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Add-ons for SAP systems



10M USD revenue

30% YoY growth

DWH, BI, Big Data consultancy

owner



2016 Aug. spin-off

~1.2M USD from

Product development focus

partner



sta  
CONSULTING

SAP Development Partner  
since 2015

Add-ons for SAP



## DATA UNFOLDER



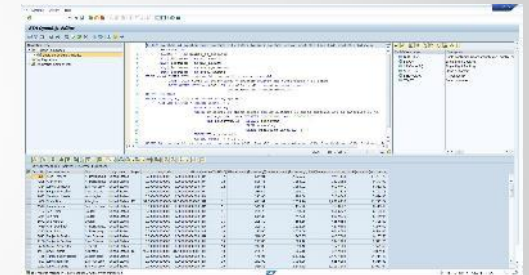
Prepare and push SAP R/3 or S/4HANA data to BI platforms and Databases



## OPENSQLEditor



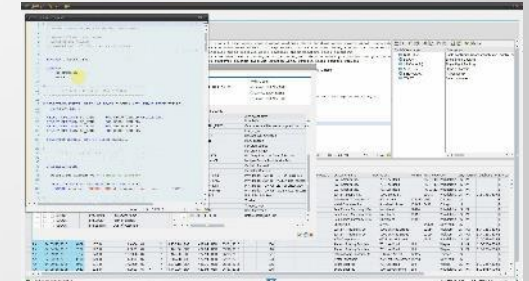
Create, test and optimize SQL queries in SAP



## REPORT GENERATOR



Generate customizable ABAP reports based on SQL queries



# PRODUCTS – USER PRODUCTIVITY



## INSTANT INSIGHTS



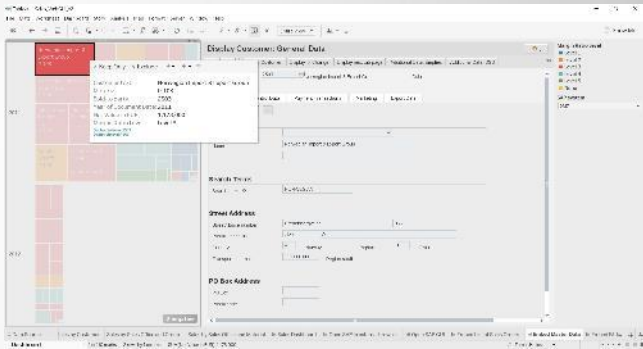
Context sensitive analytics by embedding dashboards into SAP GUI



## BI BRIDGE FOR SAP



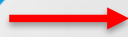
Embed SAP GUI into BI Dashboards



## TICKET SYSTEM FOR SAP



Integrate ITSM platforms with SAP for incident management



# **DATA UNFOLDER**

Enterprise-level solution to

# Prepare and push **SAP R/3 or S/4HANA** data to **BI platforms & Databases**, like:

## Cloud Providers



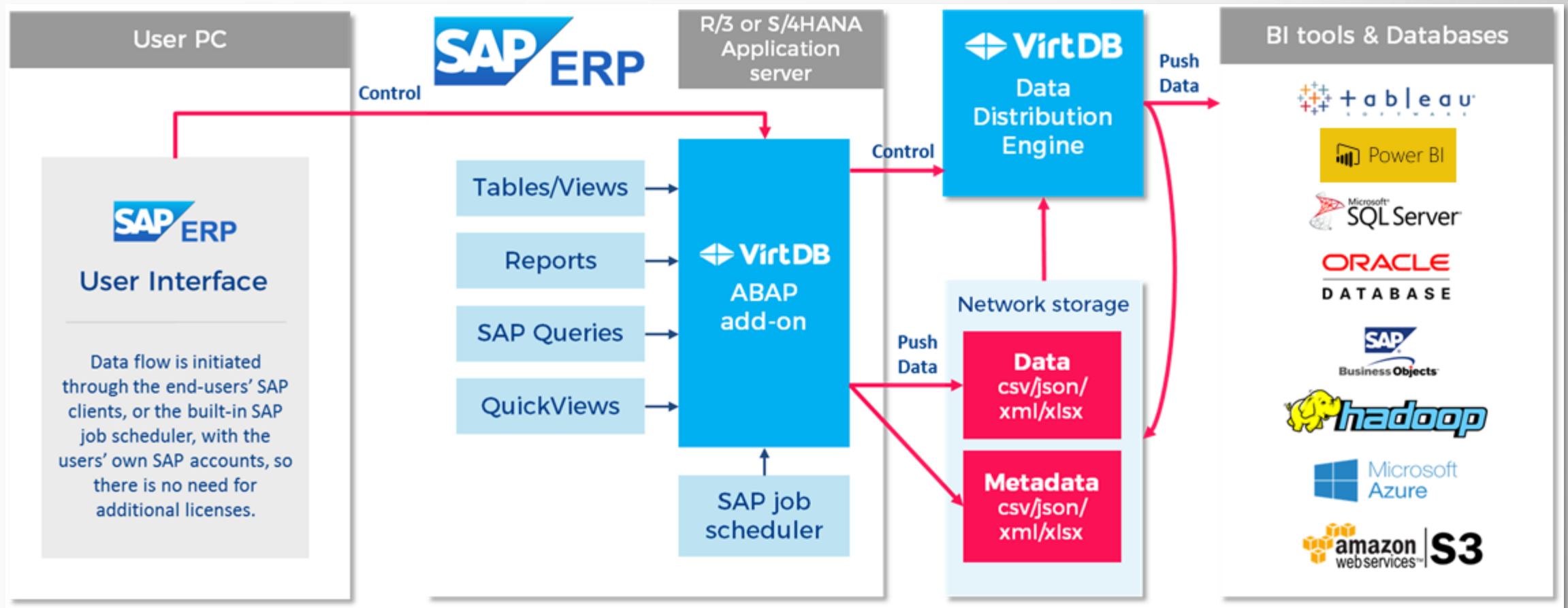
## Databases



## BI Platforms



# DATA UNFOLDER ARCHITECTURE



- ✓ Business logic (ABAP report) and table level data access
- ✓ Self-service data extraction (No ETL needed)
- ✓ Uses standard SAP scheduler
- ✓ Full meta data access
- ✓ Central control for IT
- ✓ High-performance mass data extraction
- ✓ SAP license compliant!

