Wirtschaftswoche - Solver Place Event München
Industrie 4.0 - Business im Internet der Dinge

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Basic Principles for Industrie 4.0

- Manufacturer Independent Integration
- Decreased effort of integration and control
- Green production
- Standardisation of Production: IT Technology vs special Field-bus
- Connectivity from Idea to recycling
- Customer individual, lot-size 1
- Realtime, event based control
- Event based control
- Product controlled manufacturing
New era of computing: defined by three shifts

SHIFT 1
Data is becoming the world’s new natural resource, transforming industries and professions.

SHIFT 2
The emergence of cloud is transforming IT and business processes into digital services.

SHIFT 3
Mobile and social are transforming individual engagement – creating expectations of security, trust and value in return for personal information.

OUR POINT OF VIEW
Data is the new basis of competitive advantage.

OUR POINT OF VIEW
Cloud is the path to new business models.

OUR POINT OF VIEW
A systematic approach to engagement is now required.
Enterprise innovation will be realised through the integration of new era technologies with core systems

Yesterday

Mission Critical Systems

Today, Innovation is Discrete and Disparate

Innovative Core Operations

Mobile

Social

Cloud

Security

Big Data & Analytics

Emergent, Integrated Systems for Enterprise Innovation

Systems of Insight

Enterprise Innovation

Systems of Record

Systems of Engagement

Enabled by Cloud

Pervasive Security Intelligence

40% of IT hires are recruited primarily for business skills. (IDC)

60% of IT spend is funded by line of business. (IDC)

80% of IT initiatives will be decided by line of business by 2016. (IDC)
Data drives new business models and transforms entire industries

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<th>2012</th>
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- Cloud
- Mobile
- Social
- Internet of Things

Data
Data attract more data…

Data curation leads to optimal value

Compute must move to data

New IT platforms will emerge at the edge
Challenge for the european economy?
Linear PPP forecast without IoT effects

• Key industrial countries will decline without innovation
• Countries with natural resources will keep or grow their positions
• IoT / Industrie 4.0 is a matter of survival for the european industry!
Individuality drives customer demand

20th century: the mass era

21st century: era of the “new individual” (*)

(*) “… a new awareness that I call psychological self-determination…”

Shoshana Zuboff, Charles Edward Wilson Professor of Business Administration, Harvard Business School
Trends supporting Industrie 4.0
Lot size 1 to volume production and v.v

**spreadshirt.de**
- Buy self-designed T-Shirt
- Offer motives and make money

**Dillinger Hütte**:
- pure order related production
- many unique customer specifications
- extremely complex production sequence
- a function of specified product properties.
- Lot size 1
The underlying trends

From a world of...

Products
Outputs
Transactions
Suppliers
Elements

... to a world including

Solutions
Outcomes
Relationships
Network partners
Ecosystems

The shift to services requires business model innovation

Source: Prof. A. Neely, University of Cambridge
Industrie 4.0: new business, innovative and disruptive

The digital advantage:
- 9% Revenue
- 26% GP
- 8% Corporate Value

Source: MIT Sloan Study
"Keyless vehicle access in real-time via the app"

**MQTT** - Reliable Open Standard message based communication with a Quality of Service
Real-time communication with cars for a seamless user experience
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THE BUSINESS NEED

Enable online shoppers to create personalized gifts.

Lindt was looking for a platform and vendors that would grow with them. The chocolate business moves very quickly between holidays, so they must respond with seasonal promotions just as rapidly—and deliver a premium experience.

Lindt sought a solution that would make it very easy to manage promotions, scale capacity and personalize interactions.


https://www.lindt-shop.de/schokoladen-shop/individuelle-produkte.html

THE SOLUTION

IBM’s WebSphere Commerce Platform with CrossView’s Aurora Plus Commerce cloud were deployed.

Flexibility associated with the IBM WebSphere Commerce platform now enables Lindt to quickly build and execute highly personalized seasonal promotions around holidays for which chocolate is the go-to gift—think Valentine’s Day to Christmas and everything in between.

Through microsites, Lindt can launch holiday-based promotions and campaigns that sell highly targeted offerings.

Moreover, because the solution is cloud-based, Lindt can quickly scale capacity up and down as demand increases for each holiday.

THE BENEFIT

Doubled conversion rates and tripled mobile revenues.

In addition to personalized promotions, Lindt can now use its web store to offer a custom range of products. Shoppers can mix and match products to build personalized gifts—choosing quantity, type of chocolate, packaging and messaging.

The site allows Lindt to engage with customers in meaningful, thoughtful ways, and to understand their behavior.
**Pervasive Security Intelligence**

**European Bank**

**THE BUSINESS NEED**

**Adopt a new approach to mobile security.**

The bank needs to protect the organization’s existing mobile banking application by adding device risk analysis.

The solution needs to enable the bank to detect high-risk access from compromised or vulnerable devices.

The bank also wants to generate a persistent mobile device ID for unique device identification.

**THE SOLUTION**

**Antifraud solutions from Trusteer, an IBM company, help secure mobile transactions.**

Using crowdsourced intelligence from 100M+ endpoints, Trusteer monitors bank customer activity for evidence of fraud.

Browser attacks and account take-over attempts can be detected, and the bank and the customer are notified.

Trusteer can disrupt the attack chain using advanced analytics to identify behavior anomalies across millions of users.

**THE BENEFIT**

The bank stopped $1M in attempted fraudulent transactions in the first week.

The bank prevented $60M in fraudulent activity the first year of deployment.

The bank’s customers’ transactions are secure, protecting the bank’s reputation and relationships with customers.
Pervasive Security Intelligence

International Energy Company

THE BUSINESS NEED

Protect critical assets from diverse global threats; help detect advanced threats.

The IT security team needs a global view of the enterprise security posture.

The enterprise must respond to and meet critical infrastructure regulatory mandates.

The organization needs to identify and prioritize vulnerabilities across its IT infrastructure.

THE SOLUTION

IBM Security QRadar provides integrated intelligence in a single security console.

Combine analysis of historical data with real-time alerts to gain a “big picture” view of the security landscape, providing visibility and situational awareness.

Automatically uncover patterns of unusual activity that humans miss and immediately block suspected traffic.

Automate security operations while improving visibility.

THE BENEFIT

The company analyzes 2 billion logs and events per day to find 20–25 potential offenses to investigate, a 99.999999% data reduction. Automated compliance operations for PCI (6 million daily transactions) and NERC (SCADA system monitoring).

The company’s security investment is protected through integration and real-time correlation of data from hundreds of security partners.
“...performance improvements designed to make your messaging experience even better. To do this without killing battery life, we used a protocol called MQTT ... designed to use bandwidth and batteries sparingly... phone-to-phone in hundreds of milliseconds, rather than multiple seconds.”

- Lucy Zhang, Facebook Engineer

www.facebook.com/lucyz