Business Transformation for Industries with SAP BTP: Public Sector

Chris Atkins, Vice President for Digital Government Transformation, SAP Public Sector

Abhijit Umbarkar, CEO, The Solutions Company (TSC)

Shresth Sethi, Analytics Lead, The Solutions Company (TSC)

Farooq Azam, Principal Data Scientist, SAP BTP Global Center of Excellence

Overall Agenda

- **BTP for Public Sector: Overview (Chris Atkins)**

- **Demo of a Public Sector BTP Industry Cloud Solution (Abhijit Umbarkar and Shresth Sethi)**

- **What's New for BTP in 2023? (Farooq Azam)**

Data Driven Government
Leveraging SAP's Business Technology Platform to Fulfill the Promise of Digital Government Transformation

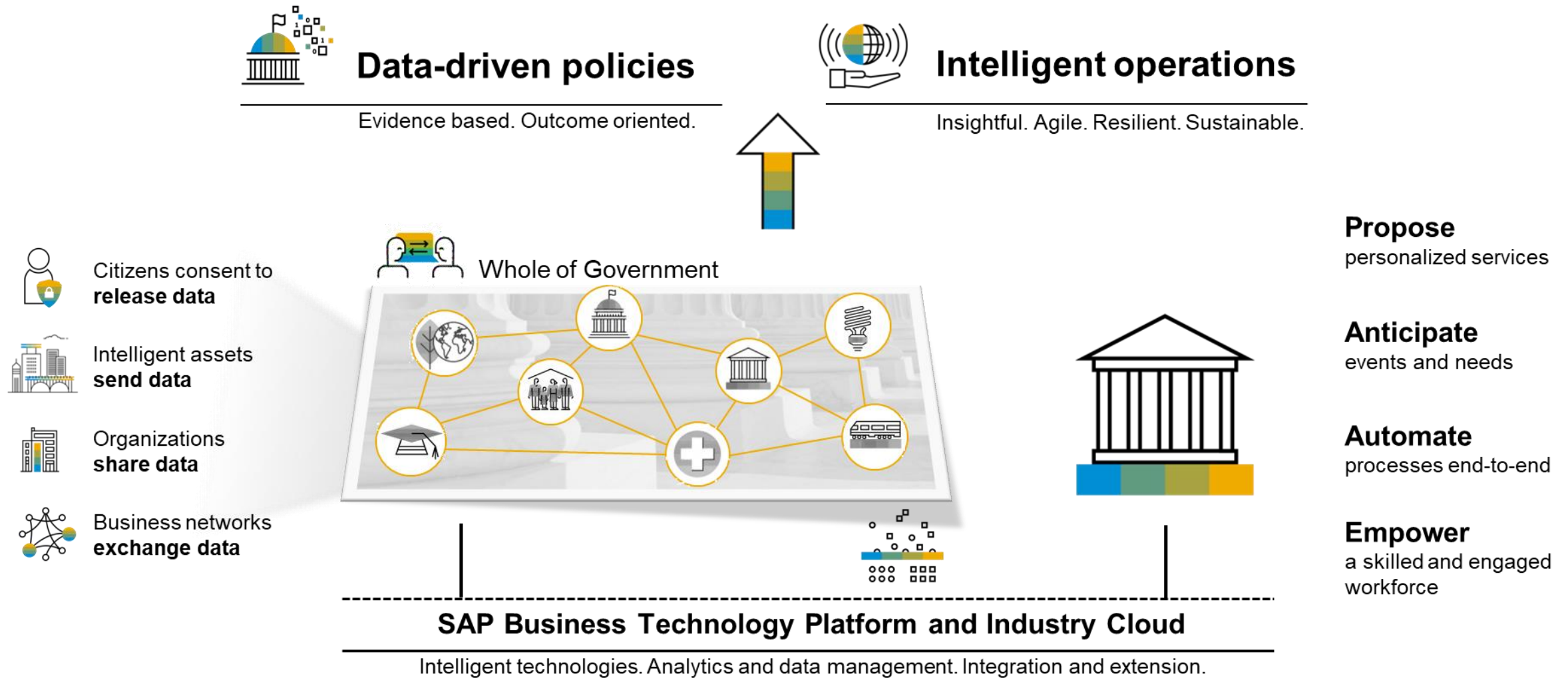**Chris Atkins, Global BTP Lead, SAP Public Sector**

Agenda

- **Digital Government Transformation Challenges in Government**

- **Digital Government Transformation with SAP**

- **SAP's Business Technology Platform: The Engine for Data-Driven Government**

Digital Transformation Challenges in Government
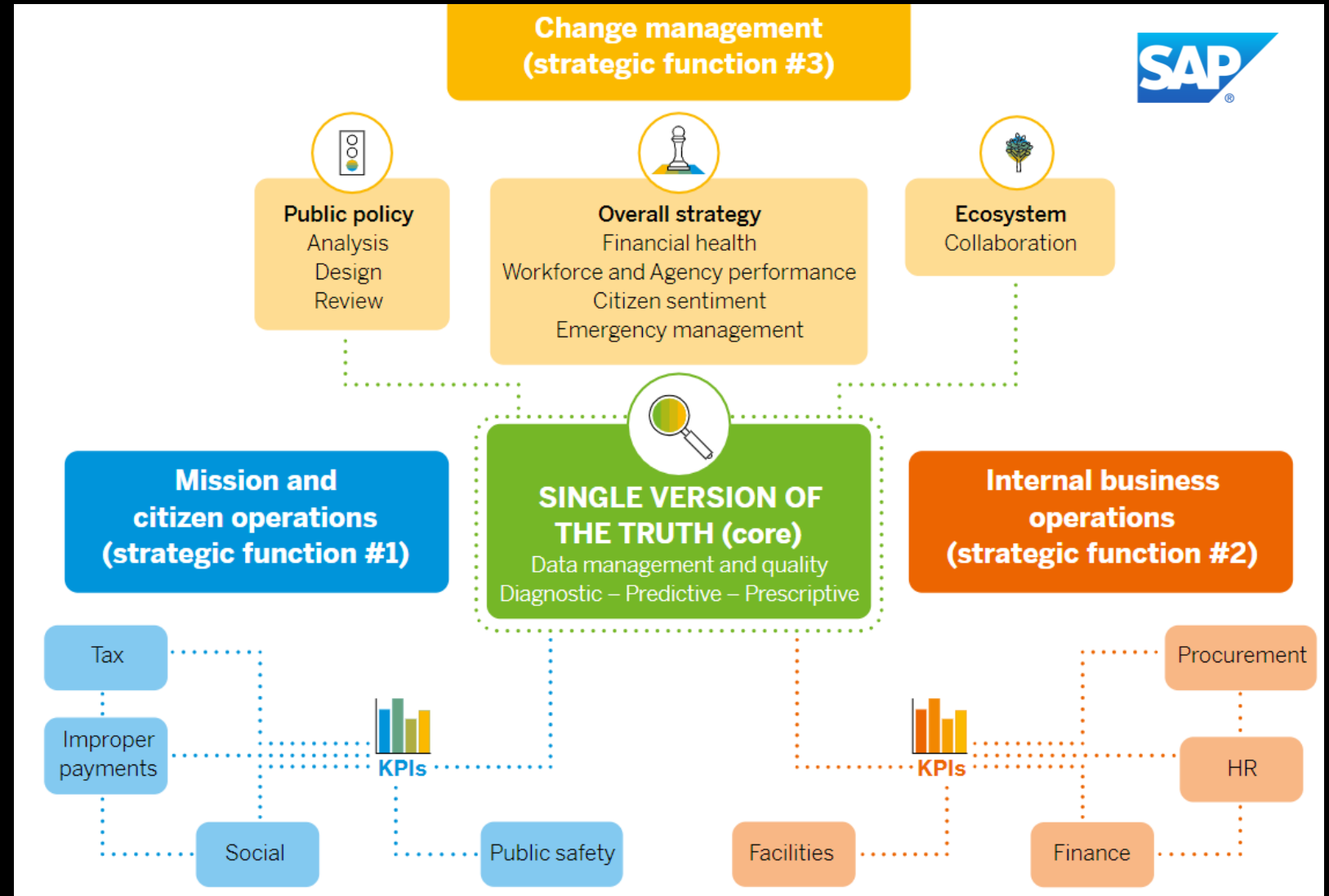
Data-driven policies
Evidence based. Outcome oriented.

Intelligent operations
Insightful. Agile. Resilient. Sustainable.

Citizens consent to **release data**

Intelligent assets **send data**

Organizations **share data**

Business networks **exchange data**

Whole of Government

Propose
personalized services

Anticipate
events and needs

Automate
processes end-to-end

Empower
a skilled and engaged workforce

SAP Business Technology Platform and Industry Cloud
Intelligent technologies. Analytics and data management. Integration and extension.

