

# Securing a Data Platform

Preventing Data Loss and Ensuring Data Privacy





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he/him

DevOps Engineer for APG in the role of SQL Server Infrastructure Specialist and Product Architect for on-premises Database Management Systems.

- Nearly 20 years IT Experience
- 10+ years DBA
- SQL Server Infrastructure Specialist



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“It's not a matter of if, but when...”



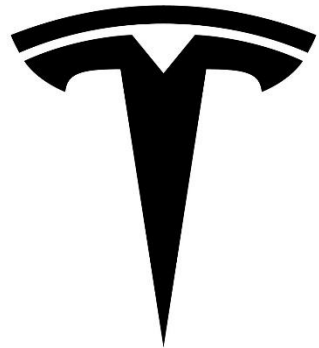
TRANSP  
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hessey

BBC

INSOMNIAC  
GAMES



TESLA

duolingo



Lyca  
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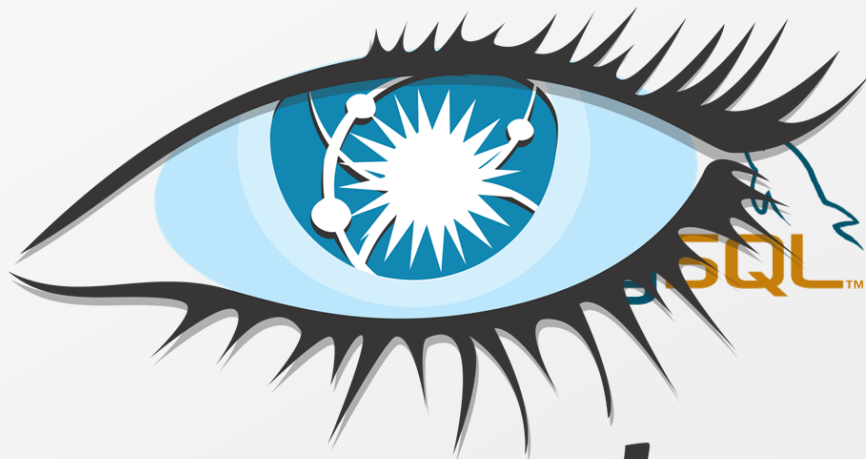
# Content

- What is a data platform?
- Data and Platform Security
- Best Practices of Data(base) Development



