



State of the Metals and Mining Industry

Eckhardt Siess, SAP

Digital trends transforming the Metals and Mining industries



New players enter and change business

68%

Of metals CEOs worry about new rivals from other industries disrupting their sector

<http://www.pwc.com/gx/en/ceo-agenda/ceo-survey/download.html>



Integration of operations and the enterprise

By 2020

Every leading miner will have implemented an integrated digital core across enterprise and operations

Source: Emilie Ditton, IDC, Creating Agile Digital Mining, May, 2017



Need for innovation is not debatable

65%

Of enterprises are already using the Internet of Things

<https://www.emc.com/leadership/digital-universe/2014iiview/internet-of-things.htm>

90%

of CEOs believe the digital economy will impact their industry, but less than 15% have a digital strategy



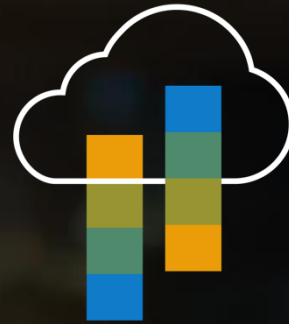
Sources: Embracing Digital Technology™ MIT Sloan and CapGemini, 2013,
<http://sloanreview.mit.edu/projects/embracing-digital-technology/>

Technology trends enabling digital transformation



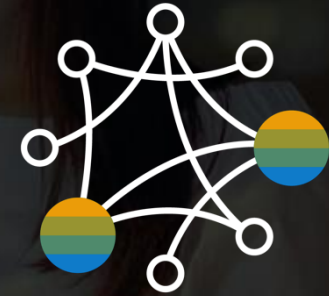
Artificial intelligence and machine learning

Assess processes to increase productivity and safety across production and operations



Cloud computing

Offers the quickest path to new business models and software upgrades



Internet of Things (IoT)

Helps create new value, such as connected car services for roadside assistance

Potential Value from IoT...

New business models

15%–25% faster revenue growth than the industry average

Asset optimization

10%–40% lower service and maintenance costs

Operations excellence

10%–30% higher productivity

Inventory optimization

20%–50% lower inventory costs



Sources:

IDC White Paper, sponsored by SAP, The Future Services Sector: Connected Services for Continuous Delivery, 2017

McKinsey: The Internet of Things: Mapping the Value beyond the Hype, 2015

Business model innovation

Information about geology, production efficiency, asset planning, safety, and people change how and where to mine, and the revenue that can be generated.

Source: <https://archive.sap.com/documents/docs/DOC-50303>



Roy Hill

Operational innovation

Analyzes tire sensor data, truck load, environmental factors, and operator behavior. Results change operator training, speed guidelines, road layouts, and increase tire life.

