

Edge Computing - Driving Business Transformation

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**Smarter
technology
for all**

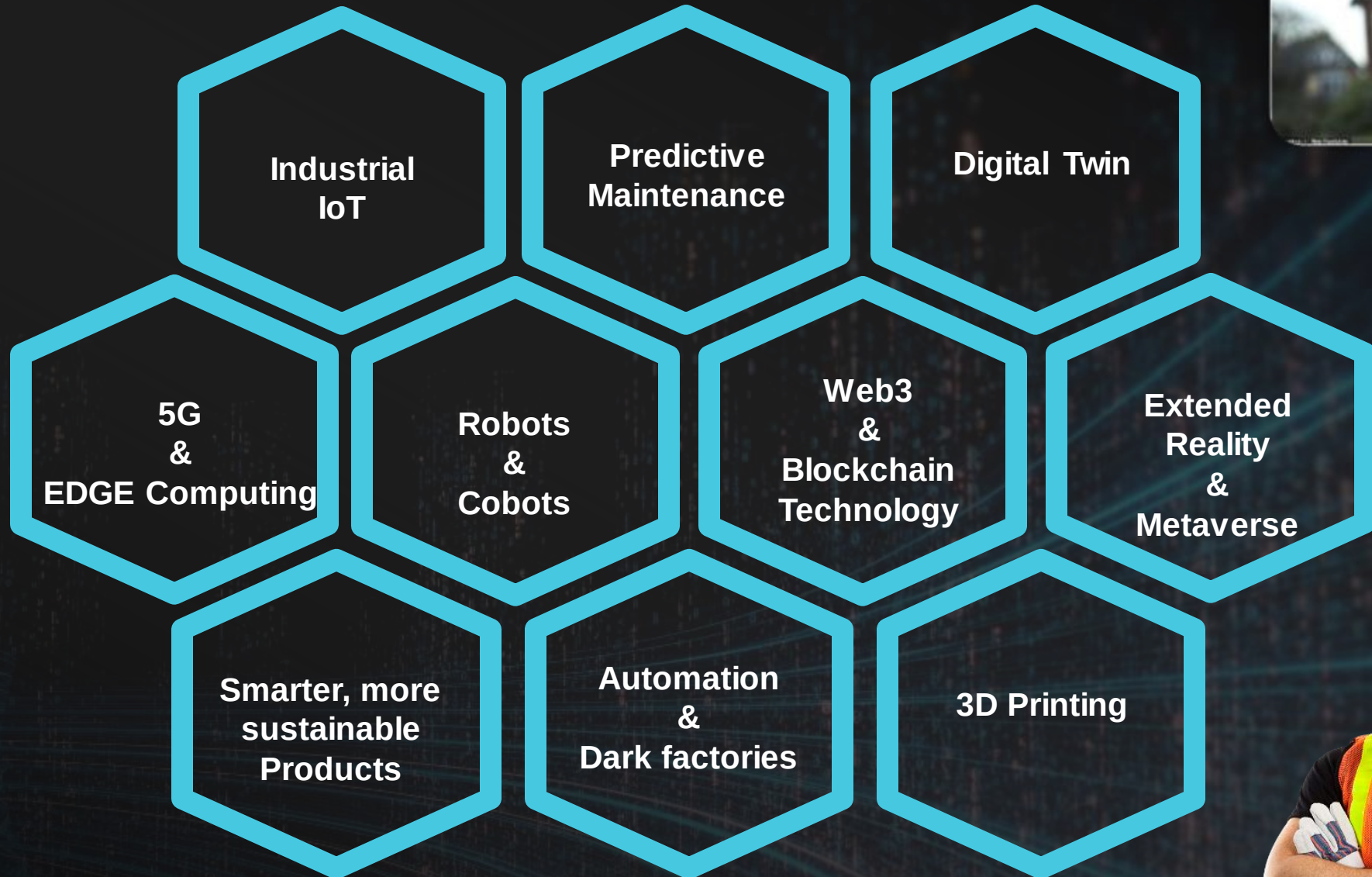
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September 2022

