International Conference for SAP Mill Products, Mining, and Chemicals 2021

Strategy Update on the Intelligent Enterprise

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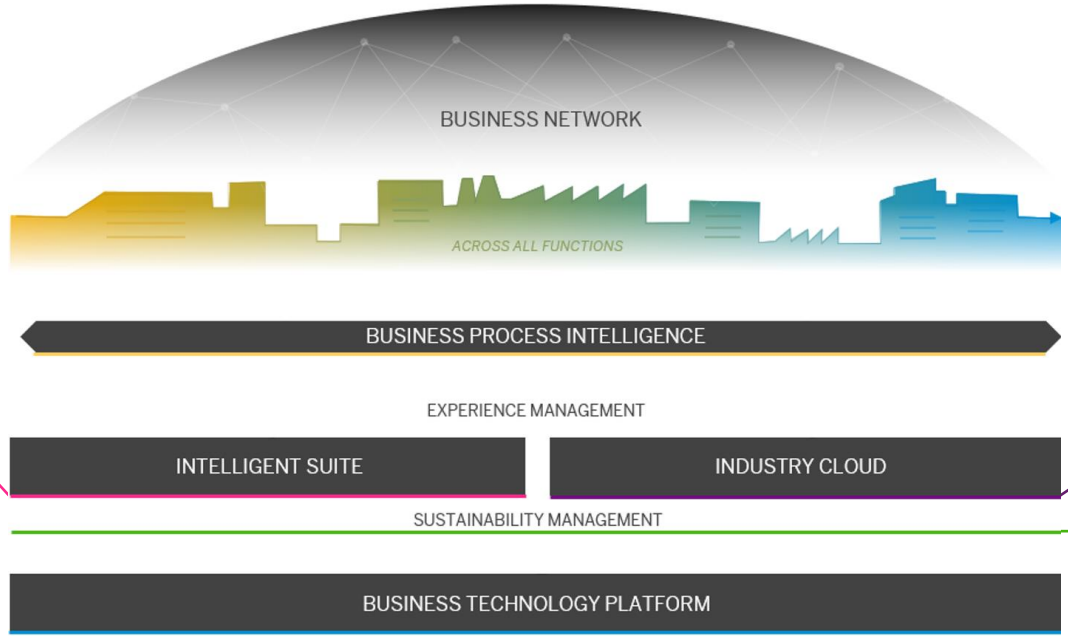
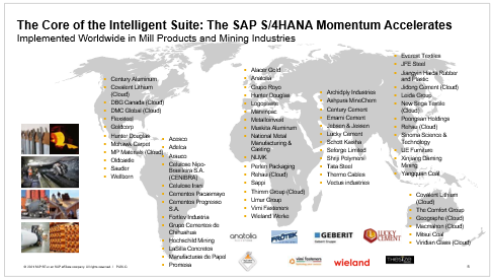
Strategy Update: The Intelligent Enterprise for Mill Products and Mining

