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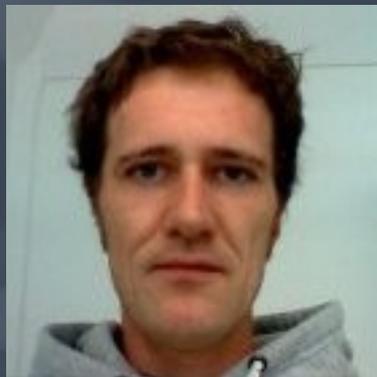# Ensuring GDPR compliance with Knowledge Graphs at a large German powertool manufacturer.

Magnus Knuth,
Senior Linked Data Consultant @ eccenca.

eccenca
Gartner Cool Vendor in Intelligent Supply Chain Execution Technologies 2018.
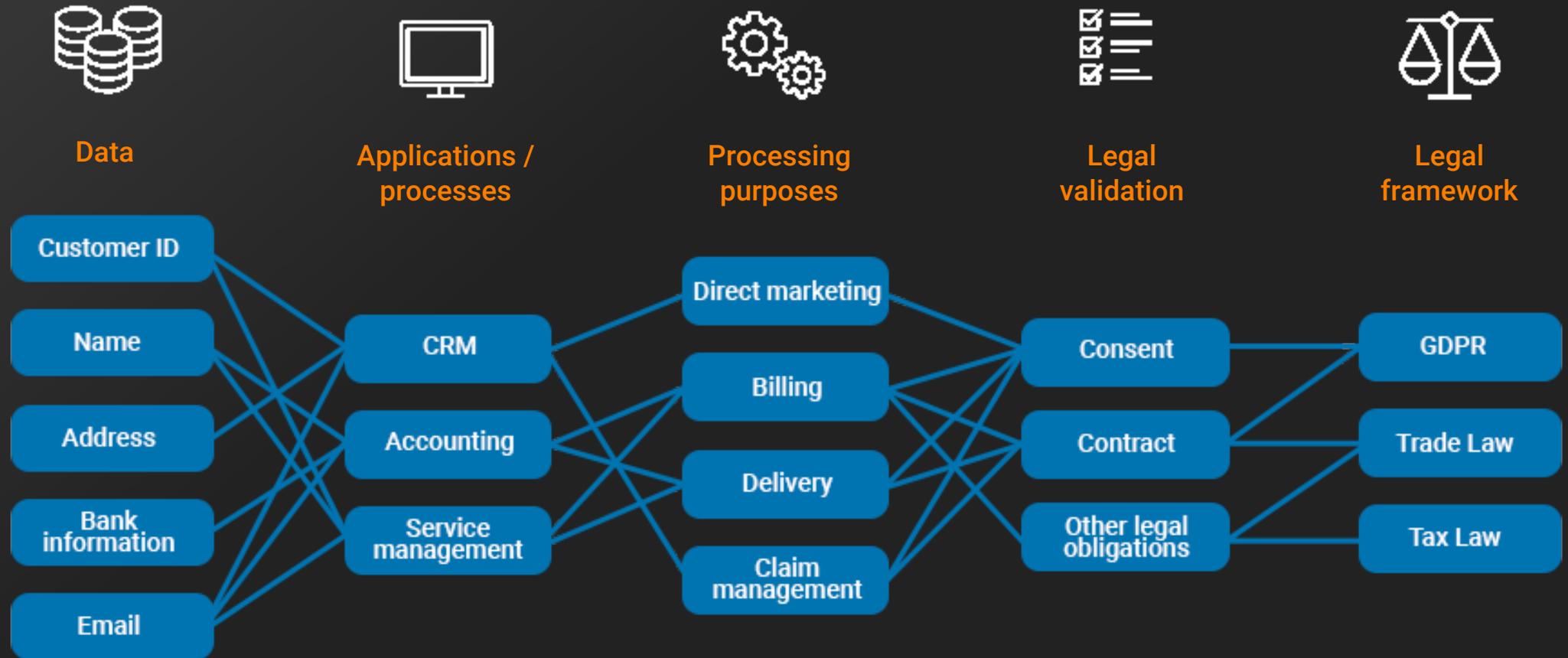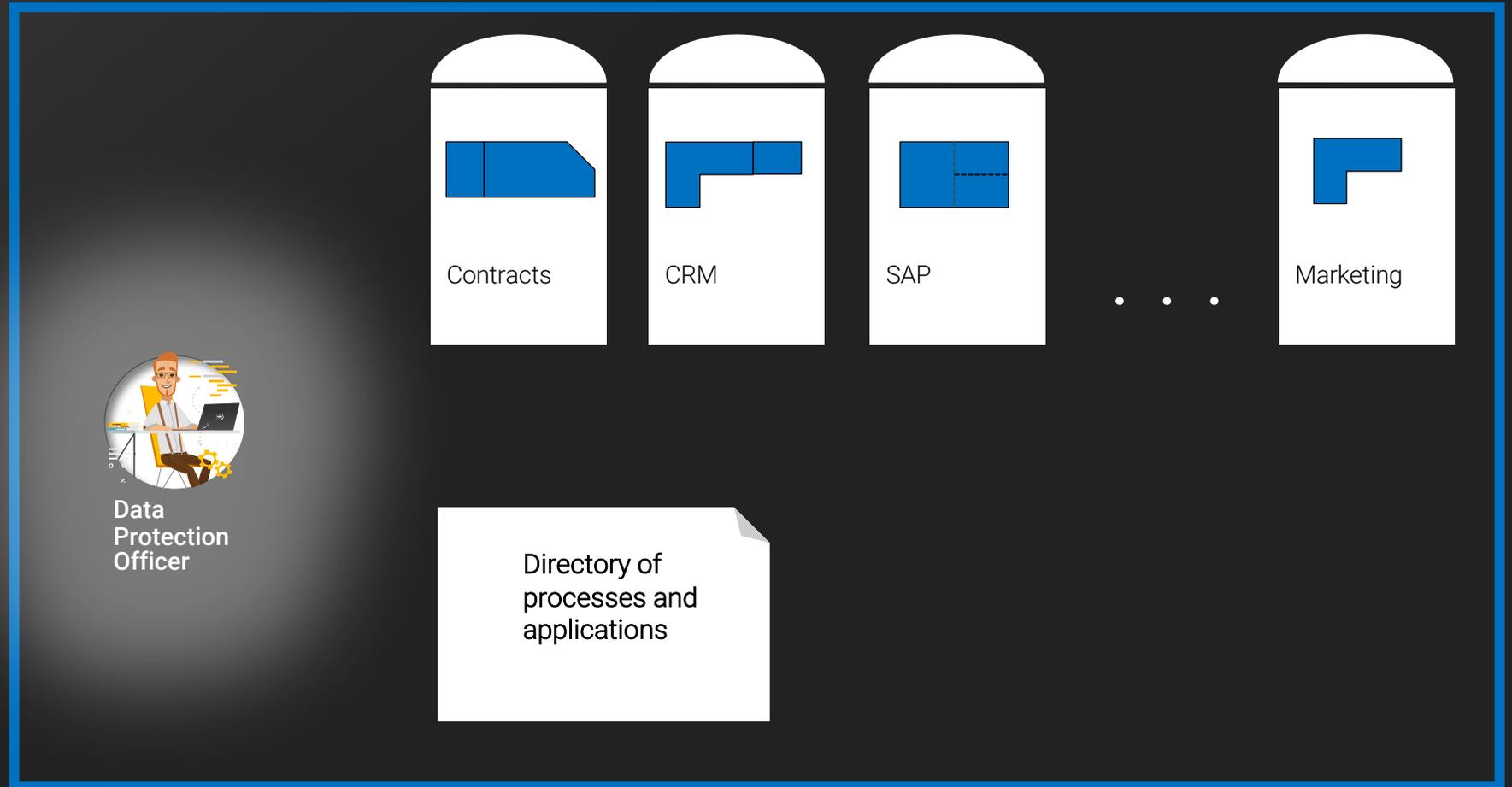Top10 GDPR Solution Provider 2019.
www.eccenca.com

AGENDA.

