

SCB BI Upgrade Workshop

November 2017

CUSTOMER



Agenda

- 1. Introductions
- 2. SAP BusinessObjects Maintenance Strategy
- 3. Overview of the New SAP BI Portfolio
- 4. Introducing BI 4.2
- 5. Roadmap & Future Direction
- 6. Intro to Lumira 2.0
- 7. Q&A

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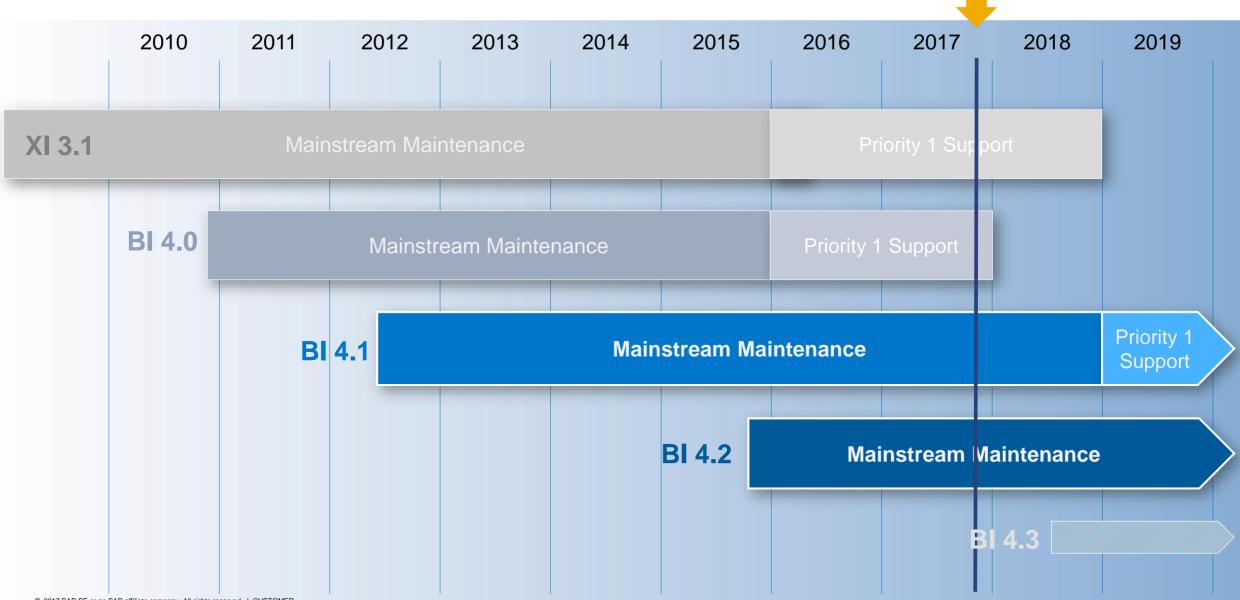
All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

SAP BusinessObjects Maintenance Strategy

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It's time to move to BI 4.2 SP4



Overview of the New SAP BI Portfolio

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BI Platform

Professional Grade



























Browsers

On Demand Services

Content

Embedded MS Office

Enterprise **Portals**

Self-Service & Visualization

Advanced Dashboarding

Reporting

Business Intelligence Platform

Universe Semantic Layer



SAP Business Suite Oracle E-Business Suite PeopleSoft, JD Edwards Other data warehouses



SAP NetWeaver BW TeraData



Oracle, IBM DB2, Microsoft SQL Server and other relational data sources



SAP HANA platform



MS Excel



Unstructured data in Social Media and Hadoop



Essbase Microsoft AS Oracle OLAP

Planned Simplification of the SAP BI Client Portfolio



Discovery & Analysis

SAP Lumira desktop, server editions SAP BusinessObjects Explorer SAP BusinessObjects Analysis, edition for OLAP SAP BusinessObjects Set Analysis

SAP Lumira 2.x*



Advanced Dashboarding

SAP BusinessObjects Design Studio SAP BusinessObjects Dashboards SAP BEx Web Application Designer



Office Integration

SAP Analysis for Microsoft Office Live Office EPM Add-In SAP BEx Analyzer

SAP Analysis for Microsoft Office



Reporting

SAP Crystal Reports SAP BusinessObjects Web Intelligence Desktop Intelligence



SAP Crystal Reports
SAP BusinessObjects Web
Intelligence

nteroperabilit

^{*} One Server Add-On for SAP Lumira

Convergence Progress

Planned as of H2 2017

SAP BusinessObjects Lumira

SAP BusinessObjects Explorer

SAP BusinessObjects Analysis for OLAP

SAP BusinessObjects Design Studio

SAP BEx Web Application Designer

SAP BusinessObjects Dashboards

SAP BusinessObjects Analysis Office

Live Office

EPM Add-In

SAP BEx Analyzer

SAP Crystal Reports

SAP BusinessObjects Web Intelligence

SAP BusinessObjects Set Analysis

Desktop Intelligence

Lumira 2.x



Analysis Office



Office Integration

Crystal Reports Web Intelligence



Reporting

- ✓ Retain simple, business user focused desktop tool & IT focused enterprise dashboard tool
- ✓ Promote business user visualizations to enterprise dashboards
- ✓ Changing requirements doesn't need a tool switch
- ✓ Support for offline applications in designer

- Combined server side add-on reduces IT administration cost
- ✓ Improved ease of use & adoption with single canvas for both visualization and storyboard authoring.
- ✓ Align with S/4 UI standard

BI Client Portfolio Planned for 2017

Office Integration

SAP Analysis for Microsoft Office

- For Financial Analysts and other business users
- Microsoft Office add-in enables financial professionals and other business users to rapidly access, visualize, and analyze hierarchical data within Excel and PowerPoint

Data Discovery & Applications

Discover, Analyze and Share

SAP Lumira 2.0

- For Business Analysts, power users, and IT professionals
- Mashup relational data, rapidly create visualizations and build simple storyboards
- Add scripting and dynamic actions to simple storyboards
- Create sophisticated, dynamic analytic applications like planning front ends.
- Use the included templates to rapidly deploy self service analytics

Reporting

Distribute Formatted Information

SAP BusinessObjects Web Intelligence **SAP Crystal Reports**

- Securely distribute information across your organization
- Answer new questions with predefined interactive reports
- Publish high volumes of personalized reports via email

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

Operational Reporting

Power Users designing pixel-perfect reports for mass consumption

Crystal Reports

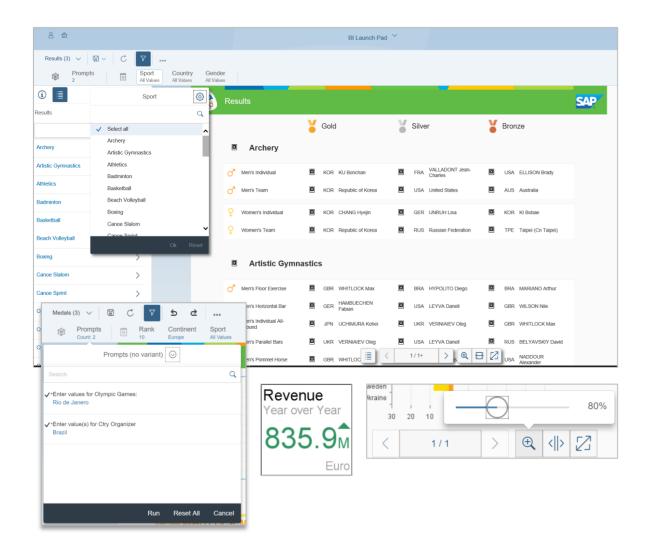


Web Intelligence



- Operational or regulatory reporting
- Build Reporting Books with a few clicks
- Drill down, slice & dice, sort, and filter
- Massive report bursting & distribution
- Embed dynamic text within written summaries
- Ideal for statements, invoices, purchase orders, and printable documents

Why Web Intelligence?