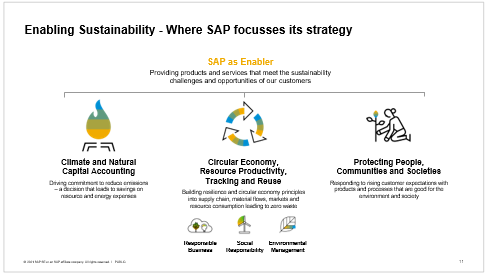


The Core of the Suite



Differentiate and Extend

"The Green Line" Embedded



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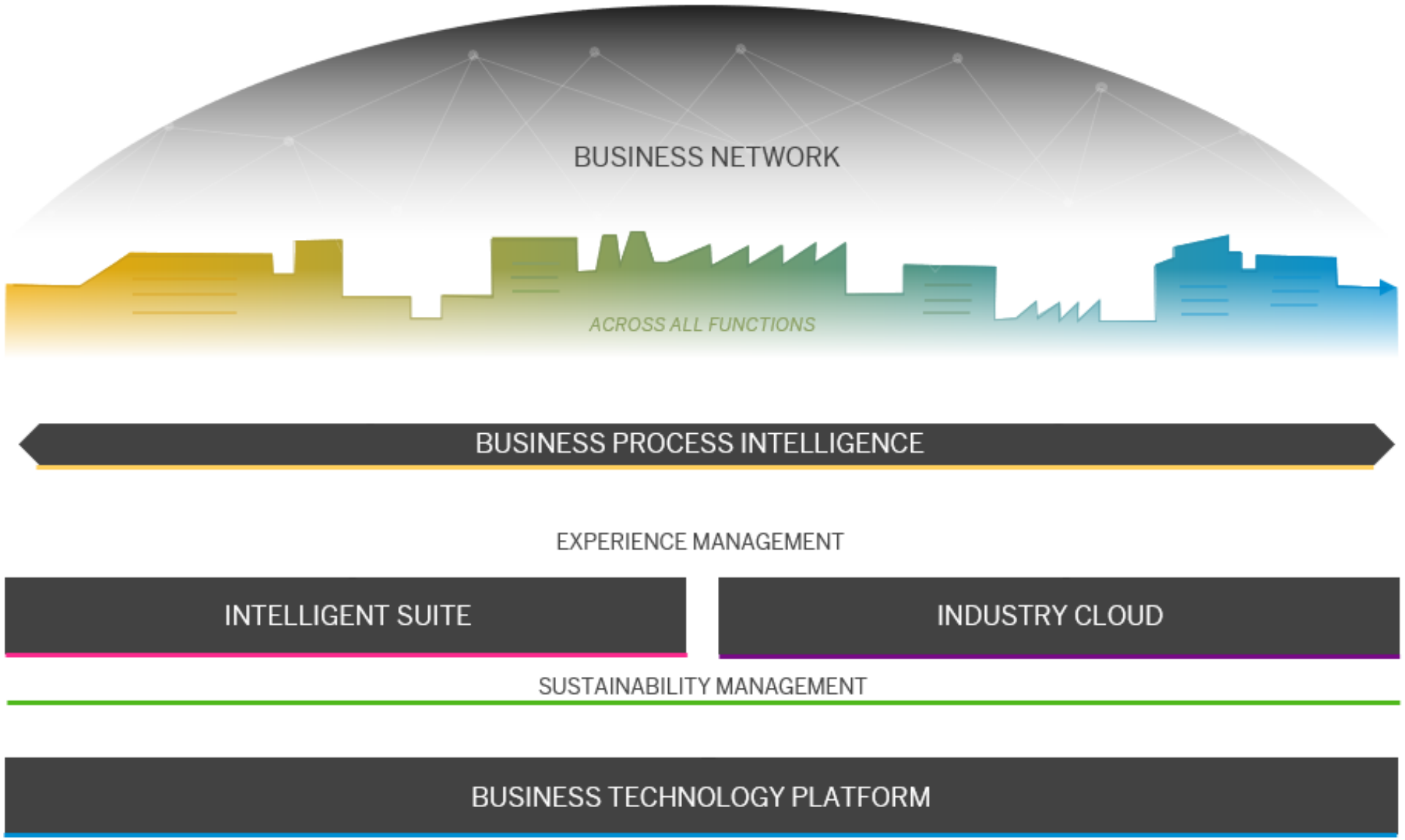

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The Core of the Intelligent Suite: The SAP S/4HANA Momentum Accelerates

Implemented Worldwide in Mill Products and Mining Industries

- Century Aluminum
- Covalent Lithium (Cloud)
- DBG Canada (Cloud)
- DMC Global (Cloud)
- Flexsteel
- Goldcorp
- Hunter Douglas
- Mohawk Carpet
- MP Materials (Cloud)
- Oldcastle
- Sauder
- Wellborn

- Acesco
- Adelca
- Arauco
- Celulose Nipo-Brasileira S.A. (CENIBRA)
- Celulose Irani
- Cementos Pacasmayo
- Cementos Progresso S.A.
- Fortlev Industria
- Grupo Cementos de Chihuahua
- Hochschild Mining
- LaSilla Concretos
- Manufacturas de Papel
- Promesa

- Alacer Gold
- Anatolia
- Grupo Royo
- Hunter Douglas
- Logoplaste
- Marvinpac
- Metalloinvest
- Muskita Aluminum
- National Metal Manufacturing & Casting
- NLMK
- Perlen Packaging
- Rehau (Cloud)
- Sappi
- Thimm Group (Cloud)
- Umur Group
- Vimi Fasteners
- Wieland Werke

- Archidply Industries
- Ashpura MineChem
- Century Cement
- Emami Cement
- Jebsen & Jessen
- Lucky Cement
- Schott Kaisha
- Seforge Limited
- Shriji Polymers
- Tata Steel
- Thermo Cables
- Vectus industries

- Everest Textiles
- JFE Steel
- Jiangyin Haida Rubber and Plastic
- Jidong Cement (Cloud)
- Leida Group
- New Sega Textile (Cloud)
- Poongsan Holdings
- Rehau (Cloud)
- Sinoma Science & Technology
- UE Furniture
- Xinjiang Daming Mining
- Yangquan Coal

- Covalent Lithium (Cloud)
- The Comfort Group
- Geographe (Cloud)
- Macmahon (Cloud)
- Mitsui Coal
- Viridian Glass (Cloud)