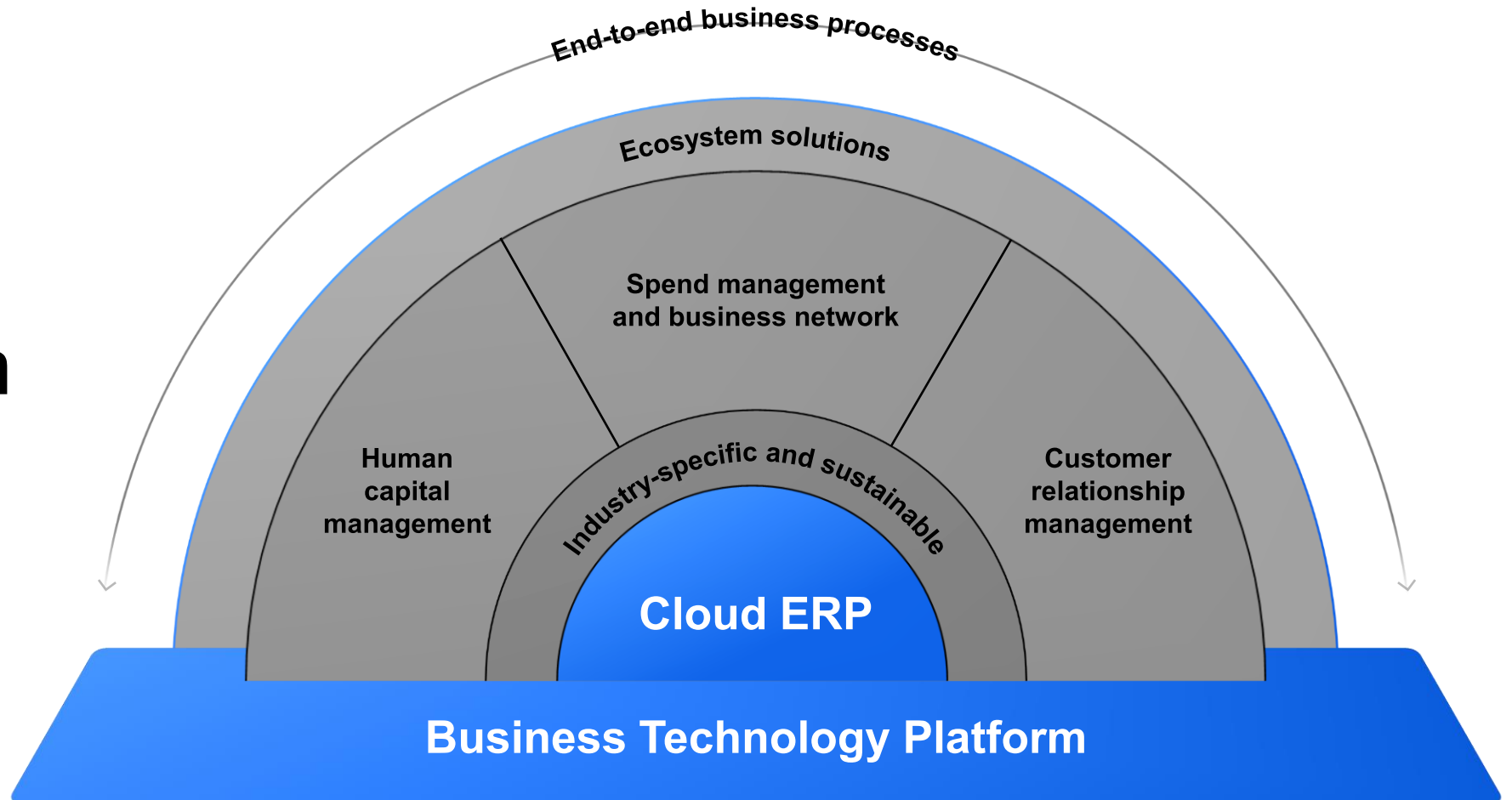# Using Data to Drive Better Decisions and Action: SAP's Data Driven Government Framework

Digital Transformation with SAP

Enable every enterprise to become an **intelligent, sustainable enterprise**

End-to-end business processes

Ecosystem solutions

Spend management and business network

Human capital management

Industry-specific and sustainable

Customer relationship management

Cloud ERP

Business Technology Platform

Build, manage, and deploy apps.
Connect data and business processes.
On a single, open, business-centric platform.

SAP BUSINESS TECHNOLOGY PLATFORM

Database and Data Management

- Run data anywhere
- Reduce data redundancy
- Connect and understand data
- Govern master data

Analytics

- Streamline analytics processes
- Embed BI and predictive planning
- Turn insights into action
- Visualize your decisions

Application Development and Integration

- Connect apps, data, and processes
- Simplify application development
- Expand with an open ecosystem
- Build new ways to access and interact with your data

Intelligent Technologies

- Access AI, data-driven cloud apps
- Embed intelligence into processes
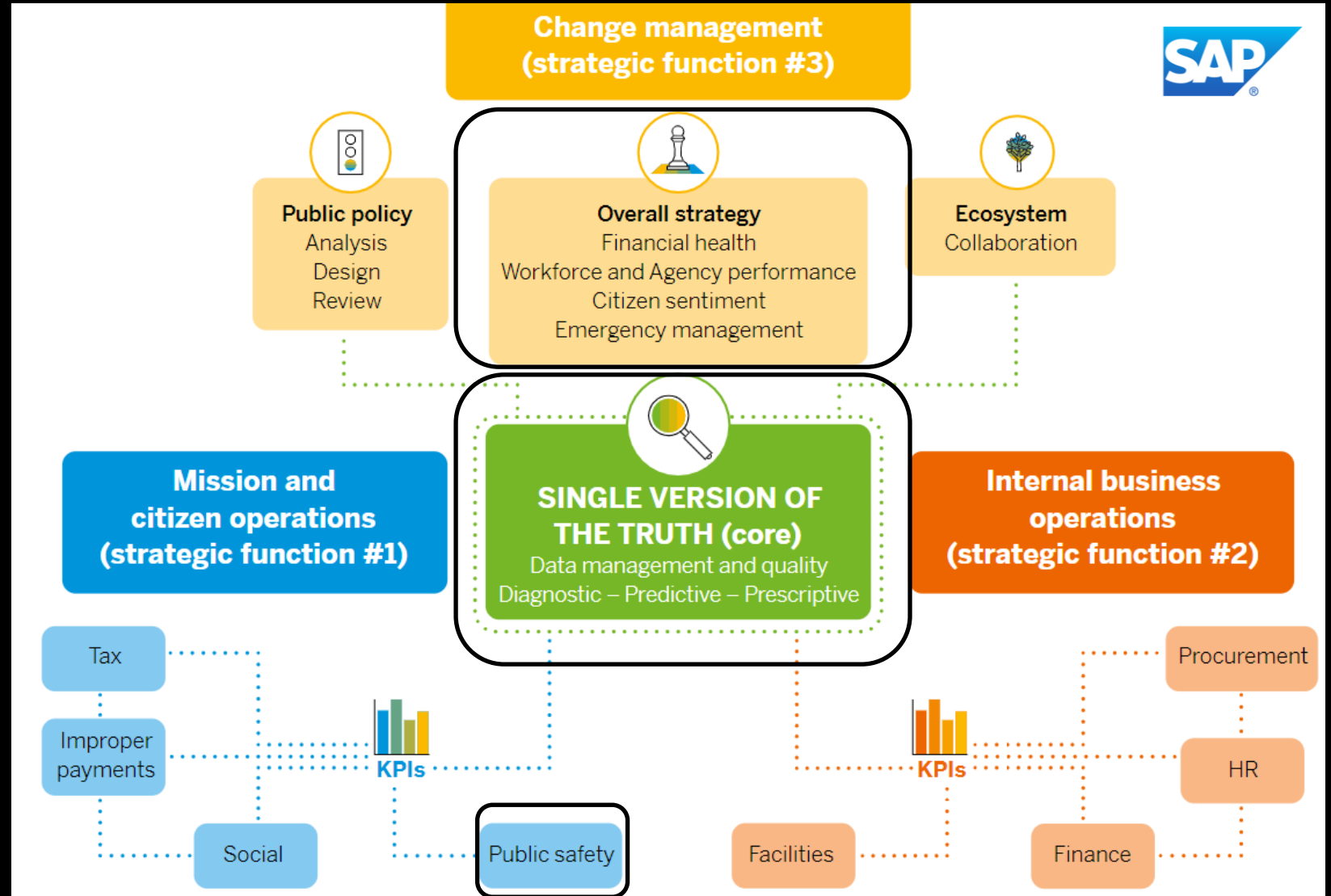- Drive end-to-end innovation
- Scale your platform

Public Sector Data Management Success: Brigada Carcarae

USE CASES

- [Intelligent Firefighting to Protect Flora and Fauna](#) (click link for SAP Innovation Award entry deck)

**Change management (strategic function #3)**

Public policy
Analysis
Design
Review

Overall strategy
Financial health
Workforce and Agency performance
Citizen sentiment
Emergency management

Ecosystem
Collaboration

Mission and citizen operations (strategic function #1)

SINGLE VERSION OF THE TRUTH (core)
Data management and quality
Diagnostic – Predictive – Prescriptive

Internal business operations (strategic function #2)

