

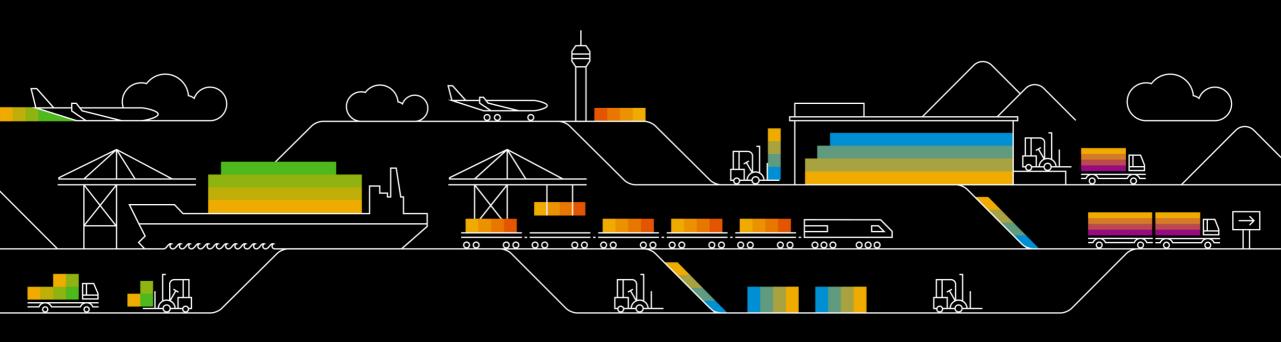
SAP Leonardo for Industries

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PUBLIC



Digitalization is happening to all of us — but every industry is different



Agriculture Sustainably feed the world

Increase farming efficiency

Create transparent and sustainable food supply chains

Manage supply and price volatility



Automotive Enable the mobility of the future

Mobility services instead of vehicles

Sustainability based on diverse energy sources

Vehicles as platform for digital business



Industrial machinery
Powering the 4th
industrial revolution

Provide digitally enabled machinery to businesses in all industries

Spearhead innovative digitally enabled processes



90%

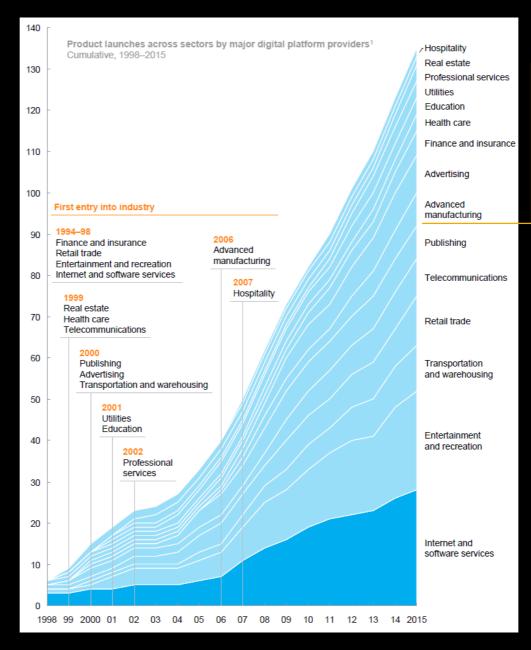
of CEOs believe the digital economy will impact their industry, but less than 15% have a digital strategy

MIT Sloan and Capgemini

Digital players enter the "real world"

Acquisitions and new product launches by Amazon, Apple, Facebook, Google, and Microsoft

SOURCE: Capital IQ; company Web sites and press releases; McKinsey Global Institute analysis



Advanced manufacturing

2010: GoogleX develops first driverless car

2013: Google enters 3D printing market

2013: Google acquires Makani Power (flying wind turbines); Redwood Robotics; Meka Robotics

