Sierra's SAP Practice in a Snapshot

End-to-End Coverage

Transformation Services
Advisory ○ Digital Consulting ○ Implementation ○ Managed Services ○ and More

New Dimension Services
Mobility ○ Cloud ○ S/4 HANA ○ Hybris ○ and More

End-To-End Advisory & Support Services
Support large, complex, multi-geo Consulting & Managed Services engagements globally.

Efficient Global Delivery Structure
New Delivery Centers and Nearshore Centers augment local capabilities.

Innovation-Focused Tools & Accelerators
Delivered $20 Million+ in savings for customers in 2020.

Capability Expansion Via Product Innovation
Aggressive enhancement packages for top-tier SAP products: SAC, BTP, and more.

240+ Customers

SAP Global Partner

200+ Active Projects

SAP S/4 HANA
Global Partner

350+ Consultants

Investing in Tomorrow

Wrap-Around Certifications

SAP® Labs & GD
Strategic & Joint Account Planning Partner

SAP® Certified
S/4 HANA Operations Services

SAP Hybris [y]
Global Silver Partner

SAP® Certified
Application Management Services

SAP® Certified
Cloud Services

i SAP Innovation Awards
- SAP Trailblazer 2016 Choice Award
- SAP S/4 HANA 2015 Certification

Global network of Regional Partners and Sourcing Agents

4 Delivery Centers for SAP with US/India Shared Service Centers

15+ Industry-Aligned Solutions for confident transformation

Emerging Services/Solutions:
HANA, Big Data, Mobile, Cloud

Best in Class delivery model

New Service Models: Outcome-Driven AMS | Factory | Catalog-Based Shared Services | User-Based

Endorsed & Trusted

SBA — U.S. Small Business Administration — Your Small Business Resource

SBA — 8(a) Certified

HUB

THE WORLD BANK

MWBE CERTIFICATION

GSA Schedule

CMAS

IRS — Department of the Treasury Internal Revenue Service

UNITED NATIONS

SIERRADIGITAL

DATASPHERE

CONVERSION READINESS ASSESSMENT :

WHAT. WHY. HOW.

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SAP BTP
APP INNOVATION STATION

Agenda

- BW Journey..

- Why Datasphere

- Datasphere Overview

- Process for Data Migration

- Migration strategy and Approach

- SAP BW Bridge overview

- Sierra Assessment tool

SAP BW Journey.....

- Current SAP BW system serves as our centralized data warehousing and reporting solution

- Scaling up the infrastructure is becoming Complex and costly

- Data integration with data lake

- Complex ETL Processes

- Lack of Real-time Data

- High Maintenance Overhead
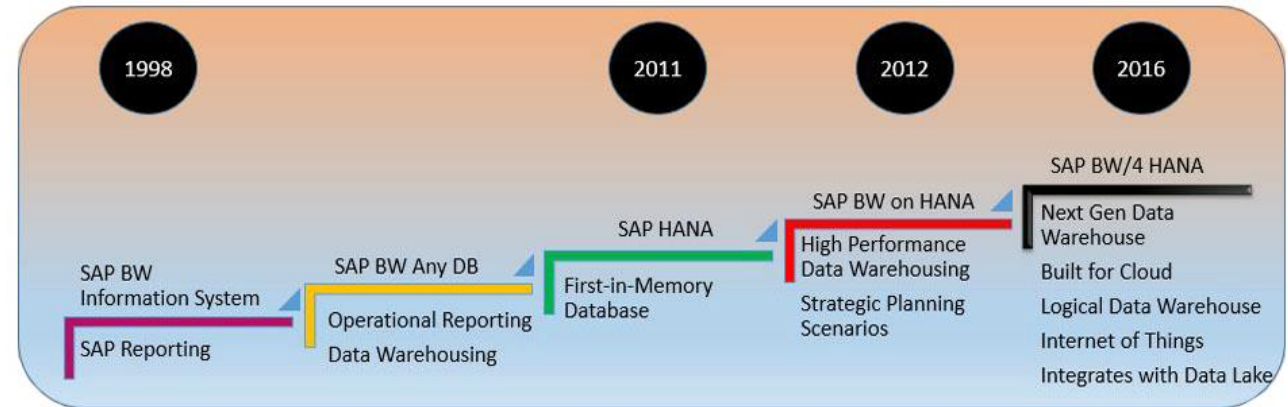
SAP Datasphere Features

Complete End-to-end Solution
Unified data and analytics service providing a complete end-to-end solution with one semantic view designed for business and IT.

Connect to SAP Data with Business Context
Out-of-the box understanding of SAP data with semantic business context from SAP applications.

Connect and Collect Data from all Sources
Data virtualization, replication and orchestration from SAP and third-party solutions across clouds and with on-prem.

Semantic Business Modelling
User empowerment with self-service modeling, governance and IT control. User ability to connect own data, share it securely, and run analytics without affecting other users.

Spaces Management & Data Sharing
Independent virtual work environments to foster collaboration and enable data sharing between IT, business units, and projects to connect global and local data.

Re-use & Extend SAP BW Investments
Leverage SAP BW data structures, transformations, customizations, and skills to quickly extend your SAP BW investments to the public cloud.

Choice and Openness
Multi-cloud support and open interfaces with choice of modeling environments, analysis tools & languages (SQL, Python, Jupyter notebook etc.) – from business analysts to data scientists to developers.

Business Content
Pre-built data models, semantic views of SAP ERP data (CDS views & Service APIs), and transformation leveraging SAP's business expertise and ecosystem partners' knowledge.

Integrated Data Marketplace
Data Marketplace manages scalable and decentralized cross tenant data exchange for data providers & consumers. Use Intelligent Lookup to match imperfect data sets for enterprise-ready usage.

Future Platform for Planning*
Streamlining planning and analysis with reduced modelling efforts, while operating on a single source of truth for analytics and planning across the organization.

* More information on the SAP Datasphere Roadmap

SAP Datasphere – Overview

Spaces

Control Compute & Storage resources

Cross-Space Sharing of Data

Spaces for Business Users & Central IT

Out-of-the-Box Access

Federated & Replicated Data Access

Connecting to SAP & Non-SAP data

Sources Partner Connectivity

Data Modeling

Data Builder & ER Modeler Data Flow

Transformations & Scheduling

Advanced Modeling Features

Business Modeling

Self service modeling for

Model in non-tech business language

Business layer independent from data layer

Hybrid BW & SQL Integration

Reuse investment in BW or HANA SQL

Use external Modeling IDE

In Open SQL Schema

Leverage BW semantics & data

Business Catalog

Common Repository across Spaces

Integration of Analytic Content network

Data Lineage for impact analysis

Governance & Administration

Security, User & Role Management

Remote Table & Data Flow Monitoring

Multi-Language, auditing, Administration .

Consumption

Built in SAC integration

SAC Story Builder and Data Explorer
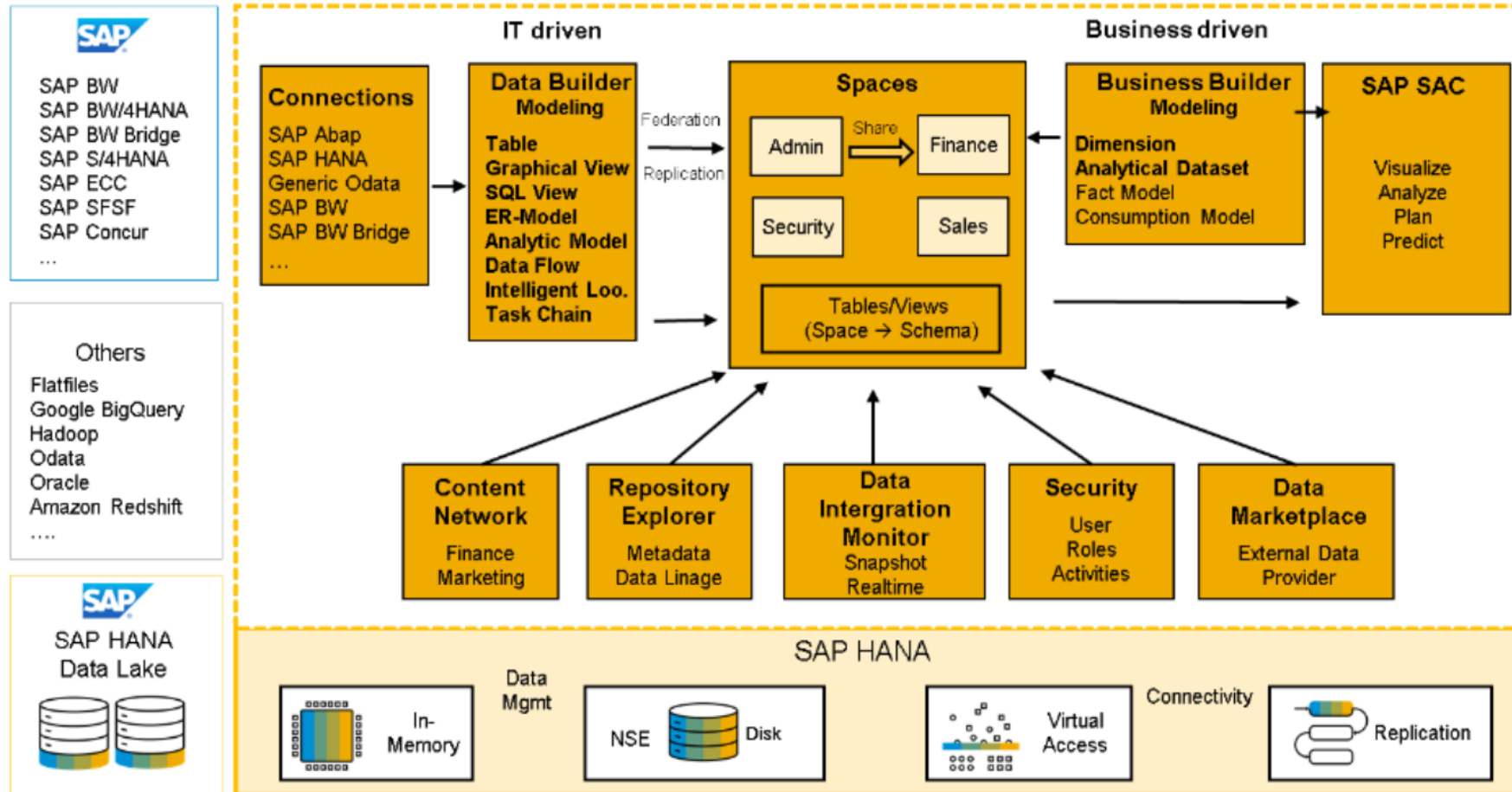
3rd Party SQL Interface

