



Data Protection By Default & Design

Speak The Same Language

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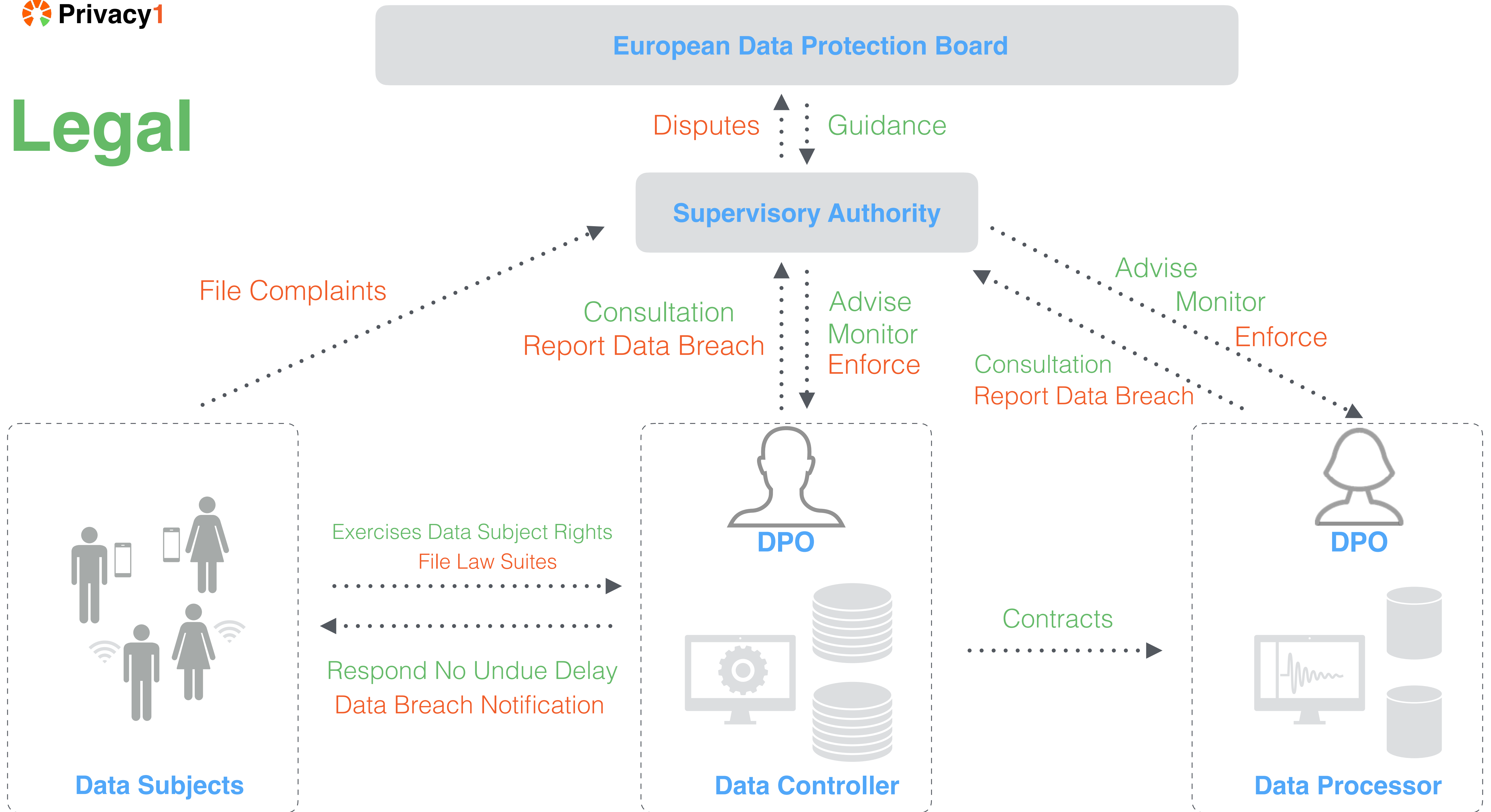