# What is a data platform?

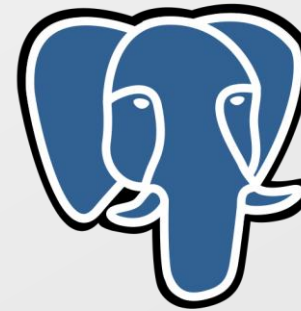
**ORACLE**  
**DATABASE**



**cassandra**



mongo**DB**



Postgre**SQL**



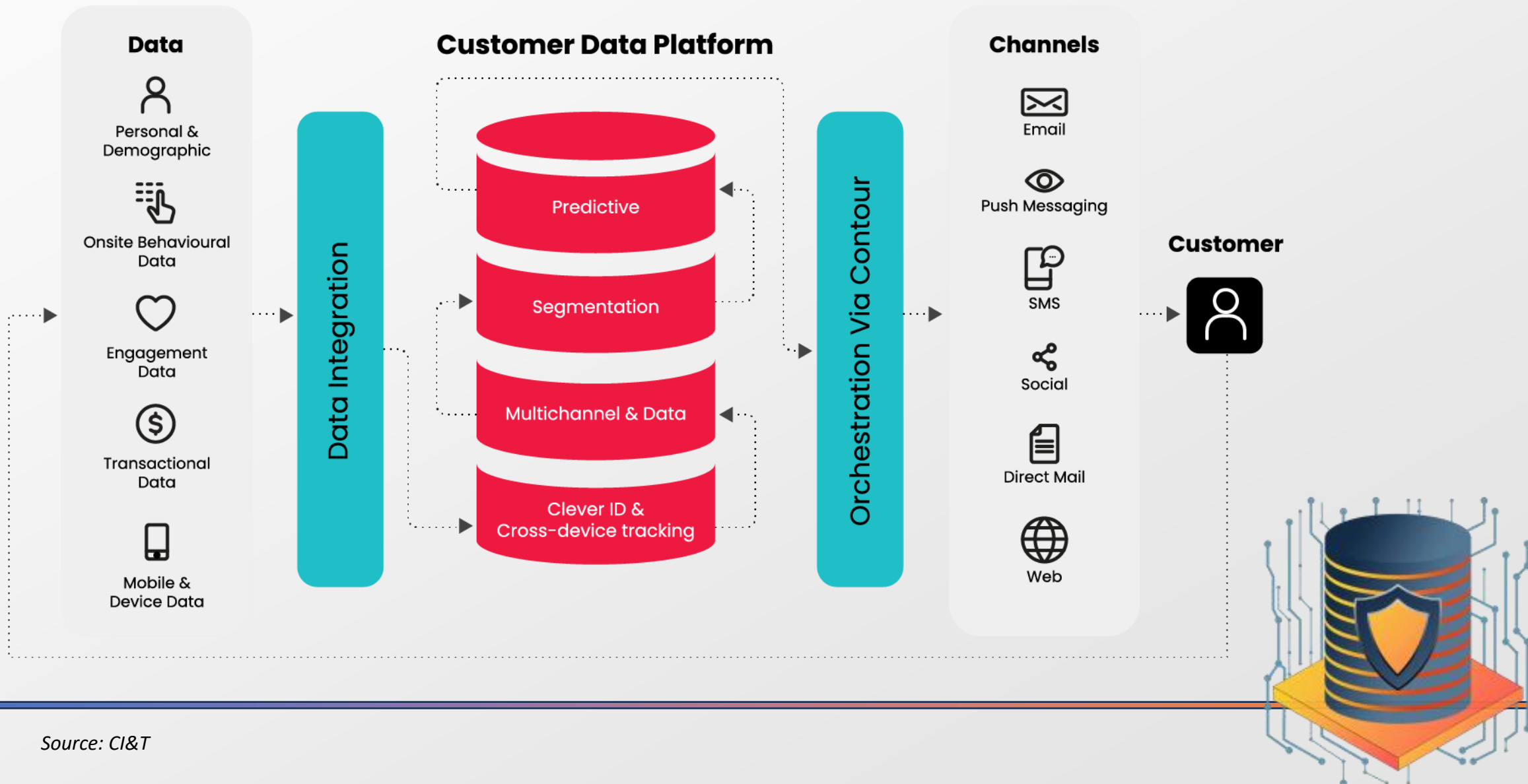
Microsoft®  
**SQL Server**



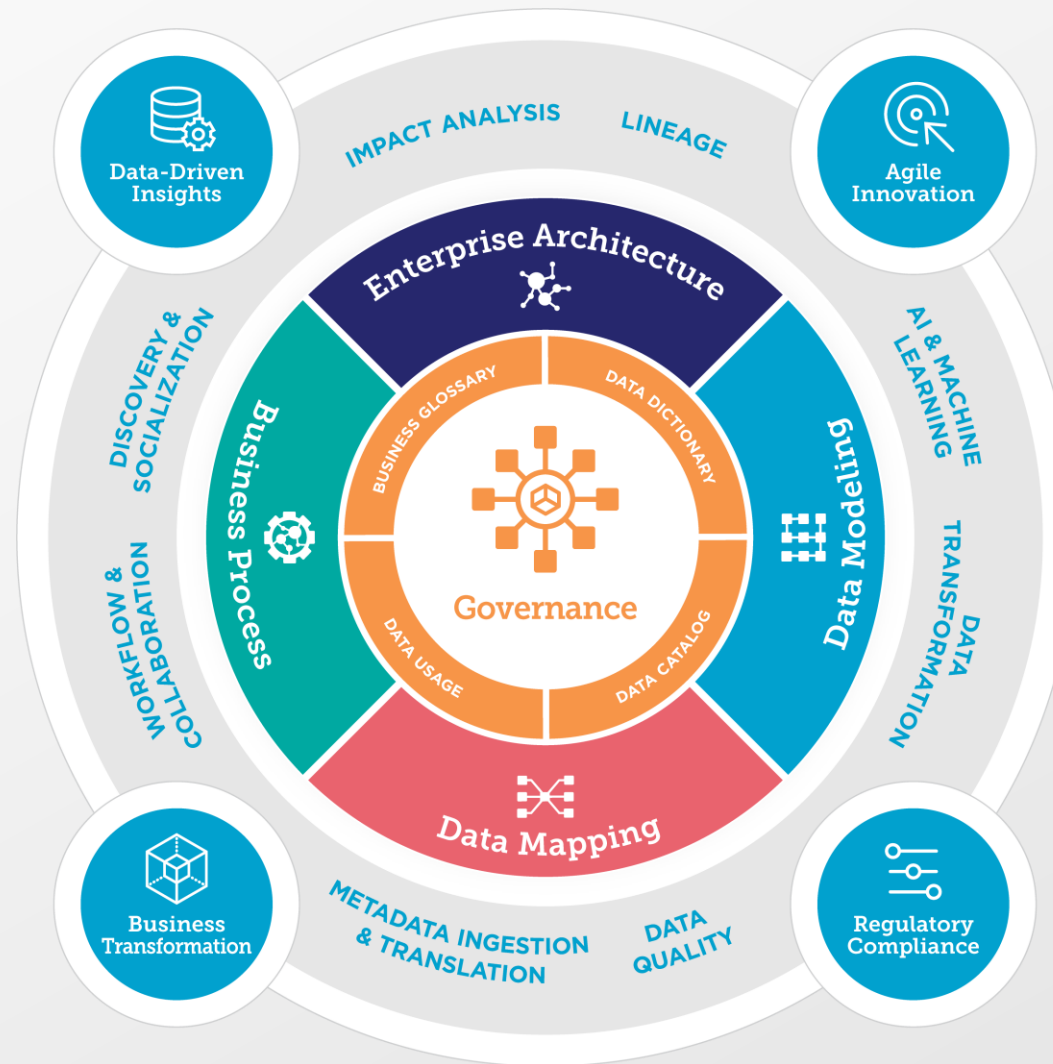
**redis**



# What is a data platform?



# What is a data platform?



# Layers

Data Ingestion

Data Transformation

Data Storage

Data Publishing





# Risks

- System Incompatibilities
- Compliance Risks
- Data Discoverability
- High Costs
- Operational Inefficiency
- Security Vulnerabilities



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# Legislation



# Data Security Risks

- Accidental Data Exposure
- Phishing Attacks
- Insider Threats
- Malware
- Ransomware
- Cloud Data Storage



# Benefits of Data Security

- Keep your information safe
- Keep your reputation clean
- Competitive edge
- Save on support and development costs



