



Northwest Utilities Day 2020

What's Your Plan for the Future?

State of the Industry and the SAP for Utilities Roadmap

Stefan Wolf, SAP America, Inc.

February 27th, 2020

PUBLIC

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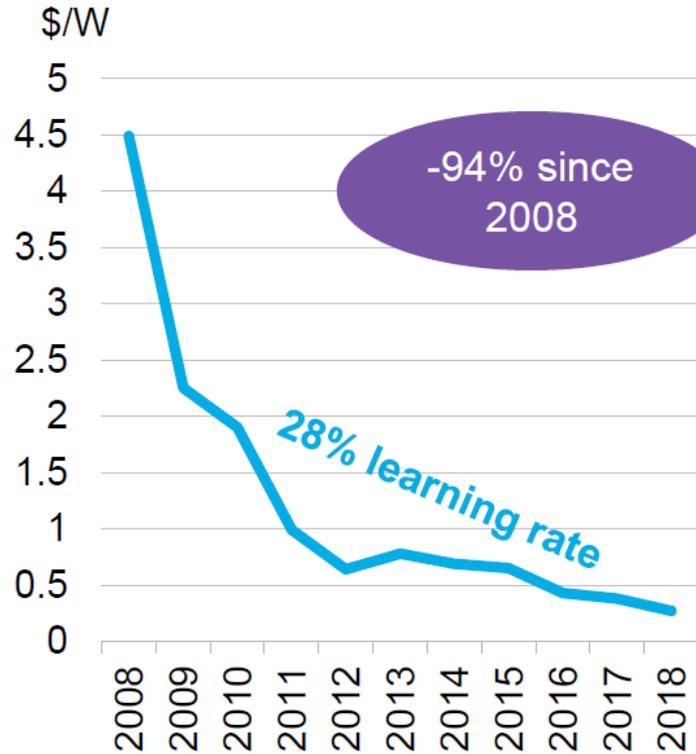
Some relevant Facts from Canada

(from the 2020 report on State of the Canadian Electricity Industry by the Canadian Electricity Association)

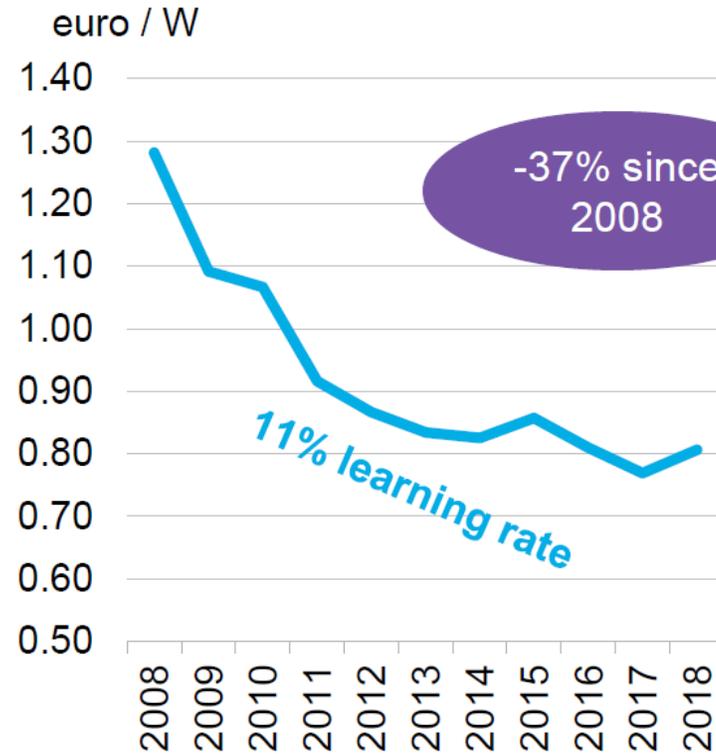
- Today over 80% of electricity is generated free of greenhouse gas emissions
- Plan to exceed current 2030 carbon reduction targets of 90%
- Achieve Net-Zero emissions for electricity generation by 2050
- By 2040 100% of Light Duty Vehicles to be Zero Emission Vehicles (ZEV)
- Catastrophic Insurance Losses in Canada rose from \$4.4 billion in the period of 1999-2008 to over \$19 billion between 2009-2018 indicating a significant increase in severe events requiring infrastructure like energy grids to be build for additional resilience
- Using battery storage to increase reliability in rural areas like the example Hydro One is planning which targets over 60% reliability increase at much lower cost over traditional grid enhancements
- Customer satisfaction in Canada improved by 11 percentage points over the last 5 years to over 66%
- Customers most wanted outcome is financial savings

Looking to the Past - Triad for Energy Transition: Solar + Wind + Storage

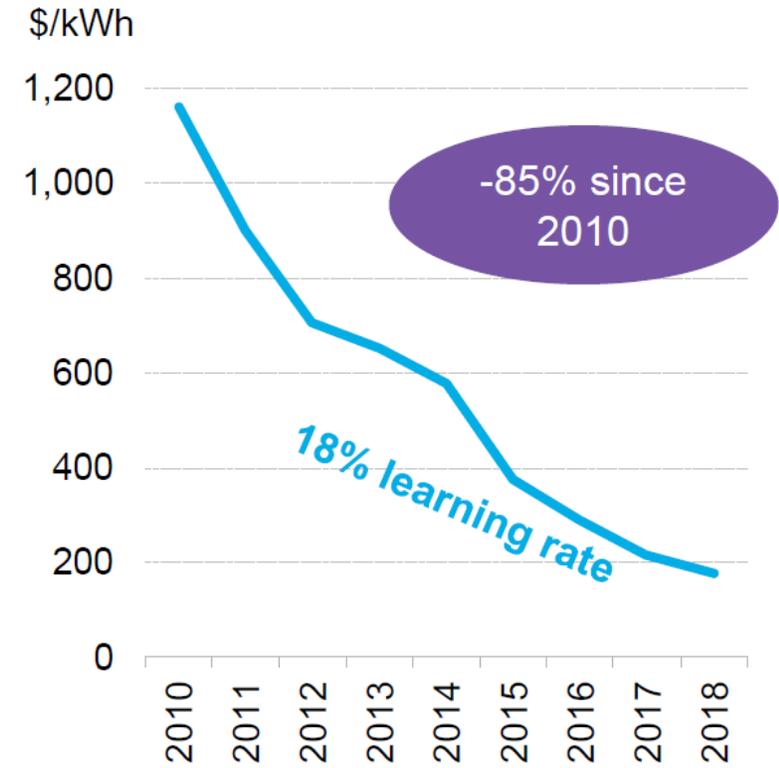
Solar PV module prices



Onshore wind turbine prices



Lithium-ion battery prices



Source: BloombergNEF.

Looking at Today

26,223 views | Jul 1, 2019, 12:03am

New Solar + Battery Price Crushes Fossil Fuels, Buries Nuclear



Jeff McMahon Senior Contributor

Green Tech

From Chicago, I write about climate change, green technology, energy.



BARREN RIDGE, CA - APRIL 4: The new project will join the current large Barren Ridge solar panel array in Kern County, California. (Photo by George Rose/Getty Images) GETTY IMAGES

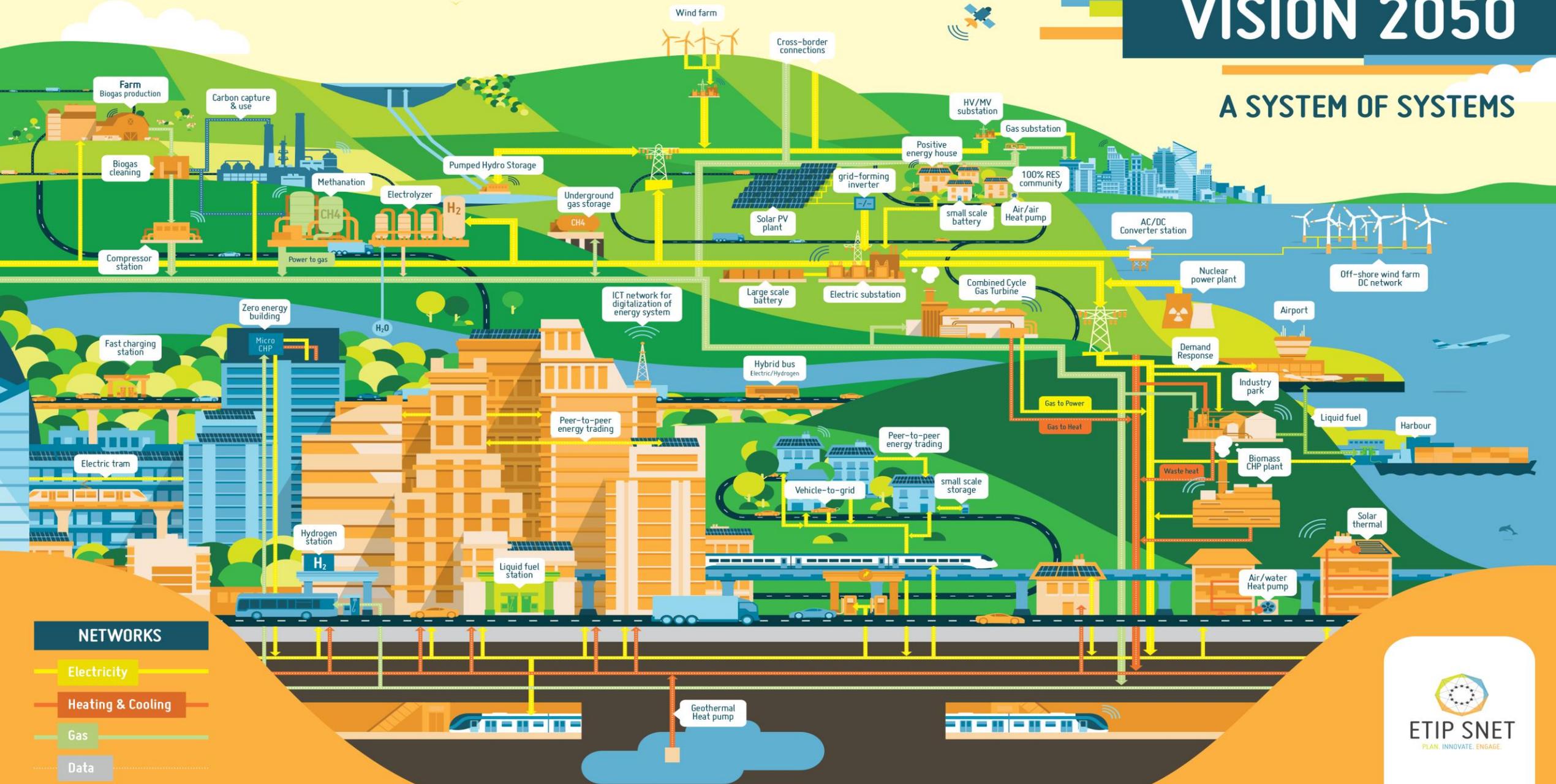
Los Angeles Power and Water officials have struck a deal on the largest and cheapest solar + battery-storage project in the world, at prices that leave fossil fuels in the dust and may relegate nuclear power to the dustbin. Later this month the LA Board of Water and Power Commissioners is expected to approve a 25-year contract that will serve 7 percent of the city's electricity demand at 1.997¢/kwh for solar energy and 1.3¢ for power from batteries.

"This is the lowest solar-photovoltaic price in the United States," said James Barner, the agency's manager for strategic initiatives, "and it is the largest and lowest-cost solar and high-capacity battery-storage project in the U.S. and we believe in the world today. So this is, I believe, truly revolutionary in the industry."

It's half the estimated cost of power from a new natural gas plant.

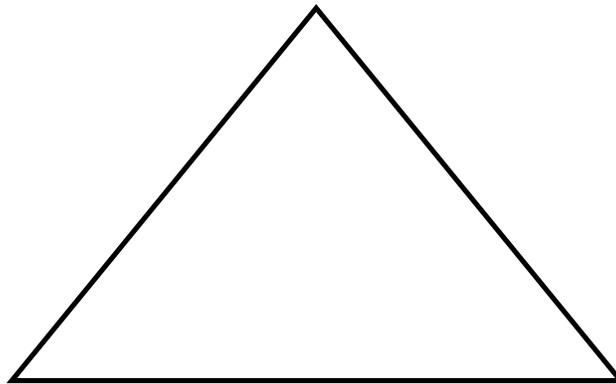
VISION 2050

A SYSTEM OF SYSTEMS

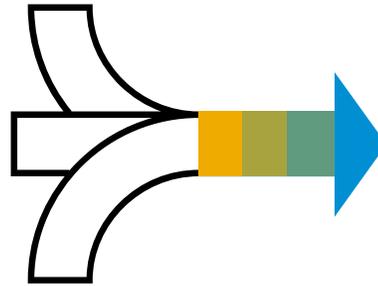
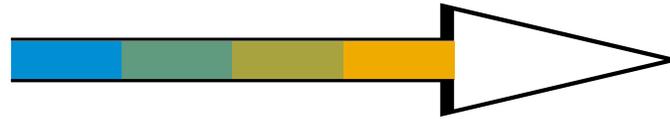


Paradigm Shift in Utilities

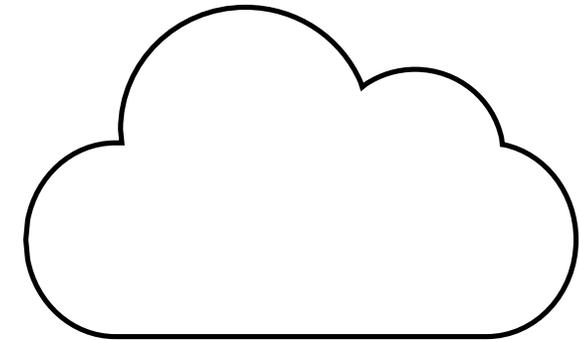
Structured



Control



Agile

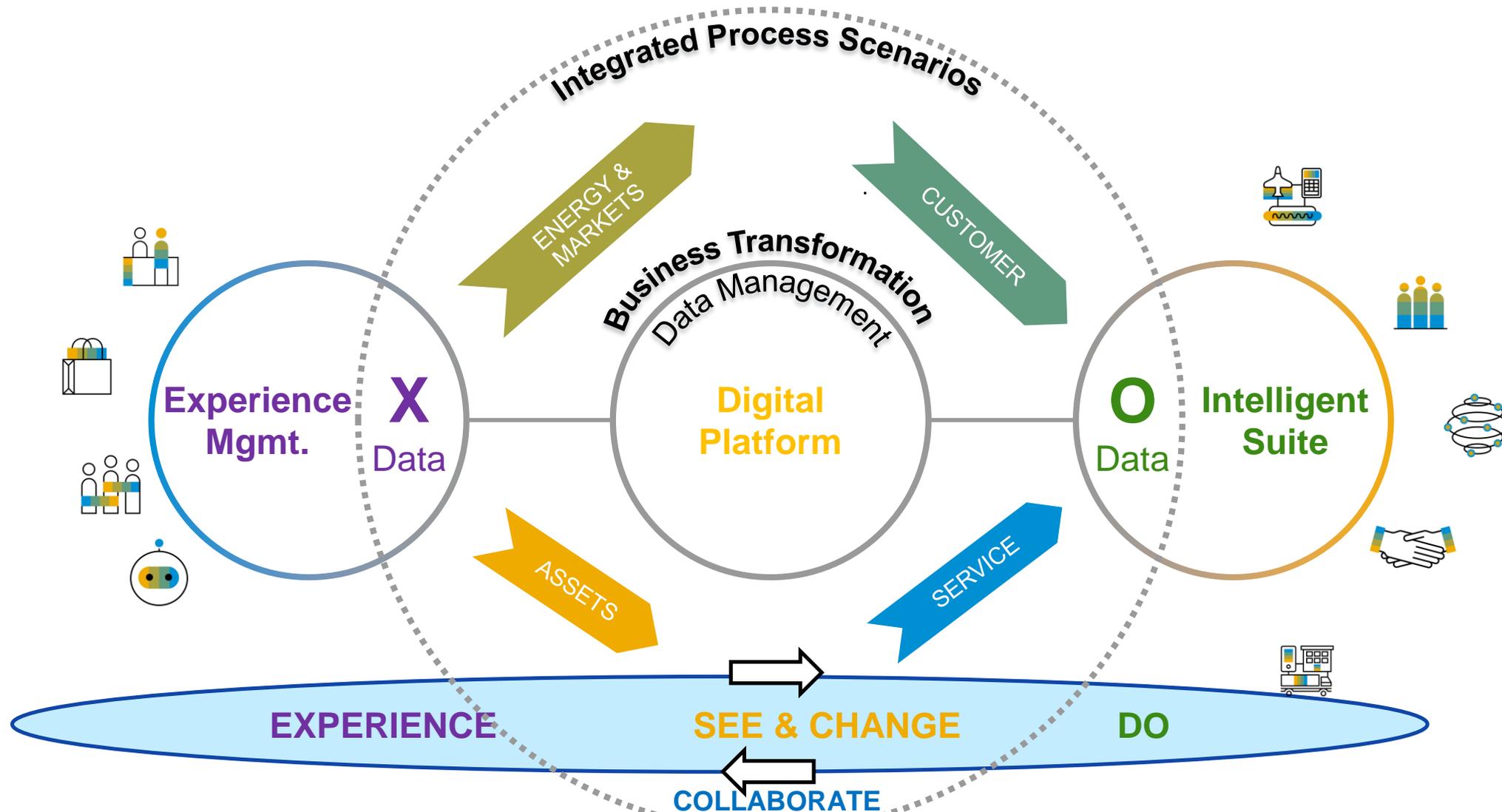


Coordinate

Yesterday

Tomorrow

Intelligent Enterprise Platform for Utilities: DO, SEE, CHANGE, COLLABORATE



The potential of intelligent technologies is everywhere

SUPPLY CHAIN

At least **50%**

of large global companies will be using **AI, advanced analytics and IoT in supply chain operations** by 2023 ¹

