Digital Insight and Cognitive Enterprise

Improve your business case for S/4HANA migration

Robert Heidasch, Global SAP Digital & Innovation Leader, IBM

Going to S/4HANA?

Many enterprises, particularly those already on SAP, see compelling reasons to consider a move to SAP S/4HANA, but the decision makers at these enterprises must navigate a complex set of questions

Some reasons to consider digital transformation…

67%
Of executives see digital transformation as **necessary** to their business' **survival**

>50%
Of executives, in 10 of 13 industries, anticipate major **digital disruption** in their industry

2025
Date of SAP's planned **deadline** for maintenance & support of ECC6

57%
Of organizations believe implementation of **digital technologies** is a **critical** business **enabler**

87%
Of businesses expect digital transformation to have a **positive** impact on **employee experience**

Themes of leaders' transformation dilemma…

Business Justification
What's the business and financial **value** of moving to S/4HANA?

Executive Alignment
How do I earn **buy-in** for transformation from stakeholders?

Transformation Scope
What's the right **scope** for starting ERP transformation?

Implementation Path
What's the right ERP **roadmap** given our business strategy?

What have we learned from prior transformations?

IBM has completed over 5000 SAP implementations globally. A few points to consider:

1. **Not clearly defined business value / cost business case**
   - *I see the necessity of the digital transformation, but I'm not sure about the business value and the costs of implementation. Why should I do it now? Should I wait and get more experience / analysis?*

2. **Obtaining a stable, integrated, SAP project environment was taking too long**
   - *Some customers were taking MONTHS to get out-of-the-box SAP to work, with hundreds of OSS notes and fixes required before simple, integrated activities were possible.*

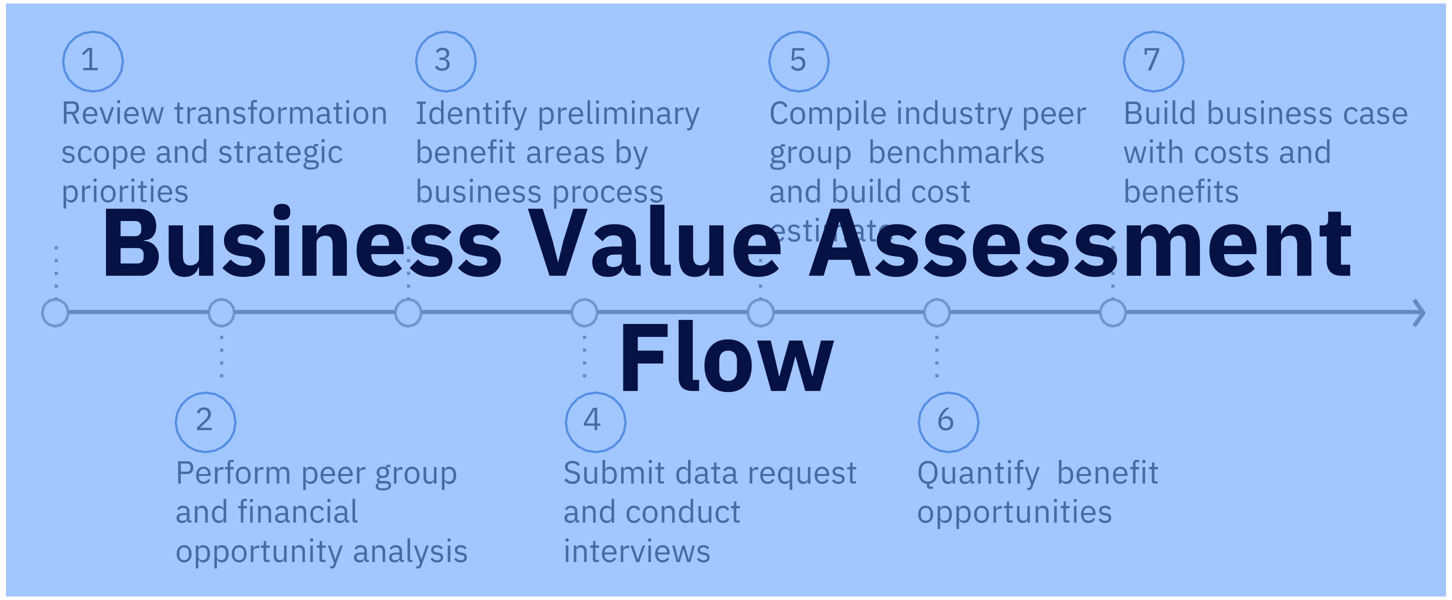
3. **Waterfall methodologies were not serving the clients well**
   - *Early phases generated documents and not working solutions. These documents were often ignored and business requirements re-written in testing phases.*

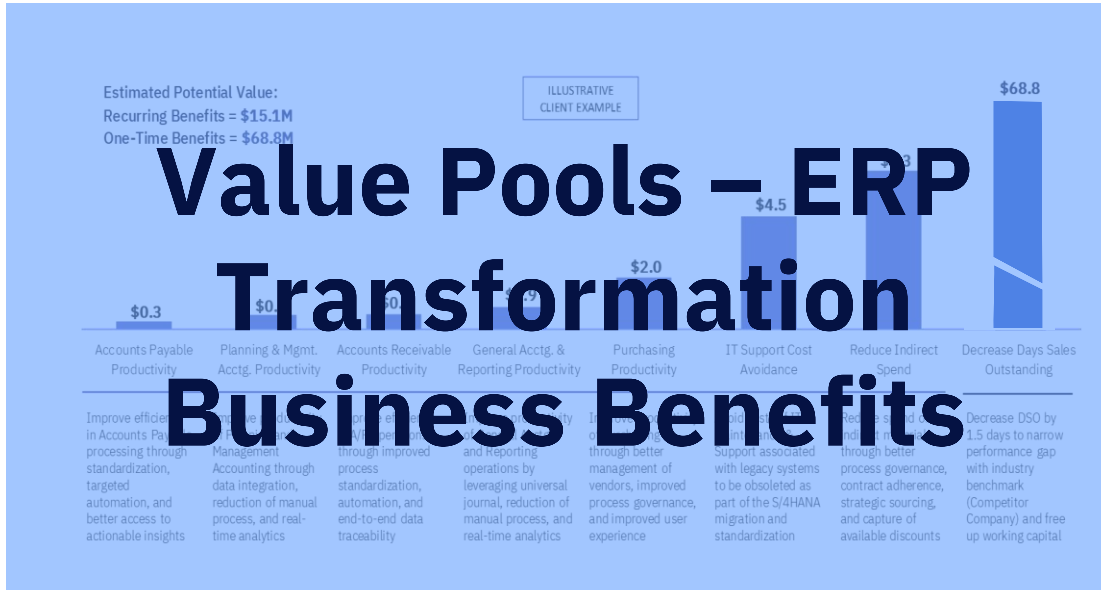
4. **Blueprint and Testing were the most expensive parts of the program**
   - *Blueprint phases often overran by 30%, and drove too much customization. Testing techniques were outdated and did not support an ongoing capability*

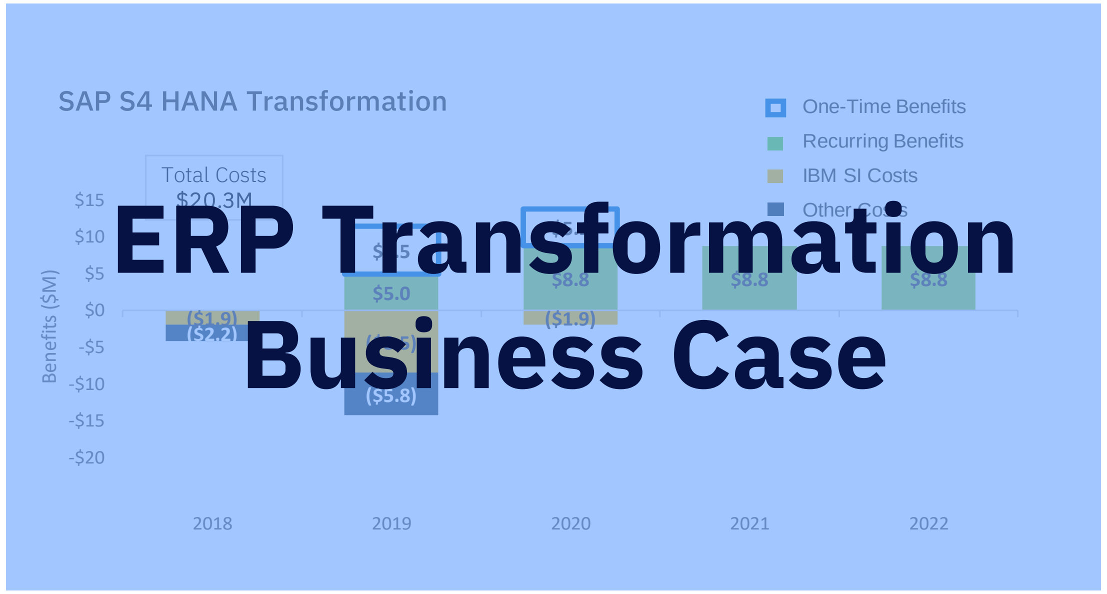
5. **Data migration often became the critical path**
   - *Lack of governance (who makes decisions), poor quality, and lack of preparation for migration activities caused unnecessary delays.*

