



SAP Analytics Cloud

Data Preparation & Integration

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July 2019

PUBLIC

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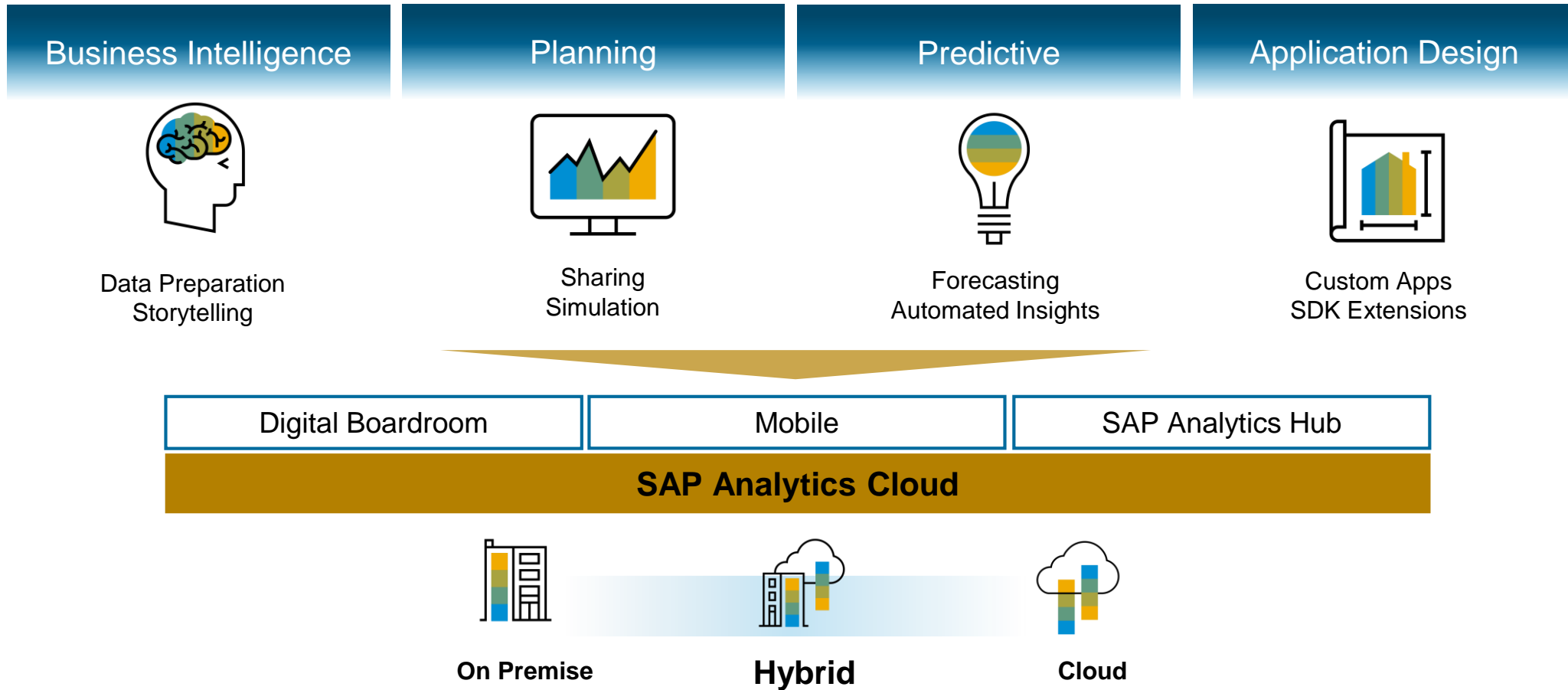
Agenda

Overview on connectivity and data preparation

Next steps

Sneak-preview demo

One | Simple | Cloud



Unified experience for Planning, BI and Predictive all in one service
Live data **connectivity** enables SaaS for everyone
End-to-end analytics for the **Intelligent Enterprise**

Data integration

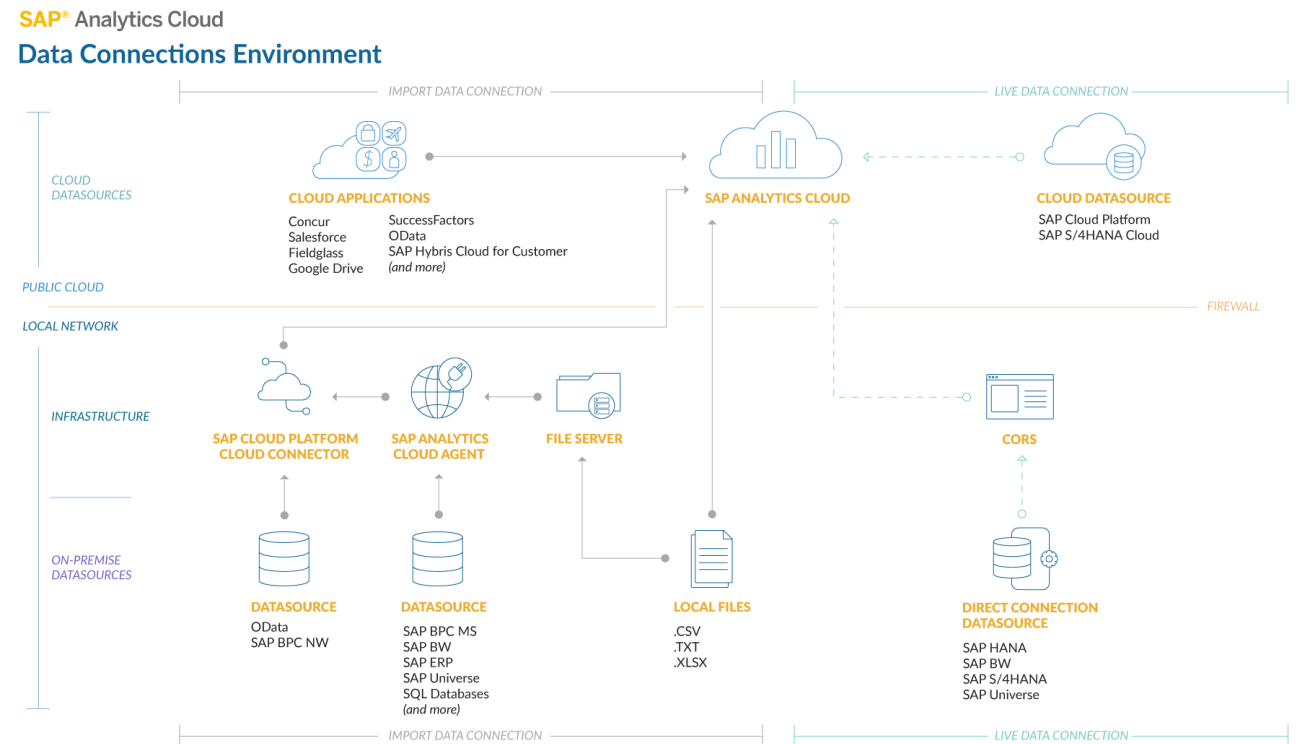
Connect to data anywhere stored in on-premise databases, cloud databases, and personal files. Enrich data and business metadata in preparation for self-service data analysis through purpose-built data modeling capabilities and calculations.