PROCUREMENT

Almost **60%**

of [individual tasks involved in the source-to-pay process have the potential to be **fully or largely automated** using currently available technologies ²

MANUFACTURING

76%

of manufacturers either have a **smart factory** initiative that is ongoing or are working on formulating it ³

FINANCE

Yet about **50%**

of the overall time of the workforce in finance and insurance is devoted to collecting and processing data, where **the potential for automation is high** ⁴

SALES

30%

of all B2B companies will employ some kind of **AI to augment** at least one of their **primary sales processes** ⁵

ASSET MANAGEMENT

On average **70%**

reduction of breakdowns though the application of **predictive maintenance** ⁶

¹<https://www.gartner.com/smarterwithgartner/gartner-predicts-2019-for-supply-chain-operations/>

²<https://www.mckinsey.com/business-functions/operations/our-insights/a-road-map-for-digitizing-source-to-pay>

³ https://www.capgemini.com/wp-content/uploads/2017/05/dti-smart-factories-full-report-rebranded-web-version_16032018.pdf

⁴https://www.mckinsey.com/~/media/McKinsey/Feature%20Insights/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works_Full-report.ashx

⁵<https://www.gartner.com/smarterwithgartner/deploy-ai-in-b2b-sales/>

⁶https://www2.deloitte.com/content/dam/Deloitte/de/Documents/deloitte-analytics/Deloitte_Predictive-Maintenance_PositionPaper.pdf

Artificial Intelligence Technologies: SAP Approach

Interact

Conversational AI (CAI)

Chatbots to interface and hand-over to execution bot

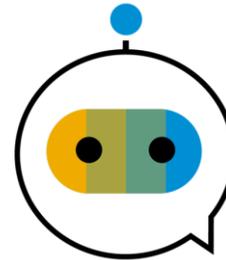


Assist user with **access to peer** for guidance & interaction or smart support with **automated conversational bot**.

Execute

Intelligent RPA

Multiple **bot workflows for execution** (attended + unattended)

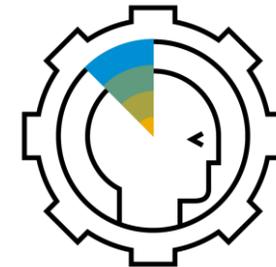


Automate standard processes via recorded transaction to **execute repetitive & time consuming** tasks automatically going forward. Use SAP Cloud Platform for cross system automation.

Optimize

Machine Learning (ML)

Self-learning bots and applications with dynamic adaptability



Learn from customer specific history and exceptions to predict, support steps, automate or optimize business user decisions.

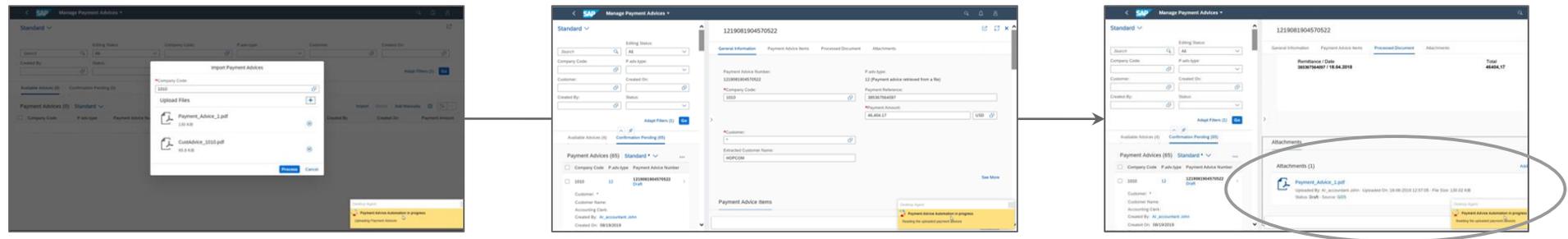
Embedded ML / PAI for simple cases like trending or forecasting and low CPU/ RAM/ data demand
Side-by-side ML / Deep Learning for Resource-intensive cases like image or language processing or Neural networks with high CPU / RAM / data demand

RPA Scenarios available for SAP S/4HANA 1/2 ** – as of Oct 2019

RPA @ Best Practice Explorer

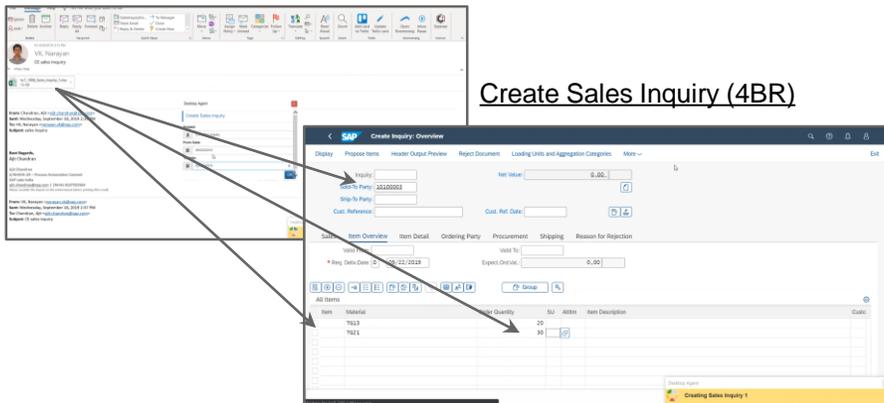
<p>Finance</p>	<p><u>Supplier Invoice Status Checks</u> <u>Dispute Management – Manage Customer Email Response</u> <u>Dispute Management – Email Notification to Customer</u> <u>Manage Payment Advice</u> <u>Supplier Down Payment Request</u> <u>Automated Upload of Manual Entries via API</u> <u>Unlock/ Lock Profit Centers</u> <u>Fixed Asset Depreciation Run</u> <u>Smart Accruals Collector</u> <u>Automated Upload of General Ledger Entries</u> <u>Release Finance Projects</u> <u>Manage Sales Order – Automated Upload Down Payments</u></p>	<p>Automate the Supplier Invoice Status Inquiry process Collect customer response from Dispute email Automate sending an email to customer following the creation of a dispute Upload Payment Advice to the FIORI application and trigger the Cash Application reconciliation Automate Supplier Down Payment Request Automates the Upload of Manual Entries via API (SAP S/4HANA Cloud Edition) Reads an excel list of profit centers and locks or unlocks those Execute a Fixed Asset Depreciation Run, analyze its log and write errors to an excel file Automate Smart Accruals collector Automate the General Entries Upload function in S/4HANA Automate release finance projects Automate the upload of Customer Down Payments</p>
<p>Prof. Services</p>	<p><u>Mass Change of Names for Commercial Project Attributes</u> <u>Mass Reassignment of Profit Centers for Planned Commercial Projects</u></p>	<p>Mass Change of Names for Project Attributes Automate mass reassignment of profit centers for Planned Commercial Projects</p>
<p>Procure</p>	<p><u>Purchase Order Confirmations</u> <u>Simple Purchase Requisition Creation from Excel</u></p>	<p>Automate the entry of the Purchase Order confirmation details from a supplier's email response Automate the creation of Purchase Requisition in S/4HANA from a source input file</p>

Manage Payment Advice (48Q)

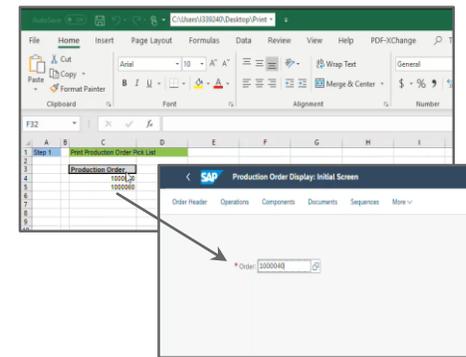


RPA Scenarios available for SAP S/4HANA 2/2 ** – as of Oct 2019

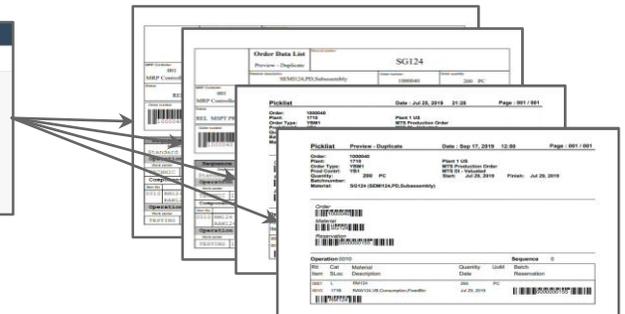
<p>Sales</p>	<p><u>Create Sales Inquiry</u> <u>Manage Sales Order – Automated Upload Down Payments</u> <u>Automatic Creation of Sales Orders from Excel</u> <u>Sales Scheduling Agreement – Delivery Schedule Creation</u> <u>Execute Business Partner Master Data Check</u></p>	<p>Automate the Sales Inquiry creation in SAP S/4HANA System Automate the upload of Customer Down Payments The bot automates the entry of sales order from excel file The bot automates the delivery schedule creation from excel file Automate Business Partner Master Data Check</p>
<p>Supply</p>	<p><u>Physical Inventory Count - Generate Count List</u> <u>Physical Inventory Count - Upload Count List</u> <u>Post Goods Movement</u></p>	<p>Automate generation of Physical Inventory(PI) Count List from a PI Document Automate Upload Physical Inventory(PI) Count List from a PI Document Automates the Post Goods Movement process</p>
<p>Produce</p>	<p><u>Production Order Completion</u> <u>Production Order Operation Confirmation</u> <u>Maintain Planned Independent Requirements</u> <u>Mass Printing of Production Order Picklist</u> <u>Process Order Confirmation</u> <u>Make Usage Decision in Quality Inspection</u></p>	<p>Automate Production order completion process Automate the Production Order Operation Confirmation Automate mass maintenance of Planned Independent requirements Automate Mass Printing of Production Order Picklist Automate Process Order Confirmation Automate usage decision in Quality Inspection</p>



Create Sales Inquiry (4BR)



Mass Printing of Production Order Picklist (4FZ)



Intelligent ML Scenarios in SAP S/4HANA – available with 1909

SAP Machine Learning with SAP S/4HANA

Predict

future conditions based on past data patterns



Procurement: Contract Consumption
Procurement: Supplier Delivery Prediction*
Sales: Quotation Conversion Probability Rate
Sales: Delivery Performance / Delivery in Time
Supply Chain / Inventory: Stock in Transit
Supply Chain / Inventory: Early Detection of Slow / Non-moving Stocks

Plus further - non ML logarithm – predictions, which are based on intelligent data mapping or simulation, e.g. Predictive Accounting or Predictive MRP

Recognize & Classify

recognize patterns or classify data to provide insights



Finance: Detect Abnormal Liquidity Items
Master Data Governance: Business Rule Mining**
Finance: Business Integrity Screening / GRC**
Finance: Real Spend: Smart Alerts for Profit & Loss & Cost Center Anomaly Alerts**

Augment / Recommend

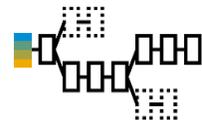
to support decisions with proposed actions based on context



Finance: Goods Receipt / Invoice Receipt Monitor ML Status Proposal (GR/IR) **
Finance: Intelligent Accrual Recommendation **^{td}
Demand-Driven Replenishment: Dynamic Buffer Level Adjustment*
Quality Management: Defect Code Proposal
Procurement Bundle: Intelligent insights for Procurement**
 - Propose Creation of New Catalog Items
 - Proposal of options for Materials without Purchase Contract
 - Propose Material Group for Freetext Items
 - Image-based Ordering
 - Intelligent Approval Workflow

Automate

steps originally handled by humans

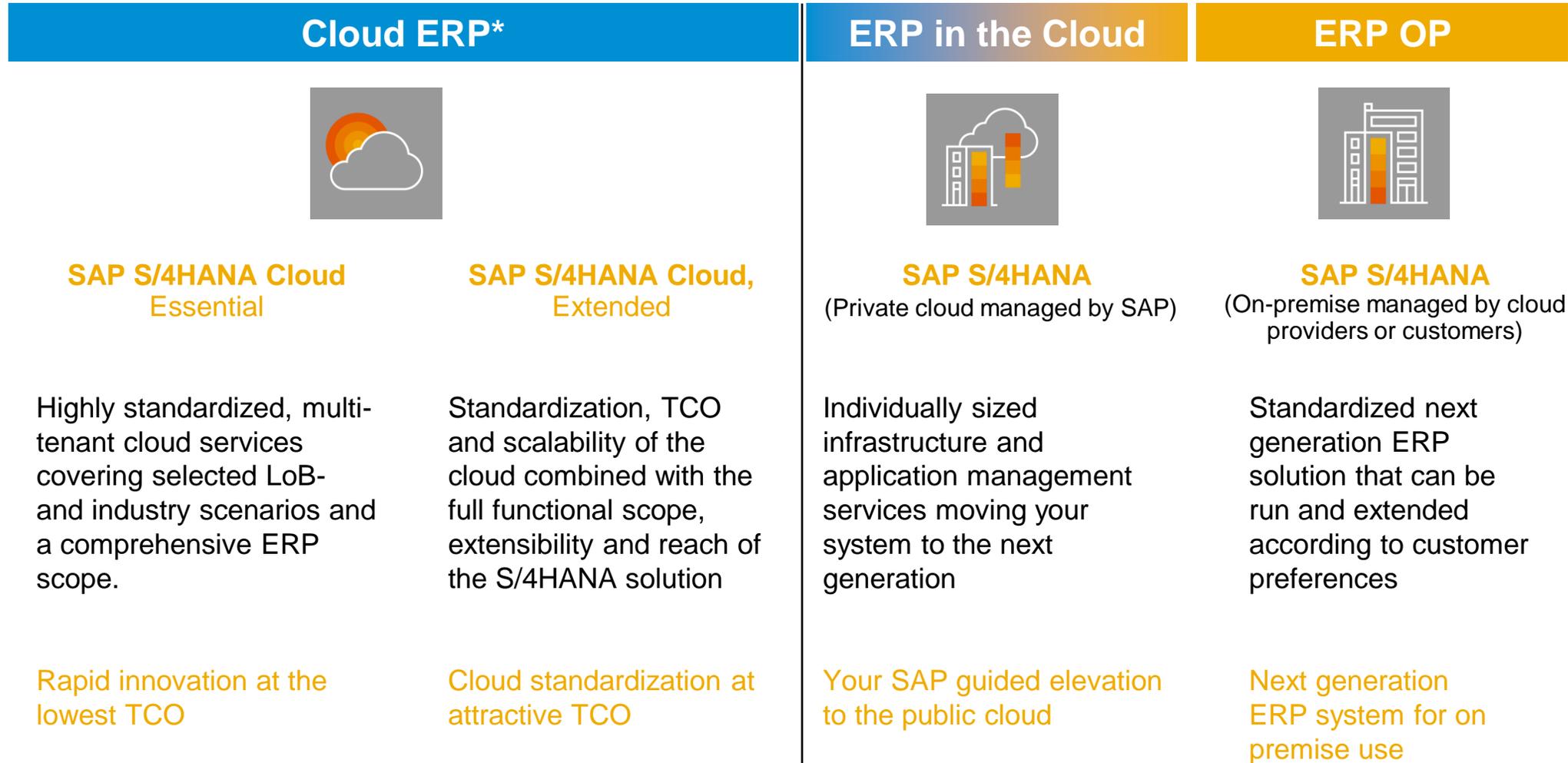


Finance Bundle: Cash Application**
 - Receivables Line-Item Matching
 - Remittance Advice / Payment Advice Extraction
 - Payables Line Item Matching
 - Lockbox
 - Cash Application for FI-CA (Account Classification)
Finance: Tax Compliance Smart Automation / GRC**
Service Ticket Intelligence**

SAP S/4HANA: what is different to SAP ERP?