What benefits does it bring to your business

- Scalable and Flexible Architecture

- Advanced Analytics and AI Capabilities

- Seamless Data Integration

- Interactive Data Exploration and Visualization
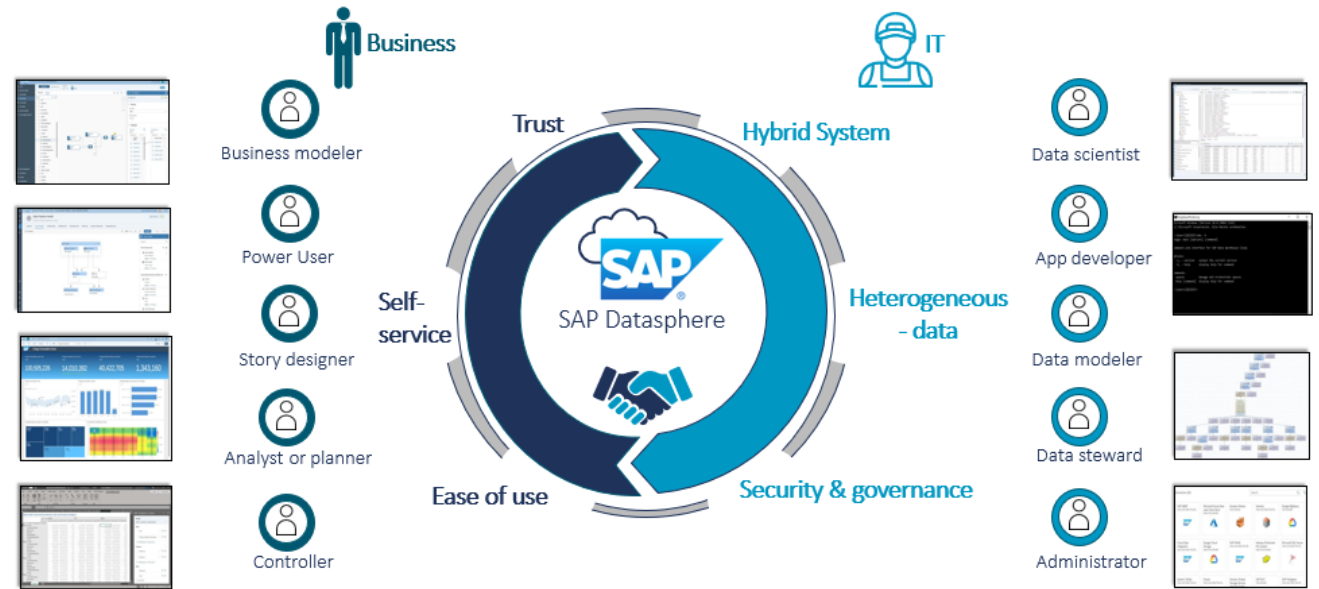
- Collaborative and Secure Environment
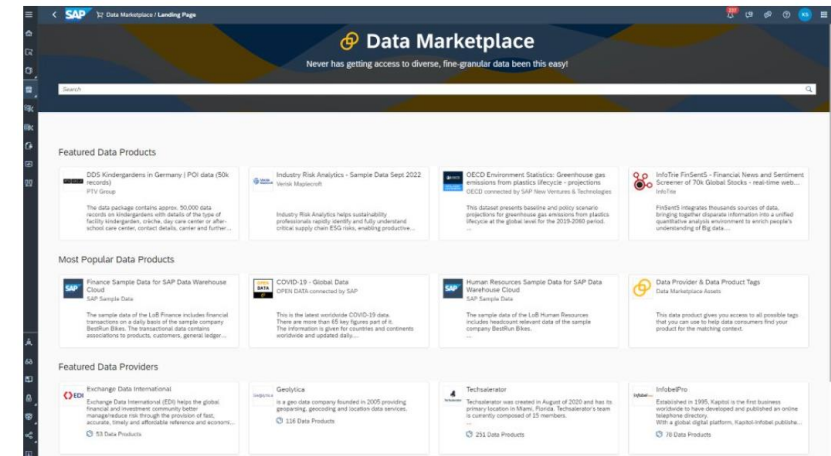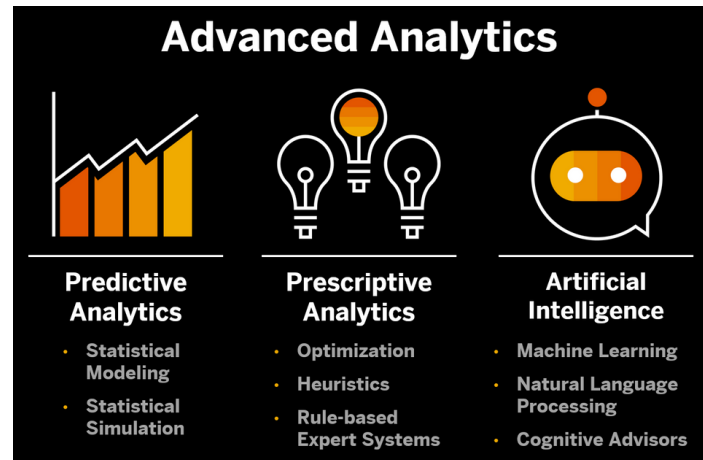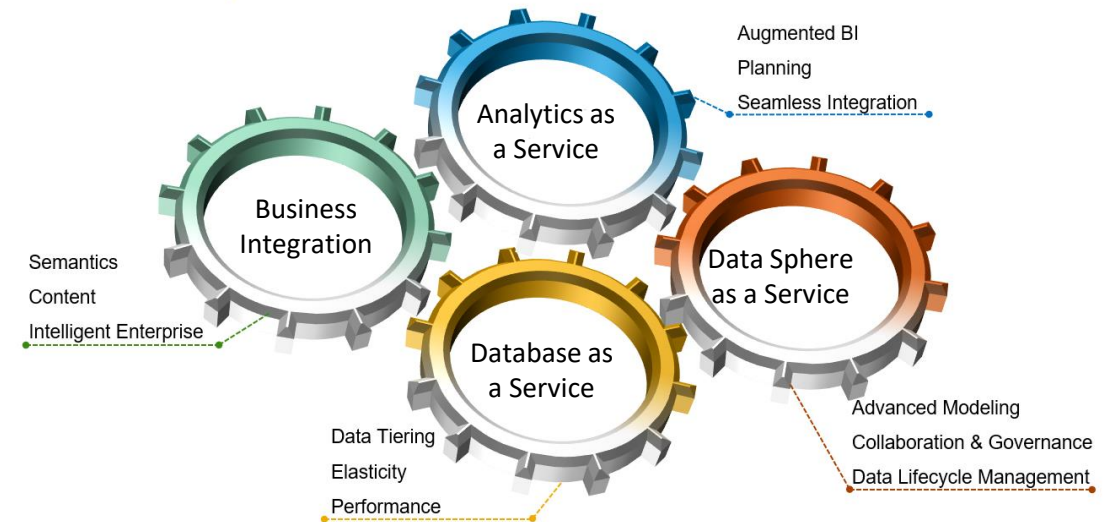
SAP Datasphere – Architecture

SAP Datasphere Architecture

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How Datasphere Differs in several keyways

- Cloud Native Architecture

- Cost-Efficiency

- Advanced Analytic Capabilities

- Seamless Data Integration and
  connectivity

- Rapid Deployment and Scalability

- Improved Performance

Business case examples

Retail industry :

SAP Datasphere is a powerful platform that can help retail businesses to improve their operations by analysing vast amount of data, decision-making , and customer buying Patterns
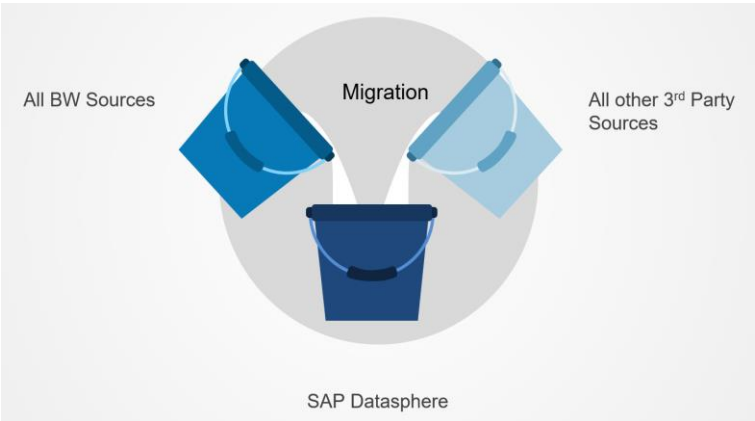
Health care Sector :

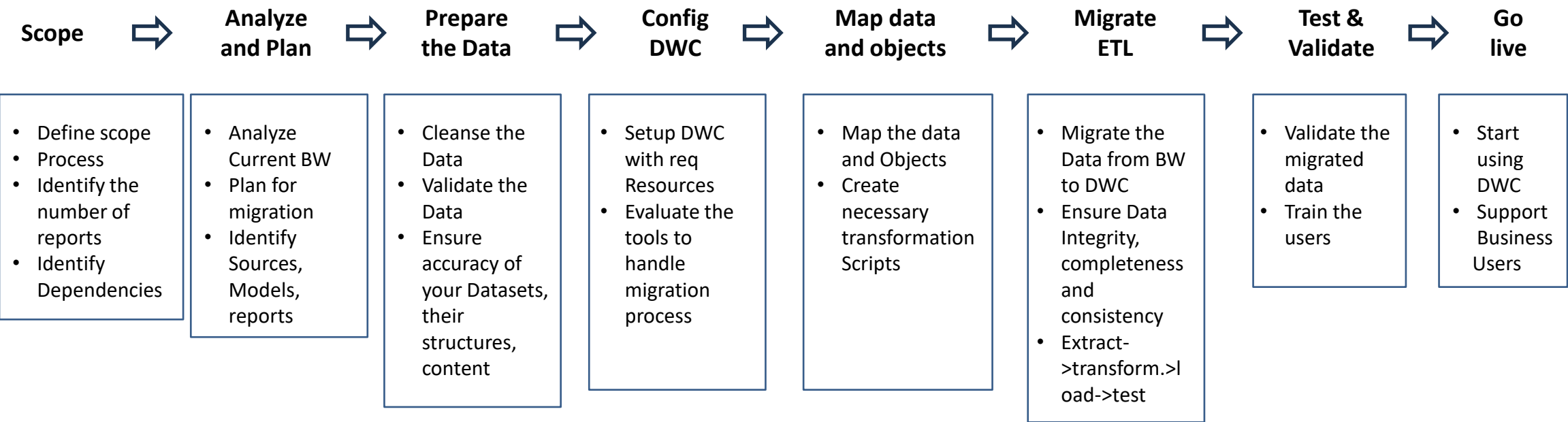SAP Datasphere can be used in healthcare to improve patient care, reduce costs, and improve operational efficiency
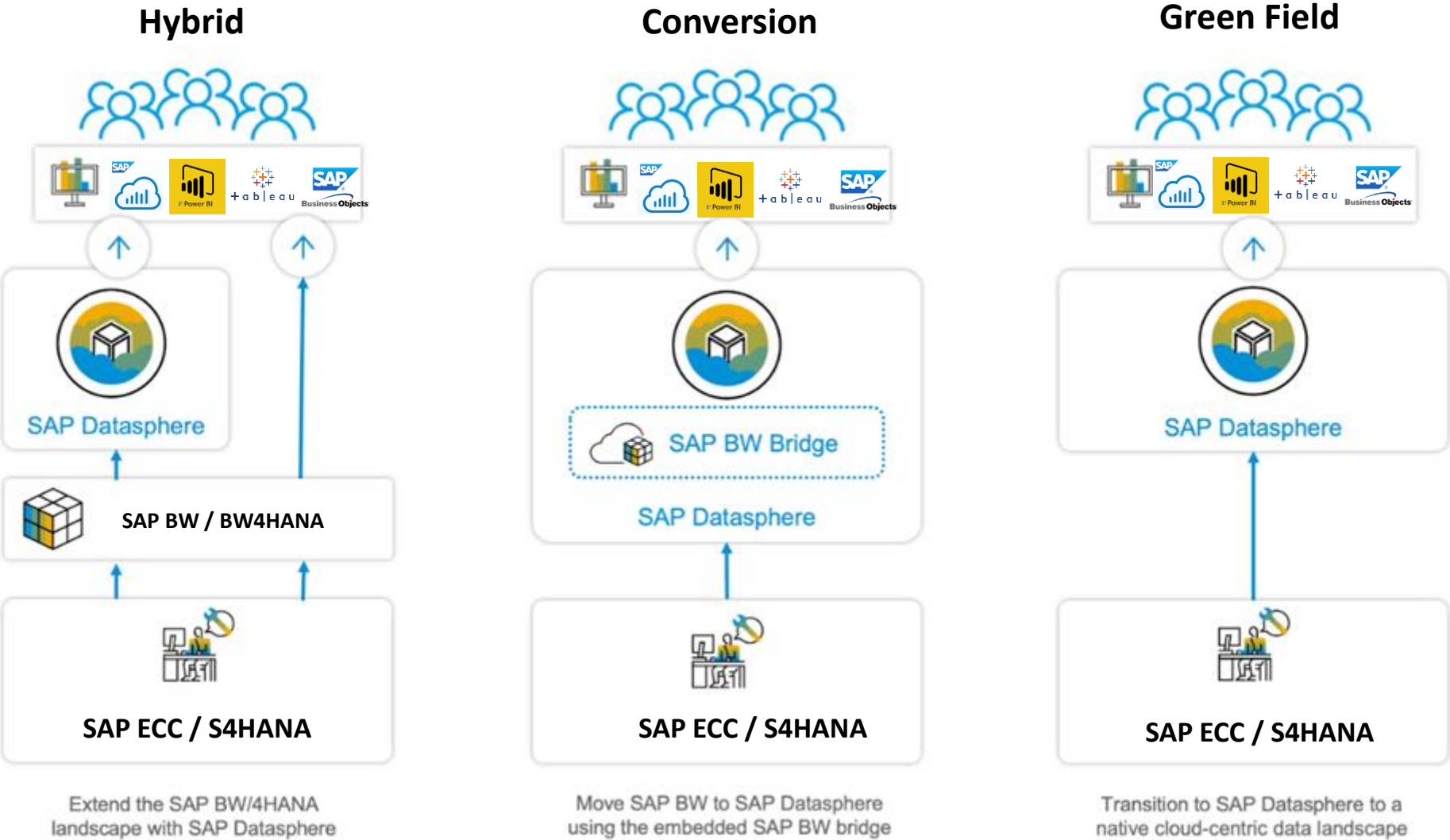
Manufacturing Industry :