- Live connectivity to SAP sources: SAP HANA, SAP BW. SAP Universes
- Save charts and tables as shared elements for re-use
- Create prompts before report execution to speed query time
- Run parallel queries to improve report performance
- Commentary panel for collaboration
- Freehand SQL scripts
- Pixel-perfect reports with highly formatted tables & crosstabs
- Enhanced charting library with gauges, KPI tiles, waterfall charts, and geomaps
- New interactive viewer for a great consumption experience

Webl in Action:

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DAGJ - The projected overspend (excluding Cluster Grants) of \$14.6M is due to Corrective Services \$11.0M and Attorney Generals \$5.3M.
This is offset by an underspend in Juvenile Justice of \$1.4M. Including Cluster Grants the projected Not Cost of Service is \$1.3M over budget.

Atturney Generals - \$5.1M averspend is mainly due to an under callection of revenue \$4.1M, consisting of Sale of Goods & Services \$4.4M under budget.

Tatal Exponers are an budget but over expenditure of \$15M including Cantractors \$4.6M are largely affect by Croun Accepted Liabilities underspend.
Carrective Services — Employee related forecast \$10.5M over budget due to increased inmate numbers, associated operating costs increases

(Garre-ctive - Services - Employou rolated forocart \$10.5M over budget due to increared inmate numbers, associated operating cart jinclude \$3M for inmate catering. Savings in Other Operating Expenses largely offset these increases, including vehicle leases,

domostic travel and \$1M in reduced management fees for Parklea Correctional Facility.

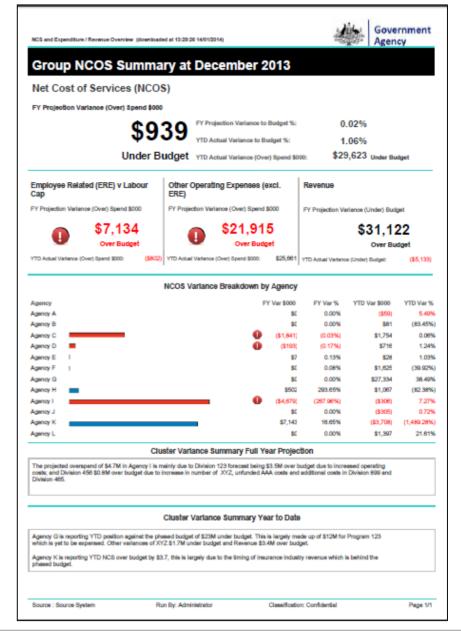
Juvenile Jurtice - Projected underspend of \$1.4M (excluder the \$1.4M Treasury error). Main underspend is \$1.8M for Child Support expenses.
Treasury have made a verbal agreement tasupplement \$1.4M in 2013/14 and have adjusted the allocation letter for forward estimator in September.

Ministry of Police & Emergency Services - The \$13.1M projection is due to Treasury approving the agency to utilise revenue from

the Cammanwealth that war not wed in 2012/13 and not carried forward therefore reducing the amount of recurrent grant from the Principal Department in 2013/14. This is detailed in the Allocation July letter.

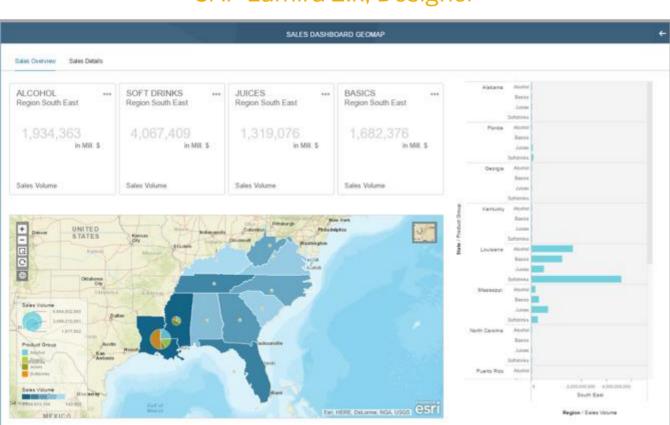
Rural Fire Service - Projected underspend of \$20M. Total Expenses projected at \$60M over budget offset by \$80M grants for Natural Disaster selief.
The underspend is related to Fire Fighting Equipment capital grant \$16.4m and Mitigation works \$2.4M.

Overspend in Emplayee related expenditure of \$4M har been approved by a Trearury adjurtment to the labour expenditure cap in 2013/14 and 2014/15.



Advanced Dashboarding:

Power Users designing dynamic dashboards with guided workflows for all to consume



SAP Lumira 2.x, Designer

- Freedom to design beautiful analytical applications with low-level JavaScript
- Customize with CSS
- Highly performant on SAP BW & SAP HANA. Also use UNX universes as a data source
- Templates ready out-of-the-box for rapid deployment
- Granular features such as microcharts and conditional formatting within crosstabs
- Save report elements as composites for reusability
- Create bookmarks for multiple prefiltered views within one application

Self-Service

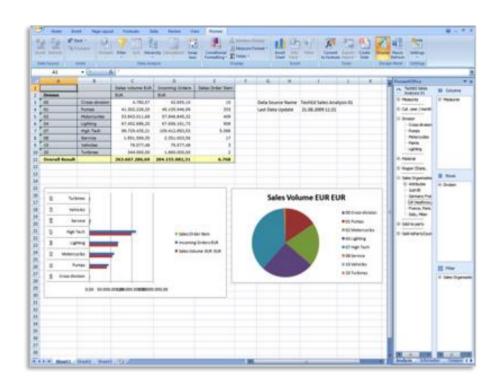
"90% of Analytics is getting the data. At best, #dataviz is icing on the cake"

- Timo Elliot

Self-Service

Users connect to data sources directly to create their own visualizations and analysis

