SAP Analytics Cloud, analytics designer

Overview and Roadmap

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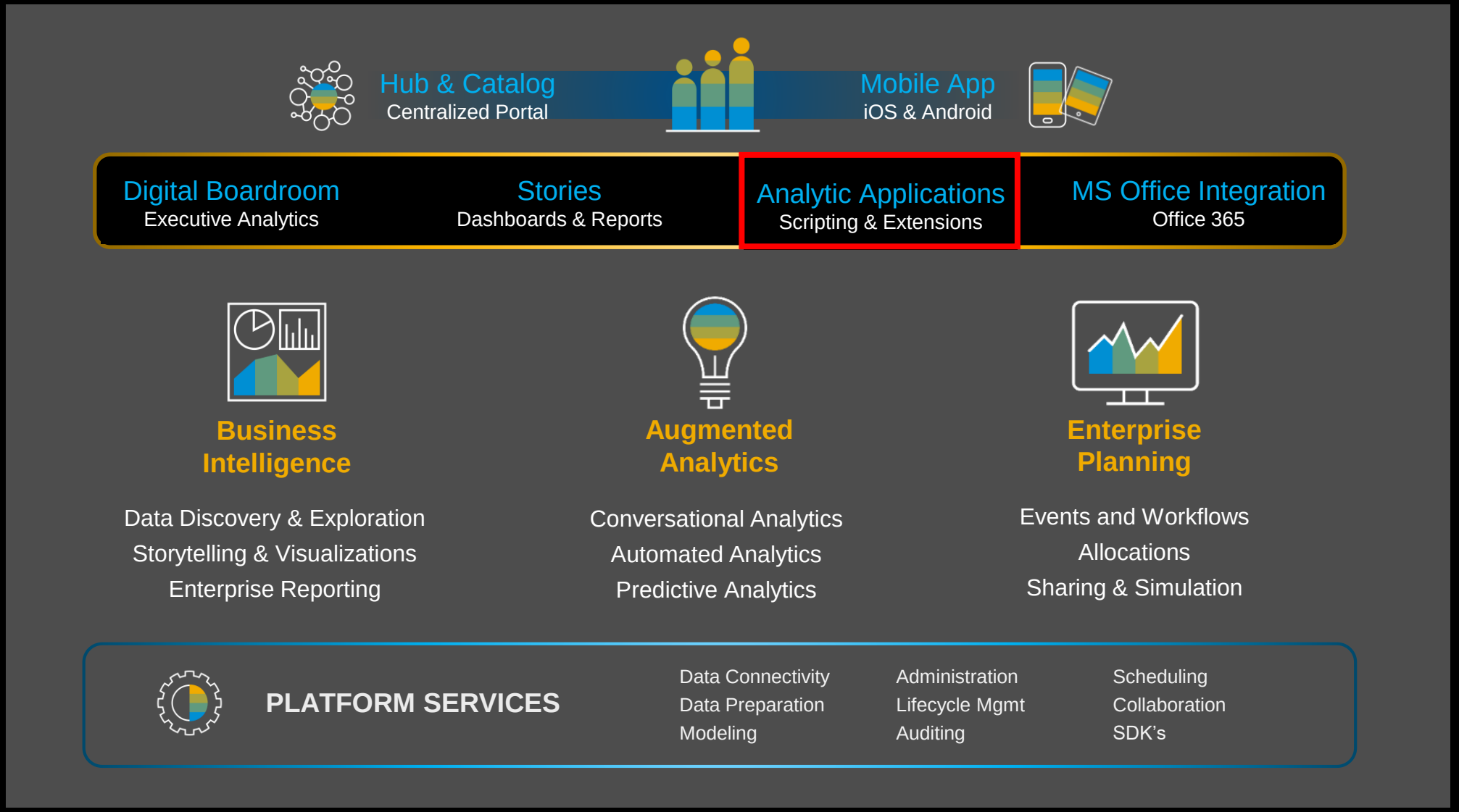
THE BEST RUN SAP

Agenda

- Introduction to Analytics Designer
- Use Cases
- Product Highlights & Live Demos
- Reference Customer
- Roadmap