SAP Datasphere is being used in the manufacturing industry. As the manufacturing industry continues to adopt digital technologies, SAP Datasphere can plays an increasingly important role in helping manufacturers improve their operations and achieve their business goals.

Process for Datasphere Migration

Scope → **Analyze and Plan** → **Prepare the Data** → **Config DWC** → **Map data and objects** → **Migrate ETL** → **Test & Validate** → **Go live**

Scope	Analyze and Plan	Prepare the Data	Config DWC	Map data and objects	Migrate ETL	Test & Validate	Go live
• Define scope • Process • Identify the number of reports • Identify Dependencies	• Analyze Current BW • Plan for migration • Identify Sources, Models, reports	• Cleanse the Data • Validate the Data • Ensure accuracy of your Datasets, their structures, content	• Setup DWC with req Resources • Evaluate the tools to handle migration process	• Map the data and Objects • Create necessary transformation Scripts	• Migrate the Data from BW to DWC • Ensure Data Integrity, completeness and consistency • Extract->transform.>load->test	• Validate the migrated data • Train the users	• Start using DWC • Support Business Users

All BW Sources

Migration

All other 3rd Party Sources

SAP Datasphere

SAP Datasphere – Various migration approaches

Hybrid

SAP Datasphere

SAP BW / BW4HANA

SAP ECC / S4HANA

Extend the SAP BW/4HANA landscape with SAP Datasphere

Conversion

SAP BW Bridge

SAP Datasphere

SAP ECC / S4HANA

Move SAP BW to SAP Datasphere using the embedded SAP BW bridge

Green Field

SAP Datasphere

SAP ECC / S4HANA

Transition to SAP Datasphere to a native cloud-centric data landscape

Conversion approaches

Shell Conversion

SAP BW / SAP BW/4HANA → **SAP Datasphere**

- A provisioned SAP Datasphere, SAP BW Bridge is needed.

- The Transfer Cockpit can be used to transfer selected data models without data into an SAP BW bridge tenant.

- Support of carve-out and system consolidation scenarios.

- Accelerate greenfield approach by transferring and converting data models and flows.
- Minimum start release

- SAP BW 7.30 to 7.50 running on SAP HANA or Any-DB , and SAP BW/4HANA 2021

Remote Conversion

SAP BW / SAP BW/4HANA → **SAP Datasphere**

- A provisioned SAP Datasphere, SAP BW Bridge is needed.

- The Transfer Cockpit can be used to transfer selected data models into an SAP BW Bridge tenant and to perform a remote data transfer into that tenant..

- Support of carve-out and consolidation scenarios.

- Transfer data models and remote data transfer

- Risk mitigation due to parallel system.

- Minimum start release

- SAP BW 7.30 to 7.50 running on SAP HANA or Any-DB , and SAP BW/4HANA 2021
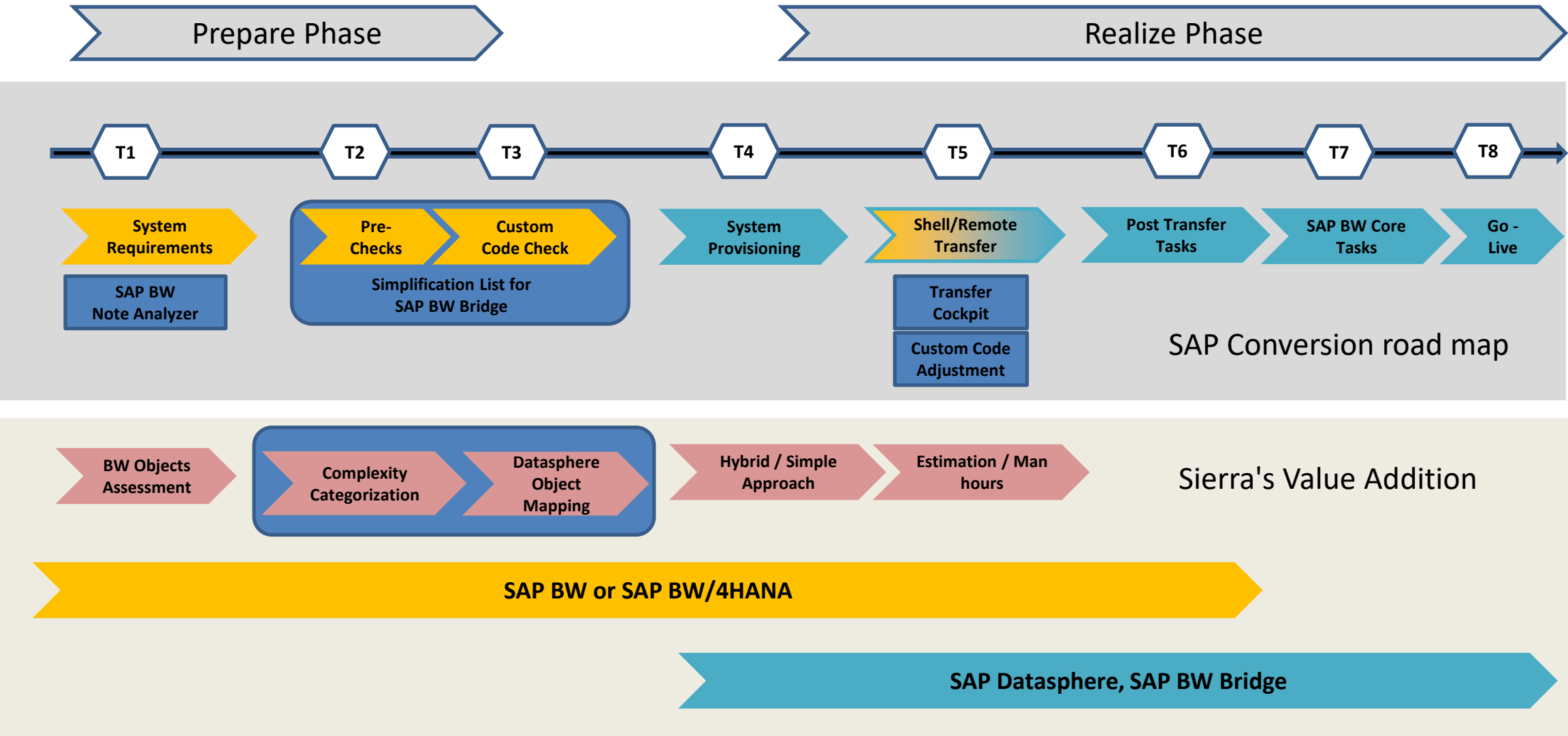
BW Bridge Architecture
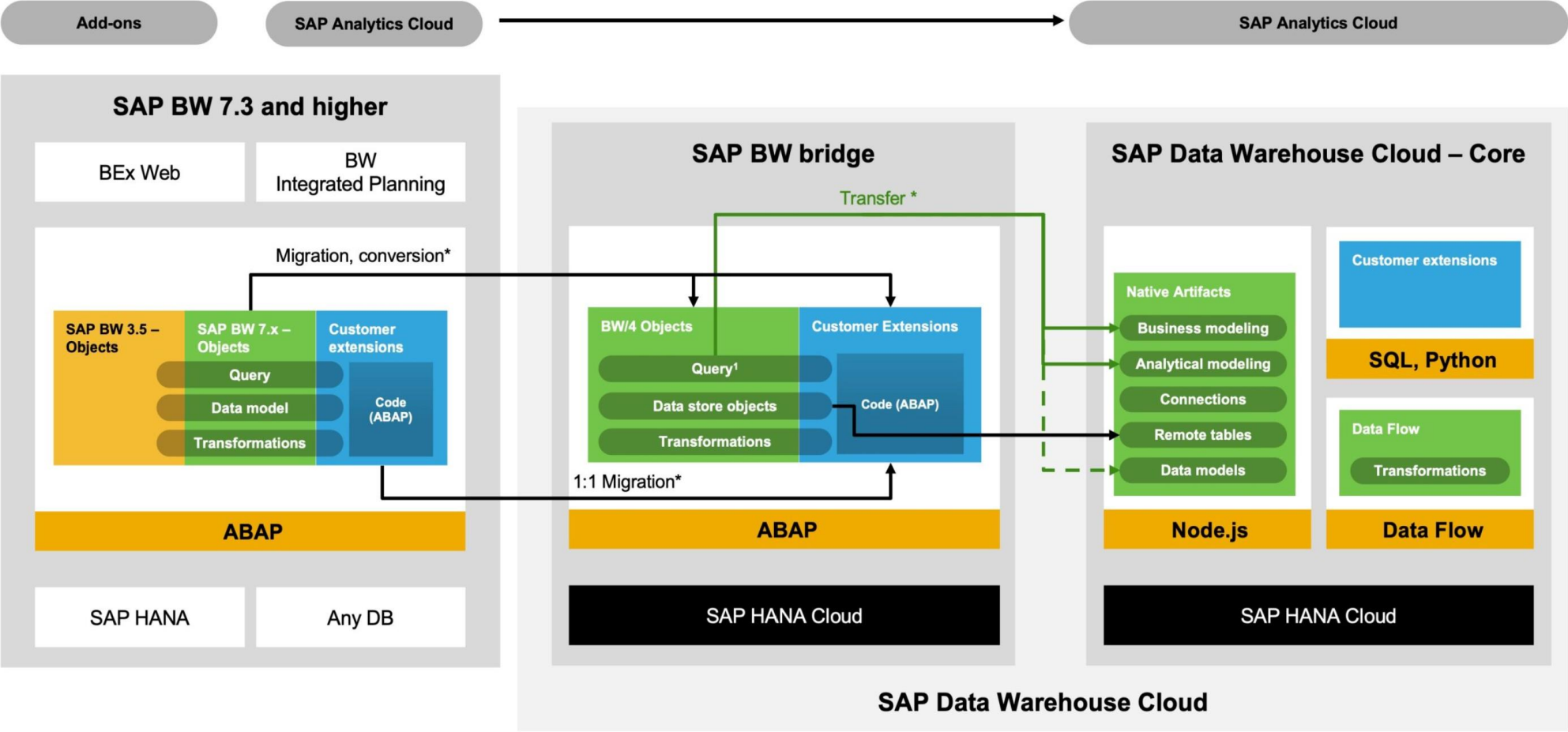
BW Bridge: BW to Datasphere Object Migration Method