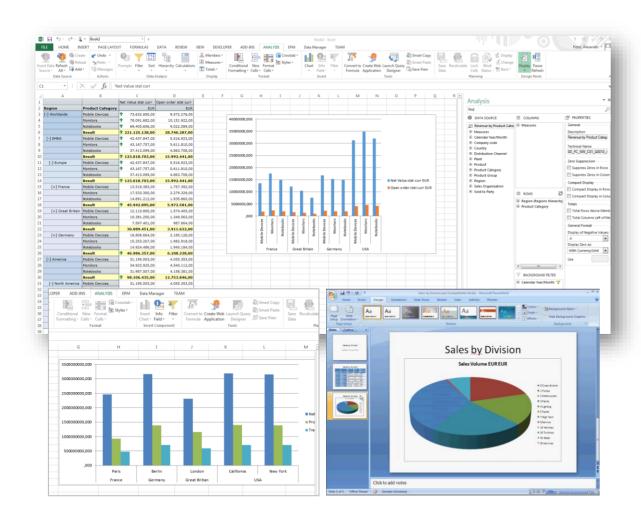
Analysis for Office



SAP Lumira 2.x, Discovery

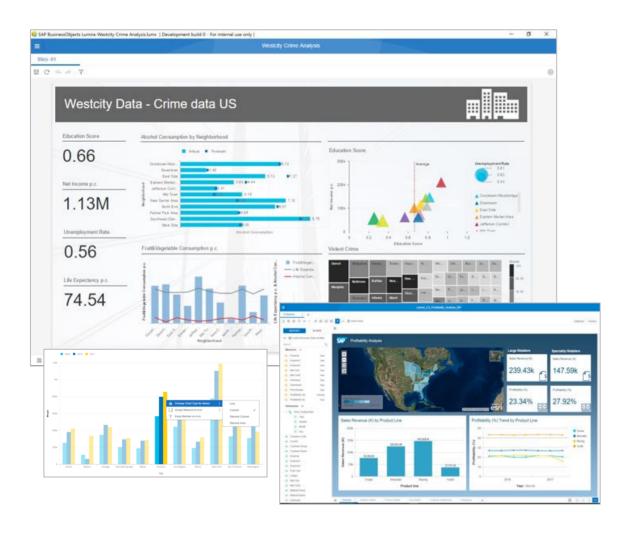


Self-Service: Analysis for Office



- Multi-dimensional analysis in Microsoft Excel, connected to a trusted and governed data source
- Connect to SAP BW, SAP HANA, SAP BPC and other MDX-based sources (Essbase, SSAS)
- Format and use custom formulas on refreshable data
- Embed analysis and insights into Microsoft PowerPoint and Microsoft Word for consumption by business users

Self-Service: Lumira 2.x, Discovery



- Analysts can connect to almost any data source directly from their desktop
- Live data connectivity (online) to SAP sources:
 SAP HANA, SAP BW, and SAP Universes
- Mashup relational data, rapidly create visualizations and build simple storyboards
- Drag and drop for quick prototyping, with input controls, custom color palates, and many chart types
- Improved user experience and interface to reduce time to value

Choosing the Right Tool For the Right Use Case

Considerations:

- Who are the end consumers and how do they want to see the data? (Offline/online, mobile, in MS Excel)
- 2. Who are the authors/creators and what is their skill level?
- 3. Does this report/dashboard need to be shared enterprise wide, within a department/team, or is it for a sole user's consumption?
- 4. What are the data sources, data structures, and who controls access to them?

Recommendations:

- Start with Lumira, Discovery and consider other clients for use cases where the functionality is not robust enough
- 2. Lumira, Designer is highly performant on BW data, whereas Web Intelligence is strong against Universe data. Both are excellent on top of SAP HANA
- 3. Lumira, Designer is the recommended go forward for any advanced capabilities including: custom scripting, writeback to BW, front-end application design, & custom planning/spreadsheet applications

Choosing the Right Tool For the Right Use Case

	Crystal Reports	Web Intelligence	Lumira 2.x, Discovery	Lumira 2.x, Designer	Analysis for Office
Data Transformation	*	*	**	*	*
Blending Multiple Sources	*	*	**	**	*
Agile Visualization	*	*	**	*	*
Linked Chart Analysis	*	*	*	**	
Dynamic & Unstructured Text	**	**	*	*	
Tables & Crosstabs	**	**	*	**	**
Drill Up & Down Through Hierarchies	*	**	*	**	**
Writeback & Jump to Transactions	*	**		**	*
What-If Simulation				**	**
Data Governance	**	**	**	**	**

Choosing the Right Tool For the Right Use Case

	Crystal Reports	Web Intelligence	Lumira 2.x, Discovery	Lumira 2.x, Designer	Analysis for Office
Flat Files	✓		✓		✓
BW/Bex Queries	✓	✓	✓	✓	✓
HANA	✓	✓	✓	✓	✓
UNV Universes	✓	✓	✓	✓	
UNX Universes	✓	✓	✓	✓	
Hierarchical Data	✓	✓	✓	✓	✓
MDX Data Sources					✓
SQL Query	✓	✓	✓		
Big Data Sources	✓		✓	✓	

Introducing BI 4.2

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SAP Roadmap & Future Direction

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About SAP road maps

Companies today are planning their digital journeys – transforming business models, reengineering business processes, and reimagining work.

SAP road maps highlight innovations that may help you plan and implement your digital journey. They span products relevant to lines of business and explain how our innovations may add value to your business.

In our road maps, you can learn about our innovations along three different timelines:

- 1. Recent innovations for our solutions that have been launched in the past weeks or months and can already be purchased
- 2. Planned innovations for our solutions that are intended to be launched in the short term or midterm
- 3. Solution direction, providing a long-term perspective on high-level development plans for innovations for our solutions inspired by your requirements
- 4. Solution vision, providing a high-level and long-term business perspective on innovations for our solutions