2013: Amazon working on own drone called Octocopter for instant delivery

2014: Google buys drone maker Titan Aerospace and other drone makers

2015: Amazon launches first space rocket able to land back on earth

2015: U.S. military tests Google robots from Boston Dynamics

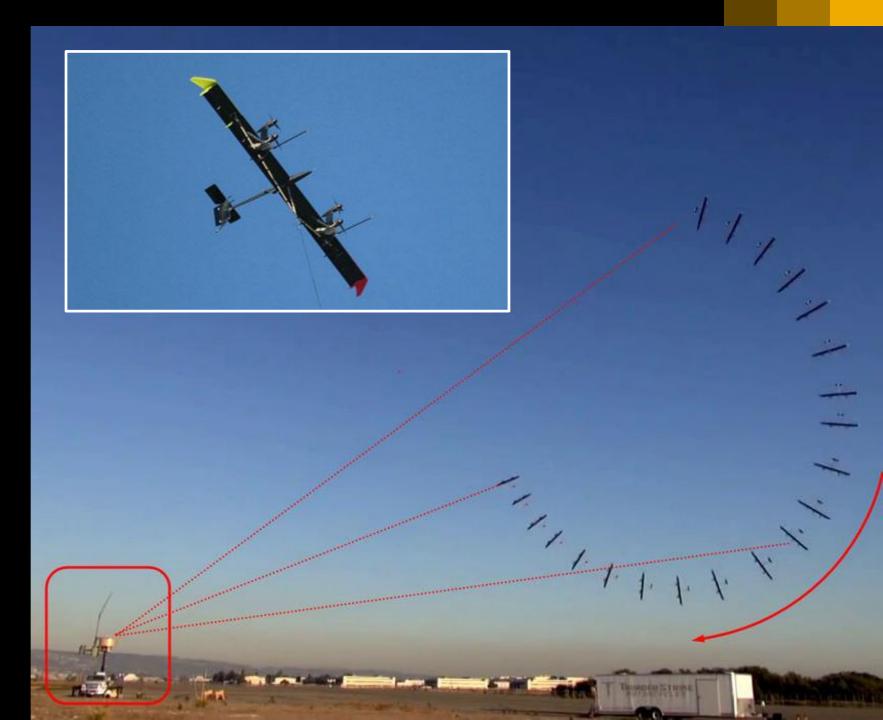
2016: Google will release "Ara" mobile phone

Makani Energy Kite (by Google)

"Makani is working to make clean energy accessible for everyone. We're developing energy kites, a new type of wind turbine that can access stronger and steadier winds at higher altitudes to generate more energy with less materials."

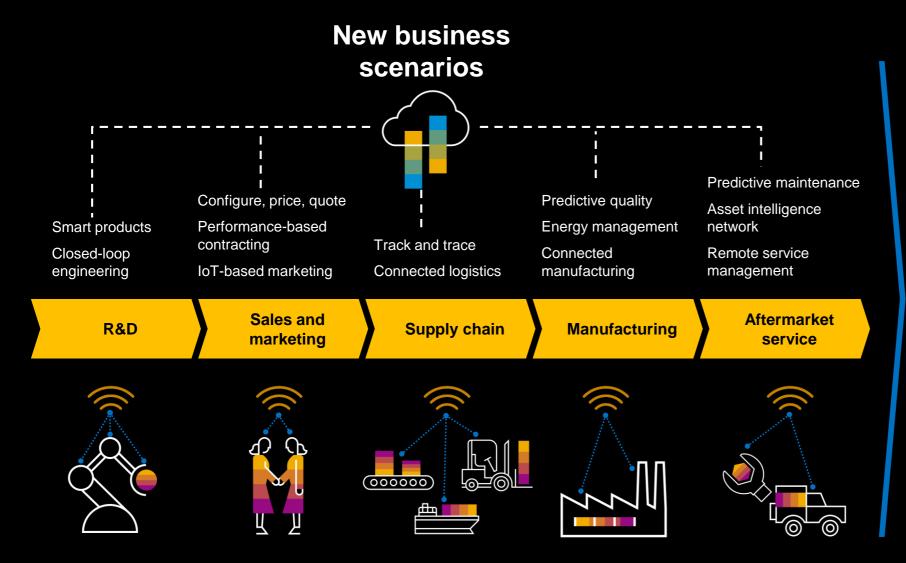
SOURCE: https://x.company/makani/







Example: Industrial machinery and components (IM&C)



Strategic priorities:



Customer centricity



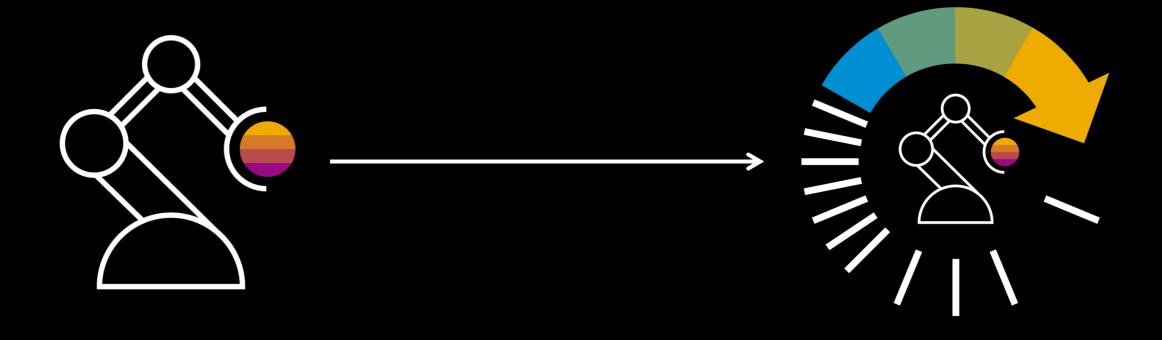
Serving the "segment of one"