1. **GDPR CHALLENGES:**
Transparency in a disparate data world

2. **GDPR SOLUTION:**
Enabling company-wide transparency and compliance

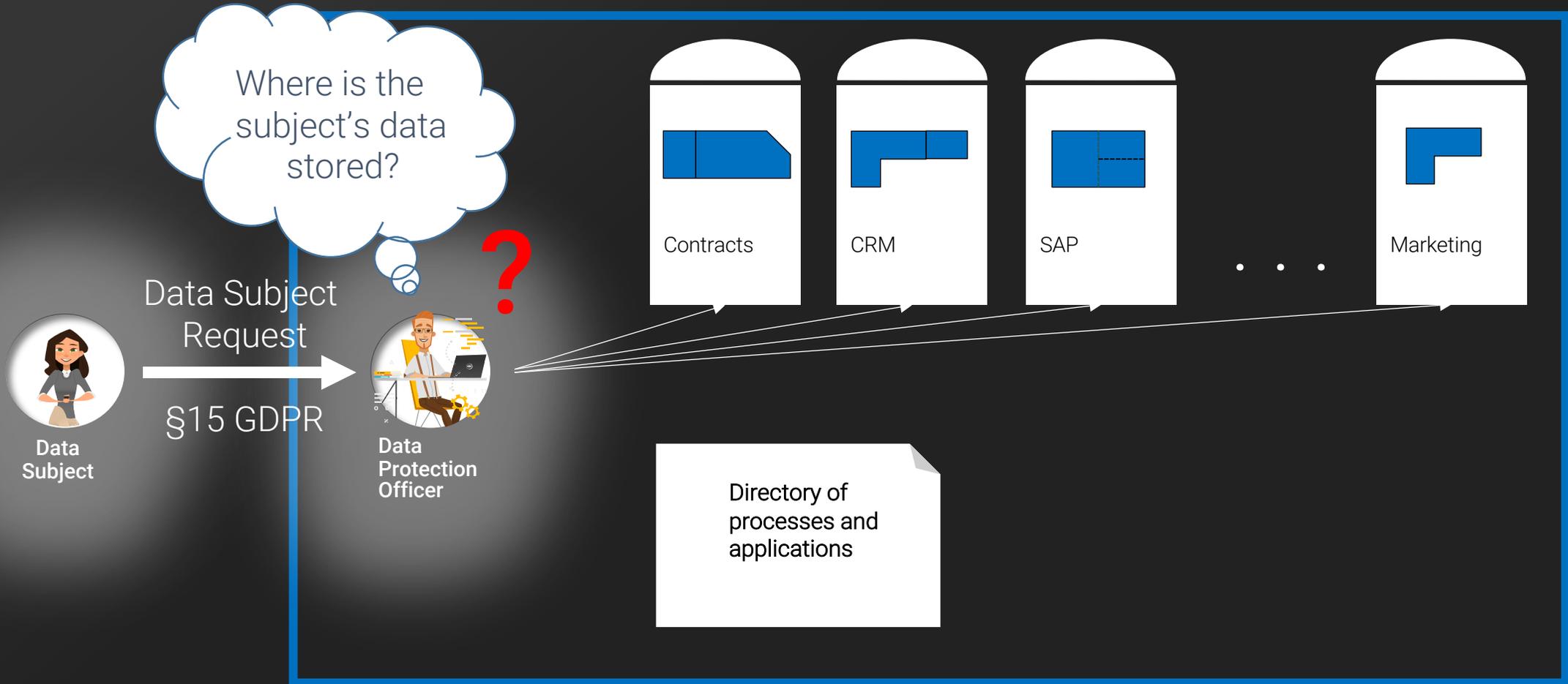**3.** **BENEFITS:**
What the stakeholder gains

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GDPR data is strongly linked and contextual

Data · **Applications / processes** · **Processing purposes** · **Legal validation** · **Legal framework**