PROCUREMENT	SALES	SUPPLY CHAIN	MANUFACTURING	R&D
Procurement Overview	Customer 360°	Real-time Inventory & TM Overview	MRP live & MRP Cockpit	Portfolio & Proj. Mgmt.
Central Procurement*	Sales Force Support**	Embedded EWM	Det. Scheduling PPDS	Software Mgmt.
Contract proposals*	Settlement Mgmt.	Embedded TM	DDMRP*	Product Compliance*
Propose groups & cat. items*	International Trade	Advanced ATP	Prod Engineering & Ops	Recipe Management*
Image based buying**	One Single Invoice	Pred. Stock in Transit*	Predictive MRP**	New VC Engine w. Simul.
Int. Workflow approv.**	Predictive Q2Order & Delivery Performance*	Pred. slow moving mat.**	QM Defect code prop. **	
SAP Ariba SAP Fieldglass	SAP C/4HANA*	IBP	DMC	IPD
FINANCE	SERVICE	ASSET MGMT.	CROSS	INDUSTRIES
U-GL & Prediction*	New Customer Mgmt., Embed. Service Core**	Maintenance Overview*	Enterprise Contract Mgmt.	Key Industry function embedded inside (e.g. Automotive, Consumer, Retail*, Mill, Prof. Services: Commercial Project Mgmt....)
BRIM, incl Order Mgmt.**	Multi-Channel Interaction Center	Geographical Framework	GDPR Tools	
Orch. Financial Close**	Quotation of Product Bundles*	Report & Repair Malfunction	Responsibility Mgmt.*	
Group Reporting*	Service Ticket Automation**	Asset Mgmt. for resource scheduling	Co-Pilot/ Digital Assistant	
Compliance Framework	SAP Fieldglass	AIN	RPA scenarios**	Re-architecture & improved functions (e.g. Chemicals, A&D, Oil Gas, Utilities**...)
Cash App*	SAP C/4HANA*		Additional ML scenarios*	<i>Details & restrictions...</i>
GR/IR Monitor*			SAP SuccessFactors ♥	
Abnormal Liquidity**			SAP Concur ◻	
Realtime Insights	Emb. in S/4HANA	NEW Business	SAP Analytics Cloud	
		AI scenario	SAP Cloud Platform	

One SAP S/4HANA: the right solution for each customer cloud journey



S/4HANA Adoption (Q3/2019)

4.500+

S/4HANA customers
globally

125+

**S/4HANA Utilities
ERP** customers in
39 countries

40+

**S/4HANA Utilities
IS-U** customers in
19 countries

How Does a Global Energy Provider Scale in the Cloud to **Meet Goals and Compliance?**

Serving **31.5 million customers** reaching 7,400 municipalities in Italy

ENEL, a global utilities giant, launched an innovation program to move its IT environment from on premise to the cloud and enable its digital transformation. e-distribuzione, part of ENEL Group and the largest Italian company in the electricity distribution and meter reading sector, sought **to improve its billing cycle speed** with a goal of handling more than one million printed invoices per hour and to comply with Italian regulatory authorities. The magnitude of transforming the existing, on-premise system to a cloud-based solution was a challenge. ENEL relied on a partnership with SAP® Digital Business Services to manage this transition.



e-distribuzione can print up to **1.3 million invoices per hour** – improving data quality and boosting cash flow.

SAP S/4HANA® and SAP HANA® Enterprise Cloud allowed the company to:

- Reduce billing process time by 50%
- Improve cash flow as invoices can be paid in the billing month
- Increase invoice processing, leading to an effective management dashboard with real-time information on KPIs
- Reduce the number of exceptions because of faster detection of issues
- Improve accuracy for technical and commercial operations, leading to efficient accounting

“The experts in the SAP Digital Business Services organization helped us implement one of the **most complex and innovative projects** in our history, and we did it on time and on budget. The implemented solution came as the result of an intense co-innovation between ENEL and development teams for the SAP S/4HANA Utilities solution and SAP HANA Enterprise Cloud.”

Fabio Veronese, Head of Infrastructure and Networks Digital Hub, ENEL



enel

ENEL
Rome, Italy

Industry
Utilities

Employees
70,000

Revenue
€75 billion
(ENEL 2017)

Featured Solutions and Services
SAP S/4HANA, SAP HANA Enterprise
Cloud, SAP S/4HANA Utilities, and
SAP® Digital Business Services

THE BEST RUN

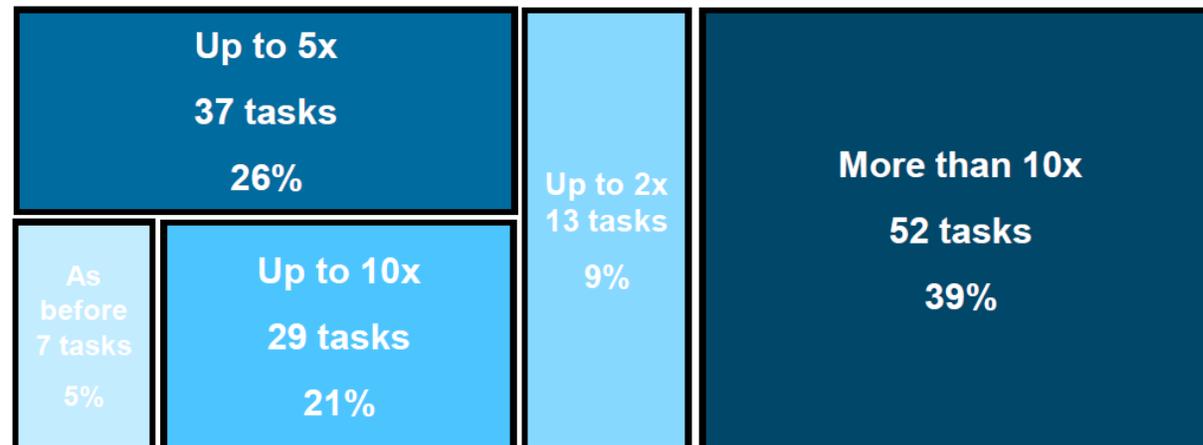


Benefits Achieved: Enel Energia

- Improved end to end billing processing time by 5x



- Reliable interface to legacy BI leveraging SAP Data Hub
- Improved customer service SLA for online queries cutting web service average response time by 50%
- Non billing batch processes performance increased significantly

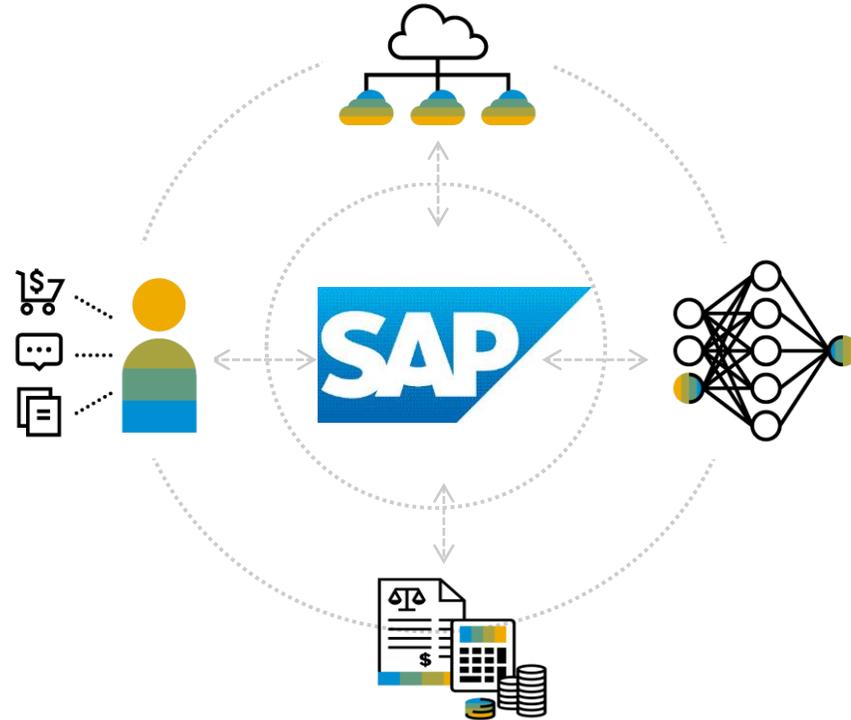


SAP's 4 Key Investment Focus Areas for Utilities

End-2-End SaaS Utilities Portfolio

SAP C/4HANA for Utilities

- SAP Sales Cloud
- SAP Service Cloud
- SAP Marketing Cloud
- SAP Commerce Cloud
- SAP Revenue Cloud



SAP Leonardo for Utilities

- SAP Cloud for Energy
- Energy Analysis
- Energy- and Measurement Data Management
- Predictive Maintenance and Service for Utilities
- Blockchain for Utilities

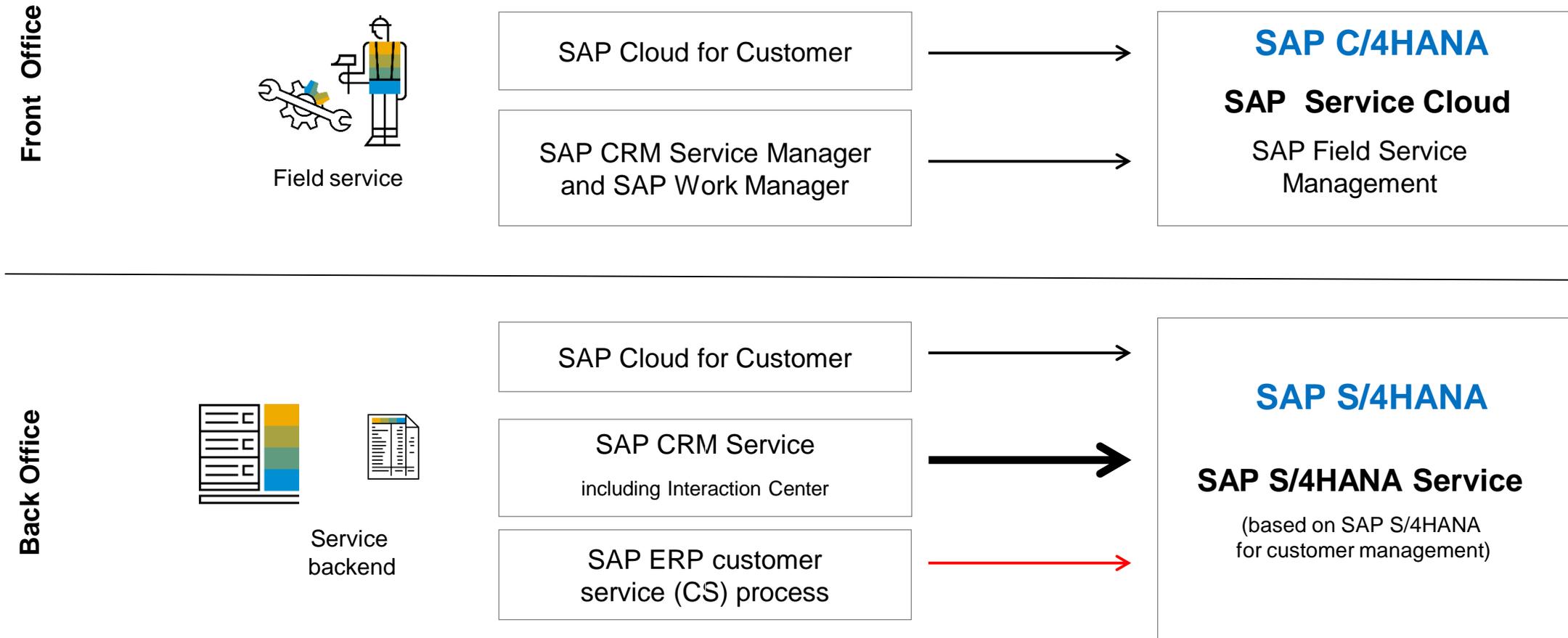
SAP S/4HANA for Utilities

- SAP for Utilities on SAP S/4HANA
- New User Interface (SAP Fiori)
- IS-U aaS
- Operational Analytics
- Process Simplification
- Process Automatization / Machine Learning
- S/4HANA Customer Management

Simplified SAP Service Strategy Evolution for Front Office and Back Office

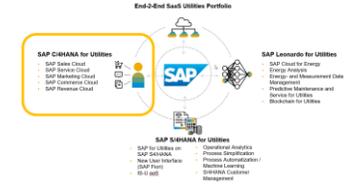
C/4HANA provides a cloud portfolio of service, sales, marketing and commerce solutions for the front office.

S/4HANA includes an on-premise portfolio for service including a customer service solution 'customer management' for the back office.



S/4HANA Customer Management and C/4HANA CX Paradigm Difference

Customer *Relations* Management and Customer *Experience* Management

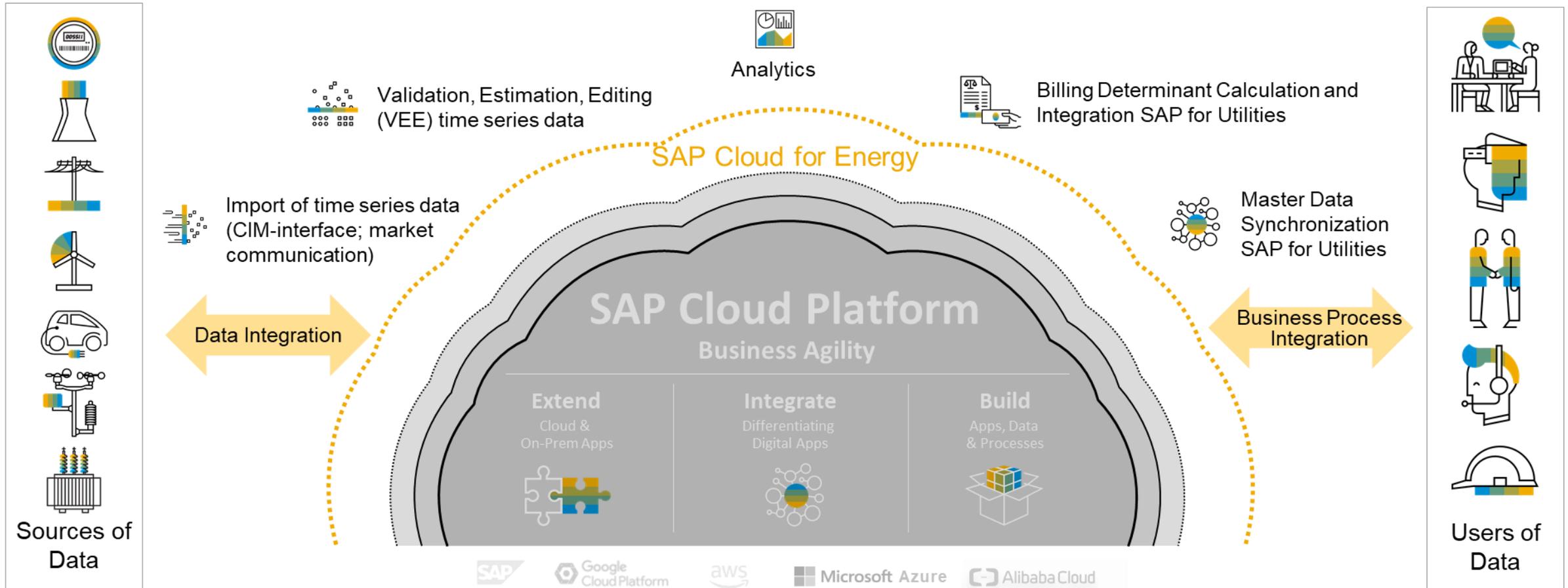
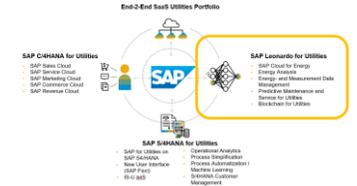