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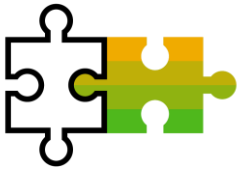
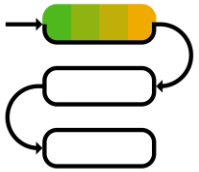
SAP's Industry Cloud

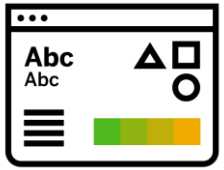
Accelerating innovation in the **difference-making, competition-beating** parts of what you do.



extend SAP's intelligent suite



optimize, extend and transform core business processes



business applications, not just technologies

built by SAP and by its Partners

interoperable and cloud native

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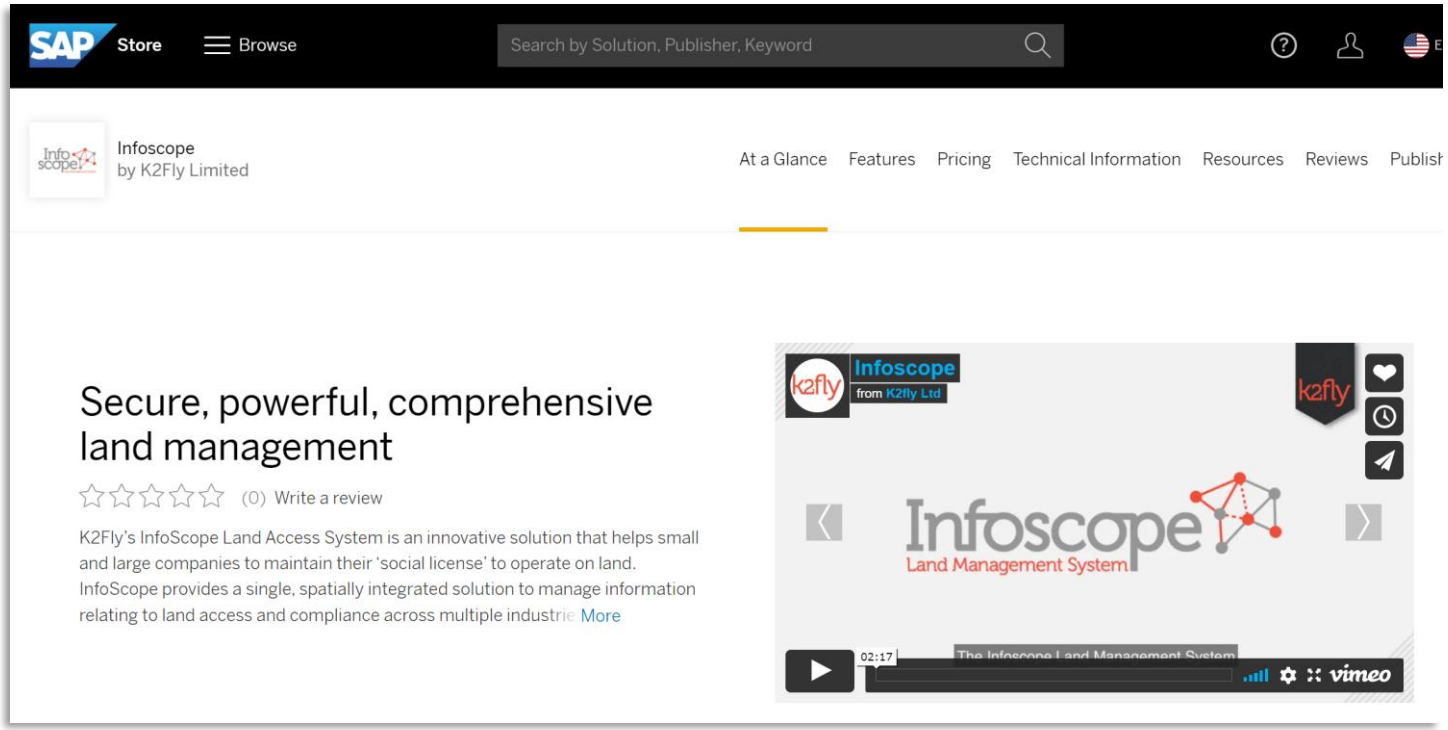
Industry Cloud Partner Solution:
K2Fly Infoscope: Natural Resource Governance

Manage information relating to land access and compliance.