Live connections

- Data replication is not required
- Leverage business metadata directly without additional modeling
- Leverage existing security and data authorizations

Data import connections

- Business users can model data with Smart Data Preparation
- Easily create, track and reverse data transformations
- Refresh data on demand or via schedule



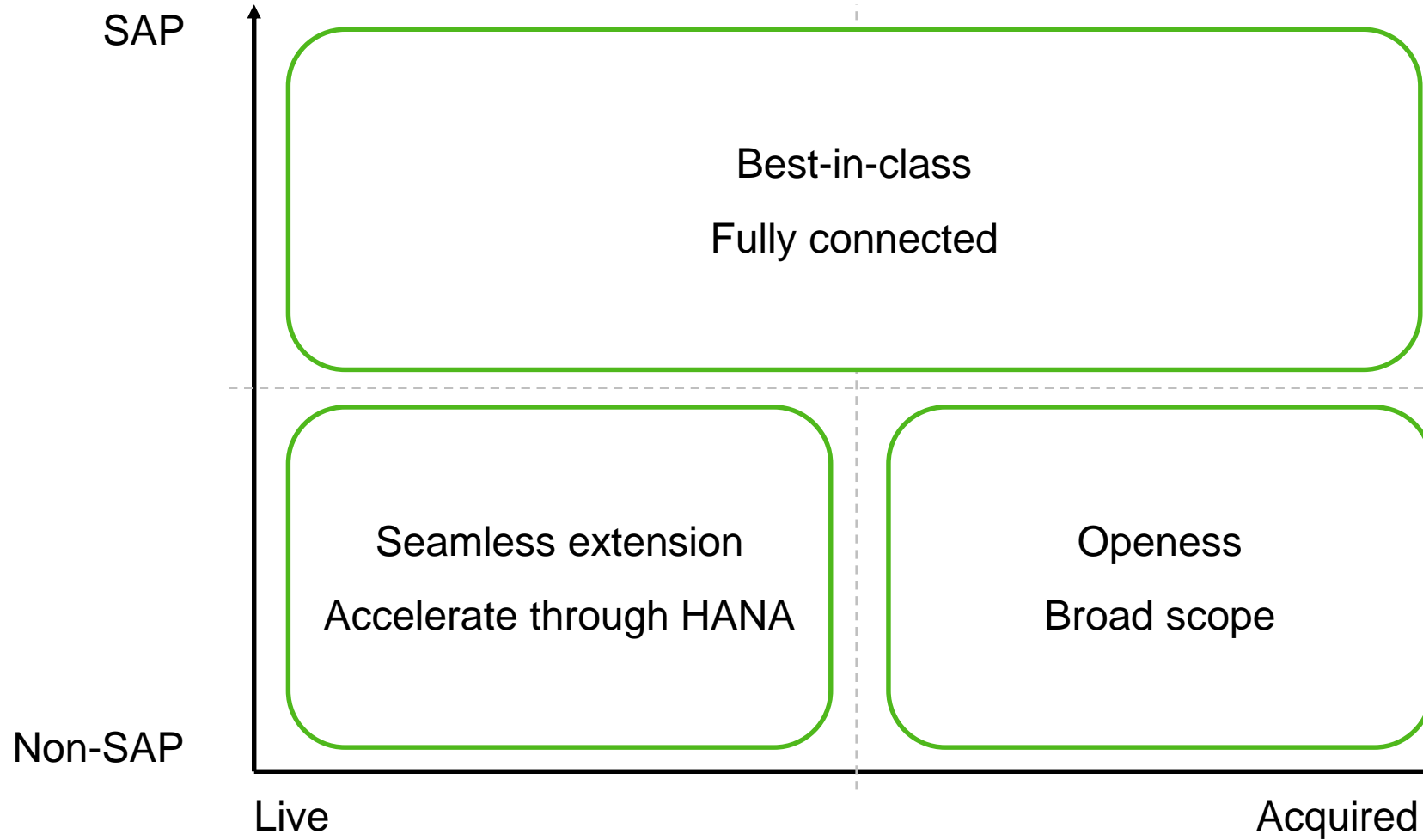
A frictionless, agile and repetitive process