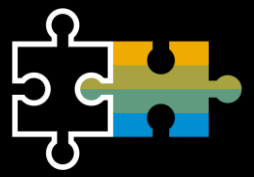
Introduction

SAP Analytics Cloud



The SAP Analytics Designer Vision

Application development framework in SAP Analytics Cloud

COMPLETE  **Extend SAP Analytics Cloud capabilities**

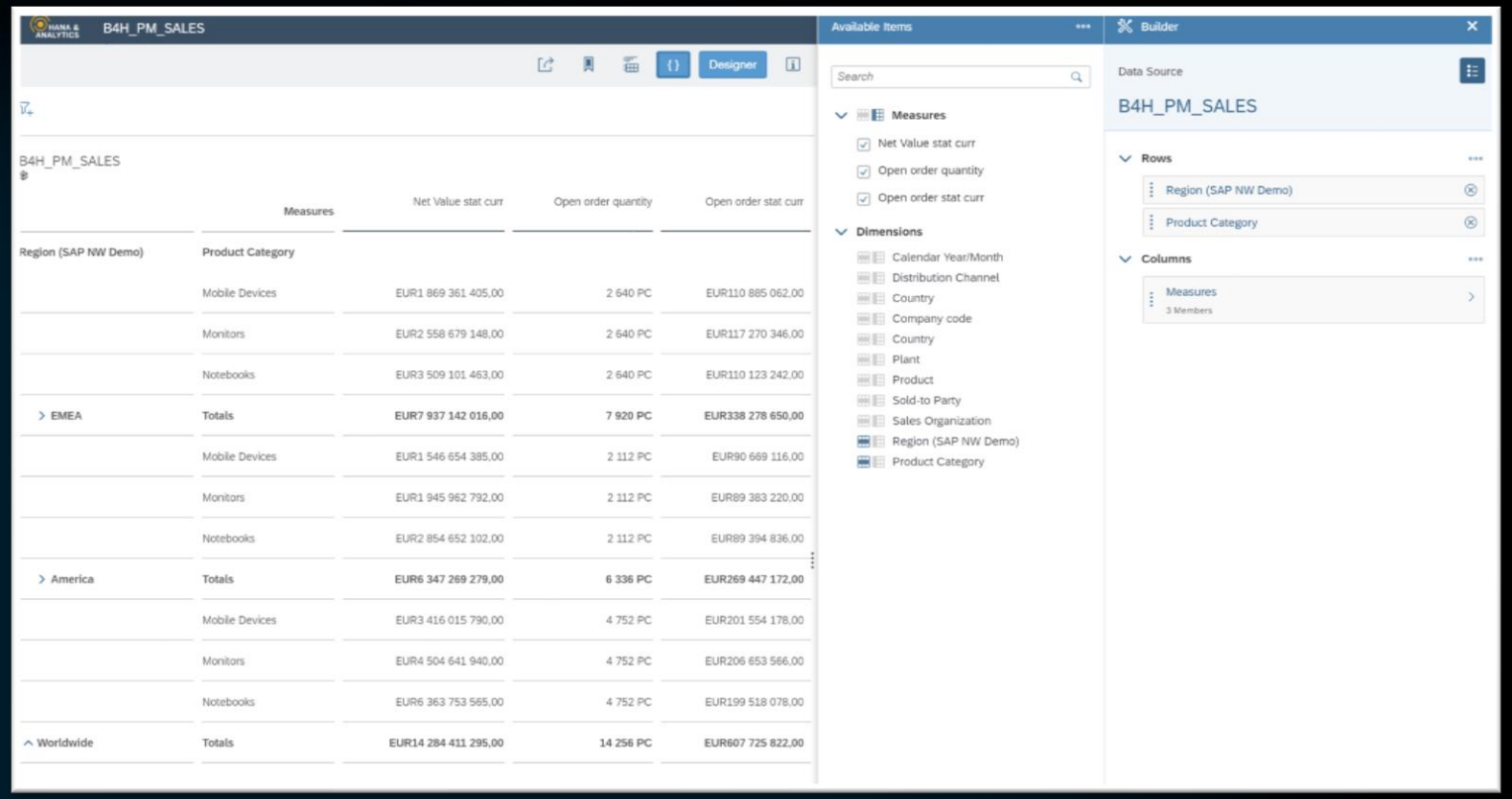
FAST  **Reduce Time to Roll-Out**

INTEGRATED  **Script BI, Planning, and Predictive together**

Analytics Designer Use Cases

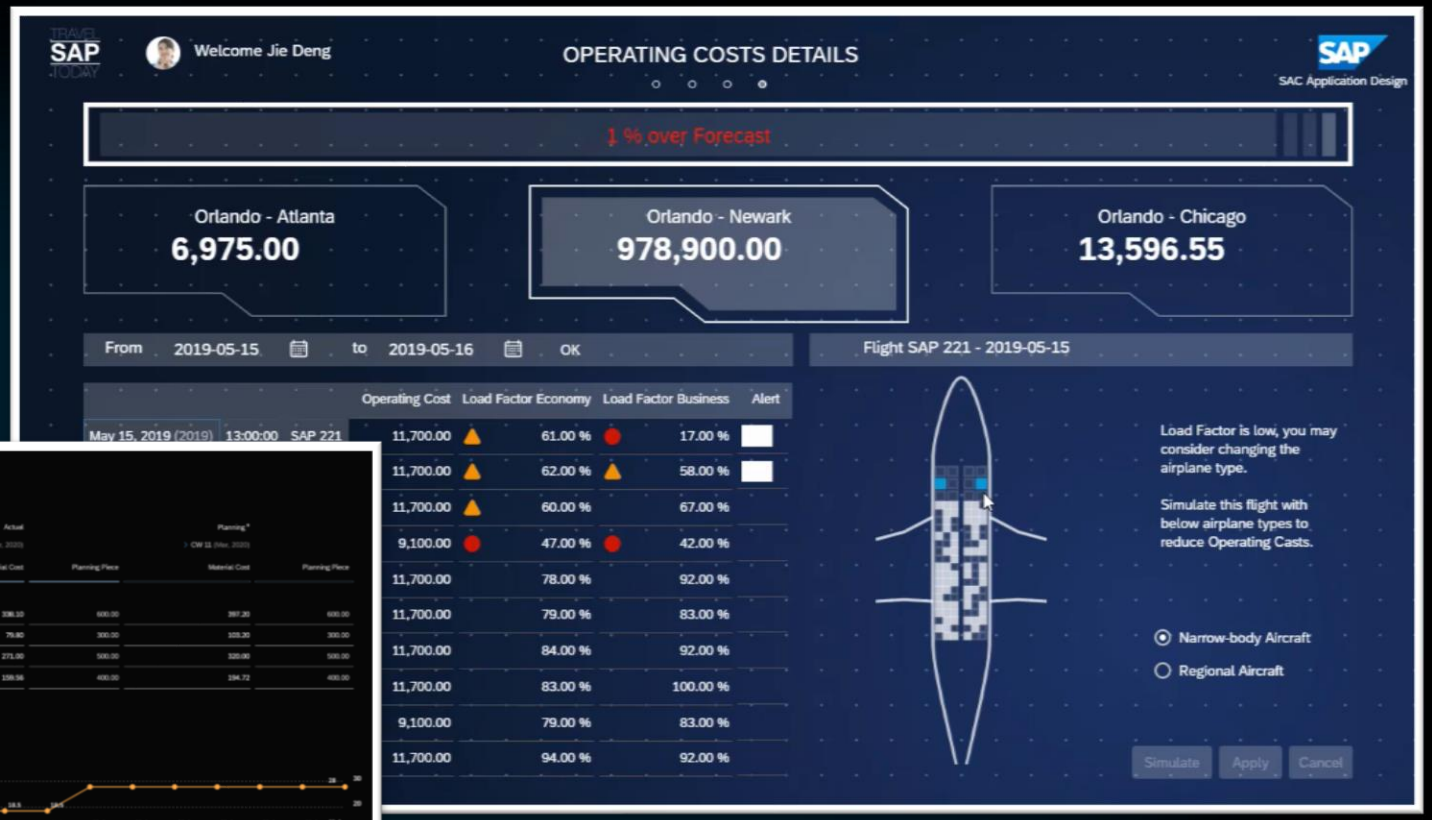
Typical Analytics Designer Use Cases 1)

- Generic Applications like Data Analyzer or Lumira generic analysis
  - Table-centric slide-dice analysis
  - Adding dimension/key figure/filter etc. at application runtime



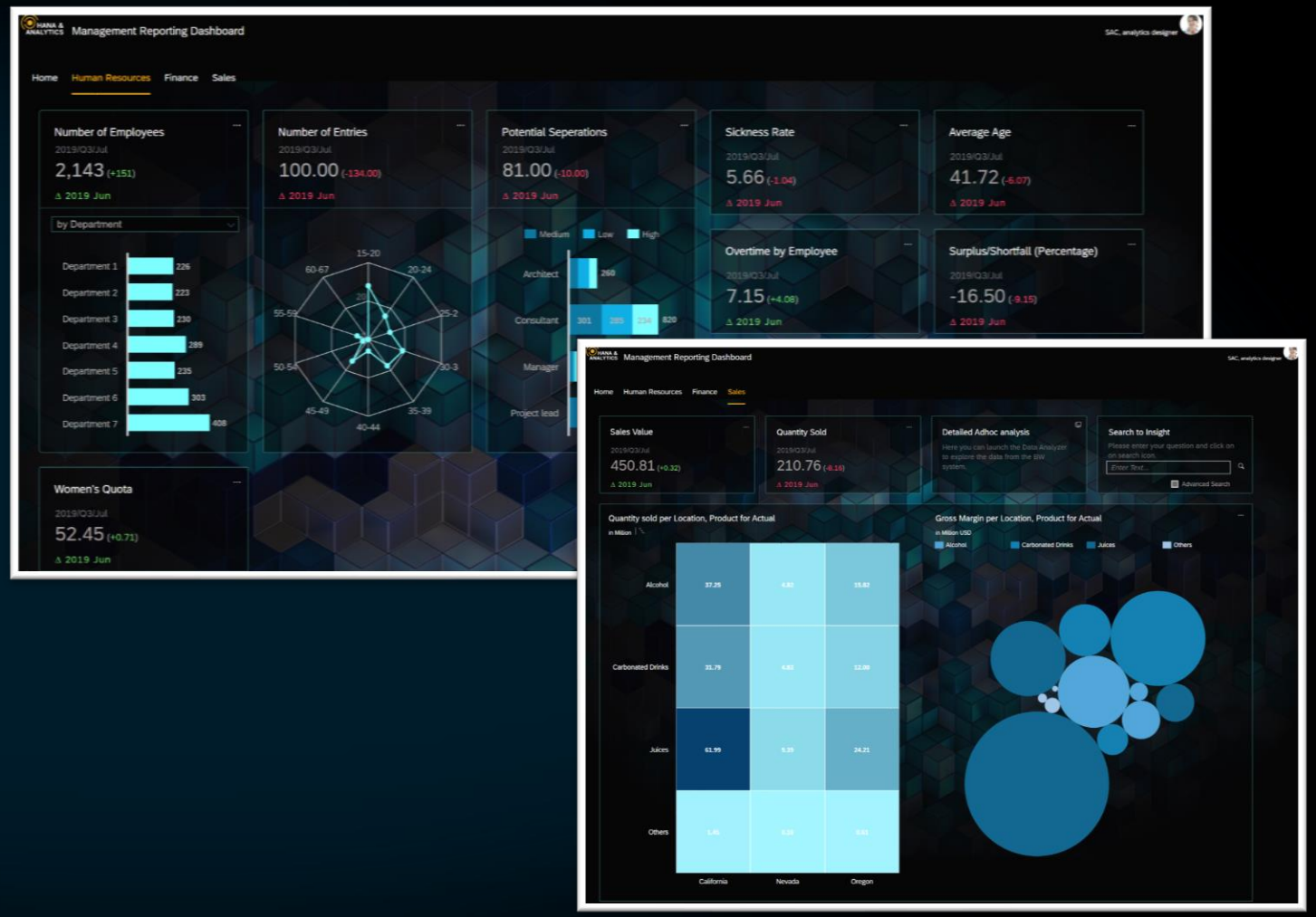
Typical Analytics Designer Use Cases 2)

- Guided analytic applications
  - Provide end user guidance /analyis path
  - Support closed loop scenarios (notification → analyze issue → simulation → take actions)



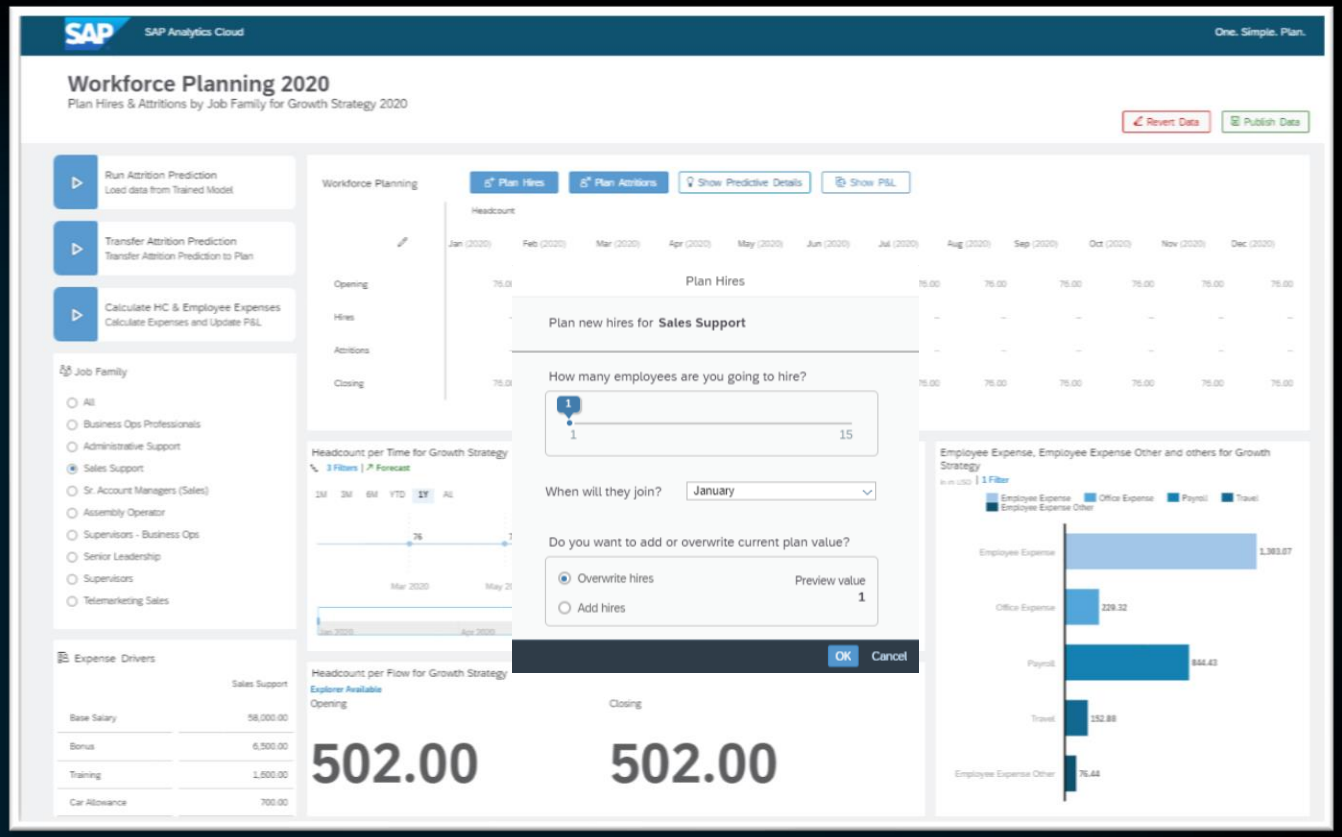
Typical Analytics Designer Use Cases 3)

- Dashboarding including flexible interactions and layout
  - Complex navigation and interaction
  - Flexible Layout / Responsive layout



Typical Analytics Designer Use Cases 4)