Convergence Principles



We are converging use cases, not features and functions



All existing content is safe and will work

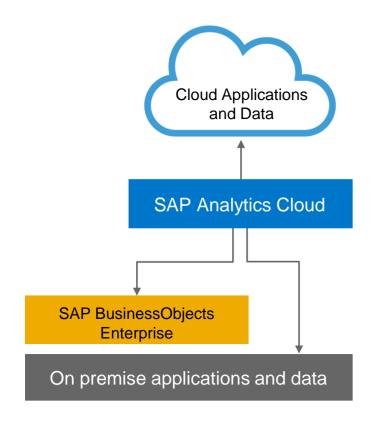


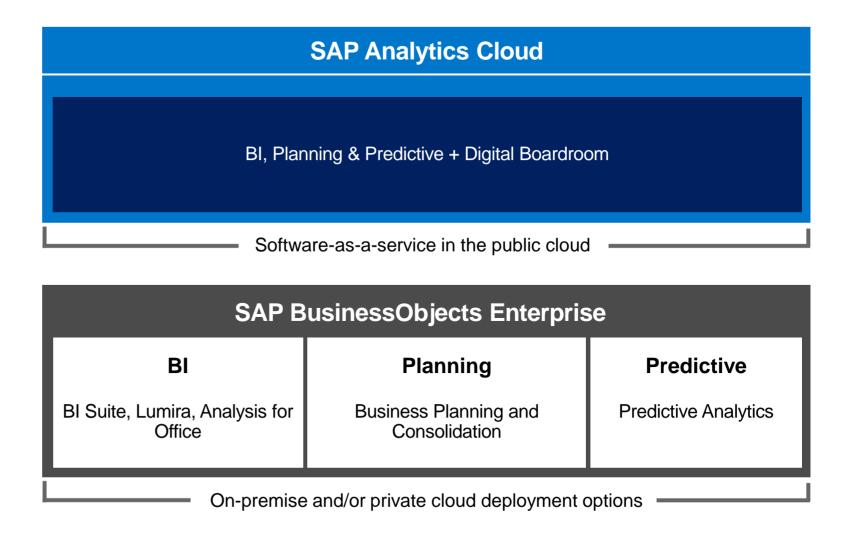
All BI 4.2 clients will be maintained and supported



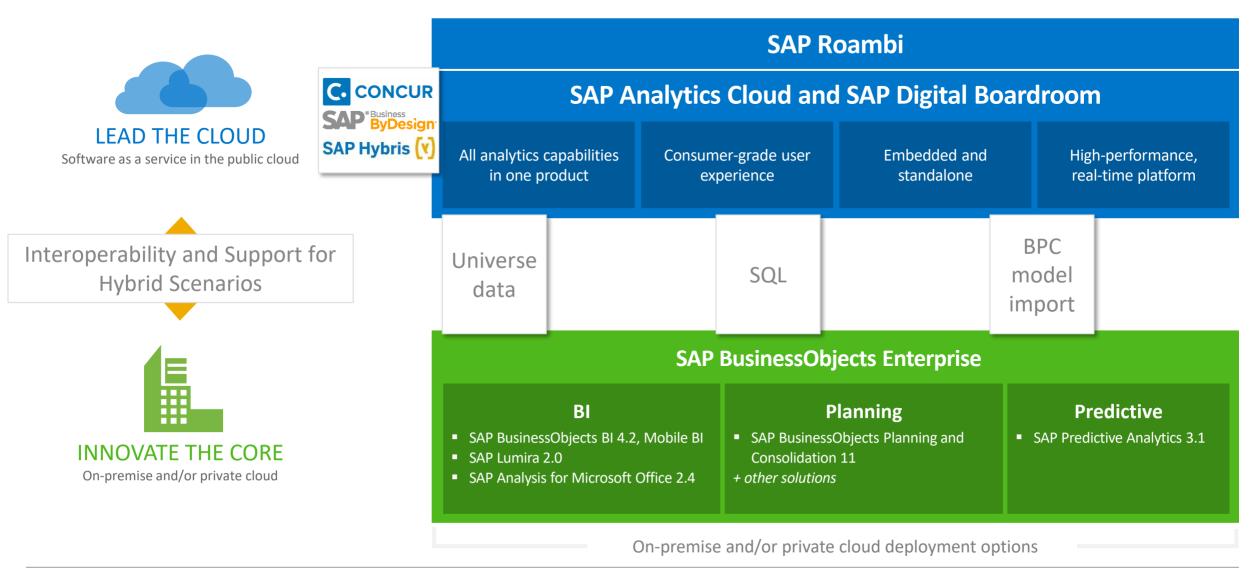
No forced migrations

To bring Analytics to your Data, not the other way around On-Premise, Cloud and Hybrid





Building Bridges



SAP BusinessObjects BI platform - Overview

Product description

SAP BusinessObjects Business Intelligence platform empowers organizations to share and discover information and to make better decisions

BI content management

Secured storage of BI content

Scalable and robust service

- Ability to scale up and scale out to suit the demand
- Fault tolerance and load balancing

Platform administration

- Central web based administration tool
- Management of BI content life cycle

Auditing

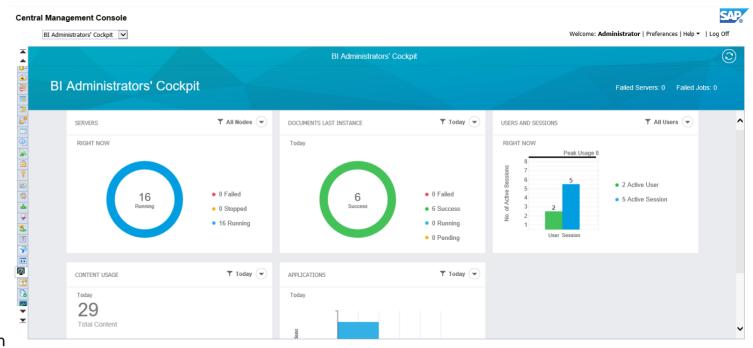
Audit trail for compliance or capacity planning

Information delivery

Distribution of personalized BI content to mass audience in an automated manner

Software development kit

API for extending the solution or for process automation



SAP BusinessObjects BI platform

Product road map overview - key themes and capabilities

Recent innovations

System Administration

- BI on BI (CMS db driver) support access level reporting, report samples included.
- Manage inbox documents
- View number of instances per document
- LCM performance enhancements

Multi-tenancy

 Assign Server group to Folders – support schedule and processing workflows

Platform Search

Indexing performance improvement

Deployment Enhancements

- One-Step Patch Installer
- Special characters support for CMS Admin password on installer

2017 - Planned innovations

Scheduling enhancements

- SAP BW event based report scheduling.
- Secure Scheduling Destinations Individually
- Better control of paused schedule behavior once un-paused
- Partial result status when partial result returned from scheduled SAP BusinessObjects Web Intelligence report
- Add Header to email fired by Publication

Automation

Workflow automation

Security Updates

 Support for SHA2 and SHA3 algorithms and deprecate SHA1

Simplification

 Support deployment of rest services on all application servers

2018 - Product direction

System Administration

- Improved Monitoring
- Auditing

Smart Search

- On documents content and Universes metadata
- Improve performance and accuracy

Smart Recommendation

At consumption and design time

Modern LCM flow

- LCM rich client tool
- LCMBIAR SDK

Deployment Enhancements

- Support deployment of restful services on all application servers
- Key installer updates for better experience
- Normalizing install setup engine across BI platform, add-ons, clients

2019 - Product vision

Cognitive Search

- Questions based on Natural Language Processing
- Speech recognition interface

Advanced Recommendation

- Full integration of machine learning algorithms.
- Intelligent Personal Assistant

Deployment Enhancements

- Unified/Multi-package Installer
- Installer allowing new components to be installed during update
- Installer recovery from errors without losing context
- Smart agent to aid installation process and recommend

BI 4.2 SP4

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SAP BusinessObjects BI platform