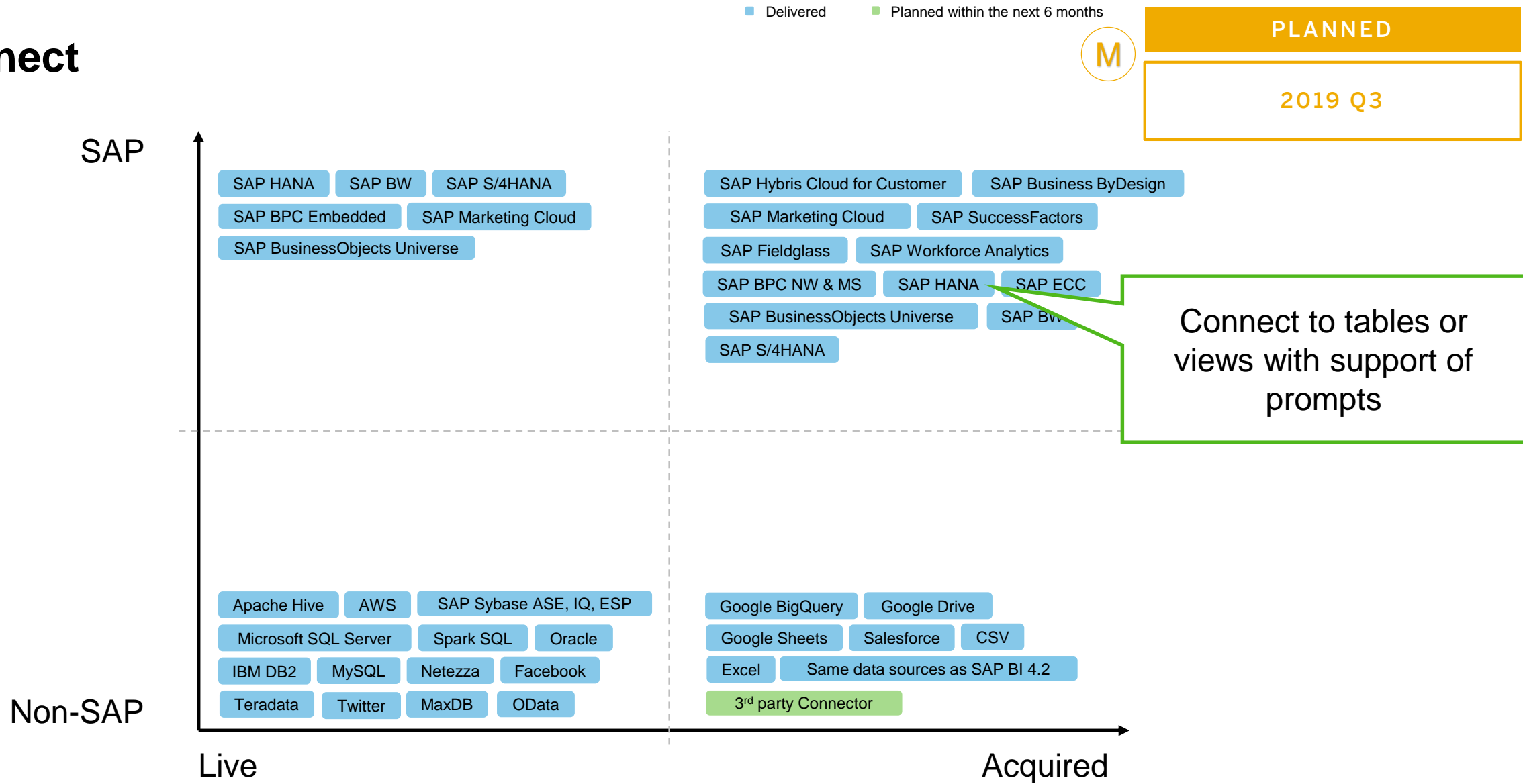
Connect



Connect



Connect



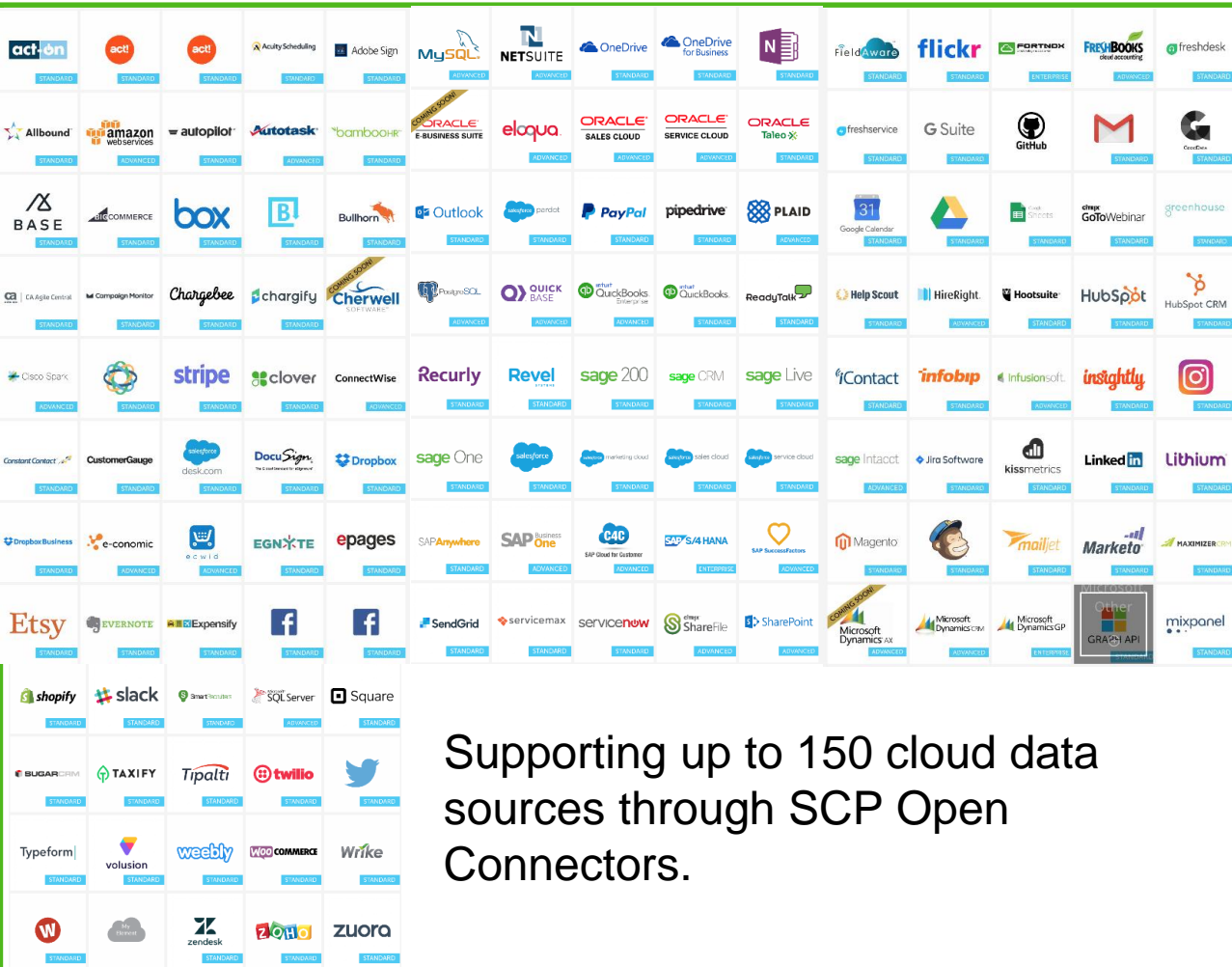
Connect

■ Delivered ■ Planned within the next 6

M

STAGED DELIVERIES

Starting with 2019 Q3



Supporting up to 150 cloud data sources through SCP Open Connectors.

