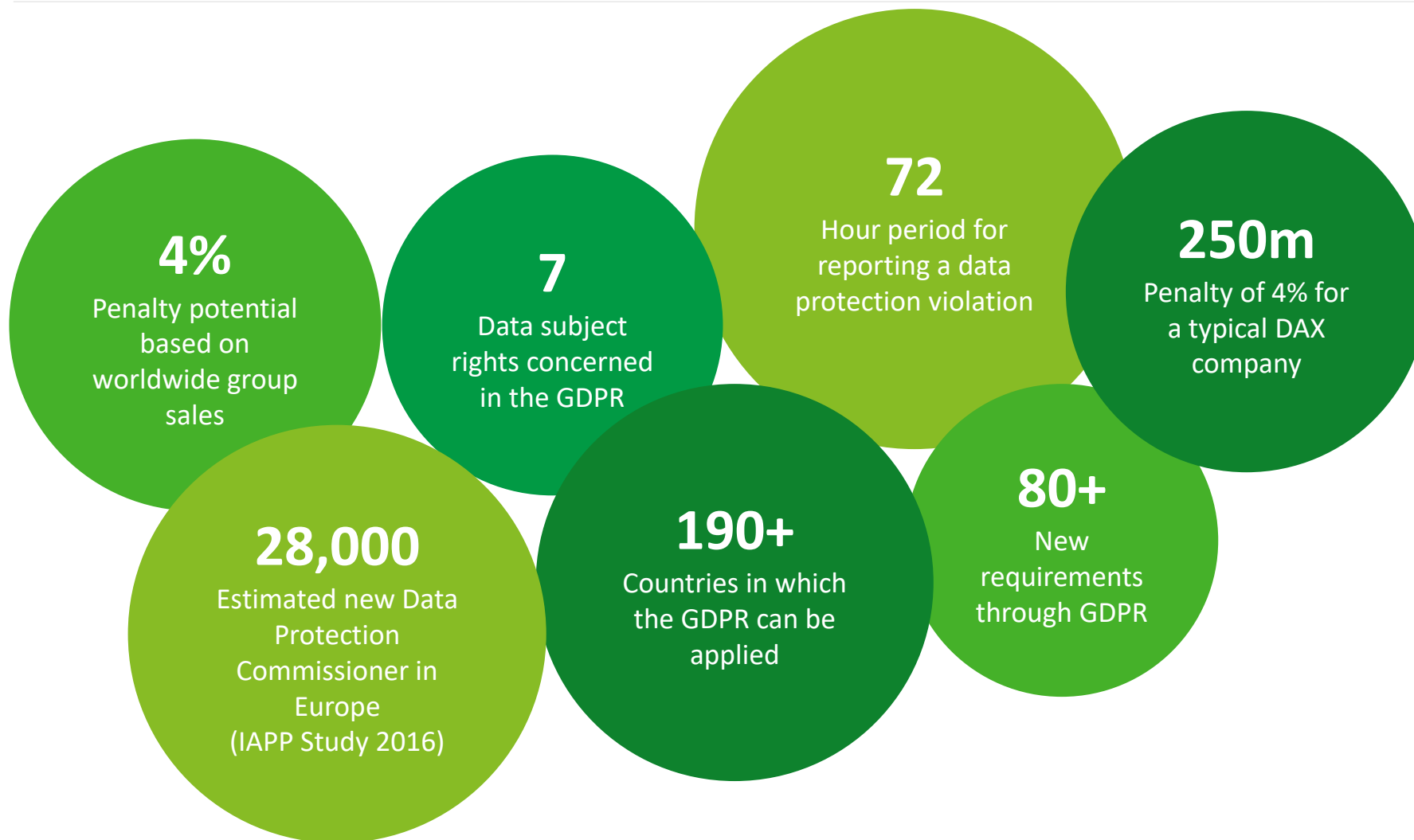


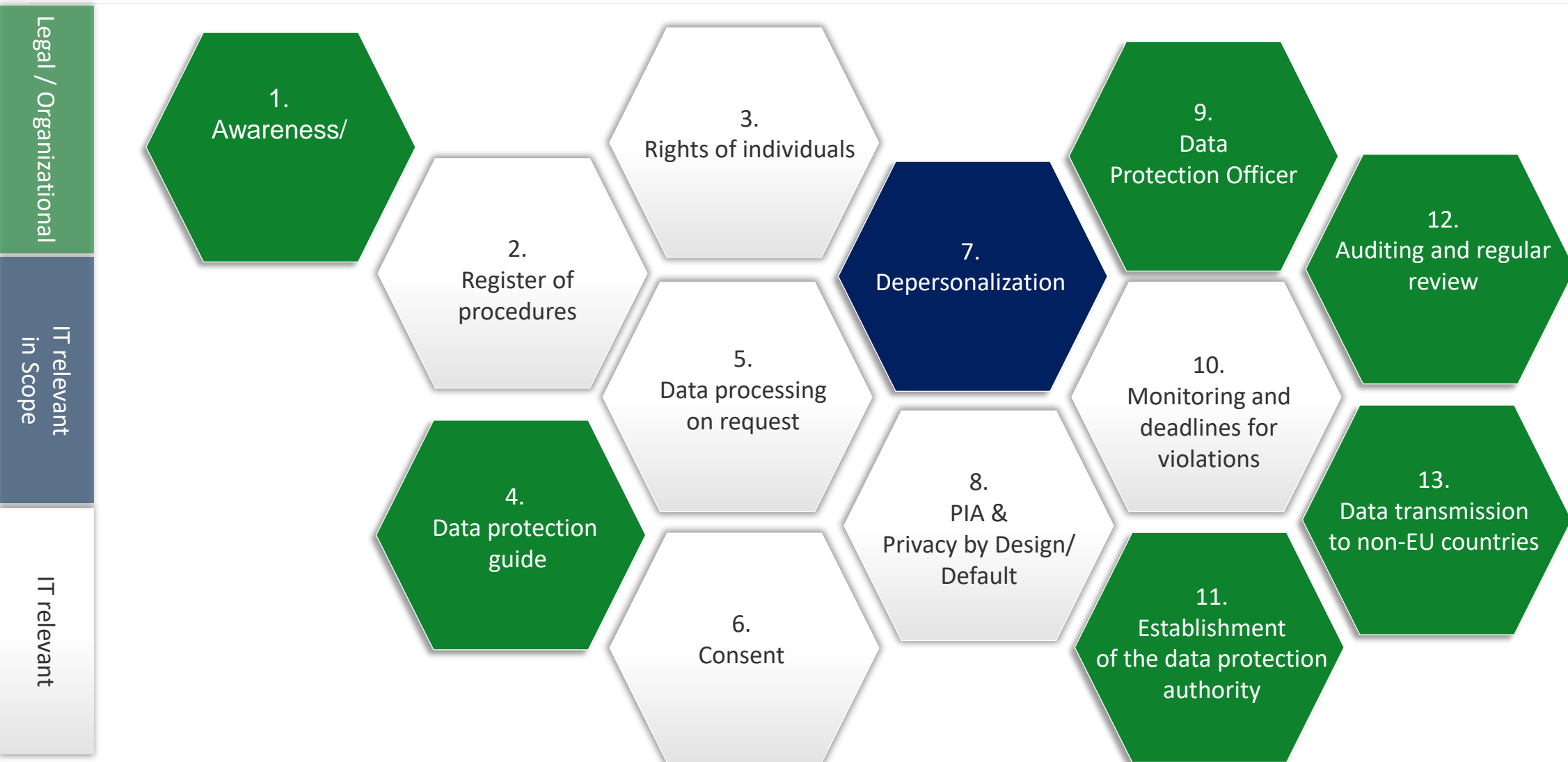


# Risk and Effort Reduction Through Data Depersonalization with SAP and Natuvion

Patric Dahse (Natuvion)