10 Megatrends



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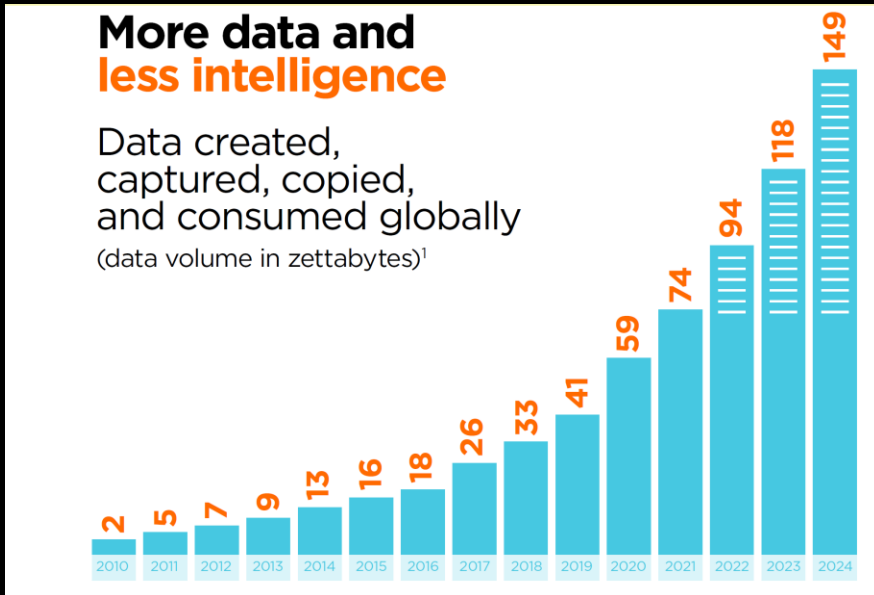
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Edge Computing als wachsender Trend

Analysten schätzen, dass 2025, **75%** der Daten, die Unternehmen erzeugen, durch Edge Computing verarbeitet werden.



Business continuity

- Evolution of infrastructure: rugged edge devices driving efficient 24/7 uptime



Intelligence on the edge

- New edge-driven data sources for real-time decision-making
- Dynamic, data-heavy streams on the edge



Connectivity

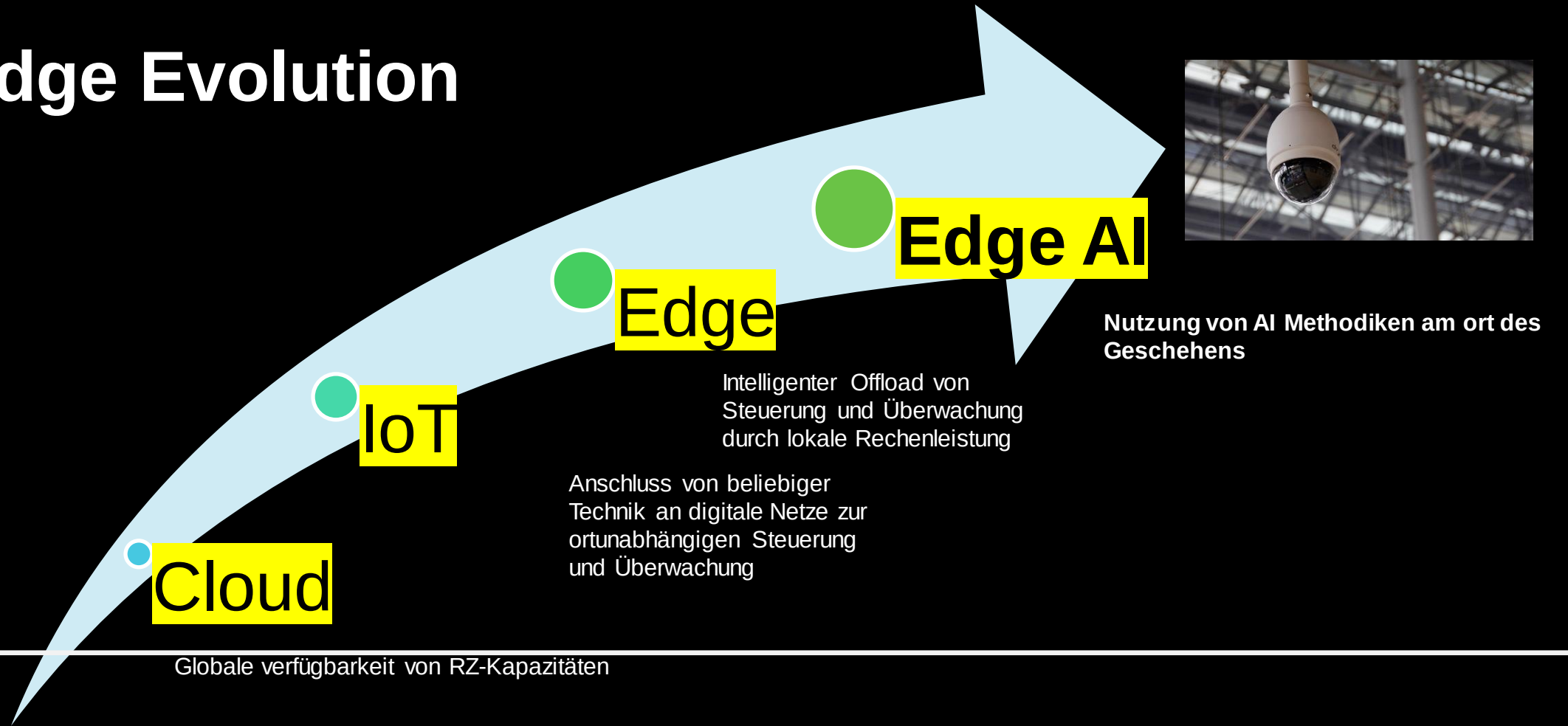
- Need for improved speeds and redundancy with LTE and 5G