S/4HANA CM: Traditional CRM Design

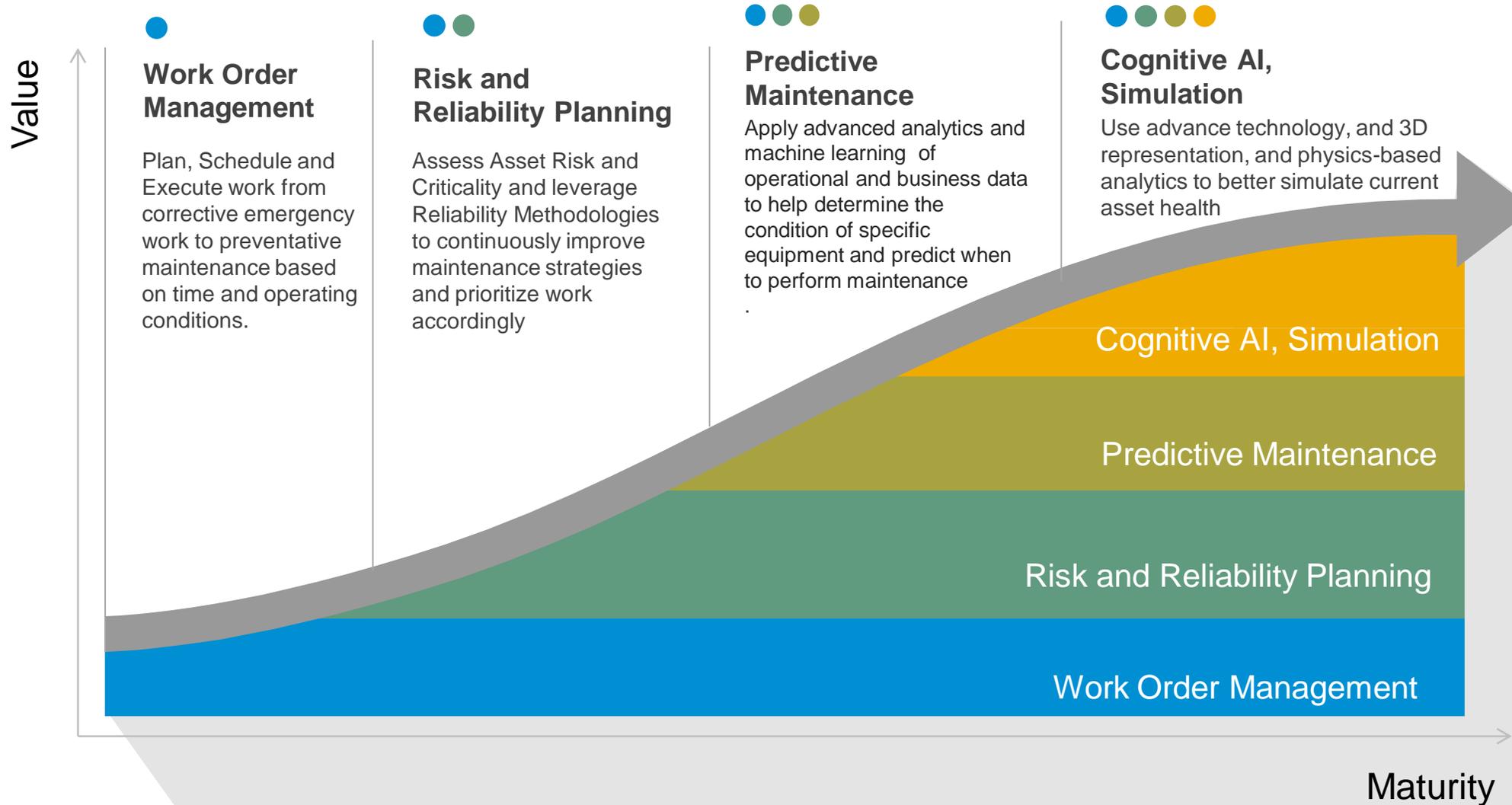
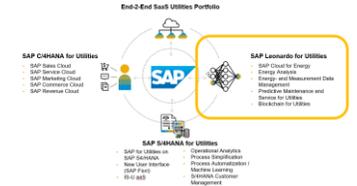
C/4HANA: 4th generation CX Design

Customer Relationship	Transactional & Enterprise-focused	Trust-based & Customer-focused
Customer Engagement	Waterfall Lifecycle, Known Customers	Iterative Journeys
Business Model	Service and Sales Specialists	Lifetime Service and Service Moments
Central Record	Interaction and Sales Opportunity	Customer Profile
Customer Data	Enterprise-Owned	Customer-Granted
System Architecture	Three-tier, On-prem only	Microservices, Big Data, Cloud only
Consumption	Solution Ownership, Yearly releases	Subscription, SaaS, Quarterly releases

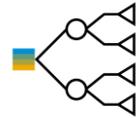
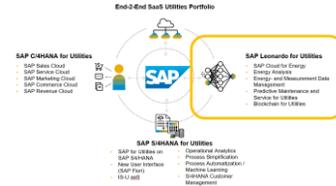
SAP Cloud for Energy leveraging the SAP Cloud Platform



Digital Transformation of Enterprise Asset Management

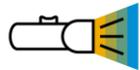


SAP Intelligent Asset Management Portfolio – Business Capabilities



Innovative & collaborative business processes

Enable best practices for asset performance management.
 Transform with shared services for asset intelligence.
 Collaborate with partners throughout the asset lifecycle



Real-time insights and Connected Assets

End-to-end visibility on strategic, tactical and operational level,
 with real time information from IoT



Predict, optimize, simulate, prescribe

Drive smarter decisions, improve reliability, enable prescriptive maintenance and automate processes with IoT, advanced analytics, machine learning and simulation



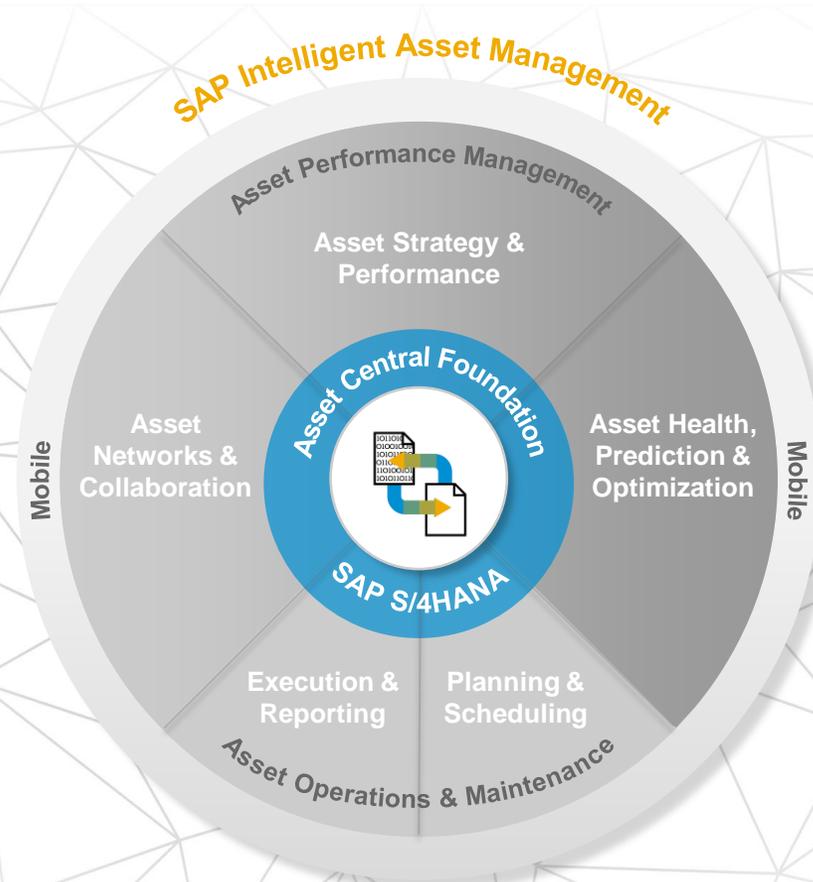
Experience

Share asset information and access one version of the truth through amazing user experience for 'front office' and Mobile

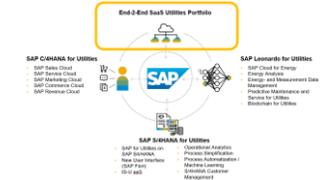


Integrate

Integrate maintenance strategy, planning and execution across the enterprise



Tailor-made Business Transformation made possible by the ONLY modular Solution Suite



Building Blocks of Cloud for Utilities



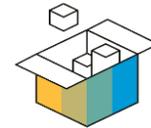
Intelligent Front-Office



Customer Data Management



Marketing



Commerce



Sales



Customer Service



Service Delivery Platform



Billing



Revenue Management



Energy Data



Market Communication



Innovative Technology



E2E Process Monitoring



Master Data Management



Integration



Real-Time Analytics

Why SAP?

4100+ utilities in 118 countries run SAP

1600+ utilities run core ERP software

850+ utilities manage 3 billion+ bills

550+ utilities manage assets

275+ power generation companies

380+ municipal utilities

135+ water utilities

140+ waste and environmental resources

78% of top 50 utilities (Forbes 2000) run SAP

100+ partners co-innovate with SAP for
Utilities solution portfolio

SAP is a recognized solution leader in utilities

Feedback from analysts

“Because of its traditionally strong presence among large energy companies, **SAP has the largest market share**, defined by the aggregate number of end customers billed on its installations in production (**more than 450 million customers**). The largest site in production is a **French utility with over 30 million customers** and a batch cycle size of 700,000 bills.”

Gartner CIS Magic Quadrant, Gartner Inc., May 2018.

“From a customer care and billing software market share perspective SAP is the leading software provider in the utilities industry. ... **Significantly, SAP is the only solution deployed in all existing unbundled competitive energy markets.**”

IDC MarketScape Customer Care and Billing in Competitive Unbundled Energy Markets, 2012 Vendor Assessment

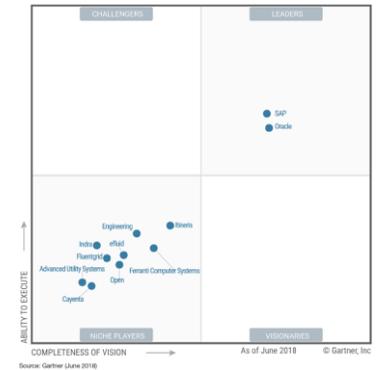
Feedback from analysts

“SAP has a mature and extensive global community of EAM support resources and partners minimizing implementation risks and support shortfalls.”

Gartner EAM Magic Quadrant, Gartner Inc., September 2015

Gartner Inc.

2018 Magic Quadrant for Utilities **CIS** Solutions*
market leader for **13 consecutive years**



Gartner Inc.

2015 Magic Quadrant for Utilities **EAM** Solutions*



91% of the utilities companies in the Forbes Global 2000 are SAP customers



Americas



Europe, Middle East, Africa



Asia-Pacific

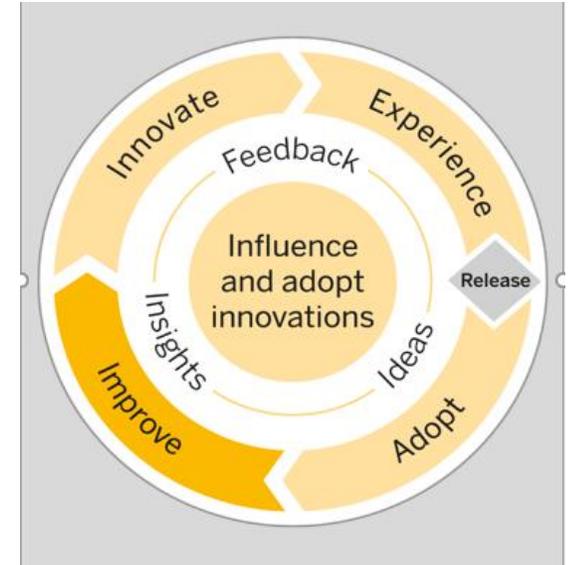
SAP Customer Connection

Join our project **SAP for Utilities On Premise 2020** !

Starting March 2020

Why SAP Customer Connection?

- **Improve** the **SAP for Utilities On Premise** solution (IS-U, CRM, MCF) you are using **today**
- Use a **direct and transparent channel** to address improvements request to SAP
- **Collaborate** easily with **SAP development** via the dedicated project [influence page](#)
- Get **regular feedback** from SAP on the status of the improvement requests submitted
- Use [SAP improvement finder](#) to search and find enhancements made publicly available



How does SAP Customer Connection work?

- **Customers** can vote for already submitted **improvement requests** valuable for their needs or submit their own
- There is a **customer votes threshold** for SAP to evaluate an improvement request for implementation
- **SAP development** prioritizes improvement requests by customer votes
- **Customers** easily adopt non-disruptive enhancements delivered via SAP Notes or support packages

Interested? Any questions? Contact lilja.jost@sap.com, michael.ernzerhoff@sap.com or holger.schuett@sap.com,
... and don't miss our **kick-off** (one session in English + one session in German) planned for **Tue 10 March 2020**

Thank you.

Contact information:

Stefan Wolf

VP GTM Execution IBU Utilities

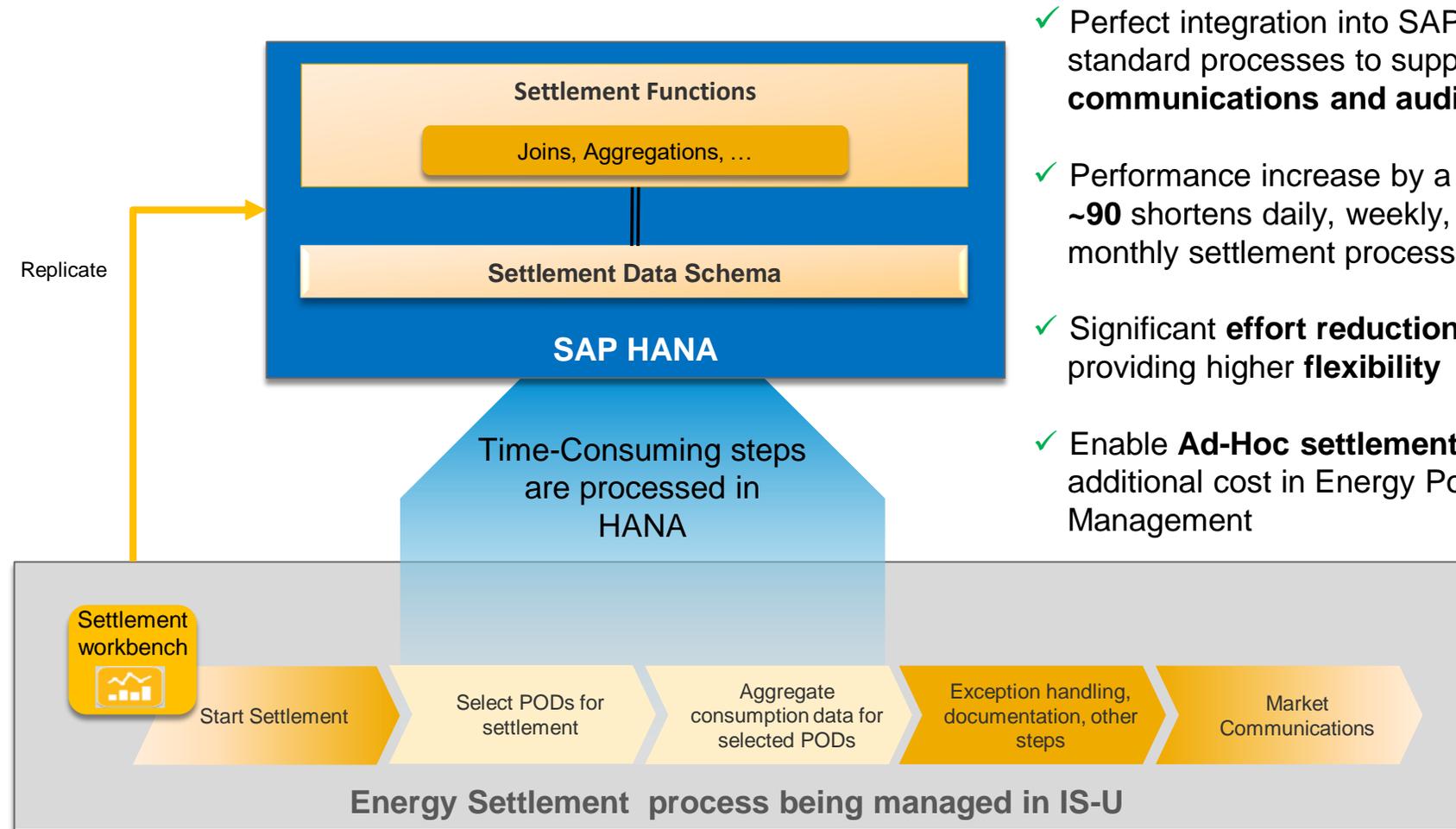
stefan.wolf@sap.com

+1-408-627-5581

Appendix

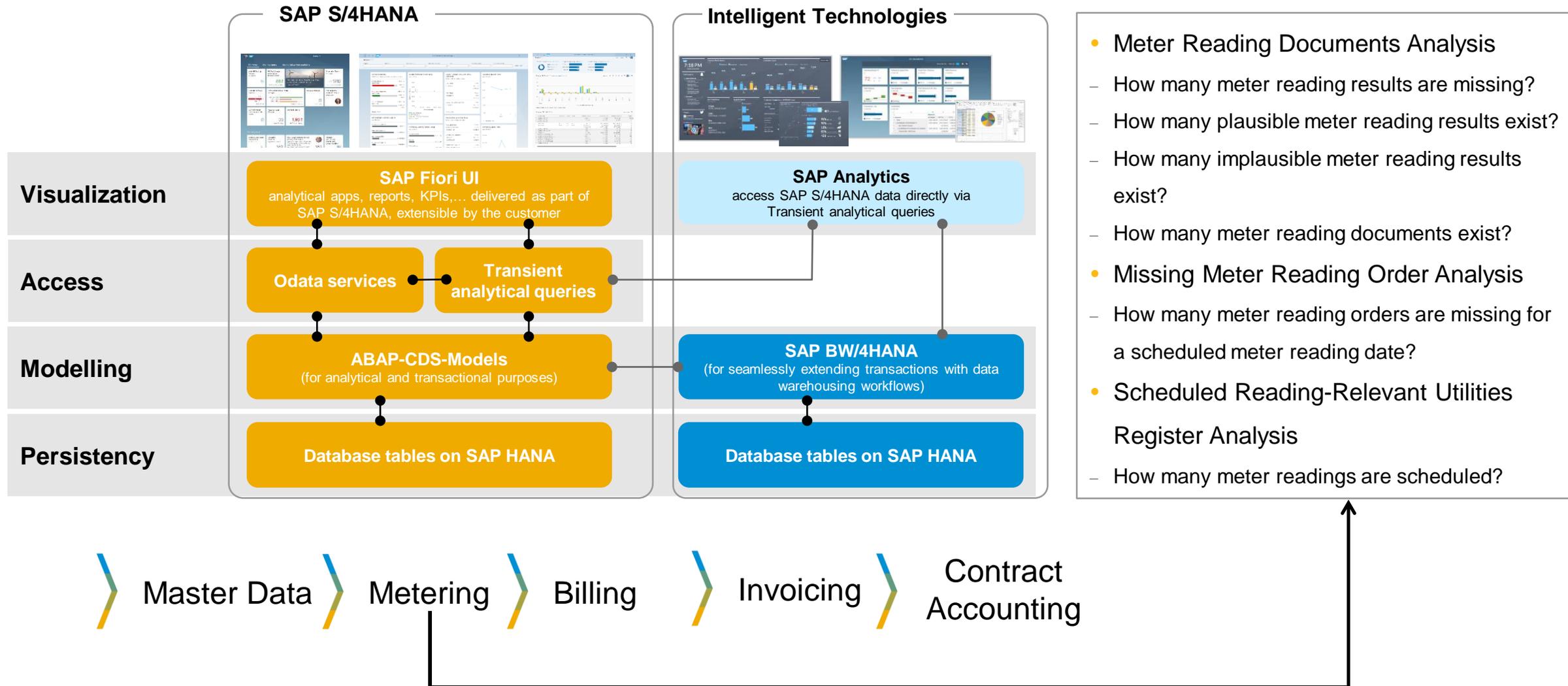
Accelerated Energy Settlement

Based on Co-Innovation Project with ESB (Ireland)



- ✓ Perfect integration into SAP for Utilities standard processes to support **market communications and audits**
- ✓ Performance increase by a **factor of ~90** shortens daily, weekly, and monthly settlement processes
- ✓ Significant **effort reduction** while providing higher **flexibility**
- ✓ Enable **Ad-Hoc settlement** to avoid additional cost in Energy Portfolio Management

SAP S/4HANA Analytics Utilities



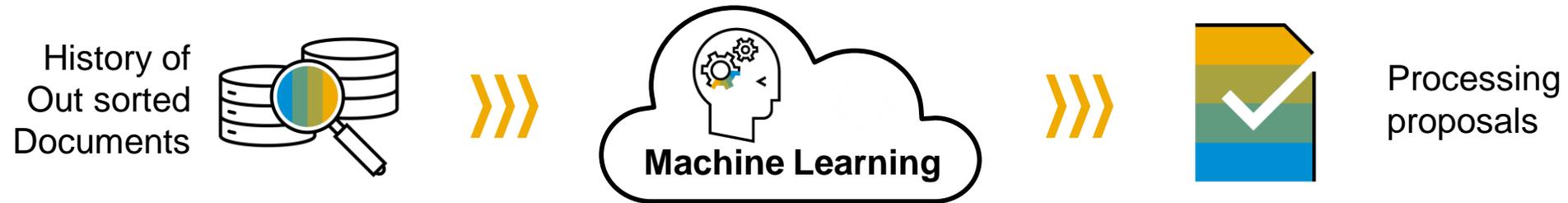
- **Meter Reading Documents Analysis**
 - How many meter reading results are missing?
 - How many plausible meter reading results exist?
 - How many implausible meter reading results exist?
 - How many meter reading documents exist?
- **Missing Meter Reading Order Analysis**
 - How many meter reading orders are missing for a scheduled meter reading date?
- **Scheduled Reading-Relevant Utilities Register Analysis**
 - How many meter readings are scheduled?

SAP S/4HANA Analytics Utilities – Outsourced Billing Documents

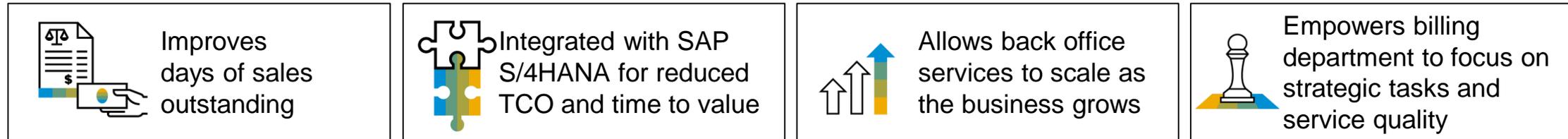


Use Case – SAP IS-U Billing Specialist & Out sorted Billing Documents

Next-generation intelligent billing out sorting powered by machine learning



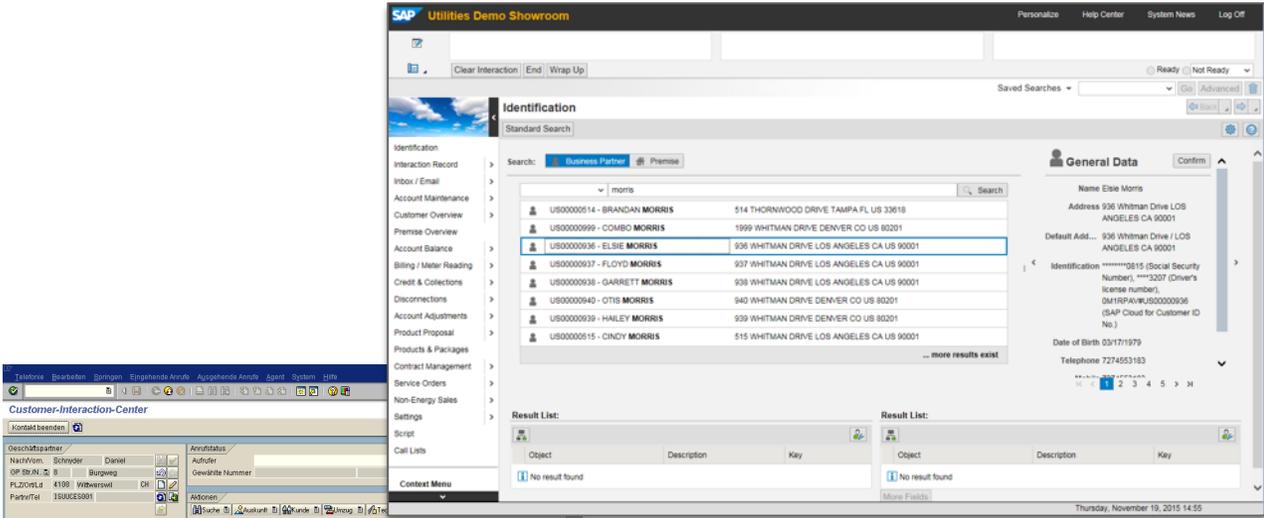
SAP Out sorting Application intelligently learns evaluation criteria from your history and automatically processes out sorting cases



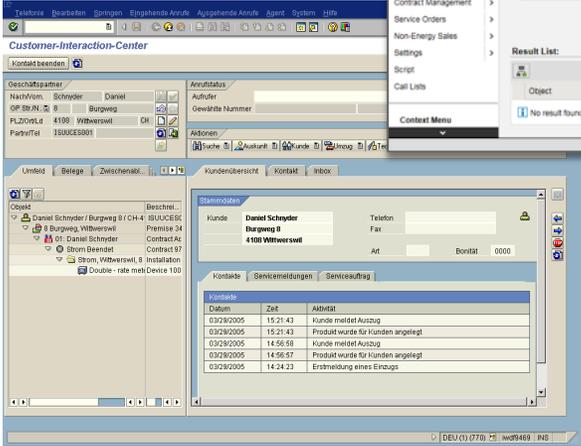
Applied Machine Learning (ML) for Meter Reading



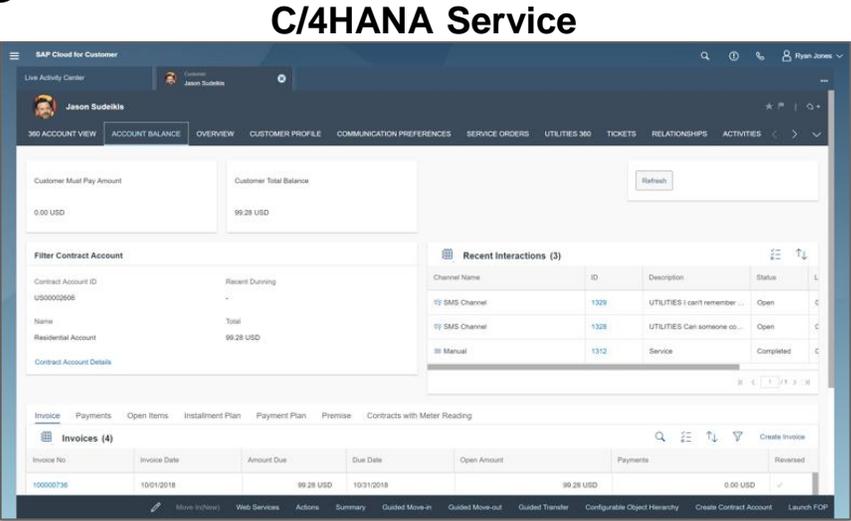
Evolution of Customer Solutions in SAP for Utilities



CRM IC



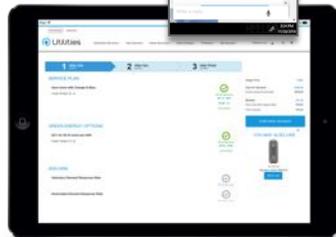
CICO



C/4HANA Service



SAP Chatbot

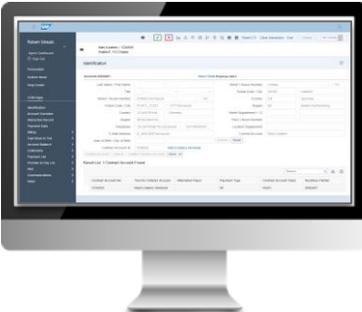


C/4HANA Commerce

C/4HANA Marketing



S/4HANA Service



SAP CRM

SAP CX C/4 HANA

SAP ERP R/3

SAP ERP S/4 HANA

Integration of Front Office to Digital Core Delivering End-to-End Scenarios

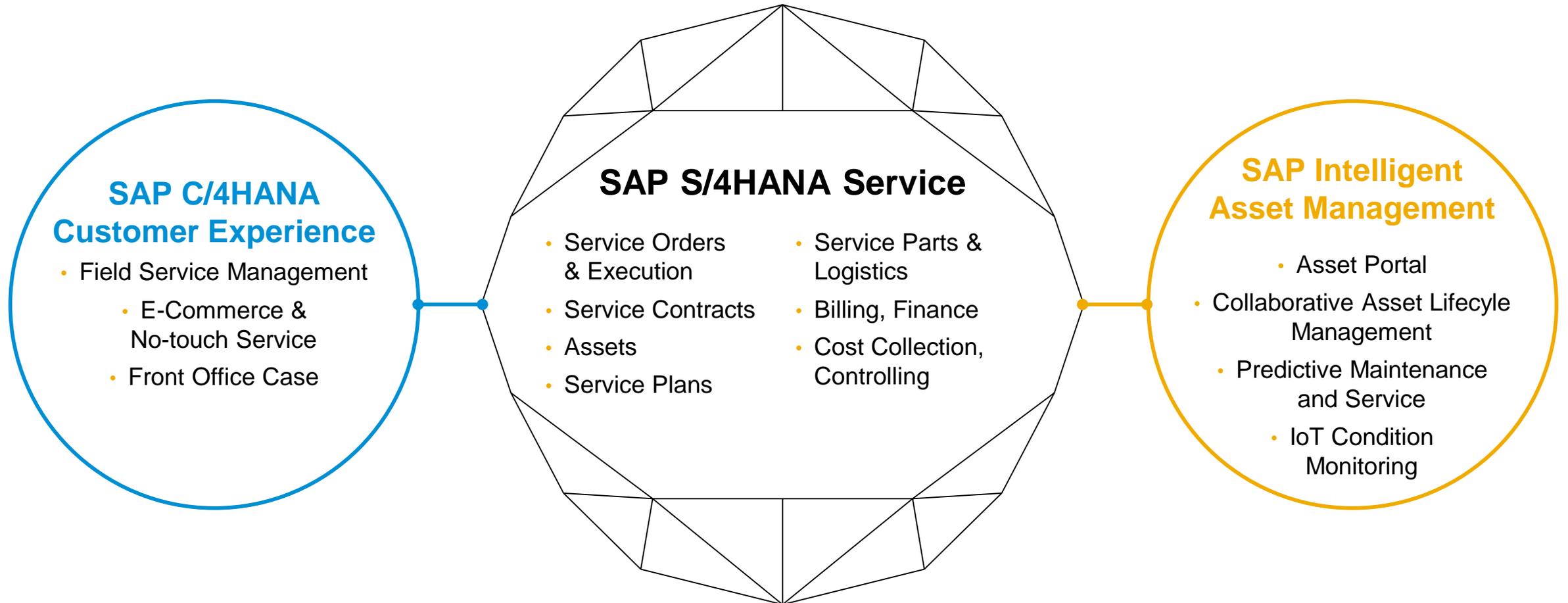
From Lead to Cash: Delivering integrated end-to-end scenarios