1. Extended rights of data subjects
2. Increased obligation to protect data
3. Obligation to report data protection violations
4. Extreme penalties for non-compliance



## Right of Access | Art.15

- Information
- Issuing

## Rectification | Art. 16

- Rectification
- Expansion

## Erasure | Art. 17

- Person responsible
- 3rd party (to be forgotten)

## Restrictions | Art. 18

- Blocking

## Objections | Art. 21

- General
- Direct marketing

## Portability | Art. 20

- Extraction
- Automatic transfer to 3rd party

Anonymization is obligatory (Art. 5) and can reduce costs within the scope of the GDPR implementation

A request must be answered within one month

The rights of those concerned are generally free of charge

# Distinction between pseudonymization and anonymization

## De-Personalized

### Pseudonymized Data

The person concerned can be identified again by consulting the information stored separately or, if necessary, publicly accessible.

### Anonymized Data

The person concerned cannot be identified again, or only with disproportionate effort.

"The principles of data protection should therefore not apply to anonymous information, i.e. information that does not relate to an identified or identifiable natural person, or **personal data that has been made anonymous in such a way that the person concerned cannot or can no longer be identified**. This Regulation therefore does not concern the processing of such anonymous data, including for statistical or research purposes".

"In order to determine whether a natural person is identifiable, **all means likely to be used by the responsible person or another natural person in general judgement to identify the natural person directly or indirectly should be taken into account. The technology and technological development available at the time of processing shall also be taken into account.**"

ErwG  
26

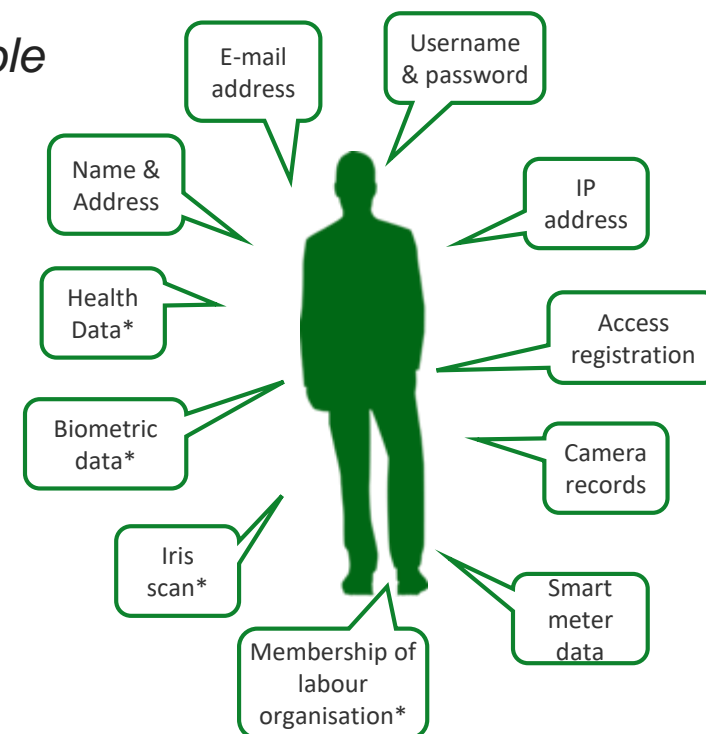
?

1

*Personal data is all information relating to an identified or identifiable natural person*

2

*It is sufficient to have data that would **theoretically** allow you to draw conclusions about a certain person. **It does not matter whether one instance alone or a third party or several bodies together could establish the identification.** It does not matter whether a real identification of a natural person has taken place or could take place to justify the classification of a date as personal.*



As a basic rule, all data that could contain **unique information** should be regarded as personal if they were not generated themselves (and proven without personal reference).

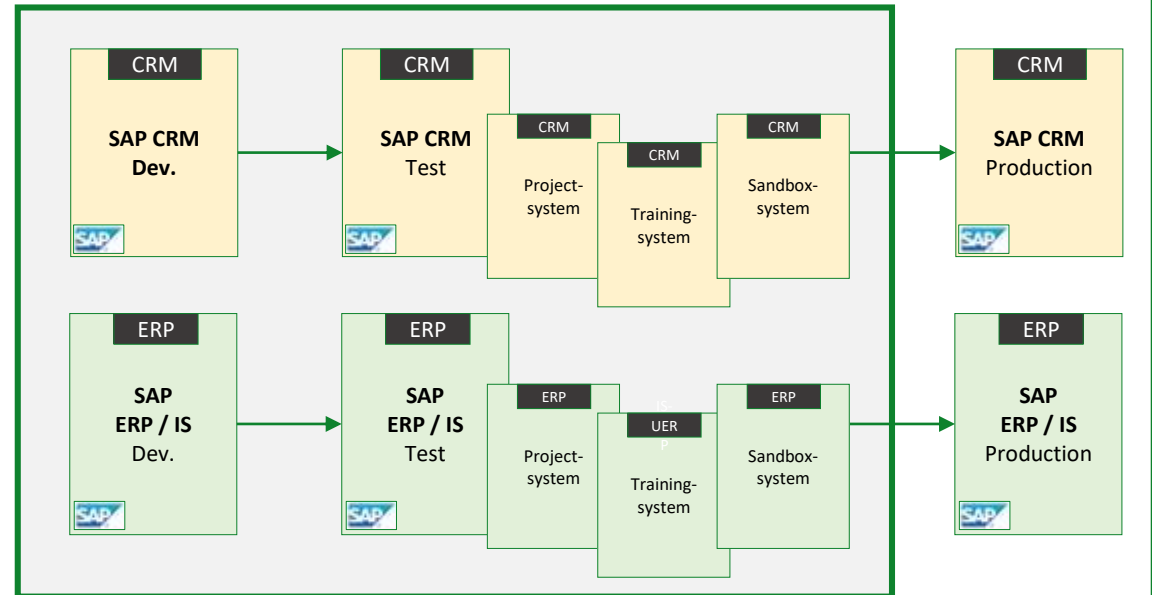
# Is there already a permissible change in data protection law regarding the handling of personal data for test purposes?

## Change of purpose in handling personal data for test purposes

### Description

- 1) **Dealing with pers. Data for test purposes is generally not covered by consent** (§ 4a Paragraph 1 BDSG-alt; Art. 6 Paragraph 1 lit. a) GDPR). Consent is given for specific purposes. **Dealing with personal data for test purposes is regularly not covered by a consent.**
- 2) **Dealing with pers. Data for test purposes is generally not required for contract fulfilment**, e.g. in the ratio "RU - company" (§ 28 para. 1 sentence 1 no. 1 BDSG-alt; until 25 May 2018; Art. 6 para. 1 lit. b) DSGVO). **Such contact is usually not connected with a concrete implementation of the contract.** For the execution of the contract it is necessary to deal with personal data. data for test purposes is not required on a regular basis.

