Extending the Intelligent Enterprise for Mill Products and Mining with Co-innovation

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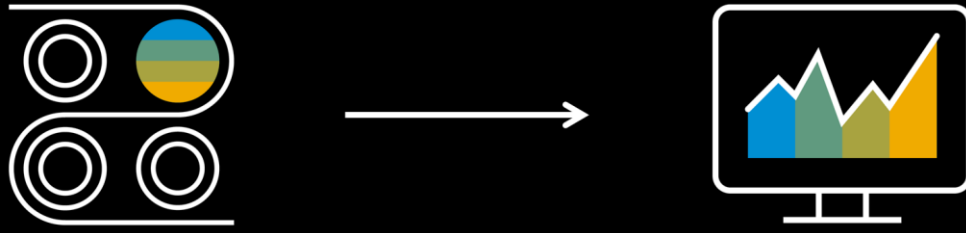
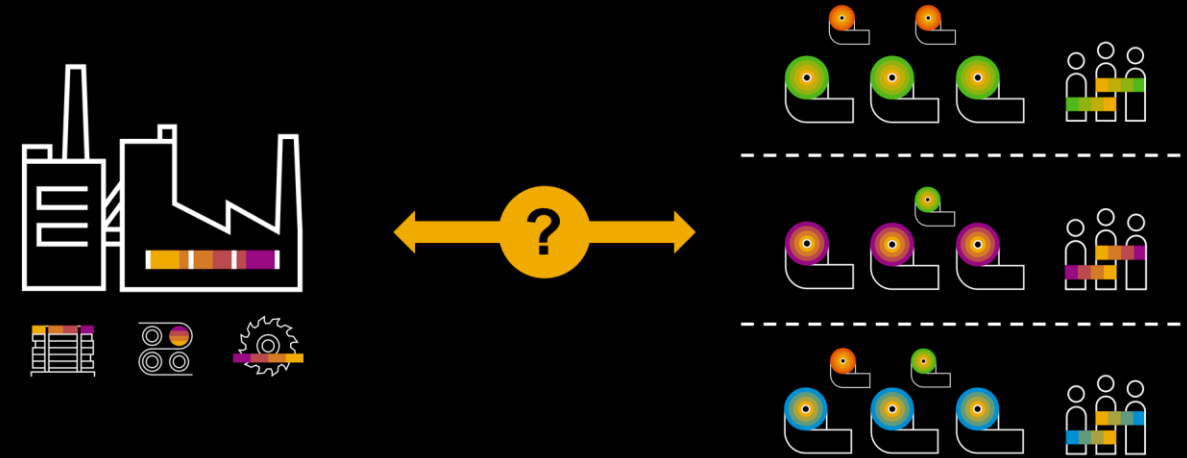**SAP** Run Simple

Dynamics

Priority 1: Innovative products at better margins
From production control to real-time profitability

Priority 2: Small lot sizes and individualization
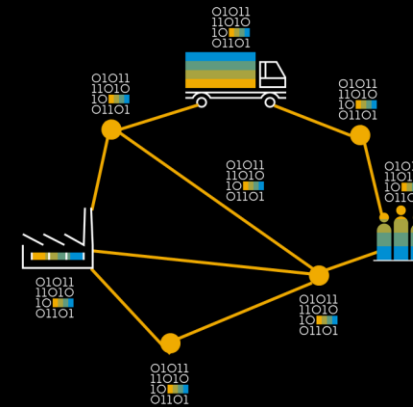The right product for the right customer

Priority 3: Customer collaboration
Real outcomes instead of just products

Steel
producer

Metal service
center

Construction
company

Priority 4: Value-added services – the art of the possible
Real-time tracking of production and logistics generates data for customer benefit

Digital trends transforming the mill and mining industry

New players enter and change business

321 Billion

Potential created value for mining and metals

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

World Economic Forum: Digital Transformation Intuitive: Mining and Metals Industry Executive Summary

Need for innovation is not debatable

87%

Of mining executives say companies that do not embrace Digital will lose their competitive position.

65%

Of enterprises are already using the Internet of Things

https://451research.com/blog/419-today-65-of-enterprises-already-using-internet-of-things-business-value-found-in-optimizing-operations-and-reducing-risk

Accenture Digital Mining Survey

Democratization of information is continuing

30 billion

Things will be connected by 2020

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

To transform metals companies, prioritize new business models and processes

1. Innovative products
Customers demand constant innovation, such as metals made from recycling material, new grades for specific characteristics such as strength, innovative coatings, and better processing capabilities.