SAP Hybris Cloud for Customer SAP Business ByDesign
SAP Marketing Cloud SAP SuccessFactors
SAP Fieldglass SAP Workforce Analytics
SAP BPC NW & MS SAP HANA SAP ECC
SAP BusinessObjects Universe SAP BW
SAP S/4HANA

Google BigQuery Google Drive
Google Sheets Salesforce CSV
Excel Same data sources as SAP BI 4.2

3rd party Connector

Acquired

Connecting to SAP SCP Open Connectors



PLANNED

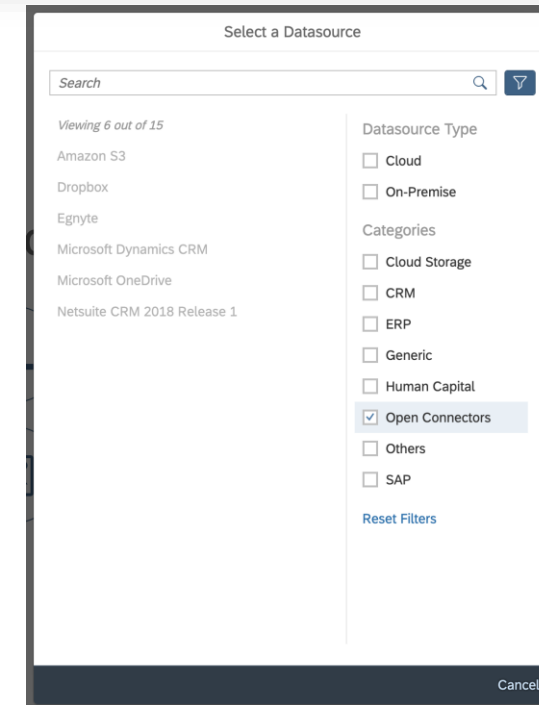
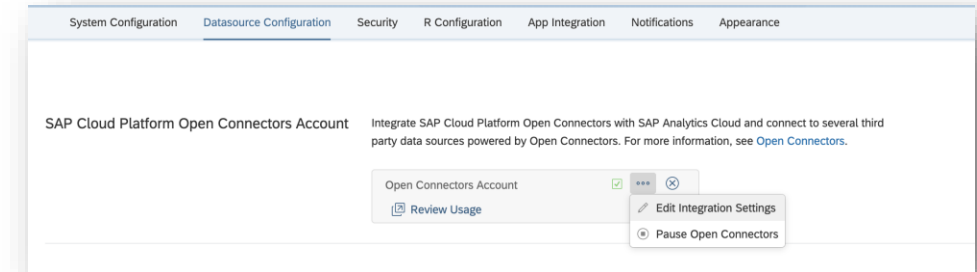
2019 Q3

Access to 6 new sources

- Amazon S3, Egnyte, DropBox, OneDrive
 - Upload CSV, xlsx files from these sources
- Netsuite, Microsoft Dynamics

Setup of SCP's Open Connector service is needed

- Available on the SAP Store
- Sub-account information of the SCP service is needed to trigger access to these sources in SAC
 - Pricing based on # of API calls
 - Monitor usage in SCP cockpit
- Global pause button of SCP Open Connector sources available to SAC administrator.



New upload limits

M

PLANNED

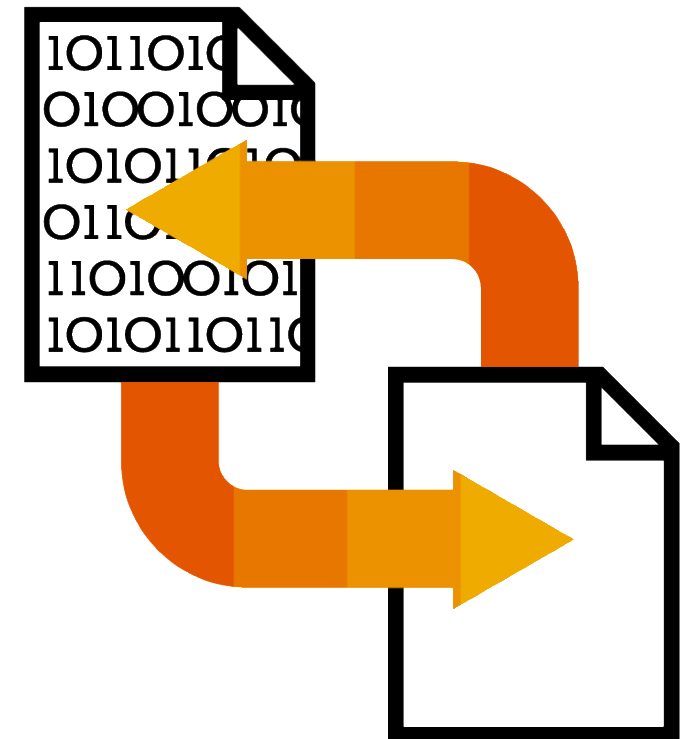
2019.Q3

On rows

- For files
 - Support 2Gb files
- For non-files (Q4)
 - 100m cells for models
 - 1B cells for Datasets

On columns

- Limits for Agile BI workflows will be re-assessed during beta program
- Beyond that limit, a new UX will be required to navigate across a high number of columns



Exporting data out of SAC



PLANNED

2019 Q3

Asynchronous experience when pushing data to CSV, S/4HANA

Export up to 6m rows from the fact data

- Magnitudes better performance vs. existing export
- For requests to export 1m+ rows, only fact data can be considered
- Only files without calculations can be exported, otherwise limit will be still of 1m rows.

Export Model As File

Export Details*

Select Data

Scheduling

*Model Name

ABCModel

*Target

☒ File Repository ☐ File Server

Select Folder *No folder selected.*

Maximum Rows Per File *1*

10000

☐ Add Separator information for use in Excel *1*

☐ Export lead account members only

☐ Export booked data only

☐ Include account calculations

Exporting with account calculations is limited to the first million rows.