### Example of SAP Landscape



No personal data may be stored in SAP test or project systems. All test procedures are to be carried out with depersonalized data sets

## Common Challenges

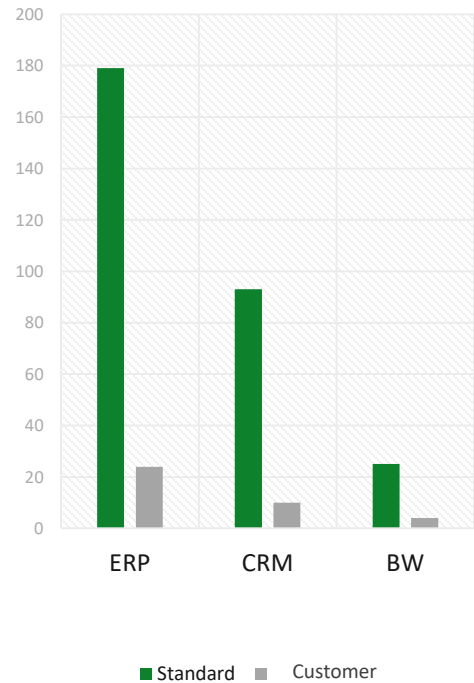
- 1 Networked systems**  
Related systems must have a synchronous data status even after depersonalization.
- 2 Functions**  
The possibility of generating synthetic data and modifying key objects/numbers should be provided.
- 3 Completeness**  
All personal data (customer developments and add-ons) must be taken into account for depersonalization.
- 4 Integration with ILM processes**  
The integration to established information management processes must be given especially for reporting systems.
- 5 Speed**  
Performance during a system changeover/depersonalization is a decisive criterion for feasibility. The depersonalization must not have any noticeable influence on the established processes.
- 6 Sustainability and complexity**  
An SAP system landscape is subject to constant change. Data structures are changed and new data structures are added which may contain personal data. HANA and S/4 Readiness.
- 7 External systems / interfaces**  
Interfaces to non-SAP systems are subject to increased attention in connection with depersonalization. Problems in the testability/functionality of the processes can occur at these points.



# Sample scope of SAP ERP/CRM depersonalization

*exemplary illustration*

**Relevant Fields with Personal Data**



## Master Data

- **Names**  
Rule-based replacement, merging, generation, deletion
- **Bank Connection**  
Rule-based replacement, generation, merging of business customers, erasure
- **Date of Birth**  
Rule-based generation, setting of ranges, deletion
- **Addresses**  
Centralized comprehensive address assignment
- **Communications Structure**  
Rule-based replacement, merging, generation, deletion
- **Service Provider**  
Rule-based replacement, merging, generation, deletion

## Transactional Data

- **SEPA Mandates**  
Consistent adjustment to master data
- **Returns/repayment request**  
Consistent adjustment to master data
- **Payment batch**  
Consistent adjustment to master data
- **Payment Program**  
Consistent adjustment to Master Data
- **CRM Activities and IS-U Contacts**

## Customer Development

- Automated content-dependent search of data fields with personal reference
- Inclusion of these fields in rule-dependent field modification
- Connection of non-SAP databases

# Find 99% of personal data in your SAP systems

## 1 Start of analysis

**SOPHIA - Analyse für personenbezogene Daten**

Tabellenname  bis

Projekt-ID

Mindestmenge an Werten

Anzahl Hintergrundjobs

## 2 Use of results

**/NA2/TDA\_FLD\_RES: Anzeige der gefundenen Einträge**

Zu durchsuchende Tabelle: /NA2/TDA\_FLD\_RES Feldanalyse Ergebnisse  
Anzahl Treffer: 300  
Laufzeit: 0 Maximaler Trefferzahl: 300

Projekt-ID	Tabellenname	Feldname	Datenelement	Domänenname	Länge	DTyp	Werte	Korr.	Tab.	Korr.	Feld	Korr.Menge	Beispielinhalt
N11.800	/1MD/MD_00G	/1MD/0GFSI	USMDZ1_FSI2	USMDZ1_FSI	10	CHAR	100	???					0000120500 0000152050 0000218200 0000220100 0000290200 0000290400 =
N11.800	/1MD/MD_030	/1MD/0GACCCOUNT	USMDZ1_ACCOUNT	USMDZ1_ACCOUNT	10	CHAR	100	???					0000001000 0000022010 0000037000 0000038010 0000045600 0000060230 =
N11.800	/1MD/MD_03T	/1MD/0GACCCOUNT	USMDZ1_ACCOUNT	USMDZ1_ACCOUNT	10	CHAR	100	???					0000001000 0000022010 0000037000 0000038010 0000045600 0000060230 =
N11.800	/1MD/MD_03T	TXTLG	USMD_TXTLG	TEXT60	60	CHAR	100	???					Plant and Equipment (Direct posting) Accumulated depreciation - motor vehicle
N11.800	/1MD/MD_03T	TXTSH	USMD_TXTSH	TEXT20	20	CHAR	100	???					Office equipment Clearing capitalized Govt sec - AFS Unsecured Bank Loans P
N11.800	/1MD/MD_03T	/1MD/0GFSI	USMDZ1_FSI2	USMDZ1_FSI	10	CHAR	100	???					0000120500 0000152050 0000218200 0000220100 0000290200 0000290400 =

24 Hours "Installation result"

# Find 99% of personal data in your SAP systems

## Exemplary result of a search for personal data with SOPHIA

Search in Table: /NA2/TDA\_FLD\_RES Field analyze results

Number of hits: 4

Runtime: 0 Maximum no. of hits: 500

Project ID	Table	Field Name	Data element	Domain	Lngh	DTyp	Dis.Vals	Corr. tab	Corr. field	Corr. amount	Example	Status
N01.220	BUT000	MC_NAME1	BU_MCNAME1	CHAR35	35	CHAR	10	BUT000	MC_NAME1	102	BILANZKOORDINATOR STROM MÜLLER NATUVION NETZ GMBH MUSTERMANN NATUVION LIEFERANT GMB...	INCLUDE

Name	Typ	Beschreibung	ILM-Objekt Zuordnung	ILM-Objekt Beschreibung
BU_PERN0	Personalnummer		CA_BUPA	Archivierung von Geschäftspartnern
BU_PARTNER	Geschäftspartnernummer		CA_BUPA	Archivierung von Geschäftspartnern
AD_ADDNRUM	Adressnummer		CA_BUPA	Archivierung von Geschäftspartnern
AD_ADDNRUM	Adressnummer		FI_ACCRECV	Debitorenstammdaten
AD_ADDNRUM	Adressnummer		FI_ACCPAYB	Kreditorenstammdaten
BU_RELNR	Geschäftspartner-Beziehungsnummer		CA_BUPA	Archivierung von Geschäftspartnern
VERTRAG	Vertrag			
E_PROPERTY	Eigentum			
VKONT_KX	Vertragskontonummer			
E_BELNR	Belegnummer eines Abrechnungsbelegs			