2. Small lot sizes and individualization
Quick order completion and delivery of tailor-made solutions create additional value for customers.

3. Customer collaboration
Critical customer relationships need to be strengthened for sustaining high customer satisfaction and retention rates.

4. Value-added services
Digitalization and interconnection of products and services create additional value. An example is to advise on the best usage of a complex product, which can drive new revenue opportunities.

5. Disintermediation
Companies will increasingly look up, down, and across their value chains to expand into additional markets.

To transform mining companies, prioritize new business models and processes

1. Make mining more predictable and safer
Advanced predictive analytics and machine learning help predict failures or exceptions to support the right decision making, making mining more predictable and safer for the workforce.

3 . Enhance operational and commercial agility
Enable commercial and operational agility through real-time decisions by bringing together IT and OT along the entire pit-to-customer process.

2. Collaborate with customers, suppliers, and workers
Collaboration with customers, suppliers, and workers will strengthen relationships, digitalize the data exchanges, and make the business more agile, increasing profitability and digitalizing the worker.

5. Increase productivity through automation
The mining industry will increase the level of automation to make work safer and the outcome more predictable, and increase productivity.

High performance delivers substantial rewards

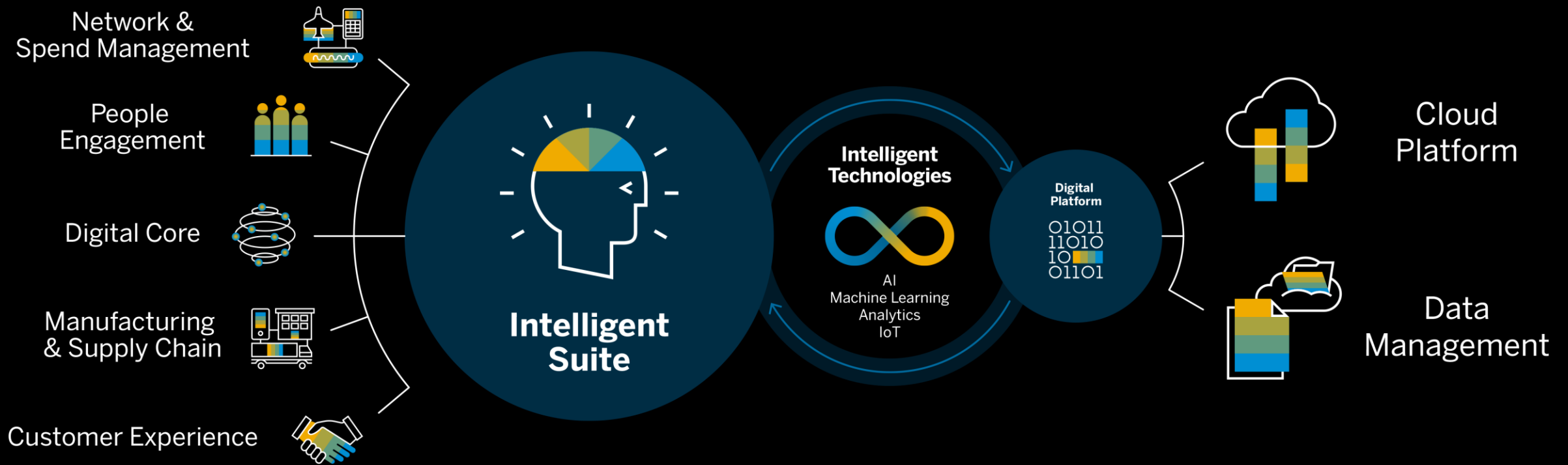SAP performance benchmarking shows that, compared with average performers, top performers in mill products achieve:

+30% **Growth in market share** by integrating offers across traditional and digital marketing channels

+17% **Return on assets** where asset management systems are fully integrated

-33% **Lead time** for order fulfillment when supply plans align with demand

+30% **Rervice level** creating greater customer satisfaction and profitability

+11% **Overall equipment effectiveness** on assets where equipment use is tracked in real time

High performance delivers substantial rewards

SAP Performance Benchmarking shows that, compared with average performers, top performers in mining achieve:

62% **Reduction in equipment outages** with reliability-based maintenance procedures and tools that increase asset availability

60% **Higher order compliance** with suppliers and terms working through the business network

41% **Lower inventory** where maintenance planning and scheduling takes into account skill levels and specific job requirements