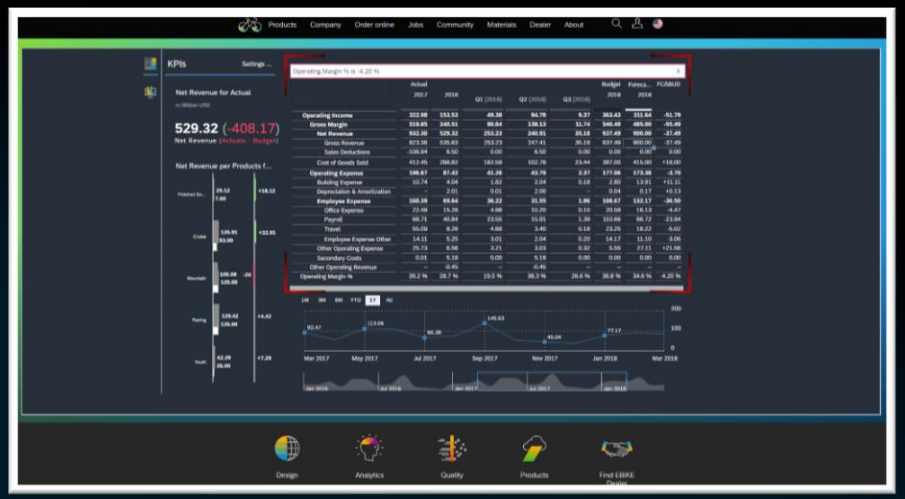
- Planning applicaitons (customized planning UI)
  - Guided planning experience
  - More user friendly and tailored UX for planning users
  - Mobile usage



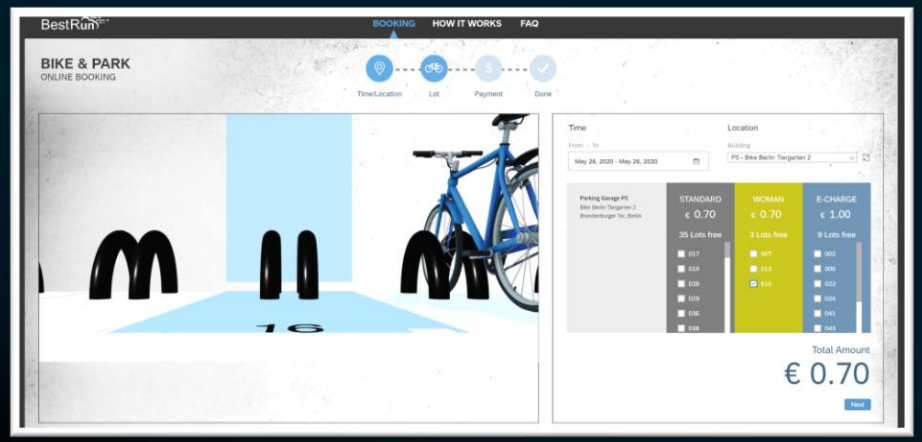
Typical Analytics Designer Use Cases 5)

Embedding/Extending applications

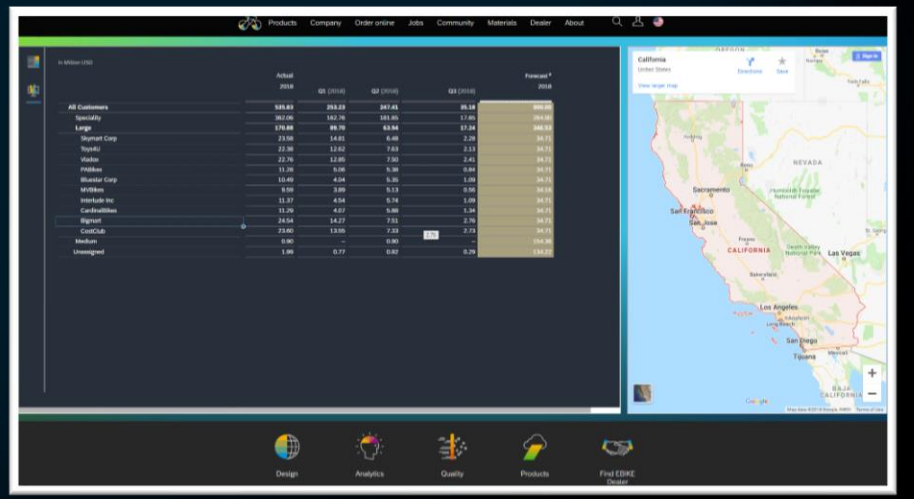
- Any external page can be embeded into analytic applications
- Or analytic applications can be embede to any external page
- Analytic applications and external pages can communicate to each other by using post message API
- Extending Applications via custom widget SDK



Embedding applications into other web pages



3D custom widgets integrated into analytic application

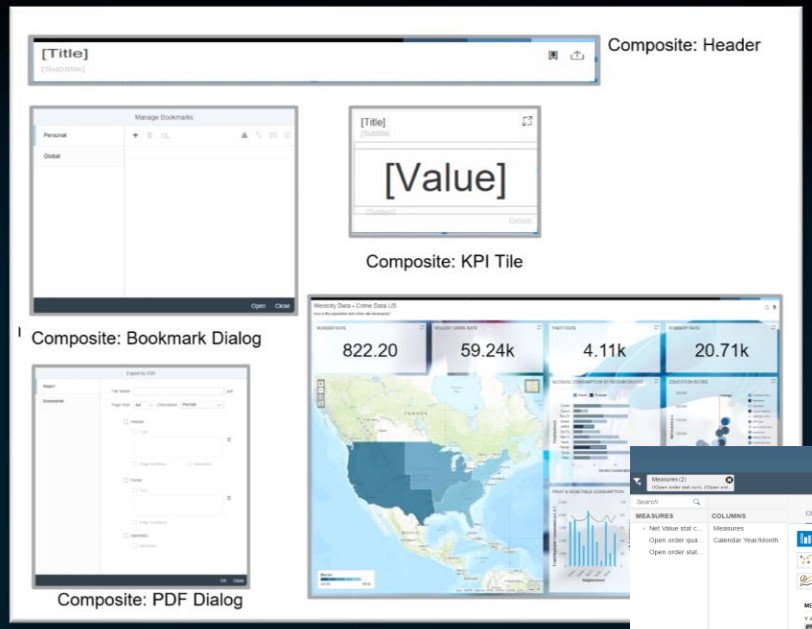


Communicating with other web pages

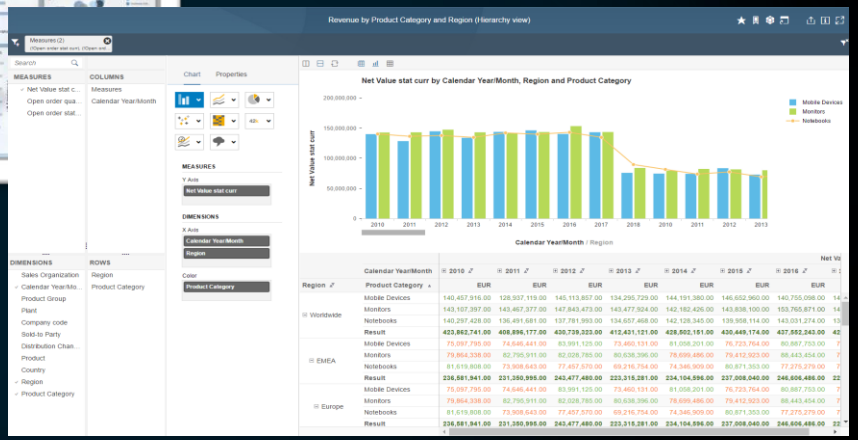
Typical Analytics Designer Use Cases 6)

Teamplate*, Composite*etc.

- Application template
- Commenting Dialog, Bookmark Dialog etc.