Tax

Improper payments

KPIs

Social

Public safety

Procurement

HR

KPIs

Facilities

Finance

Public Sector Data Management Success: Commonwealth of Pennsylvania

USE CASES

- [Public Spend and Audit Risk Management](#) (click link for SAP Innovation Award entry deck)
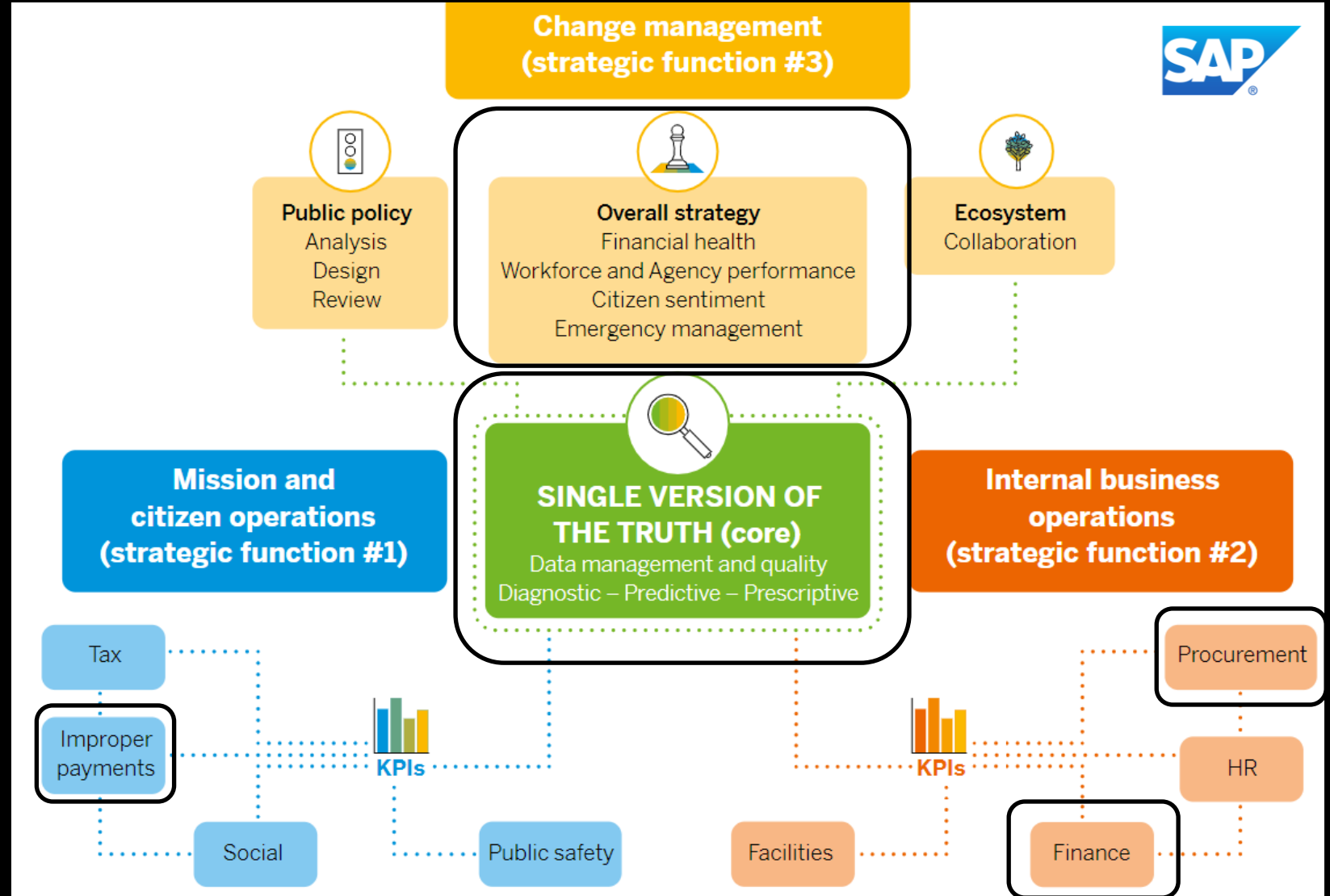
"Dashboards Are Not Enough"
SAP Analytics Cloud is the analytics platform for data-driven government

Business Intelligence
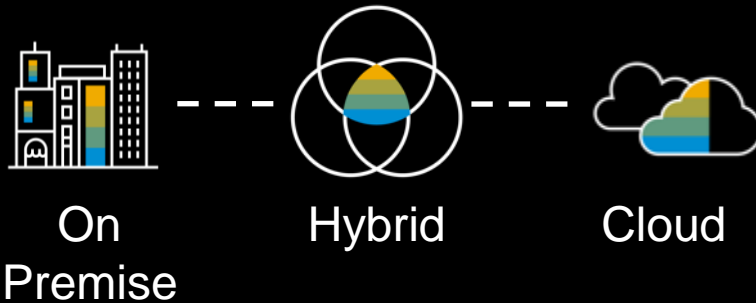
Enterprise Planning

Augmented Analytics

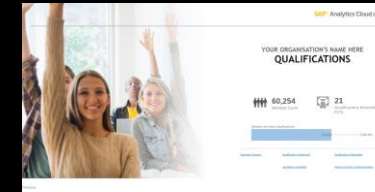| Digital Boardroom	Analytics Hub	Analytics Designer	Mobile

On Premise

Hybrid

Cloud

Public Sector Analytics Content Available

1. Volunteer Workforce Management

2. Public Sector Management: KPI Reporting

3. Public Sector Management: Planning

4. Smart Budgeting & Forecasting (Partner: Sierra Digital)

5. Spend & Audit Risk Management (Partner: The Solutions Company)

Public Sector Analytics Success: Ministry of Finance (Serbia)

New for 2023!

USE CASES

- [Government-wide Cloud-based Workforce Expenditure Planning and Budgeting](#) (click link for Innovation Award entry deck)
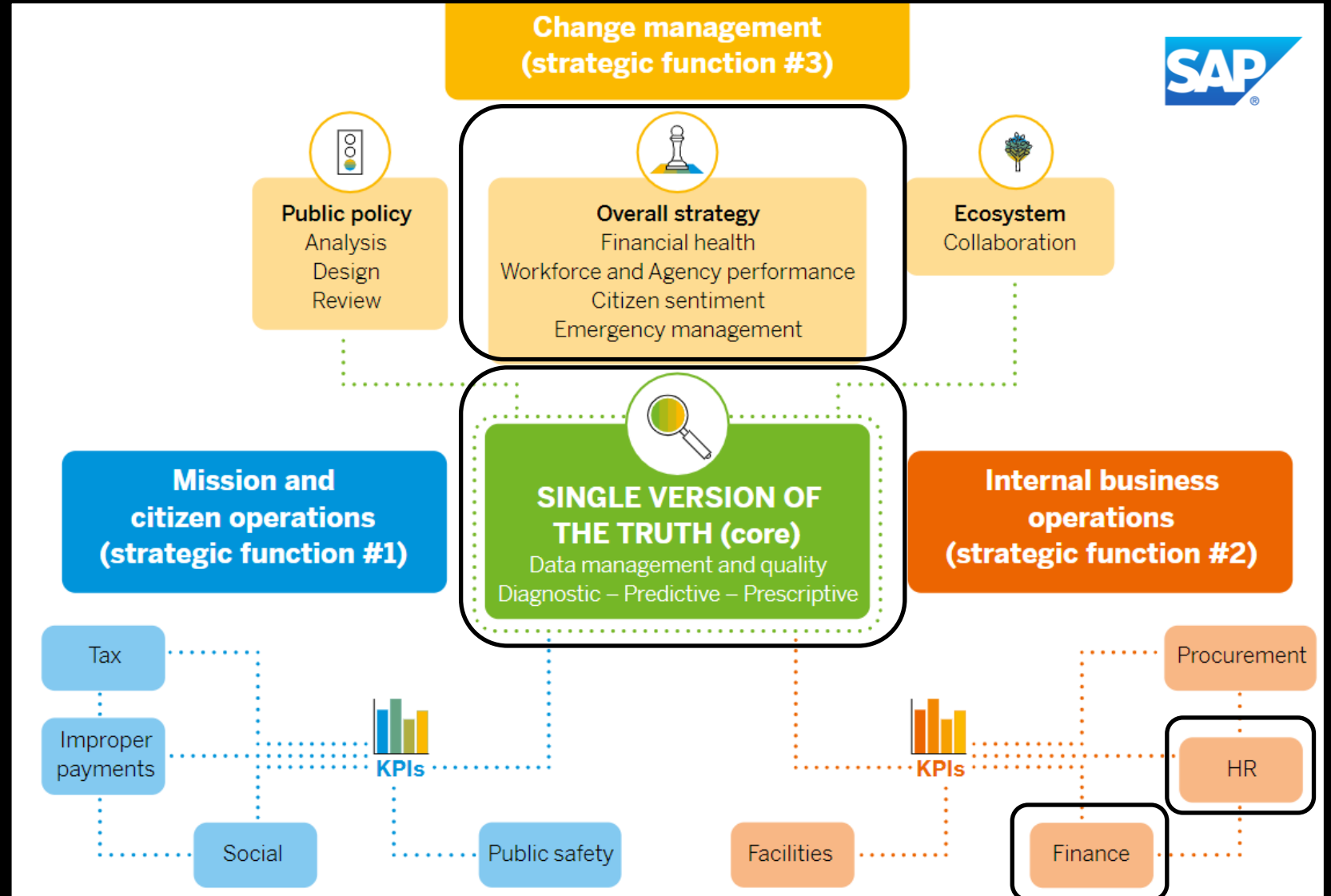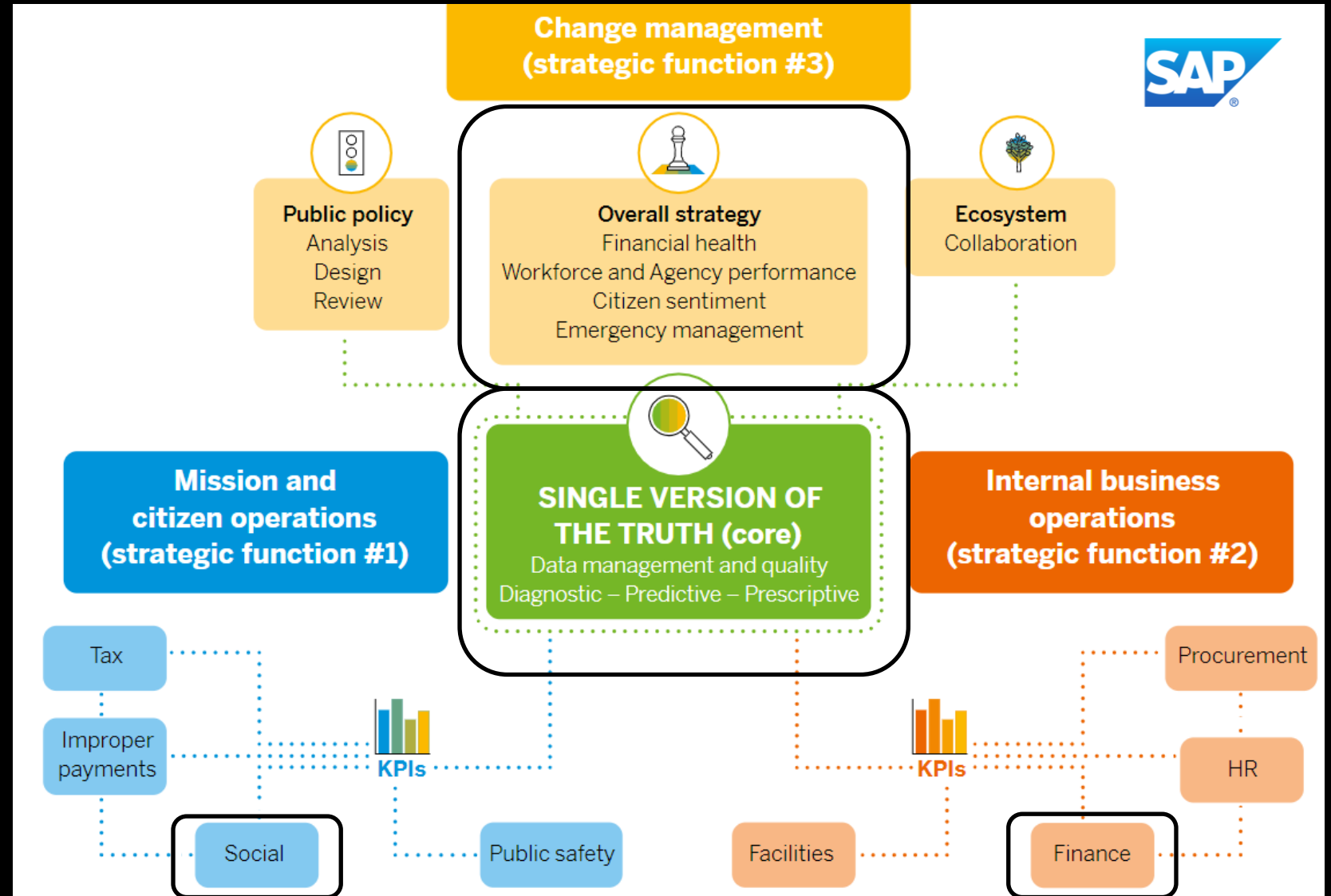
Public Sector App Dev & Extension Success: Christchurch City Council