“

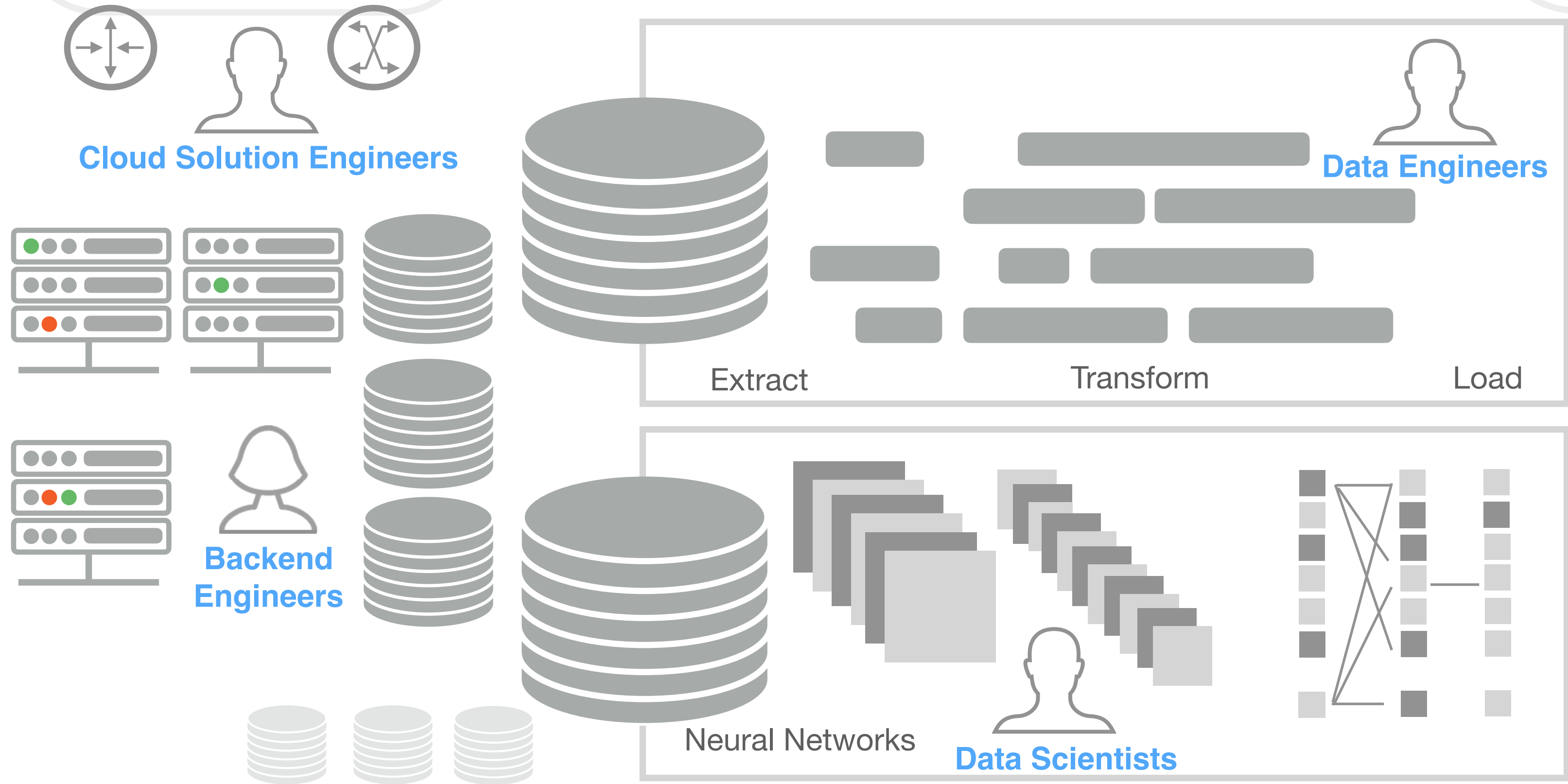
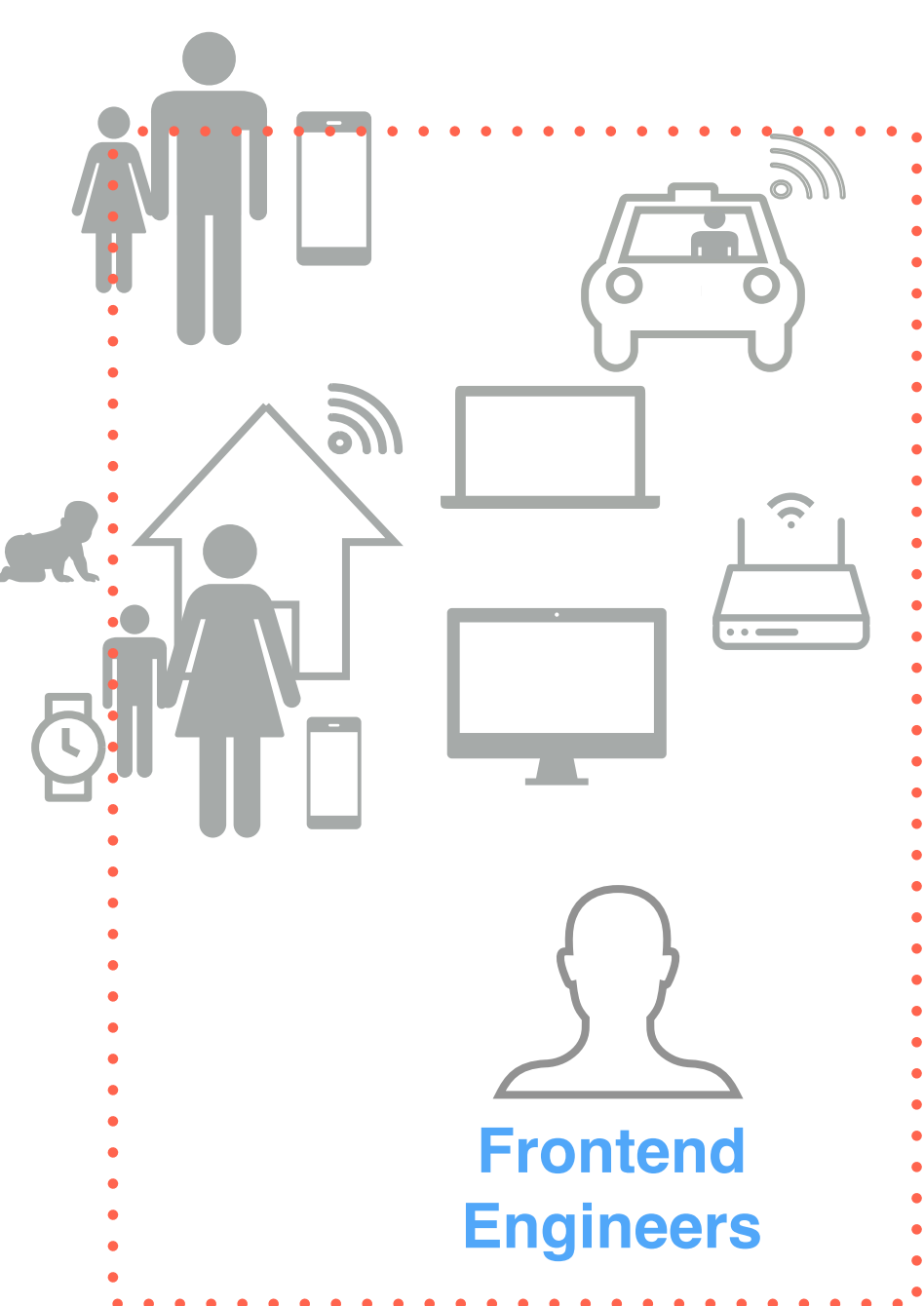
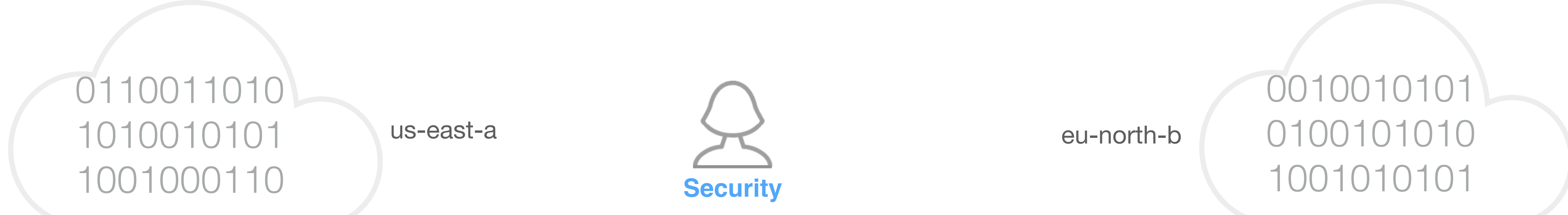
Lawyers and Engineers are two kinds of species...