Single, spatially integrated solution managing:

- Stakeholder information
- Cultural heritage
- Native title & environmental management along with a full life-cycle ground disturbance process
- Tenement Management
- Environmental Obligations



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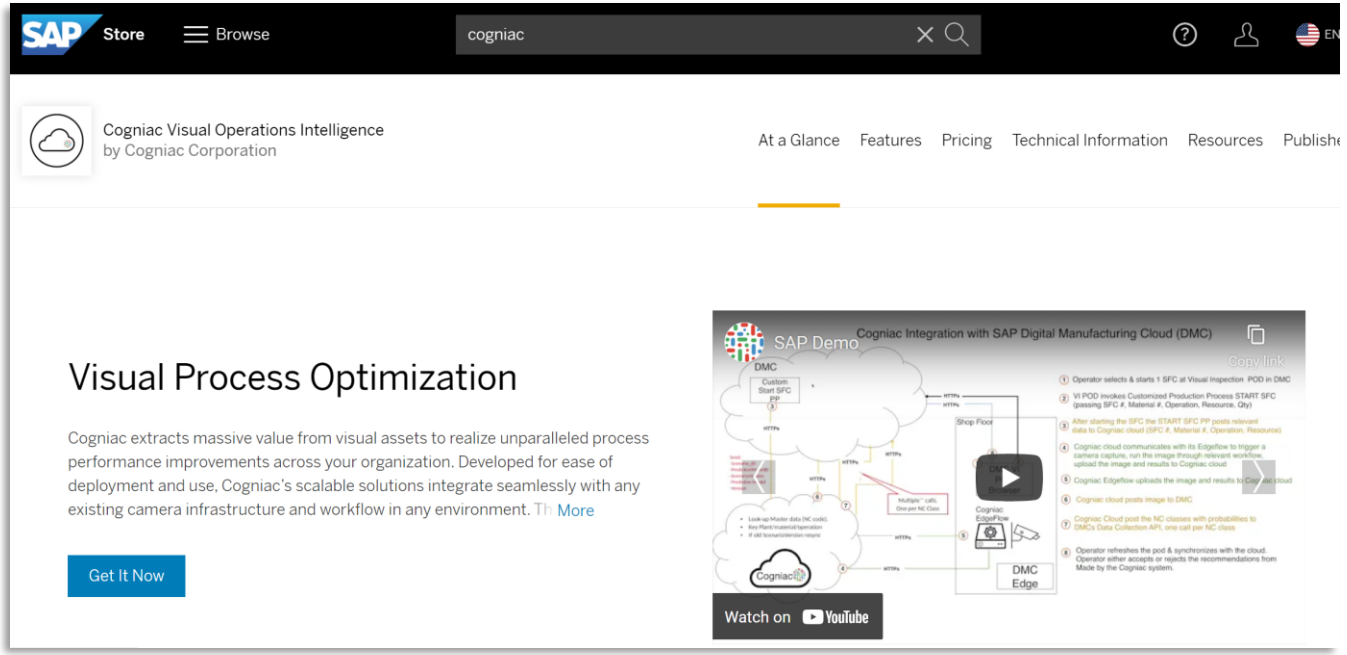
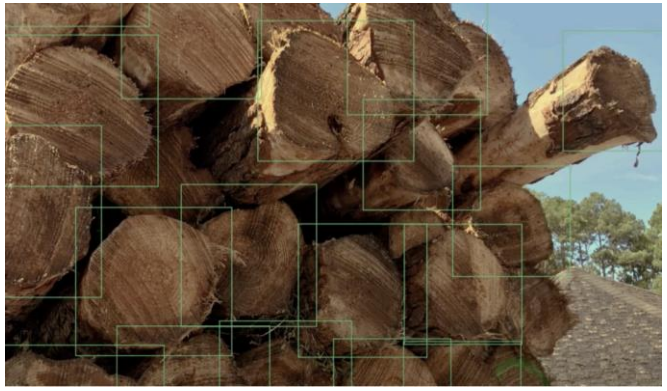
Industry Cloud Partner Solution
Cogniac: Visual Operations Intelligence

Truckload automation inspection at paper mills, sawmills and plywood mills using AI-powered visual inspection



Maximizes value of Visual Data

- Uses convolutional neural network techniques
- Integrates with SAP Digital Manufacturing Cloud
- Produces meaningful data within days or weeks
- Optimizes models and course-corrects in real time
- Short deployment time
- Saves hundreds of thousands of dollars



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Existing and Planned[1] Industry Cloud Solutions for Mill Products & Mining