## SAP vs DIAGEO

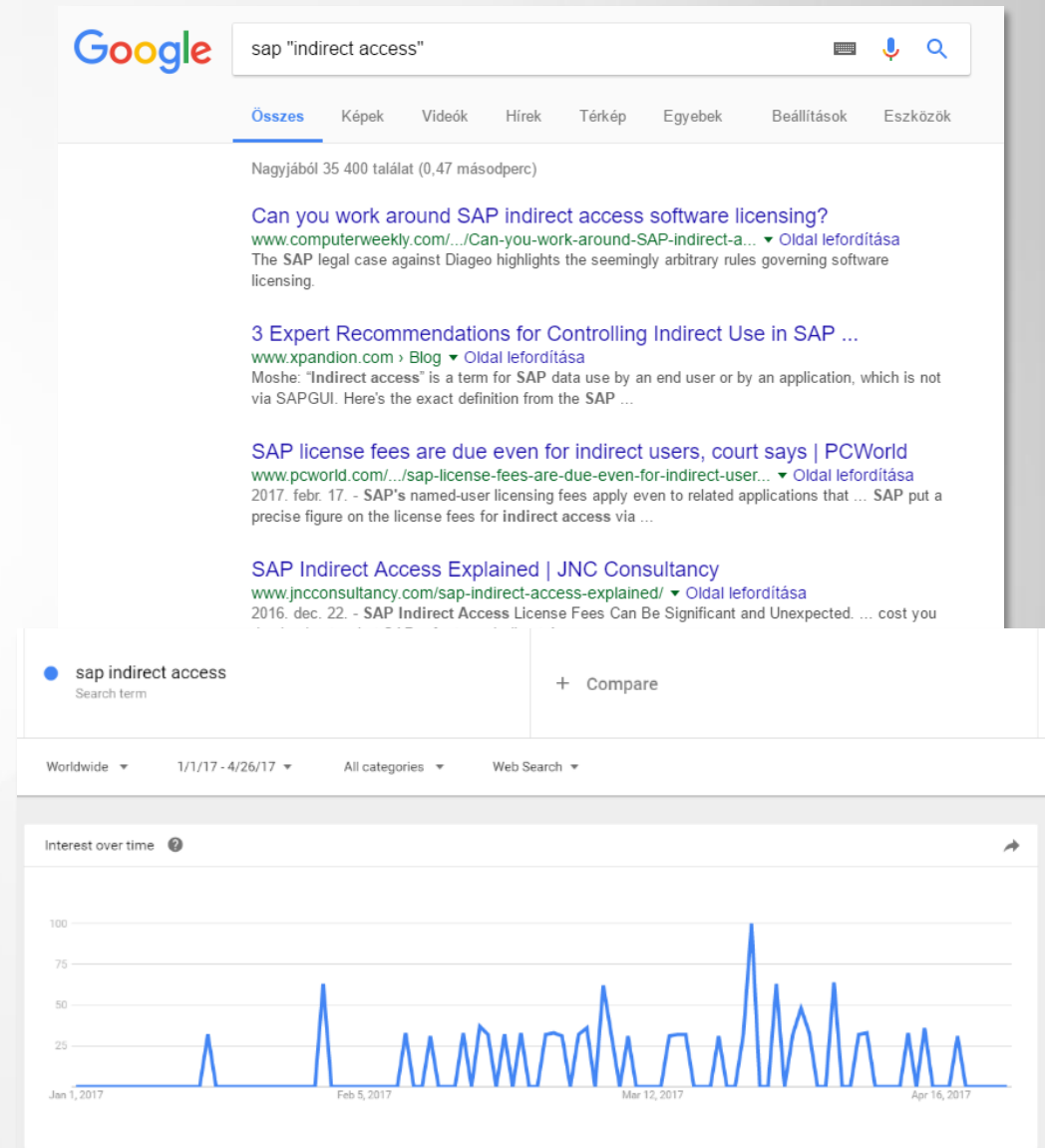
DIAGEO



- SAP customer since 2004
- **Integrated Salesforce and SAP** five years ago
- **5800 Salesforce users** accessing SAP customer data (using SAP PI as middleware!)
- $5800 * £9.500 + \text{interest} = \text{£59M fine}$

## SAP vs AB Inbev

- \$600M
- [link](#)





The most risky part concerning indirect access is **direct interaction with SAP functionalities initiated from outside SAP** by a non-licensed user

## Extra SAP named user license needed if

- Integration through a single “technical” user that serves multiple external business users



## No extra license needed if

- Push data out from inside SAP by existing, licensed SAP users



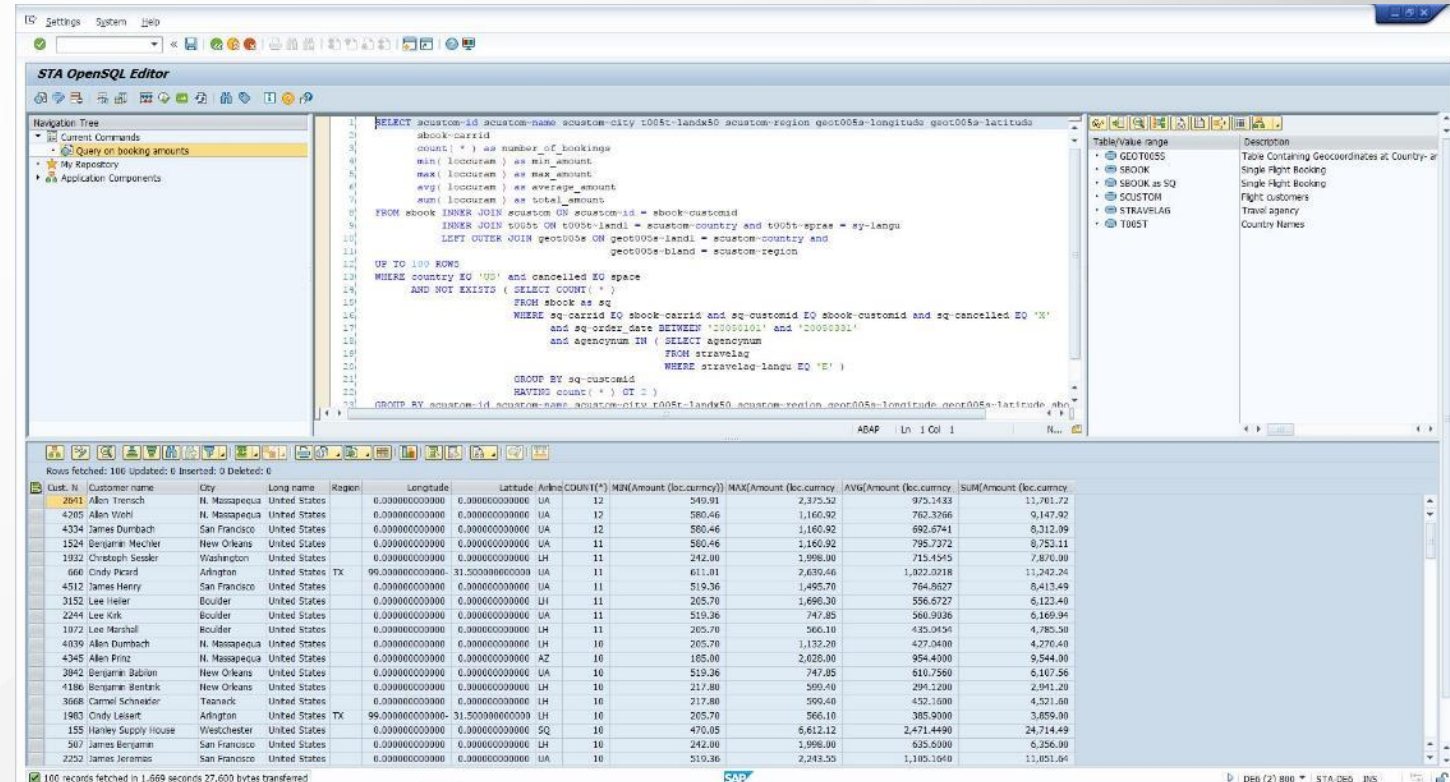
DEMO

# **OPENSQLEEDITOR**

## An ABAP developer tool to create, test and optimize SAP OpenSQL queries

Many handy features help you to quickly create well performing SQL queries.