New for 2023!

USE CASES

- [A Journey of Transformation and Citizen Engagement](#) (click link SAP Innovation Award entry deck)
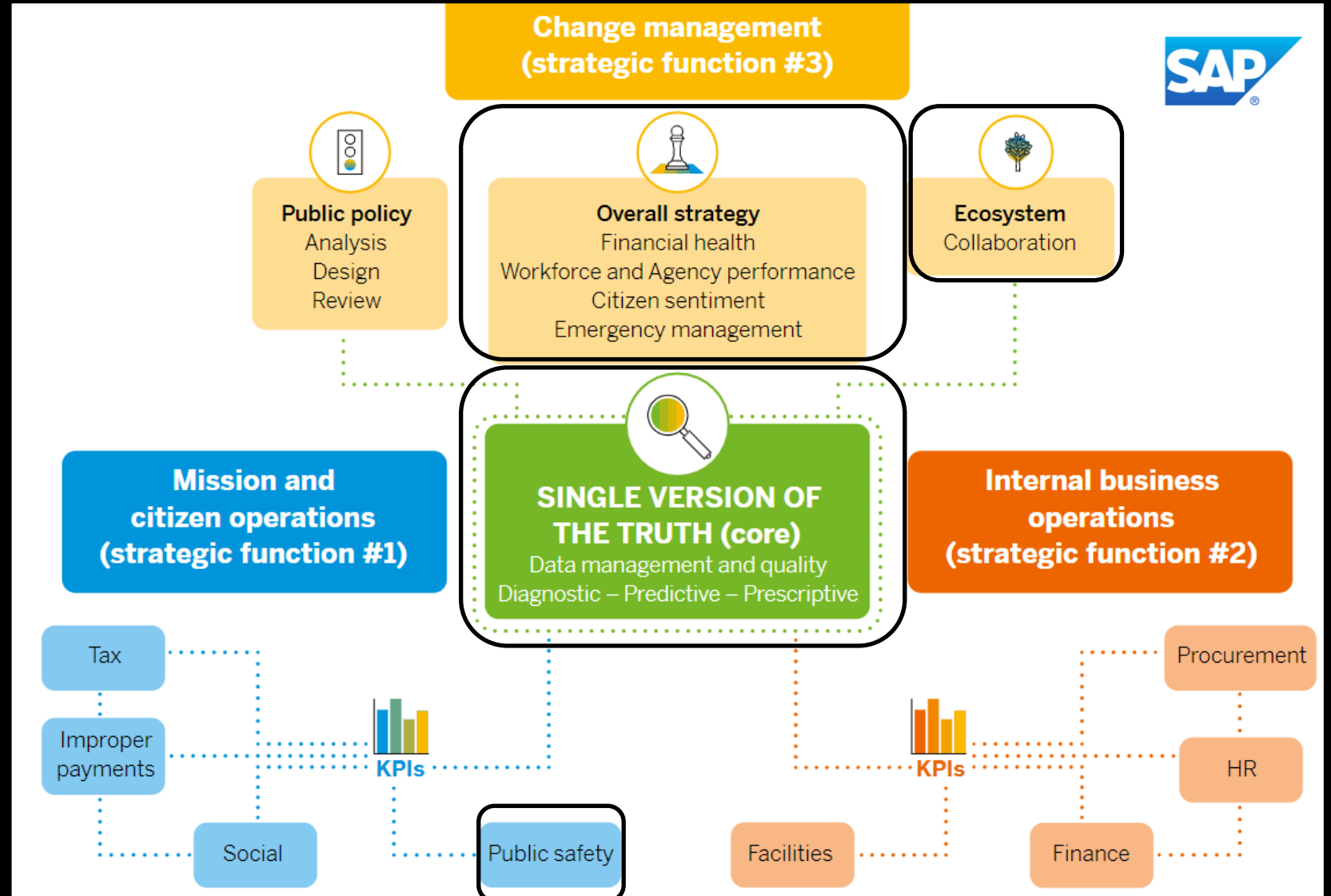
Data Ecosystem Success: Costain (UK)

USE CASES

▪ [Accelerating Net Zero UK Infrastructure through SAP's Business Technology Platform](link) (click link for SAP Innovation Award Entry)

Change management (strategic function #3)

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Social

Public safety

KPIs

Procurement

HR

Facilities

Finance

16

SAP's Business Technology Platform: The Engine for Data-Driven Government

The Business Technology Platform is a standard part of RISE with SAP

WHAT is RISE with SAP

RISE with SAP is a holistic offering that enables on-your-terms and on-your-timeline transformation to an intelligent enterprise. Complexity is significantly reduced through:

- A simplified business transformation engagement
- A guided journey through your business transformation
- Faster time to premier value
- Flexibility that you need without a high up-front investment

WHAT are the components of RISE with SAP

1. SAP S/4 HANA Cloud

2. Business Process Intelligence

3. Technology Cloud Credits

4. SAP Business Network Stater Pack

5. Embedded Tools and Services

WHY RISE with SAP

Address the multi-faceted challenges that prohibit the ability of Public Sector Organizations to fully unlock the value of the Intelligent Enterprise

OUTCOMES Enabled by RISE with SAP

A

Enable Value Creation with Differentiating Business Capabilities

Industry best and next practices that create new revenue streams and maximize existing ones, improve assets efficiency, enhance productivity and allow for running sustainably

B

Mitigate Risk, Reduce IT Cost and Accelerate Time to Value with Cloud Delivery Capabilities

Capabilities that maximize transformation readiness, simplify consumption through "as-a-service experience", ensure operational resilience, reduce overall TCO and deliver the required level of information and data security

Digital Government Transformation Has Flexible Pricing Through The Cloud Platform Enterprise Agreement (CPEA)

CPEA

Configure and scale cloud services with agility by accessing eligible services instantly.