# Data Platform Security





# Enterprise vs Open Source

- Supported Authentication
- Fit for purpose
- Supported Encryption





# Encryption

- At rest
- In transit
- In memory



# Privacy

- Data Masking
- Anonimization
- Subsetting

		XXX XXX X348	
		XXX XXX X692	
		XXX XXX X925	
		XXX XXX X099	



# Best Practices of Data(base) Development



# Authentication

- Built-in accounts
- Active Directory Authentication
- Storage of credentials



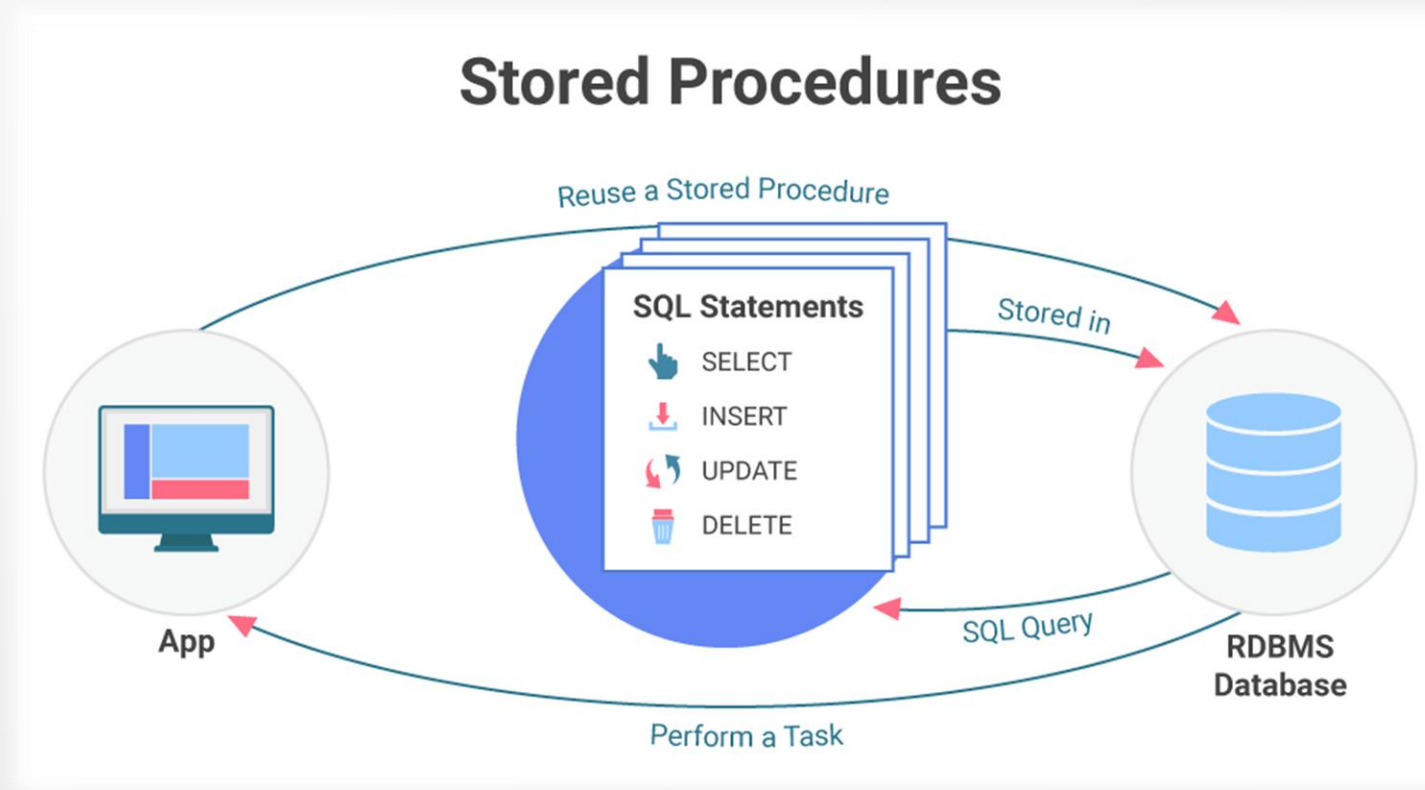
# Roles & Privileges

- Server roles vs Database roles
- Custom roles vs predefined
- Privileges



# Data Access

- Object Based Access
- Stored Procedure Access



# Read & Write Processes

- Everything you do is either a read and/or a write process
- Every single line of code can have impact on performance and security
- Even configuration!



# Summary

- Definitions of a data platform
- Data Platform Security
- Best practices of Data(base) Development





# Questions?