S/4 HANA Value Assessment

The business value assessment creates an estimate of business and financial value of S/4HANA transformation using publicly available data, IBM's proprietary KPI database, and select non-public client data







Financial Opportunity Assessment

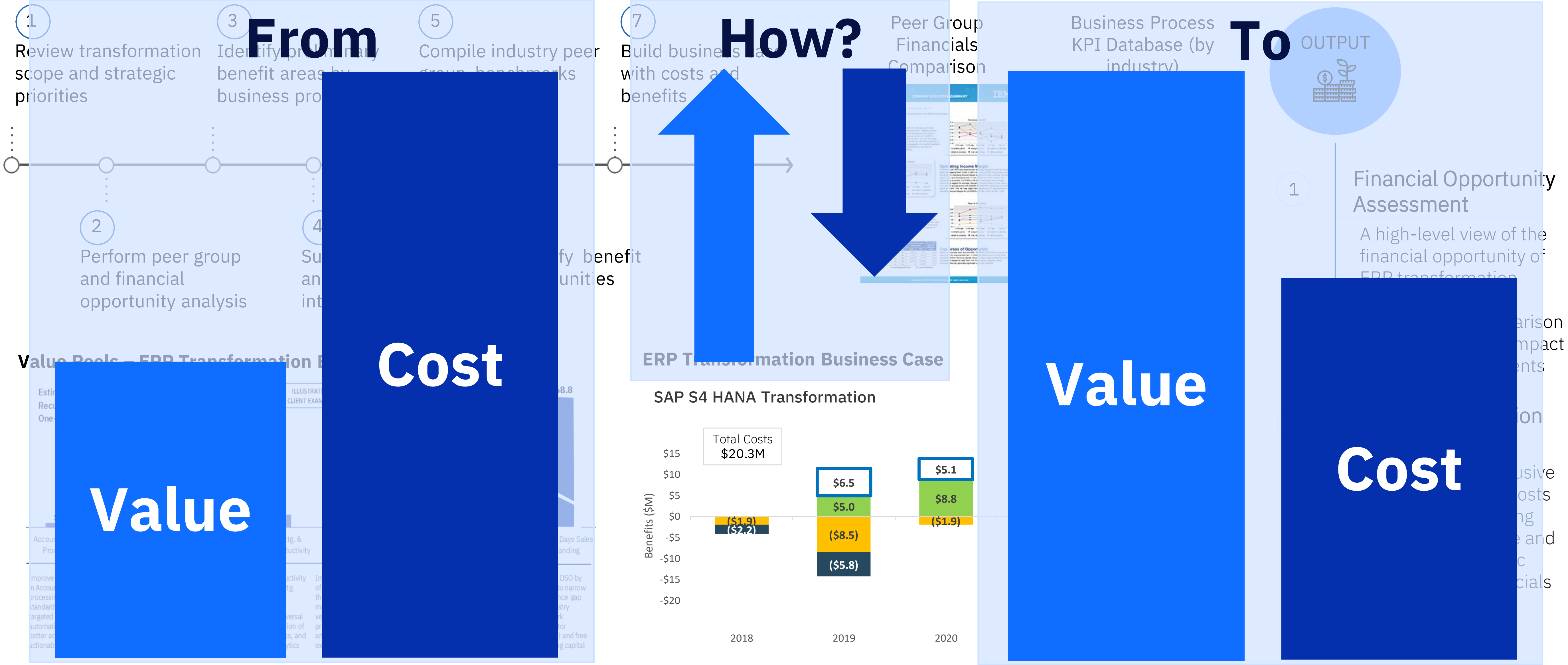
OUTPUT

ERP Transformation Business Case

19 September 2019

Change Business Value - Cost Assessment

The business value assessment creates an estimate of business and financial value of S/4HANA transformation using publicly available data, IBM’s proprietary KPI database, and select non-public client data

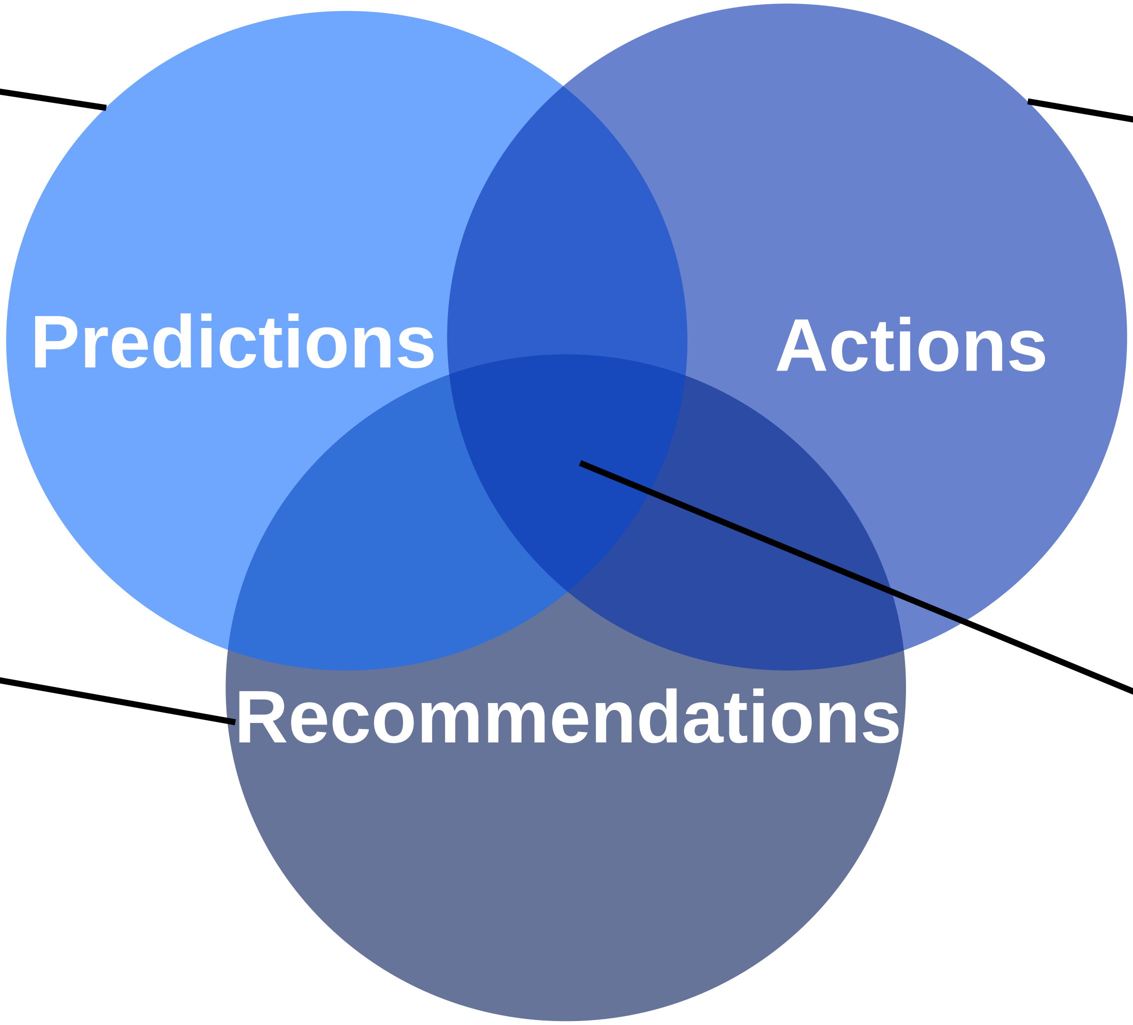


IBM

Predict, Recommend and Act

Intelligent / Cognitive Enterprise use **all available data** (not just ERP data) and **understand it** to enable:

Predict the future based on real-time data and artificial intelligence minimizing risks and detect opportunities



Deliver information and provide knowledge to proactively engage with relevant users and drives the execution of their decisions

Using machine learning and business domain expertise to dynamically uncover opportunities and improve your financial and operational performance

Area where real-time data and cognitive technology is defining the **Intelligent / Cognitive Enterprise**

5 Steps Towards Intelligent / Cognitive Enterprise

Collect Data

- Connect with credentials (authentication and authorization)
- Collect source data
- Excerpt metadata
- Build indexes
- Engage computed data
- Normalize and harmonizes data

Understand Data

- Take actions on data:
- Encompasses observation
- Take attention, judgment and valuation for relevant data
- Make data comprehension and reasoning based on your dictionary
- Build models - dynamic data modelling
- Problem solving

Predicting

- Predict the future business data
- Predict data impact on related business process
- Predict, if recommendation is required
- Predict the required action

Recommending

- Combine domain expertise and ML to make recommendations
- Making or taking recommendations (unless you can predict) with some level of confidence
- Looking for anomalies (breaks in pattern) from the past and simulate prediction (do a fast-forward) to observe conditions and/or see what happened next

Acting

- Define and traverses potentially complex decision trees to initiate and execute those processes automatically
- Defining cognitive skills with respective actions
- Start action based on user and business context