- With a Cloud Platform Enterprise Agreement (CPEA) in place, procure and use cloud credits for eligible services
- Prepay consumption of services with cloud credits
- Pay in advance when cloud credits are used up
- Add credits to your account multiple times during consumption period
- Use estimator tool

Flexibility

Buy → Pay

Evaluate Discover → Control

Learn → Develop Use

Flexibility
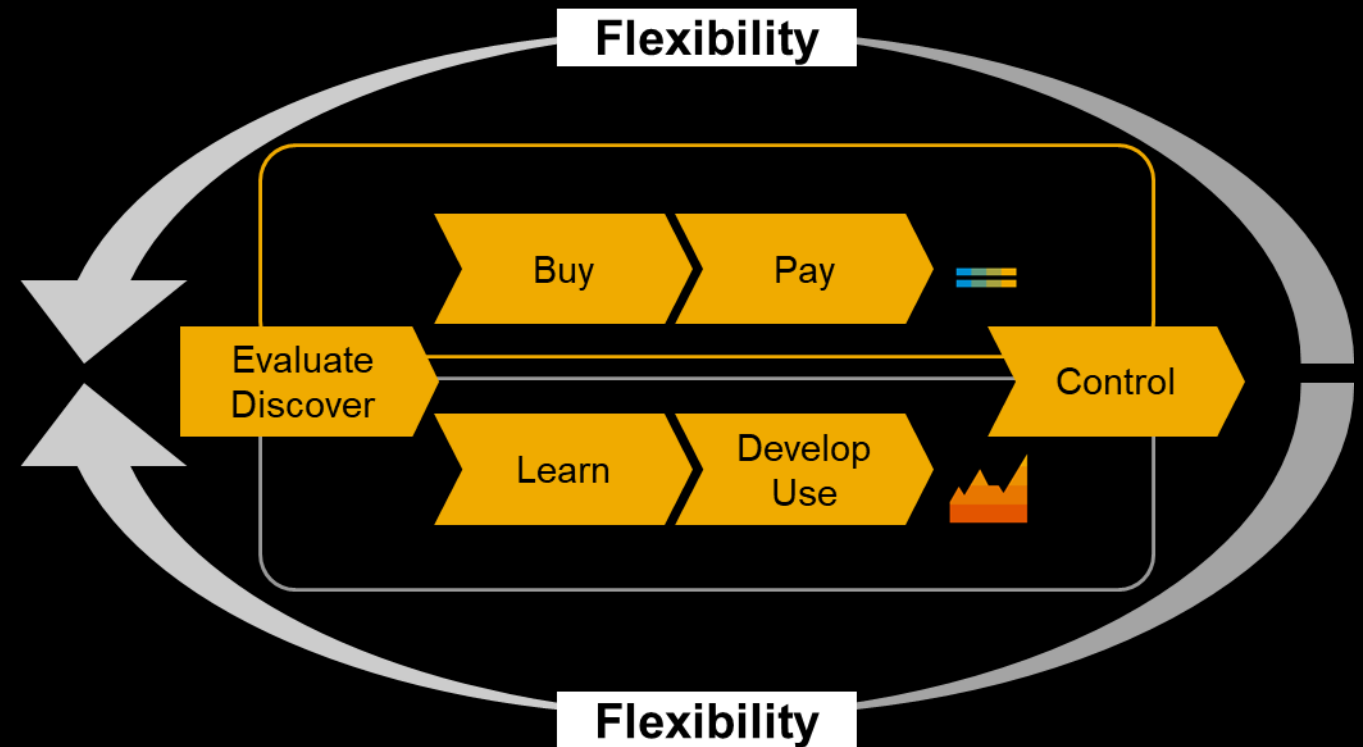
SAP BTP – Cloud Services Available Under CPEA[1]/PAYGO[2]

Q3/2022 – See also [Service Catalog](#) (Please Find More Information of Removed Services There)

- ABAP Environment
- Advanced Event Mesh (NEW)
- Agent Activation for Dynatrace
- Agentry
- Alert Notification
- Application Autoscaler
- Application Logging
- Audit Log Service
- Authorization and Trust Management
- Automation Pilot
- Bandwidth
- Business Application Studio
- Business Entity Recognition
- Cloud Foundry Runtime
- Cloud Integration Automation
- Cloud Integration for Data Services
- Cloud Management Service
- Cloud Portal Service
- Cloud Transport Management
- Connectivity Service
- Content Agent Service

- Continuous Int. and Delivery
- Conversational AI
- Credential Store
- Custom Domain
- Data Attribute Recommendation
- Data Privacy Integration
- Data Quality Services
- Date and Time (BETA)
- Destination
- Data Retention Manager
- Document Classification Service
- Document Information Extraction
- Document Management, Appl, Option
- Document Management, Int., Option
- Event Mesh
- Feature Flag Service
- Forms Service By Adobe
- HTML5 Appl. Repository Service
- IBAN Service (BETA)
- Identity Authentication
- Identity Provisioning

- Integration Suite
- Intelligent Intercompany Reconciliation (NEW)
- Intelligent Situation Automation (NEW)
- Job Scheduler
- Keystore
- Kyma Runtime
- Launchpad Service
- Market Rates, Bring Your Own Rates
- Market Rates, Refinitiv
- Master Data Integration
- Mobile Services
- Monitoring
- OAuth 2.0
- Object Store Service
- Personal Data Manager
- Personalized Recommendation (NEW)

- PostgreSQL, hyperscaler option
- Print Service
- Private Link Service (NEW)
- Process Automation (NEW)
- Redis on SAP BTP, hyperscaler option
- Responsibility Management
- SaaS Provisioning Service
- SAP AI Core (NEW)
- SAP AI Launchpad (NEW)
- SAP Analytics Cloud, embedded Edition
- SAP AppGyver (NEW)
- SAP ASE Service
- SAP Cloud ALM, memory extension
- SAP Data Intelligence
- SAP Data Retention Manager
- SAP Data Warehouse Cloud (NEW)
- SAP Graph

- SAP HANA Cloud
- SAP HANA Service
- SAP HANA Spatial Service
- SAP Intelligent RPA
- SAP IoT (R)
- SAP Solution Lifecycle Management service
- SAP Task Center (NEW)
- SAP Translation Hub
- SAP Work Zone
- Service Manager
- Service Ticket Intelligence
- UI Flexibility Key Users
- Usage Data Management
- Web IDE Full-Stack
- Work Calendar (BETA)
- Workflow Management

(R) = scheduled to be retired as of January 31, 2023

1: see definition Commercial Models
2: Like CPEA, but w/o a pre-commitment

Resources

Chris Atkins
Vice President – Digital Government
Transformation
SAP Public Services
+1 317 385-1893
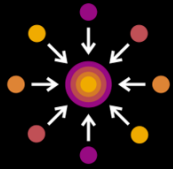chris.atkins@sap.com

SAP's Data-Driven Government Point of View

https://assets.cdn.sap.com/sapcom/docs/2020/05/b007ab0c-9a7d-0010-87a3-c30de2ffd8ff.pdf

THE BEST RUN **SAP**

The Solution:
Public Spend and Audit Risk Management

Business Challenges

Spend Analytics

Missing tools to turn Data into Information & Insight to Action

Fragmented data leading to low transparency & confidence with no single version of truth

Lack of full visibility of the Spend, trends, patterns and allocations

Inefficient and time-consuming reporting leading to delays in key decision making

Audit Risk Management

Action

Investigation

High volume of complex transactions makes the current manual process inefficient and unscalable and reactive

No early anomaly detection or outlier analysis available

No data driven guidance and global view to focus on audit efforts

Reduced audit staff and higher cost of contracted audit services

Business Benefit – Spend Analytics
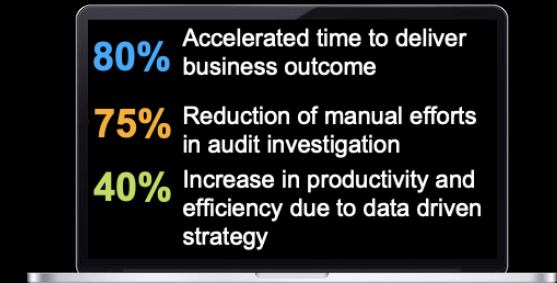## Data to Insights – Understand What Drives Your Enterprise Spend

- **Deliver Enterprise-wide Spend analytics** leveraging Public Sector Industry KPIs and visualize interesting patterns in your data. Explain anything with a few clicks

- **Forecasting** capabilities to predict upcoming spend for different KPI's e.g., future department spend, vendor spend, etc.

- **Detect influencing factors** and Discover the anomalies, patterns and trends for Expenses and Vendors and take corrective actions

- **Analyze geospatial** spending patterns to identify the grants and contract spend by zip codes

- **Real-time** Ad-hoc Self-service reporting capabilities allowing analysts to drive the root cause of the issues

Business Benefit – Audit Risk Management
Application to guard enterprise integrity, mitigate risk of fraud and noncompliance

- **Trend Analysis** – Identifying unusual transaction amounts using trends and patterns in which they typically appear for a particular account or vendor.

- **Outlier anomaly detection in transactions and enhanced protection** -Detection capabilities to help identify anomalous transactions early and take necessary action to prevent financial losses and suspicious activities

- **Efficient Screening** – Predictive methods to optimize risk analysis and prevent future recurrences with less effort & cost and improved productivity

- **Accuracy** – Use of machine learning models to help auditors with detailed investigation by minimizing false positive scenarios which enables increased accuracy of detection leading to proactive audits.

- **Seamless Integration** – Harness in-memory computing using SAP HANA and seamlessly integrate with SAP applications

80% Accelerated time to deliver business outcome

75% Reduction of manual efforts in audit investigation

40% Increase in productivity and efficiency due to data driven strategy
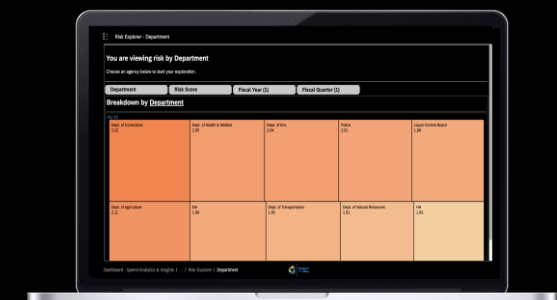
Business Benefit – PCard Analytics
=================================

Application to analyze Fraud transactions, Split Payments, Blocked MCC Codes, and Non-compliant transactions

- **Transactions Overview** – Overview of PCard transactions over time, department, and account holders

- **Features Overview** - Identifying transactions made on E-commerce, Airlines, Lodging, International, overview and trend over time with amount and number of transactions

- **Usage Patterns** – Detection of transactions that are compliant or non-compliant to enterprise policies e.g., exceeding credit limit, >10k transactions, etc.