End-to-End Customer Experience

SAP Service Strategy

SAPs Advantage: End-to-End Service

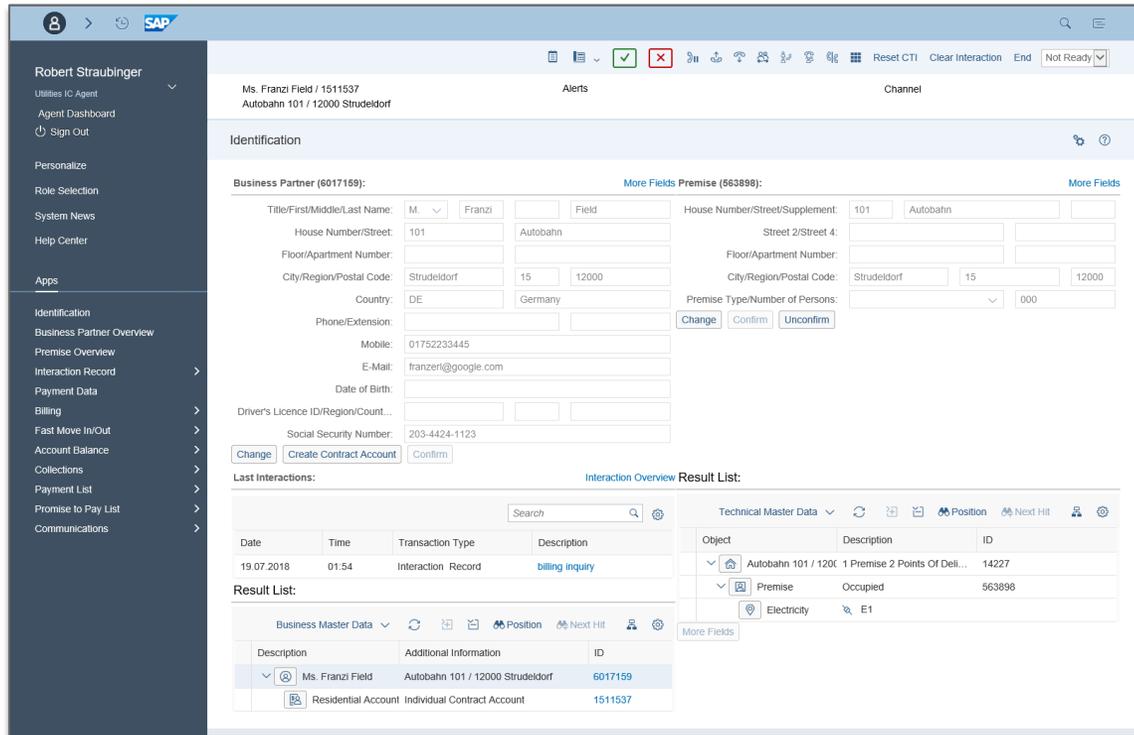


SAP has an integrated suite of solutions with S/4HANA being the digital core ERP suite focused on the back office and C/4HANA being the customer experience (CX) suite for the front office.

S/4HANA Utilities for Customer Management

Interaction Center with Industry Processes

Central entry point for customer service specialists



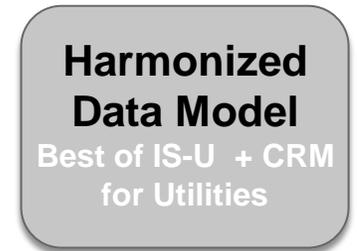
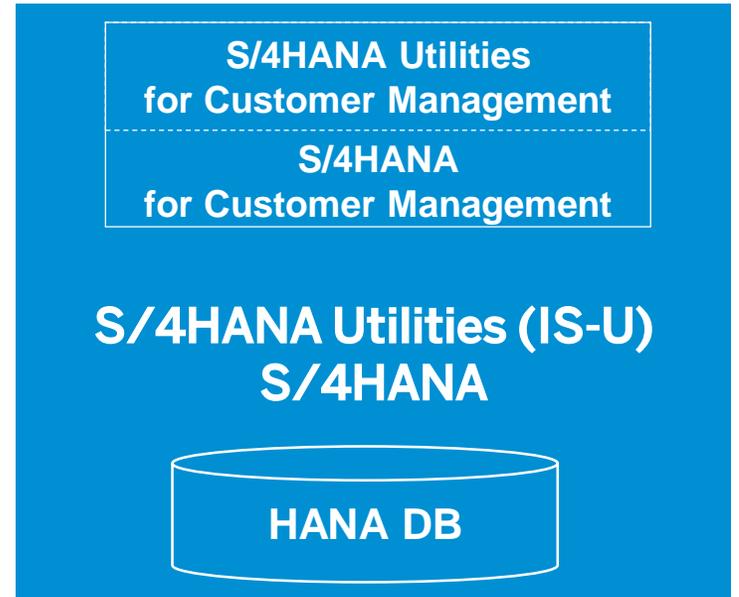
Fiori User Experience

WebClient UI offering a delightful Fiori 2.0** Belize Theme

**planned for Q1/2020: Fiori 3.0

Embedded in S/4HANA*

Available since 1709 SP01



* since S/4HANA 1909: Part of S/4 Service Core (no longer an Add-On)

Accounts Alerts Channel

Identification

Find Business Partner or Premise

Last Name / First Name:	<input type="text"/>	<input type="text"/>	Driver License Number:	<input type="text"/>
Address Category:	Business Partner		Social Insurance Number:	<input type="text"/>
Street / House Number:	<input type="text"/>	<input type="text"/>	Print Document Number:	<input type="text"/>
Postal Code / City:	<input type="text"/>	<input type="text"/>	IS-U Contract:	<input type="text"/>
Country:	DE	Germany	Serial Number:	<input type="text"/>
Region:	<input type="text"/>	<input type="text"/>	Point of Delivery:	<input type="text"/>
Telephone Number / E-Mail-Address:	<input type="text"/>	<input type="text"/>	Premise ID:	<input type="text"/>
Date of Birth / City of Birth:	<input type="text"/>	<input type="text"/>	Search String:	<input type="text"/>
Business Partner ID / Contract Account:	<input type="text"/>	<input type="text"/>		

Result List

Search

Result

The Intelligent Enterprise with SAP C4/HANA for Utilities



**SAP
Marketing
for Utilities**



**SAP
Commerce
for Utilities**

SAP C/4HANA Intelligent Front-Office



+ **SAP Leonardo** +

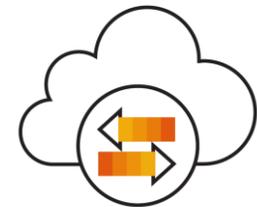


AI/ML | IoT | Analytics | Digital Boardroom

SAP S/4 HANA Digital Core



**SAP
Utilities
Call-Center**



**SAP
Self Service
Accelerator
for Utilities**

SAP C/4HANA

Trusted relationships

1 billion consent profiles



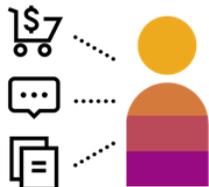
SAP CUSTOMER IDENTITY

Identify and engage customers across channels and devices



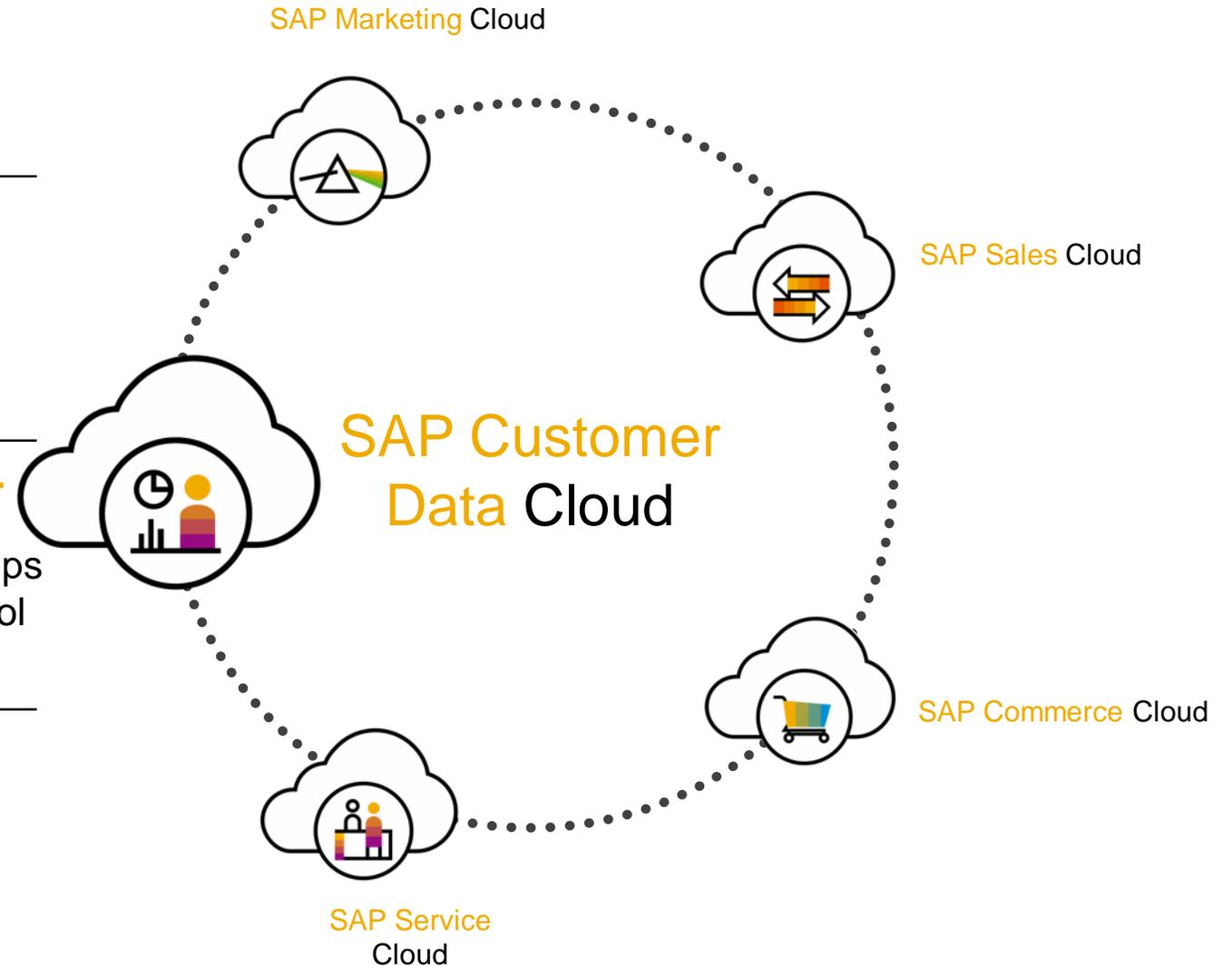
SAP CUSTOMER CONSENT

Build trusted customer relationships based on transparency and control



SAP CUSTOMER PROFILE

Power trusted digital experiences with customer data

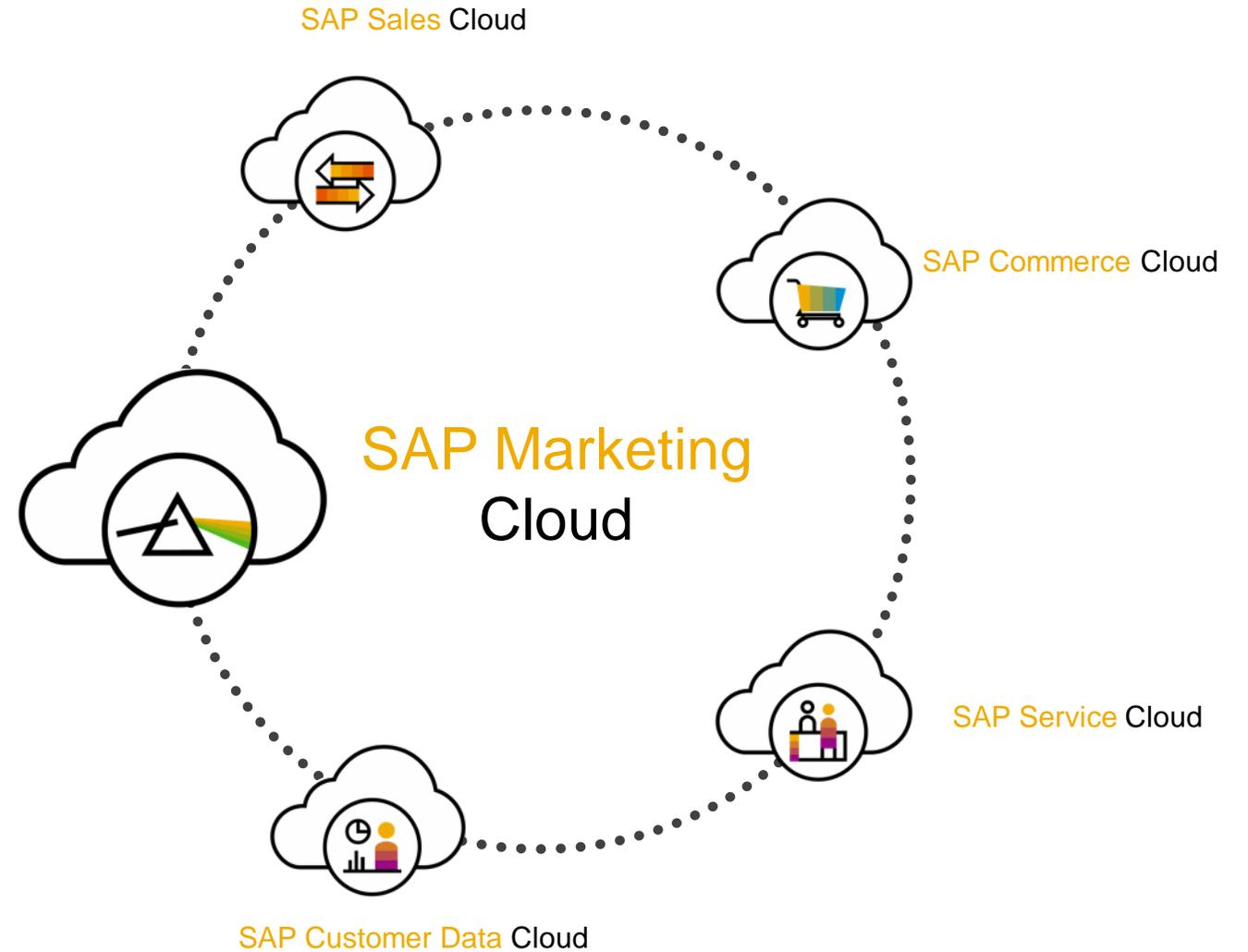


SAP C/4HANA

Trusted source of business

2.8 billion personalized interactions

Best-Run Customer Experience	
Optimized Marketing Orchestration	
Deep Marketing Insights	
Perfect Customer Profile	

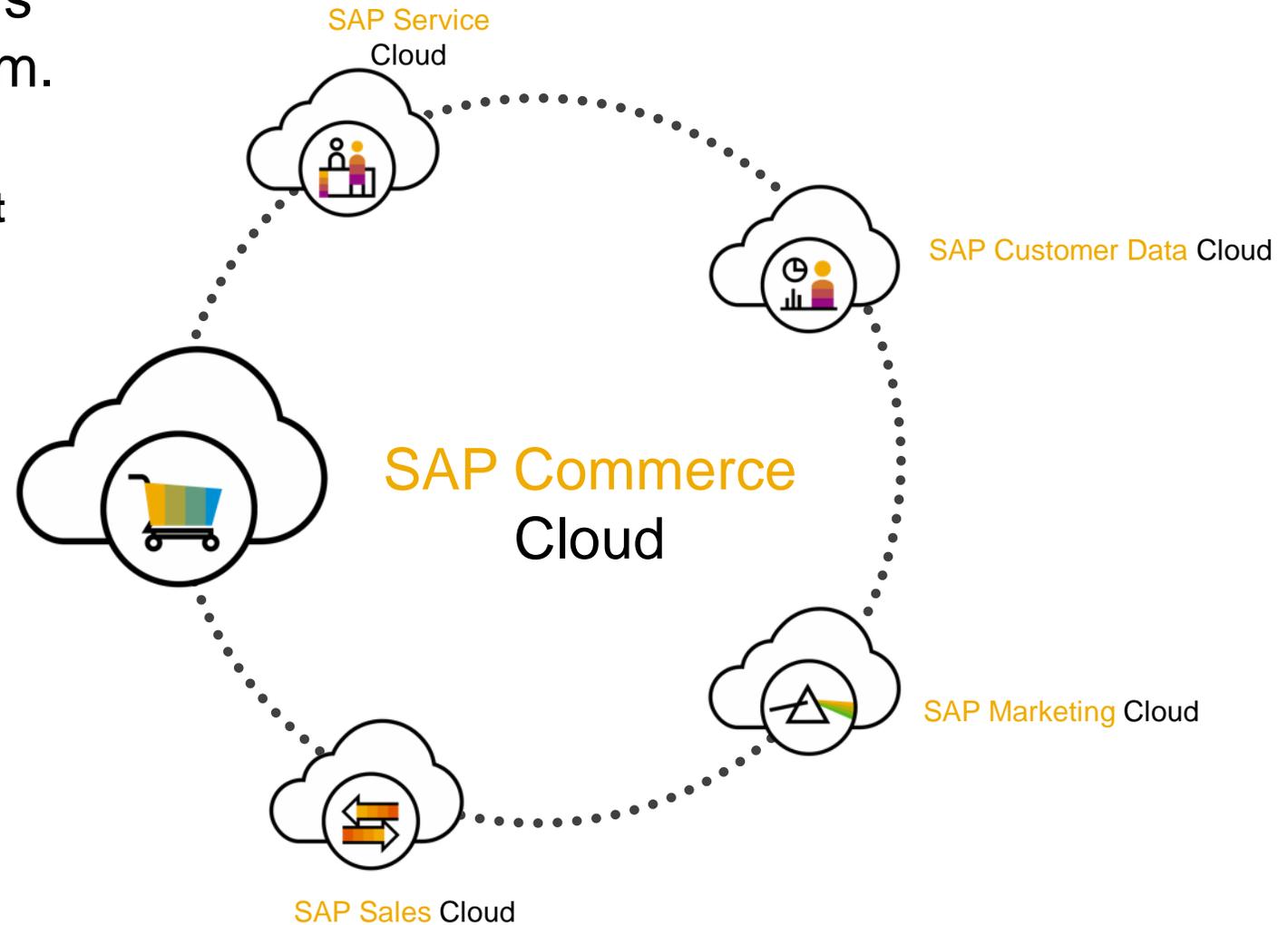


SAP C/4HANA

Take care of your customers' orders across all channels with one system. (B2B & B2C)

