development changed significantly.

#### Excursion

### Zebra, Unicorn, or Cockroach – The Animal Kingdom of Software Companies

What do animals have to do with software companies? We explain the quirky corporate animal kingdom. In the business world, especially among startups, you often hear about unicorns. Like their mythical namesakes, they are coveted because they are as rare as they are valuable. With a market value of at least one bil-

lion US dollars, they are considered the holy grail of the investment scene and are hyped wherever they appear. In Saxony, for instance, the software company Staffbase recently gained recognition as a unicorn.

But there are more animals in this zoo. Professor Aßmann calls for more gazelles. But why? We took a look at the animal concepts.

From "sustainable and socially valuable" to "down-toearth and profitably growing" to "robust and unstoppable" we elucidate the animal parallels in the corporate world

### Guest article

### The five steps to a digital business model

Digital business models have evolved through various technological and cultural eras: from open-source approaches to the shift in SaaS and PaaS models in the 2010s. With the advent of AI, we now face a future where hybrid and highly personalized  $\rightarrow$ 



business models will dominate. These models will not only efficiently utilize existing data but will also be capable of autonomously generating new content and innovative solutions. This makes them ideal for the demands of a rapidly changing market!



Discover five simple steps in developing business models and how they are connected to music



### Guide to Scalable Software Architecture (German)

Designed for product development executives, it offers the right architecture: from monolith to serverless

### GENERATIVE AI

# The Transformative **Power of Generative Al**

Generative AI promises a 30% to 50% increase in efficiency and effectiveness in the business context.

Generative Artificial Intelligence has rapidly evolved from a technological novelty to a critical business tool, promising significant efficiency gains and the creation of entirely new products and services. Foundation models push the boundaries of what is possible, with the unique ability to analyze Read more existing data and generate new content. We explain how generative AI finds answers, how it can transform business operations, and what needs to be considered.

#### Germany's Al Strategy and Action Plan

### Artificial Intelligence (AI) is the Key to the World of Tomorrow

The German AI landscape needs more research, computing power, skilled professionals, and technology transfer. Clear regulations for its use in education are also necessary.

The new AI action plan from the Federal Ministry of Education and Research (BMBF) highlights the areas with the greatest need for action.

"Al is the key technology of the 21st century

societal sectors. With our Al action plan, we aim to give new impetus to the German Al ecosystem. Our goal is for Germany and Europe to take a leading position in a world 'Powered by Al'."

Bettina Stark-Watzinger, Federal Minister of Education and Research

# German

### Deep Dive Saxony's Al Strategy

Saxony published an Al strateau in 2021, alianed with the strategies of the German federal government and the European Union. Its goal is to make Saxony a leading German hub for AI research and innovation



Advertorial

Saxony Trade & Invest

### Saxony is Working on **Digital Security for the World**

In a globalized economy, digital infrastructures have to provide the highest level of security for data, applications, and identities. Therefore, cybersecurity is an essential element of trust and key to the success of the digital transformation.

In Saxony, a large number of players in research and development and the industry are developing innovations for secure software platforms and operating systems. International technology companies such as Amazon, Huawei, IBM, or SAP with their respective development centers appreciate Saxony as a business location. Leading German companies such as secunet, and many young businesses such as Cyberus Technology, Kernkonzept or SCONTAIN also help shape the innovative ecosystem. It is supported by vast research

expertise, e.g., from the Barkhausen Institut and the Chair of Operating Systems at the Dresden University of Technology, and partners such as the Computer Security Division of the Federal Office for Information Security (BSI) in Freital. In light of the growing demand for skilled labor, Saxony is continuously expanding Read more its study and training opportunities, e.g., in the Chair of Data Privacy and Security at Leipzig University.



### secunet







# European Regulations

They are intended to create legal certainty, but many laws have not yet been transposed into national law.