- Automatic table joins
- Field selection assistant
- Visualize table relations
- Dynamic where conditions
- Display result in BI tools with one single click (VirtDB Data Unfolder integration)



The screenshot displays the STA OpenSQL Editor interface. The main window shows a complex SQL query with multiple joins and conditions. The query is as follows:

```
SELECT scustom-id scustom-name scustom-city t005t-landx50 scustom-region geot005a-longitude geot005a-latitude  
FROM scbook INNER JOIN t005t scustom ON scbook-customid = scbook-customid  
INNER JOIN t005t ON t005t-landi = scustom-country and t005t-spre = sy-landu  
LEFT OUTER JOIN geot005a ON geot005a-landi = scustom-country and  
geot005a-blend = scustom-region  
UP TO 100 ROWS  
WHERE country EQ 'US' and cancelled EQ space  
AND NOT EXISTS ( SELECT COUNT( * )  
FROM scbook as sq  
WHERE sq-carriid EQ scbook-carriid and sq-customid EQ scbook-customid and sq-cancelled EQ 'X'  
and sq-order_date BETWEEN '20000101' and '20000331'  
and agencynum IN ( SELECT agencynum  
FROM stravelag  
WHERE stravelag-langau EQ 'E' ) )  
GROUP BY sc-customid  
HAVING count( * ) GT 0  
GROUP BY scustom-id scustom-name scustom-city t005t-landx50 scustom-region geot005a-longitude geot005a-latitude
```

The results pane at the bottom shows a table with columns: Cust. N, Customer name, City, Long name, Region, Longitude, Latitude, Airline, COUIN(\*), MIN(Amount (loc.currency)), MAX(Amount (loc.currency)), AVG(Amount (loc.currency)), and SUM(Amount (loc.currency)). The table contains 20 rows of data.

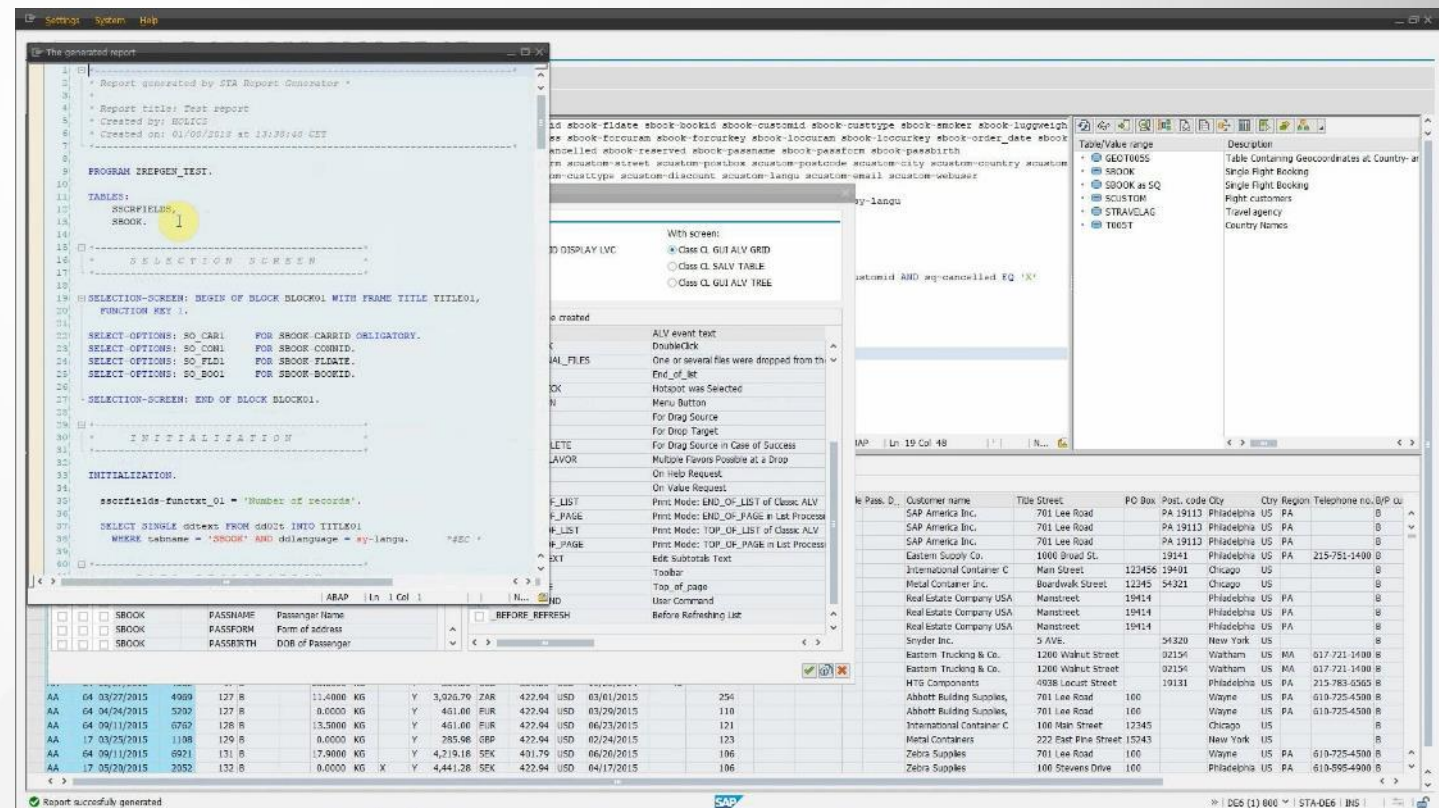
DEMO

# **REPORT GENERATOR**

# An extension of STA OpenSQL Editor that allows generating customizable ABAP reports based on SQL queries

You can spare writing hundreds of ABAP code lines by automatically generating ABAP reports.