Examples of Composites*



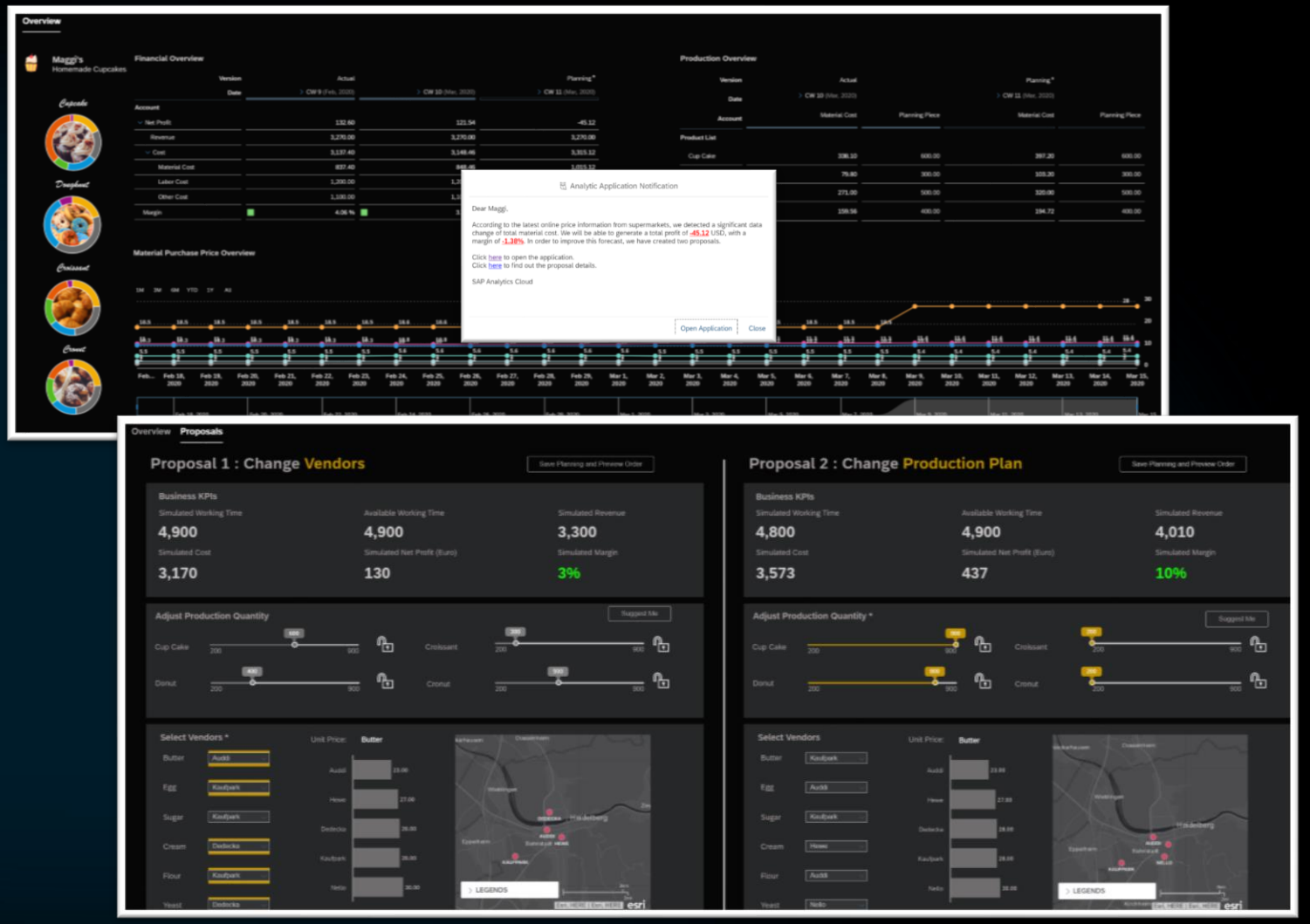
Examples of Templates*

* Planned for the future releases

Analytics Designer Feature Highlights & Live Demo

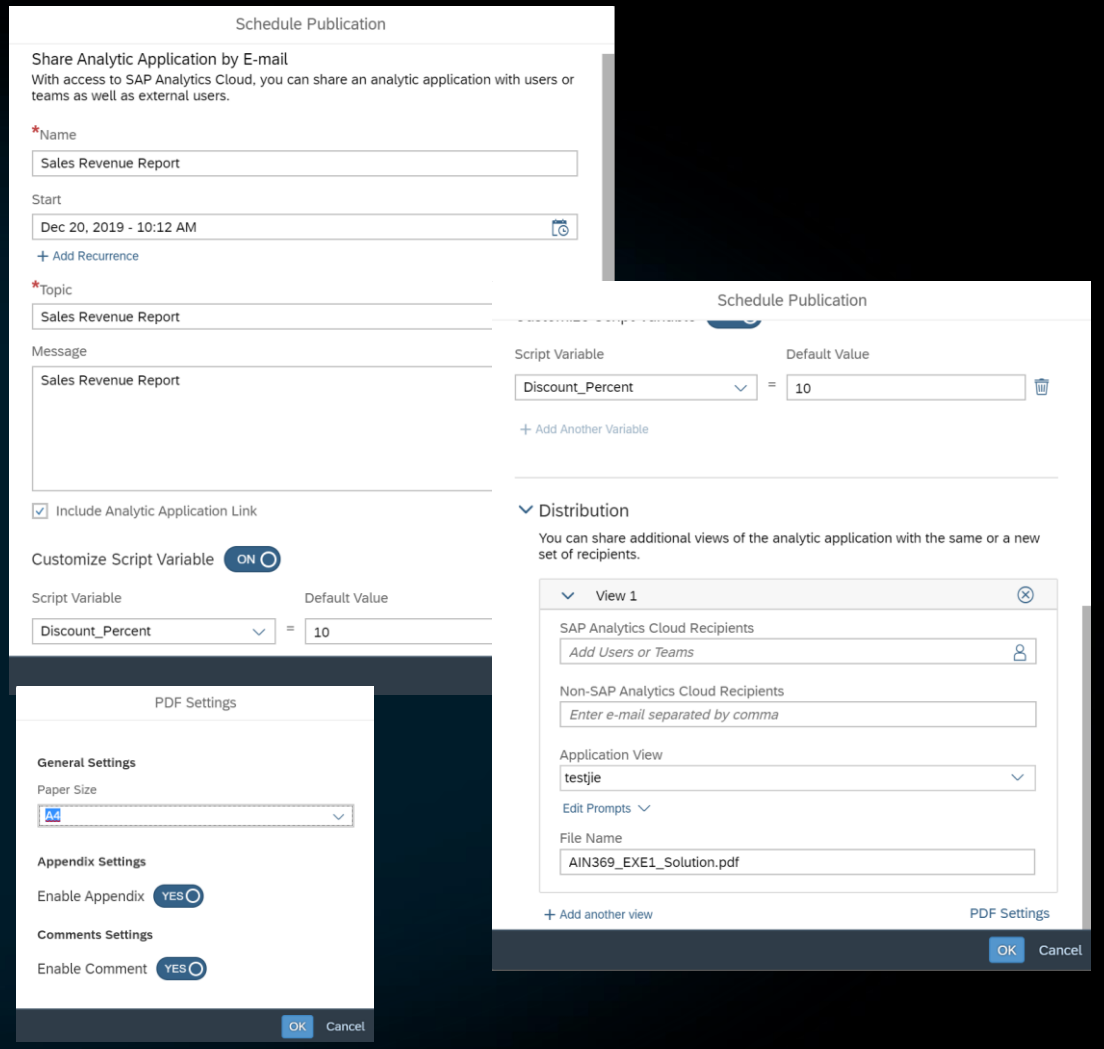
Analytics Designer

- Mobile Support
  - Support of running applications in safari browser on iPad within embedded use cases
  - Native mobile browser support for Microsoft Edge on windows surface tablet (Controlled Release)
- Scheduling and Publication : Auto/manual generating PDF, Distributing PDFs with different bookmarks and script variables, BW Prompt support, Sending notification or email via scripting API
- Integration with SAP Data Warehouse Cloud: Creating applications within DWC space
- Copy widgets from story to app and across browser tabs at application design time
- Scripting API Enhancements: Remove/Copy Variable, Remove and Range support for Filter API and Scripting API for instantly loading bookmark, Table property APIs: show and hide attributes, zero suppression and compact display
- Dynamic layout enhancement by changing parent widget at runtime
- Tab strip enhancements: rename, re-order and synchronize with outline
- OData Enhancements



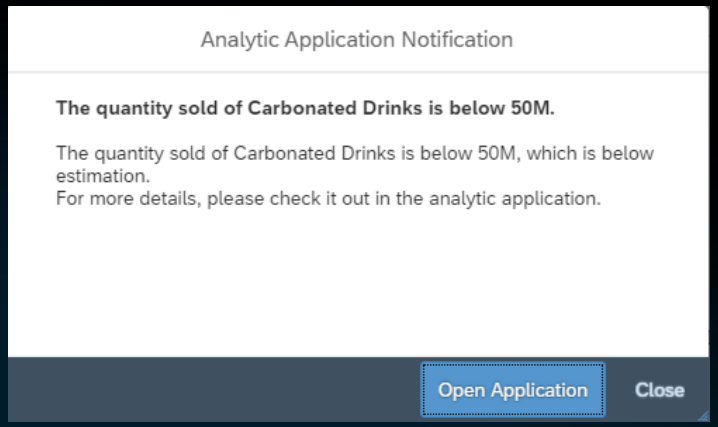
Scheduling Analytic Application

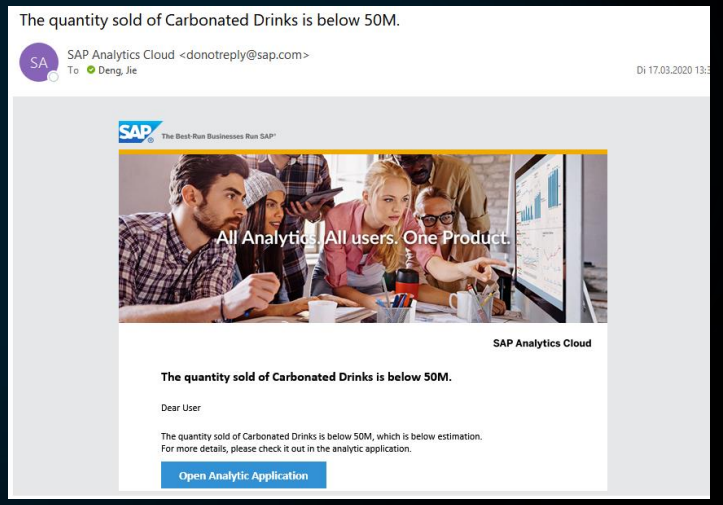
- Analytic applications can be scheduled and distributed as the PDF file.
- PDF file can be generated either automatically or based on a certain event defined in analytic applications
- End user will receive an email with PDF file as attachment and the link to analytic application
- BW and HANA Prompt Variable is supported
- Scheduling jobs can be configured with the following options
  - Start, Recurrence, Topic, Message
  - Script Variable
  - Bookmark
  - Recipients
  - PDF Settings, including appendix and comments
- Status of the scheduling job can be seen in the calendar



Sending notifications via scheduling

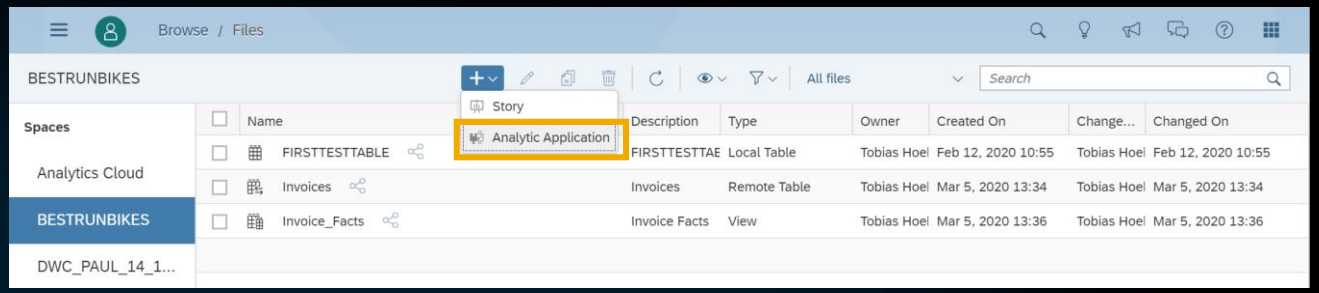
- Application developer can now use the Application.sendNotification() API to send a notification when an analytic application is run from the backend (that is, scheduling).
- You can use scripting capabilities to configure the notification
- Application consumer can receive the notification via email or notification panel of SAP Analytics Cloud.
- Maximum 3 notifications can be sent per scheduling job to avoid server overload.