Intelligent / Cognitive Enterprise - Dimensions

Source of Data / Information/ Knowledge

Unstructured Data / Files

ERP — CRM — SCM

Business Apps / Databases

Social Media

IoT Sensors & Devices

Weather

Cognitive UI
Use AI technologies to define new UI layer

HTML / Fiori

Mobile

VR / AR

Chatbots

"Traditional" ERP extended by AI / ML

ERP / MES / Automation

Artificial Intelligence

Data Lake / Integration
Information and Knowledge Building

SAP HANA

Hadoop

BLOCKCHAIN

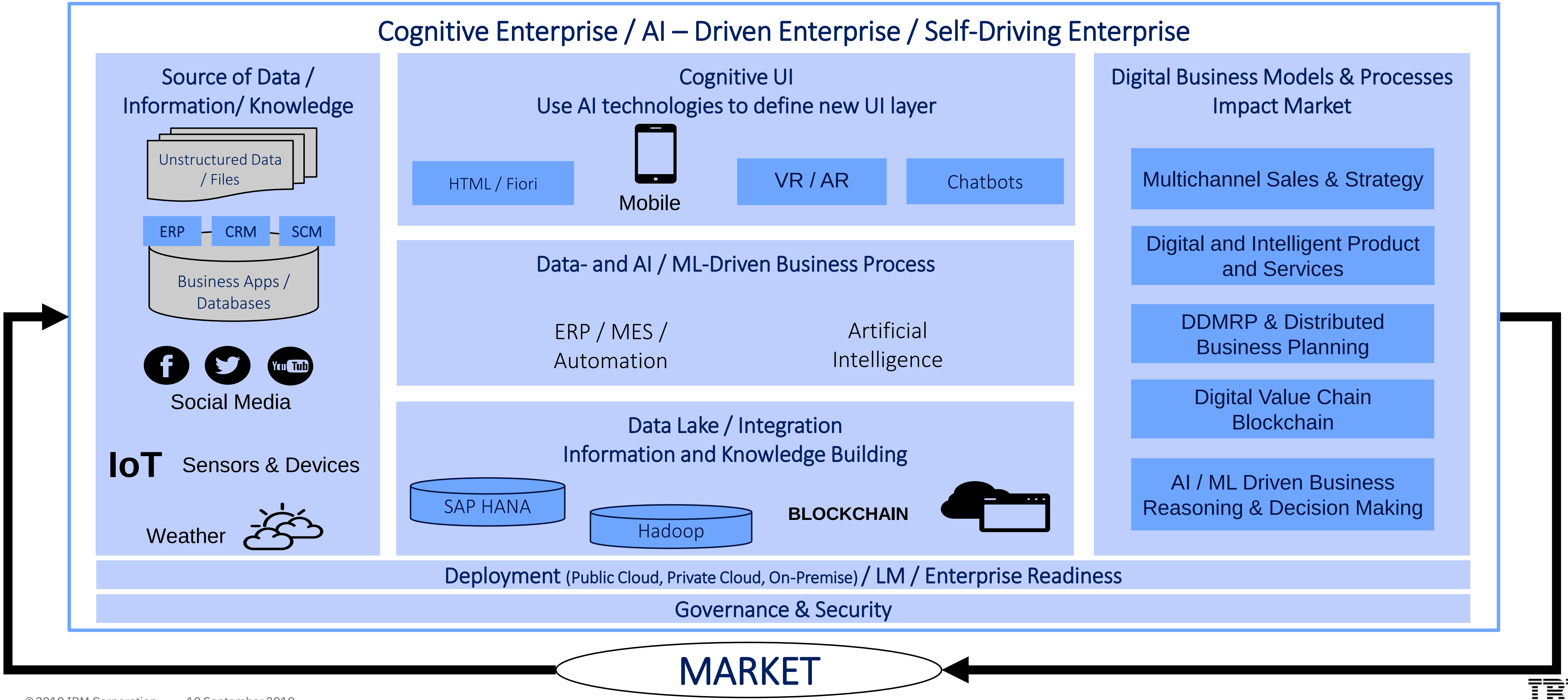
Digital Business Models & Processes Impact Market
(Exemplar Business Services)

- Multichannel Sales & Strategy
- Digital and Intelligent Product and Services
- DDMRP & Distributed Business Planning
- Digital Value Chain Blockchain
- AI / ML Driven Business Reasoning & Decision Making

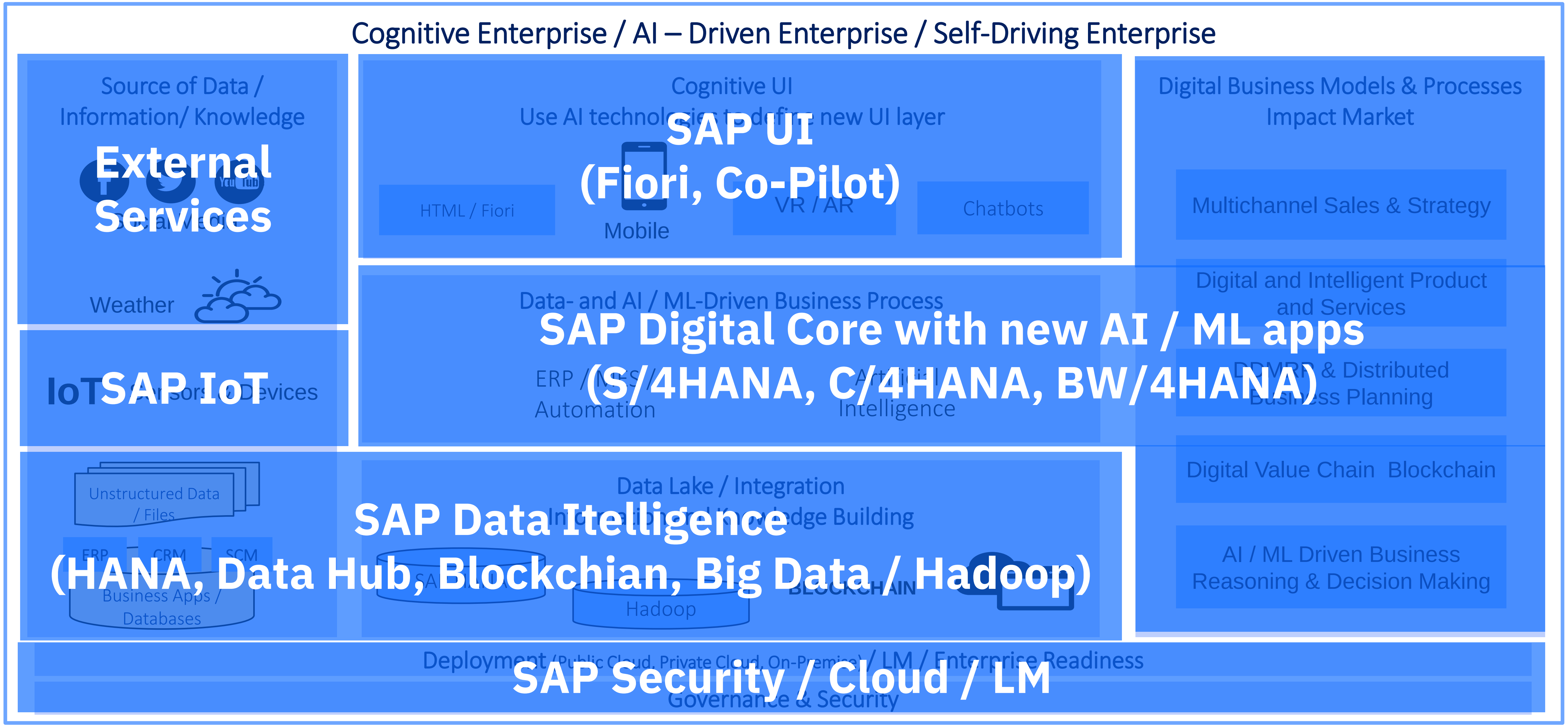
Deployment (Public Cloud, Private Cloud, On-Premise) / LM / Enterprise Readiness