- Customer ID
- Name
- Address
- Bank information
- Email

- CRM
- Accounting
- Service management

- Direct marketing
- Billing
- Delivery
- Claim management

- Consent
- Contract
- Other legal obligations

- GDPR
- Trade Law
- Tax Law

GDPR Challenges – A Myriad of Systems

Contracts   CRM   SAP   . . .   Marketing

Data Protection Officer

Directory of processes and applications
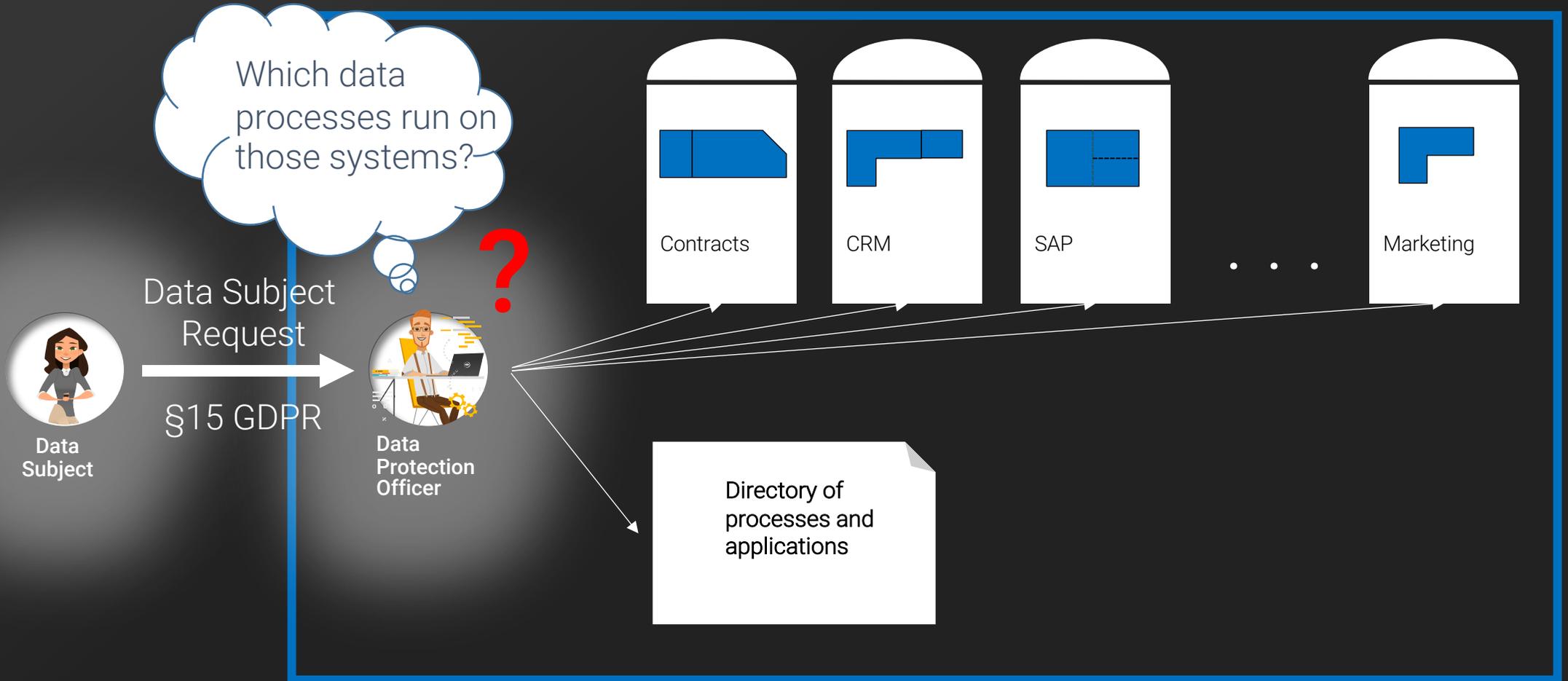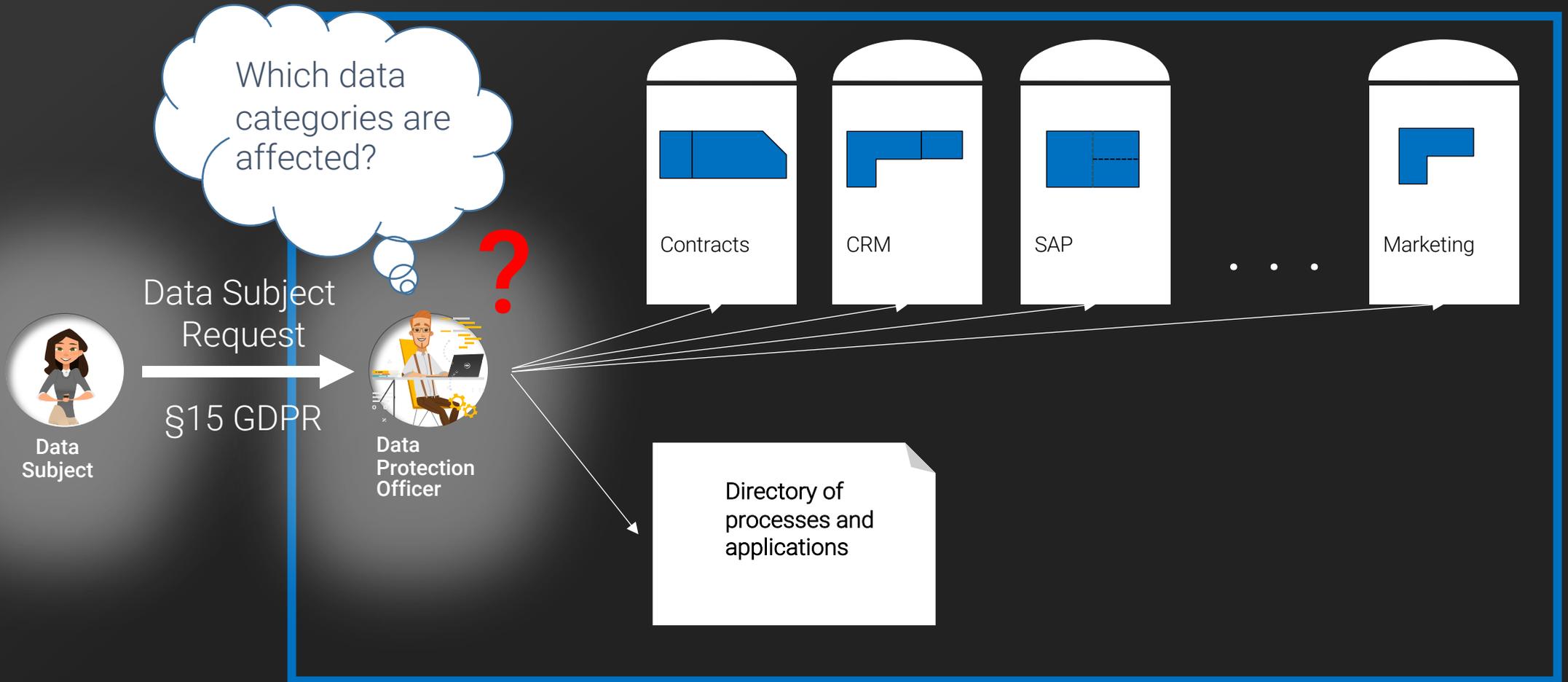