5 years in a row, Gartner Magic Quadrant Market Leader

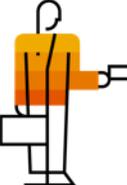
Feature-rich commerce platform	
Built-in agility layer	
Industry-flavor Commerce	
B2C, B2B, or B2B2C	
Pre-built integrations	



SAP C/4HANA

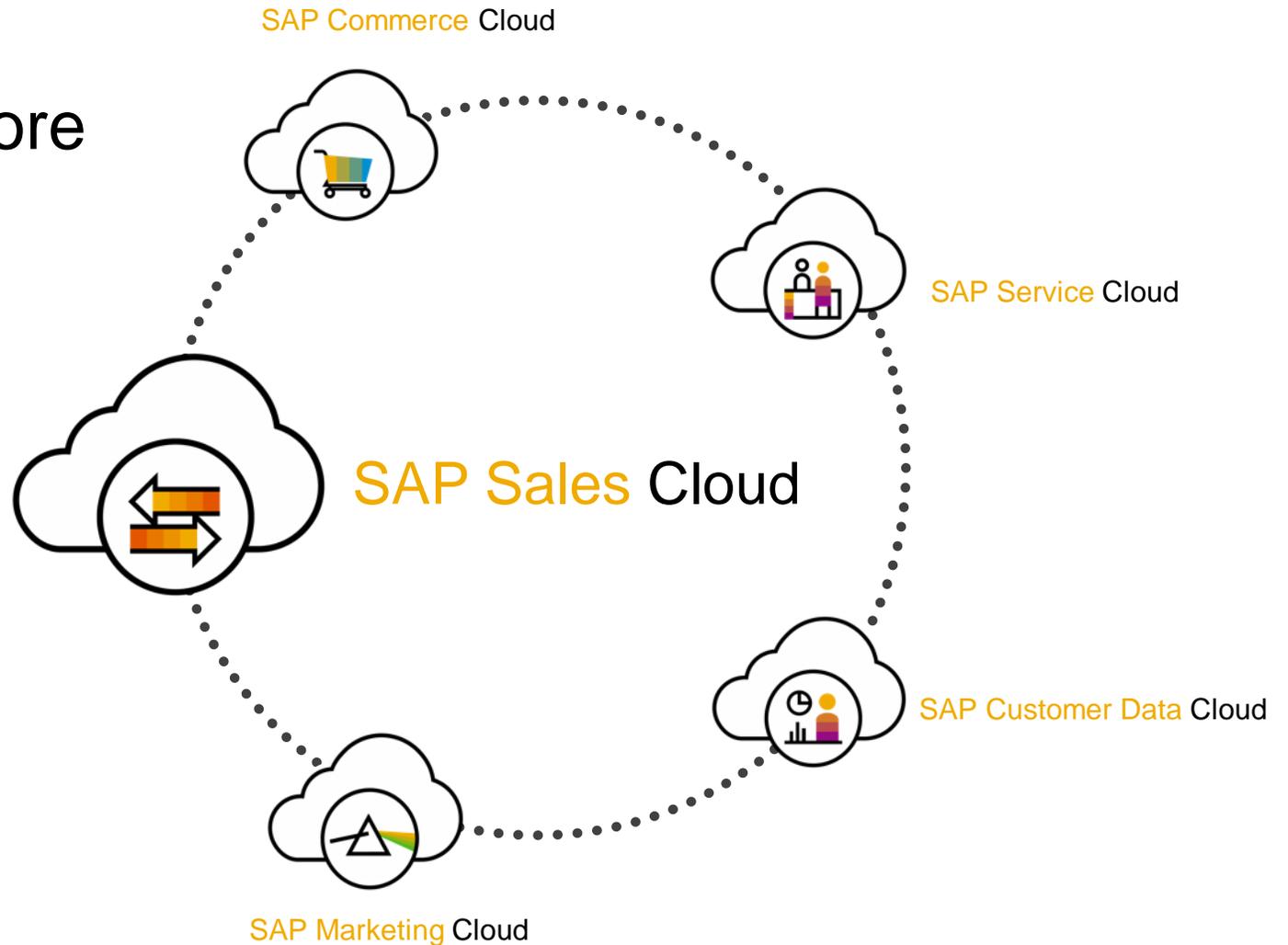
Treat your sales people like people – and help them sell more

Used by **5.6 million** sales professionals

 Sales Automation

 Sales Performance Management

 Quote-to-Cash

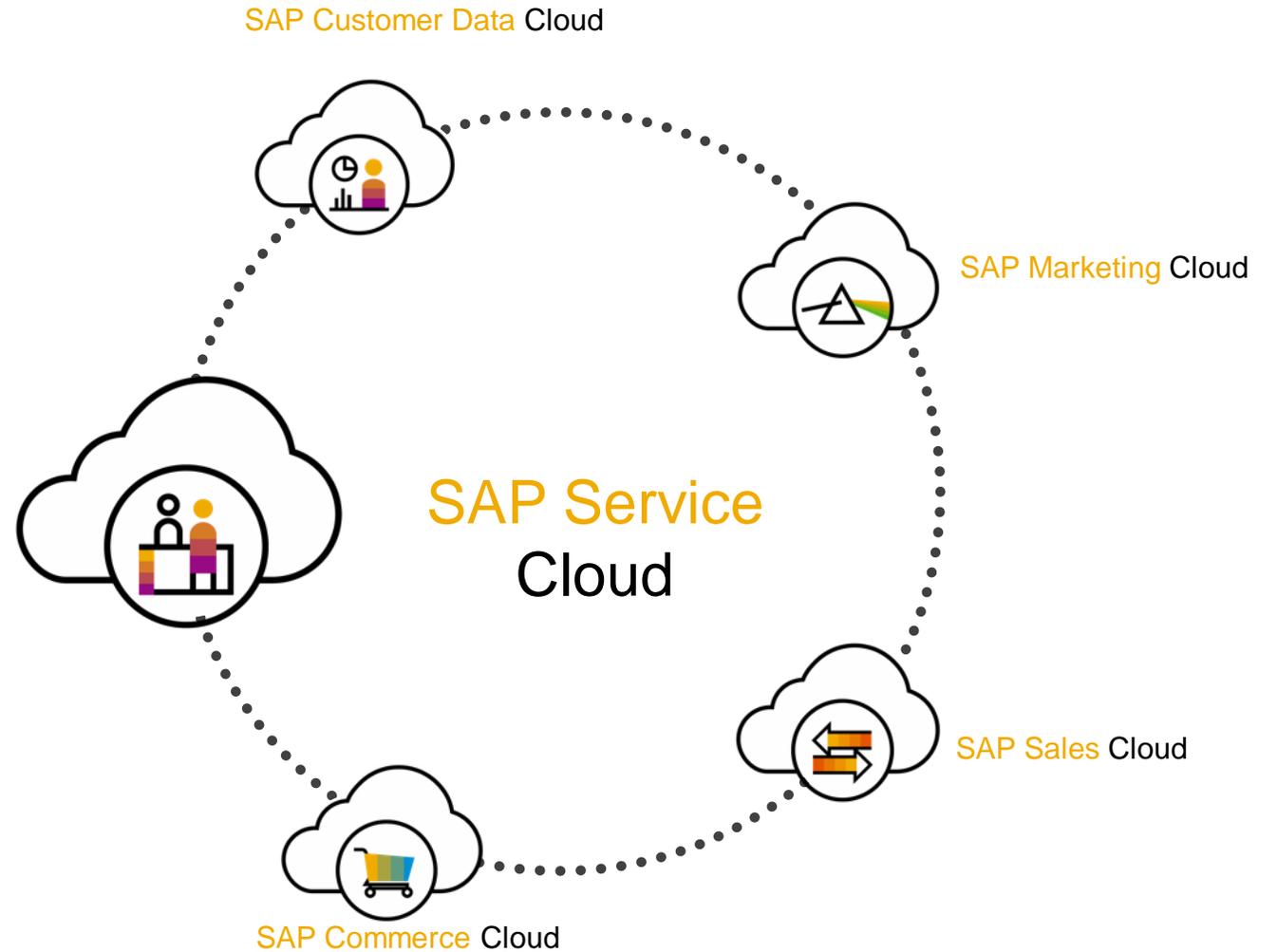
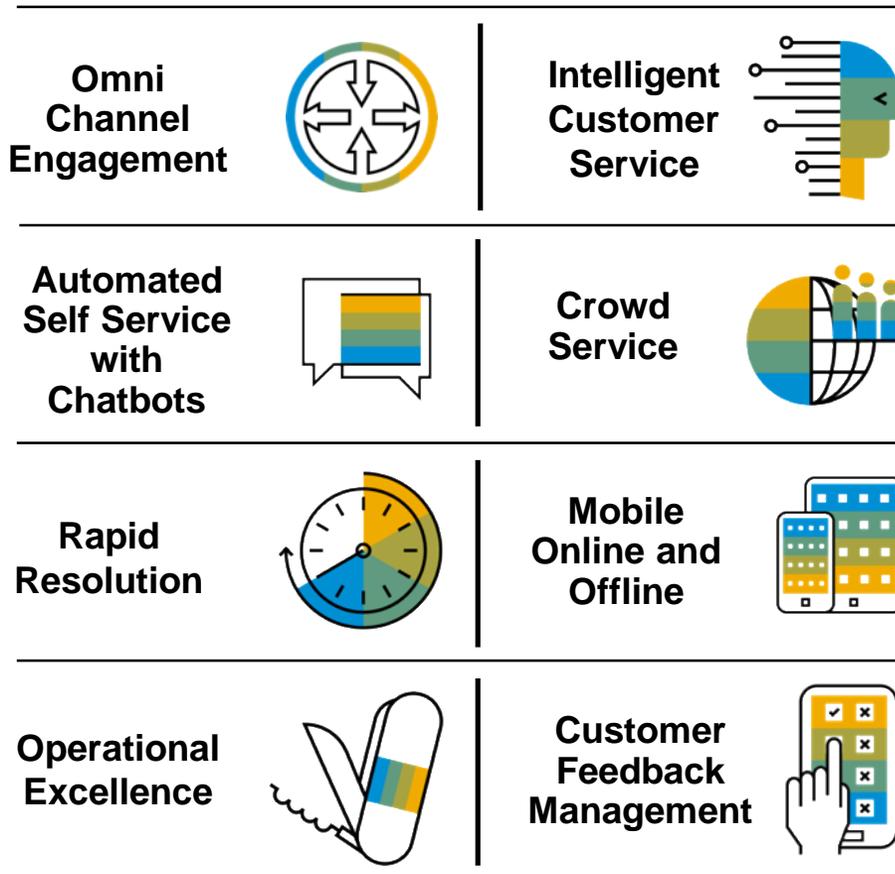


SAP C/4HANA

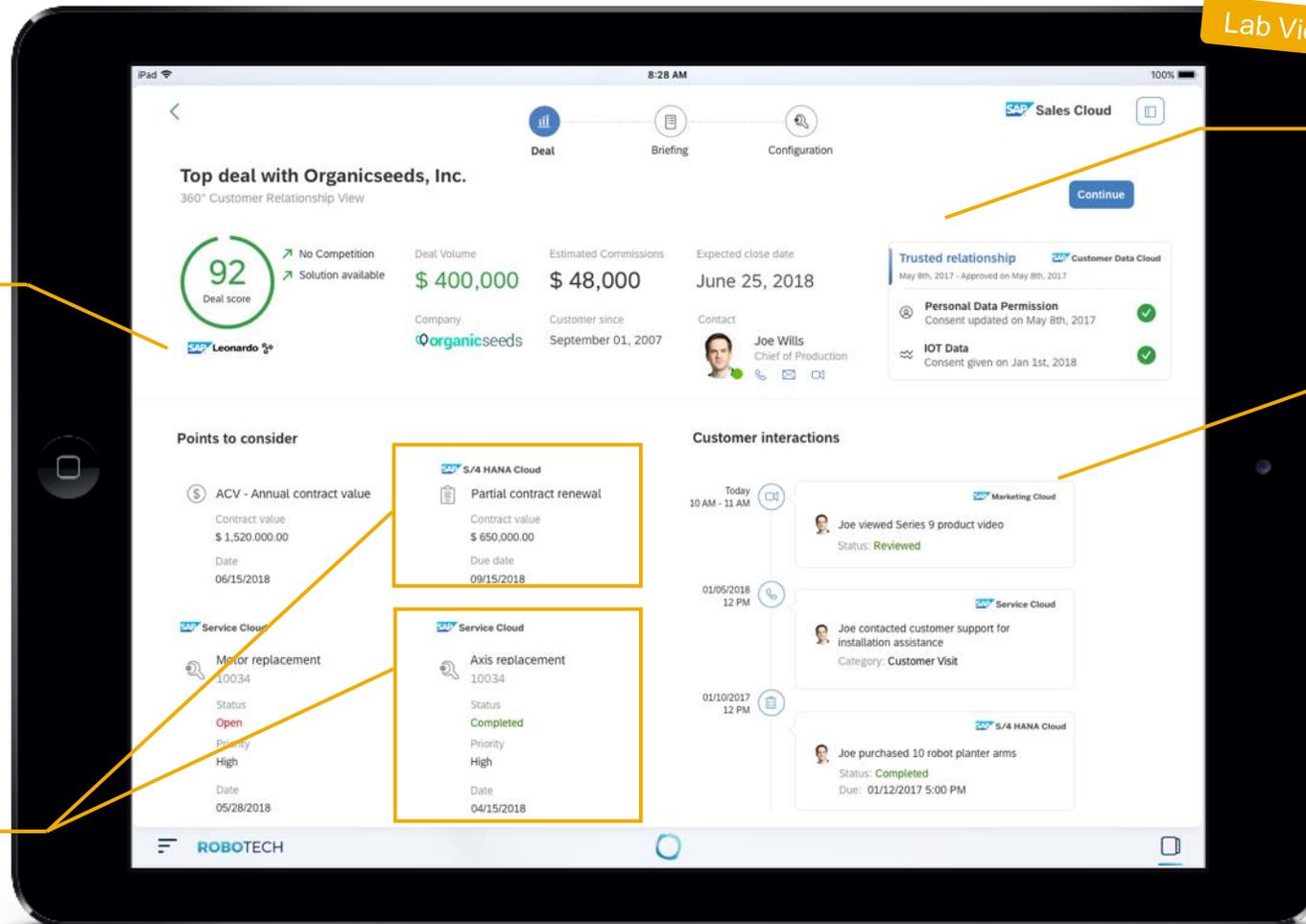
Make every moment count

End-to-End Service Management solution

61 million service tickets



SAP C/4HANA harmonized user experience



Artificial Intelligence

Embedded AI everywhere powered by SAP Leonardo

Integration with Digital Core S/4HANA

Content from multiple applications aggregated in unified screen via Cloud Widgets