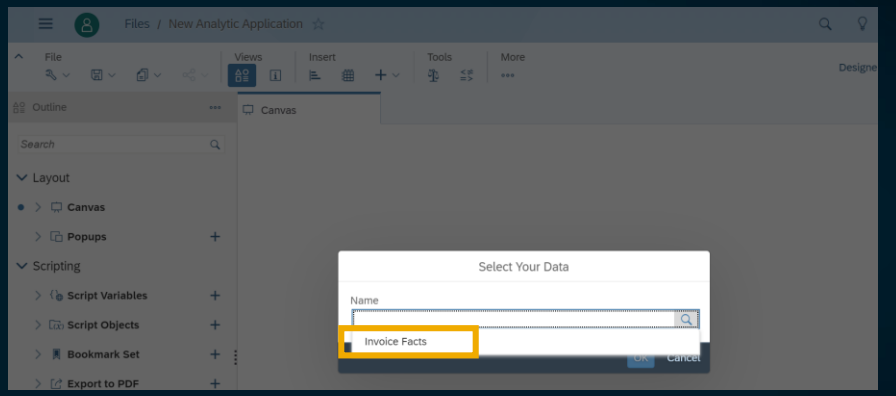




Integration with SAP Data Warehouse Cloud

- Application Creator can now create an analytic application based on an SAP Data Warehouse Cloud space in SAP Analytics Cloud.
- Steps:
  - Browse files
  - Select a space
  - Select add analytic application

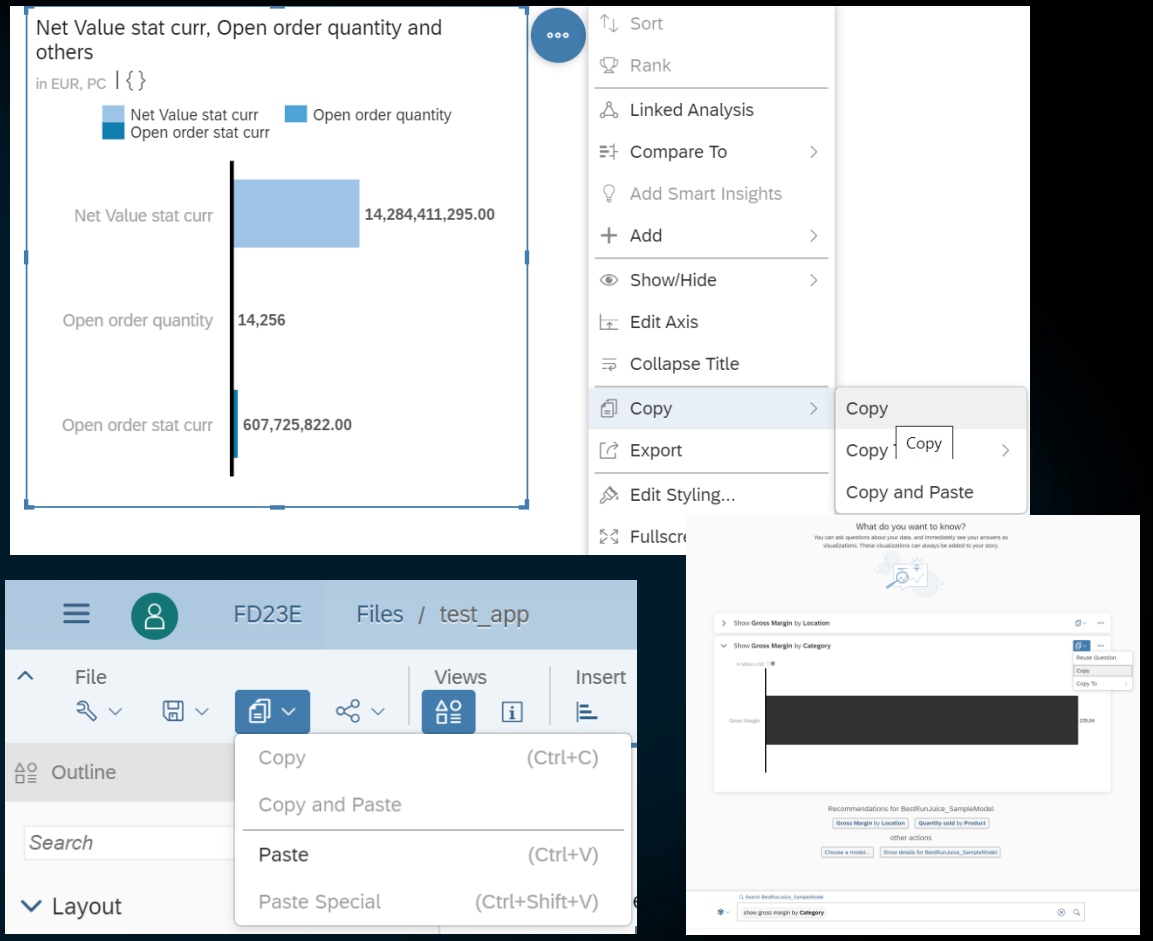




Analytic data set **within this space** can be selected as data source

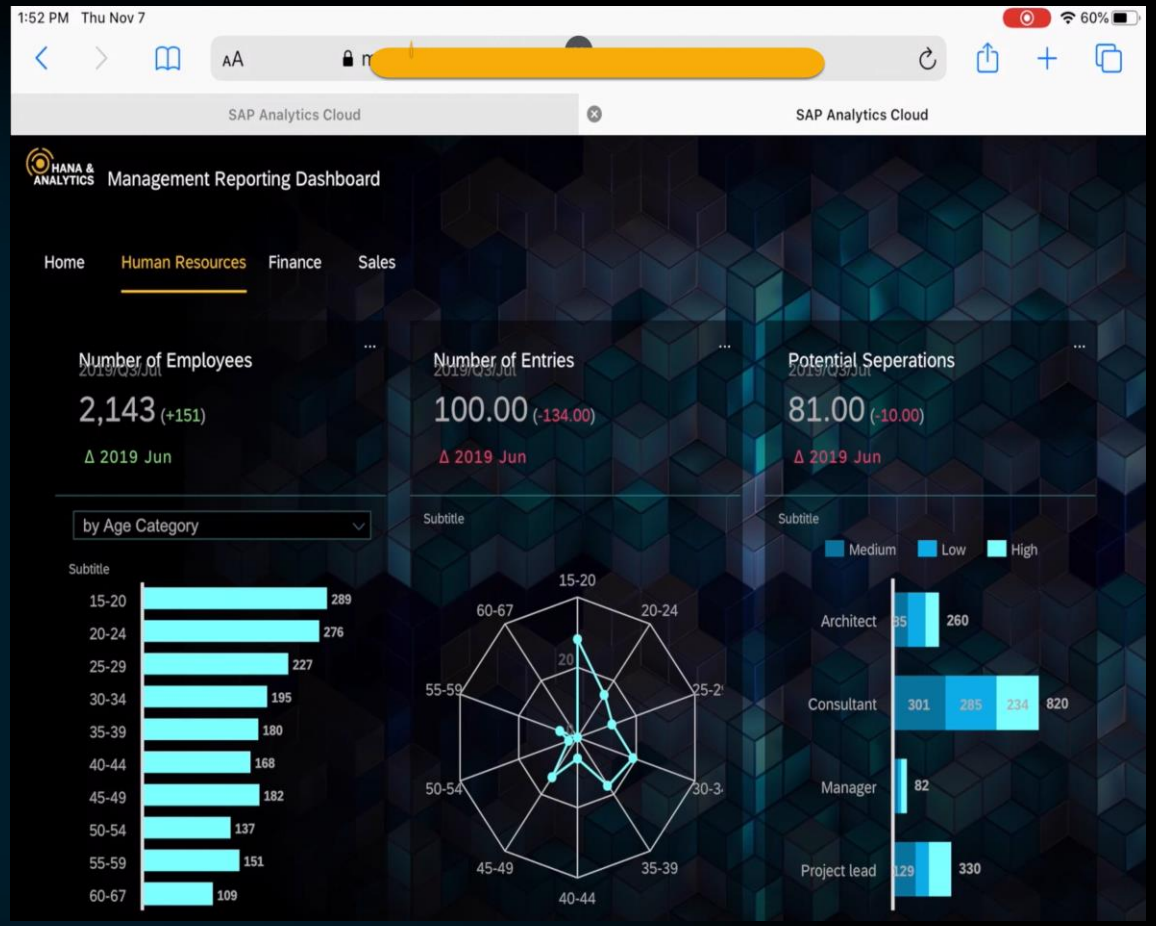
Copy widgets across browser pages

- User can copy widgets from story to analytic application, story to story and application to application at design time within the same browser page or across different browser pages
- Copy via ctrl +c and ctrl + v or via quick menu
- Supported features: State of the widgets, copying widgets to container or a popup, copying grouping widgets (the group information will get lost), chart in smart insight panel, chart in search to insight etc.
- Not supported features : VDT, Input Control, linked analysis, story/ filter, geo polygon filter, etc.