Traditional BW Objects	Solution Approach	Datasphere Objects
BEx Analyzer, Bex Web Templates, BEX tools	Manual	SAP Analytics Cloud
BW Query) Bex Query Designer)	Semi - Automated	Mode Transfer
Classic object types (InfoCubes, DSO, MultiProvider, infoset..)	BW Bridge	Data Store Object (Adv) & Composite Provider
Object Type : InfoObject	BW Bridge	Info Object
Loading object types: (Transformation, DTP, Process Chain)	BW Bridge	Transformation, DTP, BW Bridge Process Chain
SAP GUI Modeling & Workbench	BW Bridge	Eclipse based BW Modeling tools & BW Bridge cockpit (UI5)
Source system ERP Extractors (S-API) , BW	BW Bridge	Consolidation to ODP
Source System types : UD/DB Connect, data Services, Partner ETL	Manual	Consolidation to SAP Datasphere
Source System types : HANA, File	Manual	Consolidation to SAP Datasphere
PSA / Info packages	BW Bridge	Operational delta Queue, Field based datastore Object 9 Adv)
BI Content Packages	Semi - Automated	SAP BW Bridge content
Near-line Storage partner Solutions, Near-line storage SAP, DTO	Manual	New cold store planned
Hana Views	Manual	

Migration Journey with Sierra Accelerator

Prepare Phase

Realize Phase

T1 — T2 — T3 — T4 — T5 — T6 — T7 — T8

System Requirements

SAP BW Note Analyzer

Pre-Checks → **Custom Code Check**

Simplification List for SAP BW Bridge

System Provisioning

Shell/Remote Transfer

Transfer Cockpit

Custom Code Adjustment

Post Transfer Tasks

SAP BW Core Tasks

Go - Live

SAP Conversion road map

BW Objects Assessment

Complexity Categorization → **Datasphere Object Mapping**

Hybrid / Simple Approach → **Estimation / Man hours**

Sierra's Value Addition

SAP BW or SAP BW/4HANA

SAP Datasphere, SAP BW Bridge

Sierra Assessment Tool

1. BTP based assessment tool.

2. Its gives entire picture about your current BW system(Standard/Custom objects).

3. Helps in determining effort estimation for Datasphere conversion.

4. It helps in determining the objects not supported by BW Bridge conversion and its complexity

5. Its aids mitigation of challenges during the conversion.

6. It offers object usage report to understand how critical business process.

Datasphere conversion assessment tool aims to deliver 60% efficiency gains on the overall migration / transformation journey.

Essentially reduces the overall effort by providing object inventory, classification information, object usage information enabling accurate decision making in the migration approach.

Sierra's BW Assessment Report

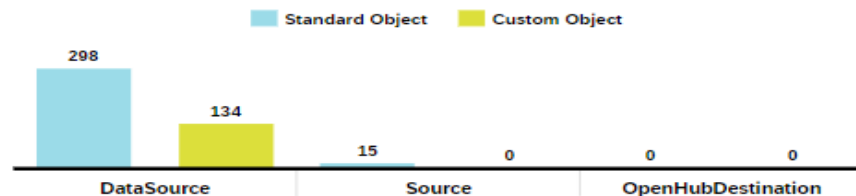| Source Systems	Data Sources	No of Modelling Objects	ETL Count	Total No.of Reports	No of Planning
15	432	7,267	2,316	7,439	0

Source

Standard Object / Custom Object

- DataSource: 298 / 134
- Source: 15 / 0
- OpenHubDestination: 0 / 0

ETL

Standard Object / Custom Object

- DataTransferProcess: 856 / 0
- Routines: 730 / 0
- Transformation: 730 / 0

ProcessChain

- ProcessChain: Custom Object 109 / 109
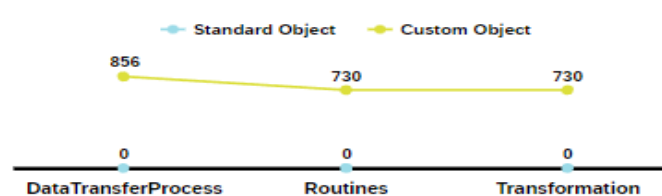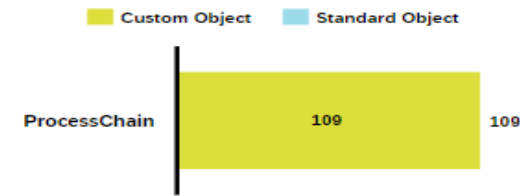
Modelling

InfoObject in hundred

Custom Object / Standard Object

- AnalysisProcessDes...: 0 / 0
- CompositeProvider: 6 / 0
- DataStoreObjectCla...: 185 / 38
- HanaView: 1 / 0
- HybridProvider: 0 / 0
- InfoArea: 140 / 0
- InfoCube: 78 / 148
- InfoObject: 205 / 401
- InfoSet: 85 / 0
- InfoSource: 436 / 0
- Multiprovider: 59 / 25
- OpenOdsView: 0 / 0
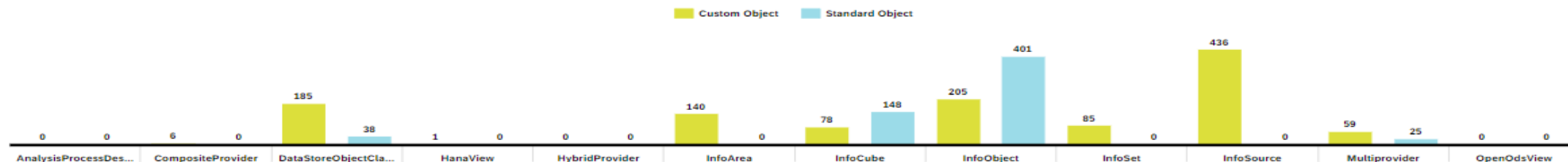
Reporting - Standard Object

- AnalysisOfficeExcelWorkbook
- CalculatedKeyFigure
- Exitvariable
- Filter
- Formula
- Query
- ReportReportInterface
- RestrictedKeyfigure
- Structure
- Variable

46% / 54% / 0% / 0% / 0% / 0% / 0% / 0% / 0% / 0% / 0%
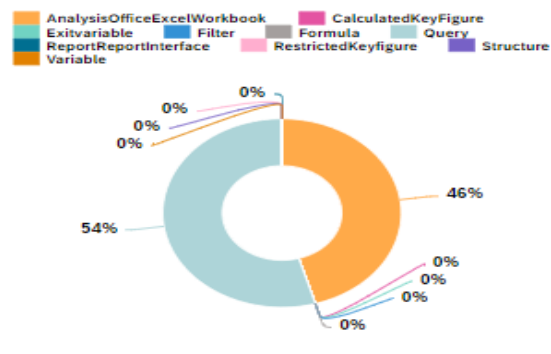
Reporting - Custom Object

- AnalysisOfficeExcelWorkbook
- CalculatedKeyFigure
- Exitvariable
- Filter
- Formula
- Query
- ReportReportInterface
- RestrictedKeyfigure
- Structure
- Variable

21% / 0% / 5% / 0% / 8% / 45% / 6% / 1% / 3% / 11%
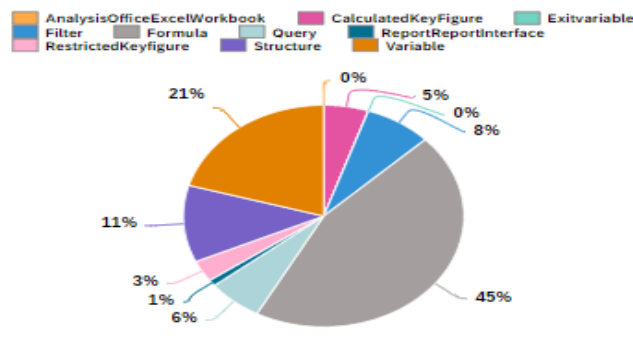
BW Artifacts

Source	Object Type	Total Object
ETL	DataTransferProcess	856
	Routines	730
	Transformation	730
Modelling	AnalysisProcessDesigner	0
	CompositeProvider	6
	DataStoreObjectClassic	223
	HanaView	1
	HybridProvider	0

Complexity Categorization Report

Simple, Medium, Complex by Objects

Legend: Simple, Medium, Complex

Object	Simple	Medium	Complex
DataTransfer... (ETL)	327	522	7
Routines	544	158	28
Transformati...	544	158	28
CompositePr... (Modelling)	3	2	1
DataStoreOb...	13	170	2
HanaView	0	1	0
InfoArea	0	140	0
InfoCube	78	0	0
InfoObject	1,374	679	1
InfoSet	0	85	0
InfoSource	0	436	0
Multiprovider	0	59	0
ProcessChain (ProcessCh...)	18	44	47
CalculatedK... (Reporting)	0	325	0
Filter	0	485	0
Formula	0	2,829	0
Query	0	398	0
ReportRepor...	0	57	0
RestrictedKe...	0	196	0
Structure	0	704	0
Variable	0	1,289	0
DataSource (Source)	68	0	66

Object Categorization — Complexity

Source	Object Type	Simple	Medium	Complex
ETL	DataTransferProcess	327	522	7
	Routines	544	158	28
	Transformation	544	158	28
Modelling	AnalysisProcessDesigner	0	0	0
	CompositeProvider	3	2	1
	DataStoreObjectClassic	13	170	2
	HanaView	0	1	0
	HybridProvider	0	0	0
	InfoArea	0	140	0
	InfoCube	78	0	0
	InfoObject	1,374	679	1
	InfoSet	0	85	0
	InfoSource	0	436	0
	Multiprovider	0	59	0
	OpenOdsView	0	0	0
Planning	AggregationLevel	0	0	0