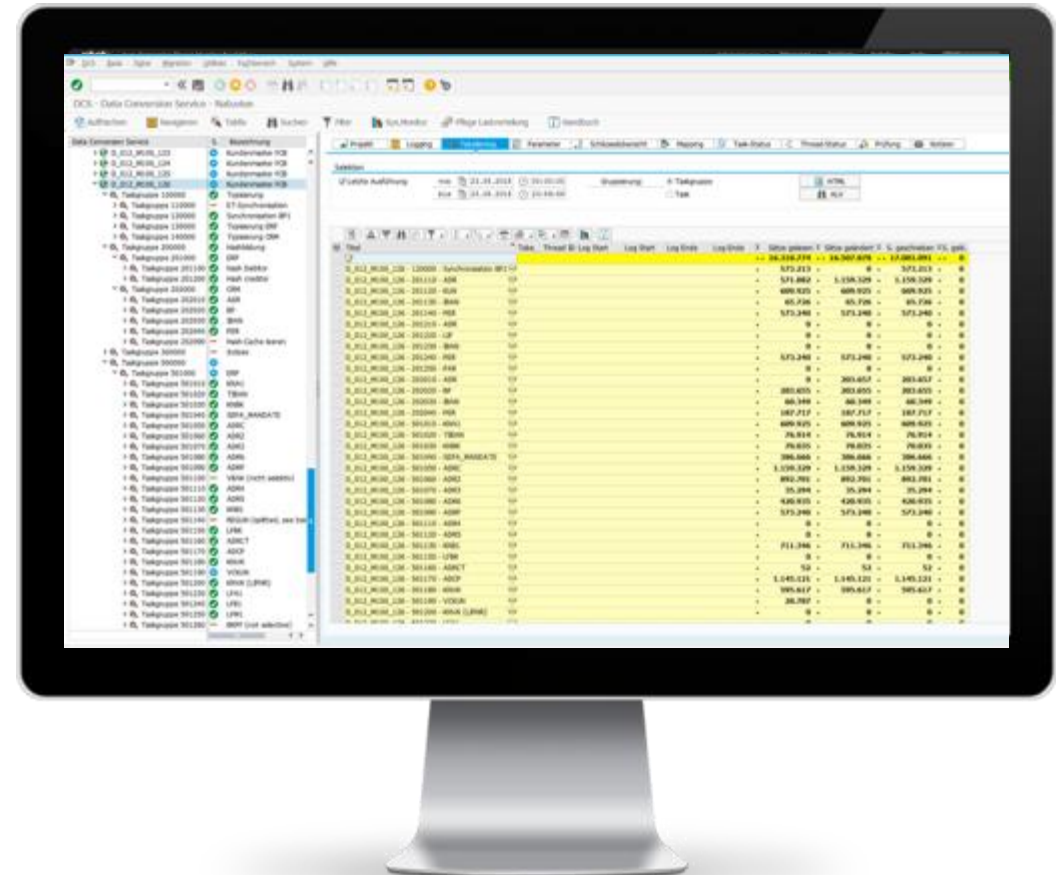
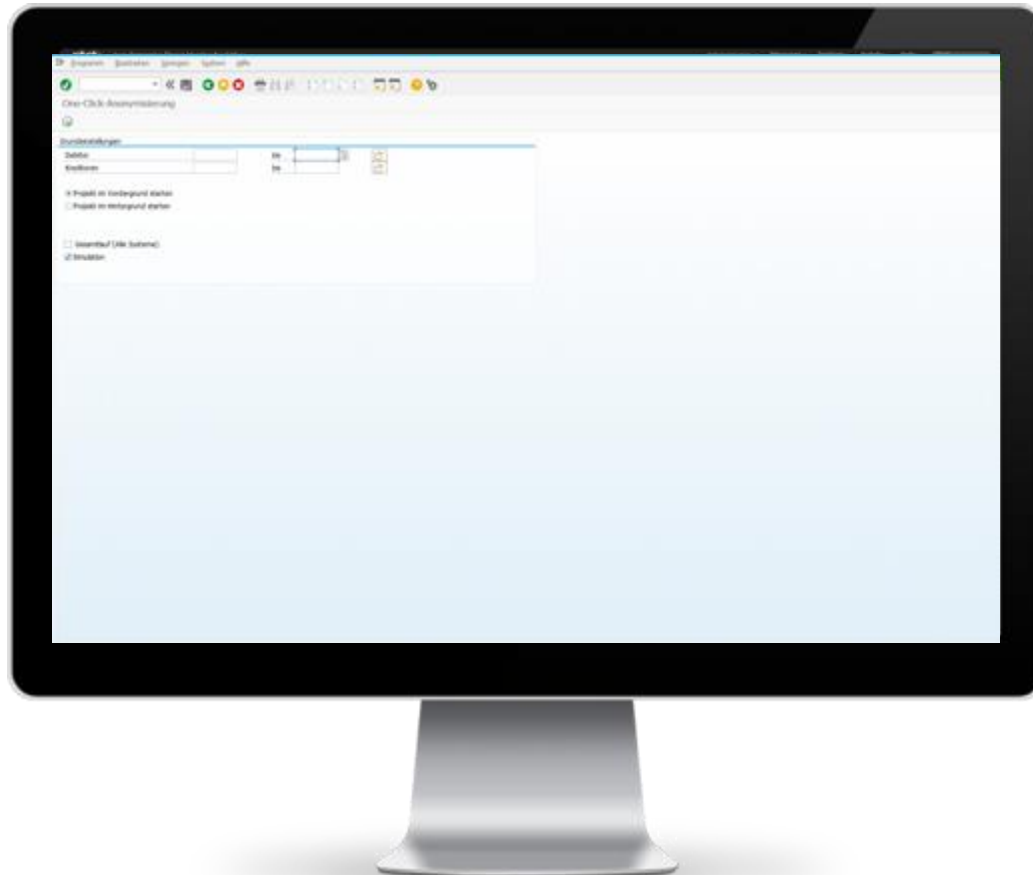
Table fields with personal data

Quantity structure of the data as an indication of relevance

Example contents of the table fields found for convenient analysis

ILM objects in which the tables found are used

## Test Data Anonymization – User vs. Administrator/Super User



# Demonstration of the depersonalization of a business partner

Before and after view (address)

The screenshot shows the SAP Business Partner view for ID 1000000016. The name is 'Edelfried Klier D-38489 Ahlum'. The address section shows 'Standardadresse' with 'Straßenadresse' 'Materniweg', 'Postleitzahl/Ort' '38489 Ahlum', 'Land' 'DE Deutschland', and 'Zeitzone' 'CET'. A red dashed box highlights the name and address fields.

Transaction BP

The screenshot shows the same SAP Business Partner view for ID 1000000016, but the name is 'Wiegand Gaus D-95188 Issigau'. The address section shows 'Standardadresse' with 'Straßenadresse' 'Am Berg 48', 'Postleitzahl/Ort' '95188 Issigau', 'Land' 'DE Deutschland', and 'Zeitzone' 'CET'. A red dashed box highlights the name and address fields. A red dashed box with the text 'Synthesized Sample Data' is overlaid on the right side of the screenshot.