Product road map overview - key themes and capabilities

Recent innovations

Security Updates

- TLS 1.1/1.2 support
- Stronger Cipher Suites
- Continued FIPS compliance
- Minimum key strength of 2048 bits
- Upgrade of encryption libraries

Authentication

 Support for SAP Secure Logon Client for thin clients

Rest API enhancements

- BI Inbox
- User Preferences, Send Documents
- Scheduling Enhancements
- Recycle BIN RESTful API's
- Publications Enhancements
- Alerts and Notifications
- Opendoc Enhancements lang param for SAP Crystal Reports , SendTo enabled

2017 - Planned innovations

Authentication

- SAML 2.0 support for BI Platform applications
- Edit / manage the options in the dropdown authentication list
- Improve user Interface in the CMC -WinAD set-up screen

Deployment simplification

- Enhanced phase-wise install improvements
- Install cache management utility

Audit

Remove unnecessary event details

Compliance

 Enhance workflows to support new compliance standards

Platform Search

Search user by Full name

2018 - Product direction

TCO reduction

 Landscape management and administration simplification

Authentication

- End to End SSO via X509 certificates
- Support logon via UPN for Win-AD
- Enhanced Credential Mapping
- Improved Kerberos Support on Linux/Unix deployments
- STS to different clients on same SAP system from BI platform

API enhancements

- Opendoc for BI Inbox and Favorites
- All RESTful API workflows auditable
- Search Rest API
- Branding and Theming Customizations for new BI Launchpad

Bridges

New hybrid BOE services

2019 - Product vision

Authentication

 Claims based Authentication from SharePoint to SAP BI platform

API enhancements

- Swagger / OpenAPI support
- Alerting Framework API's
- Extensions management framework
- Multitenancy support as RESTful API's
- Storage Management API's
- Bring parity with Java /.NET SDK and SOAP with RESTful API's

Most used platform services running hybrid

BI 4.2 SP4

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SAP Lumira 2.0

Major product updates

SAP Lumira 2.0 is the legal successor of both SAP BusinessObjects Design Studio 1.x and SAP Lumira 1.x

- SAP recommends customers of 1.x versions of Design Studio and / or SAP Lumira to upgrade to SAP Lumira 2.0
- License entitlements do not change by the upgrade
- Conversion support for 1.x documents of both Design Studio and SAP Lumira is provided
- SAP Lumira 2.0 requires deployment on the BI Platform
- Some features of SAP Lumira 1.x are differently supported in 2.0, and some functional restrictions exist
- For details to consider for customers who need to upgrade from 1.x versions to SAP Lumira 2.0, please refer to the Appendix

SAP Lumira

Product road map overview - key themes and capabilities

Recent innovations

Analysis & Exploration

- Modernized user experience
- Improved Filter and Input Controls
- Enhanced Visualization experience
- Improved SAP HANA online analysis
- Support for SAP BW online analysis
- Improved Story and Layout capabilities

Application Design

- Componentization and reusable custom components (Composites)
- Robust bookmarks
- Mobile UX: Adaptive Layout, Scrolling

Interoperability

- Use acquired data from Discovery as a data source in Designer
- Extend Discovery stories with Designer
- Contextual export to SAP Analysis for Microsoft Office

Enterprise

- Schedule Designer applications based on acquired data
- Extended support for enterprise deployment

2017 - Planned innovations

Analysis & Exploration

- Filter support for measures
- Extend Filtering with cascading and indirect filters
- Input Controls support on measures
- Interactive analysis with visualization linking
- Data level collaboration with commentary
- Improve visual analysis with Trend/regression lines and Time series
- Support for SAP HANA Deployment Infrastructure (HDI) views
- Filter Dialog enhancements (e.g. copy & paste values)
- Improved PDF export

Enterprise

- Scheduling & Broadcasting with PDF
- New SAP Fiori Like Launchpad support
- Extend Lumira consumption on Mobile
- Governance and data protection

Planned Q4/2017 release

2018 - Product direction

Analysis & Exploration

- Simplify end user analysis e.g. Business
 Query search, What-If, financial calculation
 (YTD), custom sort, SAP BW Query linking
 & axis sharing
- Improve data preparation and access e.g. Live connection to Universe and SAP Vora, Data Enrichment support for Live connections including blending, Improved calculations and formula editor
- Extend visualization capabilities, e.g. new chart variations and types, custom tooltips, binning, improved conditional formatting, trend & reference lines, crosstab formatting
- Enhance & simplify filtering experience e.g.
 Filter by system variable (Today), Personal selection variants

Enterprise

- Data preparation in the Browser
- Common and reusable datasets
- Export to PPT

Interoperability

- SAP BusinessObjects Web Intelligence as a data source
- Interoperability with SAP Analytics Cloud. This is the current state of planning and may be changed by SAP at any time.

2019 - Product vision

Analysis & Exploration

- Deliver smart data discovery with embedded predictive and machine learning capabilities
- Continue to simplify and extend analysis& exploration capabilities in key workflows while adding more sophisticated options to combine, enrich and visualize data

Enterprise

- Further investments to simplify deployment and operations of the product
- Further re-use of application parts to reduce TCO of large content deployments

Interoperability

- Further interoperability with BI 4 Tools and Platform
- Build bridges to SAP Analytics Cloud

Client Convergence in Microsoft Office

Unified Microsoft Office Client

Coexistence of Analysis and EPM sheets

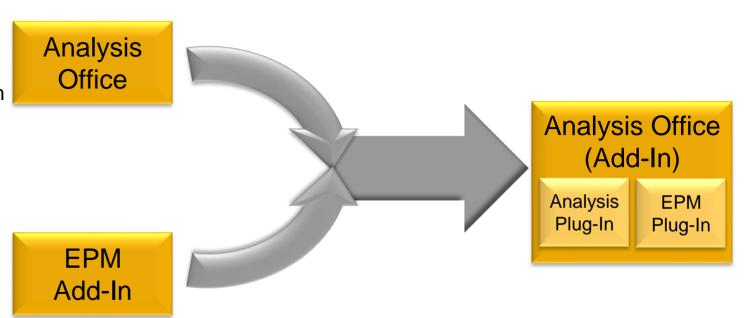
Superset of Analysis and EPM Add-In features (with some limitations)

Common Installer, single license

Protected investments: Re-use existing content

Separate ribbon tabs

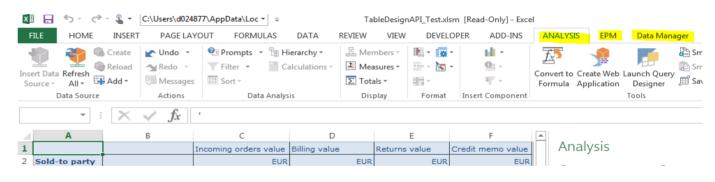
Gradual convergence: e.g. common refresh



Terminology

SAP Analysis for Microsoft Office (Add-In) → Product including the former products Analysis Office and EPM Add-In