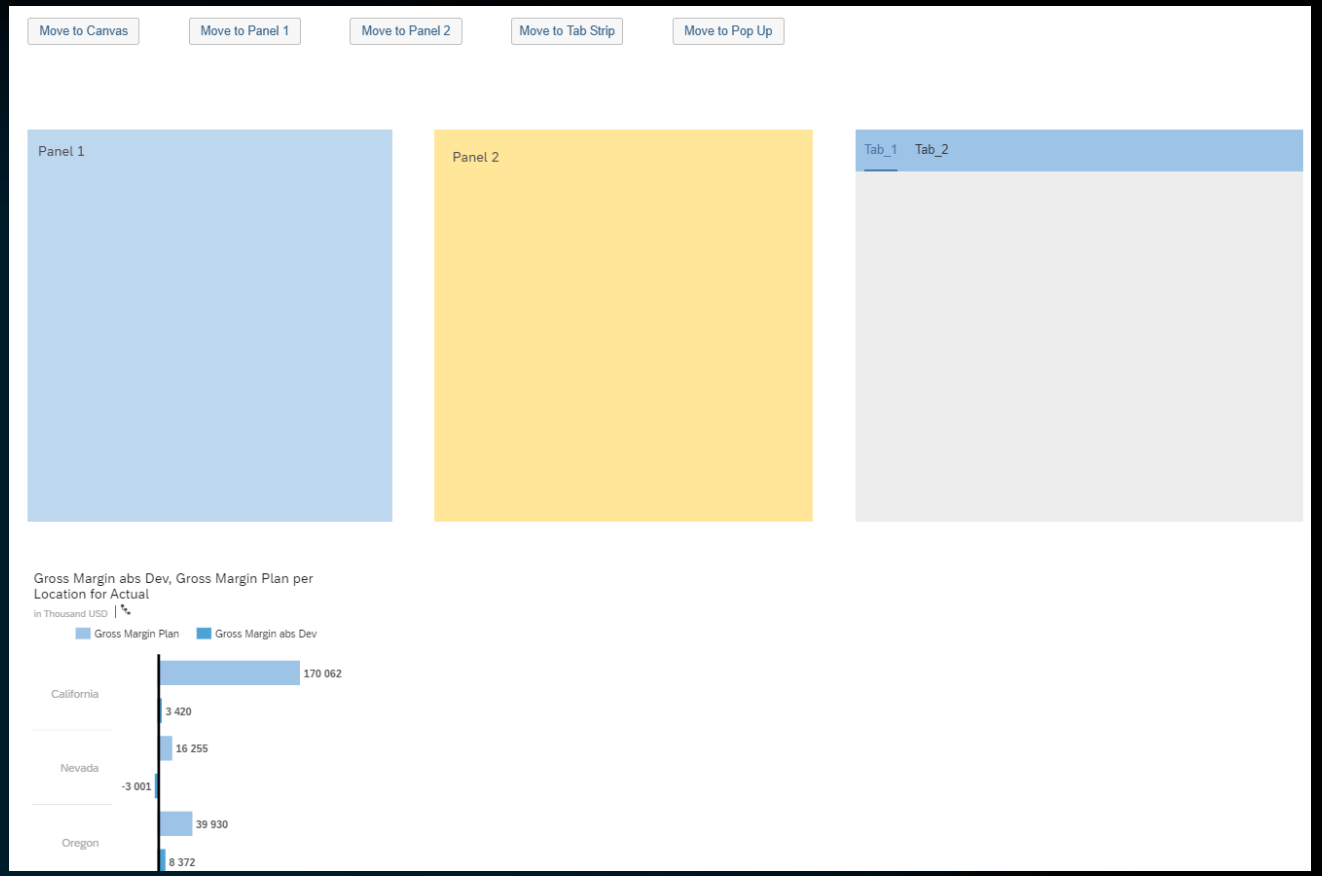
Mobile Support

- Support of running applications in safari browser on iPad within embedded use cases
- Native mobile browser support for Microsoft Edge on windows surface tablet (Controlled Release)



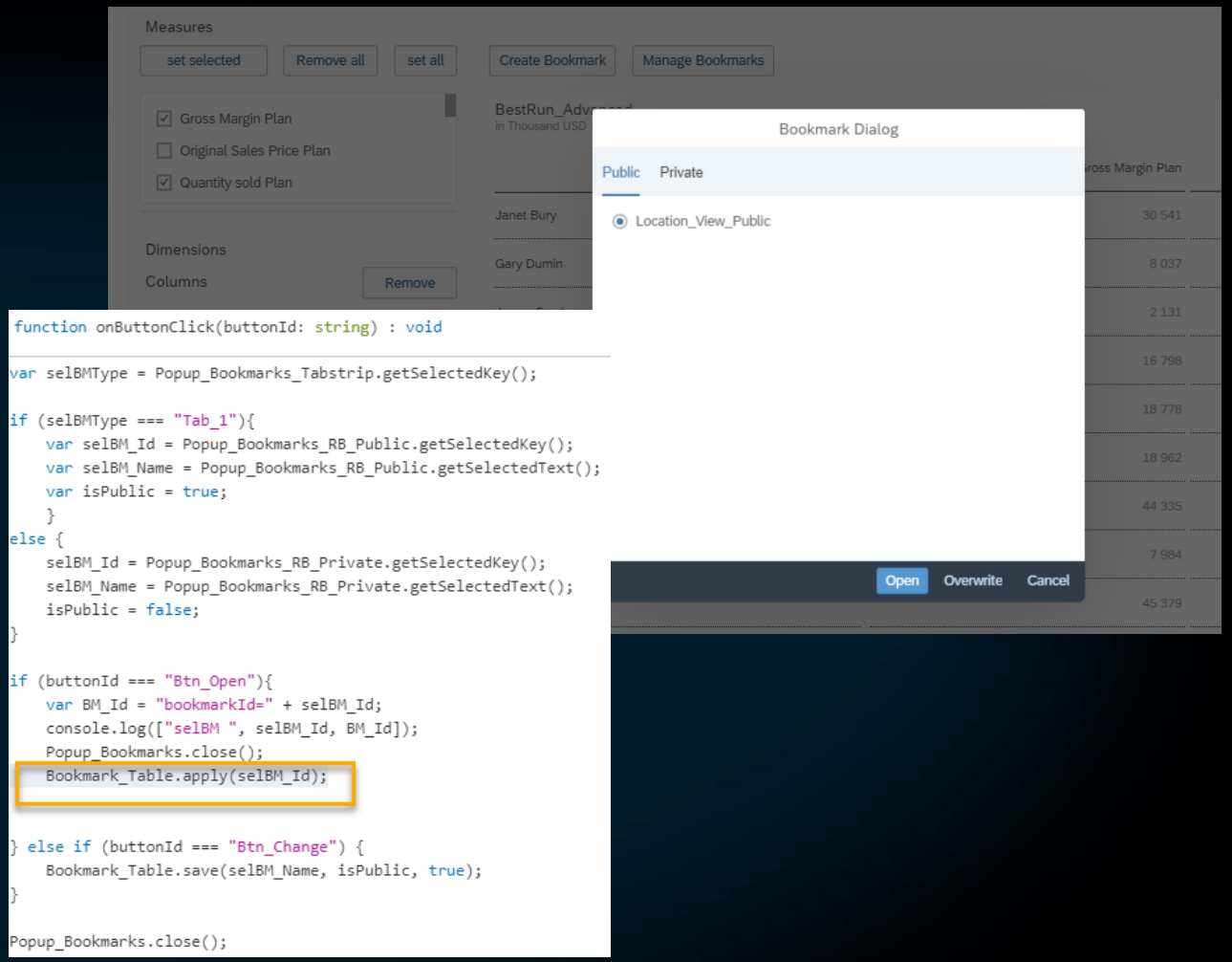
Moving widgets to different container widgets

- You can move widgets or containers dynamically to other containers at application runtime to cover dynamic layout responsive scenarios
- Supported container widgets are canvas, panel or tab strip
- Provided scripting APIs:
  - Application.moveWidget();
  - Tabstrip.moveWidget();
  - Panel.moveWidget()



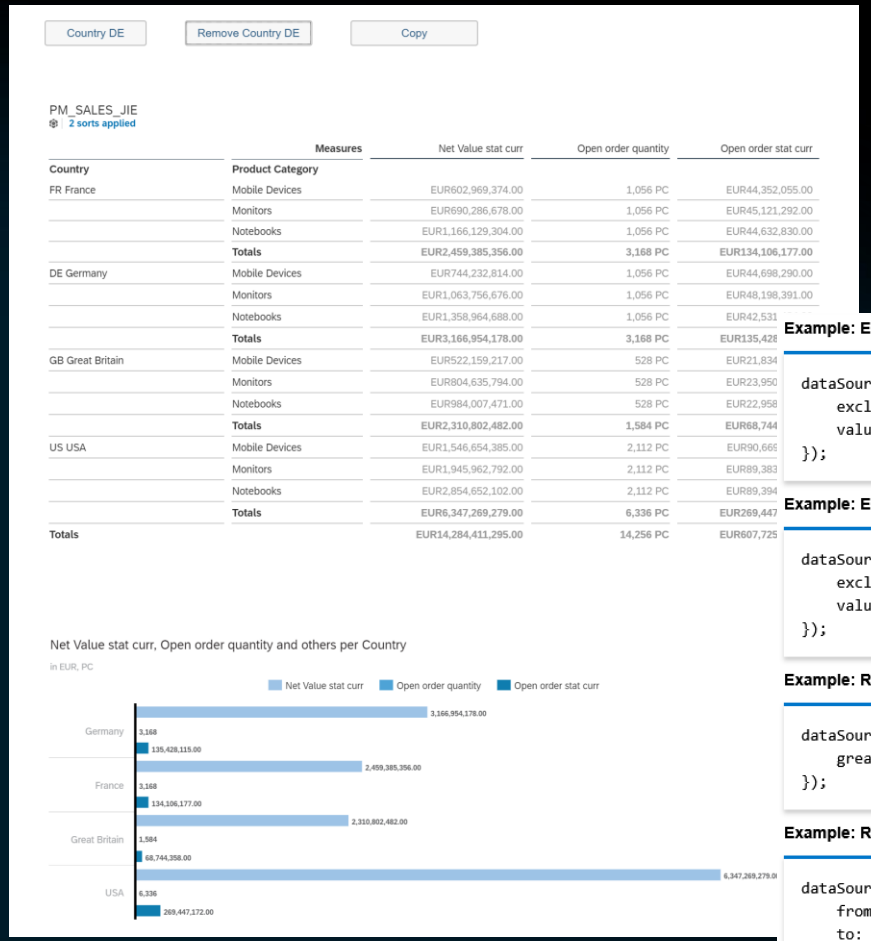
Loading bookmarks at run time

- You can now use the BookmarkSet.apply() API to load/apply bookmarks at run time
- The above script API needs to be related to the bookmark technical component Bookmark Set
- The included widgets within bookmark definition will be reloaded
- The status of non-included widgets within bookmark definition will be kept.