	Digital Supply Chain	Intelligent Manufacturing, Mining, Asset Management	Product & Project Management	Sustainable Customer Relationship
SAP-developed solutions	▪ SAP Logistic Business Network, freight collaboration option ▪ SAP LBN, global track and trace option ▪ SAP Returnable Packaging Management ▪ SAP Rural Sourcing Management[2]	▪ SAP Asset Manager ▪ SAP Predictive Asset Insights ▪ SAP Asset Strategy and Performance Management ▪ SAP Digital Manufacturing Cloud for execution ▪ SAP Digital Manufacturing Insights (including predictive quality) ▪ SAP Edge Services	▪ SAP Variant Configuration and Pricing ▪ Exposure of SAP AVC via BTP[3] ▪ SAP Project Intelligence Network ▪ SAP Product Lifecycle Costing ▪ SAP Enterprise Product Development	▪ SAP Service Ticket Intelligence
Partner and ecosystem solutions	▪ MacroPoint by Descartes ▪ CDX Data Platform & Transport Visibility by ClearMetal ▪ …	▪ Infoscope by K2Fly ▪ Visual Operations Intelligence by Cogniac ▪ ETM.next by Bearing Point ▪ …	▪ Cloud CAD Integration by Cideon ▪ …	▪ OMS+ Order Management by DataXStream ▪ Commerce Marketplace Management by Mirakl

1 This is the current state of planning and can be changed by SAP at any time without notice.
2 Not yet available on the SAP Store.
3 Planned innovation.

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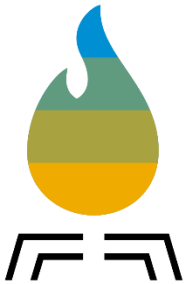
Enabling Sustainability - Where SAP focusses its strategy

SAP as Enabler

Providing products and services that meet the sustainability challenges and opportunities of our customers



Climate and Natural Capital Accounting

Driving commitment to reduce emissions – a decision that leads to savings on resource and energy expenses

Circular Economy, Resource Productivity, Tracking and Reuse

Building resilience and circular economy principles into supply chain, material flows, markets and resource consumption leading to zero waste

Responsible Business

Social Responsibility

Environmental Management

Protecting People, Communities and Societies

Responding to rising customer expectations with products and processes that are good for the environment and society

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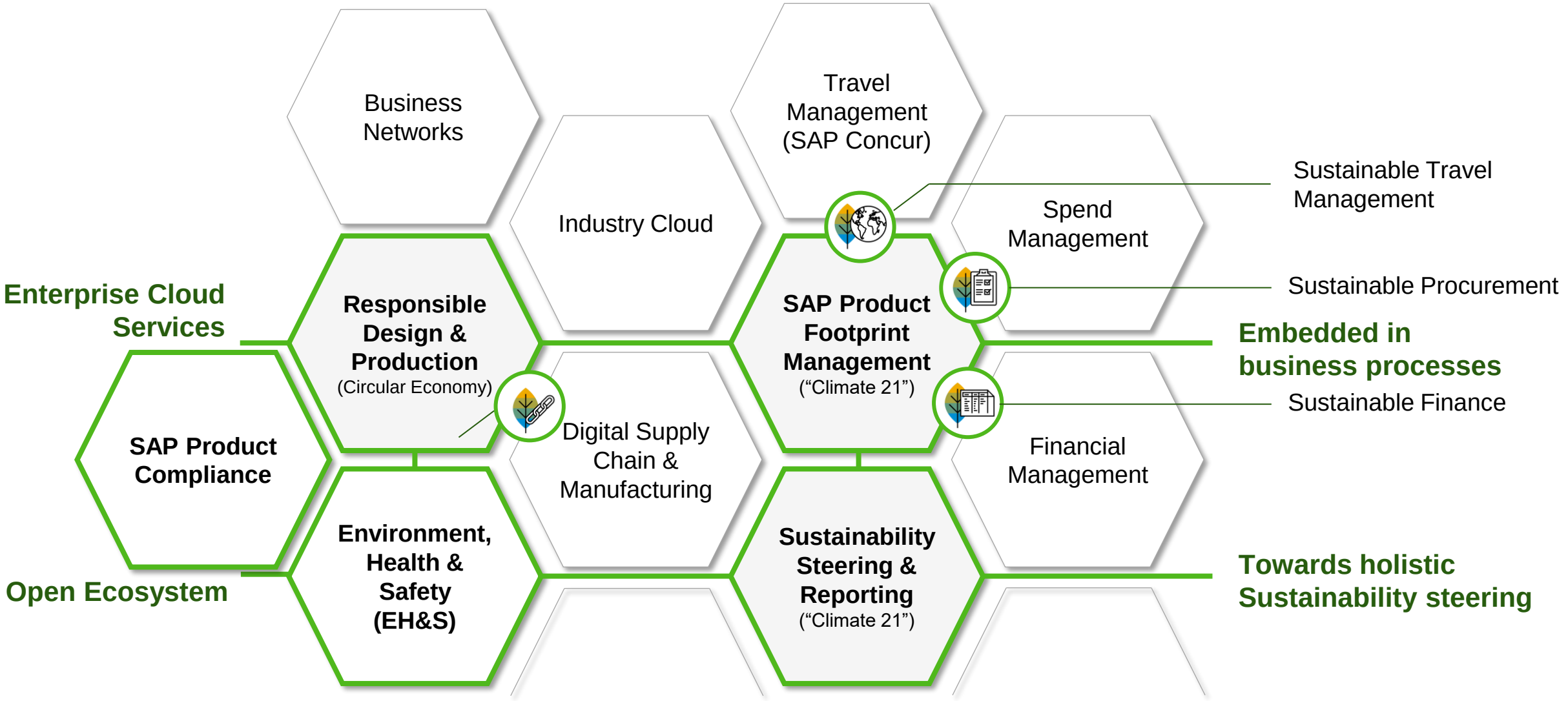
Introduction of a New Dimension in Business Processes