- Define selection screen
- Select output type (list/tree etc.)
- Select event handler methods
- Add to SAP package and transport request (optional)
- **Use the report as a datasource for VirtDB Data Unfolder**



DEMO

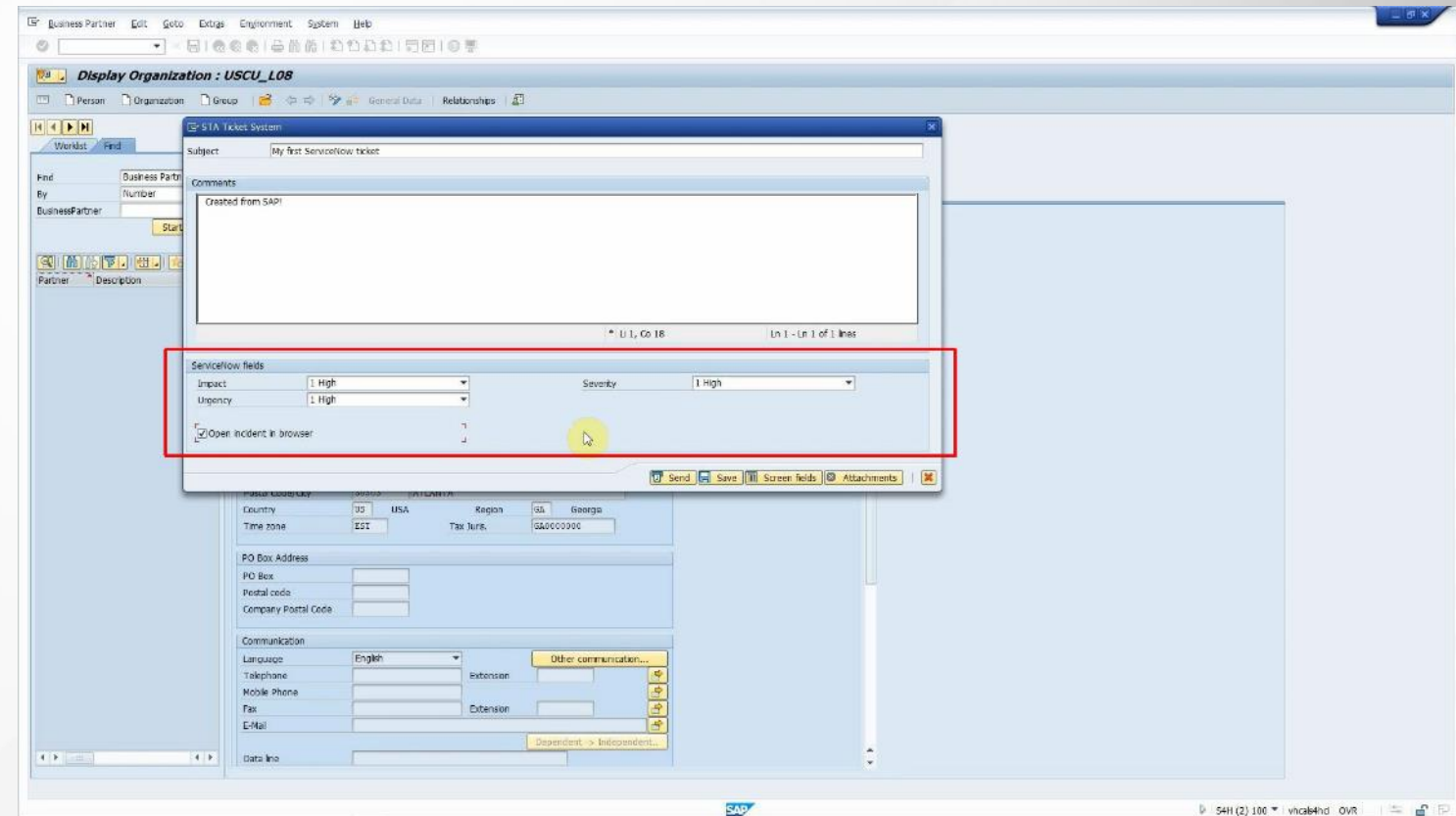


# **TICKET SYSTEM**

## Report errors directly from SAP by creating tickets in external ITSM systems

Cut ticket resolution times by enriching every ticket to reduce communication overhead.

- All SAP information is added
- Screen field contents included
- Attachments (screenshot, authorization report, job log, short dump etc.)
- Auto-reactions for SAP Solution Manager MAI and CCMS alerts
- Eliminate duplicate tickets

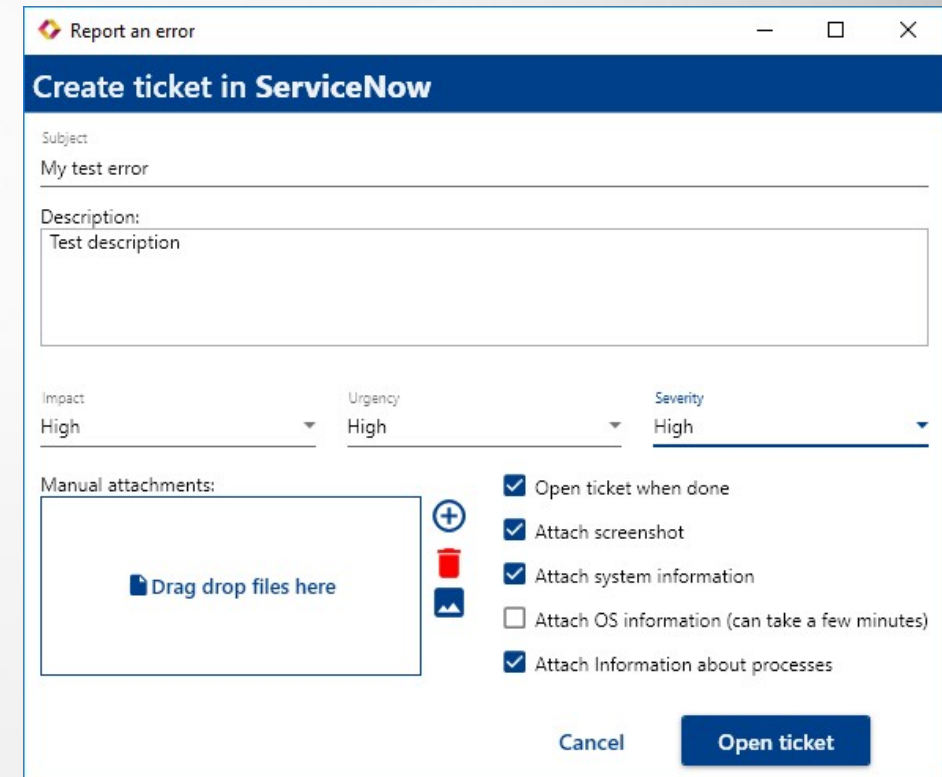
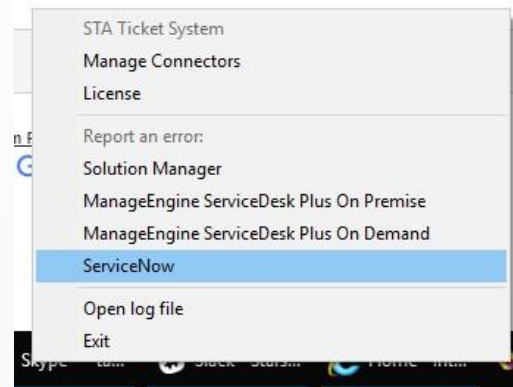


The screenshot shows the SAP Business Partner (BP) screen for 'USCU\_L08'. An overlay window titled 'STA Ticket System' is open, displaying a ticket form. The form includes a 'Subject' field with the text 'My first Serviceticket', a 'Comments' section with the text 'Created from SAP!', and a 'Serviceflow fields' section. The 'Serviceflow fields' section contains dropdown menus for 'Impact' (set to 'High'), 'Urgency' (set to 'High'), and 'Severity' (set to 'High'). Below these fields is a checkbox labeled 'Open incident in browser'. The background SAP screen shows various fields for the business partner, including 'Country' (USA), 'Region' (GA), 'Language' (English), and 'Communication' details.