Digital smart products

Strategic priority: Digital smart products

From products to lifecycle services



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Digital smart products

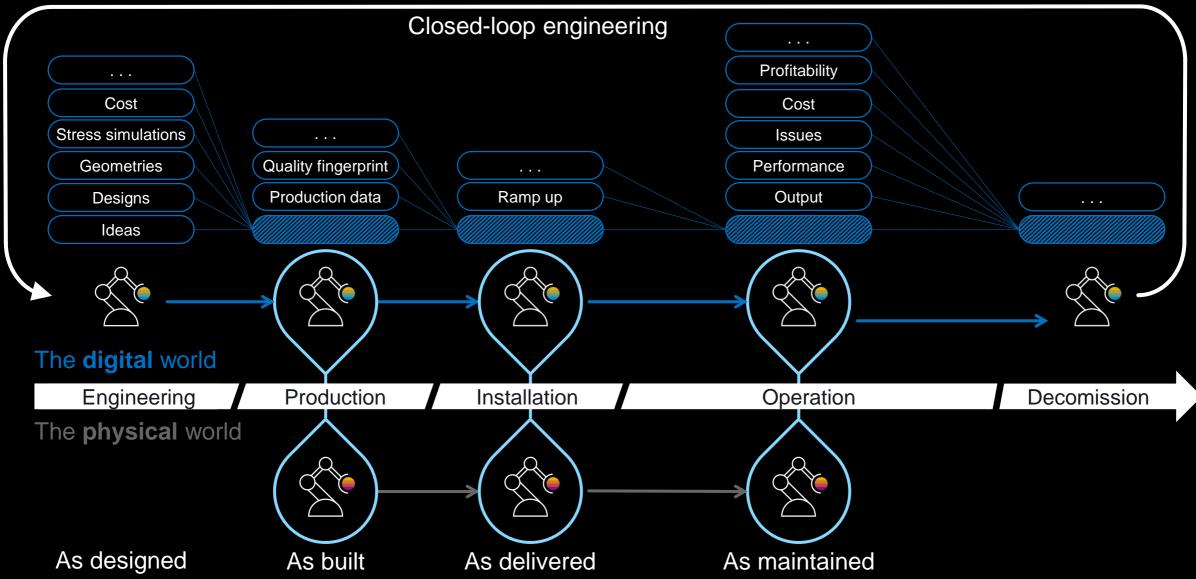
CubeXX prototype

- Finds its way autonomously on the factory floor
- Connects to the customer's warehouse system to execute transportation orders autonomously
- Is self-aware and informs the plant manager about not only its location but also

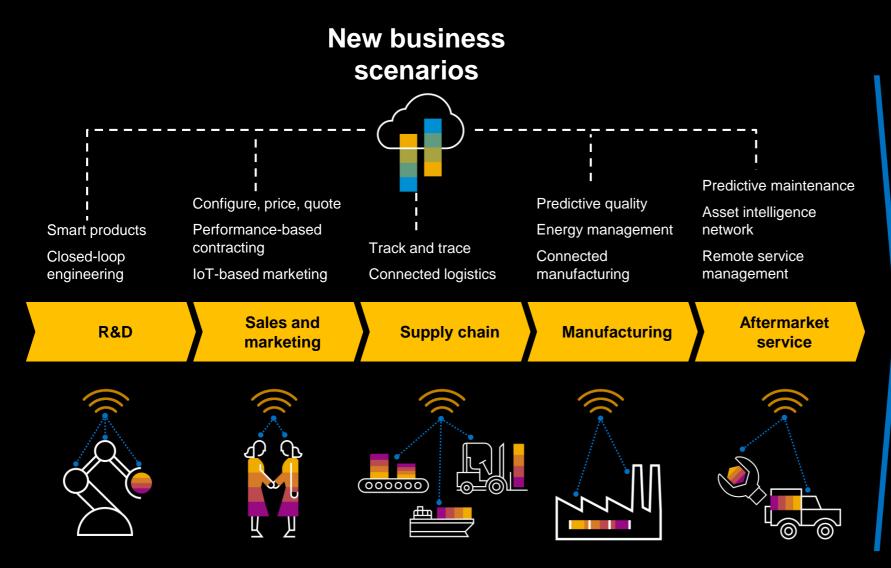
You Tube



SAP point of view: The digital twin for business



Example: Industrial machinery and components



Strategic priorities:



Customer centricity



Serving the "segment of one"



Digital smart products



Digital supply chain and smart factory



Servitization and new business models

Strategic priorities have implications along the entire value chain

Customer centricity

Digital smart products

Servitization and new business models

smart factory



Strategic priorities need core functionality and digital innovations

	R&D	Sales and marketing	Supply chain	Manufacturing	Aftermarket service
Customer centricity	Co-innovate with customers Deliver product innovations resulting from actual equipment use and incident reports Collect structured requirement based on interactions with customers and design partners	Contextualize customer engagement Engage omnichannel solution selling Organize and empower sales teams	Foster demand-driven, collaborative supply networks Enable on-time delivery and advanced availability-to-promise capabilities	Adjust production orders with greater flexibility based on customer priorities Foster an agile and responsive manufacturing network Track and trace individual products	Organize and empower teams Flow customer information across channels Personalize end-to-end service parts processes Access a service knowledge database
Serving the "segment of one"	Modularize product concepts and well-structured product families Use platform models across product families Select engineer-to-order capabilities during the sales configuration process	Personalize marketing and sales Segment customers with sophistication Configure products and manage variants such as costing		Produce for a lot size of one with high asset utilization and optimal set-up times Integrate seamlessty sales orders with specific parameters with the shop floor Give electronic work instructions	Offer tailor-made services Deliver an equipment-specific service portfolio Gain full transparency into equipment lifecycle information
Digital smart products	Adopt a systems engineering approach that includes mechanical, software, and electronic capabilities Embed the technology foundation for equipment networks Manage digital IP effectively	Enable collaborative solution and value selling Generate leads through predictive product replacement and precise segmentation Sell Software	Required		Provide services for digital smart products Enable a feedback loop in internal business processes Connect digital products in the field with an equipment network
Digital supply chain and smart factory	Integrate manufacturing engineering with electronic and manual management of bills of materials Visualize manufacturing processes digitally based on harmonized product data	Forecast sales precisely and reliably Align supply chain and sales planning Route customer orders directly into the factory as production orders	business capabiliti	es are vertically up to the customer - support machine-to-machine integration - innovate plug-and-produce processes - Benefit from a digital twin of the manufacturing facility	Collaborate on equipment data through a network Handover as-built equipment information seamlessly to aftermarket services Produce service parts by 3Dprinting
Servitization and new business models	Calculate actual equipment use Offer digital services with data platforms Support equipment information sharing along the value chain				Deliver performance-based services and products as a service Monitor remote conditions and performance of installed base Provide predictive services Innovate digital value-add services
Typical business benefits	\(\frac{1}{2}\)			Ē	
Digital innovation SAP Leonardo	్ల్లో Internet of Things	Machine learning	Analytics SAP Cloud Platform	₿ Blockchain	🖨 Big Data
	Solutions powered by SAP Leonardo				
Extensions	SAP Hybris (v)	SAP Ariba	SAP I	Fieldglass 👭	C. CONCUR
Digital core	SAP S/4HANA engines				
SAP S/4 HANA	Enterprise management				

They pursue five which require new business capabilities along the value chain centricity

Industrial machinery and components companies play a key role in the digitalization of businesses across all industries:

network

management

flexibility based on customer priorities

Track and trace individual products

utilization and optimal set-up times

Give electronic work instructions

Integrate seamlessly sales orders with

specific parameters with the shop floor

Install and manage in-product software

Integrate vertically up to the customer

Innovate plug-and-produce processes

Benefit from a digital twin of the

manufacturing facility

production planning

Support machine-to-machine integration

Deliver on the highest quality requirements

Avail manufacturing parameters to service

Distribute product-use information for

Support advanced testing and connectivity

Foster an agile and responsive manufacturing

Produce for a lot size of one with high asset

1. They provide the digitally enabled machinery and equipment so that other companies can innovate their business - driving topline revenue

Enable on-time delivery and advanced

Plan sales and operations with flexibility

Support responsive material requirement

Promote efficient and flexible internal and

external logistics and supplier collaboration

Track digital components

supply chain management

shop floor to warehouse

logistics performance

strategies

Actualize efficient replenishment

Enable 3D printing for spare parts

Plan demand and supply flexibly

Integrate material management -from

Collaborate with customers and suppliers

Improve demand sensing and automate

Optimize service parts planning and

Use digital twin throughout entire supply

Achieve real-time end-to-end visibility into

availability-to-promise capabilities

supply networks

2. They are spearheading innovative processes themselves leveraging digital capabilities of the equipment they use - achieving bottom-line cost savings