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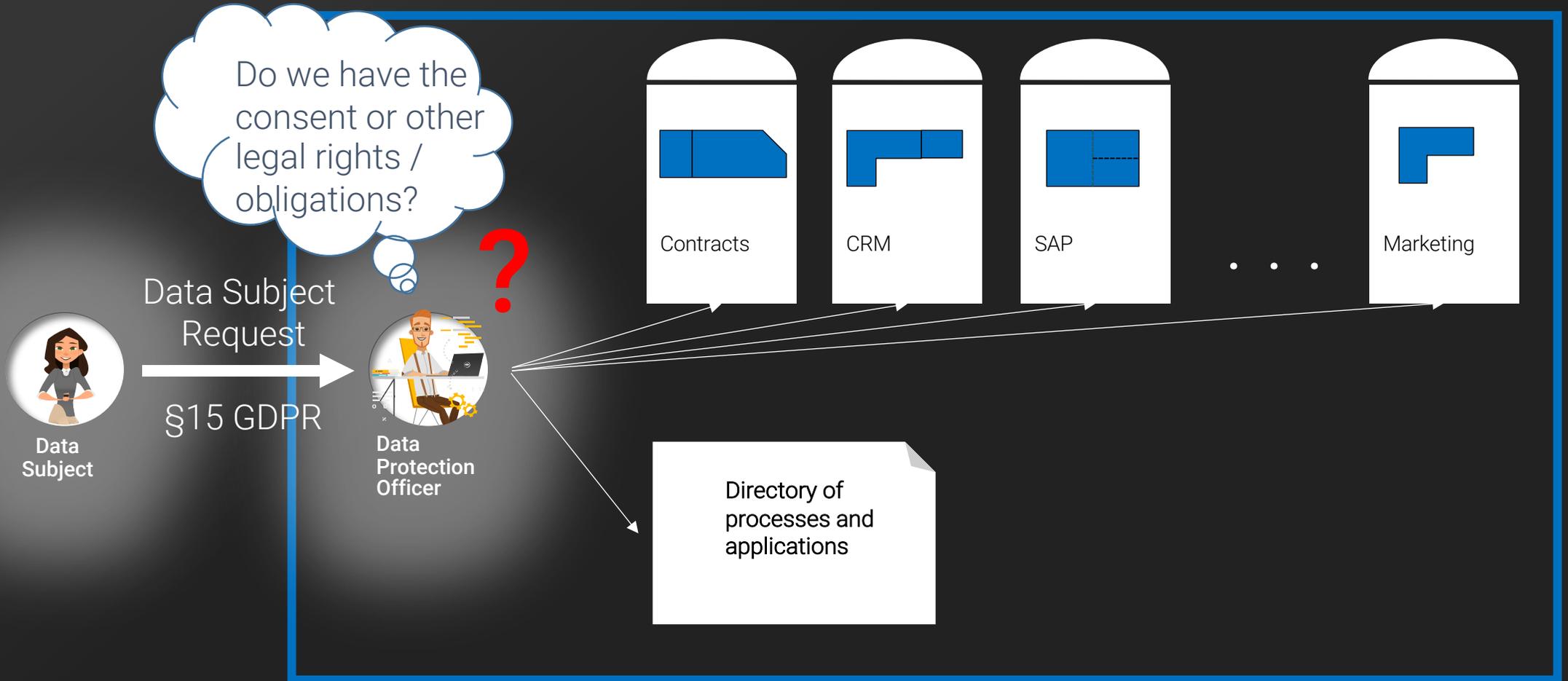
eccenca solution – Connecting everything
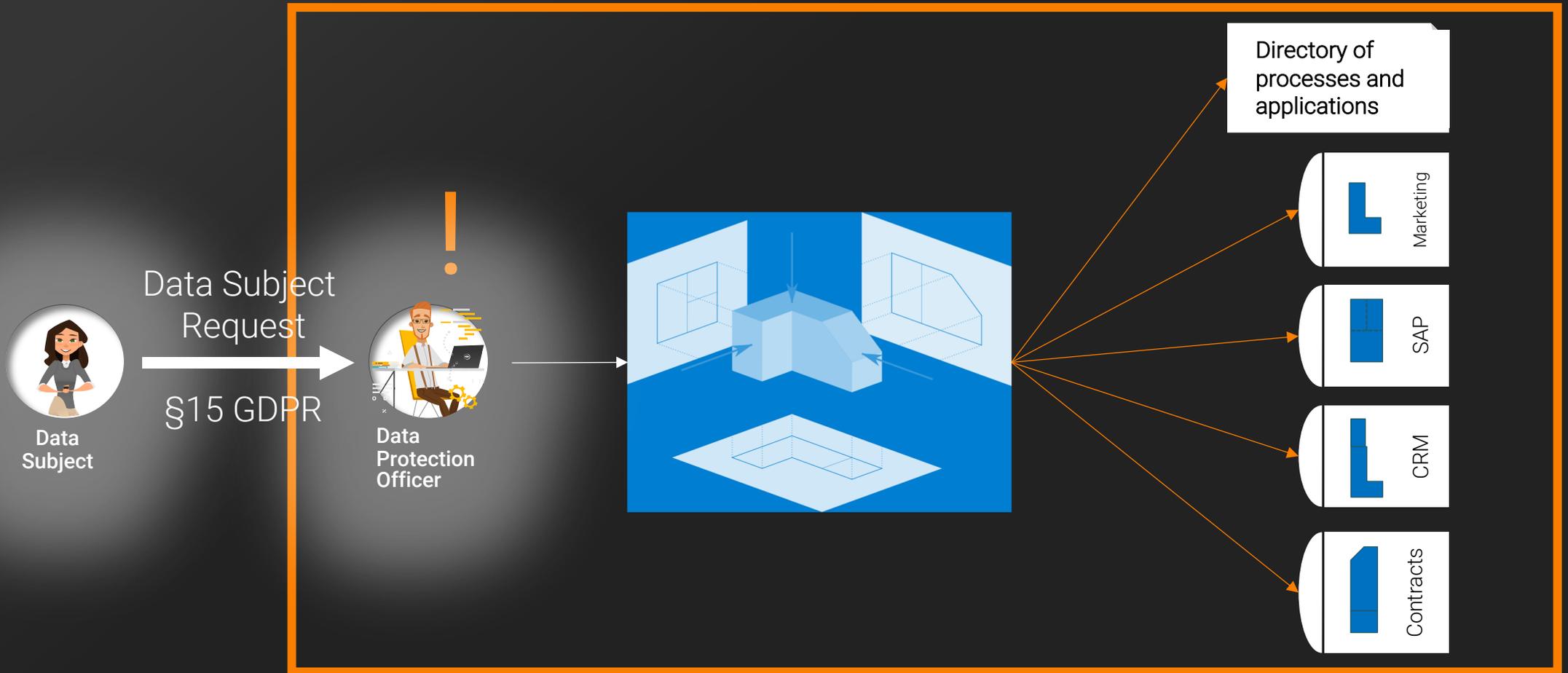
The eccenca GDPR solution
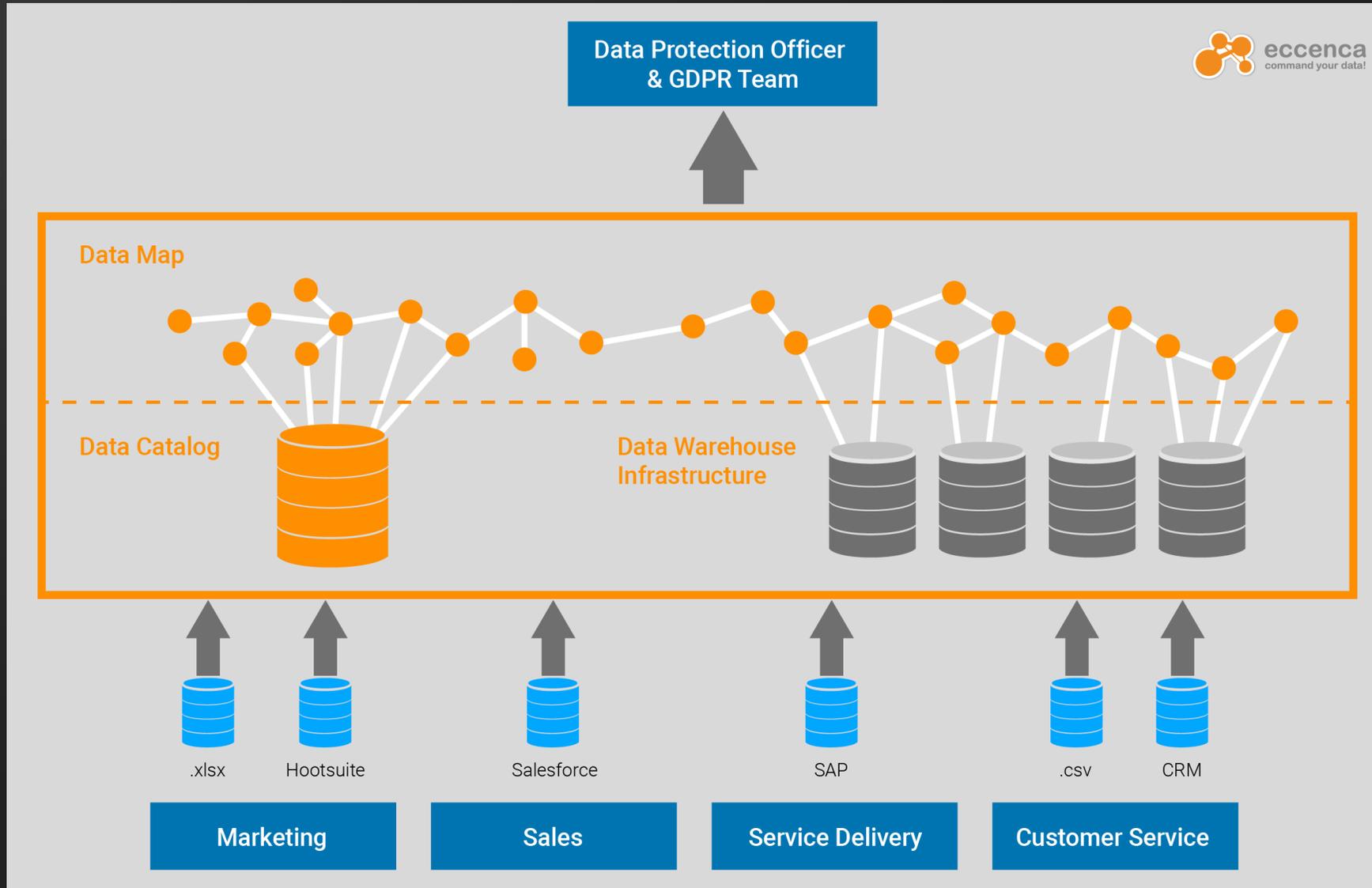
eccenca GDPR Solution
Setup
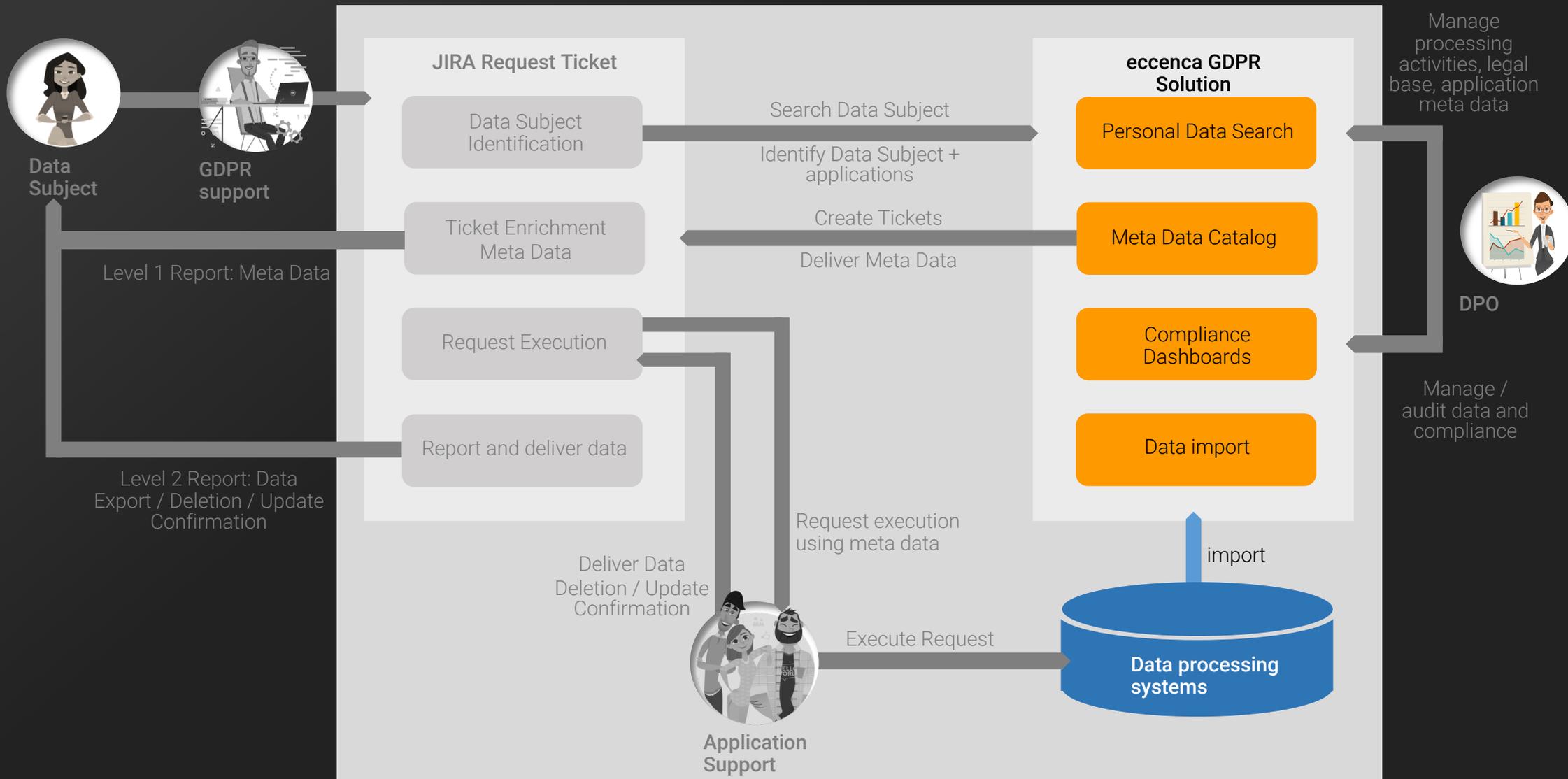
GDPR data is strongly linked and contextual
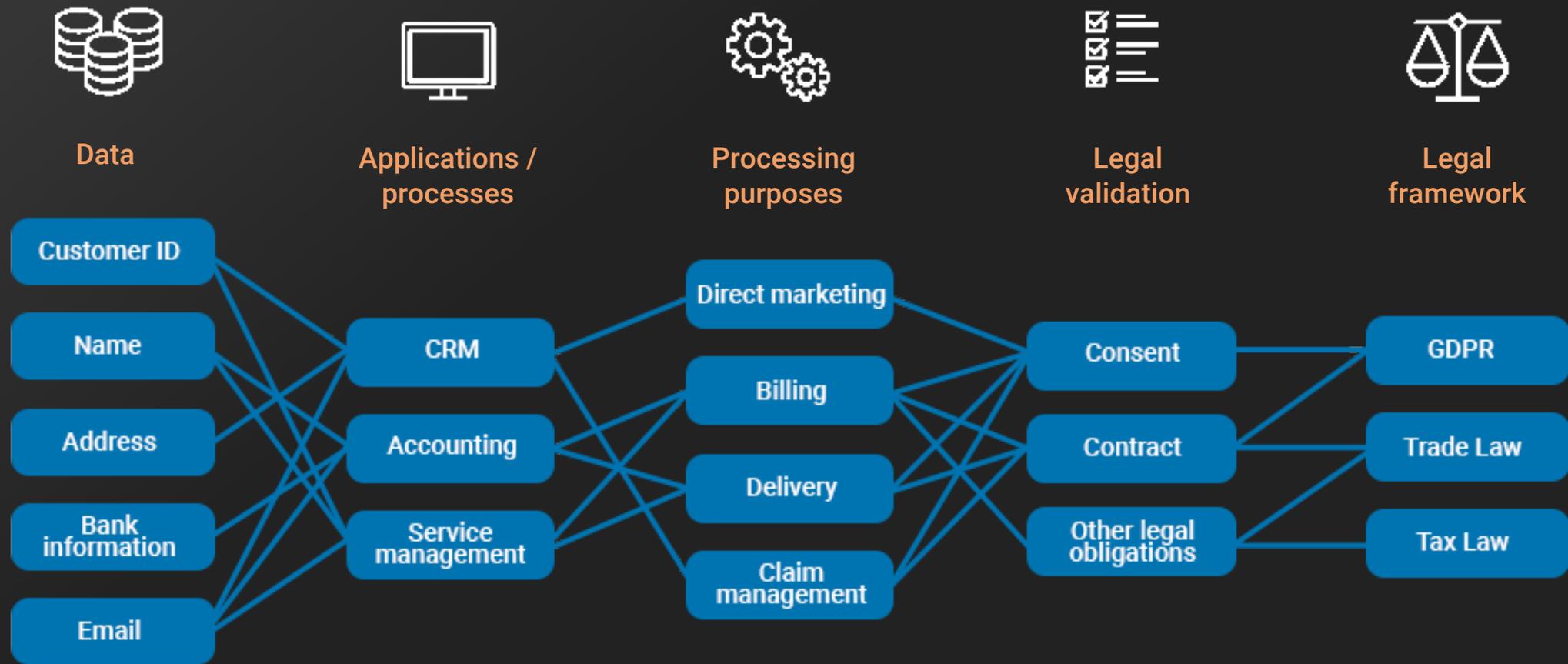
eccenca GDPR solution − How it works