76% **Higher margins** when financial systems provide insight into financial and operational performance

The intelligent enterprise in the experience economy

Network & Spend Management

People Engagement

Digital Core

Manufacturing & Supply Chain

Customer Experience

Intelligent Suite

Intelligent Technologies

AI
Machine Learning
Analytics
IoT

Digital Platform

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Cloud Platform

Data Management

80% market standards to optimize for speed and simplicity

20% differentiation to extend and transform the business

Intelligent Suite & Platform

Industralized ML Models and Apps

Industry Analytics

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Advanced Order Management

Alternative Configure Price Quote

Manufacturing Execution Systems

Supply Chain Mgmt Models

Industrialized Digital Core

Industrialized Integration to 3rd Party

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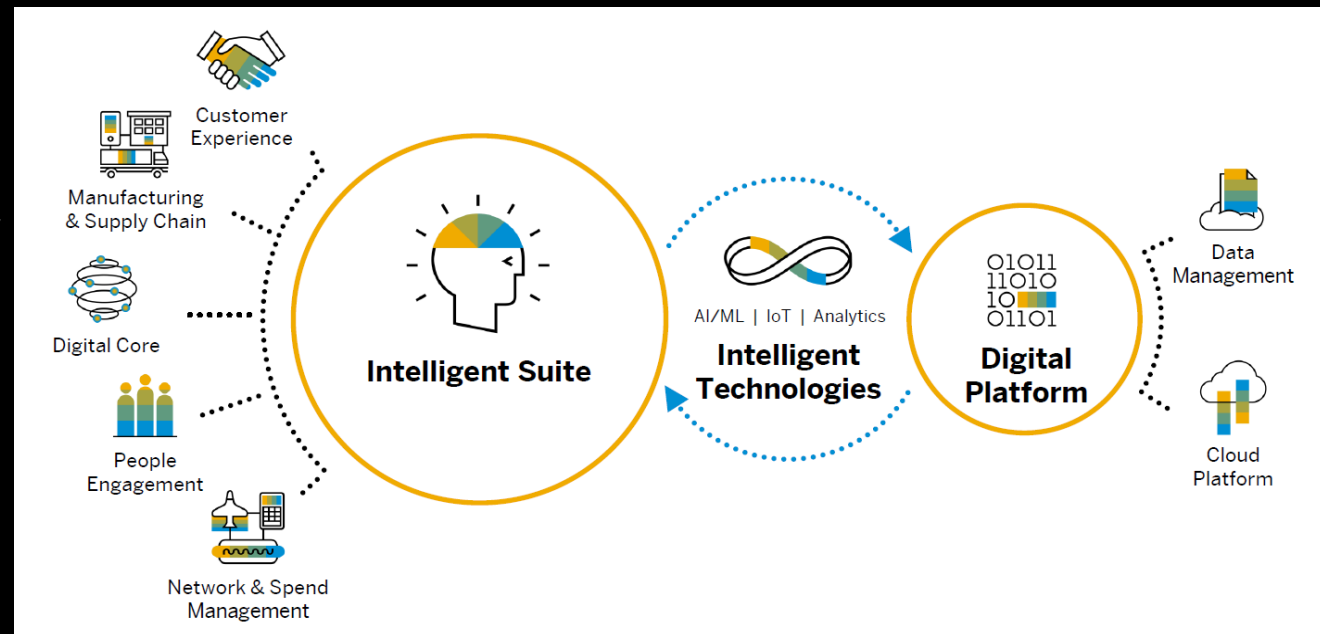
Simple UX against standard APIs

Full blown applications on SCP with standard integration

SAP Production Configuration Services & SAP Product Configuration Intelligence

Examples

Digital business scenario
Use sensor data to maintain assets proactively and to deliver the perfect order

Watch a video illustrating the scenario here

① Customer demand

① Web shop – sales order

② Production planning

③ Monitoring production

④ Analyze machine alerts

⑤ Prediction of machine shutdown

⑥ Investigate machine supplier updates

⑦ Order machine spare part

⑧ Order tracking

Stronger customer relationship

Real-time operational insights and KPIs

Business networks

Customer experience

IoT and assets

Digital core

Digital business scenario: Real-time planning and execution lead to operational excellence

1. Operational dashboards
2. Life-of-mine planning and simulation
3. Mine planning
4. Equipment monitoring and tracking
5. Predict asset failures
6. Capturing events
7. Real-time update to planning and execution
8. OEM collaboration
9. Maintenance planning and execution
10. Confirm work orders
11. Real-time operational insights and KPIs