## Windows application to create tickets in ITSM systems

Easier creation of tickets and reduced ticket resolution times.

- Customizable information package with software and hardware information is added automatically
- Screenshot attached automatically

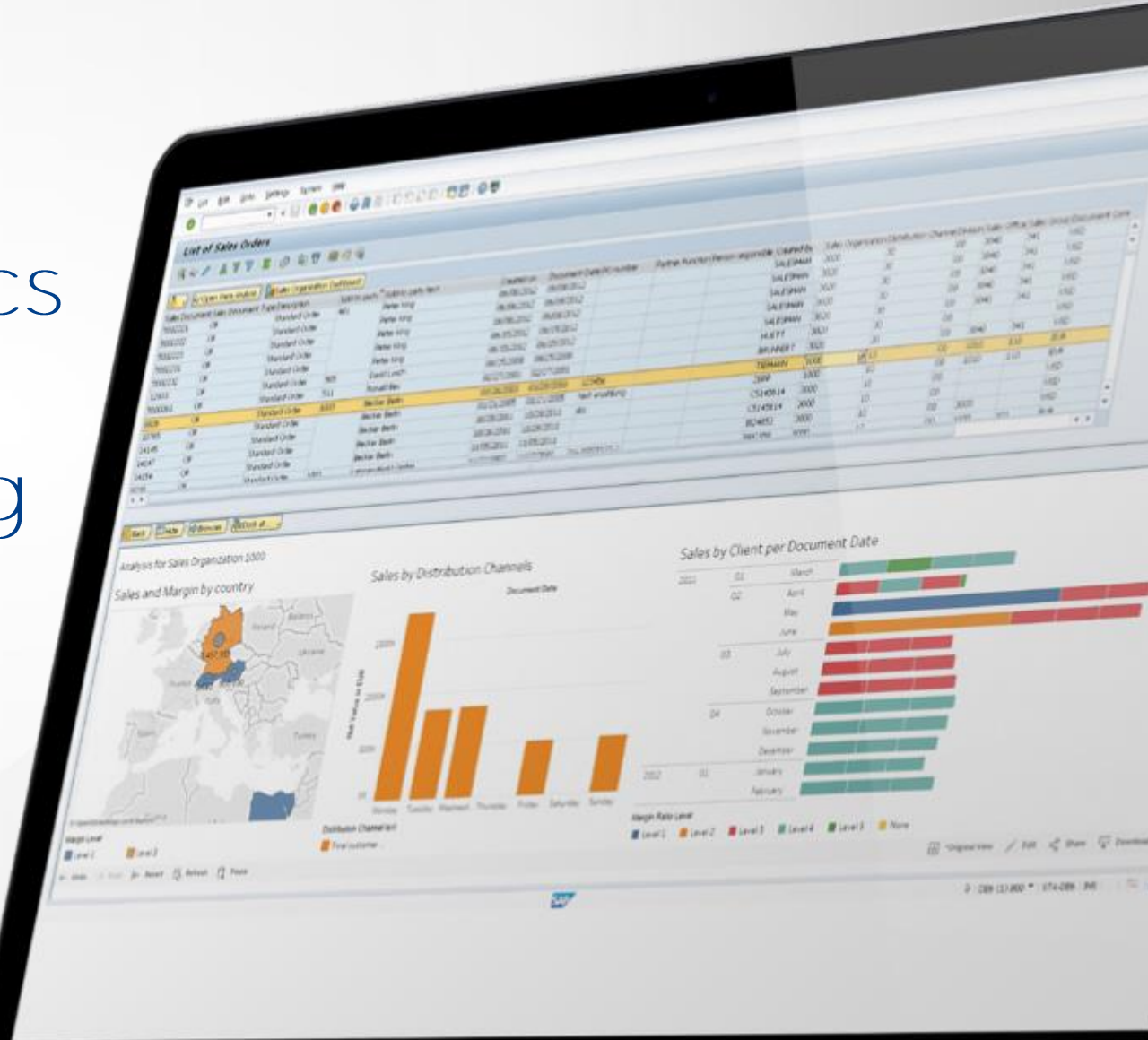
A screenshot of the 'Report an error' dialog box. The dialog has a title bar with a red icon and the text 'Report an error'. Below the title bar is a blue header with the text 'Create ticket in ServiceNow'. The main area contains a 'Subject' field with the text 'My test error', a 'Description' field with the text 'Test description', and three dropdown menus for 'Impact', 'Urgency', and 'Severity', all set to 'High'. Below these are 'Manual attachments:' with a 'Drag drop files here' area and a list of checkboxes: 'Open ticket when done' (checked), 'Attach screenshot' (checked), 'Attach system information' (checked), 'Attach OS information (can take a few minutes)' (unchecked), and 'Attach Information about processes' (checked). At the bottom right are 'Cancel' and 'Open ticket' buttons.