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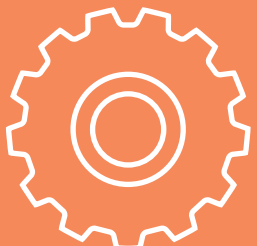



Legal




Tech



The issue - DPbDD By all business units

 <p>Legal</p> <p>Art. 25 Taking into account the state of the art, the cost of implementation and the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for rights and freedoms of natural persons posed by the processing, the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organisational measures, such as pseudonymisation, which are designed to implement data-protection principles, such as data minimisation, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects.</p> <p>The controller shall implement appropriate technical and organisational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed. That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.</p>	 <p>Sales</p> <p>Privacy should be managed for me as a service before I am engaged with a customer.</p> <p>I need to be able to pitch our solution qualifying Privacy by Design requirements</p>	 <p>Designer</p> <p>User tracking is essential to our product design. We need more personal data to gain user insights. Data protection is the balance between user tracking and respect of their privacy</p>	 <p>Engineering</p> <pre>public static String encrypt(final String plaintext, final String secret) { try { setKey(secret); Cipher cipher = Cipher.getInstance("AES/ECB/PKCS5Padding"); cipher.init(Cipher.ENCRYPT_MODE, secretKey); byte[] cipher= cipher.doFinal(plaintext.getBytes()); return Base64.getEncoder().encodeToString(cipher); } catch (final Exception e) { LOG.error("Encryptiion error: " + e.toString()); } return null; }</pre>	 <p>Security</p> <p>Access controls, Network security, Logging and Activity monitoring, Breach response Encryption</p>
	 <p>Marketing</p> <p>We need cookie tracking technologies to gain more insights of our customers. Reduce efficiency, elevated risk of using marketing data. How do I make privacy work for me</p>			 <p>Support</p> <p>There are five users just requested their data to be deleted before obtaining an archive of the data</p>

	<p>CEO</p> <p>Maximise profit, Operational efficiency, Mitigation of compliance, financial, security risks Share holder value</p>
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DPbDD Principles

- Timely
- Effective
- Demonstrable

 Lawfulness, Fairness, Transparency

 Purpose Specification, Limitation

 Data Usage Minimisation








 Data Accuracy

 Data Storage Limitation

 Data Security

 Data Accountability

DPbDD Implementation

-  Lawfulness, Fairness, Transparency
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Designer

Lawful

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Name	Description	Provider	Retention Period
p1-cookie-consent	Saves data for users consent state.	Privacy1	1 Year

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_gat	Google Analytics short term cookie. Gathers information that helps us understand how visitors interact with our websites, which allow us to create a better experience for our visitors.	Google	1 minute
_gid	Google Analytics cookie. Used to throttle request rate.	Google	1 Hour

Save

Powered by Privacy1

Dark Patterns

Sneaking

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Nagging Obstruction

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Create a personalised content profile

A profile can be built about you and your interests to show you personalised content that is relevant to you.

Object to Legitimate Interests

Select personalised content

Personalised content can be shown to you based on a profile about you.

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Force action

Need to keep influence in Republican circles

years ago today, Biden met with Pence

Biden team has if Trump's effort continues

has changed tune on accepting election results

Updated 1:30 a.m. ET, Nov. 20

BIDEN TRUMP

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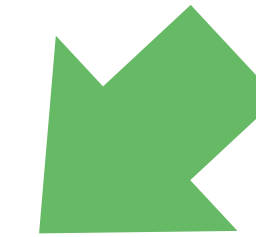
Marketing & Sales

User ID	Email	Phone Number	Role
711	johan@apple.com	N/A	Retail Store manager
722	zinon.xeni@greekmilk.com	209 482 9402	Software Engineer
768	anna@trip.com	78 192 837	CMO

Purpose customer subscription



Purpose marketing



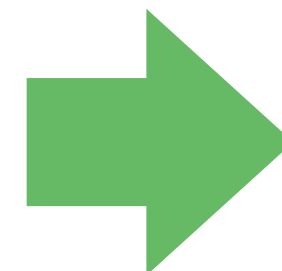
From: mikey@uber.com
To: support@biz.com

Dear Service

I really enjoyed riding your service yesterday but the driver over charged me...