Button Save Cancel

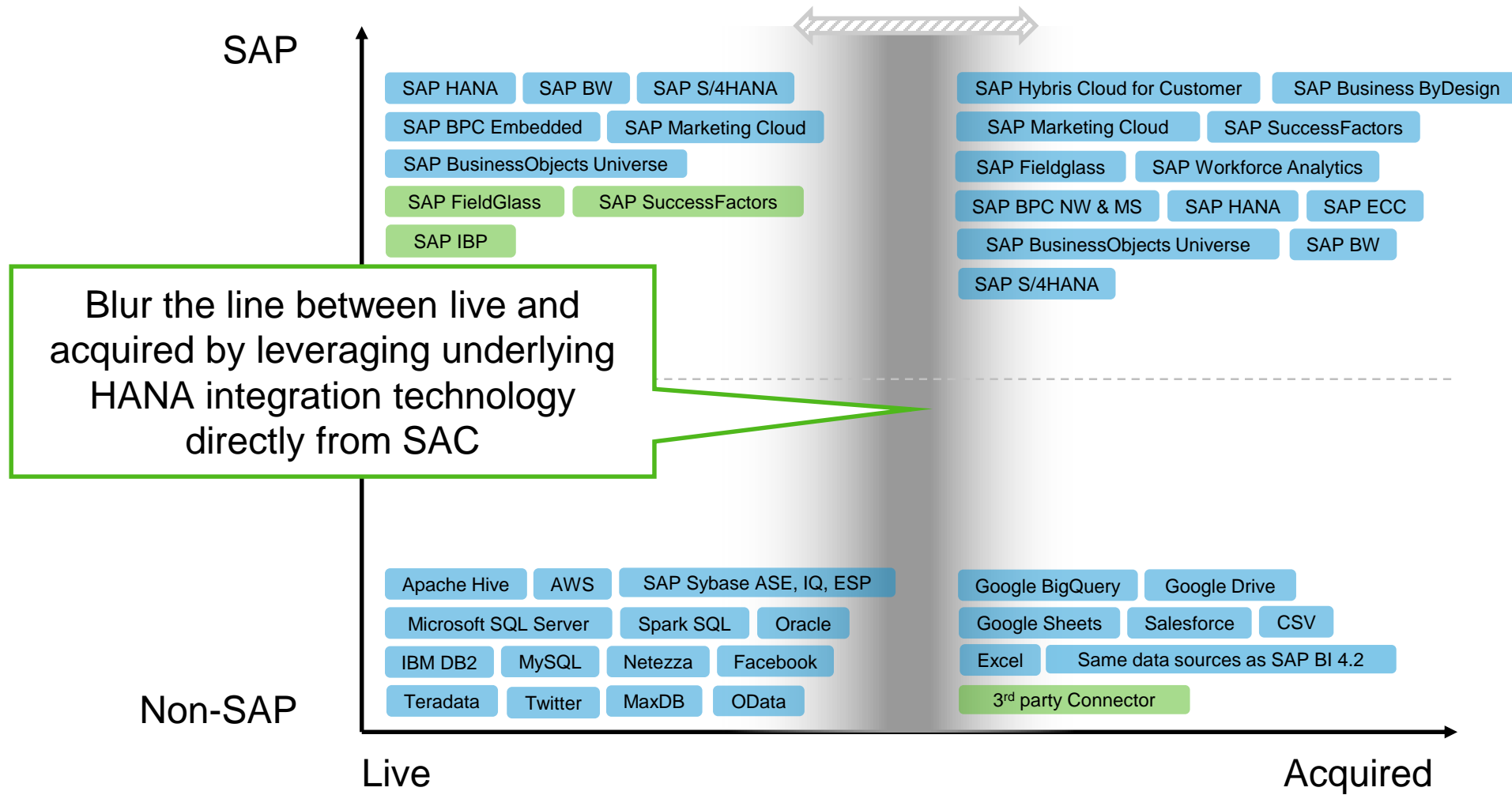
Connect

■ Delivered

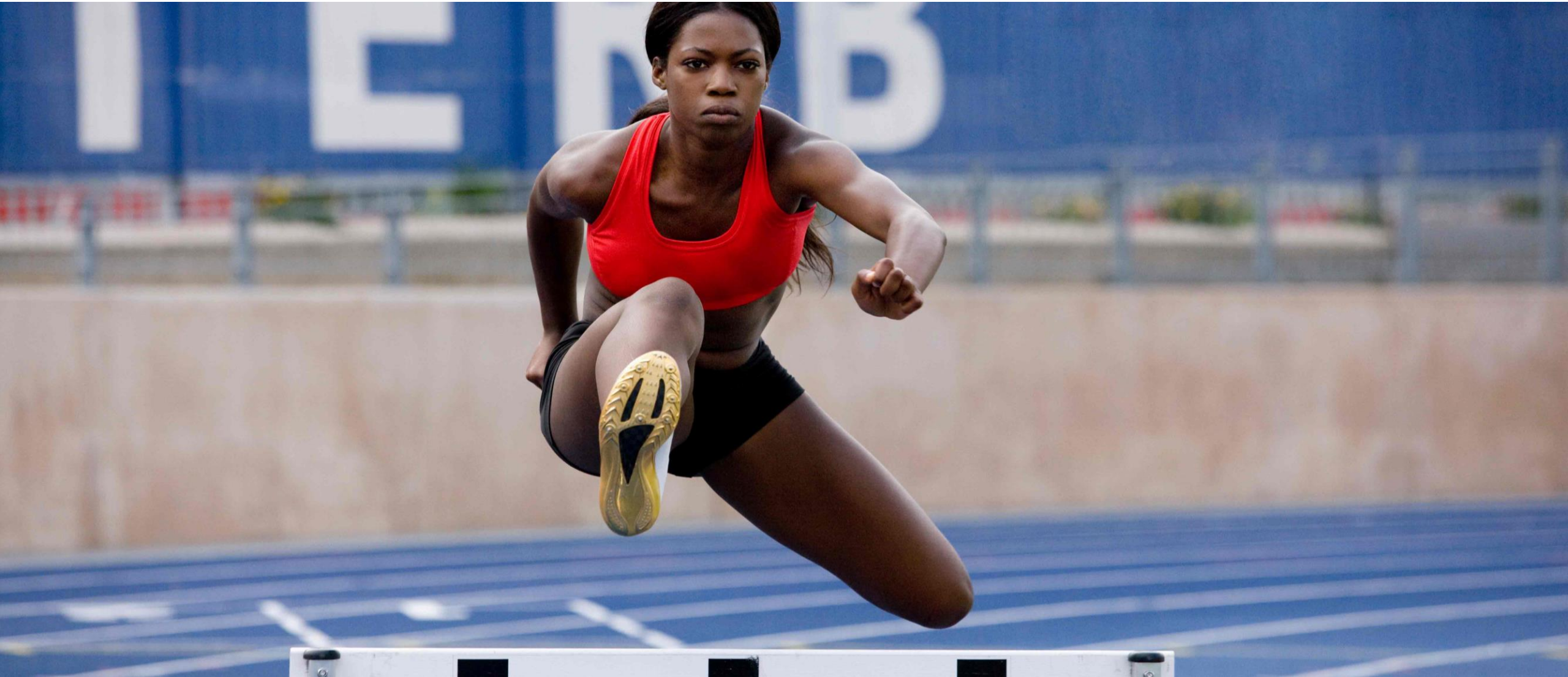
■ Planned within the next 6



FUTURE



Prepare with Agility



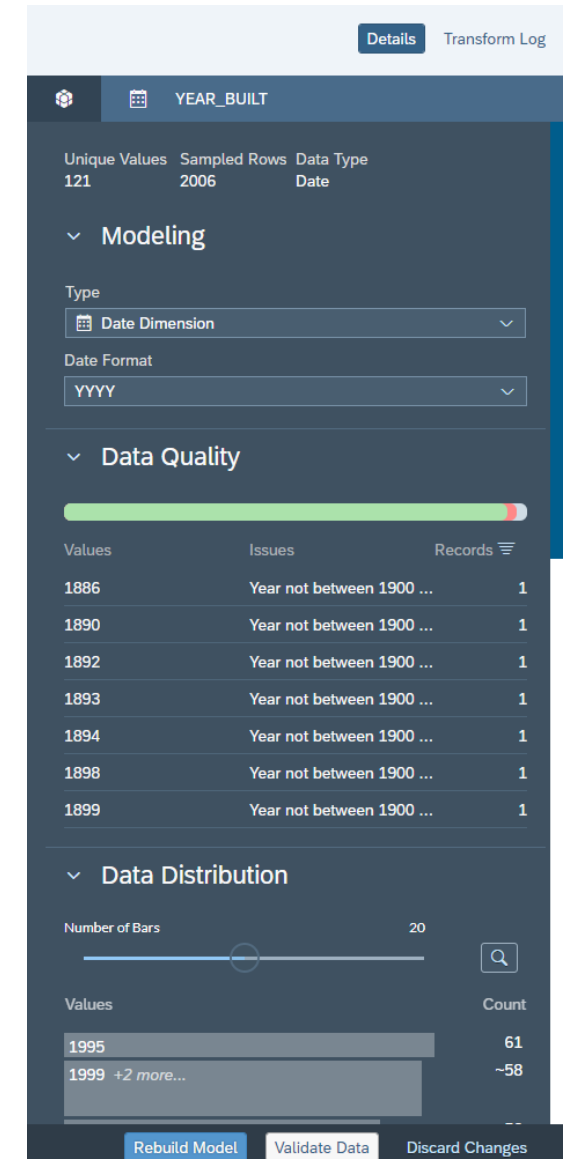
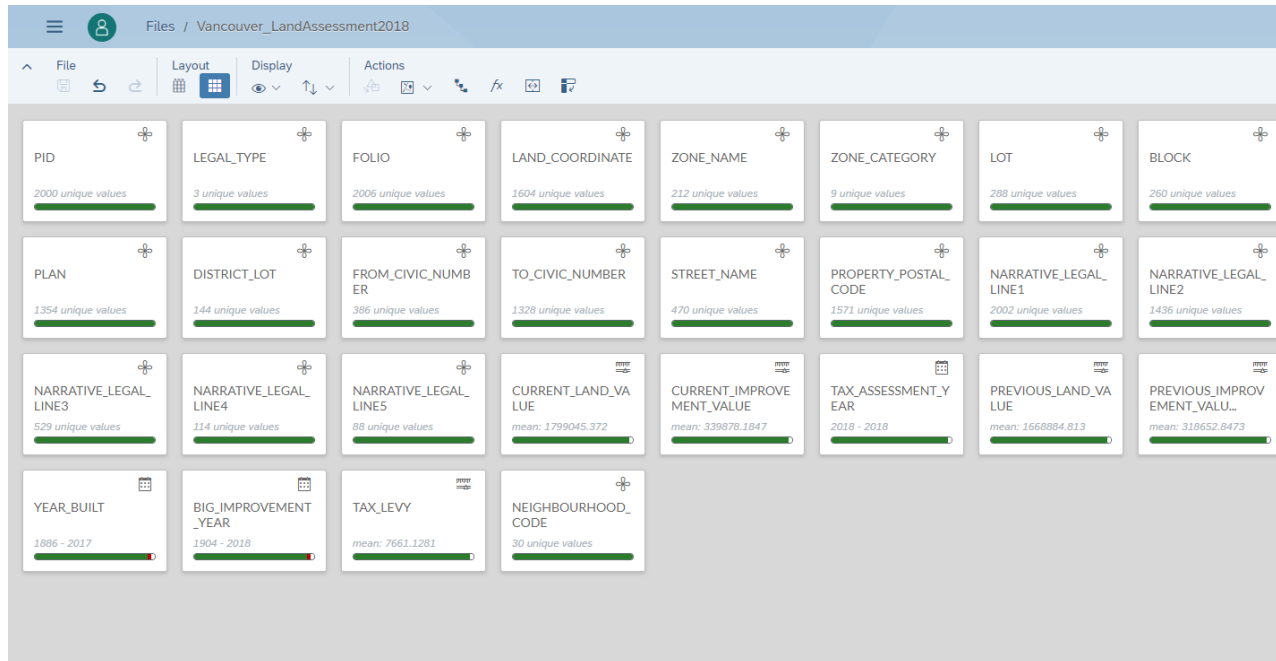
A frictionless, agile and iterative process



Driving principles of agile data preparation

Show the data from different perspectives

- Direct display – Table View / Card View
- Direct interactions
- Data Quality
- Data Distribution

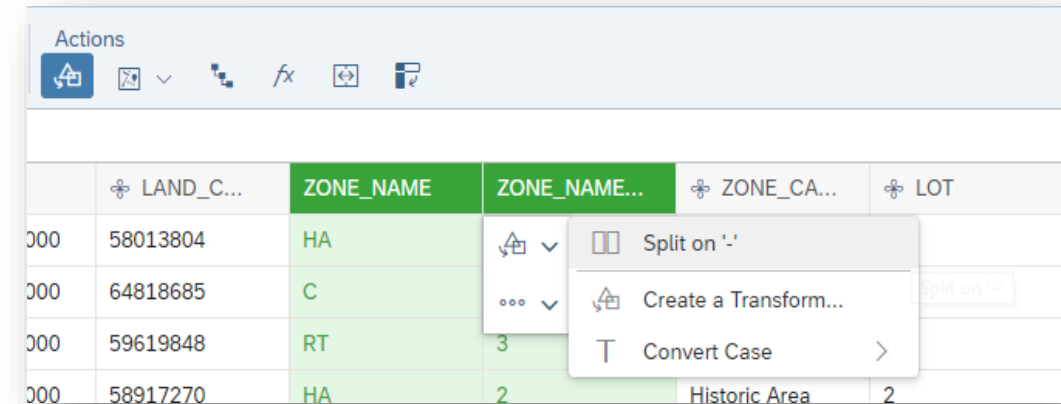


Driving principles of agile data preparation

Increase user creativity with data

Let the user focus on higher-valued workflows through suggestions

- Infer datatypes
- Transformation suggestions based on end-user's selection
- Suggest dimension relationships



The screenshot shows a data table with columns: LAND_C..., ZONE_NAME, ZONE_NAME..., ZONE_CA..., and LOT. The 'ZONE_NAME' column is highlighted in green. A context menu is open over the 'ZONE_NAME' column, showing options: Split on '-', Create a Transform..., and Convert Case. The 'Create a Transform...' option is highlighted.