Governance & Security

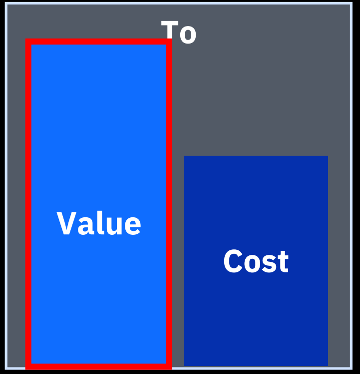
Redefine Market Interaction

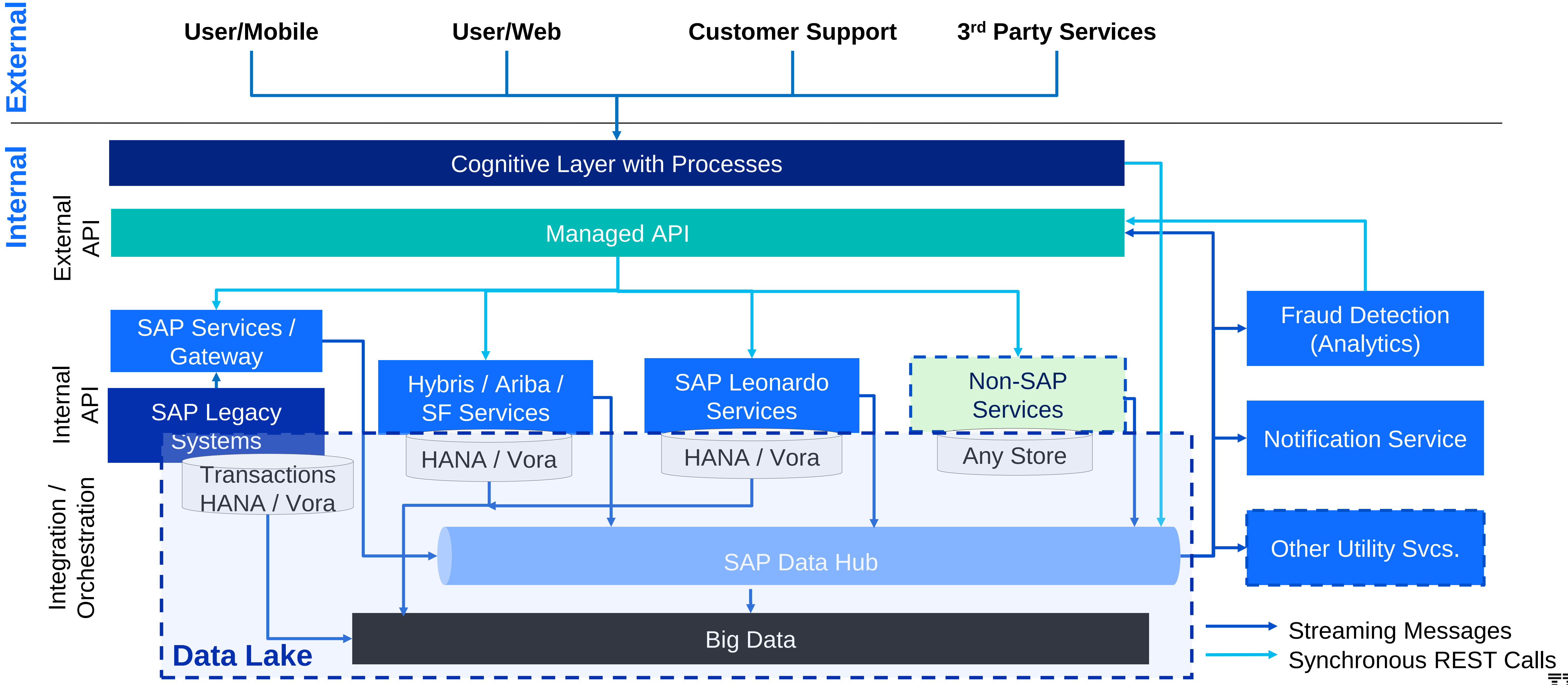


SAP Solution View



Technical Architecture
Decoupling Improves Flexibility





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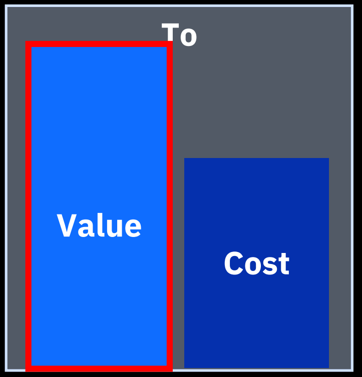
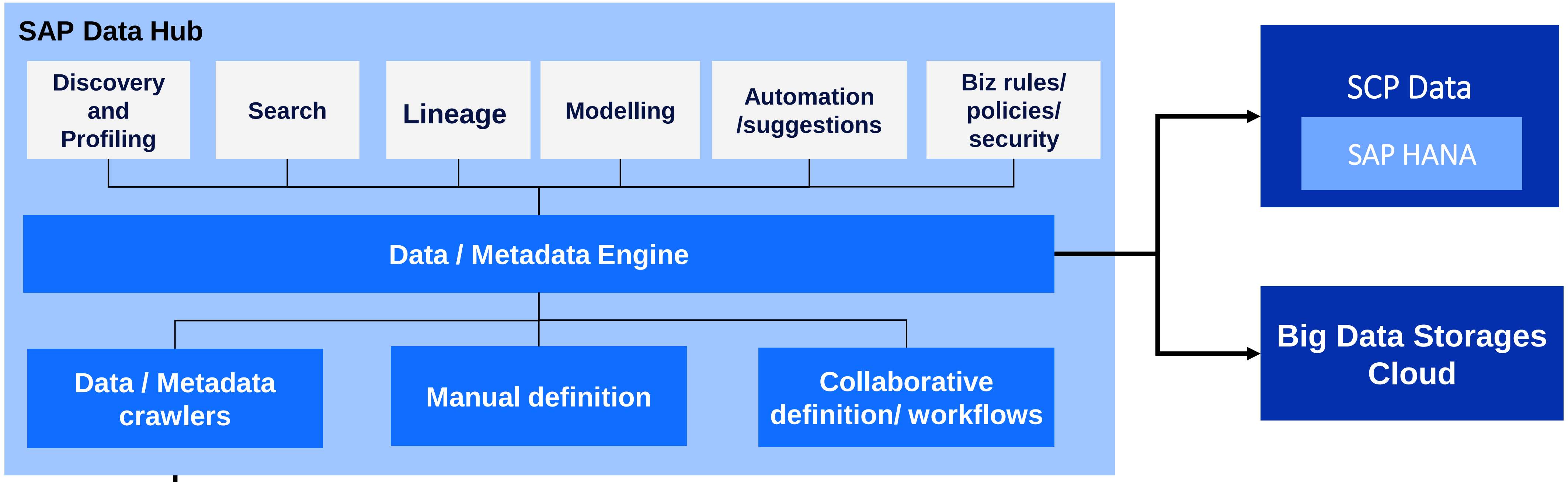
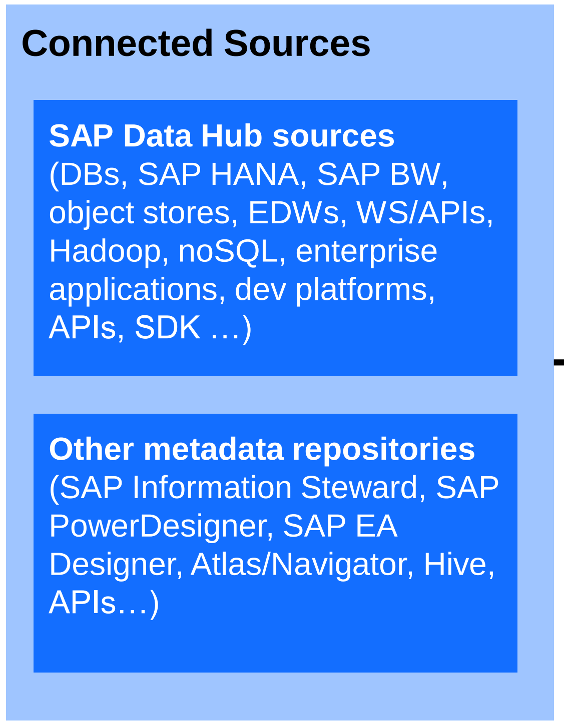
SAP Data Hub
Integration Architecture with Self-Learning Capability







Use a Data / Metadata Engine and its self-learning approach to improve the consistency, accuracy, and completeness of the data and metadata

Solution Benefits:

- Easily govern and manage data and metadata assets across data sources
- Discover, understand, and consume information about data with the ability to synchronize, share, and perform version lineage and impact analysis
- Support non-domain experts in evaluating data quality and the impact of changes

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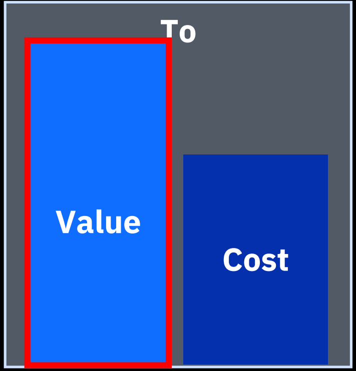
Explore the opportunity to move beyond the 'digital core' of SAP S/4HANA, leveraging prioritized innovation use cases to amplify business value



INNOVATION OPPORTUNITIES

- Advanced Analytics
- Blockchain
- Internet of Things
- Machine Learning
- Robotics Process Automation

APPLYING INNOVATION

THINK

PROCESS OPPORTUNITY OUTPUT + DESIGN THINKING SESSIONS

↓

PRIORITIZE & SELECT USE CASES

↓

POC INNOVATION USE CASE

→

TRANSFORM

STRATEGY & ROADMAP FOR INNOVATION DEFINED

↓

POC INNOVATION USE CASE DELIVERED

OUTPUTS:

PRIORITIZED INNOVATION OPPORTUNITIES
Prioritized Innovation Opportunity use case backlog based on importance and feasibility

POC INNOVATION USE CASE
Top priority use case is selected, design is finalized, technical architecture is defined, and Proof of Value (PoV) is documented

INNOVATION STRATEGY AND ROADMAP
Strategy and roadmap defined for applying innovation use cases to production (Transform)

POC INNOVATION USE CASE DELIVERED
POC is built for selected high-priority innovation use case to support Proof of Value (PoV)