Drive new strategies outside the current

Enable economies of scale and flexible

call orders with strategic and agile

Onboard alternative suppliers with

global supplier-network managemen

Execute procurement strategies for 3D

Bundle third-party service with products

Allow contractual enablement of global

supply chains with multi-tier suppliers

Automate and simplify the integration o

Augment the workforce by integrating

contingent workers efficiently

Deliver the highest quality in the

shortest time through service-parts

noncore skills

business scope

printed service parts

managemen

material suppliers



Attract and secure top talent

contracting

technologies

flexibility

across regions

in a flexible manner

community building

Enable agile work teams

Work with customers through flexible

Enable social collaboration among teams

Identify, forecast, and address skill gaps

Onboard and train employees quickly and

Train and certify workforce on new digital

Work with universities and external entities

Empower employees to make decisions in

Manage external contractors with greater

Procure and manage contingent labor and

services for an optimized service delivery

Engage in knowledge sharing and

R&D Manufacturing Sales and marketing Supply chain Aftermarket service Finance Human resources Procurement Co-innovate with customers Contextualize customer engagement Foster demand-driven, collaborative Adjust production orders with greater Find and contract talent with specific Use simulation and analysis to evaluate Maintain a pipeline of top talent

Organize and empower teams

Offer tailor-made services

information

processes

equipment network

products as a service

Provide predictive services

Mobile services

Asset intelligence network

Predictive maintenance and service

Service

Innovate digital value-add services

Flow customer information across channels

Deliver an equipment-specific service portfolio

Gain full transparency into equipment lifecycle

Provide services for digital smart products

Enable a feedback loop in internal business

Connect digital products in the field with an

Collaborate on equipment data through a

Handover as-built equipment information

Deliver performance-based services and

Monitor remote conditions and performance o

seamlessly to aftermarket services

Produce service parts by 3D printing

Personalize end-to-end service parts

Access a service knowledge database



Digital supply



new business

Servitization &

- R&D cost: - 20-30%

New products revenue: + 10-20%

Revenue targets met by production: + 15-

R&D

actual equipment use and incident reports Collect structured requirement based on interactions with customers and design Modularize product concepts and well-

Deliver product innovations resulting from

structured product families Use platform models across product Select engineer-to-order capabilities during the sales configuration process

Adopt a systems engineering approach that includes mechanical, software, and electronic capabilities Embed the technology foundation for equipment networks

Integrate manufacturing engineering with electronic and manual management of bills of materials Visualize manufacturing processes digitally based on harmonized product

Manage digital IP effectively

Calculate actual equipment use Offer digital services with data platforms Support equipment information sharing

Inventory levels: - 25-30% Customer satisfaction: + 10-20%

Engage omnichannel solution selling

Organize and empower sales teams

Personalize marketing and sales

such as costing

Sell Software

Segment customers with sophistication

Configure products and manage variants

Enable collaborative solution and value

replacement and precise segmentation

Forecast sales precisely and reliably

Align supply chain and sales planning

Route customer orders directly into the

Support omnichannel solution selling

factory as production orders

Sell data and digital services

Charge based on performance

Enable customer self-service

Manage contract value

Generate leads through predictive product

 Cost due to stock-outs: - 20-25% Davs in inventory: - 10-12% Total logistics cost: - 10-12%

Total manufacturing cost: - 10% Manufacturing cycle time: - 10% Scrap value: - 25%

Revenue leakage: - 7-9% Service delivery cost: - 4-5% Cost of noncompliance: - 4-5%

 Procurement function cost: - 15-20% Worker acquisition time: - 30-40% Days payable outstanding on targeted spend - 2-5 days

Days to close annual books: - 40-50 Budgeting & forecasting cost: - 25-50% Audit cost: - 20-40%

financial implications of strategic business

Manage the customer portfolio strategicall

Analyze profitability instantly across

multiple dimensions such as product

groups, customers, projects, profit centers

Include payment models for digital service

in product calculations and financial

Manage and help ensure digital rights

Optimize working capital

Manage increased financial risks

associated with highly flexible supply

chains and manufacturing operations

are operated for customers through a

product-as-a-service contract

based service contracts

Finance and manage the risk of assets the

Allow financial controlling of performance

choices

and plants

Lower time and attendance function cost HR full-time equivalents: -44%

Internet of Things



Machine learning





Security services



Finance

Digital innovation

Typical business

benefits*

SAP Cloud Platform Analytics services

Brand impact



UX services

Analytics



Collaboration Services

Job matching

Job standardization

SAP Leonardo

· Product lifecycle costing

Engineering control cente Visual enterprise

Constraint management Innovation management

Cloud for product stewardship

· Configure, price, Sales Marketing and guote Sales planning and performance manageme Billing and revenue innovation management

