Dynamic Context Aware Data Protection

Tobias Keller, Product Manager, SAP

ASUG83699

About the Speaker

Tobias Keller

- Product Manager UI Data Security, SAP
- Based out of Walldorf, joining SAP 2007 as consultant and later solution architect in SD/mobility/usability; managing UI Masking and UI Logging solutions since 2013

Key Outcomes/Objectives

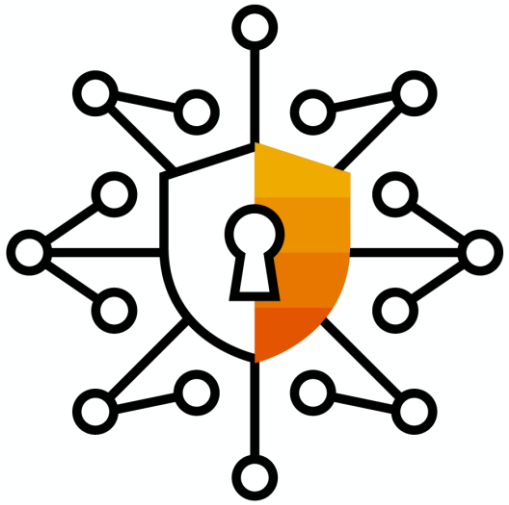
ABAC (Attribute Based Access Control) –
authorizations for the smart enterprise!

1. New Generation access rights get more dynamic, based on the context of a request
2. Required “context” resides in SAP systems – waiting to be leveraged!
3. “attribute-policy” paradigm exemplified in “UI Data Security Masking for SAP S/4HANA” (UI Masking)

Agenda

- Business use cases
- Background on UI Masking
- Demo of attribute based access
- Q&A

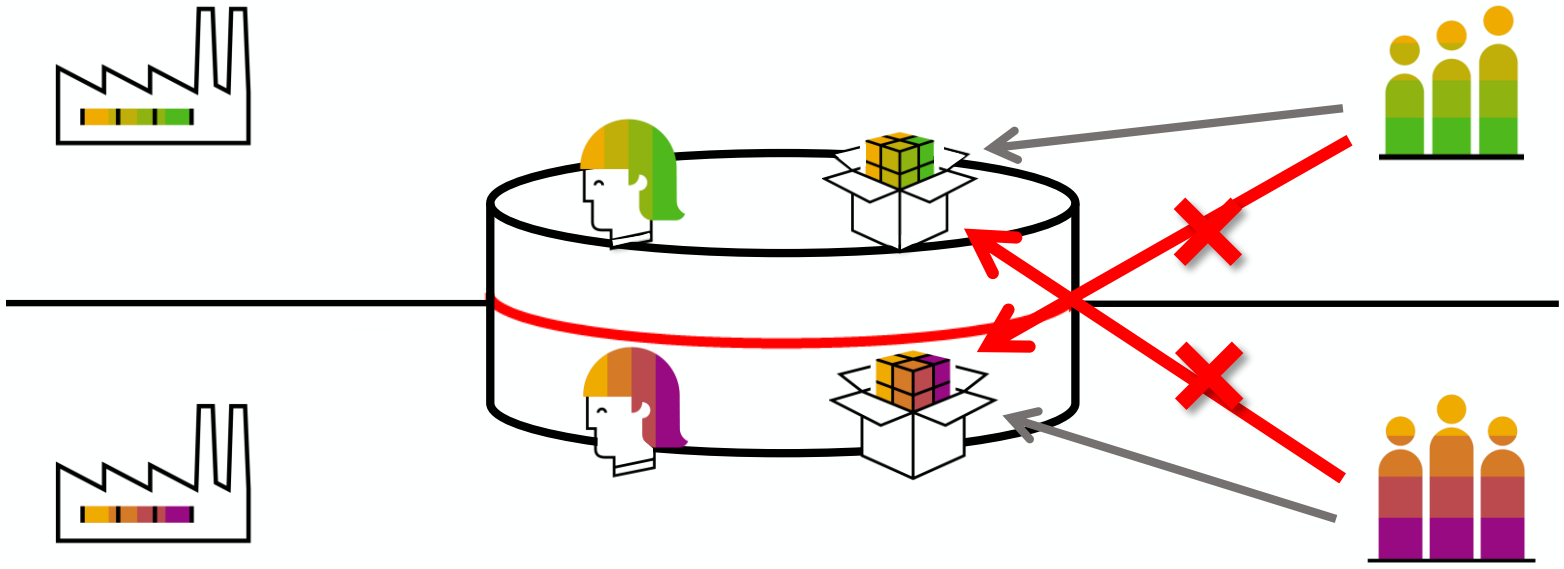
Business Background



Context dependent access: organizational splits

Temporary situation of “two organizations in one IT system” (M&A or spin-off)