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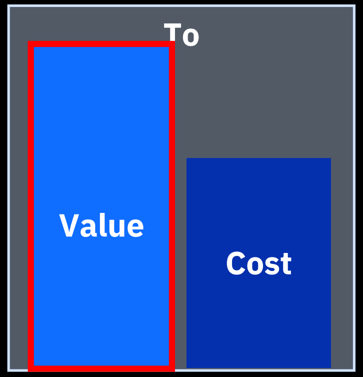
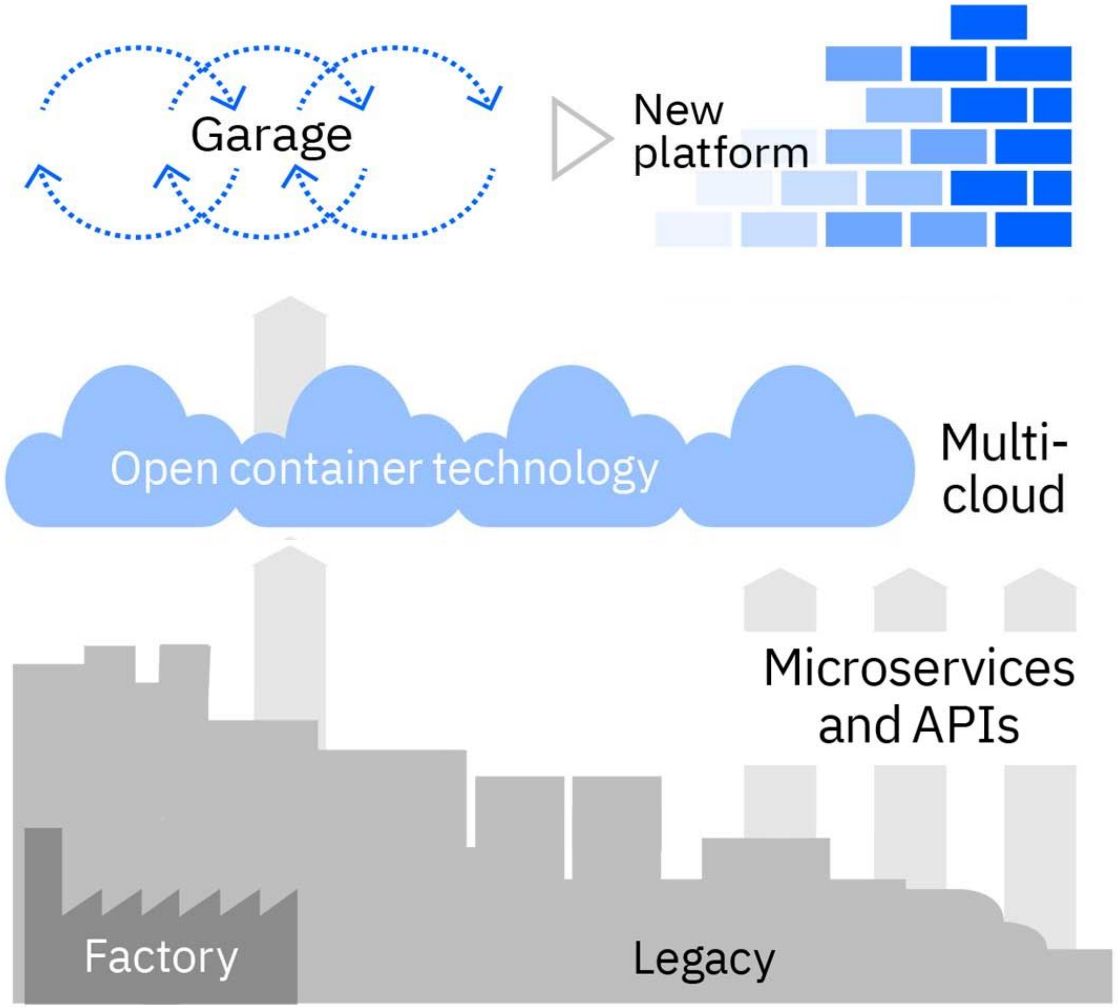
How to start the journey





The “garage” answer to a legacy question

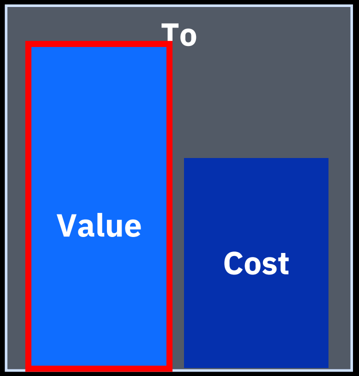
The garage approach involves:

- ✓ Creation of cross-organizational spaces where cross-functional teams can come together with strategic partners, such as IBM, and other ecosystem players and startups to co-create,
- ✓ Co-execute and co-operate the new business platforms.

Garage environments can jumpstart innovation by

- ✓ Putting technology options into the context of customer journeys, critical workflows, pain points and value potential.
- ✓ Allowing for early testing of ideas against customer and employee feedback, avoiding wasted activity.
- ✓ Design- thinking, agile and DevOps approaches move concepts quickly from ideation into day-to-day operation using scrums, squads and sprints to break up the build process into manageable, valuable building blocks.
- ✓ Enabling benefits from continuous learning - new business platforms can be developed at greater pace and lower risk.

Yara International & IBM
Press Release - Agreement to build the world's leading digital farming platform



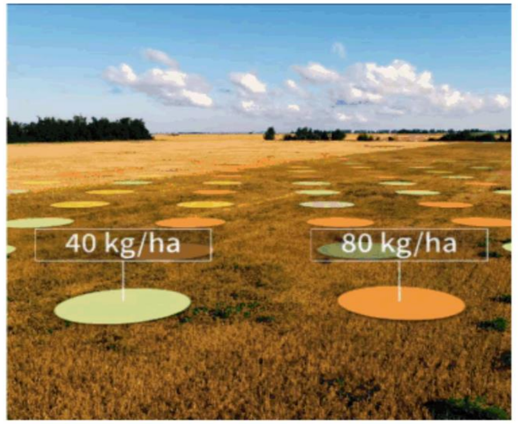
Yara and IBM will combine world-class agronomy and cutting-edge technology to develop the world's leading global digital farming platform.

Oslo, Norway & ARMONK, N.Y., April. 26, 2019: Yara International (OSE: YAR), a global leader in crop nutrition, and IBM (NYSE: IBM), today announced an agreement to build the world's leading digital farming platform, providing holistic digital services and instant agronomic advice.

Yara and IBM Services will jointly innovate and commercialize digital agricultural solutions that will help increase global food production by drawing on the two companies' complementary capabilities: Yara's unrivalled agronomic knowledge, backed by more than 800 agronomists and a century of experience, and **IBM's digital platforms**, services and expertise in **artificial intelligence (AI)** and **data analytics**.

"Our collaboration centers around a common goal to make a real difference in agriculture. To be able to responsibly feed a growing population, it is critical that farmers increase food production on existing farmland to avoid deforestation. Yara and IBM will develop digital solutions that empower professional and smallholder farmers to optimize farming practices to increase yields, crop quality and incomes in a sustainable way," said Terje Knutsen, EVP Sales and Marketing in Yara.

Yara and IBM join forces to transform the future of farming



- Partnership agreement to build the world's leading digital farming platform, combining Yara's unrivalled agronomic knowledge and market presence with IBM's digital platforms, services and expertise in data analytics
- Yara and IBM will develop digital solutions for both professional and smallholder farmers to sustainably increase yields, crop quality, and incomes
- The joint platform will apply artificial intelligence, machine learning and in-field data to achieve worldwide coverage, aiming to reach 100 million hectares of farmland
- Yara and IBM will establish joint innovation teams, collaborating at digital hubs in Europe, Singapore, the US and Brazil
- The teams will work to develop new capabilities, such as visual analytics, machine learning techniques for crop identification and validation as well as field boundary digitization
- The first services are planned for end 2019

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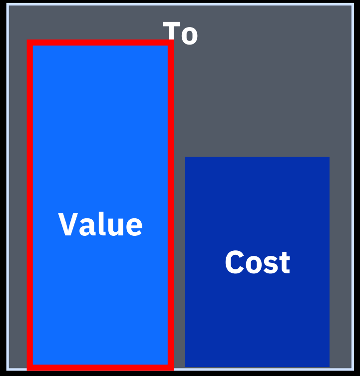
IBM Cognitive AI Cash Flow Predictor for SAP