- Data is linked with the requirements of GDPR (consent, purpose of processing, etc.)

- Record of processing activities, legal bases and retention periods

- Application / Meta data Inventory

- Data import and systems integration via REST APIs, Flatfiles or direct mappings

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eccenca GDPR Solution
Subject Access Requests

Challenges of GDPR

- Right of access (Art. 15)
- Right to rectification (Art. 16)
- Right to erasure – `right to be forgotten` (Art. 17)
- Right to restriction of processing (Art. 18)
- Right to data portability (Art. 20)

Task: Identify corresponding data sets across all applications & processes

GDPR Orchestration

- Summary
- **Issues**
- Reports

PROJECT SHORTCUTS

Working in a project

Project management ideas

+ Add link

Max Cline requests access to his PII according GDPR Art 15

| Edit | Comment | Assign | More ⌄ | Start Progress | Done | Admin ⌄ |

Share | Export ⌄

⌄ Details

Type:	☑ Task	Status:	**TO DO** (View Workflow)
Priority:	↑ Medium	Resolution:	Unresolved
Labels:	None		

⌄ Description

Max Cline
Hafenstraße 1136, 39268 Hoyerswerda
Max.Cline@company.com
Max.Cline@gmail.com
(09268) 3556293
+49-835-5629389

⌄ Attachments   ...

⌃ Drop files to attach, or browse.

⌄ Activity

| All | **Comments** | Work Log | History | Activity |

There are no comments yet on this issue.