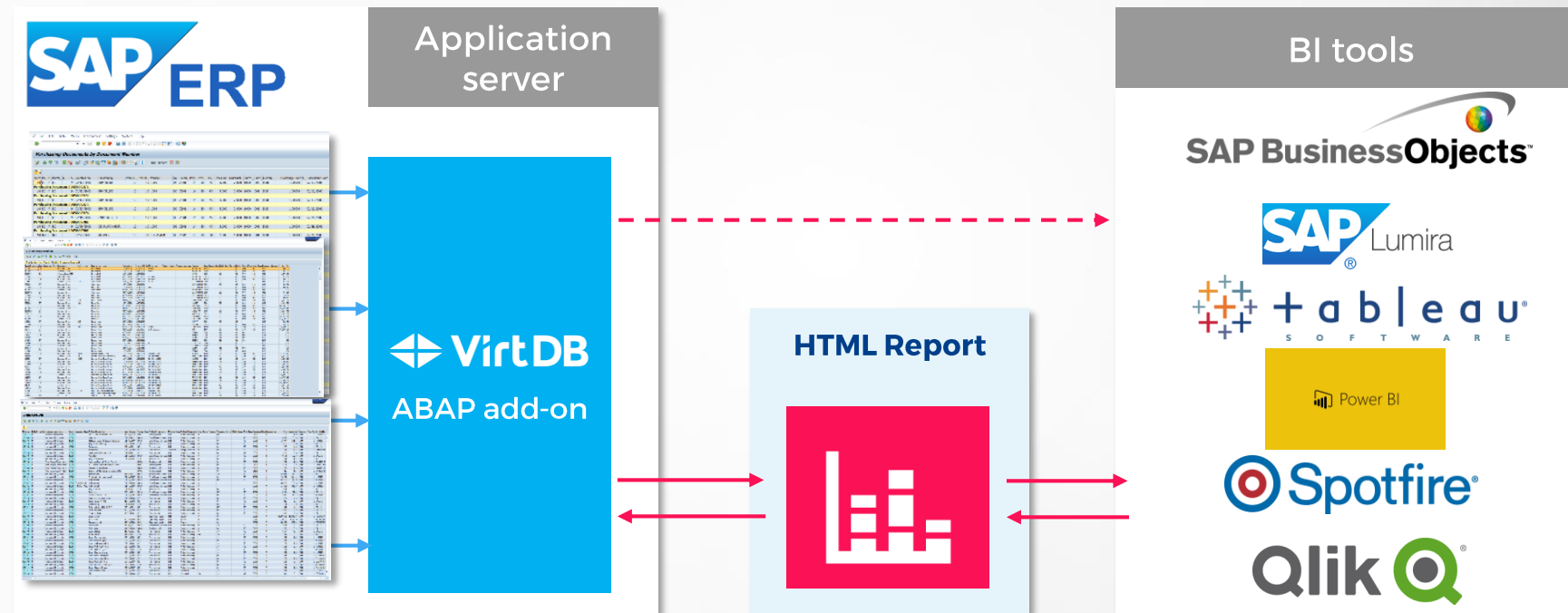
DEMO

**INSTANTINSIGHTS**

## InstantInsights enables

Context sensitive analytics to make better business decisions, by embedding dashboards into SAP.





DEMO



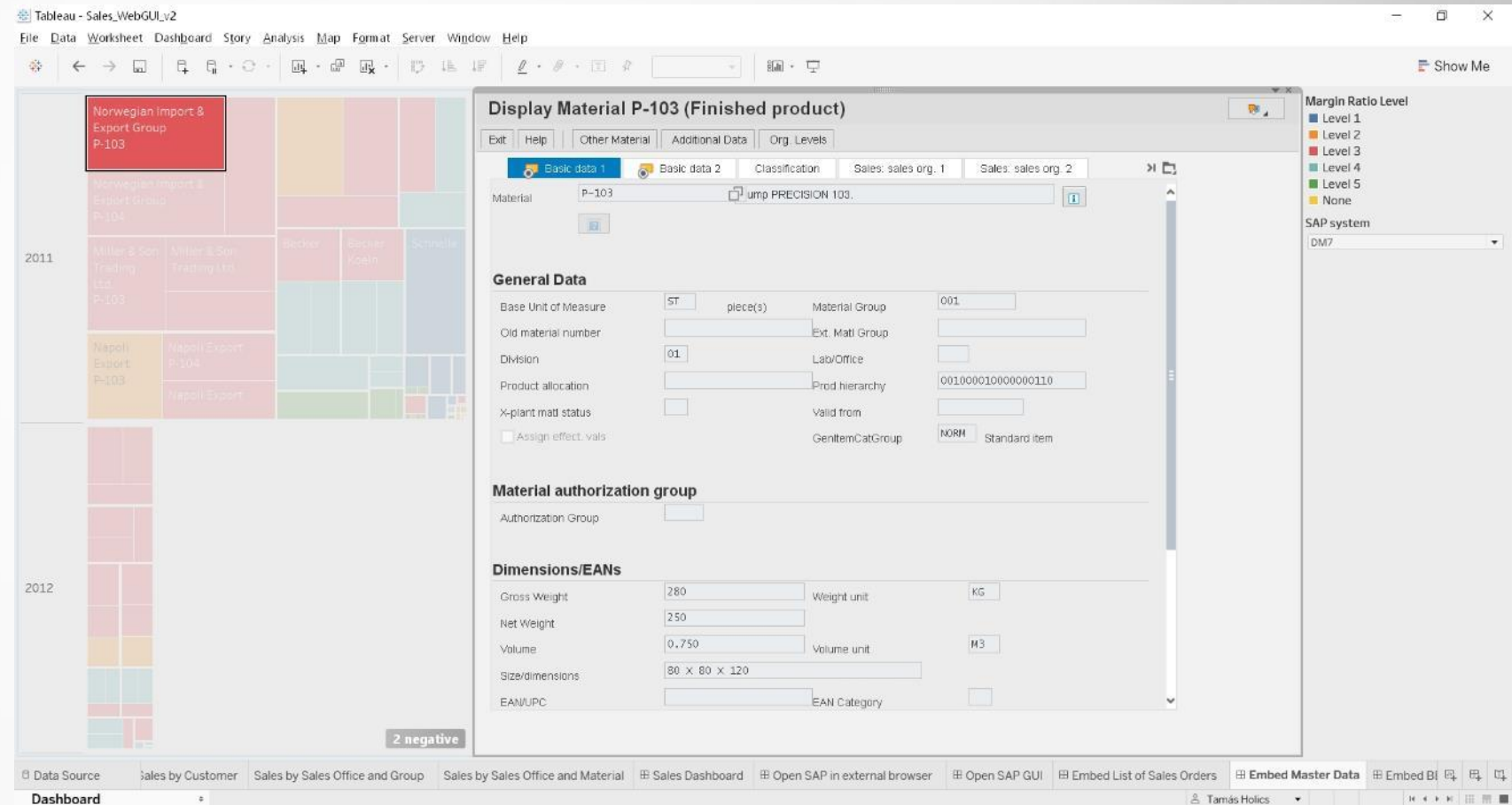


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BI Bridge for SAP

## Why extract SAP data if you can display SAP in Tableau?

*Not all data is meant to be visualized.*



The screenshot displays the Tableau interface with a treemap visualization on the left and a SAP data form on the right. The treemap shows data for 2011 and 2012, with categories like 'Norwegian Import & Export Group P-103' and 'Napoli Export P-103'. The SAP form, titled 'Display Material P-103 (Finished product)', contains fields for General Data, Material authorization group, and Dimensions/EANs. The SAP system is set to DM7.

**Tableau - Sales\_WebGUI\_v2**

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

2011

Norwegian Import & Export Group P-103

Norwegian Import & Export Group P-104

Miller & Son Trading Ltd P-103

Miller & Son Trading Ltd

Becker Becker Voisin

Schnelle

2012

Napoli Export P-103

Napoli Export P-104

Napoli Export

2 negative

**Display Material P-103 (Finished product)**

Exit Help Other Material Additional Data Org. Levels

Basic data 1 Basic data 2 Classification Sales: sales org. 1 Sales: sales org. 2

Material P-103 Lump PRECISION 103.