Time

Collaboration

The IoT and assets

Digital core

View demo

Innovative products at better margins
Simplifying Protective Packaging with SAP Hybris Solutions and SAP S/4HANA

Objectives

- Upgrade sales and customer management systems to more-effectively personalize and enhance customer experiences to increase lifetime value
- Provide proactive, relevant service to a diverse clientele
- Simplify and integrate disparate systems across departments to unify operations

Resolution

- Worked with TPC to deploy SAP S/4HANA and the SAP Hybris Cloud for Sales solution
- Completed the digital transformation project in 16 weeks

Benefits

- More-informed decision making using instant reports to the executive team that increase visibility into sales and customer support
- Enhanced agility with a simplified platform that allows real-time data sharing among sales, customer service, and business leaders
- Greater efficiency due to the elimination of duplicate data entry
- Simplified data analysis for more-effective and targeted selling

16 weeks
Implementation on schedule and within budget

360-degree
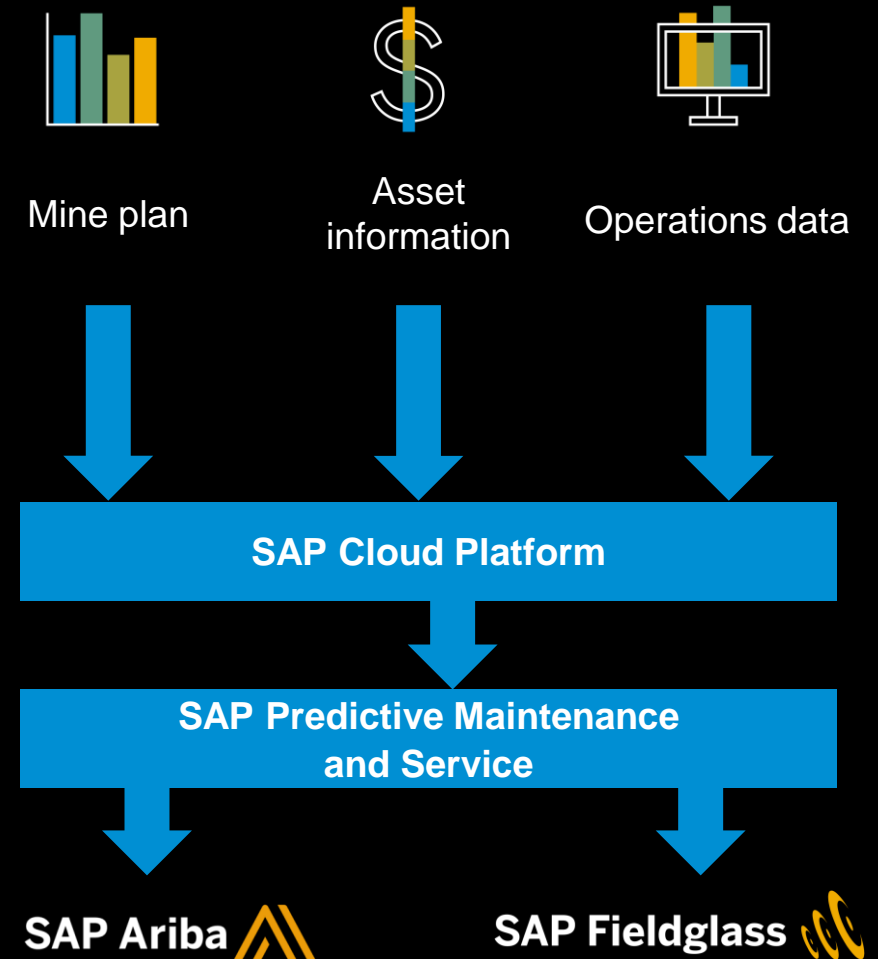View of each customer account

15%–20%
Expansion of the sales pipeline

Enabling higher productivity and increasing profits

SAP Cloud Platform allows mining companies to:

- Gain real-time operational insights
- Combine mine planning and financial data to enhance life-of-mine planning and simulation
- Reduce operating costs with improved connectivity and process automation
- Speed up maintenance and repair through integrated asset data, spare-parts procurement, and alignment of contingent workforce

Mine plan

Asset information

Operations data

SAP Cloud Platform

SAP Predictive Maintenance and Service

SAP Ariba

SAP Fieldglass

Thank you

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