Rough Estimated Hours Per Object — Complexity

Source	Object Type	Simple	Medium	Complex	Standard objects
ETL	DataTransferProcess	1	2	4	+0
	Routines	4	8	16	1
	Transformation	1	4	6	+0
Modelling	AnalysisProcessDesigner	4	16	24	1
	CompositeProvider	2	4	6	+0
	DataStoreObjectClassic	4	8	24	+0
	HanaView	2	4	6	+0
	HybridProvider	4	8	24	1
	InfoArea	+0	+0	+0	+0
	InfoCube	4	8	24	+0
	InfoObject	+0	+0	+0	+0
	InfoSet	2	4	6	+0
	InfoSource	2	4	6	1
	Multiprovider	2	4	6	1
	OpenOdsView	8	16	24	1
Planning	AggregationLevel	4	8	16	+0

Rough Estimated Hours using BW Bridge — Complexity

Object Category	Object Name	Hours
Basis	Basis configuration	24
ETL	Routines	5
Modelling	CompositeProvider	3
	Currency conversion in Query	4
	DataStoreObjectClassic	8
	InfoCube	8
	InfoSet	4
	InfoSource	8
	Multiprovider	8
	OpenOdsView	8
	Unit conversion in Query	4
	Unit conversion in transformation	4
	currency conversion in transformation	4
Reporting	AnalysisOfficeExcelWorkbook	10
	Exitvariable	10
Source	Source	2
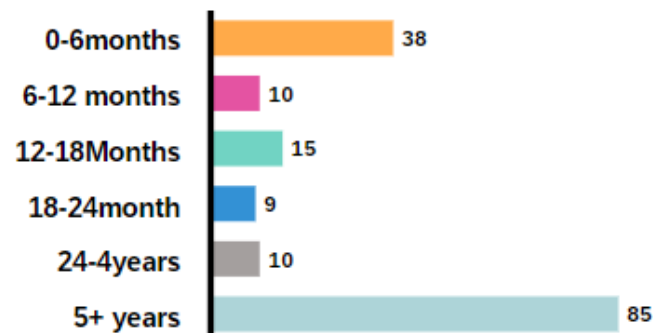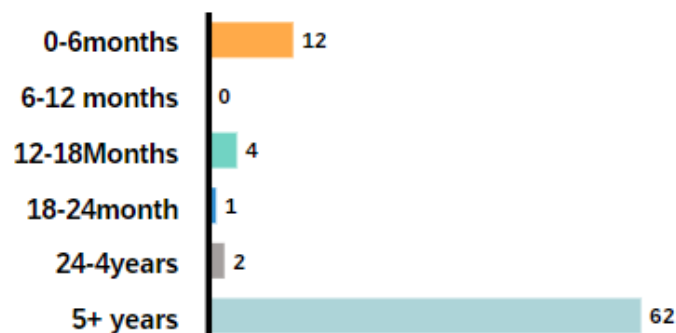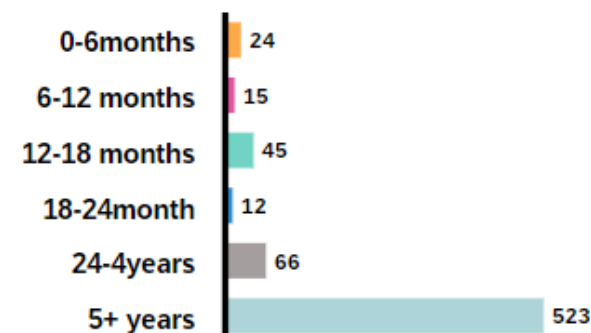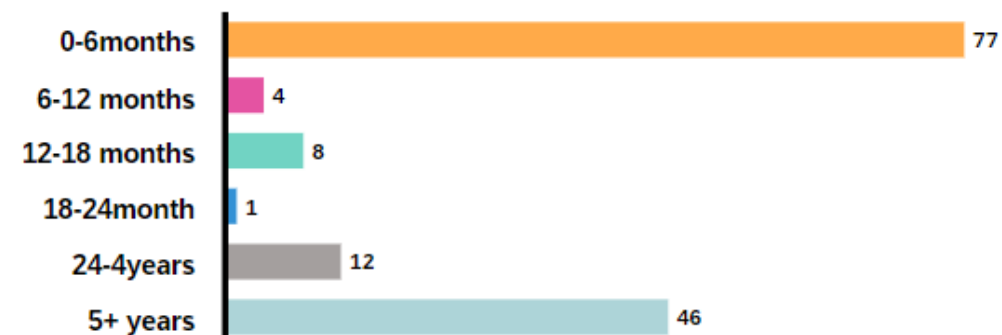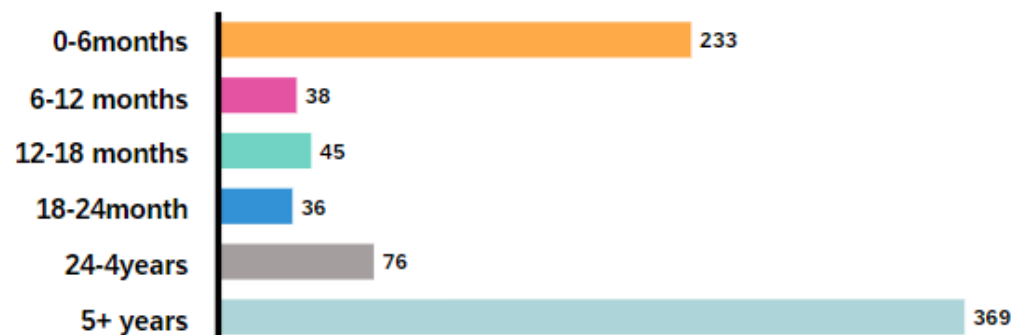
Currency & Unit Conversion

CURRENCY CONVERSION IN QUERY

		Count
Query Name	**Curr Name**	
Totals		18
YPUR_C15_Q1002_TEST	ZUSDMR	6
ZPUR_M02_Q0011	ZUSDMR	4
ZPUR_M02_Q0014_7	ZEU_CURR	2
ZPUR_M02_Q1002	ZUSDMR	4
ZPUR_M03_Q0001	ZUSDMR	2

UNIT CONVERSION IN QUERY

Query Name	Unit Name
Unassigned	Unassigned

CURRENCY CONVERSION I

Query Name	Unit Na
Unassigned	Unassi

Object Usage Frequency

DSO	DSO Frequency
DSO	
UOM0MATE	262
ZCCA_O10	49
ZCCA_O12	71
ZCCA_O20	52
ZCCA_O22	10
ZCRM_O01	1
ZFGL_D05	139
ZFGL_D06	139
ZFGL_O01	1
ZFIAP_O3	131
ZFIAP_O5	29
ZIC_D05	1
ZIC_W01	1

DTP	DTP Frequency
DTP	
DTP_00O2TJJNJAMAO6R7J0E7FXSZR	252
DTP_00O2TJJNJAMAO6R7XKUC3URYF	249
DTP_00O2TJJNJAMAODJ0Z085TNL6V	66
DTP_00O2TJKM4KR6TLXO7Q2IU0XPF	301
DTP_00O2TJKM4KR6TLXO7Q2IU25YB	301
DTP_00O2TJL19FZLTM4U37QDPPD7E	88
DTP_00O2TJL19FZLTM4UABNL25WYI	89
DTP_00O2TJL19FZLTM4UHDJTNJUHM	246
DTP_00O2TJL19FZLTM4UTJYK7BM6Y	230
DTP_00O2TJL19FZLTMHY4P26P2CD6	223
DTP_00O2TJL19FZLTMHY8JQ31Z76I	245
DTP_00O2TJL19FZLTN5CMZ0667W2I	232
DTP_00O2TJL19FZLTN5NP12AEI49M	224

INFOCUBE	Infocube Frequency
INFOCUBE	
0PABN_C01	300
0PA_C01	2
0TCT_C02	11
0TCT_C03	301
0TCT_C05	301
0TCT_C21	301
0TCT_C22	301
0TCT_C23	301
0TCT_C25	1
0TCT_CA1	301
ZCP_SLSC3	130
ZCP_SLSC6	2
ZSLS_C20	1

PROCESSCHAIN	Processchain Frequency
PROCESSCHAIN	
0TCT_C0_FULL_P01	301
0TCT_C0_INIT_DELTA_P01	301
0TCT_C25_FULL_P01	301
0TCT_C2_INIT_DELTA_P01	301
0TCT_MD_C_FULL_P01	301
0TCT_MD_S_FULL_P01	301
AP_DFI	333
AP_FCC	122
AP_FCC_DFI	333
COMPLAINTS	296
COMPRESS_CUBES	78
COMPRESS_CUBES_S	78
COPA_BELIZE	347

QUERY	Query Frequency
QUERY	
ZCP_MMIM01_Q0001	1
ZCP_MMIM01_Q0001_D	1
ZCP_MMIM01_Q0003	1
ZCP_MMIM01_Q0003_D	1
ZCP_MMIM01_Q0004	1
ZCP_MMIM01_Q0004_D	1
ZCP_MMIM01_Q0006	2
ZCP_MMIM01_Q0007	1
ZCP_MMIM01_Q0007_D	1
ZCP_MMIM01_Q0012	2
ZCP_MMIM01_Q0013	2
ZCP_SLS50_Q0001	2
ZCRM_M01_Q0106	1

Object Limitation

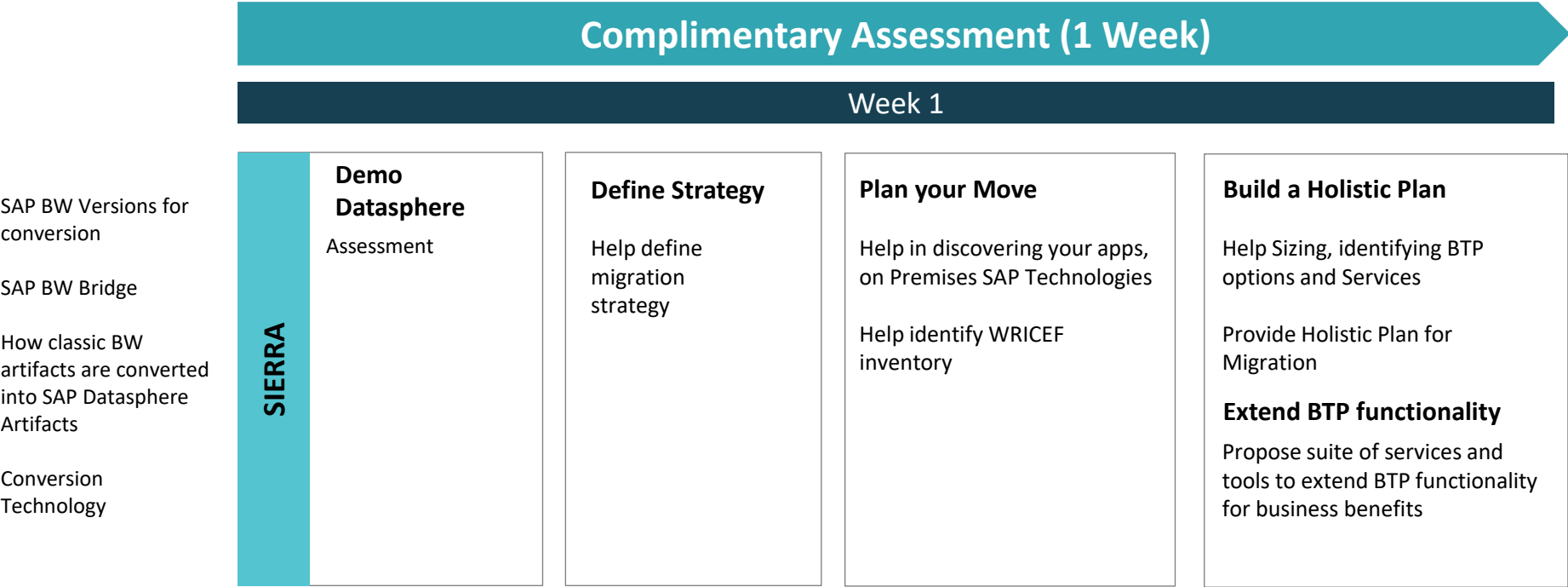| DTP	Variable
DTP	**Variable**
DTP_00O2TJJBKYKOPXYXJF15Q0PUN	FISCPER=2017010;FISCPER=2019005;FISCPER=2019010;VTYPE=010;
	FISCPER=2019001;FISCPER=2019004;FISCPER=2019005;FISCPER=2019010;VTYPE=010;
	FISCPER=2019004;FISCPER=2019005;FISCPER=2019010;VTYPE=010;
	FISCPER=2020001-2020001;VTYPE=010;
	FISCPER=2020001-2020003;VTYPE=010;
	FISCPER=2020001-2020012;VTYPE=010;
	VTYPE=010;
DTP_00O2TJJBKYKOPXZ0LYYKT27RZ	FISCPER=2018001-2018012;VTYPE=020;
	VTYPE=020;
DTP_00O2TJJBKYKOTDSE375ZRN8CA	DPM_DCAS=005056963D2E1ED388ABB7AA379BFA40;
	DPM_DCAS=005056964FDE1EE5B0EB13FD7744F088;
DTP_00O2TJJBKYKOTYGWEAZRL0FUF	FISCPER=2018012;VTYPE=010;
	FISCPER=2019001-2019001;VTYPE=010;
	FISCPER=2019001;FISCPER=2019004;FISCPER=2019005;FISCPER=2019010;VTYPE=010;
	FISCPER=2020001-2020012;VTYPE=010;