Price and margin management

Social collaboration

Heavy equipment management

Sales and marketing

Integrated business planning Response and supply orchestration Supplier network collaboration Collaborative supply chain Service parts planning

Transportation managemen

Extended warehouse manageme

Advanced order promising and ATP

Constraint-based production planning

Vehicle insights

Supply chain

Distributed manufacturing Manufacturing execution Manufacturing integration and intelligence Visual manufacturing planner Product structure synchronization

Manufacturing

 Service ticketing SAP Hybris (v) Service Commerce

SAP Ariba // Spend Visibility Collaborative Sourcing

SAP Fieldglass

Collaborative Supply Chain Procure-to-Pay Collaborative Commerce

Procurement

SAP Ariba ∧ Financial supply chain Collaborative Finance C. CONCUR

C. CONCUR Financial planning and analysis

Accounts payable

Business process consolidation

Shared services framework

SAP SuccessFactors Core human resources and payrol Talent management

Time and attendance managemen Human capital analytics

SAP Fieldglass 🅔

C. CONCUR

Digital core SAP S/4HANA

Extensions

Product development and project control

· Enterprise portfolio and project management

Commercial project management
 Compliant product lifecycle management

Production engineering

 Order and contract management Sales order fulfillment cockpit

· User experience and interface solutions Settlement management
 Integration with SAP Hybris solutions

· Inventory and basic warehouse management
Production planning Real-time inventory management

Production scheduling

· Production orchestration and execution Enhanced material requirements planning Quality management

Service management.

 Service master data managemen Service parts management

Operational purchasing

 Collaborative sourcing and contract mgm! Invoice and pavables momt

Receivables management · Invoice mgmt, and accounts payable Accounting and closing operations Accounting Cost management Profitability analysis

Accounting and financial close

Treasury management

Time recording



Get your poster here

Bringing it to live: SAP Leonardo industry accelerators



- Industrial machinery
- Consumer goods
- Manufacturing
- Sports and entertainment
- Any industry with innovation services

- Cloud
- Big Data
- Machine learning
- Blockchain
- Analytics
- IoT

- SAP Leonardo Innovation Services, express edition
- Discovery workshop
- Design and prototype
- Business case
- Technical blueprint

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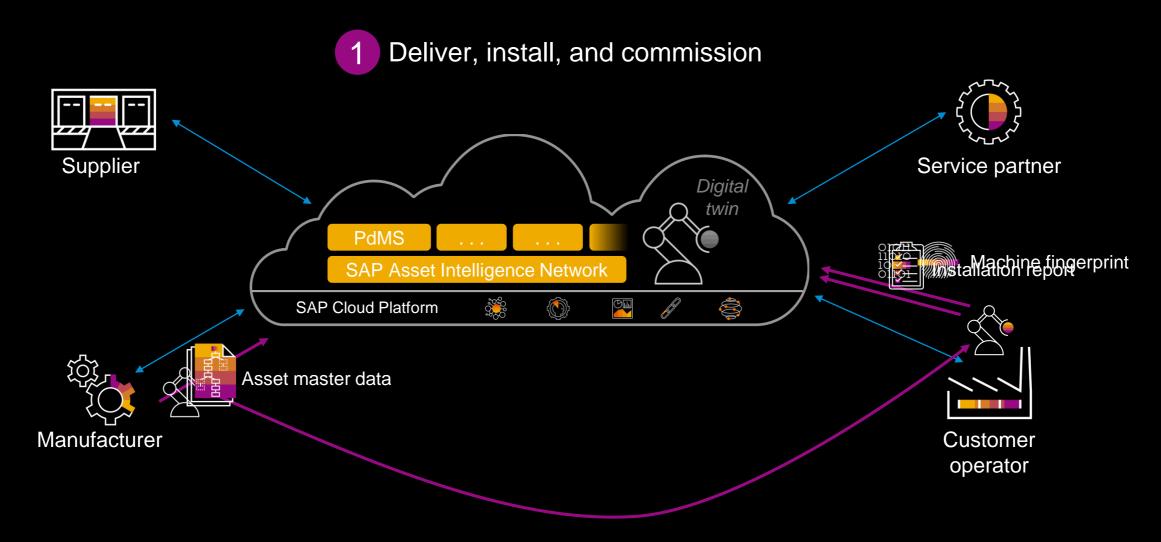
Fixed-price accelerator bundles of necessary expertise, data, and software integrated to solve a specific and common business problem, plus the services to get started and deliver business value quickly