Keys can be completely anonymized



# Demonstration of the depersonalization of a business partner

Before and after view (payment transactions)

**Before View:**

Person anzeigen: 1000000016

Geschäftspartner: 1000000016 Edelfried Klier D-38489 Ahlum

Anzeigen in GP-Rolle: GPartner allgemein

Gültigkeitszeitraum: 01.01.0001 - 31.12.9999

ID	Land	Bankschlüssel	Bankkonto	Kontrollschlüssel	IBAN	IBAN
0001	DE	67292200	00001917156666			DE86672922001917156666

**After View:**

Person anzeigen: 1000000016

Geschäftspartner: 1000000016 Wiegand Gaus D-95188 Issigau

Anzeigen in GP-Rolle: GPartner allgemein

Gültigkeitszeitraum: 01.01.0001 - 31.12.9999

ID	Land	Bankschlüssel	Bankkonto	Kontrollschlüssel	IBAN	IBAN	Referenzangab
0001	DE	30056600	9395992050			DE88300566009395992050	

Synthesized Sample Data

Transaction BP

# Demonstration of the depersonalization of a debtor

Before and after view (address)

**Debitor anzeigen: Allgemeine Daten**

Anderer Debitor 261 Andrew Williams ALBUQUERQUE

Adresse Steuerungsdaten Zahlungsverkehr Marketing Exportdaten

Vorschau

Name

Anrede Herr

Name Andrew Williams

Suchbegriffe

Suchbegriff 1/2 B2C WILLIAMS

Straßenadresse

Straße/Hausnummer 1030 Rio Grande Boulevard 1030

Ortsteil BERNALILLO

Postleitzahl/Ort 87104 ALBUQUERQUE

Land US USA Region NM New Mexico

Steuerstandort 3200100201

Transportzone 0000000003 Inland

Postfachadresse

Postfach 1030

Postleitzahl

Kommunikation

Sprache Englisch

Telefon 505-843-9577

Fax

**Debitor anzeigen: Allgemeine Daten**

Anderer Debitor 261 Wolfdieter Rottleberode

Adresse Steuerungsdaten Zahlungsverkehr Marketing Exportdaten

Vorschau

Name

Anrede

Name Wolfdieter Rohmann

Suchbegriffe

Suchbegriff 1/2 ANONYM

Straßenadresse

Straße/Hausnummer Odrellstrasse 19

Postleitzahl/Ort 6548 Rottleberode

Land DE Deutschland Region

Steuerstandort 3200100201

Transportzone 0000000003

Postfachadresse

Postfach

Postleitzahl

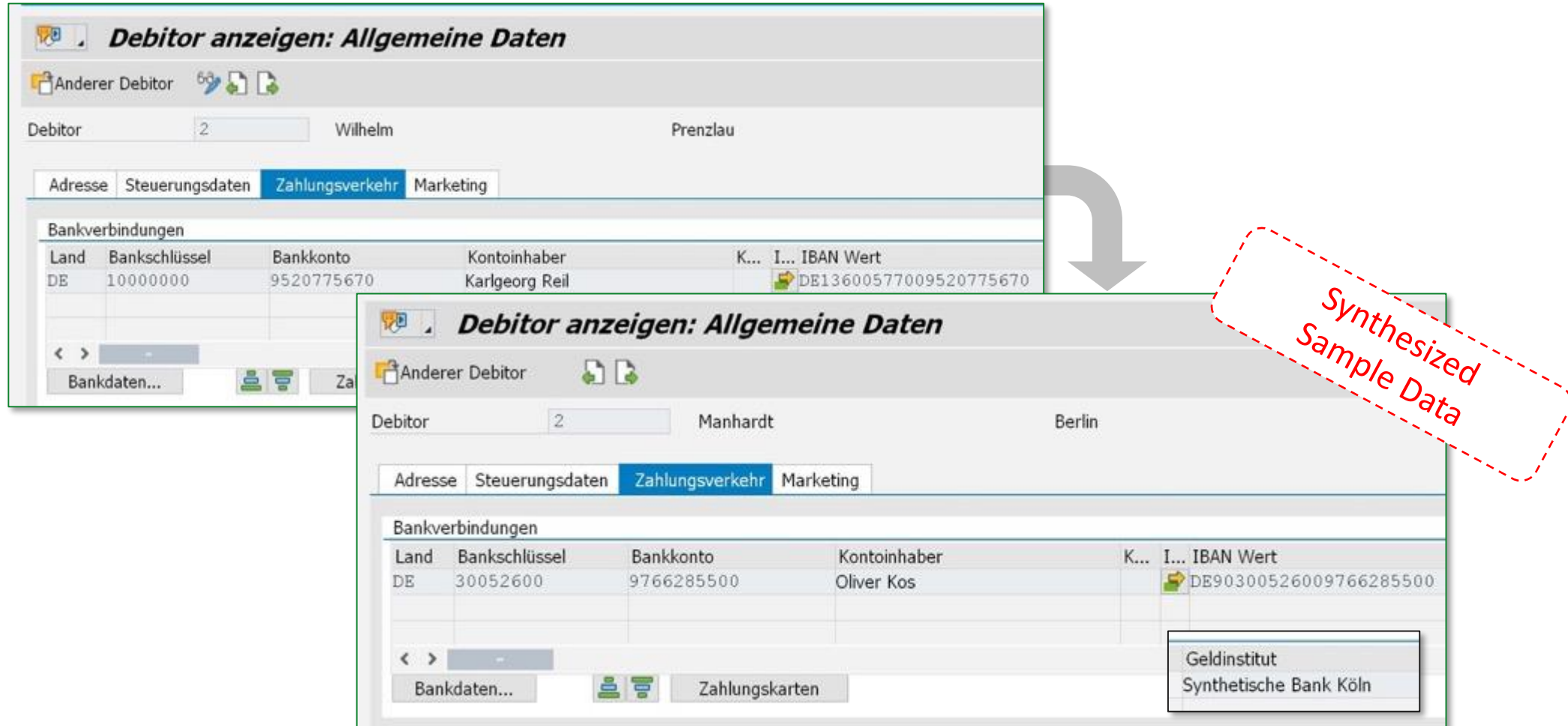
Kommunikation

Synthesized Sample Data

Keys can be completely anonymized

# Demonstration of the depersonalization of a debtor

Before and after view (payment transactions)



The image shows two screenshots of a software interface, connected by a large grey arrow pointing from the left screenshot to the right screenshot. The left screenshot shows a debtor named Wilhelm Prenzlau with a bank account at Synthetische Bank Köln. The right screenshot shows a debtor named Manhardt Berlin with a bank account at Synthetische Bank Köln. A red dashed box with the text "Synthesized Sample Data" is overlaid on the right screenshot. A small box at the bottom right of the right screenshot contains the text "Geldinstitut Synthetische Bank Köln".

**Debtor anzeigen: Allgemeine Daten**

Anderer Debitor

Debitor 2 Wilhelm Prenzlau

Adresse Steuerungsdaten **Zahlungsverkehr** Marketing

Bankverbindungen

Land	Bankschlüssel	Bankkonto	Kontoinhaber	K... I... IBAN Wert
DE	10000000	9520775670	Karlgeorg Reil	DE13600577009520775670

Bankdaten... Za

**Debtor anzeigen: Allgemeine Daten**

Anderer Debitor

Debitor 2 Manhardt Berlin

Adresse Steuerungsdaten **Zahlungsverkehr** Marketing

Bankverbindungen

Land	Bankschlüssel	Bankkonto	Kontoinhaber	K... I... IBAN Wert
DE	30052600	9766285500	Oliver Kos	DE90300526009766285500

Bankdaten... Zahlungskarten

Geldinstitut Synthetische Bank Köln

Synthesized Sample Data



# Demonstration of a depersonalization of an employee

Before and after view (Address)

**Display Personal Data**

Pers. No. 1528 Pers.Assign 00001528 Skilled Worker Maintenance I G.