Analysis Plug-In → Analysis as part of Analysis Office EPM Plug-In → EPM as part of Analysis Office



SAP BusinessObjects Live Office

Product road map overview - key themes and capabilities

Recent innovations

2017 - Planned innovations

2018 - Product direction

2019 - Product vision

Consume SAP BusinessObjects Web Intelligence 4.2 report parts

- Reports with shared elements
- Reports with comments
- Reports with geo maps
- Reports with big numbers
- Reports using custom elements

64-bit Microsoft Office support

Continuous catch up SAP BusinessObjects Web Intelligence 4.2 report parts new features

- Retrieve cell and block comments
- Use filters based on Set in query panel
- Support new charts type

Continuous improvement

 Improvement on reports containing images in PPT

Continuous catch up SAP BusinessObjects Web Intelligence report parts new features

- Shared BI variants
- Shared queries

Continuous improvement

- Improve Geo maps capability and lay out (latitude/ longitude)
- Multiple Reports access
- Merged dimension
- User Interface improvement

Continuous improvements

Support Platform updates and Microsoft innovations

SAP Analysis for Microsoft Office – 1 –

Product road map overview - key themes and capabilities

Recent innovations

Integration into SAP Analytics Cloud

Reporting on SAP Analytics Cloud models

Customize User Interface

- Workbook
- Backstage, ribbon tab & context menus configuration
- EPM and Analysis plug-ins

SAP Business Planning and Consolidation (BPC)

- Enhanced environment/model handling
- Business Process Flow
 - Change activity context
 - Set work status

Analysis - Continuous Improvements

- Grouping: move node
- Smart DataSource reset
- Planning
 - Mass copy&paste in new lines / performance
 - Keep formula on cell

2017 - Planned innovations

Integration into SAP Analytics Cloud

- Launch Analysis Office from SAP Analytics Cloud
- Support of exception aggregation, tuple sorting, ranking (list calculation)

Analysis - Continuous Improvements

- Comments (SAP BW/4HANA)
- Axis Sharing: butterfly, columns
- BI Platform: Publication
- Enhanced reporting features
 - SetData/GetData enhancements
- Planning
 - Improved handling of new lines
 - Support planning function for file upload

2018 - Product direction

Integration into SAP Analytics Cloud

- Planning support
- Access to online sources
- Analytics Cloud repository

SAP Business Planning and Consolidation (BPC)

- Support Related Actions in Analysis plug-in (Business Process Flow)
- Custom hierarchies/grouping in environment

Analysis: Continuous improvements

- Enhanced reporting features
 - Asymmetric reporting: UX to define restrictions in Microsoft Excel cells rather than one-by-one in separate dialog
 - Tuple Filter: Include or Exclude of specific tuples (as opposed to Cartesian product of dimensions)
 - Disaggregation settings
 - Reporting based on InfoProviders and key figure catalog
 - Grouping on SAP HANA
- Grouping: editor
- Universe connectivity
- Enhanced Microsoft PowerPoint support

2019 - Product vision

Framework

Net API (alternative to VBA API)

Analysis: Continuous improvements

Integration of Microsoft Excel 365 apps

SAP Analysis for Microsoft Office – 2 –

Product road map overview - key themes and capabilities

Recent innovations

EPM - Continuous Improvements

- Support SAP Secure Login
- SAML 2.0 Support
- Report protection supports grouping

EPM - Removing limitations

- **EVDRE** support
- Microsoft Word support
- Extension support

2017 - Planned innovations

EPM - Continuous Improvements

- Set work status for multiple members
- Keep logon connection history
- Planning formulas:
 - Support descendants in planning formulas/Button
- Keep & reuse favorite dimension member's selection
- Improve context menu and prompt

2018 - Product direction

EPM - Continuous Improvements

- User experience harmonization:
 - New members selector in work status
- FPM formula
 - EPMDimension and Axis Override for page header
 - Add "Dimension Property" selection in **FPMDimensionOverride**
- Support planning for BAPI provider connection (Big Volume mode)
- Support HANA Variables & Input parameters (through HANA MDX connection)

EPM - Integration into SAP Analytics Cloud

Reporting and Planning support

2019 - Product vision

EPM - Continuous Improvements

New user experience to create asymmetric reports on the fly

EPM - Platform updates

Support Microsoft technology and innovation

SAP BusinessObjects Web Intelligence

Product road map overview - key themes and capabilities

Recent innovations

Engaging user experience

- New interactive viewer
- Charts enhancements
- BI Variants
- Dynamic Input Controls

Trusted foundation

- dHTML vs. Java client parity
- Parallel queries
- Universe enhancements

Collaboration

- Commentary
- Shared Flements

Unleash the ecosystem

- Visualization extensions
- JAVA and REST SDK improvements

Best on SAP data

BEx authored universe

2017 - Planned innovations

Engaging user experience

Interactive viewer enhancements

Trusted foundation

- dHTML vs. Java client parity
- Cumulative improvements
- Additional Desktop Intelligence catch up

Unleash the ecosystem

REST SDK improvements

Best on SAP data

Support BICS INA connector

2018 - Product direction

Enhanced consumption experience

- Interactive analysis for the end users
- Management by exception
- Smart tooltip

Simplified designer experience

- Bootstrap document creation
- Templates
- Best chart recommendations

Adapt to ecosystem

- Rationalize access to data
- Online data access for universes
- Trusted BI artefact

Modern experience for readers and designers

 A modern and elegant user interface

2019 - Product vision

Cognitive search

 BI artifacts creation based on Natural Language Processing

Advanced recommendation

- Integration of machine learning algorithms
- Advanced semantic

Semantic Layer in the cloud

- Hybrid Semantic Layer:
 - bridge OnPremise data and Cloud data in a unified layer
- DBaaS

Hybrid SAP BusinessObjects Web Intelligence

Leverage your existing investment from the Cloud

BI4.2 SP04

SAP Crystal Reports

Major product updates

- SAP Crystal Reports for Enterprise is a major redesign of the SAP Crystal Reports designer and associated processing servers
- This new report designer will contain the new features and innovations going forward
- Customers should plan to transition from SAP Crystal Reports 2008, SAP Crystal Reports 2011, SAP Crystal Reports 2013, SAP Crystal Reports 2016 to SAP Crystal Reports for Enterprise to take advantage of new features and innovations
- SAP Crystal Reports 2016 is an incremental update to SAP Crystal Reports 2013, and can run side by side with SAP Crystal Reports for Enterprise
- We will continue to deliver our current IDE integrations with Microsoft Visual Studio and Eclipse for the SAP Crystal Reports 2016 product line
- SAP Crystal Reports, version for Microsoft Visual Studio will continue to support multiple versions of Microsoft Visual Studio
- We will continue to support the Software Development Kits (SDKs) that are available for SAP Crystal Reports 2016
- We will continue to support the SDKs that are available for SAP Crystal Reports 2016
- We will be investing in our new APIs and embeddable services for SAP Crystal Reports for Enterprise
- Investments in reports is preserved
 - Reports created in the 2016 designer will open in the Enterprise designer (data connection can be migrated to the BI platform stack)