The EU AI Act, in particular, has recently divided opinions: Some see it as overregulation and a brake on innovation for the use of artificial intelligence in Europe, while others view it as an opportunity for European software companies to create a level playing field and narrow the gap with the major hyperscalers from the USA and China. However, experience shows that Germany is particularly "regulationfriendly". In other words, "It remains to be seen  $\rightarrow$ 



**The European Parliament** in Brussels, Belgium

how Germany will implement the Al Act compared to other EU countries", says Daniel Abbou, Managing Director of the German Al Association. And the Al Act is not the end of the series of European regulations. Digital Services Act, Digital Markets Act, Data Act, Cyber Resilience Act – numerous directives, documentation requirements, and laws from Brussels and Berlin overlap and pose increasing challenges. especially for internationally operating software companies. The regulations are complex, difficult to understand, and entail a substantial regulatory burden. Therefore, we have examined the most important European regulations, placed them in an international context, and explained their practical impacts particularly for SMEs.

### Large number of new regulations is increasingly becoming an obstacle to innovation



Small and mediumsized enterprises (SMEs) are reaching the limits of their capacity due to the continuous introduction of new regulations. Policy makers should place more trust in the domestic digital economy and adjust the framework conditions so that European IT companies can compete globally.



"Many do not realize that we still have the opportunity to capture

significant market with the help of our own IT dependencies on Big Tech."

Patrick Häuser, Head of the Berlin **Office at the German Federal** Association of IT SMEs, directs his demands towards Berlin and Brussels



podcast

### Silicon Saxony Podcast "Hallo Zukunft" (German) Putting the EU AI Act to the test: objectives, potential and unresolved issues

Are we able to safeguard democratic values, human rights and the rule of law in an Alpowered world and what exactly does the EU AI Act mean for Europe and its position in the world? We take a closer look at the law, which EU Commission President Ursula von der Leyen describes as a Listen to the "blueprint for trustworthy Al around the world".

regulations



In conversation with host Julia Nitzschner: Stefanie Baade (German Al Association) and **Gregor Blichmann (elevait)** 

innovations

# **Road Safety** "Made in Saxony"

Saxon software paves the way for solutions that affect us all.

Are you aware of Saxon players making road traffic and vehicles - from motorcycles and cars to trucks - even safer? If not, it's time to learn about them. For instance, the Traffic Accident Research at TU Dresden GmbH (VUFO) analyzes 1,000 accidents annually to generate life-saving knowledge. The Fahrzeugsystemdaten GmbH (FSD) equips 18,000 officially recognized experts with guidelines, testing software, and hardware, facilitating 30 million vehicle inspections per year. COLLISION ZERO raises awareness among children and parents about road dangers with 3D reconstructions of accidents, contributing to the identification and mitigation of accident hotspots. These are solutions that concern all of us and are worth discussing. Our members, such as Trans4mation IT and DevBoost, support these initiatives.



FSD Fahrzeugsystemdaten GmbH - Central **Office under the German Road Traffic Act** 



### **OPC-UA** Standard

Paving the way for data platforms, Al and digital twins



### Software in the semiconductor industry Challenges and innovations in a highly specialized sector

Why are software products for the semiconductor industry so complex? How can software support the sustainability efforts of fabs? Which technology trends will shape the coming years and why are software service providers focusing on cooperation despite all the competition?



Read this an more in the double interviev



"Every company has to become a software company, some just haven't understood that yet."

Thomas Leps, Director High-tech Verticals, SYSTEMA



industry requires a deep understanding of the unique requirements of this highly specialized industry."

Frank Geißler. Director Sales. Kontron AIS

KI @ DUALIS: 3 Pillars. 1 Mission. Infinite Possibilities



At DUALIS, AI not only ensures efficient processes and intelligent algorithms but also intuitive software solutions. Driven by one goal: we never settle for the status quo. That's why you can talk to our production planning software GANTTPLAN in the future: "Hey GANTTbot: How many orders are currently delayed? Create an optimized alternative plan and visualize the three biggest bottlenecks in our production!"



**Managing Director Heike Wilson** and Product Manager Dr. Kirsten Hoffmann reveal some secrets of the Al strategy at DUALIS.





Advertorial



### SKILLED WORKERS

### Al trend professions

- Al development and research
- Data science and analysis
- Al training
- Al ethics
- Al project management
  Software development with special Al knowledge
- Source: SAP, Henning Heitkötter

# Human-Al teams will be the future

Software companies that do not integrate Al will cease to exist in two to five years, predicts Prof. Dr. Frank Schönefeld from Telekom MMS.