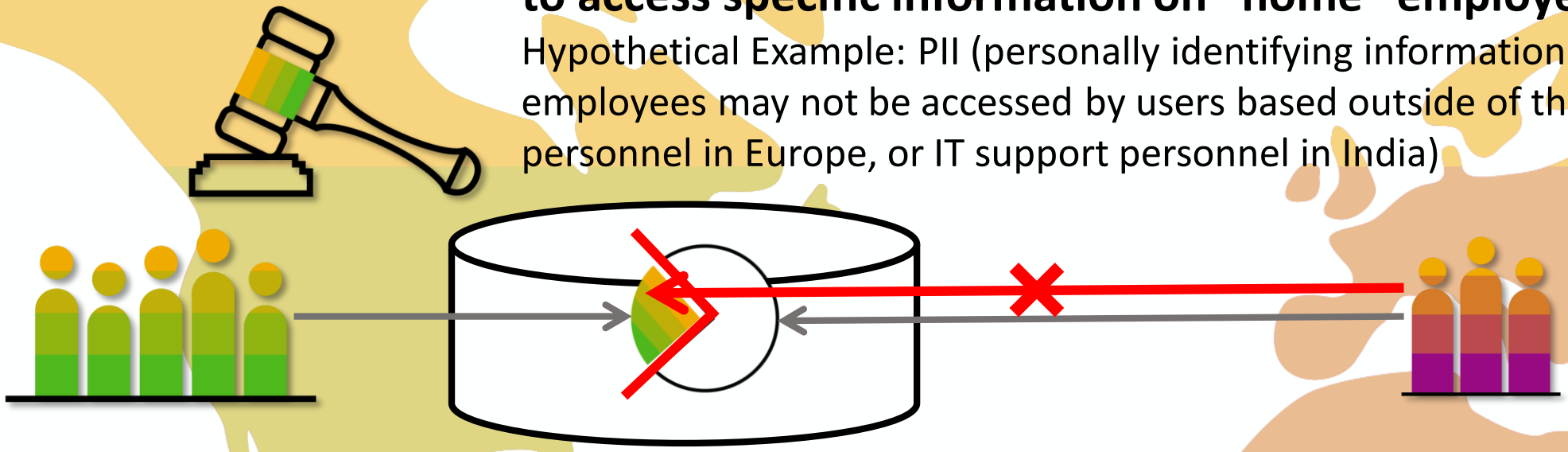
If parts of an organization are split off (e.g. sold to another organization), processes and IT base usually take time to split. To avoid users from one entity also accessing the other organization’s HR data, pricing information, sales documents, etc., a logical split of the system needs to be conducted:



Context dependent access: legal restrictions from moving data outside a locality (offshore)

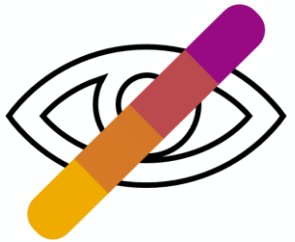
New legislation restricts users of a “foreign” locality to access specific information on “home” employees

Hypothetical Example: PII (personally identifying information) pertaining to U based employees may not be accessed by users based outside of the US (such as HR personnel in Europe, or IT support personnel in India)