Security

- Layered security enables remote edge deployments with unmanned devices

Die Edge Evolution



Reduzierte Netzlasten

Zeitgewinn

Neue und innovative
Servicemöglichkeiten



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Enabling the smart city of Barcelona

[Watch video](#)



- ThinkEdge SE450 deployed in street cabinets
- Hosting several edge AI use cases
 - Tourism, traffic, management, security, etc.
- Small form-factor, Secure, Quiet, Ruggedized

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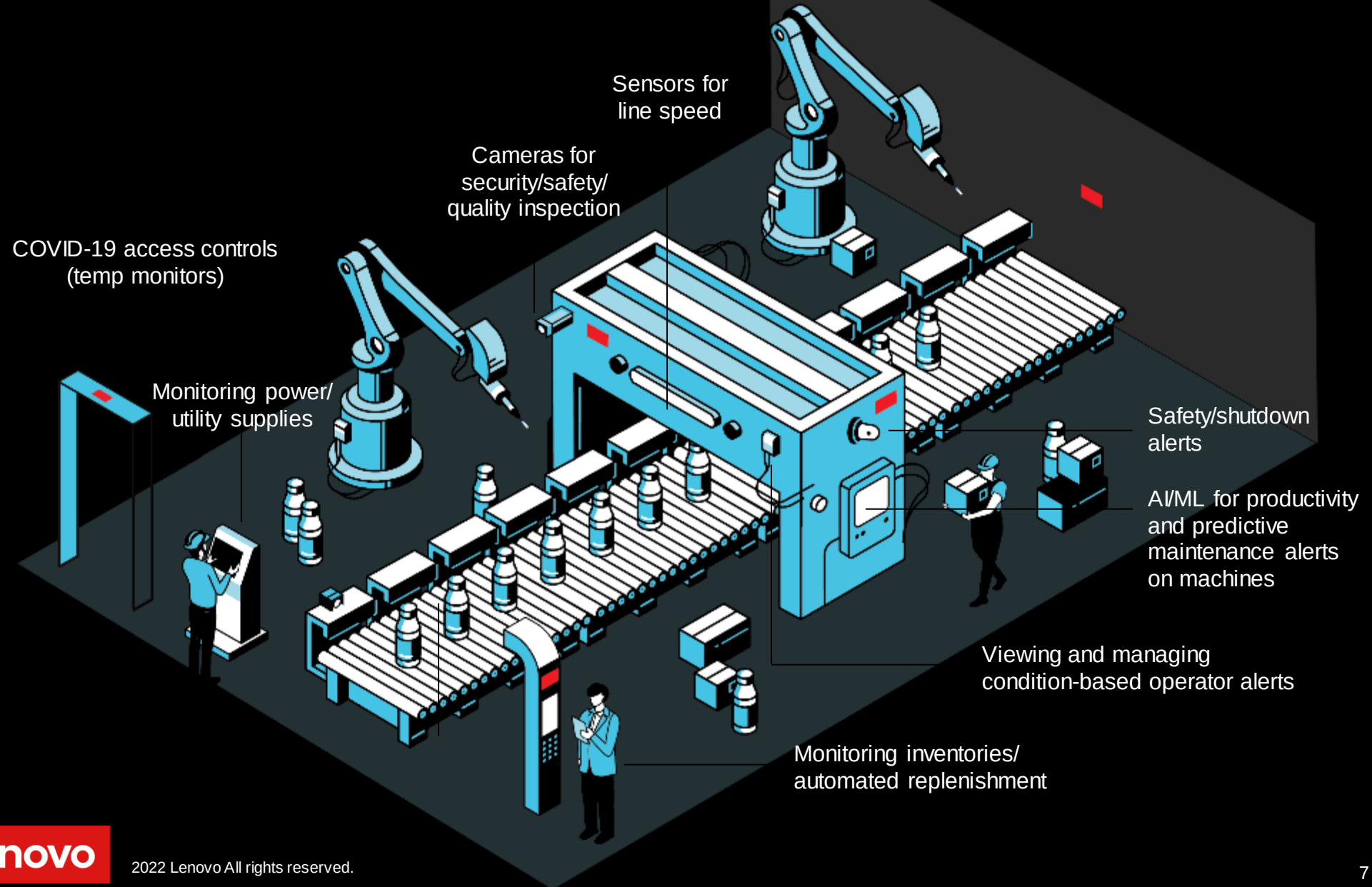
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5G City Use Cases am Beispiel Barcelona



Beispiel Smart Manufacturing



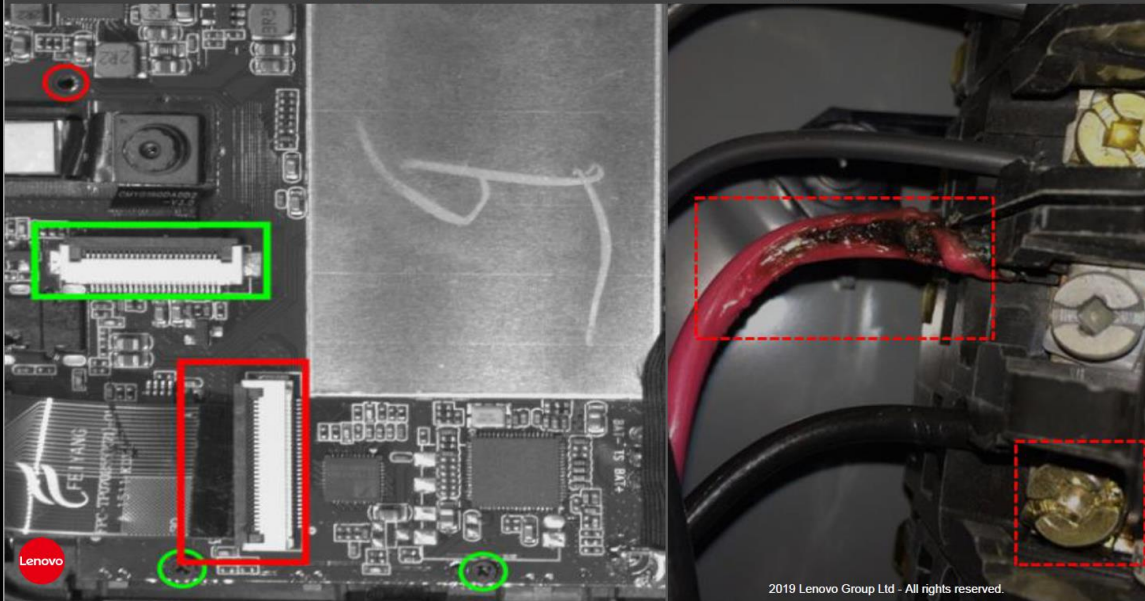
A leader in sustainability

Corporate Knights 2018 | 100 Most Sustainable Corporations in the World Index | Rated AA on 2018 Harvard Business School Sustainability Index

Low temperature solder

Lenovo uses a new and more sustainable process to build stronger, more reliable devices and conserve energy.