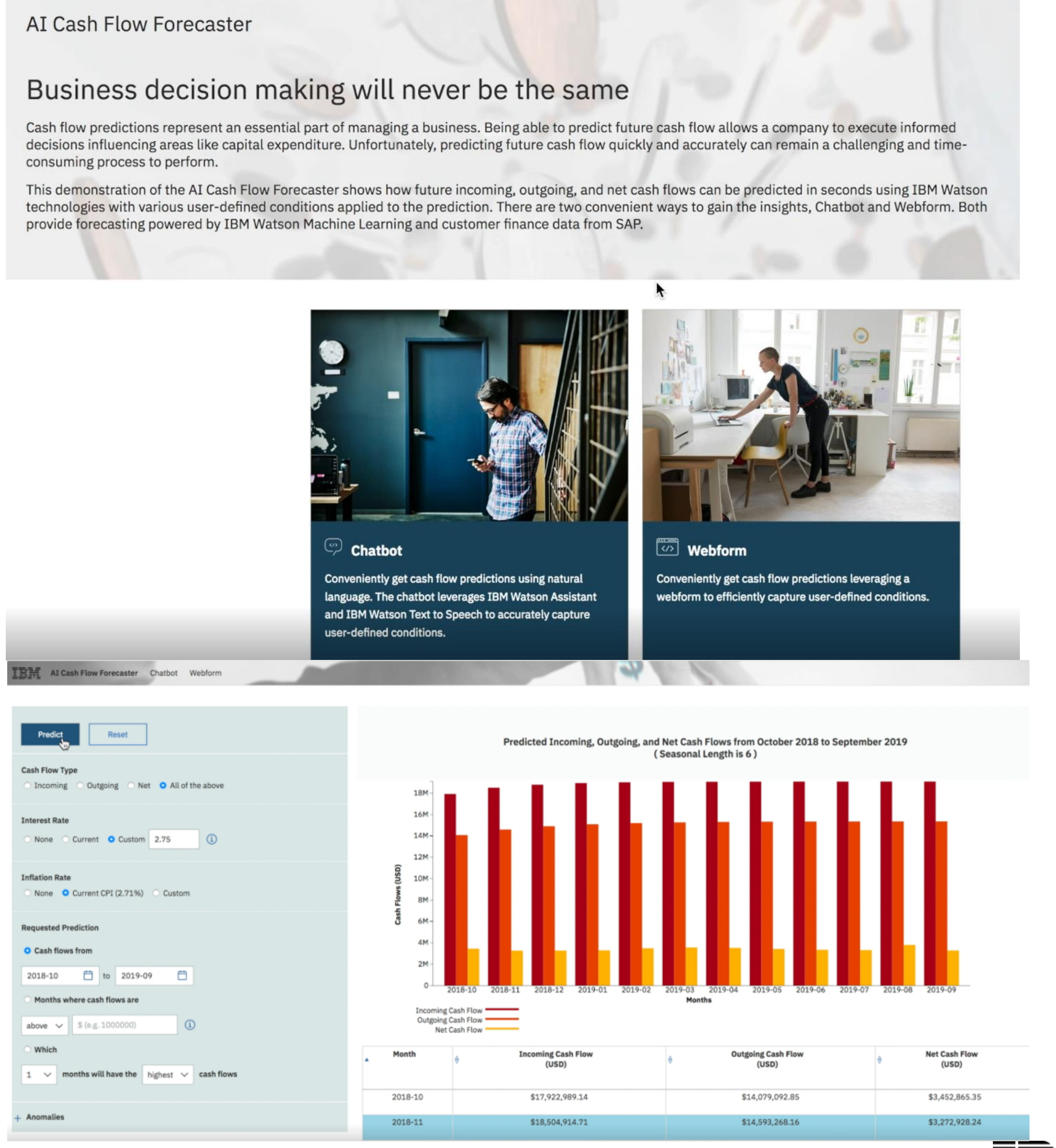


The AI Cash Flow Forecaster uses customer finance data coupled with interest and inflation rate information to predict future cash flows using the power of IBM Watson.

Customers deploying the AI Cognitive Cash Flow Forecaster gain a competitive edge in decision-making and risk avoidance. The IBM Cloud and Watson brands inspire confidence and an innovative approach to traditional finance.

This PoC is built by SAP Innovation by IBM Services and IBM Services Managed Applications for SAP with:

- SAP ECC,
- AI Cash Flow Forecaster Orchestrator App,
- Watson Assistant,
- Watson Text to Speech,
- Watson Studio,
- SPSS Modeler,
- Secure Gateway



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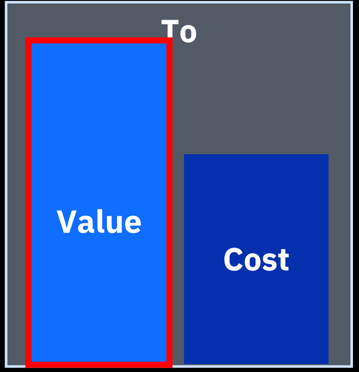
IBM Cognitive RPA Automation for Month End Closing

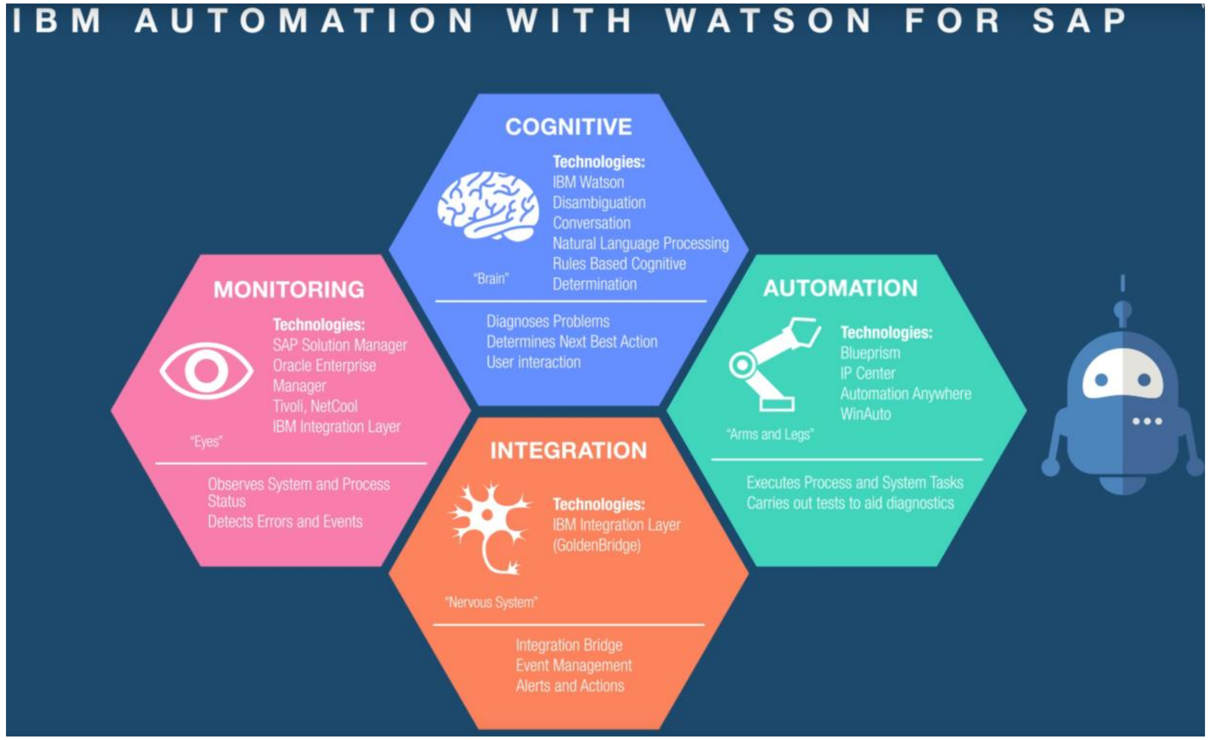


Use RPA with existing SAP systems to reduce manual effort at Month End, increasing productivity of your best staff.

The repetitive steps in mail send, SAP, SAP BW and third party systems (Hyperion, TM5 etc) are automated by BluePrism RPA, powered by IBM Watson to resolve system and data issues faster and accurately. An interactive iOS dashboard is updated by the automation engine and provides progress updates to staff, including diagnostics where manual intervention is required.

This PoC is built and delivered for an IBM customer with:

- SAP ECC,
- BluePrism RPA,
- IBM Watson using IBM GoldenBridge for decision-making,
- IBM Cloud Cloud Foundry (Application Platform),
- IBM Cloud Infrastructure Virtual Servers,
- Apple iOS App dashboard using Apple-SAP iOS SDK for SAP Fiori



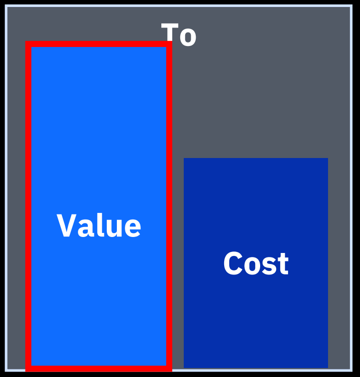
SAP
+
Robotic Process Automation
+
IBM Watson

= Increased Staff Productivity

Reducing manual work performed by strategic resources – so they can work on higher value tasks **Speed, Accuracy, Visibility, Improving**