New Scripting APIs for BW and HANA live connections

- Variable scripting APIs for BW and HANA Live connections:
  - removeVariableValue()
  - copyVariableValueFrom()
- In SAC story or application the variables are merged by default. Though you can set the variable unmerged or unmerged individually on the widget.
- Script API DataSource.setDimensionFilter() now supports
  - Range filters
  - Excluding members with single and multiple filter values



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Country	Product Category			
FR France	Mobile Devices	EUR602,969,374.00	1,056 PC	EUR44,352,055.00
	Monitors	EUR690,286,678.00	1,056 PC	EUR45,121,292.00
	Notebooks	EUR1,166,129,304.00	1,056 PC	EUR44,632,830.00
	Totals	**EUR2,459,385,356.00**	**3,168 PC**	**EUR134,106,177.00**
DE Germany	Mobile Devices	EUR744,232,814.00	1,056 PC	EUR44,698,290.00
	Monitors	EUR1,063,756,676.00	1,056 PC	EUR48,198,391.00
	Notebooks	EUR1,358,964,688.00	1,056 PC	EUR42,531
	Totals	**EUR3,166,954,178.00**	**3,168 PC**	**EUR135,428**
GB Great Britain	Mobile Devices	EUR522,159,217.00	528 PC	EUR21,834
	Monitors	EUR804,635,794.00	528 PC	EUR23,950
	Notebooks	EUR984,007,471.00	528 PC	EUR22,958
	Totals	**EUR2,310,802,482.00**	**1,584 PC**	**EUR68,744**
US USA	Mobile Devices	EUR1,546,654,385.00	2,112 PC	EUR90,669
	Monitors	EUR1,945,962,792.00	2,112 PC	EUR89,383
	Notebooks	EUR2,854,652,102.00	2,112 PC	EUR89,394
	Totals	**EUR6,347,269,279.00**	**6,336 PC**	**EUR269,447**
Totals		**EUR14,284,411,295.00**	**14,256 PC**	**EUR607,725**

Example: Exclude filter

```
dataSource.setDimensionFilterValue("dim1", {
    exclude: true,
    value: "member12"
});
```

Example: Exclude filter

```
dataSource.setDimensionFilterValue("dim1", {
    exclude: true,
    values: ["member12", "member13"]
});
```

Example: Range filter (greater)

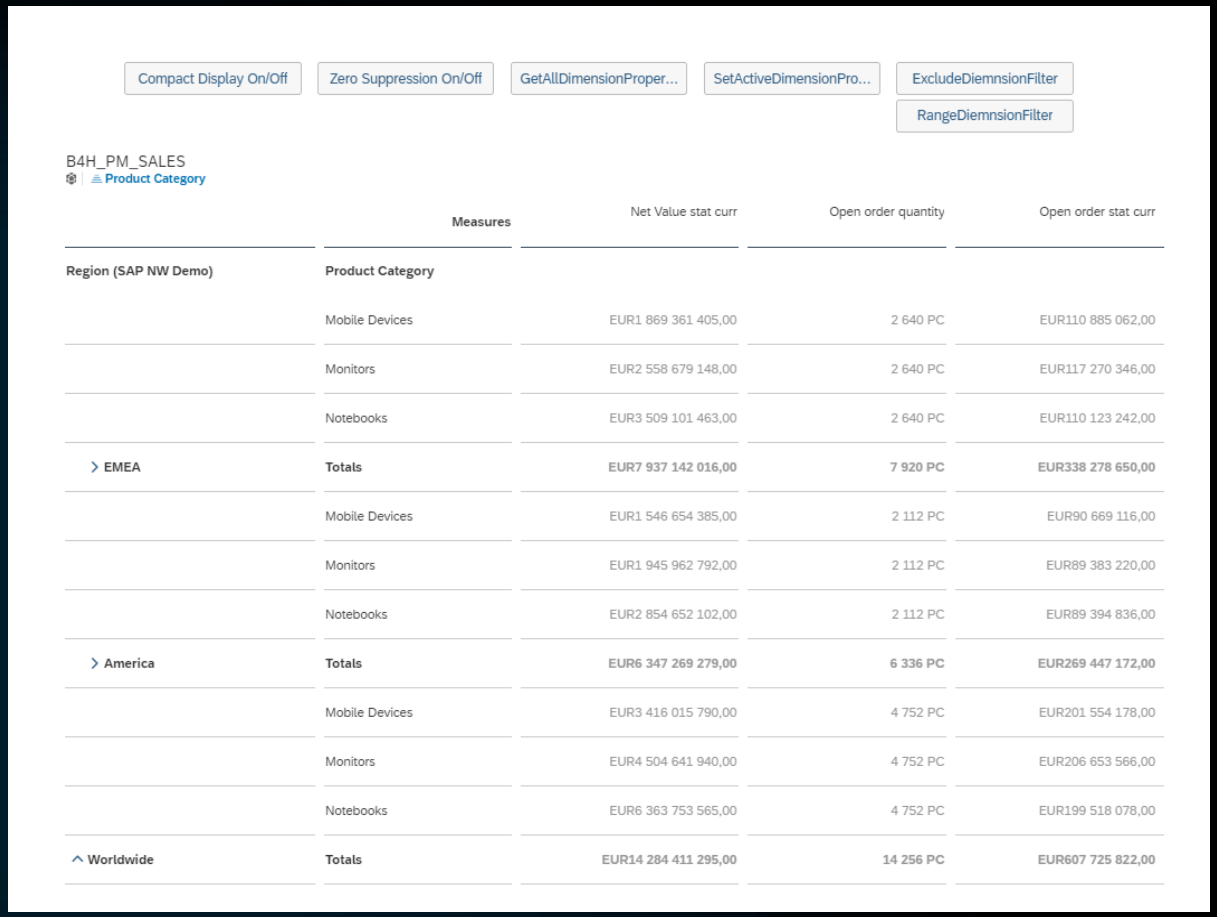
```
dataSource.setDimensionFilterValue("dim2", {
    greater: "10",
});
```

Example: Range filter (between)

```
dataSource.setDimensionFilterValue("dim2", {
    from: "10",
    to: "20"
});
```

New Scripting APIs for BW models in the Table Widget

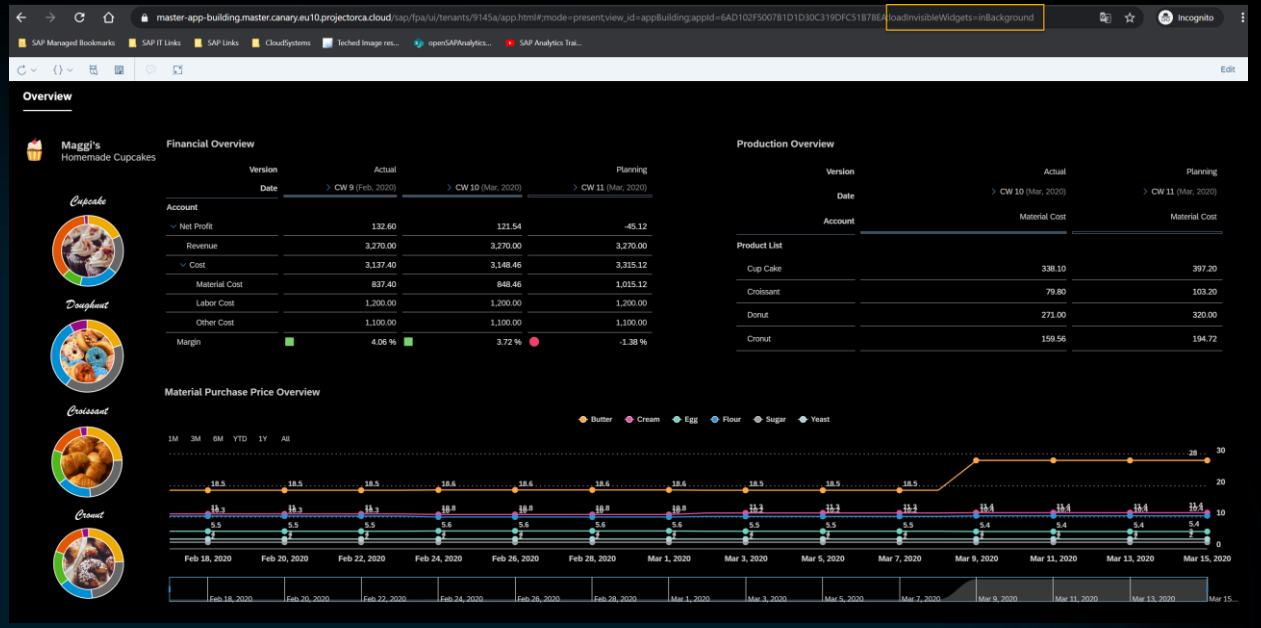
- Valid for Table Widgets
- Turn On/Off Compact Display
  - Table.setCompactDisplayEnabled()
  - Table.isCompactDisplayEnabled()
- Turn On/Off Zero Supression
  - Table.setZeroSuppression()
  - Table.isZeroSuppressionEnabled() table axis.
- Get dimension propertieties
  - DataSource.getDimensionProperties()
- Set Active dimension properties
  - Table.setActiveDimensionProperties()
- Get active dimension properties
  - Table.getActiveDimensionProperties()

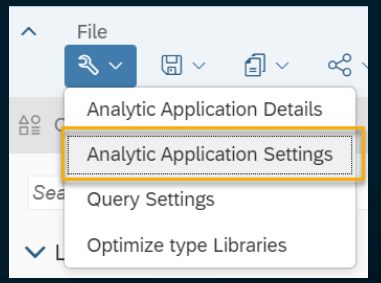


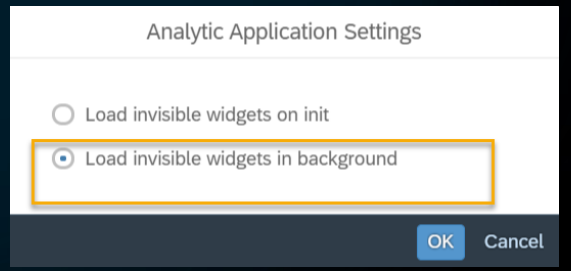
	Measures	Net Value stat curr	Open order quantity	Open order stat curr
Region (SAP NW Demo)	Product Category			
	Mobile Devices	EUR1 869 361 405,00	2 640 PC	EUR110 885 062,00
	Monitors	EUR2 558 679 148,00	2 640 PC	EUR117 270 346,00
	Notebooks	EUR3 509 101 463,00	2 640 PC	EUR110 123 242,00
> EMEA	**Totals**	**EUR7 937 142 016,00**	**7 920 PC**	**EUR338 278 650,00**
	Mobile Devices	EUR1 546 654 385,00	2 112 PC	EUR90 669 116,00
	Monitors	EUR1 945 962 792,00	2 112 PC	EUR89 383 220,00
	Notebooks	EUR2 854 652 102,00	2 112 PC	EUR89 394 836,00
> America	**Totals**	**EUR6 347 269 279,00**	**6 336 PC**	**EUR269 447 172,00**
	Mobile Devices	EUR3 416 015 790,00	4 752 PC	EUR201 554 178,00
	Monitors	EUR4 504 641 940,00	4 752 PC	EUR206 653 566,00
	Notebooks	EUR6 363 753 565,00	4 752 PC	EUR199 518 078,00
^ Worldwide	**Totals**	**EUR14 284 411 295,00**	**14 256 PC**	**EUR607 725 822,00**