Video Analytics – Quality of Service, Yield Monitoring & Fault Detection



- **Reduces CO2 emissions in production up to 35%**
- **But requires new processes incl. quality control**

LENOVO PLANS TO REDUCE ANNUAL CO2 EMISSIONS BY
5956 METRIC TONS
WHAT DOES IT MEAN?

4

Greenhouse Gas Equivalencies



14,274,481 Miles driven by an average car



1,890 Tons of waste recycled instead of landfilled



670,192 Gallons of gasoline consumed



154,357 Tree seedlings grown for 10 years

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1-3: Greenhouse gas emissions from
4: Carbon sequestered by
Source: EPA Greenhouse Gas Equivalencies Calculator

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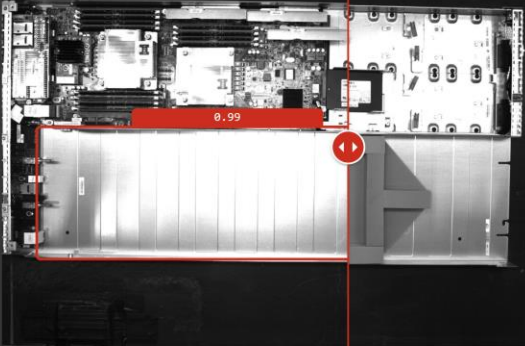
Defekt Lokalisierung durch AI





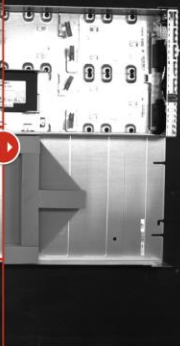
Servers / 1S3989AC1J12HCEZ

Actual



0.99

Reference



ID	Status	Reason
G5_022	Passed	Aligned XY
G5_094	Passed	Correct Heatsink
G5_018	Failed	Foam Component Is Missing
G5_140	Passed	Bracket Screw Is Present

Was this prediction correct?



- Qualitäts- und Effizienzoptimierung durch AI zur AOI (Automatic Optical Inspection)
- Neue Potenziale und Entlastung der Mitarbeiter

Client AI: The Intelligent Edge



Warehouse / Logistics



Retail / Hospitality



Transportation



Medical



Smart City



Robotics



Unmanned Vehicle



Vision Inspection



License Plate Recognition



Face Recognition

■ Edge (IoT) Geräte sind in allen Formen und Faktoren verfügbar

- Client PC Technology in besonderen Gehäusen
- Performance ist eine frei skalierbare Ressource gemessen an den Anforderungen