Sustainability Management by SAP – Modular, Embedded S/4HANA Cloud Services



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Thank you

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International Conference for SAP Mill Products, Mining and Chemicals 2021 - Keynote

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Vice President & Global Head Chemical Industry
SAP SE

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Chemical Industry Economic Outlook

Global GDP set to bounce back

(Percent change in real GDP and key components)

	2020	2021	2022	2023
Real GDP	-4.0%	4.5%	3.9%	3.2%
Private consumption	-5.7	4.6	4.1	3.1
Fixed investment	-3.6	4.3	4.2	3.8
Goods and services trade (exports)	-8.2	5.4	5.6	4.0
Industrial production	-5.5	5.6	3.9	3.3

Source: IHS Markit © 2021 IHS Markit

Global chemical output set to rebound

(YOY percent change in volume)

By region	2020	2021	2022
Africa & Middle East	0.3%	3.6%	3.1%
North America	-3.9	4.1	2.7
Latin America	-7.2	4.6	3.2
Europe	-2.2	3.1	1.6
Asia/Pacific	-2.1	4.4	3.3
Total world	**-2.6**	**3.9**	**2.6**

By segment			
Agricultural chemicals	-1.7	3.9	2.9
Basic chemicals	-1.2	4.2	2.7
Inorganics	-3.9	4.2	2.4
Bulk petrochemicals & organics	-2.4	4.0	2.7
Plastic resins	3.1	4.9	3.3
Synthetic rubber	-9.4	7.5	3.6
Manmade fibers	-3.4	6.1	3.0
Specialties	-7.3	4.1	2.8
Coatings	-15.0	4.6	3.0
Other specialties	-4.1	4.0	2.8
Total chemicals output	**-2.6**	**3.9**	**2.6**

Source: IHS Markit © 2021 IHS Markit

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FULL LIST VIEW

WORLD CHEMICAL OUTLOOK 2021

SHARE

Moderate: Near-term carbon reduction

Air Liquide	30% reduction versus 2015	2025
Braskem	58% reduction versus 2008	2030
Covestro	50% reduction versus 2005	2025
Evonik Industries	50% reduction versus 2008	2025
Linde	35% reduction versus 2018	2028
Lotte Chemical	26% reduction versus 2013	2028
LyondellBasell Industries	15% reduction versus 2015	2030
Mitsui Chemicals	25% reduction versus 2005	2030
Sabic	25% reduction versus 2010	2025
Shin-Etsu Chemical	55% reduction versus 1990	2025
Solvay	26% reduction versus 2018	2030
Sumitomo Chemical[a]	57% reduction versus 2013	2050
Toray Industries	30% reduction versus 2013	2030

Ambitious: Net zero by 2050

Chemours	Carbon negative	2050
Dow	Carbon neutral	2050
DuPont	Carbon neutral	2050
Eastman Chemical	Carbon neutral	2050
Mitsubishi Chemical	Carbon neutral	2050
PetroChina	Near carbon neutral	2050
Reliance Industries	Carbon neutral	2035
Sinopec	Carbon neutral	2030
Yara	Carbon neutral	2050