⌄ People

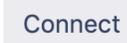| Assignee: | 👤 gdpr user the 0 |
	Assign to me
Reporter:	👥 Administrator
Votes:	0
Watchers:	**1** Stop watching this issue

⌄ Dates

Due:	09/Oct/19
Created:	Just now
Updated:	Just now

⌄ HipChat discussions

Do you want to discuss this issue? Connect to HipChat.

| Connect | Dismiss |

Project settings ⟪

Task: Define subject's personal data sets and identify affected applications

eccenca DSGVO solution   EXPLORE   QUERY   **GDPRSEARCH**   ⋮

SEARCH FORM

SEARCH RESULTS (3)

BOOKMARKS (0)

REPORTS

Search for attributes

Name	Address	Email	Phone
Max Cline			

SourceApplicationName	SourceApplicationID	SourceUserID	ControllerID

IdentityProviderID	IdentityProviderUserID	Aux

☑ Show all fields

SEARCH   CLEAR SEARCH

⚏ Search results

	Name ↑↓	Address ↑↓	Email ↑↓	Phone ↑↓	Source application name ↑↓
⌄ ☐	Max Cline	Hafenstraße 1136 39268 Hoyerswerda	Max.Cline@company.com	(09268) 3556293	eShop
⌄ ☐	Max Cline		Max.Cline@gmail.com	(09268) 3556293	HR
⌄ ☐	Dr. Max Cline	Hafenstraße 1136 39268 Hoyerswerda	Dr_.Max.Cline@gmail.com	+49-835-5629389	ContractManagement

Found 3 results. Rows per page 50 |<   <   Page 1 of 1   >   >|

⌄ **Description**

Max Cline
Hafenstraße 1136, 39268 Hoyerswerda
Max.Cline@company.com
Max.Cline@gmail.com
(09268) 3556293
+49-835-5629389

⌄ **Attachments**

⬆ Drop files to attach, or b

GDPR-1 Level 1 Report.doc
2 minutes ago   11 kB

⌄ **Issue Links**

is blocked by

☑ GDPR-2 Max Cline requests access to his PII according GDPR Art 15 (for appl

☑ GDPR-3 Max Cline requests access to his PII according GDPR Art 15 (for appl

☑ GDPR-4 Max Cline requests access to his PII according GDPR Art 15 (for appl

☑ GDPR-5 Max Cline requests access to his PII according GDPR Art 15 (for appl

⌄ **Activity**

All   **Comments**   Work Log   History   Activity

---

1. Automatically transfer information from and to the ticket system (i.e. JIRA):
   - Affected applications
   - Saved data types

2. Assign specific requests to respective application owners (prevent wild-card queries)

3. Export data from systems using automatically created and assigned tasks

4. Prepare report, personal notification and data delivery

5. Send specific request for data deletion, export and updates to respective system owners
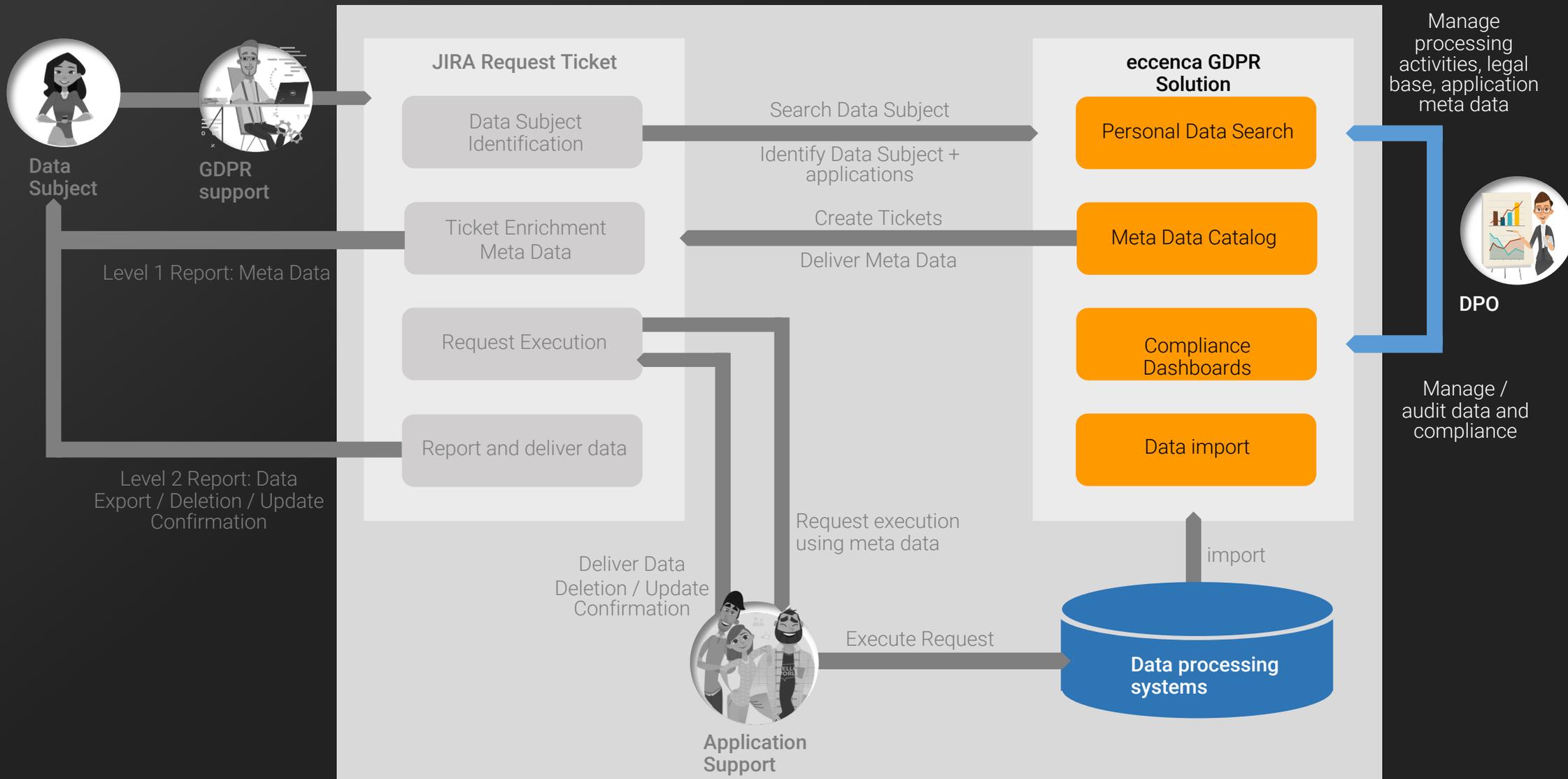
eccenca GDPR solution – How it works