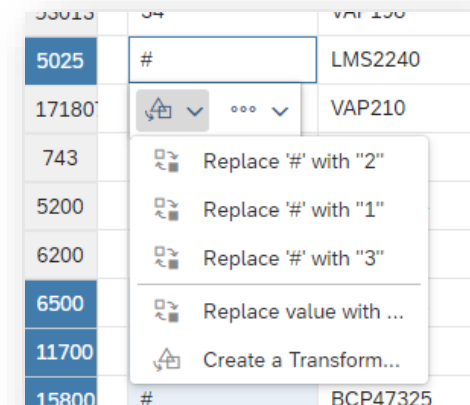
	LAND_C...	ZONE_NAME	ZONE_NAME...	ZONE_CA...	LOT
000	58013804	HA			
000	64818685	C			
000	59619848	RT	3		
000	58917270	HA	2	Historic Area	2

Let the users play with the data

- Show the different states: previous, future
- Preview transforms
- Let users decide on the result



The screenshot shows a 'Replace' action bar with the text: Replace cell in [BLOCK] matching "#" with "2".



The screenshot shows a data table with columns: #, LMS2240, and VAP210. The '#' column is highlighted in blue. A context menu is open over the '#' column, showing options: Replace '#' with "2", Replace '#' with "1", Replace '#' with "3", Replace value with ..., and Create a Transform... The 'Replace value with ...' option is highlighted.

	#	LMS2240	VAP210
5025	#	LMS2240	
17180	#	VAP210	
743	#		
5200	#		
6200	#		
6500	#		
11700	#		
15800	#	BCP47325	

Unpivot columns into rows

Manage Excel crosstabs

- Apply a new unpivot transformation to bring columns into rows
- Each header row will have its own column after pivoting
- Rows of the dataset will be promoted as column headers

Word of caution on refresh

- Models created with unpivot can only be refreshed if the number of columns is the same.
- Users will have to use “import data” workflow to bring in new data

The screenshot illustrates the process of creating an unpivot transformation in SAP Analytics Cloud. The main window shows a data table with columns for Product, Year, and Sales. A red arrow points from the 'Unpivot Rows' dropdown in the 'Create an Unpivot Transform' panel to a smaller inset window showing the 'Unpivot Settings' dialog. The dialog includes a table for selecting rows to unpivot and a preview of the resulting data structure.

Product	Year	Sales
Tshirts	2018	345
Jeans	2017	7533
socks	2016	4456
shirts	2017	866
shoes	2016	12367

Unpivot Settings

Unpivot Rows: First 2 rows

Unpivot Columns (6/7):

- HEADER0
- HEADER1
- HEADER2
- HEADER3
- HEADER4
- HEADER5

Unpivot Preview

Rows: 7 → 30
Columns: 7 → 4

Columns Preview (4):

- Product
- KEY_1: 1st row of 6 columns
- KEY_2: 2nd row of 6 columns

Preview on grid: OFF

Buttons: Unpivot, Cancel

Data preparation functions

Data preparation functions make it easy to transform data

- Split, duplicate, delete, concatenate columns
- Replace, change single or multiple values/cells
- Extract values to create a new column
- Calculated columns
- Geo enrichment by coordinates & area name
- Create level-based and parent-child hierarchies
- Transpose columns to rows and vice versa
- Combine data from other sources
- History maintained of transformations with undo/redo

The screenshot displays the SAP Data Builder interface. On the left, the 'Geo by Coordinates' configuration panel is visible, showing fields for Dimension Name (Location), Identifiers (Location ID: PostalCode, Location Description: Select column with location descriptions), and Coordinates (*Latitude: Latitude, *Longitude: Longitude). A 'Create' button is at the bottom right of this panel.

On the right, the 'Transformation Log for Model' panel shows a list of applied transformations:

- Delete all rows with "1800" in [BIG_IMPROVEMENT_YEAR]
- Split [ZONE_CATEGORY] into "2" new columns on " "
- Replace " " with empty in [PROPERTY_POSTAL_CODE]
- Replace " " with empty in [PROPERTY_POSTAL_CODE]
- Replace "#" with "3" in [FROM_CIVIC_NUMBER]
- Replace "#" with "0" in [FROM_CIVIC_NUMBER]

Below the transformation log, a data table is shown with a context menu open over the first column. The context menu options are: Concatenate, Split, Extract, Replace, and Change. The data table has the following rows:

30755				
17581				
19017				
16035				
53013	34	VAP198	302	#

Product Demo



Prepare with Agility



PLANNED BETA

2019 Q4

Discover, prepare, and share data without the reliance from IT

Easy for business users and analysts to quickly prepare data with a visual, interactive interface