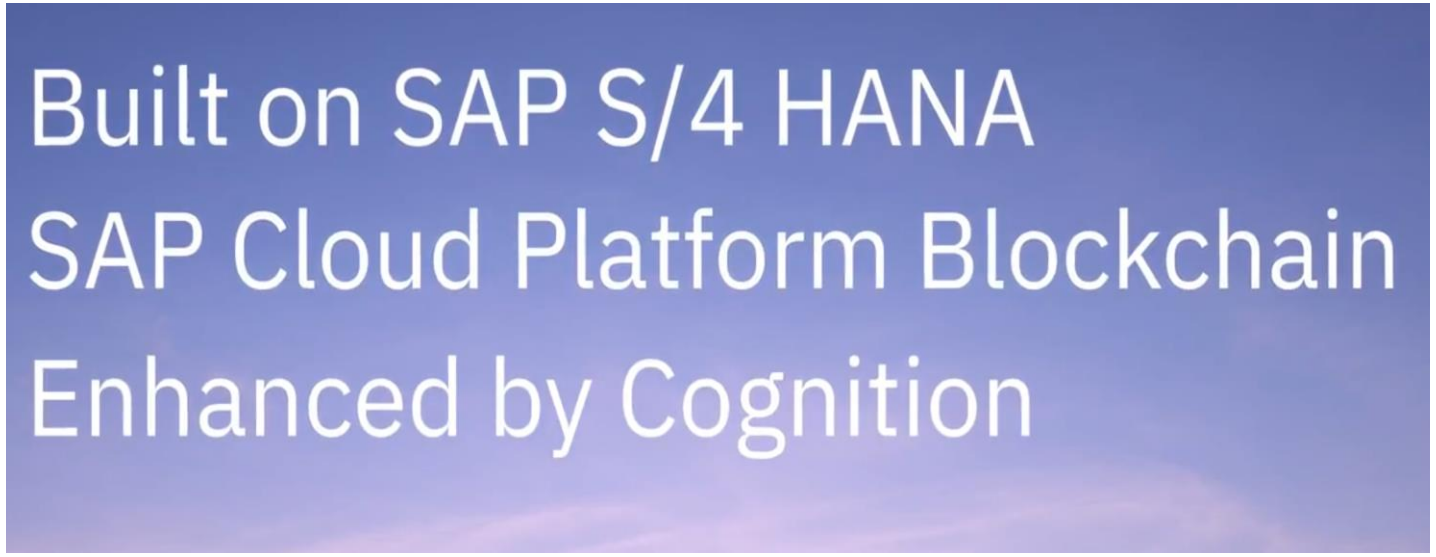
IBM

Blockchain Joint Venture Accounting (JVA) with SAP Blockchain



Use Blockchain with existing SAP systems in Joint Venture partnerships to reduce cost, increasing efficiency of your partnership with a shared ledger. This is a Blockchain solution for Finance and Supply-Chain.

The disputes and enquiries in cutback and non-operator billing are decreased by a Blockchain shared ledger, which records all Joint Venture Accounting transactions transparently within the partnership for audit and reporting. In addition, this expands beyond Finance into managing the Supply-Chain with Hydro-Carbon Movements.



This PoC is built by IBM-SAP co-innovation with:

- SAP S/4HANA with IBM Industry IMPACT template for Oil&Gas Upstream,
- Blockchain-as-a-Service by SAP Cloud Platform using Hyperledger Fabric,
- SAP Cloud Platform (Cloud Foundry) for Node.js application using Bootstrap-4 UI,
- SAP Cloud Connector

IBM-SAP Press Release April-2018:
"IBM Services and SAP Introduce Plans for a New Solution to Help Oil and Gas Companies Streamline Joint Venture Accounting with Blockchain"

IBM S/4HANA Value Discovery Case Study

$53B global pharmaceutical company that develops and produces medicines and vaccines for a wide range of medical disciplines, including immunology, oncology, cardiology, endocrinology, and neurology.

Why Value Discovery Now?

- Need to understand how to reduce risk during a phased deployment scenario. Big bang was not a desired option for leadership
- Need recommendations on how to approach a dual production system scenario for a very large, single, global ECC instance
- Need to plan (staffing/cost) for pre-migration and migration
- 2025 deadline looming with many other dependent projects affecting the roadmap
- Pfizer leadership requirements to understand S/4 transformation opportunities and benefits
- Pfizer leadership initiatives around innovation (RPA, Machine Learning, etc)

The S/4 Journey:

- Completed: Big Bang/Phased Deployment Options Assessment
- Future: Technical Discovery & POC: Brownfield, Bluefield, Pre-Project Design Decisions & Final Scoping, Business Case Development, Phase 0 / Pre-Migration Activities

Value Discovery Objectives:

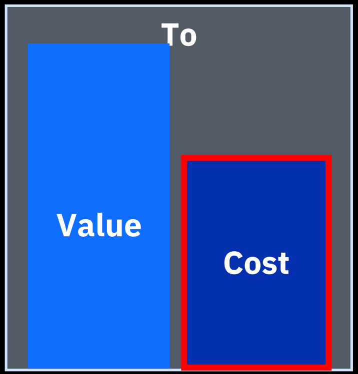
- Assess current ECC6 environment (leveraging previous assessments and IBM/SNP tools)
- Assess EDGE system impacts – high level as it pertains to the move from ECC to S/4HANA
- Define and evaluate Bluefield migration approach
- Define and evaluate deployment options – Big Bang vs Phased
- Gain consensus on preferred migration/deployment option through workshops
- Create a final S/4HANA strategy readout deliverable including recommended approach benefits and ROM cost

Value Discovery Results:

- Clarity around the best approach options to take for a phased migration including pros/cons, timeline, cost and staffing needs
- Guiding principles on how to reduce business disruption and overall risk to Pfizer's business
- Recommendations around S/4 transformation opportunities across the board based on Pfizer needs and pain points

Reduce Costs of S/4HANA Transformation

IMPACT Pre-Configured Solution



Acceleration

- Deliver a pre-configured working S/4HANA system and full suite of documentation/accelerators on Day 1 of an engagement
- Run blueprinting workshops more efficiently with pre-built process design documentation and flows in Blueworks Live
- Established master data and scripts to follow pre-built processes in S/4HANA during workshops
- *Move away from theoretical to visualize scenarios within the same session!*
- Streamline testing phases with Worksoft test automation or libraries of excel scripts ready to load in HPALM or your choice of testing platform

Standardization

- Start with the latest release of SAP's Best Practice processes
- IBM has developed hundreds of Cross Industry and Industry specific Best Practice processes included in the IMPACT solution
- Leverage IBM's deep SAP process and industry expertise acquired across thousands of engagements
- Utilize prior sprint plans and project management assets to jumpstart your build phase established by Agile experts across the globe

Adoption

- Introduce end users to the system as early as Day 1 to increase acceptance of the solution
- IMPACT provides customers with thousands of pre-built training recordings to be used early on in the engagement
- Leverage fully built, self serve, robust training recordings on Day 1
- Best practice enabled and IBM improved upon Fiori Catalogs & Role structures to common user profiles
- Relate user profiles & job functions early in sprint cycles through Blueworks Live integration of process mapping

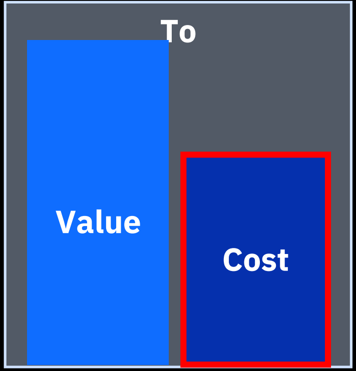
Risk Mitigation

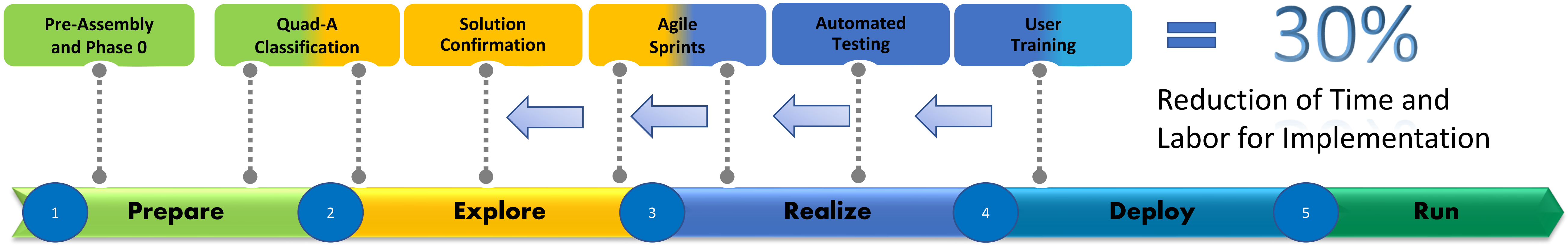
- Start off with a fully tested, validated, and hardened S/4HANA system on Day 1 of your engagement
- Take advantage of shorter project durations and less costly rollouts by using pre-built IMPACT content
- Utilization of Enterprise Hub to start data migration activities early – profile your data, assess your gaps and mitigate your data risk within the first sprint
- Integrate lessons learned from previously deployed IMPACT programs to further accelerate your build with less risk

Impact
INDUSTRY SOLUTIONS

IBM

IBM Ascend powered by SAP Activate (Agile)





= 30%

Reduction of Time and Labor for Implementation

Project Setup:
- Define Project Standards
- Method and Tools
- Assemble IBM Impact Solution and prepare Best Practices content, Industry templates
- Initial Quad-A Assessment,
- Workshop & release/ planning and preparation
- Scope Confirmation
- Rolling wave Release Plan of Sprints

Deliverables Provided:
- *Pre-Configured S/4HANA System*
- *Business Process Hierarchies*
- *Process Definition Documents and Flows to Prepare for Workshops*
- *User Stories templates and recommendations*
- *Security Roles*
- *Lesson's Learned*

Design Activation/Configuration:
- Quad-A Assessment
- Agile Sprints, demos, playback and validation of business processes with key stakeholders
- Capture requirements and identify gaps
- Execute workshops with early business feedback
- Functional Specifications and selective WRICEF development
- Data assessment and conversions
- Manage product backlog