Loading invisible widgets in background

- Analytics Designer provides additional option that invisible widgets can be automatically loaded in background
- Loading invisible widgets in background can accelerate application start up time , especially
  - Application are divided into different pages/tab strips .
  - The first page or tab strip of the application does not contain a lot of widgets
- All the meta data, result set etc. of the widgets are loaded in the background if the option is set to Loading in background
- Following components are automatically loaded in background if the option is set to the application:
  - Scripts that are related to initial invisible widgets
  - Widgets or containers that defined within the invisible containers
  - Invisible tab strips
- You can set application to be loaded in background via
  - Analytic application setting dialog
  - Application URL parameter: **loadInvisibleWidgets=inBackground**

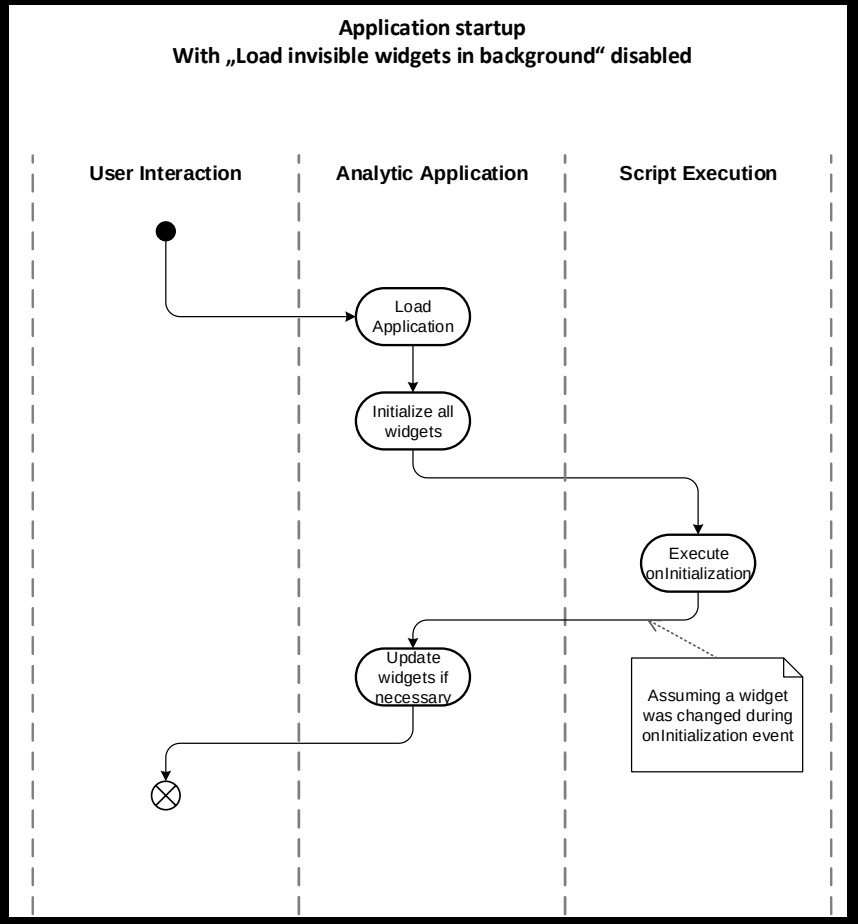




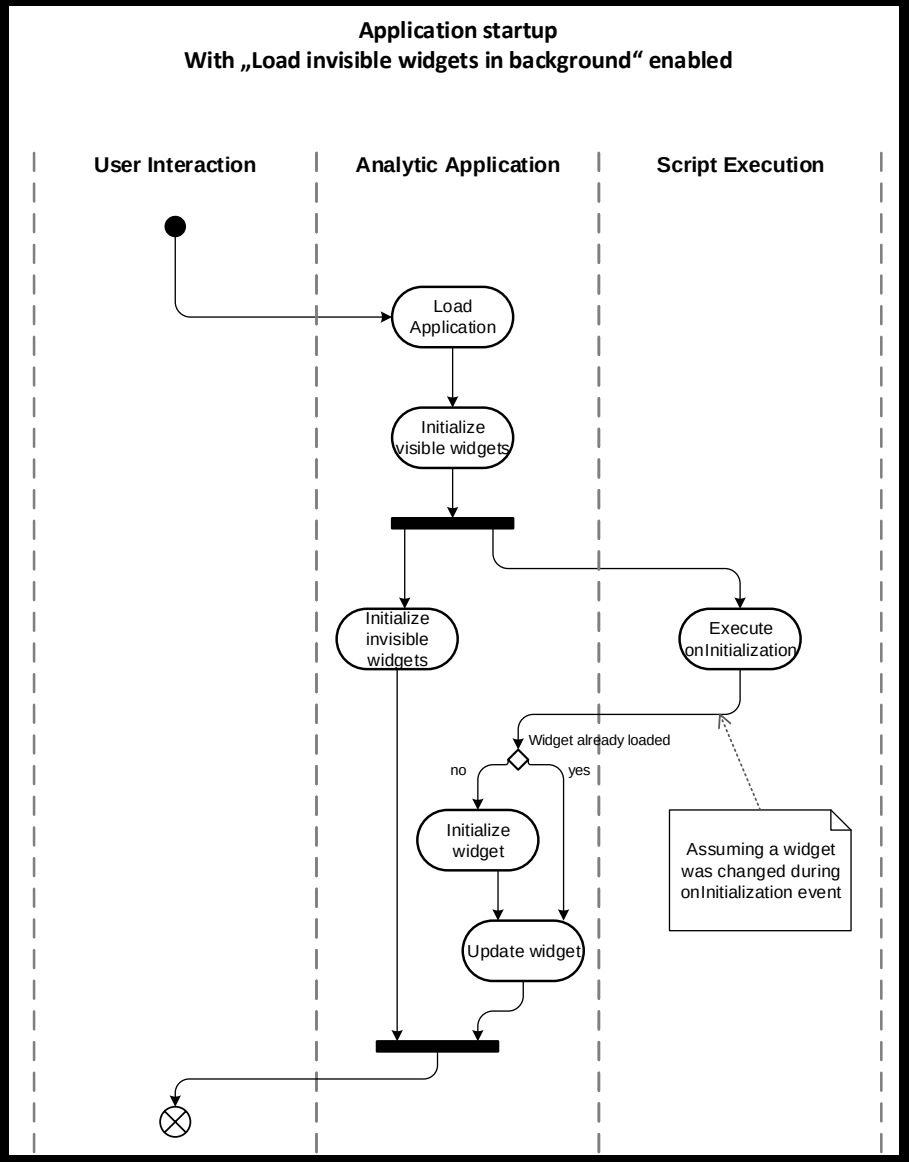


SAP LAB PREVIEW

Loading widgets



Default mode



Loading invisible widgets in background

SAP LAB PREVIEW

In order to achieve the best performance by leveraging loading invisible widgets in background

- keep the scripts for onInitialization Event as less as possible
- Don’t access and prepare invisible widgets for onInitialization event if is possible. Try to prepare the invisible widgets only if the widgets turn into visible.
- Don’t nest the invisible widgets too deep into container structure if you can’t avoid accessing invisible widgets during application onInitialization event. It will wait until the container of the invisible widget is rendered completely.

Reference Customer

Randstadt -> Generic Applications like Bex Web Template

Roadmap

Analytics Designer

Q2/2020

Dashboarding Capabilities:

- Mobile Support:
  - Support of running applications in safari browser on iPad within embedded use cases
  - Native mobile browser support for Microsoft Edge on windows surface tablet (Controlled Release)
- Tab strip enhancements: rename, re-order and synchronize with outline
- Dynamic layout enhancement by changing parent widget at runtime

Extension Capabilities:

- Custom widgets further enhancement: dependency etc.

Enterprise Capabilities:

- Scheduling and publication : Auto/manual generating PDF, Distributing PDFs with different bookmarks and script variables, BW Prompt support, Sending notification or email via scripting API

Integration with SAP Data Warehouse Cloud: Creating applications within DWC space

OData Enhancements:

- Support for more connections: BW/HANA/BPC
- Enable filtering, counting, selecting etc. for OData read access

Scripting API Enhancements:, Remove/Copy Variable, Remove and Range support for Filter API, Notification Scripting API and Scripting API for instantly loading bookmark

Table property APIs: show and hide attributes, zero suppression and compact display

Developer productivity features:

- Copy widgets from story to app and across browser tabs
- Restoring deleted widgets at design time

Q3/2020

Dashboarding Capabilities:

- Integration with SAC Mobile Solution: enable analytic application within SAC Mobile iOS app (Controlled Release)
- New widgets: Page Book, List box
- Data change insights (Beta Program)
- Enable Navigation Panel for table based on SAC model

Data Analyzer:

- Further enhancements

Enterprise Capabilities:

- Calendar task integrations with scripting access
- Performance features: Loading invisible widgets in background to accelerate the start up performance

Integration with SAP Data Warehouse Cloud:

- Creating applications by using DWC as remote live connection

Scripting API Enhancements:

- Create member-on-the-fly / getMemberProperties for Planning Model
- Set Variable value for hierarchy node variable, getVariableValue , get Filter Value, Hierarchy scripting API, Drill API,
- Application message API, getApplicationInfo API,
- Extending getResultSet API to access dimension attributes
- Change widget property and style API
- Export to PDF API for setting Include and exclude parts
- Support of setting Null Numbers via scripting API

Developer productivity features:

- Simple widget property binding,
- Grouping widgets at design time

Future Direction

Dashboarding Capabilities:

- Mobile App support for Android devices
- Responsive layout and container
- Blending support as in story, SAP Digital Boardroom Integration

Data Analyzer:

- Completely customizable Data Analyzer in Analytics Designer

Extension Capabilities:

- Custom widgets further enhancements(Data Access, Mobile support, bookmarking etc.)

Enterprise Capabilities:

- Composites, Templates
- Advanced Printing capabilities
- Export to SAP Analytics Cloud, add-in for Microsoft Office
- Creating applications within S/4

Smart Predict Integration

Scripting API Enhancements:

- Geo Map script API
- DataSource related APIs, events etc.

Developer productivity features:

- Data source and widget binding
- Undo/Redo
- Pause/Refresh at design time

This is the current state of planning and may be changed by SAP at any time.

Thank you.

Contact information:

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