SAP Crystal Reports

Product road map overview - key themes and capabilities

Recent innovations

Enable the Business (CR2016 and CR4E)

- Fiorified BI Launchpad
- Server Group Enhancements
- Partner Extension Dictionary
- Vertical Alignment in text objects
- Data Source Mapping Enhancements
- Waterfall charts (CR4E)
- QR code and Bar code Support (CR4E)
- Consume SETS via UNX (CR4E)
- Conditional formatting for Line and Box(CR2016)

New platform support (CR2016 and CR4E)

 Direct to Data enhancement Access 2013 and XML

OEM/developer

- Microsoft Visual Studio 2015
- Eclipse 3.7, 4.x
- Open Document Enhancements(CR2016 and CR4E)
- JavaScript API enhancement (CR4E)

2017 - Planned innovations

Continued improvement (CR2016 and CR4E)

 Fiorified BI Launchpad - continuous improvement

Enable the Business(CR2016 and CR4E)

- Home Page redesign
- Removal of Flash Prompt (CR4E)

New platform support (CR2016 and CR4E)

 Continued support of new data sources, applications, and operating systems

OEM/developer

- Microsoft Visual Studio 2017
- Java 1.8 (CR for Eclipse)

2018 - Product direction

Continued improvement

Bridging the functionality gaps in CR4E compared to CR2016

New platform support

 Continued support of new data sources, applications, and operating systems

OEM/developer

- Continued API enhancements
- Continued RESTful Web services enhancements

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2019 - Product vision

Continued improvement

Bridging the functionality gaps in CR4E compared to CR2016

Unified Viewer

 SAP UI5 Based Design integrated in Fiorified BI Launchpad

New platform support

 Continued support of new data sources, applications, and operating systems

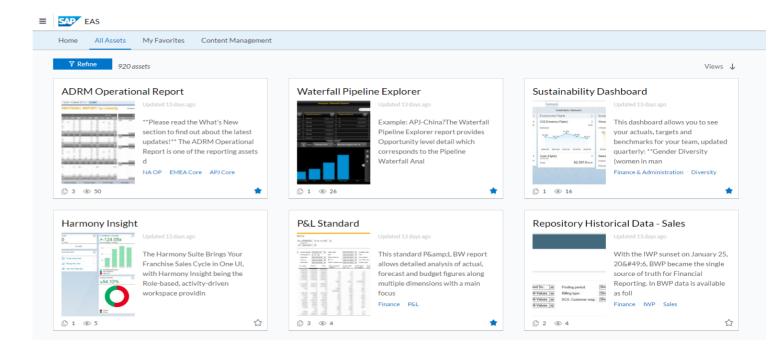
OEM/developer

- Continued API enhancements
- Chart Extension API
- Richer RESTful web services
- New embeddable reporting service
- Customizable and embeddable SAPUI5 viewer

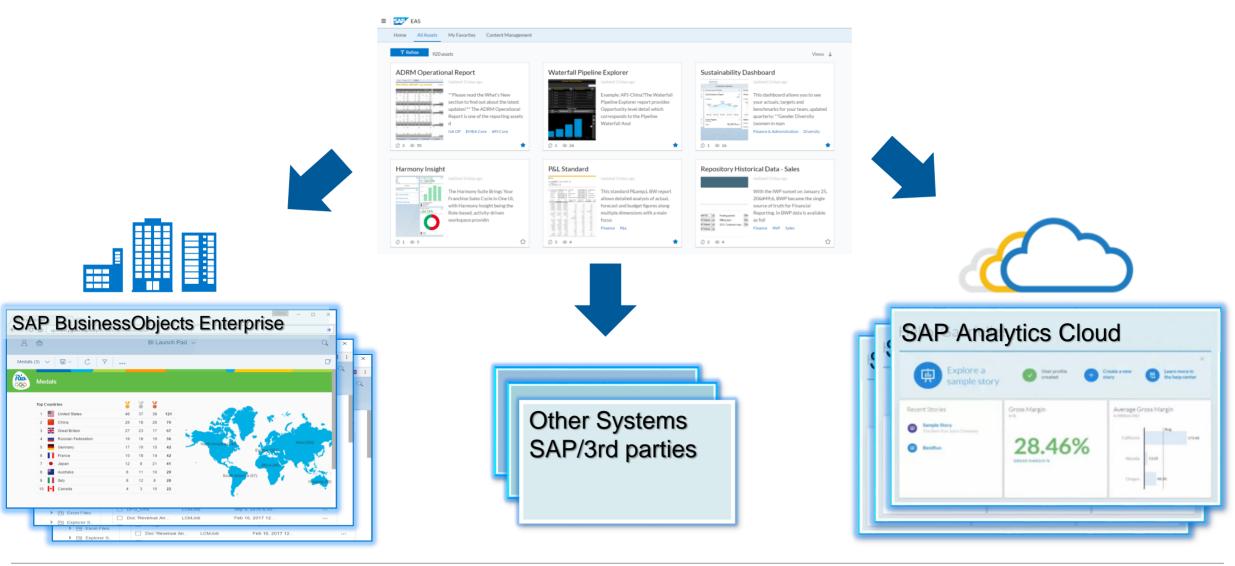
BI 4.2 SP4, CR VS SP20, CR Eclipse SP20

•(CR4E) = Only for CR for Enterprise version, (CR2016) = Only for CR 2016 Version

- Simplify access to all analytics
- Automate recommendation with machine-learning services
- Grant business users with more trust in analytics
- Get started on your journey to the cloud