Pers.No. 1528 Age 59

EE group 1 Active Pers.area 1300 Frankfurt

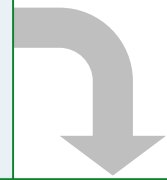
EE subgroup DN Monthly wage earner Cost Center 4100 Technical Service I

Start 23.11.1958 To 31.12.9999 Chng 31.05.1995 LIMPERT

Name: Mrs, Last name: Dereser, First name: Svantje

Birth data: Birthdate: 22.11.1958, Language: German, Nationality: Swedish

Marital status/religion: Mar.Status: Single, No. child: 0



Synthesized Sample Data

**Display Personal Data**

Pers. No. 1528 Pers.Assign 00001528 Electronic Engineer Active

Pers.No. 1528 Age 48

EE group 1 Active Pers.area 1300 Frankfurt

EE subgroup DN Monthly wage earner Cost Center 4100 Technical Service I

Start 23.11.1958 To 31.12.9999 Chng 14.05.2018 IANDRIOAIE

Name: Mr, Last name: Harnisch, First name: Henning

Birth data: Birthdate: 01.01.1970, Language: German, Nationality: German



Keys can be completely anonymized

# Demonstration of the depersonalization of an employee

The image shows two screenshots of the SAP 'Display Bank Details' interface. A large grey arrow points from the left screenshot to the right one. A red dashed box with the text 'Synthesized Sample Data' is overlaid on the right screenshot.

**Left Screenshot (Before):**

- Person:** Pers. No. 1528, Name Svantje Dereser, Pers. area 1300 Frankfurt, Cost Center 4100 Technical Service I.
- Bank details:** Main bank, Payee Svantje Dereser, Postal Code/City 69576 Frankfurt, Bank Country Germany, Bank Key 10050000, Bank Account 51354132, Payment method U Überweisung, Purpose, Payment currency EUR Euro (EMU currency).

**Right Screenshot (After):**

- Person:** Pers. No. 1528, Name Henning Harnisch, Pers. area 1300 Frankfurt, Cost Center 4100 Technical Service I.
- Bank details:** Main bank, Payee Henning Harnisch, Postal Code/City 70111 Stuttgart, Bank Country Germany, Bank Key 60052100 Synthetische Bank Südwest, Bank Account 9464517930, Payment method U Überweisung, Purpose, Payment currency EUR Euro (EMU currency as of 01/01/1999).

Before and after view (payment transactions)

# Demonstration of the depersonalization of a business partner in Business Warehouse

Kalenderjahr/-monat	BAS: Ort	BAS: PLZ (geo-rel.)	BAS: Straße	BAS: Hausnummer	Betrag variabel	EUR
01.2016	Walldorf	69190	Altrottstraße	2	99.85	
02.2016	Walldorf	69190	Altrottstraße	2	93.41	
03.2016	Walldorf	69190	Altrottstraße	2	99.85	
04.2016	Walldorf	69190	Altrottstraße	2	96.61	
05.2016	Walldorf	69190	Altrottstraße	2	99.85	
06.2016	Walldorf	69190	Altrottstraße	2	96.61	
07.2016	Walldorf	69190	Altrottstraße	2	99.85	
08.2016	Walldorf	69190	Altrottstraße	2	99.85	
09.2016	Walldorf	69190	Altrottstraße	2	96.61	
10.2016	Walldorf	69190	Altrottstraße	2	99.85	
11.2016	Walldorf	69190	Altrottstraße	2	96.61	
12.2016	Walldorf	69190	Altrottstraße	2	99.85	
01.2017	Walldorf	69190	Altrottstraße	2	99.85	

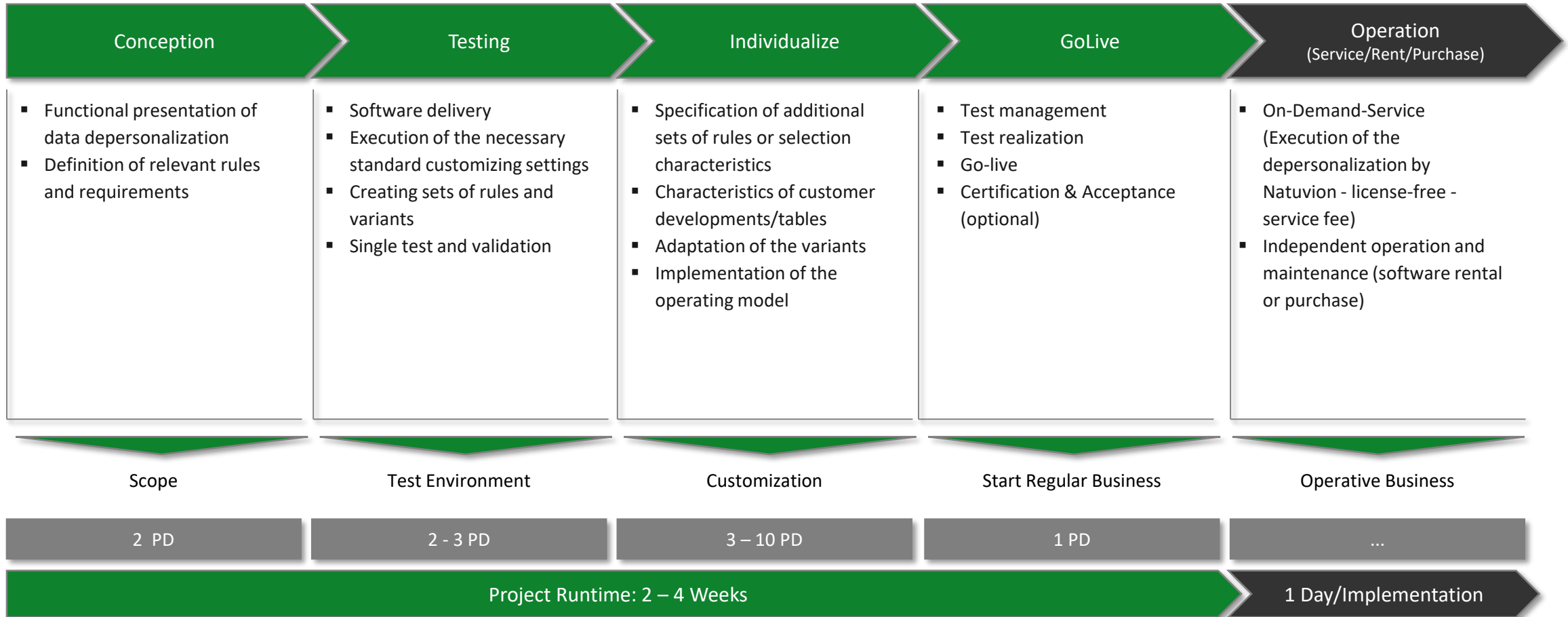
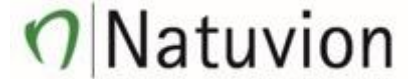
Kalenderjahr/-monat	BAS: Ort	BAS: PLZ (geo-rel.)	BAS: Straße	BAS: Hausnummer	Betrag variabel	EUR
01.2016	Karlsruhe	76133	Gartenstraße	10	99.85	
02.2016	Karlsruhe	76133	Gartenstraße	10	93.41	
03.2016	Karlsruhe	76133	Gartenstraße	10	99.85	
04.2016	Karlsruhe	76133	Gartenstraße	10	96.61	
05.2016	Karlsruhe	76133	Gartenstraße	10	99.85	
06.2016	Karlsruhe	76133	Gartenstraße	10	96.61	
07.2016	Karlsruhe	76133	Gartenstraße	10	99.85	
08.2016	Karlsruhe	76133	Gartenstraße	10	99.85	
09.2016	Karlsruhe	76133	Gartenstraße	10	96.61	
10.2016	Karlsruhe	76133	Gartenstraße	10	99.85	