Lab View

Customer Profile

Customer Data Cloud: Single View of the Customer based on Consent

Full view of customer

Marketing Cloud: visibility of customer interactions across channels

Services Cloud: all customer services tickets and touch points in one place

Sales Cloud: all sales interactions and purchase history

SAP Service Cloud Call Center for Utilities

Key processes as of 1908 release S4 (ISU) and ECC (ISU)

SEARCH AND IDENTIFY

- Live activity search
- ISU-finder search

CUSTOMER OVERVIEW

- Highlights
- Object hierarchy and details
- Confirm/Unconfirm Contract Account
- 8 recent history info – ex. Tickets, Invoices

BUSINESS PARTNER REPLICATION

- Contract partner role
- Multiple addresses and relationships

CONTRACT ACCOUNT OVERVIEW

- Contract account information
- Contract account create and maintenance
- Create using master data template
- Contract information
- Contract account and contract locks
- Quotes linked to contract account
- Fixed address
- Collective contract account and linked child contract accounts table

SERVICE TICKETS

- Service tickets (With option to add POD)
- Service ticket to create (BPEM) exception case
- Closing of the BPEM case to automatically close service ticket

SERVICE ORDER

- ERP service order in Customer and Premise objects

LANDLORD / TENANT

- Landlord / tenant view (owner allocation)



CUSTOMER

GUIDED SALES CLOUD QUOTE FOR UTILITIES

- Integrated with ERP switch document

SALES POINT OF DELIVERY

- Create and edit of sales POD
- Ability to import and export sales POD
- Create and add sales POD in sales quote

MOVE IN / MOVE OUT / TRANSFER

- Guided and simple processes
- Create customer and/or contract account
- Create service order
- Enter and validate meter reading
- Create move in using master data template (separate MDT for process and data creation)
- Rate comparison
- Scripting for rate / service order selection
- BRF Plus for scripting configuration/set up

ISU CONTACTS

- View of ISU Contacts

EXCEPTIONS MANAGEMENT (BPEM)

- View of exceptions from Customer and Premise
- View of linked service tickets
- Objection selection for exception creation from service ticket

SERVICE NOTIFICATION

- ERP service notification in Customer and Premise objects

ANALYTICAL REPORTING

- Data source for premise and related tickets
- Standard report for premise and related tickets

ACCOUNT EXECUTIVE DASHBOARD

- Home tile to view service order work by center

FRONT OFFICE PROCESS (FOP)

- Launch FOP from Customer, Contract Account, and Premise objects

FINANCIALS

- Open items
- Payments
- Invoice history
- Installment plan
- Payment plan
- Bill correction (full and adjustment reversals)
- Invoicing and invoice simulation
- Contract account, contract, and open items locks
- Display main & child collective account amounts
- Miscellaneous postings
- Bank payment method and CA assignment
- One time payment
- Payment deferral
- Promise to pay (*Available only in S4*)
- Budget billing (European)



AGENT



PREMISE

PREMISE OVERVIEW

- Highlights
- View in Google map
- Customer history
- Premise/installation/meter information
- Guided create and change move in/out
- Meter reading entry and history
- Service orders and service notifications
- Service Tickets
- View disconnect documents



ALERTS FRAMEWORK

- Available in Move In / Out / Transfer
- Available in Customer, Contract account, and Premise objects
- Based on BRFplus

CONFIGURABLE OBJECT HIERARCHY

- Render configured object hierarchy in IS-U

COLLECTIONS

- Credit rating overview
- Security deposit overview
- Partial, full release and reverse deposits
- Dunning history
- Correspondence history
- Account history
- Write offs
- Returns
- Simulate dunning

RATE CHANGE AND SIMULATION

- View / update tariff and billing parameters
- Simulate rate change

METERS

AMI (SMART METERS)

- View AMI meter information in customer, premise, and move processes
- Ping meter
- Reconnect meter
- Safety message for reconnect

METER READING

- Meter reading orders
- Meter reading history
- Estimation and override
- Interim meter reading

Service Cloud for Utilities

Subject to Change

Released 1911	Released 2002	Planned 2005	Future - 2008 and Beyond
Account Executive Dashboard – Service Orders (GA)	Maintain Customer Independent Communication (Phase 2)	Contract Account Overview (Beta)	View Utility Objects in Agent Desktop
Account Executive Dashboard – Exceptions	Display Address Usage (Phase 2)	Premise Overview (Beta)	Landlord/Tenant Processes (Phase 2)
Customer Independent Communication (Phase 1)	Confirm Contract Account Automatically Based on IVR Entry	Move In with Sales (POC)	View Large Accounts / Processes
Address Time Slice (Phase 1)	Enhance Utilities 360 – Launch FOP	Customer Identification with Independent Communication Data in Live Activity	Enhance Sales Point of Delivery
Confirm Contract Account in Live Activity	Enable deletion of Sales Point of Delivery	Confirm Collective Contract Account in Live Activity	Enhance Guided Sales Quote
View Switch Documents	Contract Account Object in Service Ticket	Enhance Header Fields for Contract Account and Premise Objects	Contract Account Overview (GA)
Reverse Open Items	Release Contract Account and Premise Objects for Reporting	Total Balances in Contract Account Object	Premise Overview (GA)
Enhance IS-U Finder Results with Contacts	Delete Bank Data in Payment Data	Extensibility Value Help Search in Guided Sales Quote Premise Search	Integration to SAP Self Service Accelerator by SEW
Device Location Information and Notes	Enable Sales Quotes for Contacts	Integration to SAP Self Service Accelerator by SEW with Consumption Graph	
Enhance Initial Loading of Contract Account	Unassign Contract Account in Payment Data	Integration to SAP Self Service Accelerator by SEW with Customer Notification Preference	
Enhance Service Ticket to Display Exception ID	Guided Move Process to Include Link to Independent Communication Data		
Pre-validation for Process Pop Ups	Utilities Search Results to Show Name3 and Name4		

Utilities (based on S/4HANA 1511)

Incremental Features	Customer Value
<p>Suite on HANA</p> <ul style="list-style-type: none"> - HANA smart search in CRM Interaction Center - Enablement of the type-ahead search - Settlement (aggregation of load profiles) optimization in Energy Data Management - Performance optimizations in Meter2Cash batch processes 	<ul style="list-style-type: none"> - Intuitive, user-friendly and faster search of relevant data in CRM Interaction Center - Intuitive, user-friendly and faster search of objects and data in value help - Significant performance improvement in Settlement run in Energy Data Management - Improved Meter2Cash batch process runtime - Improved call center and operational efficiency
<p>SAP S/4HANA Utilities Enablement</p> <ul style="list-style-type: none"> - Provisioning of utilities functionality (IS-U) in SAP S/4HANA, on-premise edition - Compatibility and integration with simplified finance and simplified logistics - Extend field-length of the material number 	<ul style="list-style-type: none"> - Enabled core components of IS-U on S/4HANA on Premise - Combined use of S/4HANA Utilities, S/4HANA Financial Management and S/4HANA Materials Management & Operations in one system
<p>SAP S/4HANA Utilities Analytics</p> <ul style="list-style-type: none"> - Enabled operational analytics based on CDS views in the area of billing, invoicing and device management 	<ul style="list-style-type: none"> - Fast visualization and analysis of data with pre-defined KPIs for the execution of analytic requests in meter reading, billing and invoicing - Real-time analytics based on operational data without any latency time - Real-time insights into Meter2Bill process to identify process gaps and improve operational efficiency

Utilities (based on S/4HANA 1610)

Incremental Features	Customer Value
<p>SAP S/4HANA Utilities Analytics, part 2</p> <ul style="list-style-type: none"> - Enhancements to the virtual data model in the area of billing and device management 	<ul style="list-style-type: none"> - Increased analytical capabilities - Real-time insights into Meter2Bill process
<p>Fiori</p> <ul style="list-style-type: none"> - Fiori Apps for the user roles “Billing Specialist (Utilities)” and “Meter Data Specialist (Utilities)” 	<ul style="list-style-type: none"> - Optimize key processes in meter reading and billing to improve revenue assurance and user productivity - Improve operational efficiency in back-office
<p>Enablement of SAP S/4HANA Utilities for large systems</p> <ul style="list-style-type: none"> - Optimize the SAP S/4HANA Utilities solution for application to large systems and large volumes of data 	<ul style="list-style-type: none"> - Increased flexibility – provision of scale-out capability as an alternative option for system architectures in addition to scale-up architecture - Significantly reduced TCO
<p>SAP Multichannel Foundation for Utilities and Public Sector software and SAP S/4HANA: self-services for end customers</p> <ul style="list-style-type: none"> - Allows utility companies to interact with their customers through different communication channels, for example, the Web (online self-services), mobile, and social networks 	<ul style="list-style-type: none"> - A comprehensive self-service solution as part of SAP S/4HANA Utilities - Consistent customer experiences across different channels - Simple and attractive template apps (Web, responsive, and mobile) - Highly configurable and flexible software to meet specific customer needs - Short time to market for enabling new self-service channels - Improve operational efficiency in front-office

Utilities (based on S/4HANA 1709)

Incremental Features	Customer Value
<p>Fiori</p> <ul style="list-style-type: none"> - Additional Fiori Apps for the user role “Billing Specialist (Utilities)” - Additional Fiori Apps for the user role “Meter Data Specialist (Utilities)” 	<ul style="list-style-type: none"> - Central overview providing immediate insights on business relevant information for quick decision making - Optimize key processes in meter reading and billing - Improve operational efficiency in back-office
<p>SAP S/4HANA Utilities – analysis of premise, installation, and utilities contract</p> <ul style="list-style-type: none"> - Extend the virtual data model based on core data services (CDS) views to support analytic functionalities of premise, installation and Utilities contract 	<ul style="list-style-type: none"> - Fast visualization and analysis of data with predefined KPIs for the execution of analytic requests in utilities master data - Real-time analytics based on operational data without any latency time - High degree of flexibility in deriving analytics - Support regulatory reporting and compliance - Improve customer retention by getting real-time insights into relevant master data

Utilities (based on S/4HANA 1809)

Incremental Features	Customer Value
<p>Fiori</p> <ul style="list-style-type: none"> - Additional Fiori Apps for the user role “Billing Specialist (Utilities)” 	<ul style="list-style-type: none"> - Holistic view and monitoring of complete Meter2Bill mass process - Flexible and intuitive analysis of execution progress and exceptions in the area of billing and invoicing - User friendly visualization for decision making - Improve operational efficiency in back-office
<p>Dynamic Tiering (not generally available)</p> <ul style="list-style-type: none"> - Enable large FI-CA tables in the area of open items management for Dynamic Tiering 	<ul style="list-style-type: none"> - Lower TCO to reduce HANA in-memory data footprint - Reducing HANA nodes to be replaced with cheaper Dynamic Tiering store
<p>Machine Learning (still a PoC – to be delivered beyond 1809 SP00)</p> <ul style="list-style-type: none"> - Machine Learning PoC for Implausible Meter Reading Results 	<ul style="list-style-type: none"> - Machine Learning based resolution of exceptions in the area of Meter Reading - Reducing manual clarification and correction processes - Lower TCO due to higher automatization - Significant improvement of operational efficiency in back-office - Increased customer satisfaction due to better exception management
<p>S/4HANA Utilities for Customer Management (February 2018)</p> <ul style="list-style-type: none"> - S/4HANA Utilities for Customer Management first version based on S/4HANA 1709 - Simplify Business Partner and Business Agreement/Contract Account data objects to enable data harmonization and middleware removal - Provide on Premise Customer Interaction Center within S/4HANA (after CIC0 void) 	<ul style="list-style-type: none"> - Simplification of data objects - Significantly reducing TCO due to partial removal of data replication (middleware) - Simplified managing data - Embedded on Premise Customer Interaction Center - Improved customer 360° view

Utilities (based on S/4HANA 1809)

Incremental Features	Customer Value
<p>Machine Learning</p> <ul style="list-style-type: none"> - Meter Reading - Billing 	<ul style="list-style-type: none"> - Reduce manual work for utilities meter data and billing specialists - Increase quality in exception resolution - Improve cash flow by increasing speed in resolving exceptions and hence bill creation
<p>SAP S/4HANA Utilities for Customer Management</p> <ul style="list-style-type: none"> - Harmonized Master Data III - Product Definition I - Utilities Sales Contract Management I - Scope Round-Up 	<ul style="list-style-type: none"> - Simplification of data objects - Significantly reducing TCO due to partial removal of data replication (middleware) - Simplified managing data - Embedded on Premise Customer Interaction Center - Improved customer 360° view
<p>Bill to Cash for Energy 'Prosumers'</p> <ul style="list-style-type: none"> - Interface to automate setup of billing master data in SAP S/4HANA Utilities based on the commodity product definition in the external system - Support for reusing existing rate-category and billing schema - Support for storing commodity product-attributes data as installation facts in SAP S/4HANA Utilities - Framework to allow flexible mapping between SAP S/4HANA Utilities rate operands and external commodity product attributes 	<ul style="list-style-type: none"> - Give your product managers an intuitive user experience and a central product management tool to define and manage energy products. - Remove the dependency of business on IT (IS-U billing experts/integration experts) when introducing new energy products to market. - Shorten the time to market for new energy products by way of automating the billing master data setup in SAP S/4HANA Utilities and seamless distribution of energy products to sales system - Reuse your existing rate categories and billing schemas.

Fiori Apps for IS-Utilities with SAP S/4HANA Utilities 1809 (1/2)

Fiori App Title	Business Role	Fiori ID	Comments
Block Utilities Contracts	Billing Specialist (Utilities)	F3131	The app presents the most relevant information for the selected contracts and can be used to set a billing block for one or more contracts in a single step.
Process Missing Billing Orders	Billing Specialist (Utilities)	F3133	This app presents the most relevant information about missing billing orders for a specific portion and scheduled billing date. It also enables you to create a billing order for each item.
Display Suppressed Billing Orders	Billing Specialist (Utilities)	F3132	This app presents the most relevant information about suppressed billing orders and can be used to monitor the processing status of the related higher prioritized billing order. You can navigate directly to the relevant app to process the billing order according to the specific billing status of the higher prioritized billing order.
Display Outstanding Billing Items	Billing Specialist (Utilities)	F3134	The app presents the most relevant information about outstanding billing items for a portion-centered analysis of the billing process. You can directly navigate to specific apps (for example "Resolve Outsourced Billing Documents") from each billing status to obtain further details and to process the specific billing item.
Periodic Invoicing Overview	Billing Specialist (Utilities)	F3135	Different charts provide analytic content about KPIs, the status and results of the periodic invoicing process for a specific utilities portion and a specific scheduled billing date.
Resolve Outsourced Invoicing Documents	Billing Specialist (Utilities)	F3253	This app provides an overview of all outsourced invoicing documents. You can display details for a selected invoicing document, see relevant data and directly perform actions for example release, reverse or show the bill as pdf. The total number of outsourced invoicing documents is shown as the default KPI on the tile.

Fiori Apps for IS-Utilities with SAP S/4HANA Utilities 1809 (2/2)

Fiori App Title	Business Role	Fiori ID	Comments
Process Billing Errors	Billing Specialist (Utilities)	F3358	The app presents the most relevant information about contracts with billing errors and can be used to display and process the related Business Process Exception Management (BPEM) clarification cases. If no clarification cases exist (or BPEM is not used), the app can still be used, but the BPEM-related actions are disabled. The total number of billing orders billed with errors is shown as the default KPI on the tile.
Process Billing Orders	Billing Specialist (Utilities)	F3339	This app presents the most relevant information about the billable billing orders and the related master data environment. It can be used to analyze potential issues before the billing run takes place, and includes billing run simulations.
Periodic Billing & Invoicing Analysis	Billing Specialist (Utilities)	F3424	The app presents the most relevant KPIs for a portion-centered analysis of the billing and invoicing process. You can use different charts to perform a step-by-step analysis of data from different perspectives.
Periodic Billing Overview	Billing Specialist (Utilities)	F2709	Overview of new features in SAP S/4HANA 1809 (navigation, resizable cards, toggle percentage and absolute values)
Outstanding Billing Overview	Billing Specialist (Utilities)	F2801	Overview of new features in SAP S/4HANA 1809 (navigation, resizable cards, toggle percentage and absolute values)