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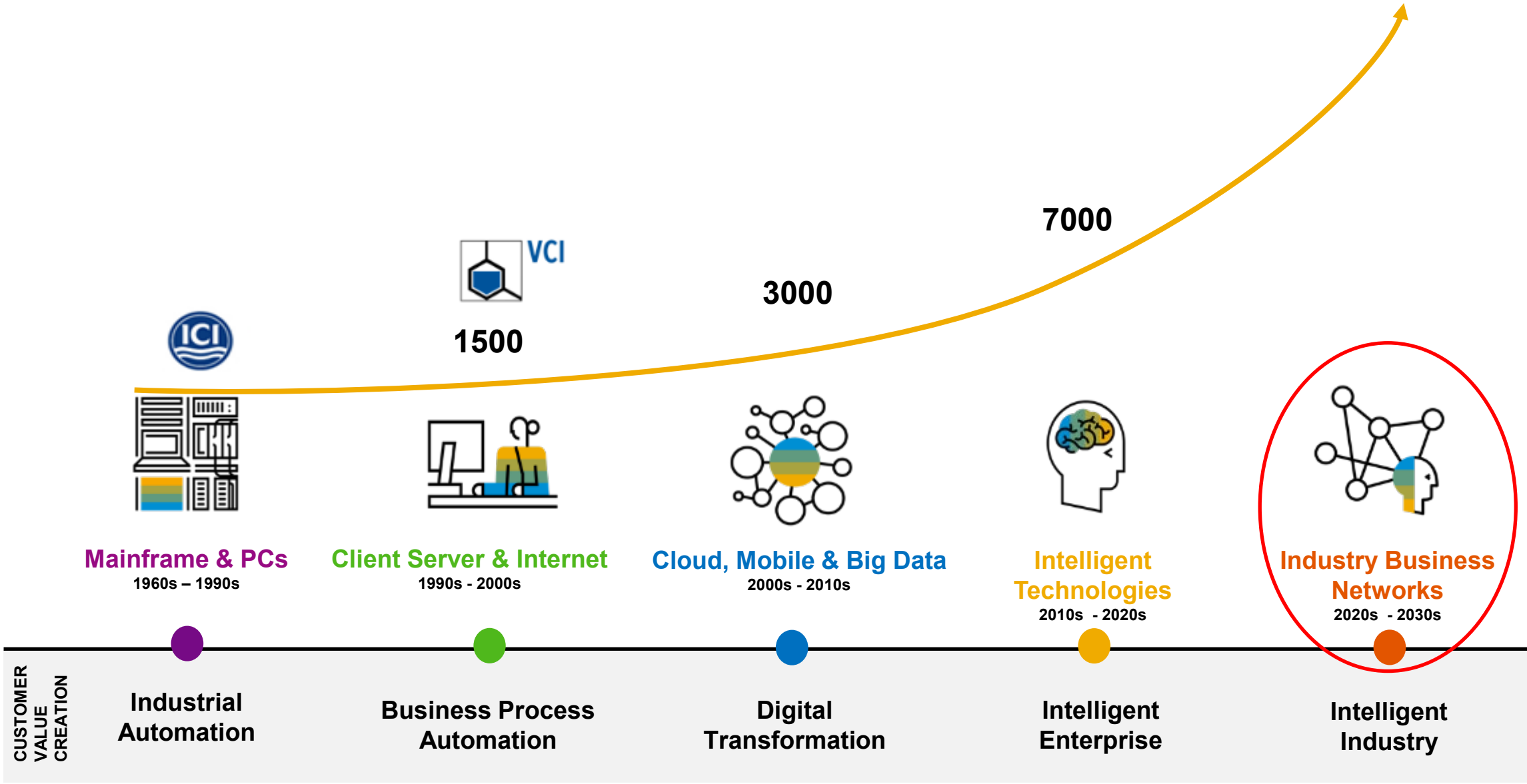
Growth of SAP´s Chemical customer base



SAP for Chemicals: End-to-End Business Support

- Idea & Innovation Mgmt.
- R&D Mgmt.
- Product Development Collaboration & Formulation
- Open Innovation
- Product Management
- “Segment of One”

- Digital Boardroom for Chemicals
- Business Planning
- Discover Sourcing Options
- Procurement
- Source 3rd party resources

- Inhouse Manufacturing
- Predictive Quality
- Quality Mgmt
- Digital Twin
- Labeling
- Continuous Process verification
- Predictive Maintenance

- Serialized Track and Trace
- Warehouse Mgmt
- Digital Twin
- CO_2 Reduction
- Logistics Business Network
- Digital Assistant Safety Data Sheet
- Returnables Handling

- Financials
- Controlling
- Cost Control
- KPI reporting
- Predictive Analytics
- Human Resources

- Asset Information Network
- eCommerce
- Digital Boardroom for Chemicals
- Active Portfolio Management
- ML for Dangerous Goods Classification