- **Unusual Transactions and Spend patterns** – transactions made by Inactive, Terminated, Voluntarily closed, or Lost/Stolen cards over the years

- **Fraud Detection** – predictive methods to identify fraudulent cards and future usage, analysis on trends and patterns for these cards

- API integration capabilities for combining Non-SAP data with SAP data using **SAP BTP**

Business Benefit – Vendor Analytics

Application to analyze payments to One Time Vendors, payments to Vendors with frequent changes of payment method and address, and Vendor spend patterns

- **Vendor Spend Overview** – Overview of vendor transactions over time, spend categories, and expenses. Key KPI's for most used vendors or one-time vendors by each department

- **Outlier Analysis** over a time period for all vendors across expense types and departments

- **Non – Compliant OTV** – Identify all OTV's where the business defined purchase limit is exceeded for an individual transaction

- **Detection of changes to the details of vendors e.g.,** payment details/ address changes, etc. and identifying vendor change trends/patterns and outlier vendors over the years

- **Promptly identify High-risk vendors using** international vendor data

Demo

SPEND & AUDIT RISK MANAGEMENT AVAILABLE AT SAP STORE

Link: SAP App Store - TSC Application

BTP Value Areas and what is new in SAP BTP

Customer Success Across SAP BTP Solutions and Value Areas

Database Management

100x

Reduction in sales query execution time

Integration Solutions

66%

Reduction in administrative work

Data, Analytics, & Planning

200%

Increase in annual production capacity

Application Development

80%

Reduction in new customer onboarding time

Artificial Intelligence

46%

Improvements in accounts receivable productivity

Sustainability Missions

>95%

Use of standard processes with zero core code modifications

Lower Total Cost of Ownership (TCO)

66%

Lower costs in IT infrastructure

Process Automation

91%

Of incoming emails automated

* Success metrics from SAP customer stories

SAP Build
Create and augment enterprise apps, automate processes, and design business sites, all visually

Compose apps
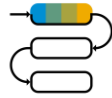
Automate processes

Design business sites
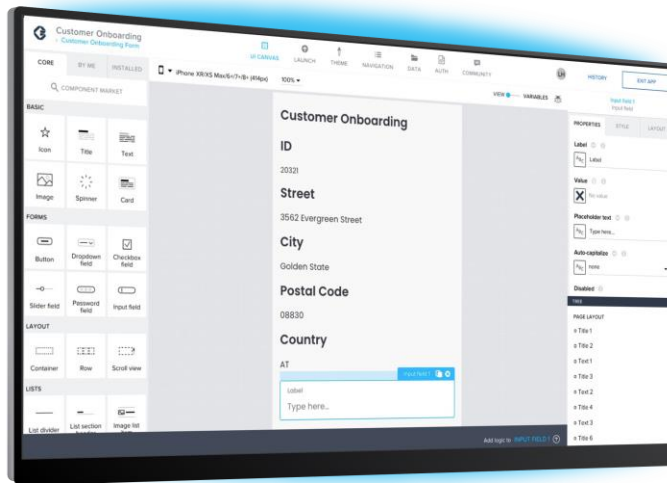
SAP Build Apps
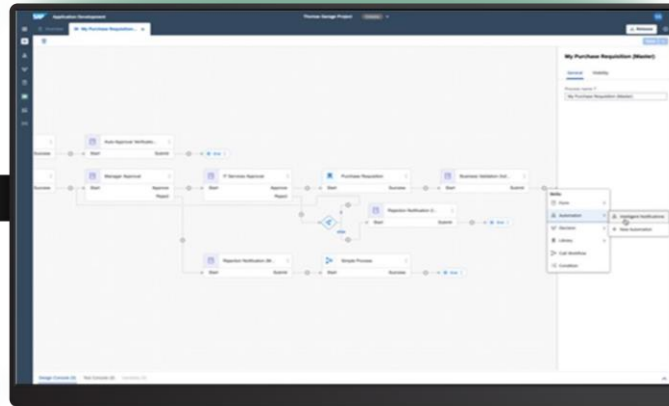
SAP Build Process Automation
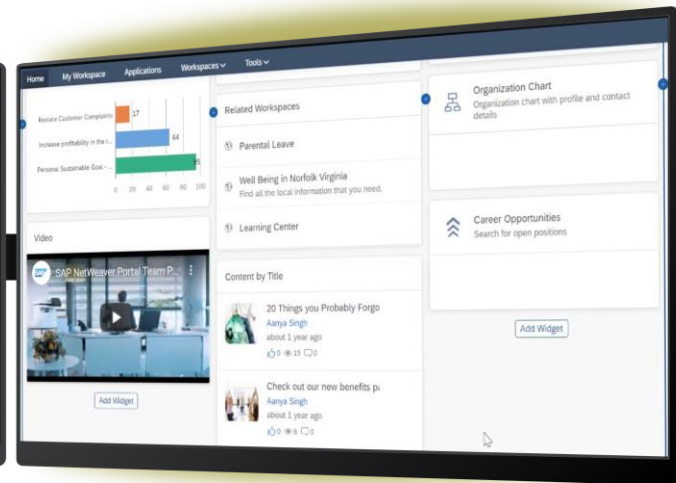
SAP Build Work Zone

Build Visually
Integrate Seamlessly
Collaborate Securely

SAP Business Technology Platform

Confidential

SAP Build Apps

Build enterprise-grade apps with an intuitive visual drag-and-drop experience, regardless of your skill level

SAP Build Apps

SAP Build Process Automation

SAP & 3rd Party

Stand-alone & SAP App Extensions	Extensive UI Component: Theming, Layout, Fiori, native web	Simplified Data Modelling	Formulas for Data Transformation REST and OData API Connectivity
Development continuum Citizen Dev → Pro Dev	Multi-channel Support: Mobile & Web	Visual process Management & Business Logic	Enterprise Grade DevOps governance on BTP

SAP Business Application Studio

SAP Build Work Zone

BTP Authentication

SAP Build Process Automation

Capabilities: citizen automation and workflows for line-of-business builders

SAP Build Apps

SAP Signavio

SAP & 3rd Party

SAP Build Process Automation

Processes & Workflows

Forms & Multi-Step Approvals

Task Automation

SAP Build Work Zone

Business Rules & Decisions

Pre-Built Content

Document Understanding

Process Visibility & Flexibility

SAP Business Application Studio
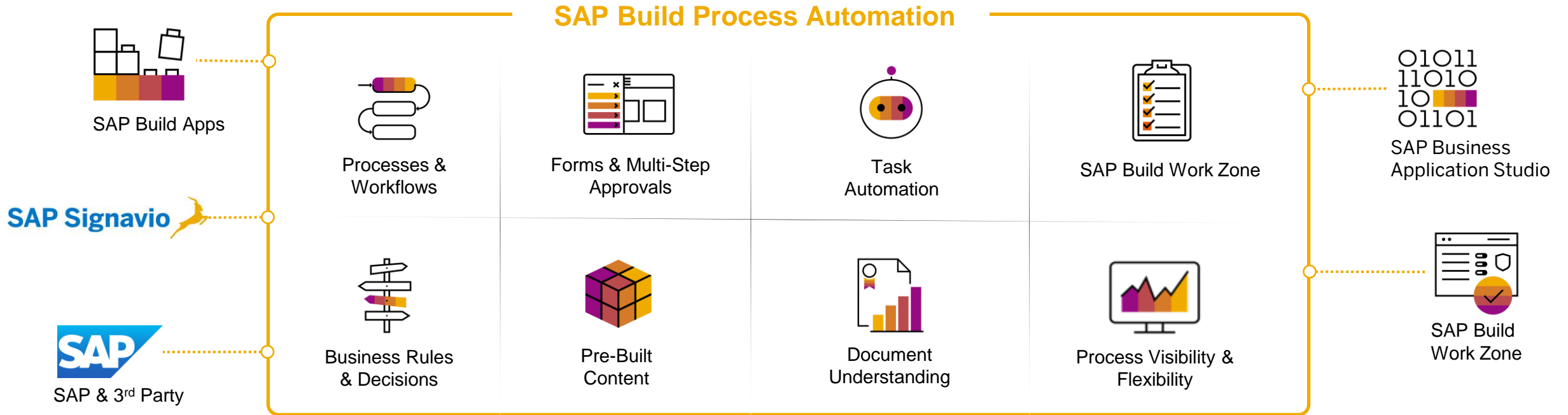
SAP Build Work Zone

SAP Build Work Zone

Improving productivity by seamless digital experiences

SAP Build Apps

SAP Build Process Automation

SAP and third parties

SAP Build Work Zone

Intuitive page building and content authoring

Engaging, interactive workspaces

(Web) Content & Knowledge Management

Context-aware UI cards & content widgets

Secure, central access to apps, tasks and processes

Personalized and role-based user experience

Flexible customization & extensibility

Business content from SAP solutions + third-party integration

Advanced Edition

Standard Edition

Integration Suite

For business and professional developer
With low-code and pro-code tools

LOW-CODE

SAP Build Apps

Create **enterprise applications** without writing code

SAP Build Process Automation

Automate **workflow processes and tasks** with simple drag-and-drop and AI capabilities

SAP Build Work Zone

Design engaging **business sites** to get work done quickly across all your enterprise applications

PRO-CODE

ABAP Environment

Leverage **ABAP know-how** to develop and run ABAP applications in the cloud

SAP Business Application Studio

Boost **developer productivity** using IDE, tools, and frameworks optimized for Java, Java Script

Cloud Native

Build **highly scalable**, resilient and manageable applications

SAP Datasphere

Unleash the power of business data

Data needs context for authoritative decision-making

Innovation has happened in silos

Data, especially metadata, has been removed from its context

There's been a fundamental error—focusing solely on technology rather than the data

Confidential

Why a business data fabric

Self-service access to trusted data breeds agility and accelerated, accurate decisions

Comprehensive data governance assures every stakeholder that private data stays private

Real-time data, infused throughout your data architecture helps business users, partners, and employees make in-the-moment improvements