**General Data**

Base Unit of Measure ST piece(s) Material Group 001

Old material number Ext. Mat. Group

Division 01 Lab/Office

Product allocation Prod. hierarchy 00100001000000110

X-plant mat. status Valid from

Assign effect. vals GentemCatGroup NORM Standard item

**Material authorization group**

Authorization Group

**Dimensions/EANs**

Gross Weight 280 Weight unit KG

Net Weight 250

Volume 0.750 Volume unit M3

Size/dimensions 80 x 80 x 120

EAN/UPC EAN Category

Margin Ratio Level

- Level 1
- Level 2
- Level 3
- Level 4
- Level 5
- None

SAP system DM7

Data Source Sales by Customer Sales by Sales Office and Group Sales by Sales Office and Material Sales Dashboard Open SAP in external browser Open SAP GUI Embed List of Sales Orders Embed Master Data Embed B Embed C Embed D Embed E Embed F Embed G Embed H Embed I Embed J Embed K Embed L Embed M Embed N Embed O Embed P Embed Q Embed R Embed S Embed T Embed U Embed V Embed W Embed X Embed Y Embed Z Embed AA Embed AB Embed AC Embed AD Embed AE Embed AF Embed AG Embed AH Embed AI Embed AJ Embed AK Embed AL Embed AM Embed AN Embed AO Embed AP Embed AQ Embed AR Embed AS Embed AT Embed AU Embed AV Embed AW Embed AX Embed AY Embed AZ Embed BA Embed BB Embed BC Embed BD Embed BE Embed BF Embed BG Embed BH Embed BI Embed BJ Embed BK Embed BL Embed BM Embed BN Embed BO Embed BP Embed BQ Embed BR Embed BS Embed BT Embed BU Embed BV Embed BW Embed BX Embed BY Embed BZ Embed CA Embed CB Embed CC Embed CD Embed CE Embed CF Embed CG Embed CH Embed CI Embed CJ Embed CK Embed CL Embed CM Embed CN Embed CO Embed CP Embed CQ Embed CR Embed CS Embed CT Embed CU Embed CV Embed CW Embed CX Embed CY Embed CZ Embed DA Embed DB Embed DC Embed DD Embed DE Embed DF Embed DG Embed DH Embed DI Embed DJ Embed DK Embed DL Embed DM Embed DN Embed DO Embed DP Embed DQ Embed DR Embed DS Embed DT Embed DU Embed DV Embed DW Embed DX Embed DY Embed DZ Embed EA Embed EB Embed EC Embed ED Embed EE Embed EF Embed EG Embed EH Embed EI Embed EJ Embed EK Embed EL Embed EM Embed EN Embed EO Embed EP Embed EQ Embed ER Embed ES Embed ET Embed EU Embed EV Embed EW Embed EX Embed EY Embed EZ Embed FA Embed FB Embed FC Embed FD Embed FE Embed FF Embed FG Embed FH Embed FI Embed FJ Embed FK Embed FL Embed FM Embed FN Embed FO Embed FP Embed FQ Embed FR Embed FS Embed FT Embed FU Embed FV Embed FW Embed FX Embed FY Embed FZ Embed GA Embed GB Embed GC Embed GD Embed GE Embed GF Embed GG Embed GH Embed GI Embed GJ Embed GK Embed GL Embed GM Embed GN Embed GO Embed GP Embed GQ Embed GR Embed GS Embed GT Embed GU Embed GV Embed GW Embed GX Embed GY Embed GZ Embed HA Embed HB Embed HC Embed HD Embed HE Embed HF Embed HG Embed HH Embed HI Embed HJ Embed HK Embed HL Embed HM Embed HN Embed HO Embed HP Embed HQ Embed HR Embed HS Embed HT Embed HU Embed HV Embed HW Embed HX Embed HY Embed HZ Embed IA Embed IB Embed IC Embed ID Embed IE Embed IF Embed IG Embed IH Embed II Embed IJ Embed IK Embed IL Embed IM Embed IN Embed IO Embed IP Embed IQ Embed IR Embed IS Embed IT Embed IU Embed IV Embed IW Embed IX Embed IY Embed IZ Embed JA Embed JB Embed JC Embed JD Embed JE Embed JF Embed JG Embed JH Embed JI Embed JJ Embed JK Embed JL Embed JM Embed JN Embed JO Embed JP Embed JQ Embed JR Embed JS Embed JT Embed JU Embed JV Embed JW Embed JX Embed JY Embed JZ Embed KA Embed KB Embed KC Embed KD Embed KE Embed KF Embed KG Embed KH Embed KI Embed KJ Embed KK Embed KL Embed KM Embed KN Embed KO Embed KP Embed KQ Embed KR Embed KS Embed KT Embed KU Embed KV Embed KW Embed KX Embed KY Embed KZ Embed LA Embed LB Embed LC Embed LD Embed LE Embed LF Embed LG Embed LH Embed LI Embed LJ Embed LK Embed LL Embed LM Embed LN Embed LO Embed LP Embed LQ Embed LR Embed LS Embed LT Embed LU Embed LV Embed LW Embed LX Embed LY Embed LZ Embed MA Embed MB Embed MC Embed MD Embed ME Embed MF Embed MG Embed MH Embed MI Embed MJ Embed MK Embed ML Embed MM Embed MN Embed MO Embed MP Embed MQ Embed MR Embed MS Embed MT Embed MU Embed MV Embed MW Embed MX Embed MY Embed MZ Embed NA Embed NB Embed NC Embed ND Embed NE Embed NF Embed NG Embed NH Embed NI Embed NJ Embed NK Embed NL Embed NM Embed NO Embed NP Embed NQ Embed NR Embed NS Embed NT Embed NU Embed NV Embed NW Embed NX Embed NY Embed NZ Embed OA Embed OB Embed OC Embed OD Embed OE Embed OF Embed OG Embed OH Embed OI Embed OJ Embed OK Embed OL Embed OM Embed ON Embed OO Embed OP Embed OQ Embed OR Embed OS Embed OT Embed OU Embed OV Embed OW Embed OX Embed OY Embed OZ Embed PA Embed PB Embed PC Embed PD Embed PE Embed PF Embed PG Embed PH Embed PI Embed PJ Embed PK Embed PL Embed PM Embed PN Embed PO Embed PP Embed PQ Embed PR Embed PS Embed PT Embed PU Embed PV Embed PW Embed PX Embed PY Embed PZ Embed QA Embed QB Embed QC Embed QD Embed QE Embed QF Embed QG Embed QH Embed QI Embed QJ Embed QK Embed QL Embed QM Embed QN Embed QO Embed QP Embed QQ Embed QR Embed QS Embed QT Embed QU Embed QV Embed QW Embed QX Embed QY Embed QZ Embed RA Embed RB Embed RC Embed RD Embed RE Embed RF Embed RG Embed RH Embed RI Embed RJ Embed RK Embed RL Embed RM Embed RN Embed RO Embed RP Embed RQ Embed RR Embed RS Embed RT Embed RU Embed RV Embed RW Embed RX Embed RY Embed RZ Embed SA Embed SB Embed SC Embed SD Embed SE Embed SF Embed SG Embed SH Embed SI Embed SJ Embed SK Embed SL Embed SM Embed SN Embed SO Embed SP Embed SQ Embed SR Embed SS Embed ST Embed SU Embed SV Embed SW Embed SX Embed SY Embed SZ Embed TA Embed TB Embed TC Embed TD Embed TE Embed TF Embed TG Embed TH Embed TI Embed TJ Embed TK Embed TL Embed TM Embed TN Embed TO Embed TP Embed TQ Embed TR Embed TS Embed TT Embed TU Embed TV Embed TW Embed TX Embed TY Embed TZ Embed UA Embed UB Embed UC Embed UD Embed UE Embed UF Embed UG Embed UH Embed UI Embed UJ Embed UK Embed UL Embed UM Embed UN Embed UO Embed UP Embed UQ Embed UR Embed US Embed UT Embed UY Embed UZ Embed VA Embed VB Embed VC Embed VD Embed VE Embed VF Embed VG Embed VH Embed VI Embed VJ Embed VK Embed VL Embed VM Embed VN Embed VO Embed VP Embed VQ Embed VR Embed VS Embed VT Embed VU Embed VV Embed VW Embed VX Embed VY Embed VZ Embed WA Embed WB Embed WC Embed WD Embed WE Embed WF Embed WG Embed WH Embed WI Embed WJ Embed WK Embed WL Embed WM Embed WN Embed WO Embed WP Embed WQ Embed WR Embed WS Embed WT Embed WY Embed WZ Embed XA Embed XB Embed XC Embed XD Embed XE Embed XF Embed XG Embed XH Embed XI Embed XJ Embed XK Embed XL Embed XM Embed XN Embed XO Embed XP Embed XQ Embed XR Embed XS Embed XT Embed XU Embed XV Embed XW Embed XX Embed XY Embed XZ Embed YA Embed YB Embed YC Embed YD Embed YE Embed YF Embed YG Embed YH Embed YI Embed YJ Embed YK Embed YL Embed YM Embed YN Embed YO Embed YP Embed YQ Embed YR Embed YS Embed YT Embed YU Embed YV Embed YW Embed YX Embed YY Embed YZ Embed ZA Embed ZB Embed ZC Embed ZD Embed ZE Embed ZF Embed ZG Embed ZH Embed ZI Embed ZJ Embed ZK Embed ZL Embed ZM Embed ZN Embed ZO Embed ZP Embed ZQ Embed ZR Embed ZS Embed ZT Embed ZU Embed ZV Embed ZW Embed ZX Embed ZY Embed ZZ Embed