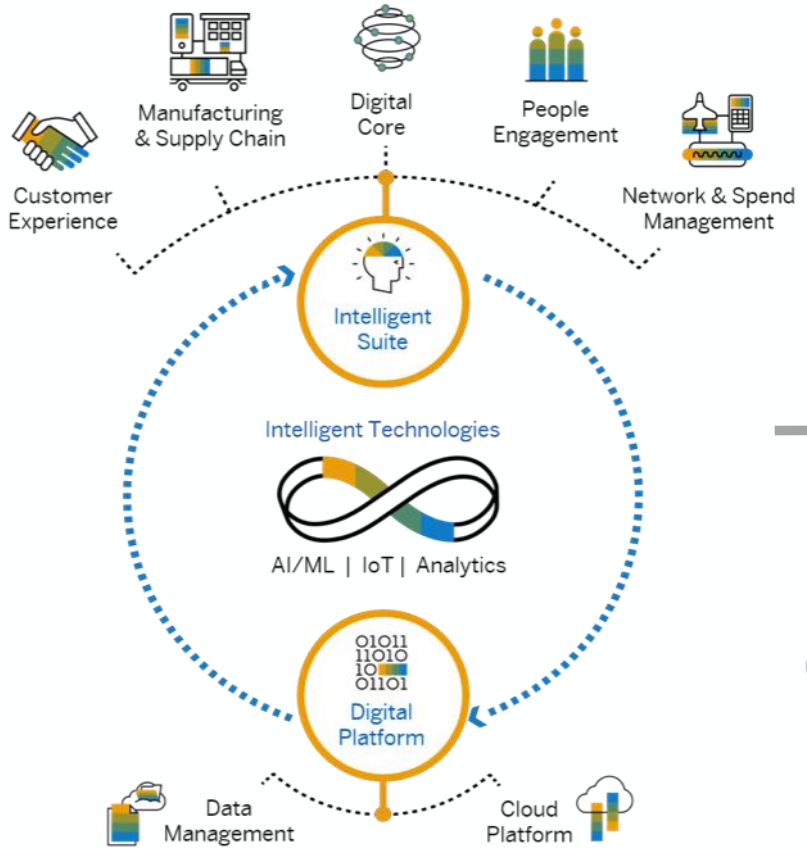
Dynamic authorizations
based on context and policies

Example based on implementation in UI Masking



UI Masking in the SAP security product portfolio

Embed GRC and security in SAP S/4HANA



Enterprise risk and compliance

Access governance

Cybersecurity and data protection

International trade

- ✓ **UI masking for SAP [ECC; SAP S/4HANA]**
- ✓ **UI logging for SAP [ECC, SAP S/4HANA]***
- ✓ **SAP Enterprise Threat Detection***
- ✓ SAP Fortify by Micro Focus
- ✓ SAP Data Privacy Governance
- ✓ SAP Data Custodian
- ✓ SAP NetWeaver AS, add-on for code vulnerability analysis

***ISS security suite**

ASUG

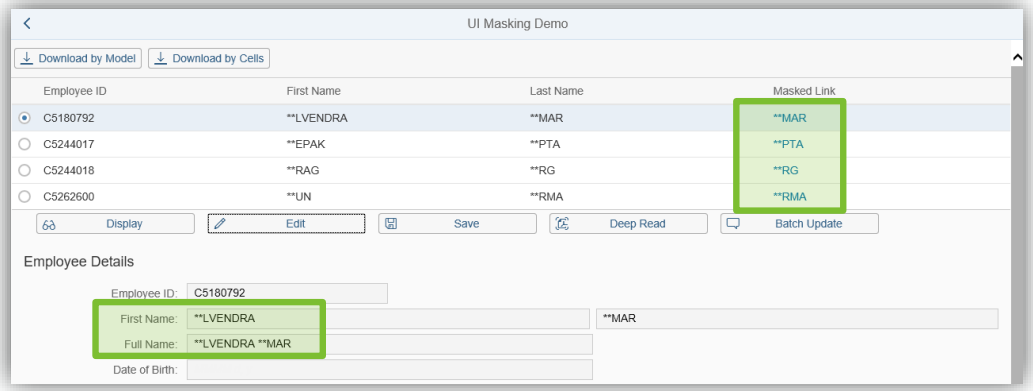
UI Masking: data protection by configurable obfuscation of sensitive data in SAP UIs

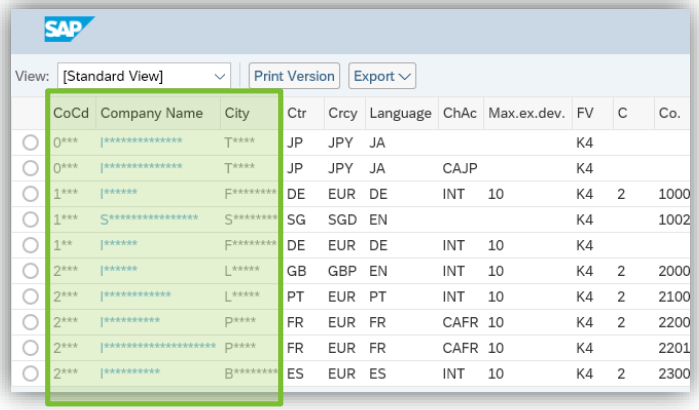
- configurable scope of data to be protected
- configurable way how protection is required (security actions)
- configurable additional authorizations for “clear” access
  - roles
  - **attributes and rules (“policies”)**