A **simplified data landscape** reduces costs and technical debt while maximizing current investments
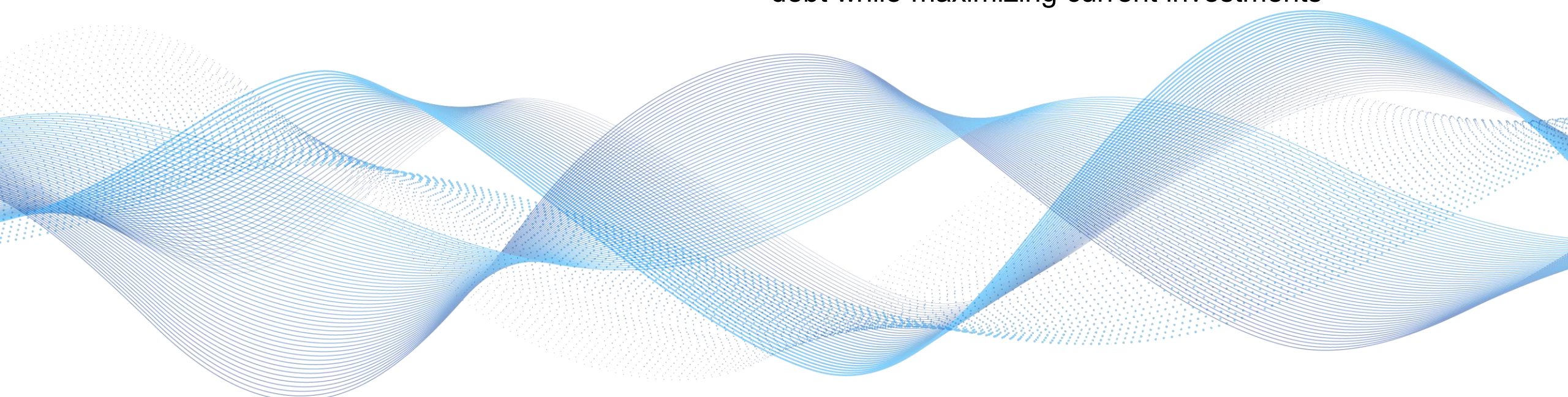
SAP Datasphere is the foundation for a business data fabric architecture

Data consumers

Planning and analytics   Intelligent data apps   Data science

SAP Datasphere running in SAP BTP

Security

Access control

Availability

Self-service data access | Virtual data products

Data discovery | Business content, data marketplace, recommendations

Orchestration | Data transformation and data ops

Processing and persistency | Warehousing, business semantics (analytic/relational models), knowledge graph

Data governance | Metadata management, catalog, lineage, privacy, data quality

Data ingestion | Data replication, data federation, real-time data, application integration

SAP and non-SAP data

| Applications | On-premises Data Warehouses | Cloud Data Warehouses and Lakehouses | Relational Databases | Unstructured/ Semi-structured Data |

Together with our open data partners

Data consumers

Planning and analytics   Intelligent data apps   Data science

SAP Datasphere running SAP BTP

Security

Access control

Availability

databricks

CONFLUENT

Collibra

DataRobot

SAP and non-SAP data

Applications | On-premises Data Warehouses | Cloud Data Warehouses and Lakehouses | Relational Databases | Unstructured/ Semi-structured Data
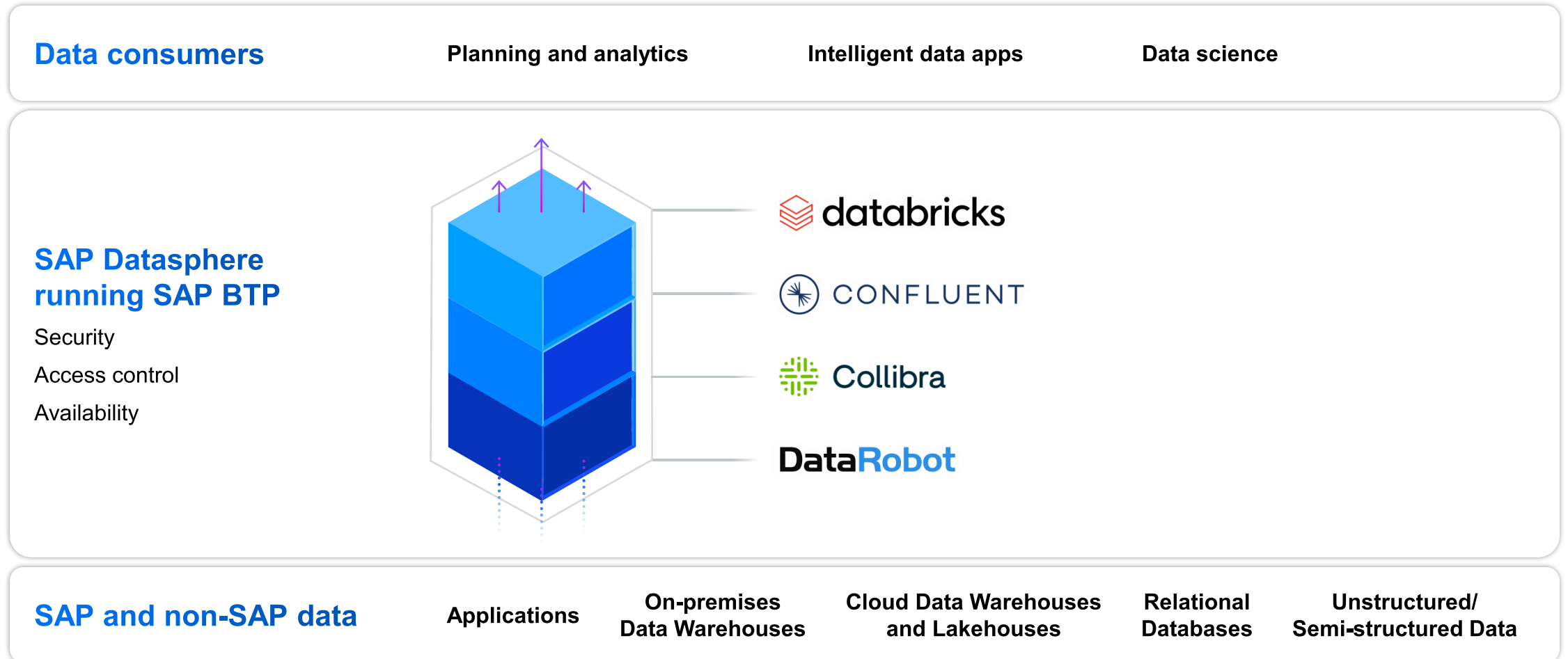
Unleash the power of business data with SAP Datasphere

Access authoritative data

Deliver business data in its business context

Make it effortless to model your business

Ensure governance throughout the data lifecycle
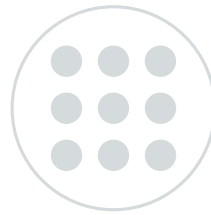
Enrich all data projects

Virtually access or physically store data from anywhere

Leverage trusted data partners and securely share data across the organization

Integrate with industry-leading data and AI platforms to capitalize on data investments

Simplify the data landscape

Innovate across hybrid architectures leveraging existing SAP models

Enable self-service data access

Leverage existing SAP BW models and transformations to innovate in the cloud

Access authoritative data

Ensure governance throughout the data lifecycle

Discover, manage, and govern all data with the SAP Datasphere Catalog

Manage data governance from a central point

Establish and share governance rules across systems

Data cataloging
- Data discovery and exploration
- Data profiling
- Data lineage

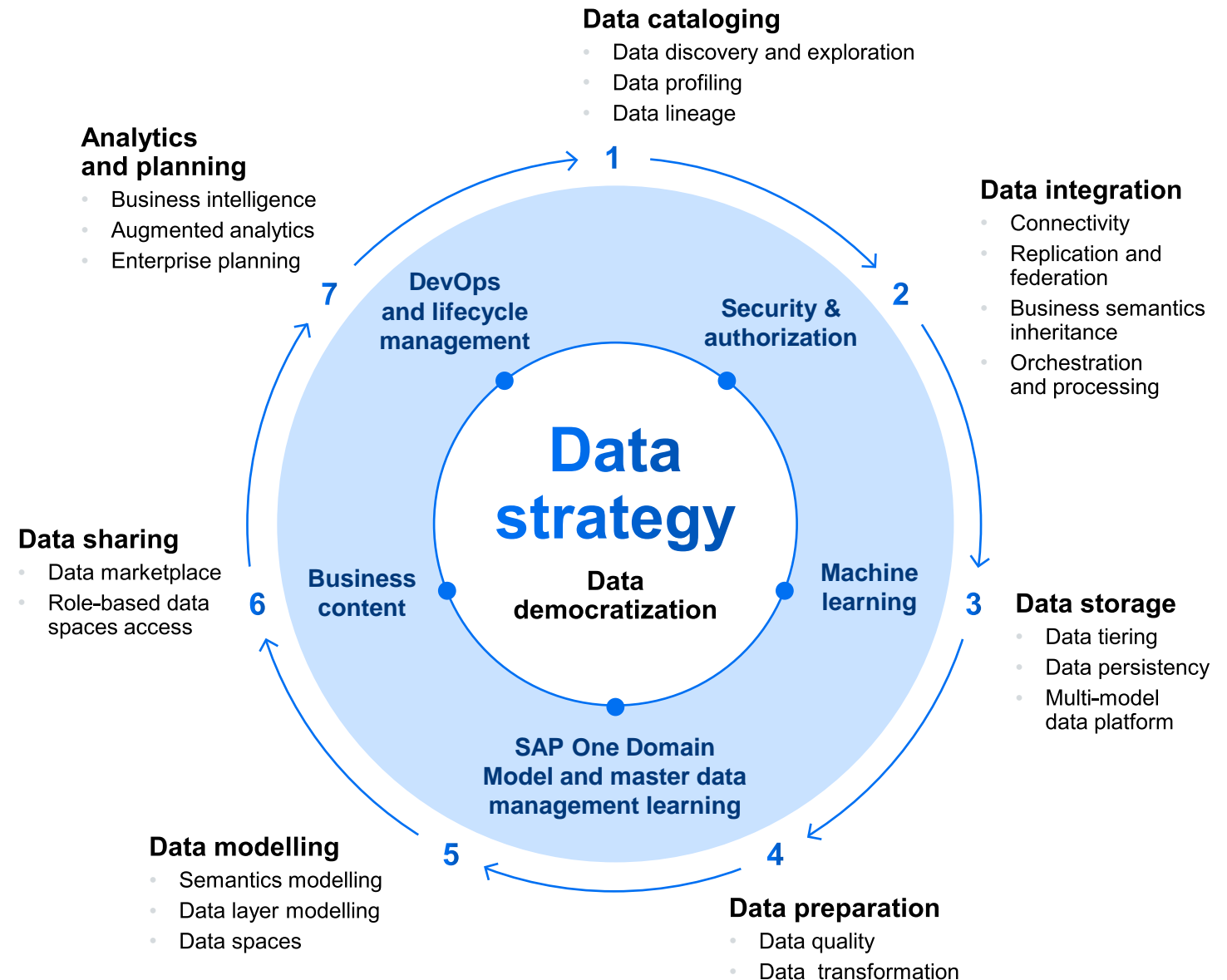**Analytics and planning**
- Business intelligence
- Augmented analytics
- Enterprise planning