- Search index and frontend for user identification
- Efficient management of incoming requests via JIRA tickets
  - Ticket creation and assignment to relevant applications automated
- Usage of meta data for data subject access rights reporting and data transparency
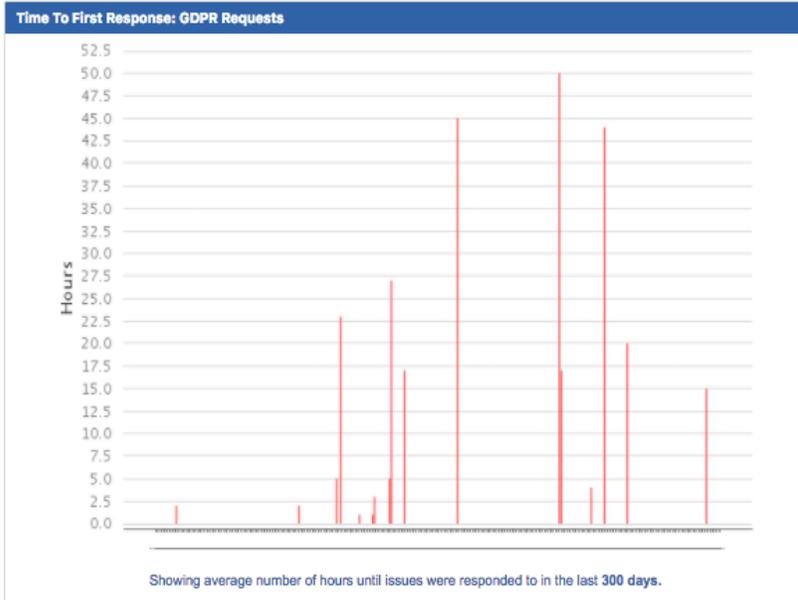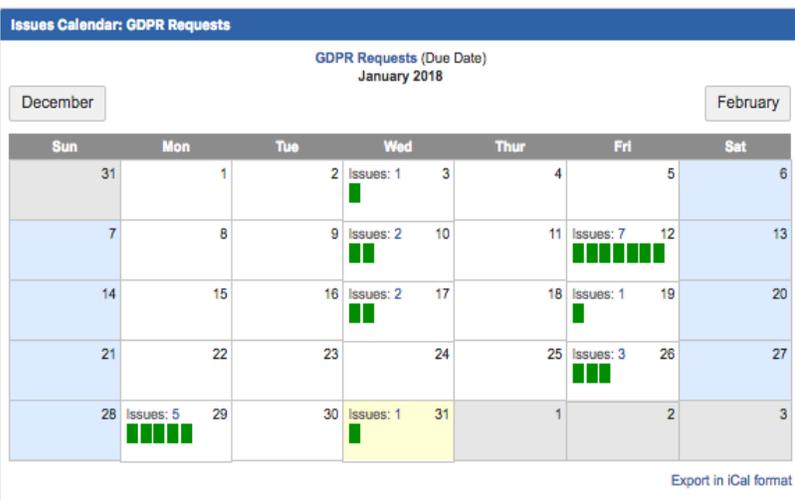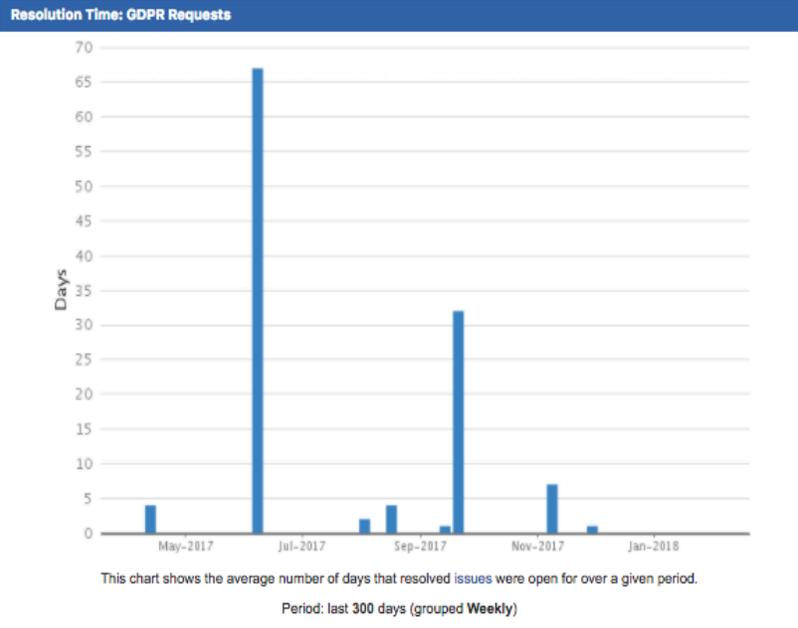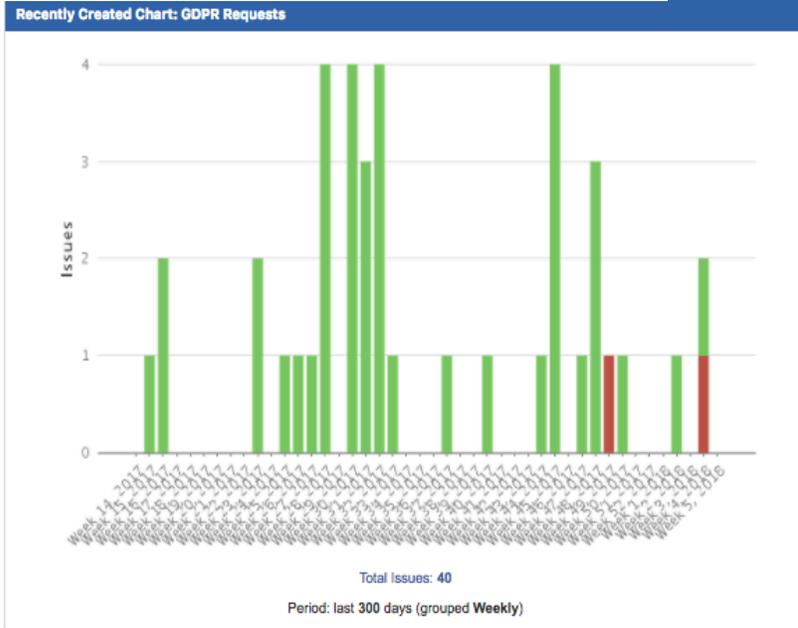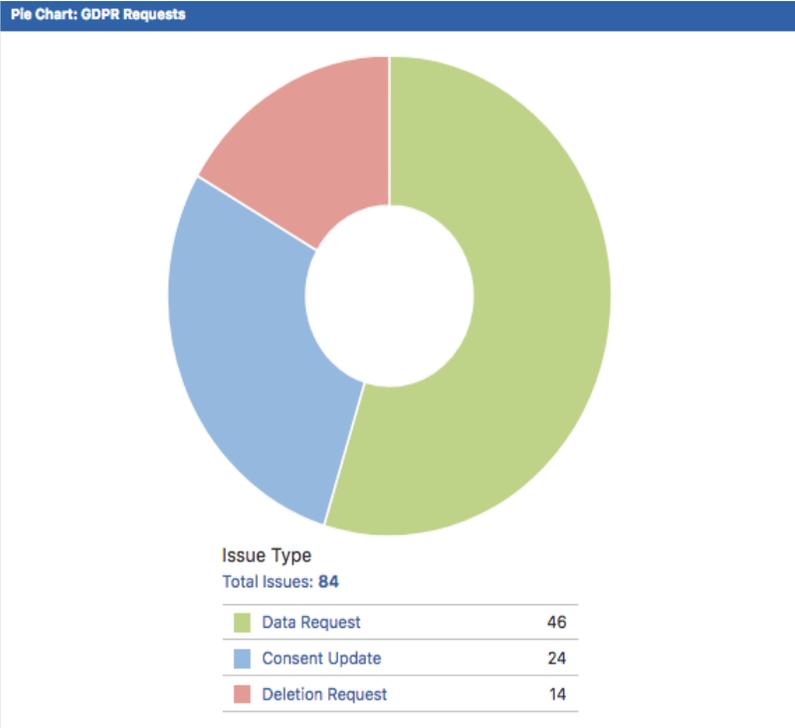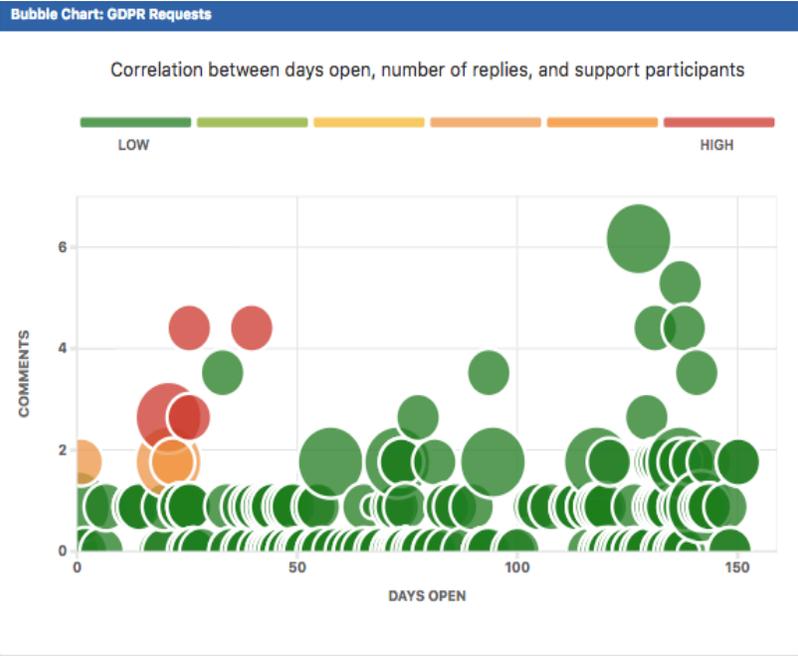
eccenca GDPR Solution
Auditing and Reporting

Challenges of GDPR

- Proof of compliance to stakeholders & authorities
- Compliance for all internal data processing operations

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Task: Tracking of Subject Data Requests

Bubble Chart: GDPR Requests

Correlation between days open, number of replies, and support participants

LOW — HIGH

COMMENTS

DAYS OPEN

Pie Chart: GDPR Requests

Issue Type
Total Issues: **84**

🟩 Data Request		46
🟦 Consent Update		24
🟥 Deletion Request		14

Recently Created Chart: GDPR Requests

Issues

Total Issues: **40**
Period: last 300 days (grouped **Weekly**)

Resolution Time: GDPR Requests

Days

May-2017 Jul-2017 Sep-2017 Nov-2017 Jan-2018

This chart shows the average number of days that resolved issues were open for over a given period.