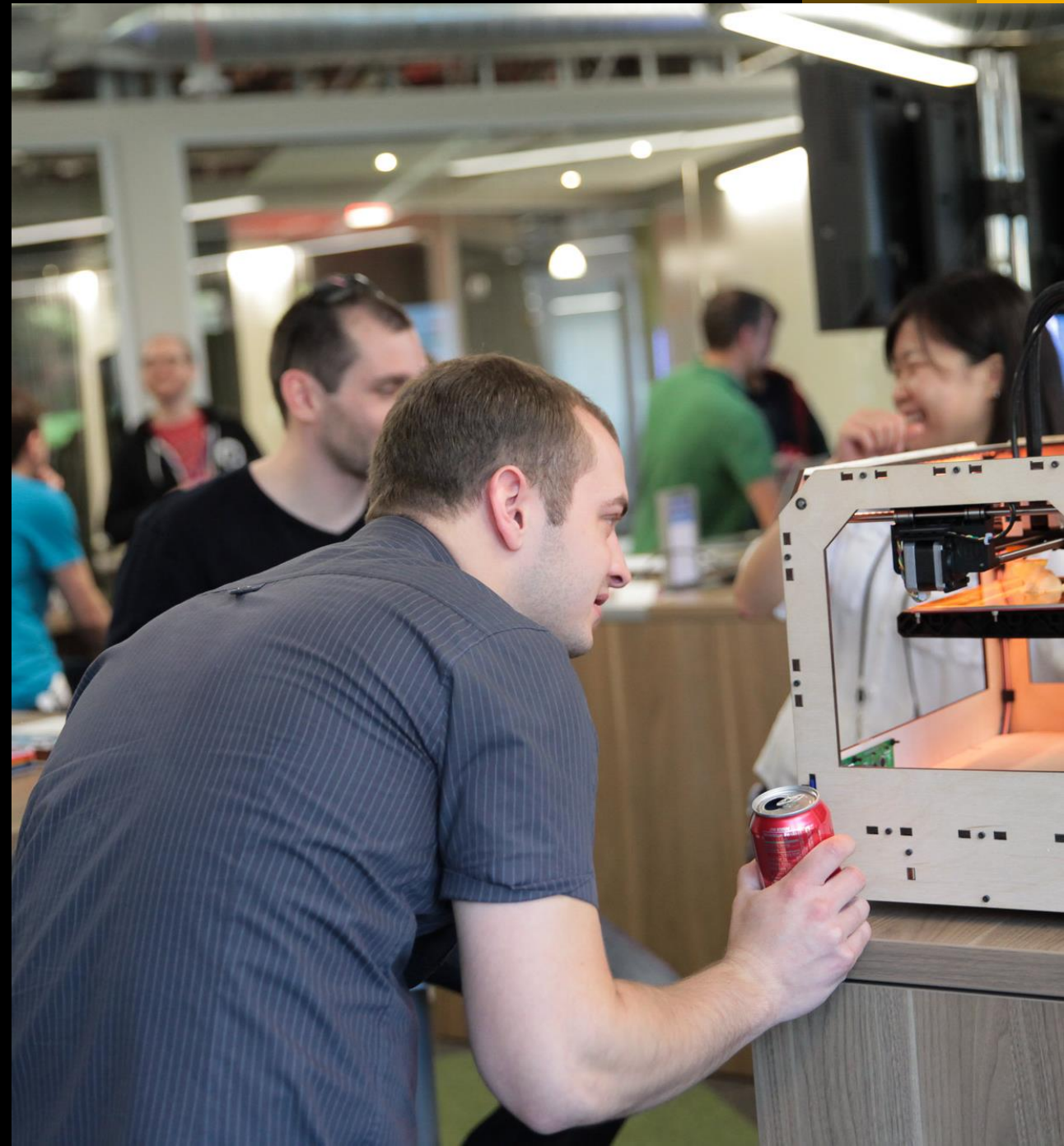


Heraeus

Heraeus and 3-D printing of parts

Manufacturing companies work with producers of 3-D printers, material producers, and logistics providers in virtual project rooms to produce components efficiently, just in time.

•Source: [Heraeus](#)