"I think developers will soon become supervisors, each overseeing four to five Als."

Ronny Siegel, CEO of Conversion Junkies The constant evolution of the job market is not a recent phenomenon. From plows pulled by horses instead of humans, to the invention of the steam engine, the computer, and more recently, robots, our working world has become increasingly automated. This automation has not led to people becoming idle; instead, it has created new professions, increased productivity, and reduced error rates.

With ever more powerful models and the widespread availability of generative AI to the masses, the job market faces significant challenges once again. According to a McKinsey study, by 2030, approximately 30 % of work hours could be automated by AI. This poses major challenges for companies, particularly regarding team composition and technological adaptability. Skills like prompt engineering are just the beginning.

3itkom Study "Job Market for IT Specialists" 20

# Global solutions for local challenges

How international recruitment enriches the software industry.

According to a study<sup>1</sup>, there are currently around 149,000 IT job vacancies in Germany. The demand for qualified professionals far exceeds the available supply. Consequently, many companies are increasingly recruiting from abroad. With our full-service recruiting offer, we assist in international recruitment and find highly gualified tech specialists who perfectly match the requirements of our partners. Additionally, we provide support with our relocation service, helping professionals settle in Dresden and navigate administrative challenges. Our services facilitate the search for suitable software and IT specialists and support companies in their own development. One company that has successfully taken this path with us is elevait GmbH & Co. KG. Read in our interview how the company successfully recruits international applicants and which steps are crucial for this process.





### #HalloIndia Grab your German Job

Das Projekt #Hallolndia hat zum Ziel, highly qualified technology specialists from India to Dresden-based companies. Supported by the Dresden Skilled Workers Alliance, it offers companies a cost-effective way to recruit soughtafter professionals from India for their Dresden location. With extensive recruitment experience and close contacts in India, we find the specialists your company needs.





# Saxony tackles the shortage of skilled workers

Saxony's education system is leading in Germany. However, without strong role models, too few boys and girls will pursue careers in IT

Saxony, like the rest of Germany, urgently needs software and IT specialists. Currently, there are around 150,000 vacancies in this sector nationwide. With a digital strategy, a recently revised teacher training program, a modern computer science curriculum, and model schools, Saxony ranks first in Germany's education comparison.  $\rightarrow$ 

Despite this, too few boys, and especially girls, are enrolling in STEM (German: MINT) apprenticeships and degree programs. It is essential to inspire children and teenagers about the many exciting STEM careers. Silicon Saxony is currently testing how role models can spark motivation and enthusiasm with the career orientation project "MINT to be".

### Young talent Computer science

2.939 – This is the size of the skills gap in the IT sector in eastern Germany.

23

- 1.268 students successfully completed a computer science degree in Saxony in 2022.
- There are 2.6 percent computer science trainees in Saxony. The German average is 3.8 percent.
- plus 122 IT alumni in 2022 compared to 2018. However, the number is currently declining again
  - Sources: Bitkom State Index 2024; SMWK; Statistical Office of Saxony

Computer science education in Saxony paves the way for digital excellence

### From elementary school to teacher training

In an interview with subject coordinator Wolf Spalteholz (TU Dresden), we take a look at Saxony's schools and teacher training in Saxony and



done.

Scan OR code

to read the interview

and what still needs to be





SKILLED WORKERS

### school concepts On the path to the school of the future

Pioneering

Multidisciplinary teams, a modern computer science curriculum, and financial flexibility. You'll be surprised at how well schools can function when everyone works together. Our guests: Andreas Koch (Code it!), Kerstin Ines Müller (M.I.T. Gymnasium Dresden-Pieschen), Heike Wilson (DUALIS GmbH IT Solution), and Steve Federow (GlobalFoundries)

> Scan the QR code to listen to the podcast (German)

### From talent to profession There is a lack of female role models: Until now!

Learn more

Role models are needed for more diversity in the STEM sector. (German website) In the "MINT to be" project, Silicon Saxony has set itself the goal of getting girls and non-binary people interested in high-tech professions through workshops and lectures. These are conducted by so-called MINTorinnen (female STEM mentors), who present their personal life paths, training and study opportunities

as well as the Saxon high-tech landscape. These very personal stories are intended to encourage young people to see future prospects in technical professions.