Period: last 300 days (grouped **Weekly**)

Issues Calendar: GDPR Requests

GDPR Requests (Due Date)
January 2018

December | February

Sun	Mon	Tue	Wed	Thur	Fri	Sat
31	1	2	3 Issues: 1	4	5	6
7	8	9	10 Issues: 2	11	12 Issues: 7	13
14	15	16	17 Issues: 2	18	19 Issues: 1	20
21	22	23	24	25	26 Issues: 3	27
28 Issues: 5	29	30	31 Issues: 1	1	2	3

Export in iCal format

Time To First Response: GDPR Requests

Hours

Showing average number of hours until issues were responded to in the last **300 days**.

Average Time in Status: GDPR Requests
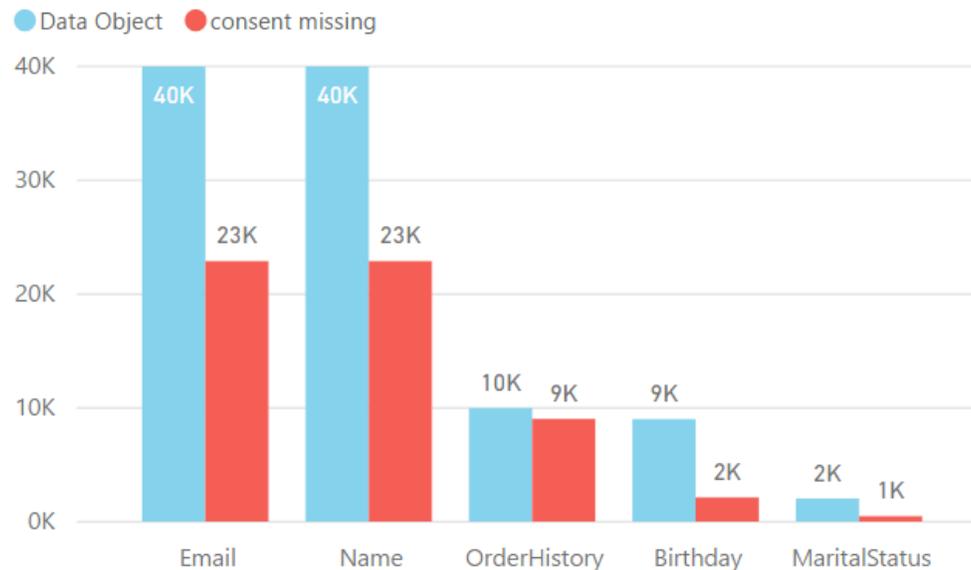
Task: Tracking & Verification of Compliance

Task: Auditing & Reporting of Compliance

GDPR Compliance Dashboard

Consent given for objects requiring consent

True / False
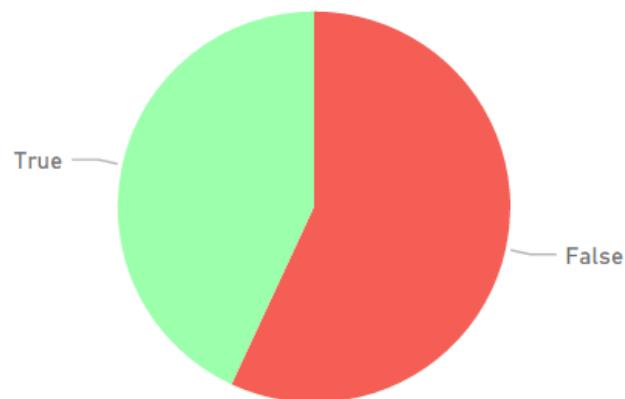
Consent missing by data object

● Data Object ● consent missing

	Email	Name	OrderHistory	Birthday	MaritalStatus
Data Object	40K	40K	10K	9K	2K
consent missing	23K	23K	9K	2K	1K

Consent missing by app

	CRSApplication	OrderProcessingAppli...
	32K	25K
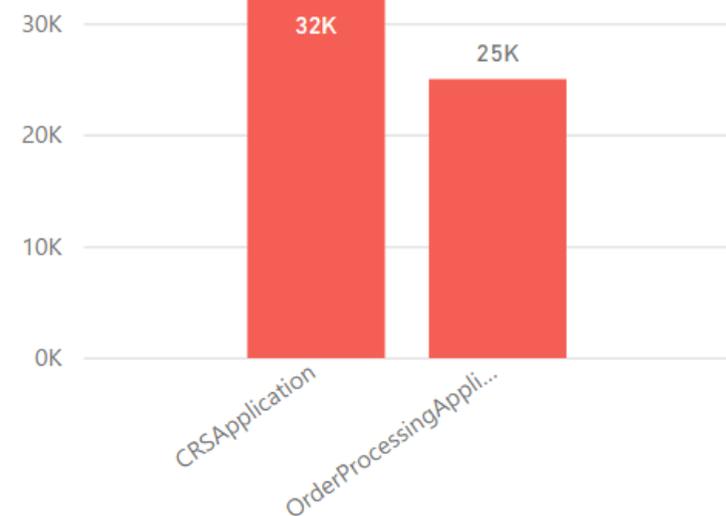
ObjectLabel	purpose	subjectCount	consent_missing	consent_given
Birthday	http://ns.eccenca.com/GDPR/e-business/BirthdayEmail	9027	2151	6876
Email	http://ns.eccenca.com/GDPR/e-business/BirthdayEmail	20000	4806	15194
MaritalStatus	http://ns.eccenca.com/GDPR/e-business/BirthdayEmail	2050	502	1548
Name	http://ns.eccenca.com/GDPR/e-business/BirthdayEmail	20000	4806	15194
Email	http://ns.eccenca.com/GDPR/e-business/PersonalizedOffers	20000	18100	1900
Name	http://ns.eccenca.com/GDPR/e-business/PersonalizedOffers	20000	18100	1900
OrderHistory	http://ns.eccenca.com/GDPR/e-business/PersonalizedOffers	10000	9050	950
Total		**101077**	**57515**	**43562**

app

☐ https://ns.eccenca.com/gdpr-example/CRSApplication

☐ https://ns.eccenca.com/gdpr-example/OrderProcessingApplication

purpose

☐ http://ns.eccenca.com/GDPR/e-business/BirthdayEmail

☐ http://ns.eccenca.com/GDPR/e-business/PersonalizedOffers

eccenca GDPR solution – How it works

- Delivery of meta data to external applications (BI, Analytics, Reports)
- Auditing and management of process via dashboards

What the stakeholders gain

- For the IT team:

  - Existing IT architecture is not affected. No need to replace legacy systems

- For Data Protection Officers:

  - 360° perspective: Fast and precise identification of data subject in all systems

  - 100 % control and transparency of compliance

  - No duplication of data through separating instance data from metadata

What the stakeholders gain

- For Application Owners:

    - Efficient processing of Subject Access Requests without overloading legacy systems

    - No time and capacity consuming wild card queries

    - Operational processes & established workflows are not disturbed.

Thank you.

 eccenca

 eccenca GmbH

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22:29   28 %