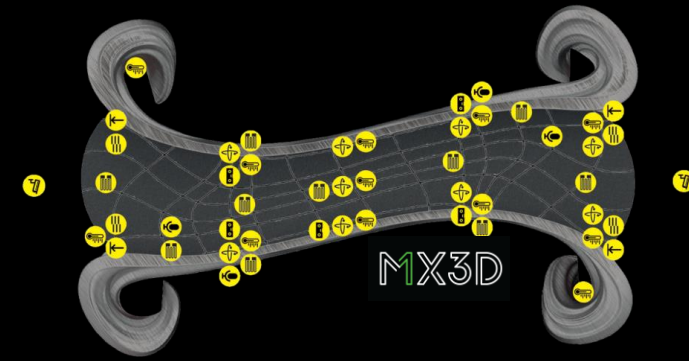
■ Edge (AI) erfordert neue Technologien

- GPU Power in Form von PCIe Devices
- Komplett neue, Ai optimierte Plattformen



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Smarte Bauwerke



Organisches Design

Drucken als neuer Produktionsprozess

Smarte Überwachung mit Edge Technology

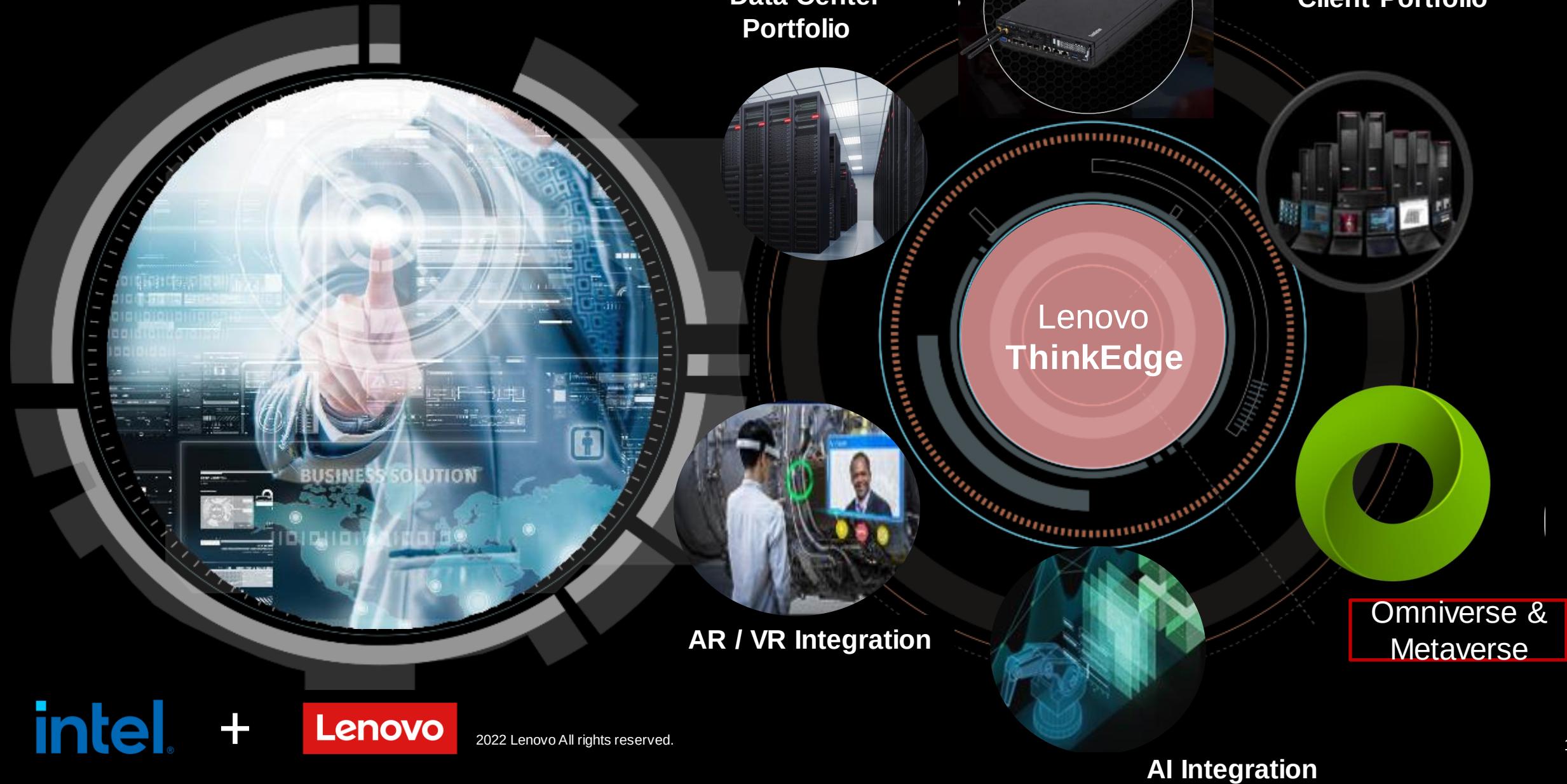
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