Before and after view (invoice reporting)

Synthesized Sample Data

# Introduction of depersonalization

The solution can be implemented within a short and manageable project framework



1. **GDPR compliance by depersonalization of data in test, training and quality systems.**
2. **Depersonalization of productive reporting and big data systems.**

## Overview of Functionalities

- Depersonalization of SAP and non-SAP systems (anonymization & pseudonymization)
- Depersonalization of Business Warehouse Systems
- Integration (Trigger) with SAP ILM - Blocking and Erasing for SAP BW
- Restricted use also in productive systems
- Designed for extremely large data volumes (BW systems, mass data systems, big data)
- Data conversion across system boundaries - Synchronous data determination and pseudonymization
- Economically & legally certified solution
- Automatic determination of data with personal reference

## Templates and Availability

- Compatible with NW 7.0 or later systems
- Runs on all SAP Business Suite Systems
- Predefined data models for SAP ERP
- Predefined data models for SAP IS-U / IS-H / IS-R / IS-T / Banking
- Predefined data models for SAP FI-CA
- Predefined data models for SAP SRM / SCM
- Predefined data models for SAP CRM
- Predefined data models for SAP HCM
- Predefined data models for SAP BW
- Training material in EN/ DE
- Over 100 productive installations

**Contact us for more info on how we could carry out a test installation or a proof-of-concept for you!**

SOPHIA supports you in identifying data with a personal reference and offers a wide range of processing options

Find 99% of personal data in your SAP systems

### Overview of Functionality

- Covers all SAP system landscapes
- Covers all data/fields with personal reference (customer tables, table field enhancements,...)
- Combination of DDIC-based structure search and semantic/content-based search
- Data scan: finds all table fields that contain "suspicious" data (direct and indirect personal reference)
- Content scan: finds table fields with direct personal reference, based on the content
- High performance parallelization

### Why do you need Sophia?

- Sophia drastically reduces the effort involved in introducing a depersonalization strategy
- Sophia provides the basis for the introduction of a data life cycle strategy
- Sophia helps you to identify the scope of the information
- Sophia helps to prioritize the topics of her GDPR/Data Privacy Strategy
- Sophia delivers substantiated results within the framework of compliance audits and controls

keine Lizenzkosten

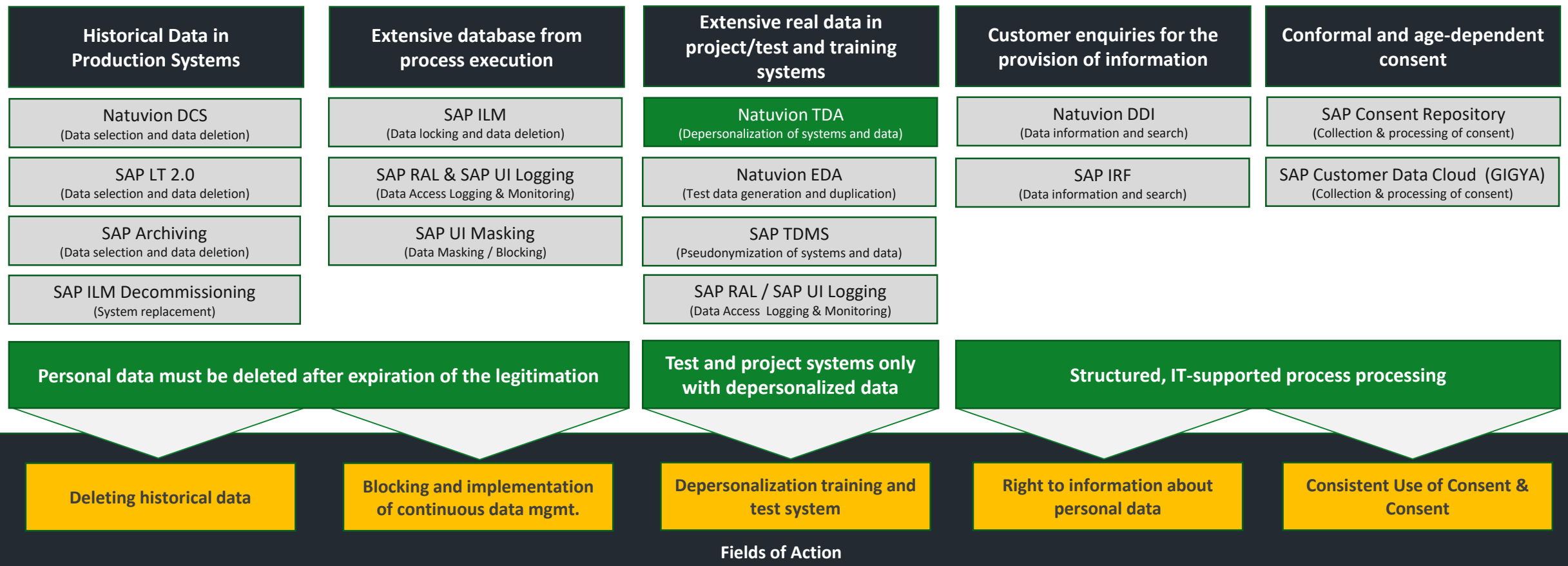
Sophia drastically reduces manual effort in data protection projects by analyzing and automatically identifying all personal data in a system/system landscape

# SAP & Natuvion's Solutions offer an Effective Data Governance Model

## Solution Roadmap



There are 99 articles, about 80 new requirements and many technical solutions. The following Natuvion Solution Roadmap sheds light and helps you to select the right solutions.