Seamless access to any hybrid deployment

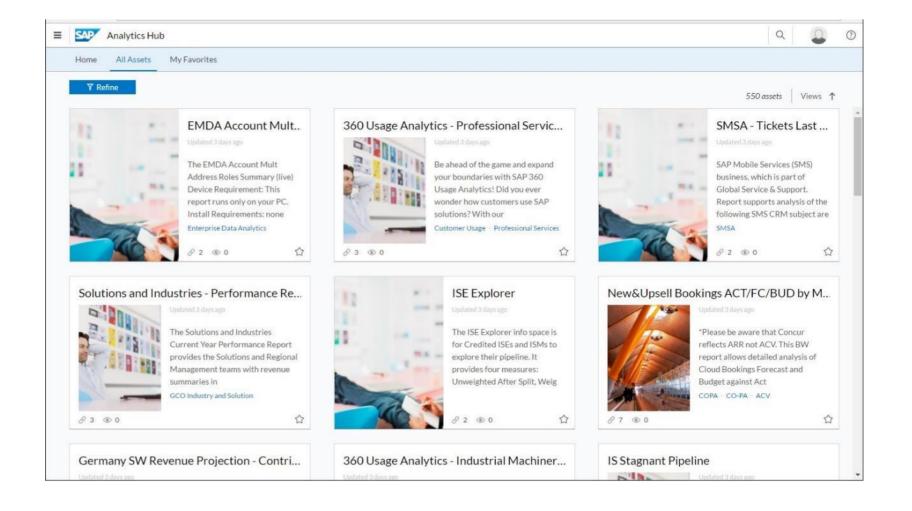


Analytics access – all assets page

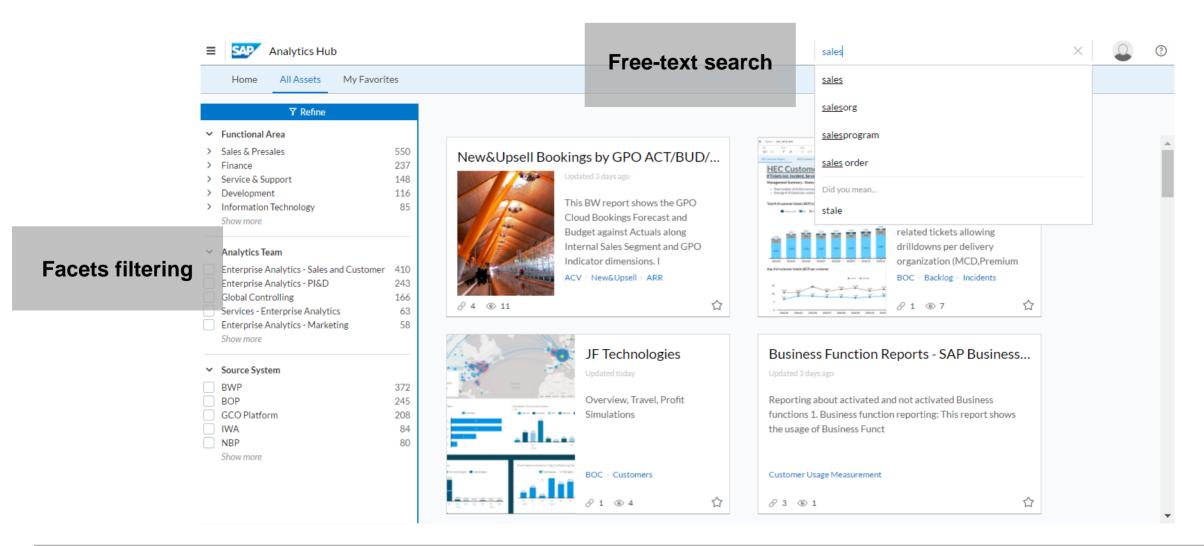
Access, in one place, all trusted analytics assets in your company

Scroll, use search, or facets to find useful assets

Click on a tile to see analytics details and open the analytics



Analytics access – search and filter



Product road map overview - key themes and capabilities

Recent innovations

Analytics access

- Search assets by free text search
- Filter assets with facets.
- Tag assets as Favorites
- Quick access to « Recently used » assets
- Quick access to « Picked for you » assets

Hub customization

- Assets metadata and layout (API)
- Logo and title (API)

Content management

- Asset creation UI
- Asset life cycle management
- Hidden assets management

Security

SAML SSO support

Release 1707 GA July 2017

Planned Q3-Q4/2017

Analytics access

Q3 - 1709

Direct URL to Search result
 O4

- Assets multi language versions
- Tier1 localization

Administration improvements

Q3 - 1709

- UI for Analytics Hub configuration
- "Picked for you" edition in Content editing

 Ω 4

- Hub visual design customization
- Analytics usage auditing
- Asset mass import/export
- Data Privacy (GDPR compliance)

Analytics portal integration

Ω4

- Promote assets from SAP Analytics Cloud to SAP Analytics Hub
- Interoperability between SAP Fiori launchpad and SAP Analytics Hub

Planned Q1-Q2/2018

Analytics access

- Mobile experience
- Home page personalization using areas of interest and user profile
- Support more asset types: KPI, data source

Content management

- Federated search across SAP systems
- Alerts on hub health and assets access
- Asset certification and tagging: Gold, Silver, Bronze
- Improve asset formatting

Analytics portal integration

 Promote assets from BI Launchpad to Analytics Hub

Developer Community

SAP Analytics Hub public API (API hub)

Product direction

Simplified access to all analytics

- Asset visualization by teams
- Assets smart recommendation
- Advanced federated search on data and contents
- Inventory and mass import of analytics assets
- Automated description of assets
- Tier2 and Tier3 localization
- Accessibility

Stay ahead of the game

- Receive smart personalized recommendations in real-time
- Predictive maintenance
- Automatic relationships between all asset types (analytics, KPIs, data sources)
- Predefined taxonomies/glossaries

Build a trusted community

- Comments and collaboration workflows
- User rating of assets
- Versioning and archiving
- Customer defined validation process

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

Intro to Lumira 2.0

CUSTOMER



Q&A

CUSTOMER



Q&A

- Can the report field to be restricted based on user and group? le.. column X-Z will be visible by admin...
- Can the scheduled reports distribute to share point link? FTP?
- Can we have the single metadata with multiple data sources where the report generation will be based on the parameter?
- Can the report deployment from dev to prod to be performed outside the application? Ie. Login in to BO is not required when we deploy the reports
- Any API/Query builder we can perform for administration purposes? Do we have the direct access to BO data source?
- Any report such as login details and user activities reports we can schedule for audit purposes?
- Any monitoring tool such as instance manager for administrator to check on the success, failed or recurring reports?
- Can we restrict user access such as report viewer (view and download) and designer (schedule, view, download)?
- Can we create custom/folders and share with those authorized users?
- Support multi language in the report wise and application wise?

Q&A

- Can we share BO Enterprise Named User & Concurrent user licenses between Development and Production or should we get separate license for Development and Production?
- Our current version of Business Objects is BOXI R4.1 SP4. We migrated from BOXIR2 to BOXIR4.1 SP4.
 This migration was very hectic and cumbersome due to huge volume. If we migrate to the latest stable version of BO, will it be similar to R2 to R4 migration or will be a simple upgrade?
- When we have webi reports with high volume of data (eg 100K records), report generation takes more time (20 minutes) though the query execution in databases takes less than 3 minutes to extract complete data.
 Any suggested solution for this?
- Once in a while we face 'Invalid Logon Token' issue while logging into Info view especially when BO services
 are not restarted frequently (for instance once in 30 days)
- Deployment of reports from Development to Production through promotion job fails with temp memory issue especially when more than 50 reports are included in promotion job
- This version not compliance with Red Hat Security patch any solution to apply the latest security patch?
 https://www.ca.com/us/services-support/ca-support/ca-support-online/knowledge-base-articles.tec1388328.html
- How to upgrade tomcat version in build in SAP product? We required to do upgrade to address CVE below, current version is Apache Tomcat Version 7.0.32

Thank you.



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- BI 4 Upgrade Resources
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