Data defines structure

StoryData

File

ModeDataActions

Presidential_D_

Create Transform

	cmte_id	cand_id	cand_nm	contr_nm	contr_city	contr_st	contr_zip	contr_empl...	contr_occu...	contr_receipt...	contr_receipt...
1	C00430470	P80002801	McCain, John S	JENRETTE, ALBER	AUBURN	AL	368323419	LWMA	MANAGEMENT	50	09-AUG-07
2	C00430470	P80002801	McCain, John S	LEE, RICHARD C. I	DECATUR	AL	356032202		RETIRED	150	23-JUL-07
3	C00430470	P80002801	McCain, John S	BOOTH, BARRY L.	SPANISH FORT	AL	365777406	SELF	DENTIST	250	06-SEP-07
4	C00430470	P80002801	McCain, John S	CLARK, CHRIS J. I	BIRMINGHAM	AL	352054162		RETIRED	2300	20-JUL-07
5	C00430470	P80002801	McCain, John S	CLARK, ALAN F. M	BIRMINGHAM	AL	352054162		RETIRED	142	21-AUG-07
6	C00430470	P80002801	McCain, John S	CLARK, ALAN F. M	BIRMINGHAM	AL	352054162		RETIRED	-142	24-AUG-07
7	C00430470	P80002801	McCain, John S	CLARK, ALAN F. M	BIRMINGHAM	AL	352054162		RETIRED	142	24-AUG-07
8	C00430470	P80002801	McCain, John S	JONES, ROBERT C	BIRMINGHAM	AL	352232908	SELF-EMPLOYED	PHYSICIAN	2300	10-SEP-07
9	C00430470	P80002801	McCain, John S	BOYER, WILLIAM I	AUBURN	AL	368306269		RETIRED	75	23-JUL-07
10	C00430470	P80002801	McCain, John S	BOYER, WILLIAM I	AUBURN	AL	368306269		RETIRED	50	20-AUG-07
11	C00430470	P80002801	McCain, John S	BRETH, JAMES R.	TUSCALOOSA	AL	354061040		RETIRED	100	20-JUL-07
12	C00430470	P80002801	McCain, John S	BRETH, JAMES R.	TUSCALOOSA	AL	354061040		RETIRED	60	10-AUG-07
13	C00430470	P80002801	McCain, John S	CLARK, MICHAEL	MOBILE	AL	366953663	SPECTRUM ENGIN	CONSTRUCTION I	25	12-JUL-07
14	C00430470	P80002801	McCain, John S	CLARK, MICHAEL	MOBILE	AL	366953663	SPECTRUM ENGIN	CONSTRUCTION I	25	09-AUG-07
15	C00430470	P80002801	McCain, John S	CLARK, MICHAEL	MOBILE	AL	366953663	SPECTRUM ENGIN	CONSTRUCTION I	25	06-SEP-07
16	C00430470	P80002801	McCain, John S	CLARK, MICHAEL	MOBILE	AL	366953663	SPECTRUM ENGIN	CONSTRUCTION I	25	30-SEP-07
17	C00430470	P80002801	McCain, John S	BOHANNON, PATR	ATTALLA	AL	359547827		RETIRED	50	23-JUL-07
18	C00430470	P80002801	McCain, John S	BOHANNON, PATR	ATTALLA	AL	359547827		RETIRED	25	14-AUG-07
19	C00430470	P80002801	McCain, John S	BOHANNON, PATR	ATTALLA	AL	359547827		RETIRED	50	10-SEP-07
20	C00430470	P80002801	McCain, John S	EDOLEMAN, BILLY	BIRMINGHAM	AL	352232605	SELF-EMPLOYED	REAL ESTATE DEV	1000	10-AUG-07
21	C00430470	P80002801	McCain, John S	EDOLEMAN, BILLY	BIRMINGHAM	AL	352232605	SELF-EMPLOYED	REAL ESTATE DEV	-1000	13-AUG-07
22	C00430470	P80002801	McCain, John S	EDOLEMAN, BILLY	BIRMINGHAM	AL	352232605	SELF-EMPLOYED	REAL ESTATE DEV	1000	13-AUG-07
23	C00430470	P80002801	McCain, John S	BAKER, MARY L. C	BIRMINGHAM	AL	352133411	BIRMINGHAM RAC	PHYSICIAN	142	20-AUG-07
24	C00430470	P80002801	McCain, John S	WILLIAMS-MURPH	HAYDEN	AL	350794633	HUNTSVILLE HOSI	EMERGENCY PHY	500	19-JUL-07
25	C00430470	P80002801	McCain, John S	TAYLOR, TIM MR.	ALEXANDER CITY	AL	350106940	SELF	SMALL BUSINESS	142	07-AUG-07
26	C00430470	P80002801	McCain, John S	HALEY, JOSEPH E.	AUBURN	AL	368301810	RETIRED	RETIRED	200	15-JUL-08

Model Overview

Presidential_Donations

2000 rows
16 columns

Search

Measures (2)

contr_receipt_amt

file_num

Dimensions (14)

cmte_id

cand_id

cand_nm

contr_nm

contr_city

contr_st

contr_employer

contr_occupation

contr_receipt_dt

receipt_desc

memo_cd

memo_text

form_tp

contr_zip



My Files



Search

2019 Q4

<input type="checkbox"/>	Name	Description	Type	Owner	Created on	Changed by	Changed on
<input type="checkbox"/>	Input Forms	Input Forms	Folder	–	Feb 25, 2019 14:22	–	Feb 25, 2019 14:22
<input type="checkbox"/>	Public	Public	Folder	–	Feb 25, 2019 14:22	–	Feb 25, 2019 14:22
<input type="checkbox"/>	Samples	Samples	Folder	–	Feb 25, 2019 14:22	–	Feb 25, 2019 14:22
<input type="checkbox"/>	Boeing Sample articles	–	Model (Analytic)	Paul Ekeland	Mar 13, 2019 16:15	Paul Ekeland	Mar 13, 2019 16:15
<input type="checkbox"/>	budget.xlsx	–	Model (Analytic)	Paul Ekeland	Apr 30, 2019 12:40	Paul Ekeland	Apr 30, 2019 12:40
<input type="checkbox"/>	CensusLocalAreaProfiles2016	–	Model (Analytic)	Paul Ekeland	Feb 25, 2019 20:59	Paul Ekeland	Feb 25, 2019 20:59
<input type="checkbox"/>	Queries across all landscapes	–	Story	Paul Ekeland	Apr 17, 2019 14:34	Paul Ekeland	Apr 17, 2019 14:34
<input type="checkbox"/>	query_result.csv	–	Model (Analytic)	Paul Ekeland	Apr 17, 2019 14:28	Paul Ekeland	Apr 17, 2019 14:28
<input type="checkbox"/>	SurveyResults_Tread	–	Model (Analytic)	Paul Ekeland	Mar 28, 2019 12:56	Paul Ekeland	Apr 5, 2019 17:56
<input type="checkbox"/>	Testing Agile BI 020519	–	Story	Paul Ekeland	May 3, 2019 2:02	Paul Ekeland	May 3, 2019 3:10
<input type="checkbox"/>	Vancouver Land Assessment 2018	–	Model (Analytic)	Paul Ekeland	Feb 25, 2019 20:02	Paul Ekeland	Feb 25, 2019 20:02
<input type="checkbox"/>	Vancouver Land Assessment 2018 - backup	–	Model (Analytic)	Paul Ekeland	Feb 25, 2019 20:15	Paul Ekeland	Feb 25, 2019 20:15
<input type="checkbox"/>	Vancouver land value	–	Story	Paul Ekeland	Feb 25, 2019 20:03	Paul Ekeland	Feb 25, 2019 20:03

Thank you.

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