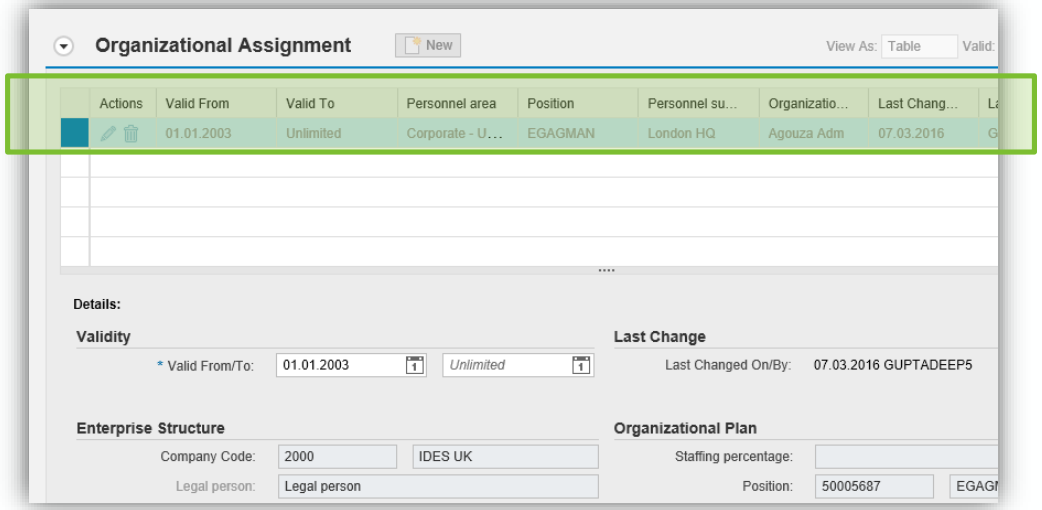
→ configurations evaluated at runtime

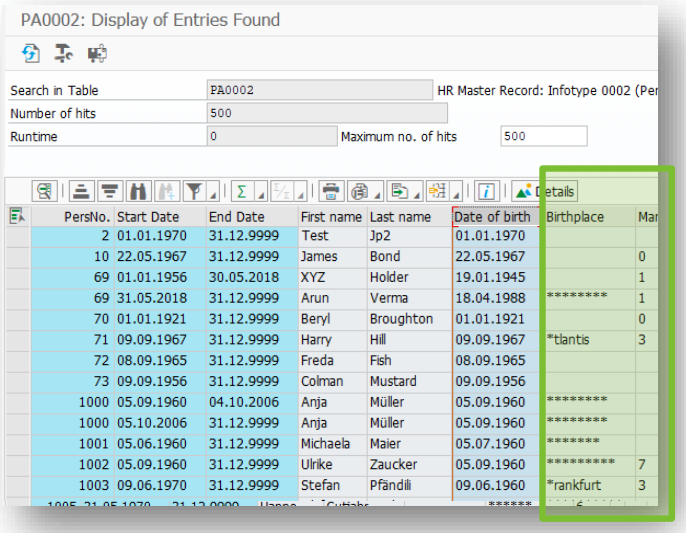
→ security actions applied to the UI layer only

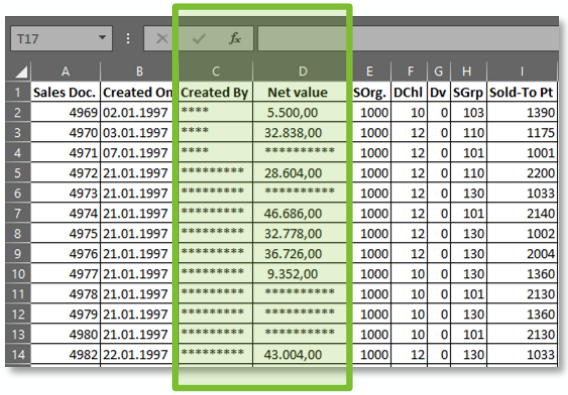
UI Masking: data protection by configurable obfuscation of sensitive data in SAP UIs