Deliverables Provided:
- *Data Migration Tools*
- *Enable Now BPPs*
- *Worksoft Automation Scripts*
- *Excel Based Scripts unloadable to most Test Management Tools*

Build / Test:
- Agile Sprints continue
- Delta business process configuration
- WRICEF development and test
- Leverage data migration and test automation
- Develop shippable product and release to QA/Pre-Prod for test cycles
- System integration and user acceptance test

Deliverables Provided:
- *Analytics Dashboards and Beyond the Core Components*

Deploy:
- End user training
- Business operation / change communications
- Release of transports to the Production environment
- Cutover dry run to the new environment
- Data conversion
- Readiness check
- Go-live
- Hyper care

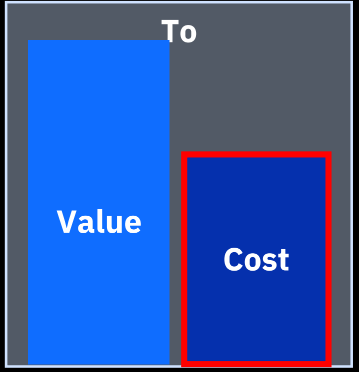
Operate:
- Post Go-live operations
- Handover / transition and sustain-mode
- Continues Improvement

IMPACT Content +

Impact
INDUSTRY SOLUTIONS

IBM

IMPACT Industry Solutions



The primary objectives of this program are to equip Evoqua with industry-leading business capabilities, simple and efficient processes, enabled by a centralized and integrated technology architecture

Watch the Evoqua IBM story here
https://youtu.be/mODHElQTyHQ

Pain Points

Needed a global template for future deployments, based on standard Best Practices and Processes

Improving business transparency and decision-making capabilities

Addressing controls challenges at business unit level and demonstrating improvement

Value

Strong delivery team: 50 IBMers on the ground

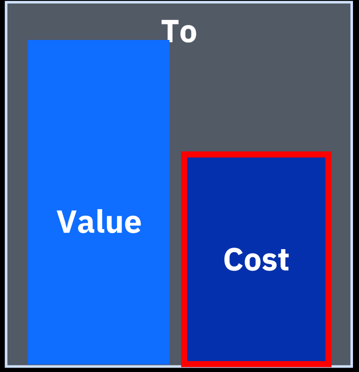
Rapid implementation program, leveraging the IBM S/4 1709 Cross Industry IMPACT Template. Went live in 6 months of project kickoff.

Leveraged the Ascend agile methodology with 3-week accelerated sprints, including Sprint 1 starting with the kickoff weeks and Fiori process demos on day 1

The functional scope included Record to Report, Procure to Pay, Order to Cash, Plan to Produce and Project Systems

IBM

IMPACT Industry Solutions



An integrated ERP delivering agility and improved operations to support an increasingly competitive and evolving business environment.

Pain Points

Duplicate system functionality across similar business processes.

Large investment in maintaining applications as opposed to adding new business functionality.

Current technology was not designed to support a dynamic business model.

Finding qualified resources to support aligning technologies.

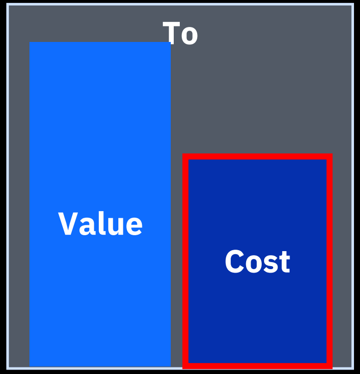
Value

Four value adds coming with S/4 and IBM's IMPACT solution that resonated with the client:

- Integrated Solutions
- Efficient Operations
- Increased Agility
- Standardized Functionality/Skills

TCI started with the IMPACT 1511 release and has since upgraded all the way to 1709 across two successful delivery phases.

Food & Beverage IMPACT + Model Company Case Study



Build a global digital foundation with harmonized business processes that unleash the power of the business and its employees through streamlined ways of working and advantaged capabilities to drive sustained growth.

Data Points

Moving from a mature ECC system to a greenfield S/4HANA solution leveraging both Model Company and IMPACT

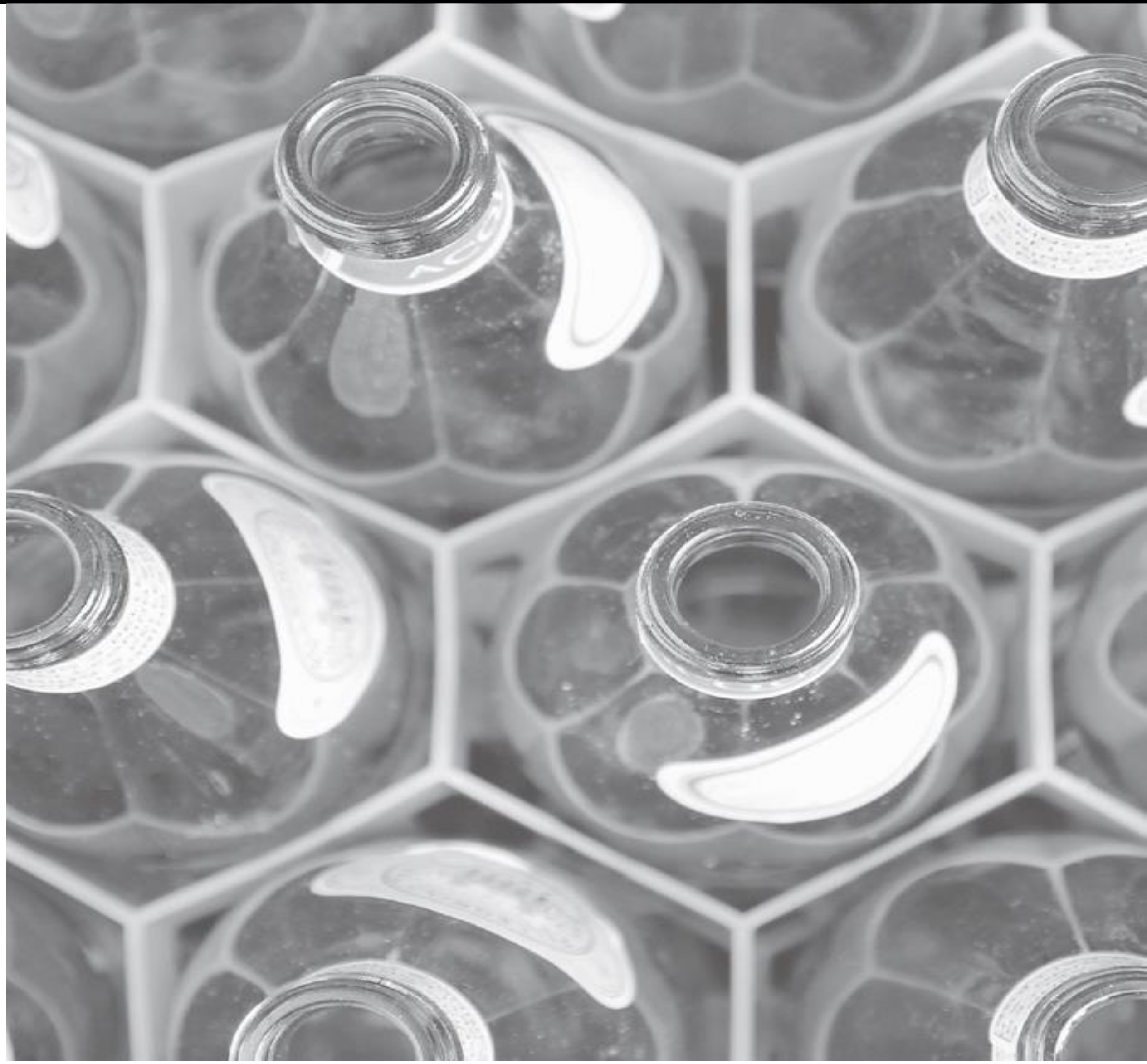
Needed a global solution with best practices covering not only the industry but also localizations for geographies

Value

Using SAP Model Company and IMPACT as a starting point provided the highest degree of industry scope fit

Improve upon existing business capabilities and address regulatory challenges

Get to a single version of the financial truth for all financial reporting



Use the IBM's S/4HANA Value Discovery

IBM's S/4HANA Value Discovery helps our clients explore a diverse set of topics and build the fact base they need to confidently move forward with their critical transformation decisions

HANA Impact Assessment	Identify the functional, technical, UI, testing, and training **impacts of upgrading** to SAP **S/4HANA**
Process Opportunity Assessment	Identify **opportunities** to adopt pre-packaged, **best-in-class business processes** unique to your industry
ERP Roadmap Evaluation	Explore ERP **roadmap options** and associated tradeoffs to select the **right path** for your business
Data and Analytics Strategy	Explore **accelerated approaches** to migrating your data and learn how to **get the most of this data** with analytics
Business Value Assessment	Identify the key **value drivers** and quantify the **business and financial benefits** of upgrading to S/4HANA
Innovation Strategy & Roadmap	Explore the opportunity to move **beyond the digital core** and use **innovation** to drive business value
Cost Estimate and Timeline	Identify the **estimated costs** associated with your S/4HANA transformation and the **timeline** for implementation
Change Management Strategy	Identify the **change management** strategy to help your organization ensure **effective transformation**