Predictive maintenance

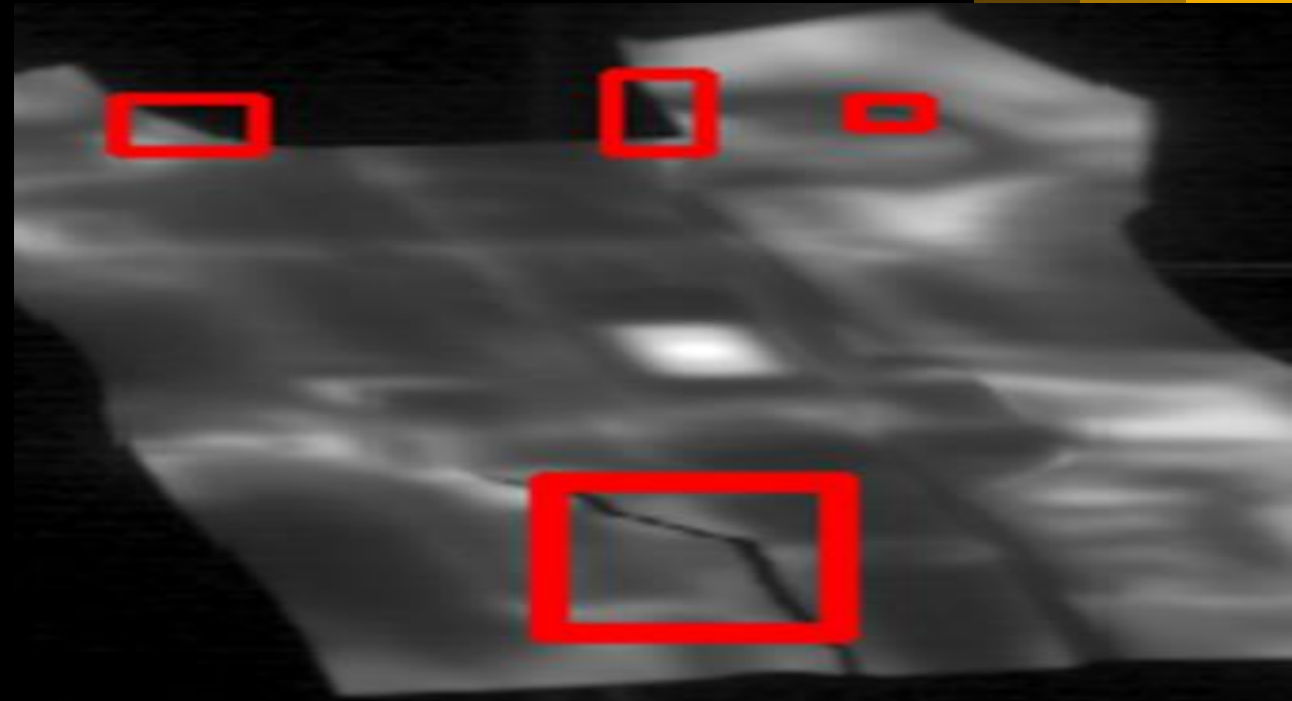
Reduce production costs and asset incidents, increase the quality of the final goods, and reduce time spent with IT systems.



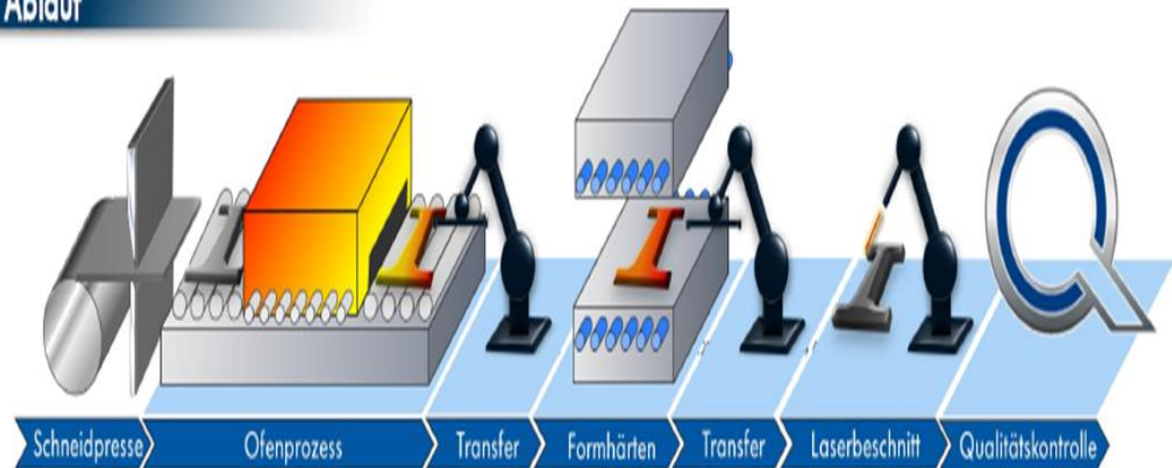
German Car Manufacturer

Quality analytics

Predictive and in process quality assurance for hot forming



Ablauf



More than 777 Mining companies in 71 countries



Source:
SAP Fast Facts

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95% of the iron,
steel, and aluminum
producers in the
Forbes Global 2000 are
SAP customers.



Source: *Forbes Global 2000*

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Chairman of the SAP Industry Advisory Council for Mining and Metals



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Thank you



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