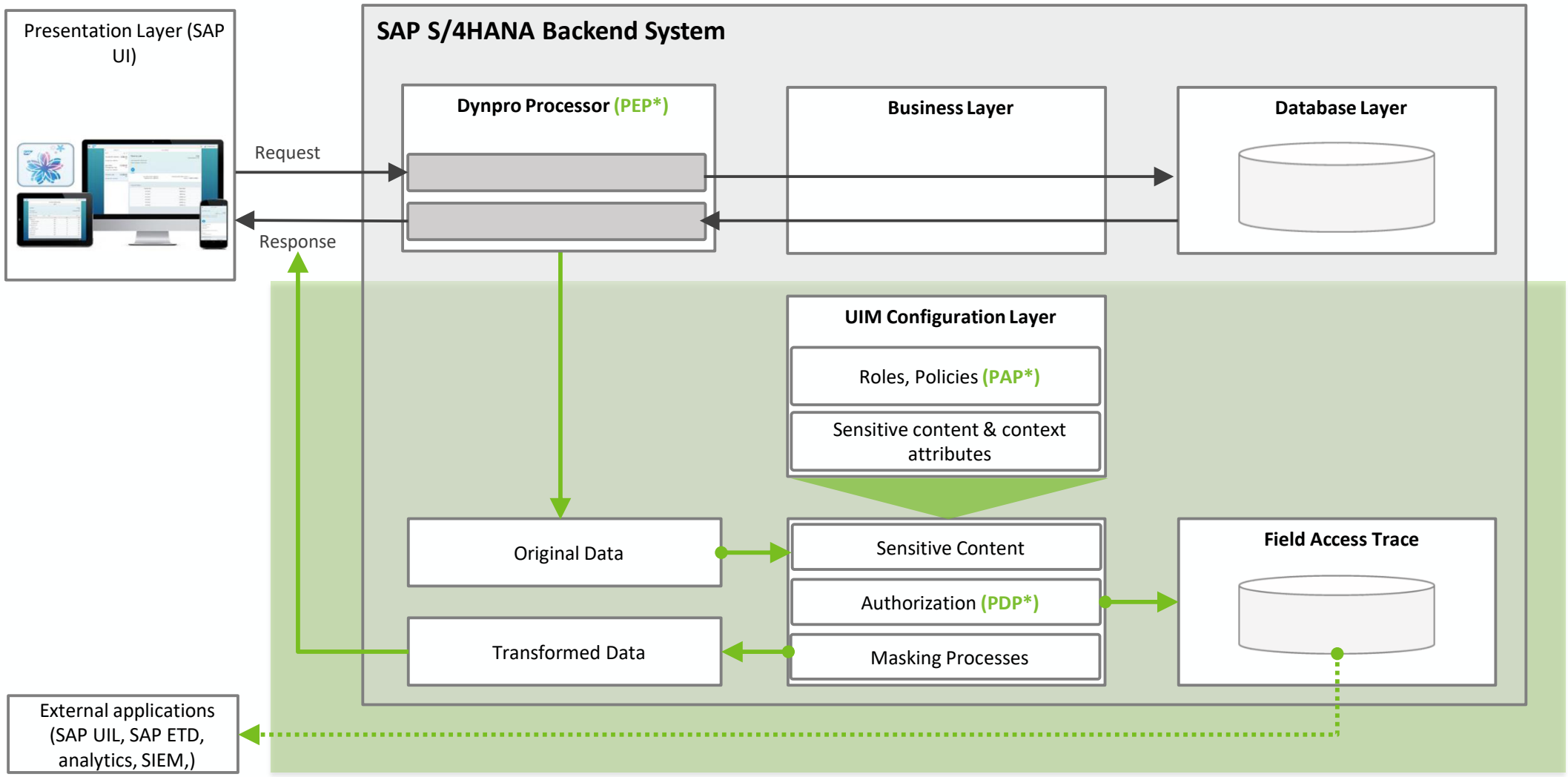




	A	B	C	D	E	F	G	H	I
1	Sales Doc.	Created On	Created By	Net value	SOrg.	DChl	Dv	SGrp	Sold-To Pt
2	4969	02.01.1997	****	5.500,00	1000	10	0	103	1390
3	4970	03.01.1997	****	32.838,00	1000	12	0	110	1175
4	4971	07.01.1997	****	**********	1000	12	0	101	1001
5	4972	21.01.1997	*********	28.604,00	1000	12	0	110	2200
6	4973	21.01.1997	*********	**********	1000	12	0	130	1033
7	4974	21.01.1997	*********	46.686,00	1000	12	0	101	2140
8	4975	21.01.1997	*********	32.778,00	1000	12	0	130	1002
9	4976	21.01.1997	*********	36.726,00	1000	12	0	130	2004