Draft ROE

ROE in Man Hours

Source	Object Type	Simple	Medium	Complex	Standard Object Hours	Total Man Hours	Total Man Days
Totals		3,902	9,531	3,258	1,130	17,821	2,228
ETL	DataTransferProcess	327	1,044	28	0	1,399	175
	Routines	2,176	1,264	448	0	3,888	486
	Transformation	544	632	168	0	1,344	168
Modelling	AnalysisProcessDesigner	0	0	0	0	0	0
	CompositeProvider	6	8	6	0	20	3
	DataStoreObjectClassic	52	1,360	48	15	1,475	184
	HanaView	0	4	0	0	4	1
	HybridProvider	0	0	0	0	0	0
	InfoArea	0	7	0	0	7	1
	InfoCube	312	0	0	59	371	46
	InfoObject	69	68	+0	401	538	67
	InfoSet	0	340	0	0	340	43
	InfoSource	0	1,744	0	0	1,744	218
	Multiprovider	0	236	0	13	249	31
	OpenOdsView	0	0	0	0	0	0
Planning	AggregationLevel	0	0	0	0	0	0

ROE in Man Hours - BW Bridge

Object Category	Object Name	TOTALMANHOURS	TotalManDays
Totals		15,610	1,953
ETL	Routines	3,888	486
Modelling	CompositeProvider	20	3
	Currency conversion in Query	72	9
	DataStoreObjectClassic	1,784	223
	InfoCube	1,808	226
	InfoSet	340	43
	InfoSource	1,744	218
	Multiprovider	674	84
	OpenOdsView	0	0
	Unit conversion in Query	0	0
	Unit conversion in transformation	0	0
	currency conversion in transformation	0	0
Reporting	AnalysisOfficeExcelWorkbook	5,250	657
	Exitvariable	0	0
Source	Source	30	4

OUR PLAN FOR YOU

Convert SAP BW or SAP BW4/HANA Technology to SAP Datasphere

Complimentary Assessment (1 Week)

Week 1

SAP BW Versions for conversion

SAP BW Bridge

How classic BW artifacts are converted into SAP Datasphere Artifacts

Conversion Technology

SIERRA

Demo Datasphere

Assessment

Define Strategy

Help define migration strategy

Plan your Move

Help in discovering your apps, on Premises SAP Technologies

Help identify WRICEF inventory

Build a Holistic Plan

Help Sizing, identifying BTP options and Services

Provide Holistic Plan for Migration

Extend BTP functionality

Propose suite of services and tools to extend BTP functionality for business benefits

SAP Datasphere Cloud Conversion

WEEK 2,3	**Deliverables** • SAP BW / BW/4HANA Artifacts list • System Requirements & SAP BW Note Analyzer • Complexity Categorization • How current BW Object maps to Datasphere Objects • Overview of As-Is and To-be Architecture		
Week2	**Week2**	**Week3**	**Week3**

Demo of Datasphere
 	
• SAP Datasphere features
 	
• Green Field / Brown Field Approach
 	
• System Requiremnts / SAP BW Note
 	
• SAP Datasphere Conversion tools Remote / Shell
	Identify SAP BW Objects
	
	• Run program to get SAP BW/ BW4/HANA objects
	
	• Object conversion list to SAP Datasphere
	
	• Prerequisites for Conversion
		SAP BW System Assessment
		
		• Review SAP BW objects
		  • Classic Objects(Infocube, DSO, Multiprovider, Infoset,…)
		  • Object Type Info object
		  • Loading Object Types(Transformation, DTP, Process chain)
		  • Source System ERP Extractors (S-API),BW
		  • Source system types UD/DB connect, Data services, partner ETL
		  • Source System types HANA , File
		  • PSA/ Info packages
		  • BI Content packages
		  • Bex Analyzer, Bex Web Templates, Bex Tools
		  • BW Query
			Overview
			
			• Review manual object conversion and steps
			
			• Present Assessment overview

SAP Datasphere Cloud Conversion – Plan and Proposal

WEEK 4,5,6	Deliverables
	• Datasphere Artifacts Walk Through and Solution approach • Sample Data flow Conversion and steps followed • To-Be Architecture • Overall plan and quote for migration

Datasphere Artifacts	Solution Approach	Architecture	Proposal
• Datasphere Space Management • Data Builder • Business Builder	• Prerequisites • Prepare Phase • Realize Phase • Conversion path • Sample Data flow Conversion	• Final Architecture with systems and services integrated • Depict Security aspects	• Project Schedule, Resource Plan, Assumptions and Constraints • Define Conversion strategy • Quote for implementation

THANK YOU

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Sierra Assessment Tool

Cloud Access:

- Access the BTP BAS with Developer access.
- Establish Cloud Connector, DB Agent and Destination connectivity to the source systems.
- Configuration on DB Container and Connectivity.
- Import Sierra Assessment tool.
- Review and validate the tool.
- Build and deploy.

HanaDB - BTP

- Create User and Schema
- Create Remote source and create Virtual tables.
- Develop Stored Procedure for proceeding Assessment Logic
- Create Synonym to access final table and develop calculation view.

Other :

- Ongoing Support from FCC Basis/Infrastructure team

Pre-Requisites

Services and connections

- ABAP Environment
- Destination Services
- SAP Business App Studio
- SAP Build Work Zone
- Web Access for ABAP
- Source System Connection via RFC protocol (Depend on Landscape)
- SAP HANA Cloud
- SAP Connectivity Service
- Destination
- HTML5 Application Repository Service
- Cloud Foundry Runtime
- SAP Authorization and Trust Management Service
- SAP Business Application Studio
- SAP Build Work Zone, standard edition
- HDI Container
- DP Agent and Grants

Assessment Results

- Assessment Report Based on Clean core Conversion which will be consumed in Fiori or SAC Report

- Assessment Report Based on BW Assessment which will be consumed in SAC Models to generate SAC Analytical dashboard
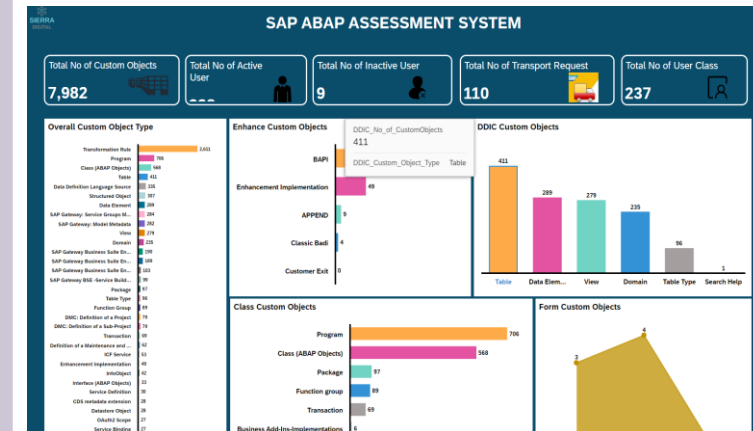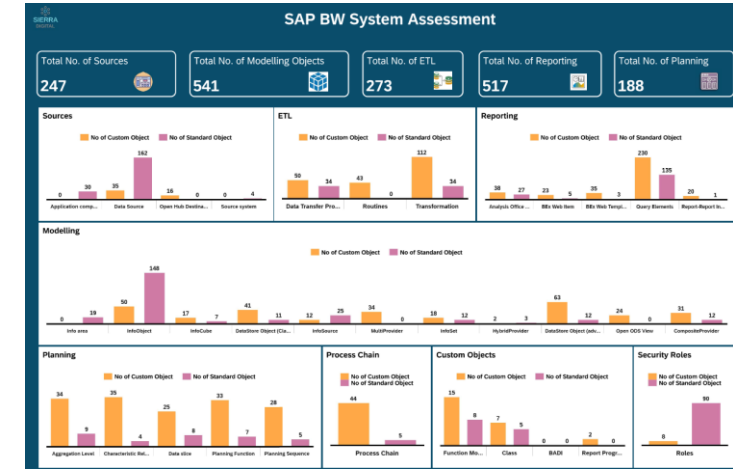
Prepare Phase T1