Overall equipment effectiveness for customers' assets

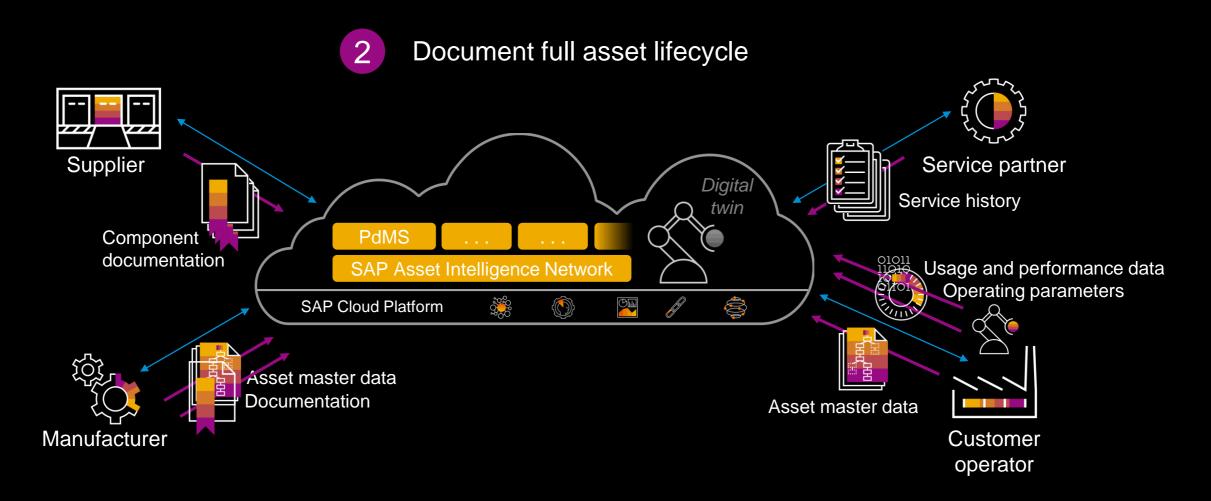


SAP Predictive Maintenance and Service

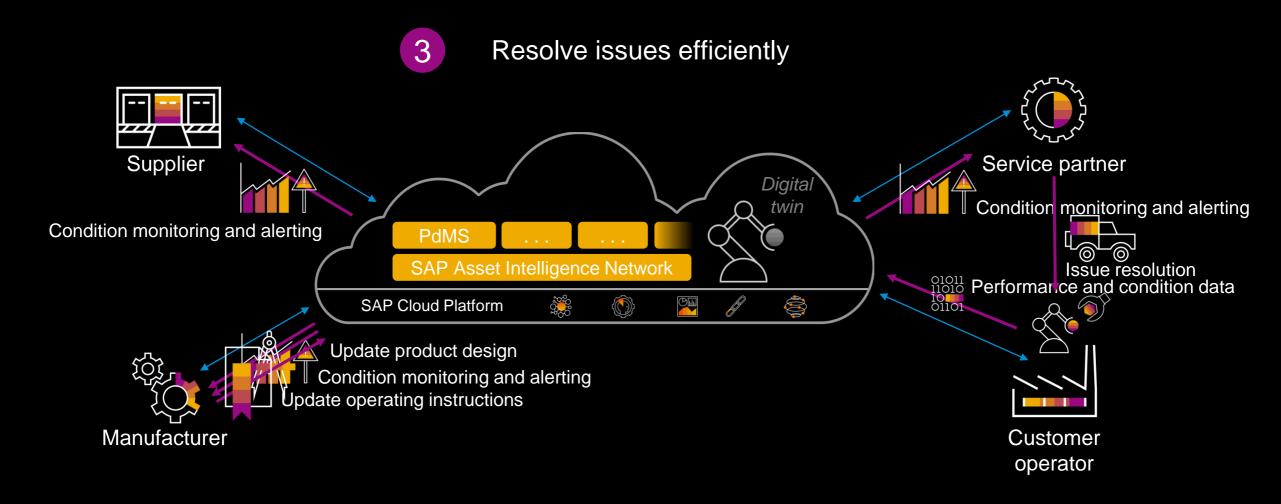
Overall equipment effectiveness for customers' assets