10	4977	21.01.1997	*********	9.352,00	1000	10	0	130	1360
11	4978	21.01.1997	*********	**********	1000	10	0	101	2130
12	4979	21.01.1997	*********	**********	1000	12	0	130	1360
13	4980	21.01.1997	*********	**********	1000	10	0	101	2130
14	4982	22.01.1997	*********	43.004,00	1000	12	0	130	1033

ASUG

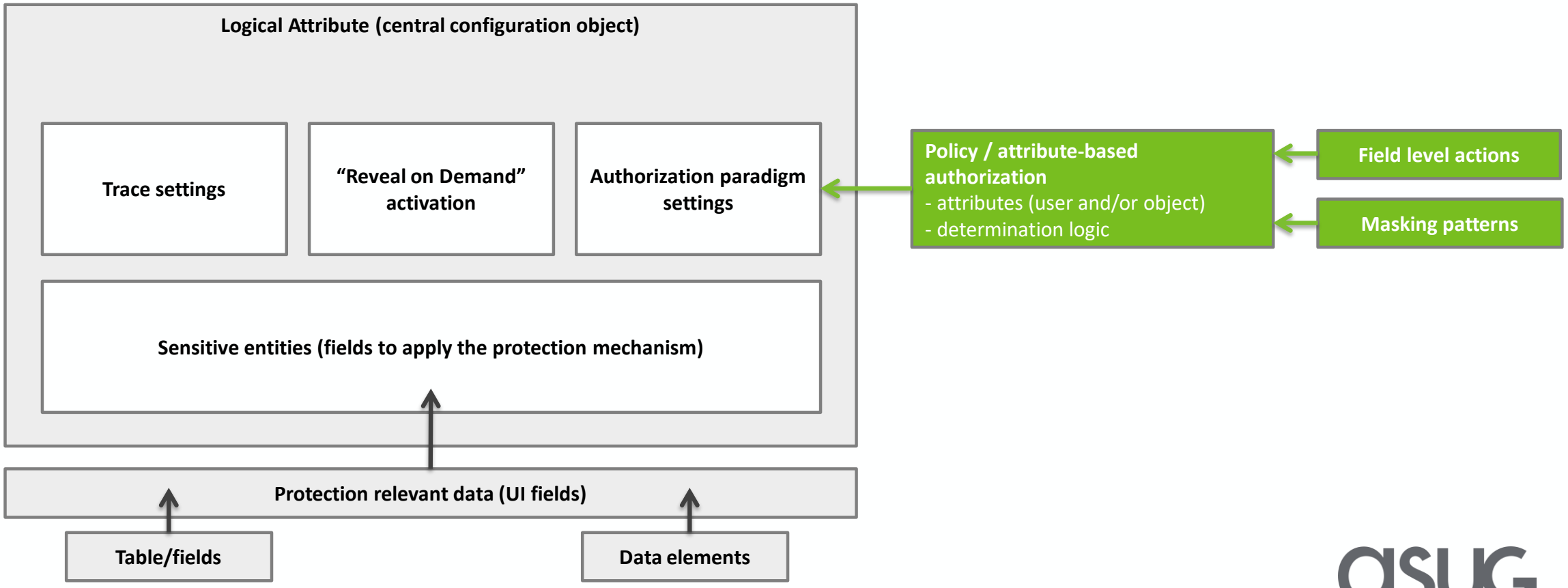
Architectural Overview UI Masking



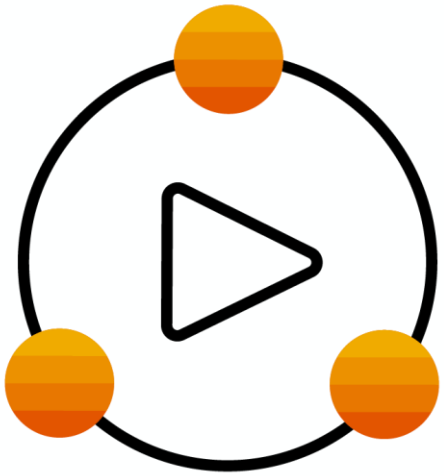
*** Legend:**
PAP – policy administration point
PEP - policy enforcement point
PDP – policy decision point