Industry Business Networks: Example – Catena-X

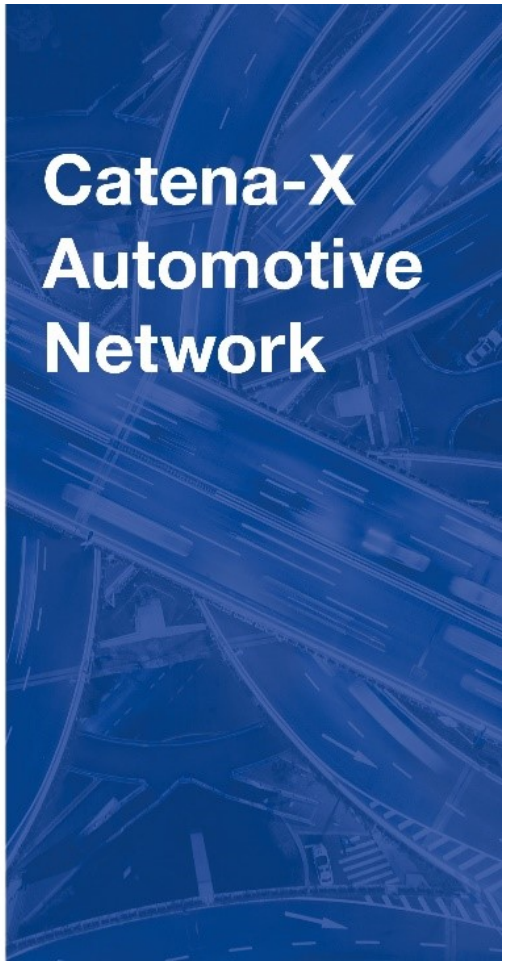
SIEMENS · T · Mercedes-Benz · BASF We create chemistry

SAP · SUPPLYON · SCHAEFFLER · BOSCH

BMW GROUP · Fraunhofer · ZF GROUP · GERMAN EDGE CLOUD

DLR · ARENA2036 · Henkel · ISTOS A MEMBER OF DMG MORI

Open for more partners.



Industry Business Networks
2020s - 2030s

https://www.linkedin.com/company/catena-x-automotive-network/

Intelligent Industry

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RISE WITH SAP | Business Transformation as a Service

This is *not* another upgrade.

It is a new way of working.

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S/4HANA Cloud for Chemicals – R4Q Roadmap

LABS PREVIEW

S/4HANA Cloud Q1/2021*

Plants abroad
- Business Partner Tax Registration ID Change

Manufacturing
- Best Practice Process MTS with S4HC and DMC Integration

Warehousing and Logistics Execution
- Delivery splits
- Handling Unit Management

Product Compliance
- Output of Dangerous Goods (DG) data on scheduling agreements
- Scheduling Agreements - Check for Marketability (PMA), Dangerous Goods (DG), Safety Data Sheet (SDS)
- No Purchase Requisition in case Sales order is blocked (e.g. material compliance)
- Verisk 3E ERD Interface DG Data (Receive and Store)

S/4HANA Cloud Q2/2021*

Parallel Valuation
- Silent Data Migration
- Margin analysis: values are calculated per ledger,COGS split per ledger

Plants abroad
- Flexible tax type determination in the Sales Order
- Implementation of Tax Determination Services

Procurement
- Raw material purchasing allowance
- Batch number on PO item level
- Tax Flexibility Leftovers Invoice: Enabling Handling on Item Level

Warehousing and Logistics Execution
- 3PL Integration

Sales
- Enablement of Standard Texts in S/4HANA Sales
- Customer Hierarchy (Sales Part)

Transportation Management
- Handling Units

Product Compliance
- DG - TM integration part I
- Substance Volume tracking part I
- Manual SDS shipment

S/4HANA Cloud Q3/2021*

Support of group valuation
- Parallel group valuation supported within an additional group ledger
- Country Fiscal Year: Shifted fiscal years are supported across Finance applications

Plants abroad
- Availability to assign Foreign Plant on Domestic Legal Entity (CoCd) including relevant inventory postings
- Auditable forms and tax reporting of indirect tax for various countries

Manufacturing
- Inventory Integration with DMC

Transportation Management
- STO/Purchase order interface to TMS
- Update the Freight order based on the updates in the delivery document
- Freight Unit Out Interface
- DG Flag in the freight order and freight unit
- Pass on item level text information from SO, PO & STO to the Freight Unit (Related to Shipping instructions)

Product Compliance
- DG-TM integration part II
- Substance Volume tracking part II
- Migration of notification status and registration information

S/4HANA Cloud Q4/2021 *

Intercompany
- Intercompany Sales with change of ownership
- Intercompany Stock Transfer with Valuated Stock in Transit
- Handling Unit Management

Plants abroad
- Sell from Stock delivered from a physical plant abroad
- Customer consignment with and without intra-community simplification rule
- Intra-and Intercompany Stock-Transfer Process
- Procurement of stockable materials abroad
- Intercompany sales from Stock delivered from a physical plant abroad

Transportation Management
- Automatically determine equipment type per product
- API from external TMS to freight agreements for freight rates

Product Compliance
- Substance Volume tracking part III
- Maintenance of Polymer Substances, including Monomer Composition
- Maintenance of Trade Secret Information, including transfer to Verisk 3E ERD
- Migration of SDS documents, including historic SDS documents

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* This is the current state of planning and may be changed by SAP at any time without notice.

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