Dashboard

Tamás Holics

## 1. Launch SAP transactions using Tooltip Actions

✓ Keep Only ✕ Exclude

Customer text: Napoli Export  
Material: P-103  
Sold-to party: 2401  
Year of Document Date: 2011  
Net Value in EUR: 759,000  
Margin Ratio Level: Level 2

[Display Customer 2401 in DM7 - 800](#)  
[Display Material P-103 in DM7 - 800](#)  
[Open Items for Customer 2401 in DM7 - 800](#)

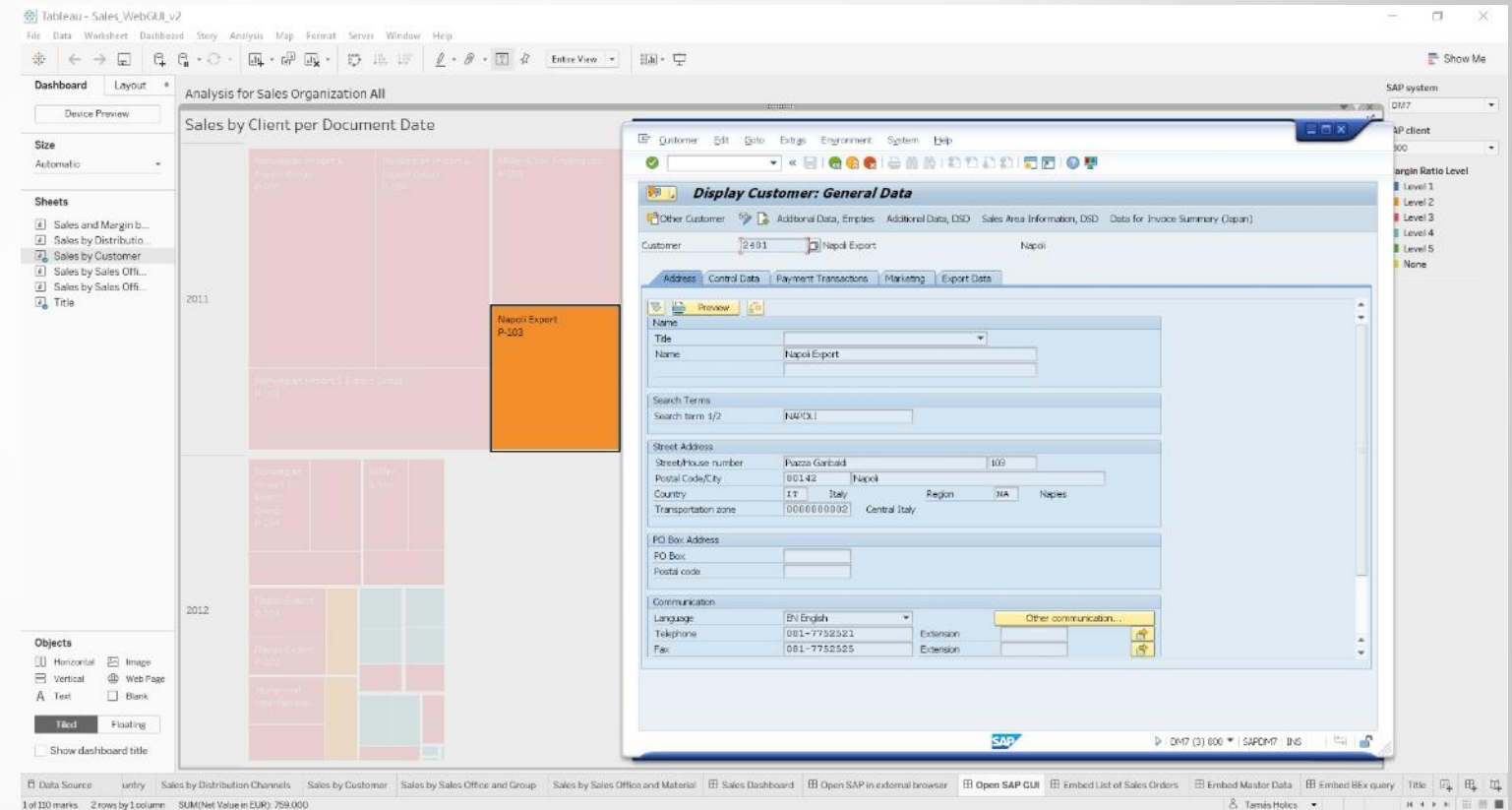
## 2. SAP logon can be bypassed using SSO

Display Customer 2401

Type your user name and password

User Name: HOLICS  
Password: [masked]

Log On Cancel



The image shows a Tableau dashboard titled 'Analysis for Sales Organization All' with a treemap visualization of sales data. A tooltip is displayed over a data point, showing details for Customer 2401, Material P-103, and Year 2011. The tooltip includes links to display the customer and material in SAP DM7, and to open items for the customer. In the background, the SAP 'Display Customer: General Data' screen is visible, showing fields for Name, Title, Search Terms, Street Address, PO Box Address, and Communication. The SAP interface also shows a sidebar with navigation options and a status bar at the bottom.

## 3. The desired standard/custom SAP transaction is launched

DEMO

### General Information

 <https://virtddb.com>

### Technical questions

 [tamas@virtddb.com](mailto:tamas@virtddb.com)

### Sales questions

 [andras@virtddb.com](mailto:andras@virtddb.com)

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