Configuration logic (overview)

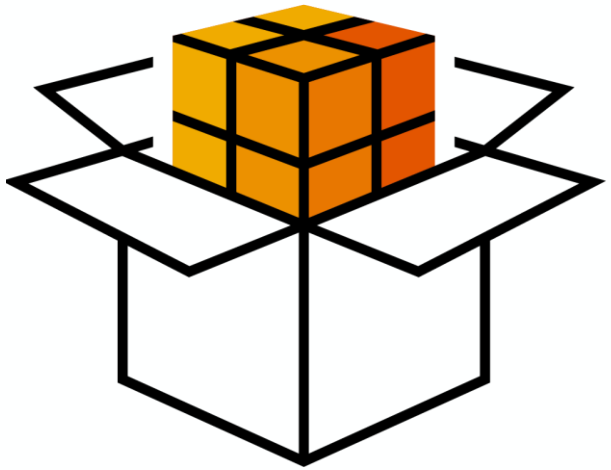
- The “Logical Attribute” is the central object in configuration: it grouping sensitive context, triggers authorization, and controls consistent application of security actions across UI channels.



Demo



Outlook & Wrap-up



UI data protection masking

Product road map overview – Key innovations

Recent innovations

UI data protection masking for SAP S/4HANA, initial release

- Integrated data element based configurations for data security actions
- Data Security actions: masking field values; disabling fields; hiding fields
- "Reveal on Demand"
- Access trace (high level technical trace of data processed through UI Masking

UI data protection masking for SAP S/4HANA, feature pack

- Framework for configurable attribute-rule based authorization determination

2019 – Planned innovations[1]

UI data protection masking for SAP S/4HANA, feature pack

- Integration of Access Trace as a log provider into SAP Enterprise Threat Detection
- Data blocking

2020 – Product direction[1]

UI data protection on „SAP S/4HANA Cloud"

- Technical availability of UI data protection for SAP's public cloud offering

UI data protection *bundle* for SAP S/4HANA, initial release

- Technical and functional integration with "UI data protection logging for SAP S/4HANA"
- Granular and dynamic control which data accesses are masked, logged, notified
- Reveal on Demand with integration framework (e.g. for multi factor authentication, consent management systems)

2021 – Product vision[1]

UI Data Security bundle on SAP Cloud Platform

- Technical availability of the UI Data Protection bundle in the SAP Cloud Platform for consumption by SAP SaaS applications

Check SAP Roadmaps for this and other solutions' roadmaps

1. This is the current state of planning and may be changed by SAP at any time without notice.

ASUG

Wrap up

1. Next Generation access controls for securing the intelligent enterprise are dynamic and “attribute based”

2. A generic and flexible framework utilizes “policies” for
   - Defining rules and
   - Utilizing context/attributes existing in SAP systems

Thank you.

Tobias Keller
Product Manager UI Data Security

SAP Innovative Business Solutions

T +49 6227-7-74995
E tobias.keller@sap.com

http://www.sap.com/innovbizsolutions

Deepak Gupta
Product Owner UI Masking

SAP Innovative Business Solutions

T +91 124 385-7195
E deepak04.gupta@sap.com

http://www.sap.com/innovbizsolutions

Kulvendra Kumar
Lead Architect UI Masking

SAP Innovative Business Solutions

T +91 124 385-7358
E kulvendra.kumar@sap.com

http://www.sap.com/innovbizsolutions

THE BEST RUN SAP

Take the Session Survey.

We want to hear from you! Be sure to complete the session evaluation on the SAPPHIRE NOW and ASUG Annual Conference mobile app.

ASUG

Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides

ASUG

Q&A

For questions after this session, contact us at uimasking@sap.com

ASUG

Let’s Be Social.

Stay connected. Share your SAP experiences anytime, anywhere.

Join the ASUG conversation on social media: **@ASUG365 #ASUG**

ASUG