Best regards,
Mikey

Purpose customer support



New (2)
Contacted (1)

Johan Fisher ▼

Retail Store Manager
Apple

Zinon Xeni ▼

Software developer
Greek Milk
[📞 2094829402](tel:2094829402)








Anna Lindström ▼

CMO
Uber
[📞 078192837](tel:078192837)

Purpose Analytics & insight sharing

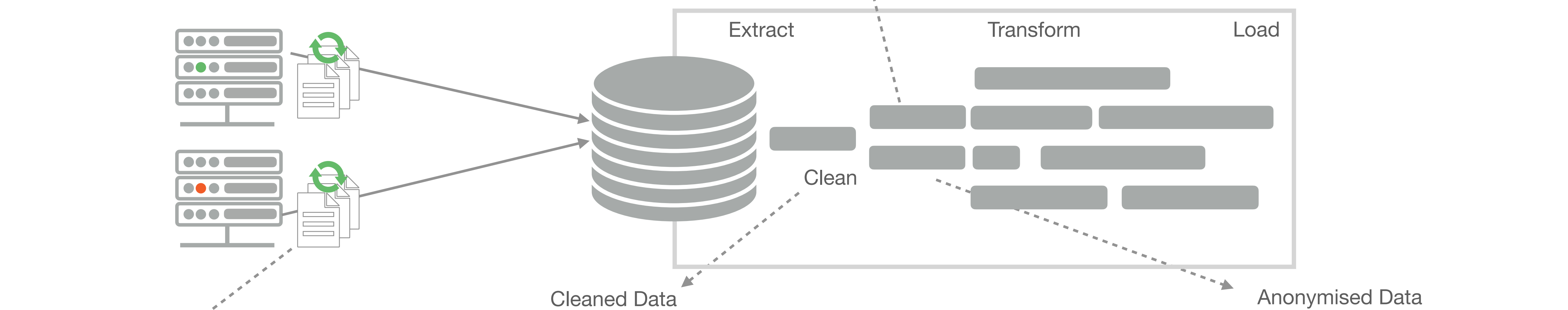


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Data Engineers

User ID	Email	IP Address	Timestamp
2BCD12	غ=%wC?'v?	M}<D'??Q??	2019-01-12T01
38EDF1	?Å??پس ??	a/5{y} ?.I	2020-02-12T06
3FA9B0	?P(M??WPpC	\ig\$1a?[y?8G	2020-03-12T07










Log Data

2020-04-12 07:12:02 110.1.2.34 GET HTTP/...
 2020-04-12 07:12:03 34.2.91.5 GET HTTP/...
 2020-04-12 07:12:03 210.1.2.34 PUT HTTP/...
 2020-04-12 07:12:03 70.90.2.7 POST HTTP/...
 2020-04-12 07:12:02 91.1.5.4 GET HTTP/...
 2020-04-12 07:12:07 2.21.24.3 POST HTTP/...
 2020-04-12 07:12:02 179.15.2.9 GET HTTP/...

User ID	Email	IP Address	Timestamp
134	alice@gmail.com	110.1.2.34	2019-01-12T01
156	bob@hotmail.com	123.12.01.41	2020-02-12T06
235	eve@yahoo.com	96.32.1.67	2020-03-12T07

User ID	Email	IP Address	Timestamp
134	a****@gmail.com	110.1.2.x	2019-01-12T01
156	b**@hotmail.com	123.12.01.x	2020-02-12T06
235	e**@yahoo.com	96.32.1.x	2020-03-12T07

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Data Scientists

- Balanced data sets
- Feature selection
- Differential privacy
- Distributed learning
- Homomorphic crypto
- Synthetic data

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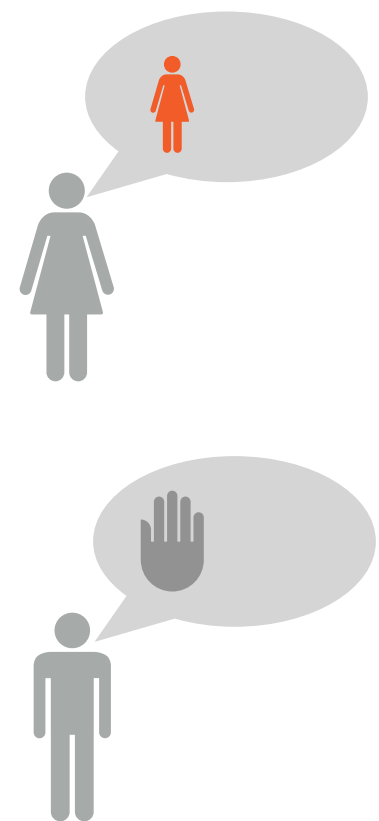
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DPbDD Implementation