Data integration
- Connectivity
- Replication and federation
- Business semantics inheritance
- Orchestration and processing

1
7
2

DevOps and lifecycle management

Security & authorization

Data strategy

Data democratization

Data sharing
- Data marketplace
- Role-based data spaces access

Business content

Machine learning

6

3

Data storage
- Data tiering
- Data persistency
- Multi-model data platform

SAP One Domain Model and master data management learning

Data modelling
- Semantics modelling
- Data layer modelling
- Data spaces

5

4

Data preparation
- Data quality
- Data transformation

Enrich all data projects

Integrate with industry-leading data and AI platforms to capitalize on data investments

Bring SAP and non-SAP data together leveraging tailored integration with solutions from open data ecosystem partners.

Reduce integration complexity

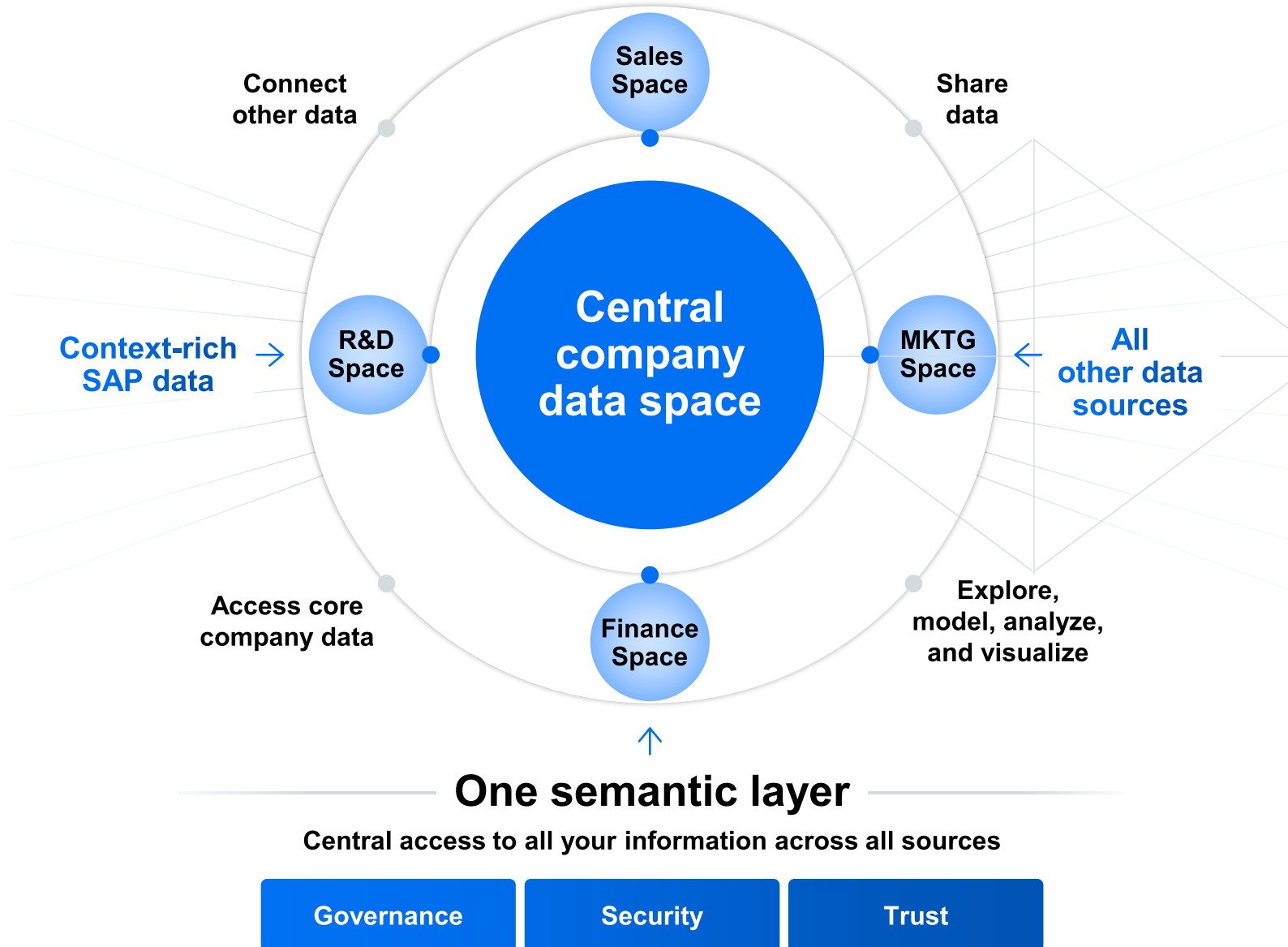Get an integrated view of information regardless of where it is stored or how it was designed

SAP Datasphere

databricks

CONFLUENT

Collibra

DataRobot
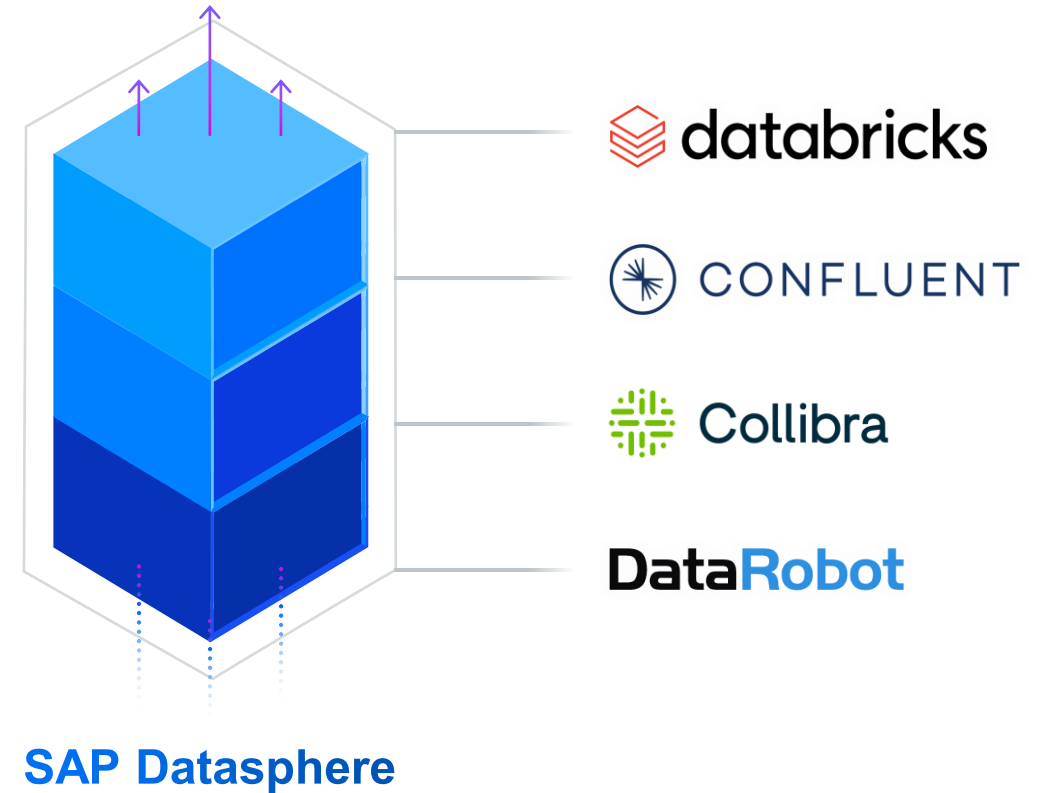
Simplify the data landscape

Enable self-service data access

Provide user-friendly access to data products that organize and manage data for different lines of business with SAP Datasphere Spaces

Implement powerful data preparation with complex transformations

Access data via SAP and non-SAP tools and open interfaces

Connect other data

Sales Space

Share data

Context-rich SAP data →

R&D Space

Central company data space

MKTG Space

← All other data sources

Access core company data

Finance Space

Explore, model, analyze, and visualize

One semantic layer

Central access to all your information across all sources

| Governance | Security | Trust |

Thank You!

Confidential