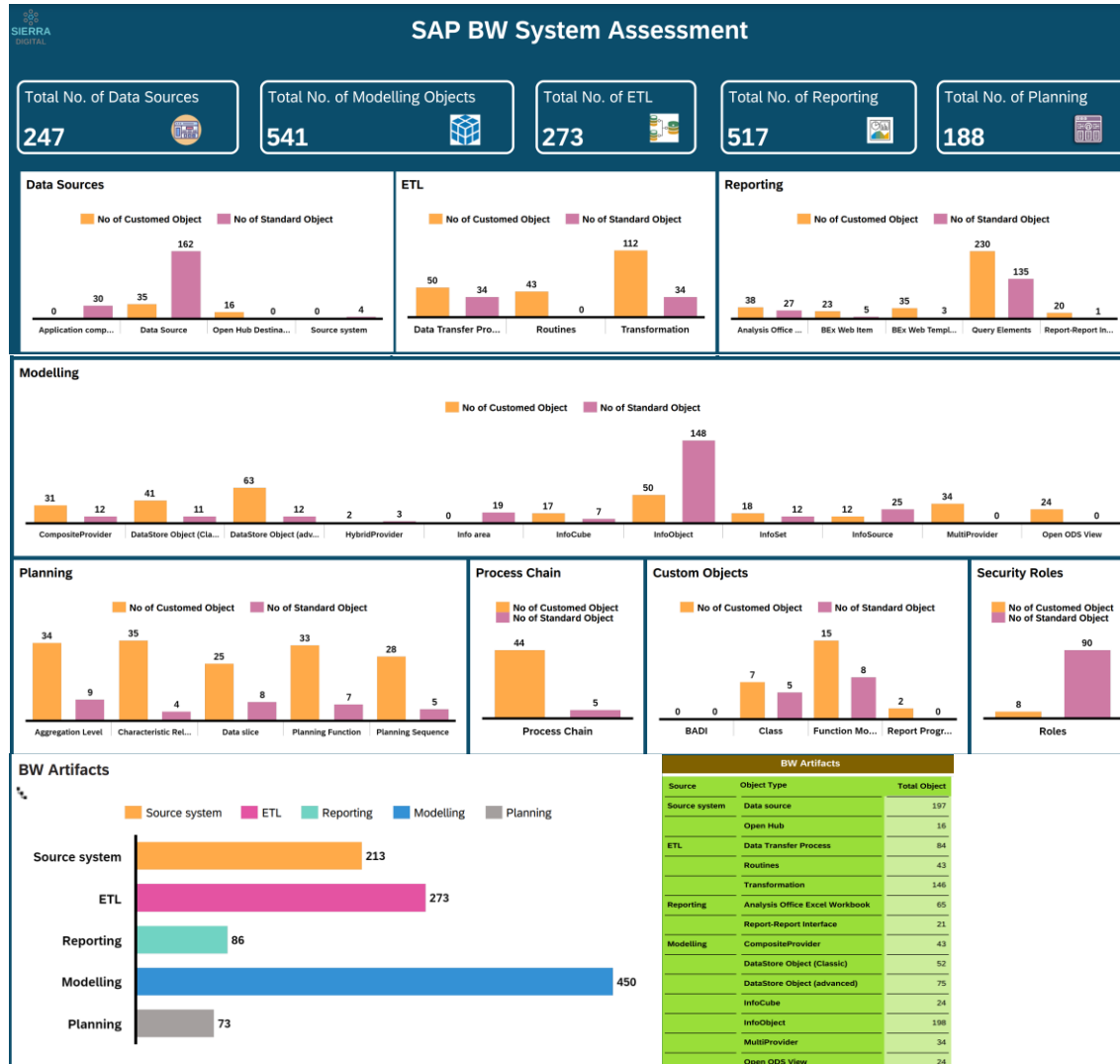| Work Package ID	Step	Comment	Note	Severity	Shell / Remote
I	**Prepare Phase**				
TI	**System Requirements**				
1.1	Check Cloud Data Center Availability for SAP Data Warehouse Cloud,SAP BW bridge	Check Cloud Data Center Availability for SAP Data Warehouse Cloud, SAP BW bridge	3117800	Mandatory	Shell / Remote
1.2	Check feature scope of SAP Data Warehouse Cloud, SAP BW bridge	Check feature scope for SAP Data Warehouse Cloud, SAP BW bridge and define development directions	3117800, 3154420, 3077382,	Mandatory	Shell / Remote
1.3	Check User Guide for SAP BW Note Analyzer	Describes how to install and update the tools related to converting from SAP BW or SAP BW/4HANA to SAP Data Warehouse Cloud, SAP BW bridge		If needed	Shell / Remote
1.4	Installing Note Analyzer	Install Note Analyzer for the sender SAP BW- and SAP source systems (SAP_Bridge_Transfer_Note_Analyzer_lastUpdate.zip) Report: Z_SAP_BW_NOTE_ANALYZER	3141688	Mandatory	Shell / Remote
1.5	Readiness Check	It offers customers a better and simple overview of their system landscape. Currently not available, but in preparation!		If needed	Shell / Remote
1.6	Check Start release	Checking the Release level of the Sender System SAP BW 7.30: SP 10 and higher SAP BW 7.31: SP 10 and higher SAP BW 7.40: SP 12 and higher, SP 09 Exceptional usage with manual implementation effort SAP BW 7.50: SP 05 and higher SAP BW/4HANA 2021: sooner or higher	3141688, 3117800	Mandatory	Shell / Remote
1.7	Check Simplification List	The Simplification List is the complete collection of simplification items. It provides the key information by application or functional area about the simplifications in SAP Data Warehouse Cloud, SAP BW bridge.	3154420	If needed	Shell / Remote
1.8	Check Business Content	SAP Data Warehouse Cloud, SAP BW bridge provides a sub-set of BW4CONT / BW4CONTB.	3154420, 2393067, 2785525,	If needed	Shell / Remote
1.9	Data Volume	SAP Data Volume Management; reduce transfer time		If needed	Remote
1.10	SAP Source Systems: Update and Release to ODP data sources	Checking the Release Levels of SAP Source Systems, Ensuring ODP readiness off all connected SAP Business Suite and SAP BW systems.	2473145, 2232584, 2350464, 2481315, 1931427, 2479674	Mandatory	Shell / Remote
1.11	Ensure Data Acquisition through DP Agent for SAP Data Warehouse Cloud Core	Data Acquisition through SDI/SDA, Data Provisioning Server, DP-Agent. SAP BW bridge is primarily intended for ODP-based source systems, which means that the connection scenarios only become available via Operational Data Provisioning (ODP). Non-SAP sources need to be connected directly to SAP Data Warehouse Cloud.	2447932, 2447932	If needed	Shell / Remote
1.12	Ensure Data Acquisition through Cloud Connector for SAP Data Warehouse Cloud, SAP	Data Acquisition through Cloud Connector		Mandatory	Shell / Remote
1.13	Change Management	Prepare your company for a change within its business warehouse process (DWCBW1 as early as possible in the project), training.sap.com -DWC01: SAP Data Warehouse Cloud - Overview -DWCBWI: SAP Data Warehouse Cloud: SAP BW Bridge option BC404: ABAP Programming in Eclipse HA400: ABAP Programming for SAP HANA HA150: SQLScript for SAP HANA		If needed	Shell / Remote

SAP BW System Assessment

Total No. of Data Sources	Total No. of Modelling Objects	Total No. of ETL	Total No. of Reporting	Total No. of Planning
247	541	273	517	188

Simple, Medium, Complex per Object - Allocation

Data Sources

No of Customed Object / No of Standard Object

ETL

No of Customed Object / No of Standard Object

Reporting

No of Customed Object / No of Standard Object

Modelling

No of Customed Object / No of Standard Object

Planning

No of Customed Object / No of Standard Object

Process Chain

No of Customed Object / No of Standard Object

Custom Objects

No of Customed Object / No of Standard Object

Security Roles

No of Customed Object / No of Standard Object

BW Artifacts

Object Allocation in %

Source	Object Type	Simple	Medium	Complex
Source system	Data source	25	45	30
	Open Hub	20	50	30
ETL	Data Transfer Process	15	55	30
	Routines	20	40	40
	Transformation	20	50	30
Reporting	Analysis Office Excel Workbook	35	20	45
	Report-Report Interface	20	35	45
Modelling	CompositeProvider	20	35	45
	DataStore Object (Classic)	30	50	20
	DataStore Object (advanced)	30	50	20
	InfoCube	15	55	30
	InfoObject	20	35	45
	MultiProvider	20	45	35
	Open ODS View	15	55	30

Hours Per Object / Complexity

Source	Object Type	Simple	Medium	Complex
Source system	Data source	4	16	40
	Open Hub	16	40	60
ETL	Data Transfer Process	1	1	1
	Routines	1	4	8
	Transformation	8	32	60
Reporting	Analysis Office Excel Workbook	16	32	45
	Report-Report Interface	16	32	45
Modelling	CompositeProvider	16	24	40
	DataStore Object (Classic)	16	40	65
	DataStore Object (advanced)	16	40	65
	InfoCube	8	16	24
	InfoObject	1	3	4
	MultiProvider	8	16	32
	Open ODS View	8	16	24

BW Artifacts

Source	Object Type	Total Object
Source system	Data source	197
	Open Hub	16
ETL	Data Transfer Process	84
	Routines	43
	Transformation	146
Reporting	Analysis Office Excel Workbook	65
	Report-Report Interface	21
Modelling	CompositeProvider	43
	DataStore Object (Classic)	52
	DataStore Object (advanced)	75
	InfoCube	24
	InfoObject	198
	MultiProvider	34
	Open ODS View	24

ROE in Man Hours

Source	Object Type	Simple	Medium	Complex	Total Man Hours	Total Man Days
Source system	Data source	197	1,418	2,364	3,979	497
	Open Hub	51	320	288	659	82
ETL	Data Transfer Process	13	46	25	84	11
	Routines	9	69	138	215	27
	Transformation	234	2,336	2,628	5,198	650
Reporting	Analysis Office Excel Workbook	364	416	1,316	2,096	262
	Report-Report Interface	67	235	425	728	91
Modelling	CompositeProvider	138	361	774	1,273	159
	DataStore Object (Classic)	250	1,040	676	1,966	246
	DataStore Object (advanced)	360	1,500	975	2,835	354
	InfoCube	29	211	173	413	52
	InfoObject	40	208	356	604	75
	MultiProvider	54	245	381	680	85
	Open ODS View	29	211	173	413	52