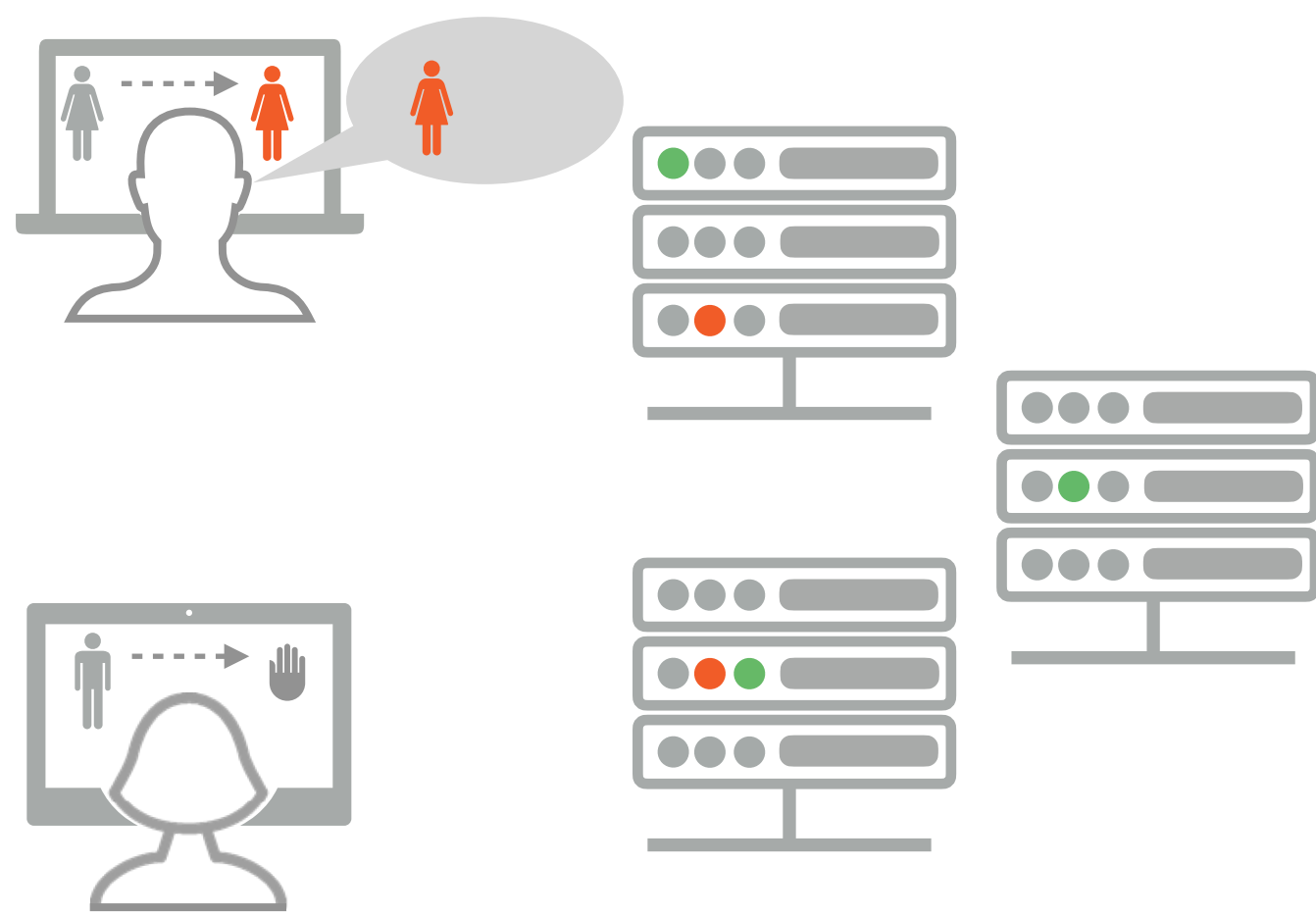
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Support Team