Project manager Ann-Christin Böttger is working on a "MINT to be" workshop with intern Lennox

### EXCURSUS: IT SECURITY

## Investing in cyber security pays off

The threat landscape in the realm of cybercrime is steadily increasing for small and medium-sized enterprises (SMEs).

> Cybercriminal attackers often rely on ransomware, malicious programs that restrict or block access to business data and IT systems within the company. To release the data, a ransom is demanded. They increasingly target victims who appear vulnerable. According to the latest 2023 report from the German Federal Office for Information Security (BSI), the most common vulnerabilities in companies lie within the software they use. Many companies lack sufficient knowledge about the general cyber threat landscape or their own risk profile. As a result, they often do not realize the need to invest more in their security. Even basic



Frauke Greven. Head of the **Digital Agency** Saxony (DiAS)

Learn more

Saxony.



and often cost-free preventive measures are frequently not implemented. Raising awareness is therefore an important first step. The Cybersecurity Network Saxony supports Saxon SMEs in significantly complicating potential cyberattacks and provides a physical IT emergency card to assist in the event of a cyber-attack. Learn how companies can effectively protect themselves against cyber-attacks and the impact of new technologies such as artificial intelligence on cybersecurity issues in an online interview with Frauke Greven, Head of the Digital Agency



Exchange of experience and best practices on an appropriate level of security and its implementation in compliance with data protection regulations in

Join the Silicon Saxony working group now





## The future of the cloud

How cloud ecosystems can run on an open-source basis.



Experience shows that free and opensource software (FOSS) does not prevent competition in the cloud sector, but rather enables it. A vibrant open-source ecosystem across company boundaries pools expertise and creates the best conditions for the joint development of sovereign, secure and digital solutions. This is attractive for top talent and also offers numerous advantages in terms of the trustworthiness of IT systems. But how exactly do such FOSS systems work? This was discussed by high-ranking cloud experts in our Cloud Transformation working group (March 2024).

Present speakers: Marius Feldmann, COO Cloud & Heat; Stefan Ilaender, Managing **Director STACKIT Platform Products &** Support; Kai Martius, CTO, Member of the Board, secunet Security Networks AG



Head of the Silicon Saxony working group **Cloud Trans**formation: Sven Jaenicke, **ZEISS Digital** Innovation

### Cloud Adoption Rate

German companies rank 13th, just slightly above the EU average ▶ Germany: 47% ► Leading country Finland: 78.3% ▶ EU average: 45.2% Source: eurostat 12/2023

25

24



The software flagship event of Silicon Saxony: DecompileD

# Software in Silicon Saxony

*Working groups, events, projects, initiatives and a core group* 

Since 2008, the software sector has been one of the strategic focal points of Europe's largest microelectronics and ICT cluster and bundles the interests of more than 550 companies, including over 130 from the software sector.

Exciting and well explained – the Calliope mini course for children

Project/ extracurricular activity Calliope mini



rman website)

mentary schools in Saxony, and we are aiming for more than 100. We are looking for interested schools and volunteer coaches.

To date, we have been able

activity "Programming with the

Calliope mini" at almost 50 ele-

to establish the extracurricular

### Working group

Our software working groups Cloud Transformation, Artificial Intelligence and Security & Privacy offer knowledge transfer, networking and inspiration on industry topics.





#WeAreSiliconSaxony

Technical information, projects, news and events at a glance: www.silicon-saxony.de

> Your contact person

lutz.hoffmann@ silicon-saxony.de +49 351 8503-2925





# Sustainability reporting with data from the digital twin.

By capturing, recording and connecting energy producers and energy consumption on the N+P platform, a solid basis is created for targeted optimisation strategies and automated energy and CO2 reporting.



N+P Informationssysteme GmbH | www.nupis.de leerane – Berlin – Dresden – Kassel – Magdeburg – Nuremberg – Stuttgart

# The third dimension of data flow

Data ingest for semiconductor fabs with ZEISS Digital Innovation



Seeing beyond



### **ZEISS Digital Innovation**



zeiss.de/digital-innovation