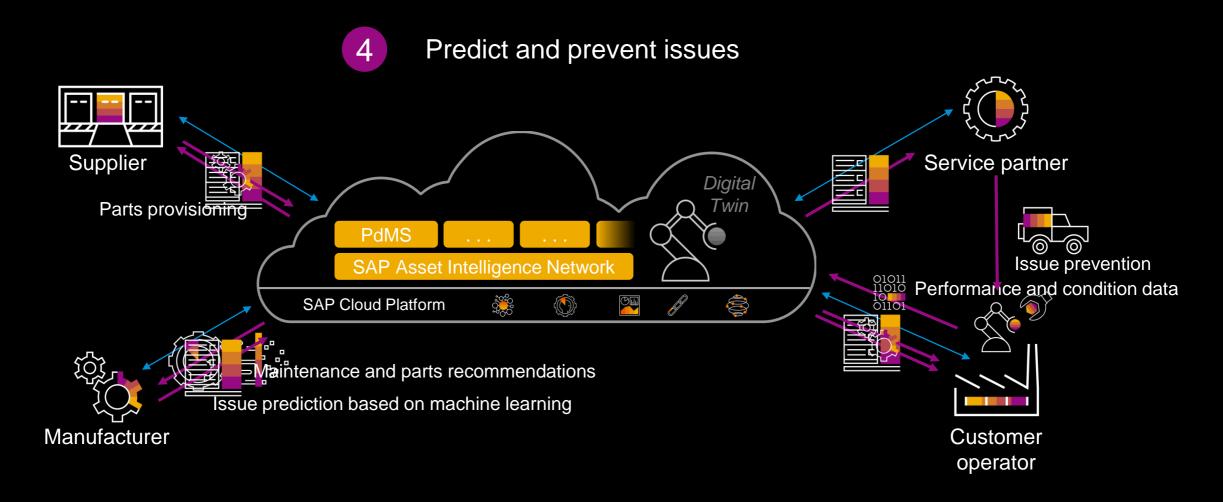
Overall equipment effectiveness for customers' assets



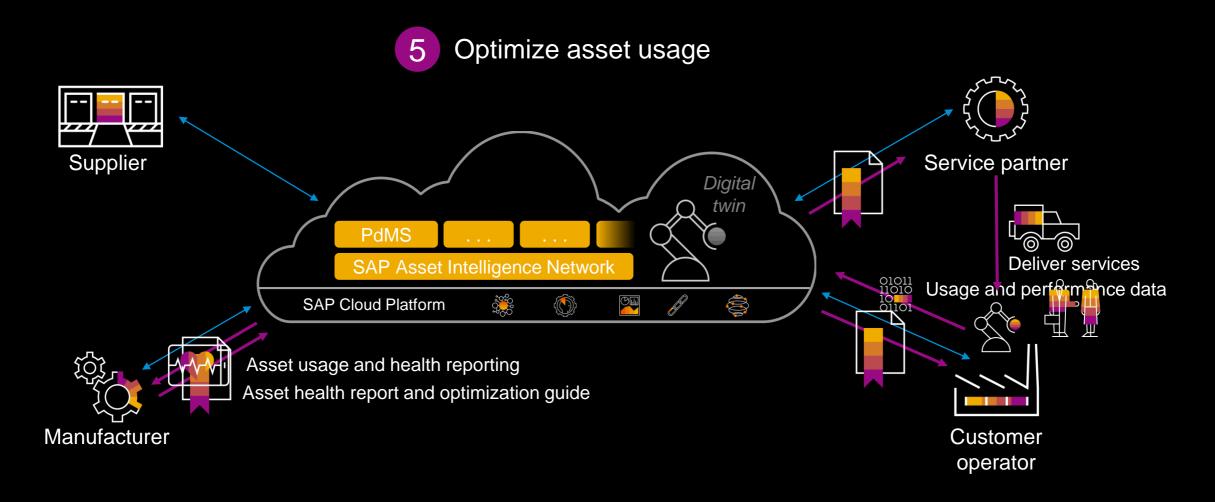
Overall equipment effectiveness for customers' assets



Overall equipment effectiveness for customers' assets



Overall equipment effectiveness for customers' assets



Overall equipment effectiveness for customers' assets



The competition is not always where you think it is

- Understand what digitalization means for your industry: The opportunities and the threats
- Define the strategic priorities that will advance your company
- Use the digital framework to build a transformation road map involving your complete value chain
- Use the breadth of the SAP portfolio: The core and the system of innovation

SAP Leonardo



Thank you.

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