Data Subjects










Data Controllers



Data Processors

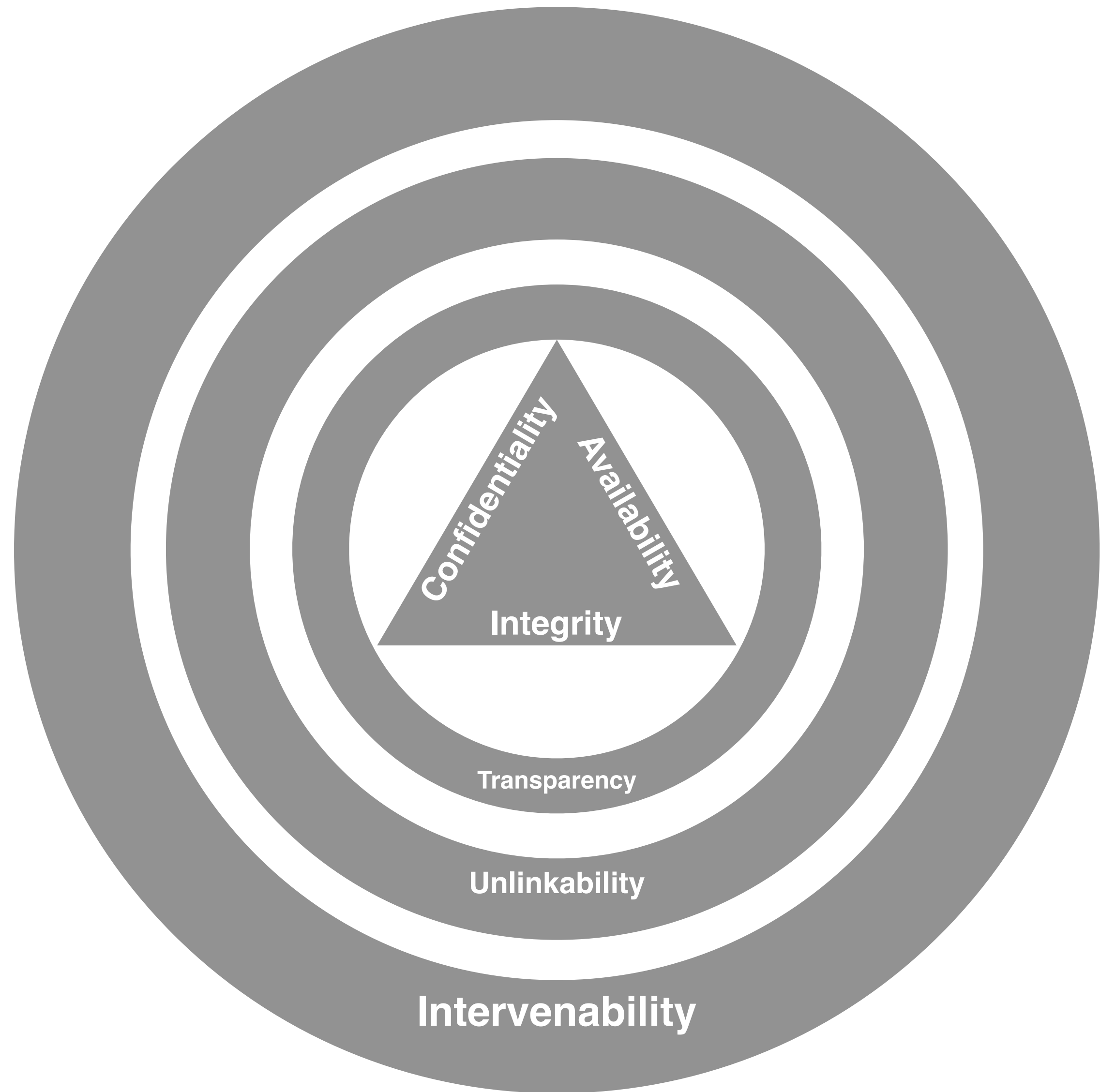


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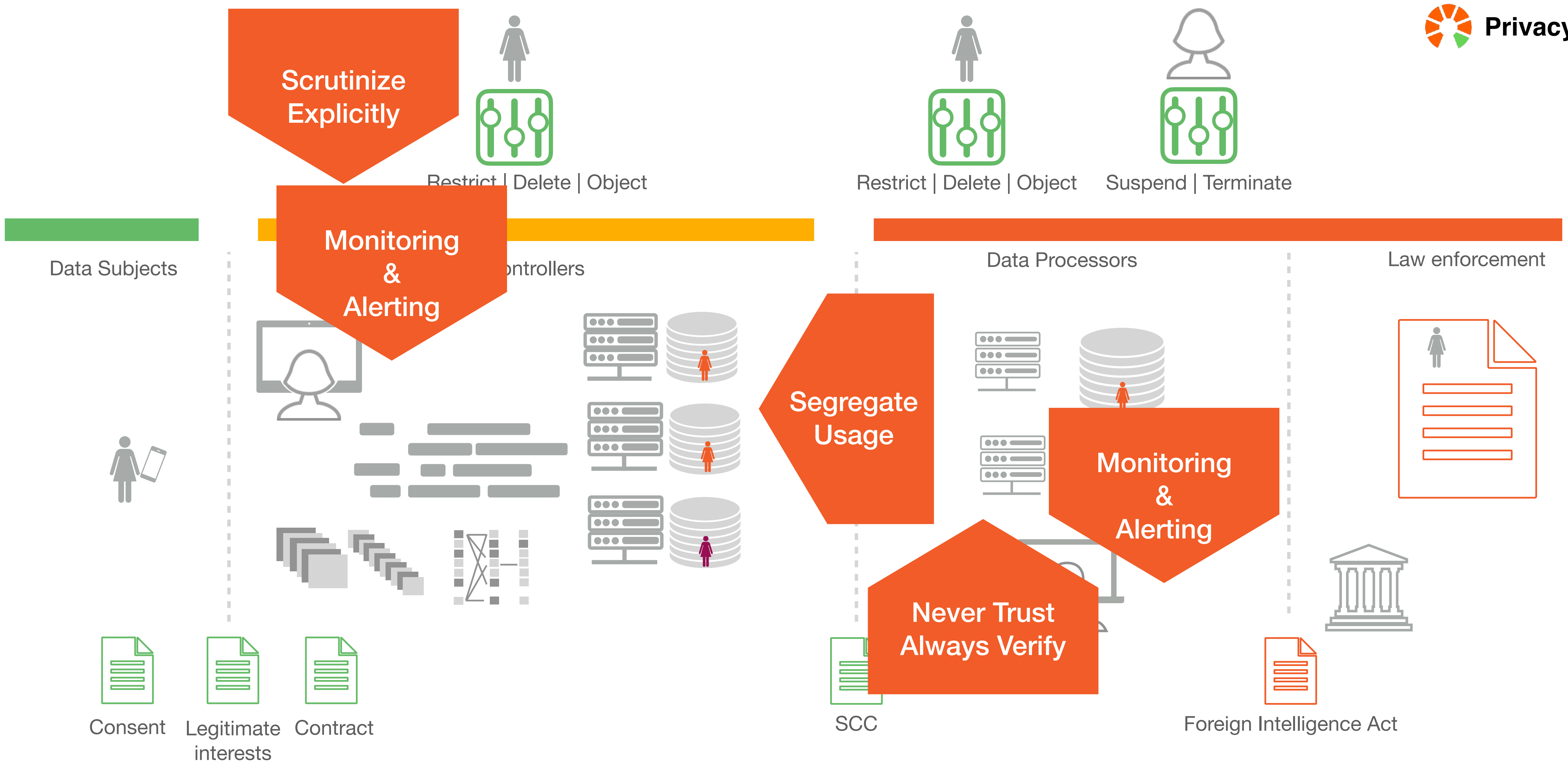
Security Team

- Least privileged access with all entities
- Segmentation of data usage
- Data encryption
- Monitoring and alerting
- Scrutinise



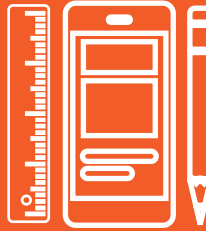
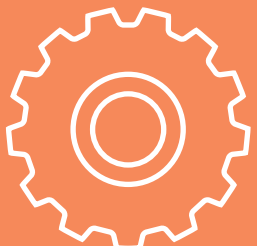





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The answer - By data language

 Legal DPbDD	 Sales Our service is privacy by design and comply with privacy by default design.	 Designer We register purpose of processing personal data into our data mapping system.	 Engineering We use software SDK to pseudonymize all personal data.	 Security We implemented ISO security controls to mitigate data risks We fire drill our data breach procedure regularly
	 Marketing Our marketing data is accurate with respects to data subjects rights	 We conduct DPIA regularly to assess the risk of processing personal data and we always keep the processing to the minimal. Personal data is deleted after retention period automatically.	 Personal data access is governed by our data protection system. We use adaptive Laplace differential privacy to preserve data privacy in our artificial intelligence	 Support Today 3 DSAR & 5 data erasure requests have been fulfilled automatically by our system



Turn head winds such as breaches and violations into tail winds with consumer trust



Thank you!

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