We support you with our profound and certified expertise in the area of Data Privacy, Protection & Governance



The following overview shows a (small) excerpt of our TDA & SOPHIA customers

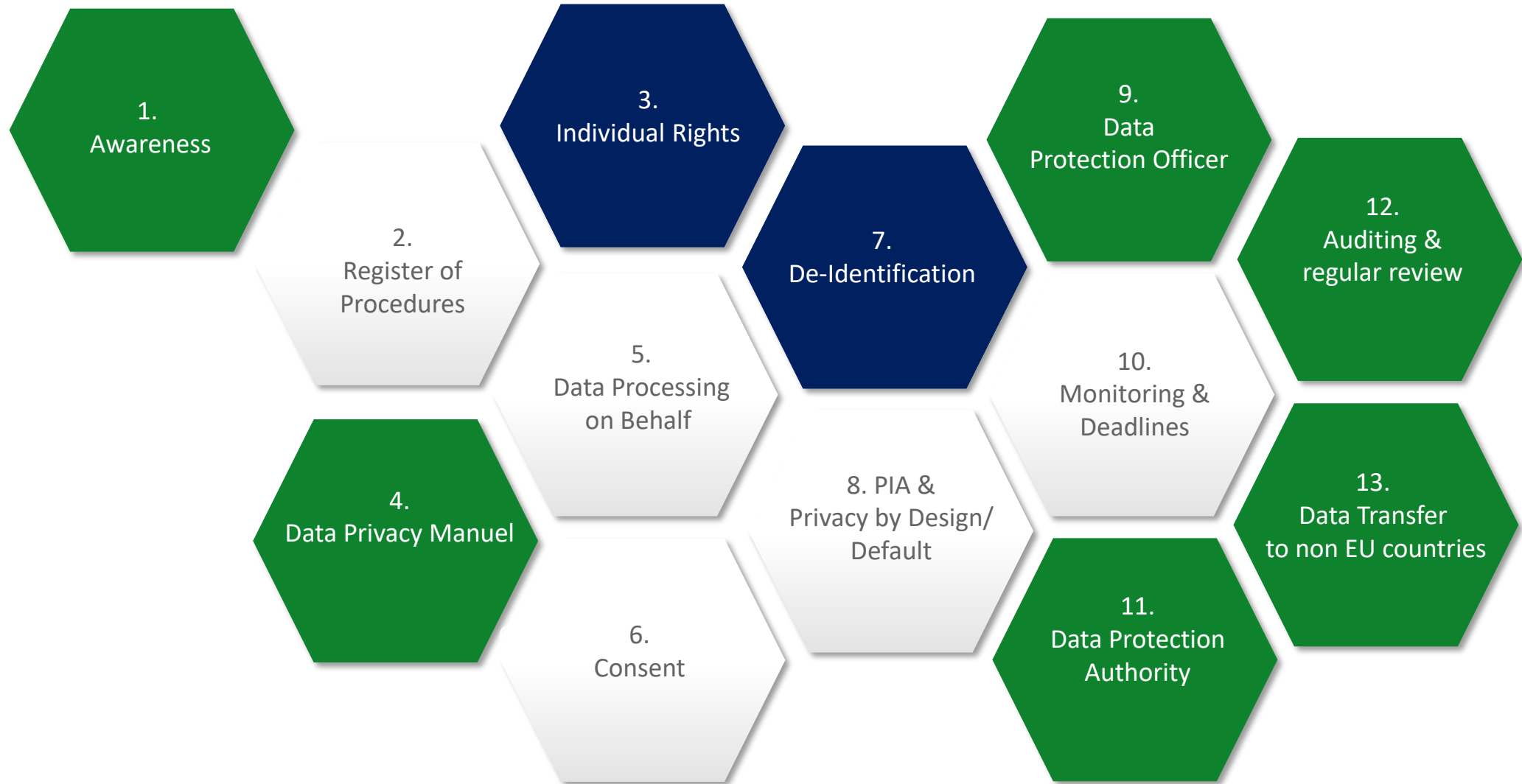






# GDPR Experiences & Challenges

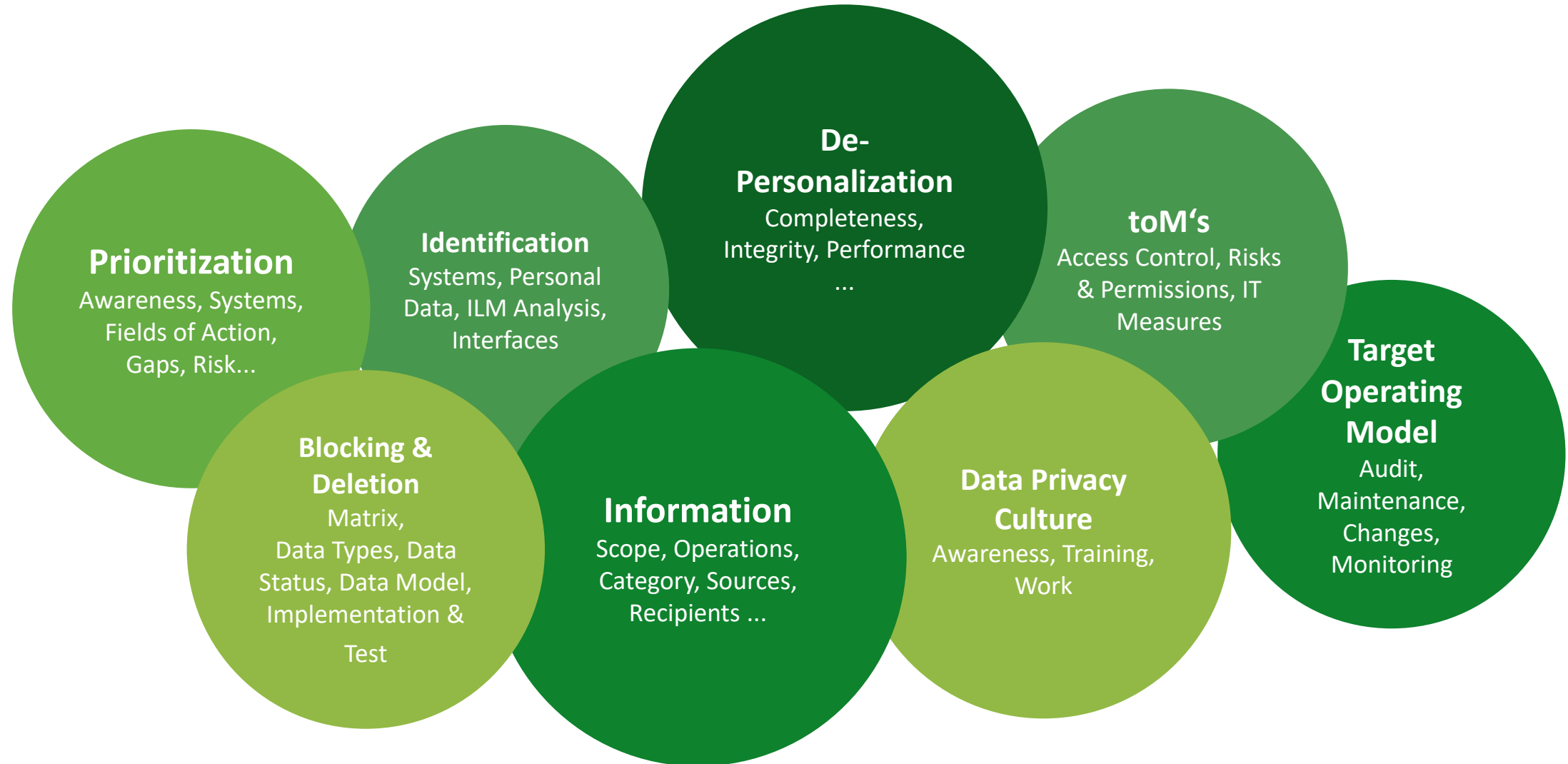
Ksenia Tretjakova, Technical Security Consultant SAP Germany  
Patric Dahse, CEO Natuvion



Legal /  
Organizational

IT relevant  
in Scope

IT relevant





# Questions and Answers

Plenums discussion



# Contact us!

**Patric Dahse**

CEO

T +49 151 171 357 02

[patric.dahse@natuvion.com](mailto:patric.dahse@natuvion.com)