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Work Package ID	Step	Comment	Note	Severity	Shell / Remote
I	**Prepare Phase**				
T2	**Pre-Checks**				
2.1	Maintain Authorizations	Maintain the authorizations to perform the Pre-Check-Tool, SAP BW bridge Transfer Cockpit, and Tasklist Manager		Mandatory	Shell / Remote
2.2	Install Pre-Check Tool in Sender System using Note Analyzer	For SAP BW from 7.30 to 7.50 or SAP BW/4HANA 2021, use XML SAP_BW4HANA_Readiness_Check_[last_update].xml Report: RS_B4HANA_RC SAP BW 7.30: sp 08 and higher SAP BW 7.31: SP 05 and higher SAP BW 7.40: SP 09 and higher SAP BW 7.50: sp 05 and higher SAP BW/4HANA 2021: spoo or higher	3141688, 2575059	Mandatory	Shell / Remote
2.3	Housekeeping Activities	Deleting of all obsolete objects (Source Systems, InfoProvider, Queries, PSA etc.)	2390883	If needed	Shell / Remote
2.4	Run Sizing Report	It is strongly recommended to run the sizing report. All SAP Data Warehouse Cloud specifics are considered by the sizing report when using the option "SAP BW Bridge" (Currently in preparation) Report: /SDF/HANA_BW_SIZING Transaction: RSB4HCONV	2296290	Mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
I	**Prepare Phase**				
T3	**Custom Code Check**				
3.1	Perform Code Scan Tool	Verify that custom code in BW objects will be compatible with SAP Data Warehouse Cloud, SAP BW bridge (ABAP adjustments might be required before and/or after transfer) Report: RS_B4HANA_CODE_SCAN Transaction: RSB4HCONV	2462639	mandatory	Shell / Remote
3.2	Configure abapGit to transfer the on-premise ABAP source code to the cloud	Custom Code in the form of routines used in DTPs and transformations will be transferred with the associated objects within the Shell Conversion. Other custom code like classes will have to be transferred using abapGit.		if needed	Shell / Remote
3.3	Execute Cleanup-Report	This provides essential consistency checks (Check and repair inconsistencies, Check and delete obsolete programs, Cleanup RSOOBJXREF) Tasklist: RS B4H CHK CLEANUP		mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
11	**Realize Phase**				
T4	**System Provisioning**				
4.1	(If not already done) License SAP Data Warehouse Cloud Core	SAP BW bridge is a feature of SAP Data Warehouse Cloud, and is therefore only available, if you have already licensed SAP Data Warehouse Cloud.		mandatory	Shell / Remote
4.2	Ensure that additional capacity units are licenced for SAP BW bridge and SAP has assigned the required capacity units to your SAP Data Warehouse Cloud tenant.	SAP BW bridge is an additional feature for SAP Data Warehouse Cloud. Here, the customer needs additional capacity units explicitly for the SAP BW bridge feature. The customer contacts Sales and the order form with the (additional) CUs then triggers the installation.	3140001, 3134262	mandatory	Shell / Remote
4.3	Activate SAP BW bridge in your existing SAP Data Warehouse Cloud Tenant	Activate SAP BW Bridge in your SAP Data Warehouse Cloud Tenant	3134262, 3156000	mandatory	Shell / Remote
4.4	Install/ Update Cloud Connector	To connect the sender system via RFC to your SAP BW bridge tenant, a Cloud Connector must be set up in your on-premise network. The Cloud Connector version must be 2.13.1 or higher.		mandatory	Shell / Remote
4.5	Connect the Sender System to SAP BW bridge (Communication Scenario)	Steps: Add the SAP Data Warehouse Cloud Subaccount in the Cloud Connector, Add a Service Channel to the SAP BW Bridge Tenant in the Cloud Connector, Create a Communication System in the SAP BW bridge Tenant, Create a Communication Arrangement in the SAP BW Bridge Tenant, Create an RFC Destination in the Sender System (transaction SM59). For Communication Scenario: SAP_COM_0691 (SAP DWC BW Bridge - Migration Integration).		mandatory	Shell / Remote
4.6	Create Software Component(s), ABAP Package(s) and Transport Request(s)	Transport requests are technically required for creating objects in SAP BW bridge as well as for the transfer with the SAP BW bridge Transfer Cockpit.	3130759	mandatory	Shell / Remote
4.7	Creating new Source System connections in SAP BW bridge for all relevant ODP-based dataflows	As a prerequisite for performing a shell / Remote transfer, you have to create new Source System connections in SAP BW bridge for all data flows that you want to transfer that contain source system dependent objects. Steps: Create a Communication System in the SAP BW bridge Tenant, Create a Communication Arrangement in the SAP BW Bridge Tenant, Create an RFC Destination in the SAP Source Systems. For Communication Scenario: SAP_COM_0692 (SAP DWC BW Bridge - ODP RFC Source System Integration).	2473145	mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
11	**Realize Phase**				
T5	**Shell / Remote Transfer**				
5.1	Installing "SAP Landscape Transformation 2.0 Add-on (DMIS)" in the sender SAP BW system using add-on installation tool (transaction SAINT)	A remote conversion requires the installation of the SAP Landscape Transformation add-on (DMIS add-on)	2513088, 1577441	mandatory	**Remote**
5.2	Using Note Analyzer for Implementation of required SAP Notes (including installation of the Transfer Cockpit) and trigger manual activities relevant for the Shell Conversion process in the sender SAP BW system.	For SAP BW from 7.30 to 7.50 acting as a sending system for a shell conversion, use SAP BW4HANA_Shell_Conversion_(Original_System)_[last_update].xml For SAP BW/4HANA 2021 acting as a sending system for a shell conversion, use SAP_BW4HANA_Shell_Conversion_(From_BW4_System)_[last_update].xml	3141688	mandatory	Shell / Remote
5.3	Using Note Analyzer for implementation of required SAP Notes and trigger manual activities relevant for the Shell Conversion process in the relevant SAP source systems.	For all systems connected to SAP BW or SAP BW/4HANA as source system for data loads, use Source_System_for_SAP_BW4HANA_[last_update] .xml	3141688	mandatory	Shell / Remote
5.4	Transfer on-premise ABAP source code (classes etc.) to the cloud via abapGit	Transfer on-premise ABAP source code (classes etc.) to the cloud via abapGit		if needed	Shell / Remote
5.5	Transfer incompatible objects to compatible objects	Conversion from 3.x to 7.x objects (Transfer, replace or delete. Not only dataflows, but also APD, BEX and other non SAP BW bridge compatible objects). The Transfer Cockpit is not able to convert legacy 3.x data flows (originating in SAP BW systems before release 7.0). Such 3.x data flows must be migrated to corresponding 7.x data flows before a transfer to objects compatible with SAP Data Warehouse Cloud, SAP BW bridge is possible. (RSMIGRATE)		if needed	Shell / Remote
5.6	Transfer Cockpit: Scope Identification and Check	Check SAP BW objects whether they are compatible with SAP BW bridge for shell conversion Transaction STCOI: Tasklist 'SAP_BW4_TRANSFER_CHECK_CLOUD_SHL' (Identify scope)		if needed	Shell / Remote
5.7	Scope Transfer Tool: Transfer SAP BW or SAP BW/4HANA objects to compatible SAP BW bridge objects (metadata)	Transfer SAP BW objects to be compatible with SAP BW bridge Transaction STCOI: Tasklist 'SAP BW4 TRANSFER CLOUD SHELL'		mandatory	Shell / Remote
5.8	Monitor previous task list runs and check application log directly	You can monitor previous task list runs using the Task List Monitor (transaction STC02) and check application log directly (transaction SLG1)		if needed	Shell / Remote
5.9	Reset a task list run (Definitely only in exceptional situations)	Report: RS_B4HANA_TRANSFER_REM_RESET The program remotely deletes in the receiver system the generated objects and the data transfer control entries and resets the METADATA flags. The SAP BW bridge Transfer Cockpit run must still be active (which is always the case, unless another sender has started transfer into the same receiver). Check also Report: RS_B4HANA_TRANSFER_REM_END		if needed	Shell / Remote
5.10	Adjusting custom developments as identified during the Prepare Phase	Adjust your custom developments as identified during the Prepare Phase or when using the code scan in the SAP BW bridge Transfer Cockpit.	2462639	mandatory	Shell / Remote
5.11	Adaptation of authorizations in SAP Data Warehouse Cloud, SAP BW bridge	SAP BW bridge has its own role and authorization management (Identity and Access Management). Authorizations in SAP BW bridge do exist on InfoArea and Source System level. Therefore, an adjustment of user roles has to be performed to reflect this change.		mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
11	**Realize Phase**				
T6	**Post Transfer Tasks**				
6.1	Data Transfer (Optional for Shell Conversion)	With a shell conversion, neither master or transaction data is transferred during a scope transfer. The following data transfer options exist: Re-load data from original sources, Load data from sender SAP BW or SAP BW/4HANA system		if needed	Shell
6.2	Perform object-specific follow-on activities	Depending on the result and content of the transfer this could include e.g. -Check whether your transferred objects are actually as expected in SAP BW bridge - If the transferred objects are inactive in SAP BW bridge, please reactivate them manually	2468657	mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
11	Realize Phase				
T7	SAP Data Warehouse Cloud Core Tasks				
7.1	Import & Share remote tables in SAP BW bridge Space in SAP Data Warehouse Cloud Core	The SAP BW bridge artefacts are available via remote tables in a dedicated SAP BW bridge Space in SAP Data Warehouse Cloud. The remote tables in the SAP BW bridge Space can then be used in the regular SAP Data Warehouse Cloud Spaces via the SAP Data Warehouse Cloud cross-space sharing approach.		mandatory	Shell / Remote
7.2	Switching the Non-SAP SourceSystem Types to SAP Data Warehouse Cloud Core	SourceSystem types UD/ DB Connect, Data Services, Partner ETL, HANA, and File need to be adapted in SAP Data Warhouse Cloud Core using SAP HANA Smart Data Integration.		if needed	Shell / Remote
7.3	Re-implementation of non-SAP based data flows in SAP Data Warehouse Cloud Core	SAP BW bridge is primarily intended for ODP-based source systems, which means that the connection scenarios only become available via Operational Data Provisioning (ODP). Non-SAP sources need to be connected directly to SAP Data Warehouse Cloud, and so the non-SAP based data flows need to be re-implemented here.		if needed	Shell / Remote
7.4	Use SAP Data Warehouse Cloud data, as source for SAP BW bridge (Definitely optional)	For InfoProviders that contain both SAP data and non-SAP data, and their transformations are quite complex to re-implement, SAP will offer the usage of SAP Data Warehouse Cloud data in the SAP BW bridge. This enables to use SAP Data Warehouse Cloud data sources in the transformations of SAP BW bridge.		if needed	Shell / Remote
7.5	Develop SAP Data Warehouse Cloud Core models to integrate BW bridge artefacts	Build data models and create views, associate master data and use additional settings. Select operators for additional data transformations e.g. Filter, Projection, Calculated Column, Aggregation in SAP Data Warehouse Cloud Core.		mandatory	Shell / Remote
7.6	Adaptation of the Reporting functionality in SAP Data Warehouse Cloud Core	OLAP functionality needs to be re-implemented in SAP Data Warehouse Cloud Core. A manual import wizard is planned for SAP Data Warehouse Cloud, it supports the onboarding of SAP BW Queries (of a sender system in a conversion scenario) and relevant objects as SAP Data Warehouse Cloud artefacts. Selection of one or more queries or complete nfo Areas, Automatic identification of relevant components (Composite Providers, Info Objects, Data Store Objects), Translation into appropriate SAP Data Warehouse Cloud artefacts (Tables, Views, Business Entities, and Consumption Models), Automatic creation and sharing of relevant objects in the SAP BW bridge and Target Space. The manual import wizard for SAP BW bridge is not the same like the SAP BW/4HANA Model Transfer.	3077402, 2832606, 2932647	mandatory	Shell / Remote
7.7	Adaptation of authorizations in SAP Data Warehouse Cloud Core	SAP Data Warehouse Cloud uses the space concept to ensure data governance. In addition Data Access Controls (DACs) allow to apply row-level security to the objects. When a data access control is applied to a data layer view or a business layer object, the rows of data contained in the object are filtered based on the specified criteria (Row-level security).		mandatory	Shell / Remote

Work Package ID	Step	Comment	Note	Severity	Shell / Remote
11	**Realize Phase**				
T8	**Go-Live**				
8.1	A parallel run of SAP BW or SAP BW/4HANA might be used to test and validate the new SAP Data Warehouse Cloud, SAP BW bridge tenant. The go-live is then completed by the decommission of the SAP BW or SAP BW/4HANA system landscape.	Shell conversion can be used as accelerated greenfield		if needed	Shell / Remote

Sierra Digital Inc Maintenance Activity

Date	Activities	Effected Areas	Servers Down	Start time	End Time
JAN 21st	Realize Phase	Coimbatore Office			

SAP BW and SAP BW4/HANA limitations

Current Challenges in classical BW and SAP BW/4HANA

- Distributed Landscape - Organizations may have their data landscape distributed among different applications and systems both in the cloud and on-premise.

- Organizations spend countless resources extracting, rebuilding, and integrating their data.

- Complex data modelling and business logic to accomplish the business needs.

- Accommodating the changes are more difficult and Time to market is slow.

- Extraction of Non-SAP data is not at all possible

- Data is not in business readable format and end user needs technical support to generate a report.

- Development life cycle management is not easy due to dependencies of the objects