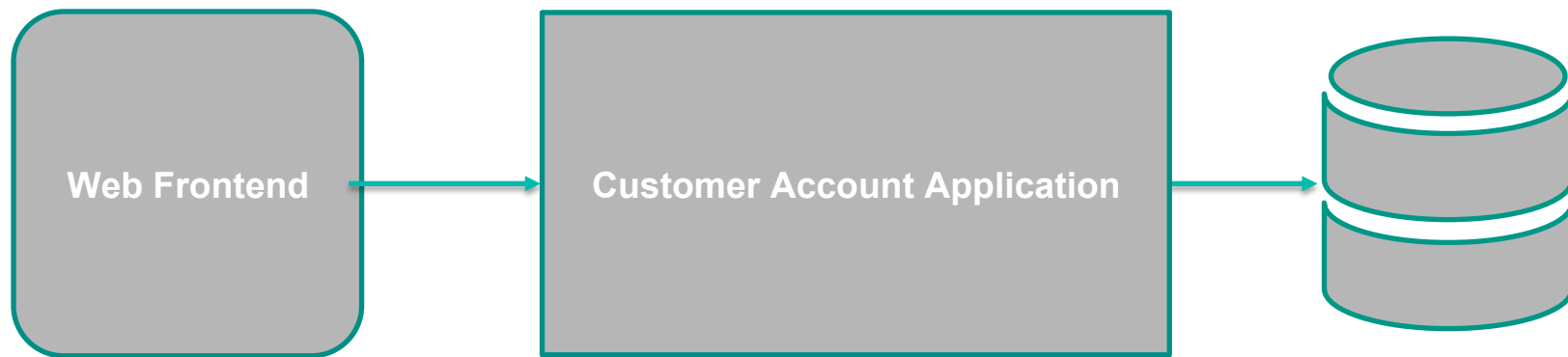
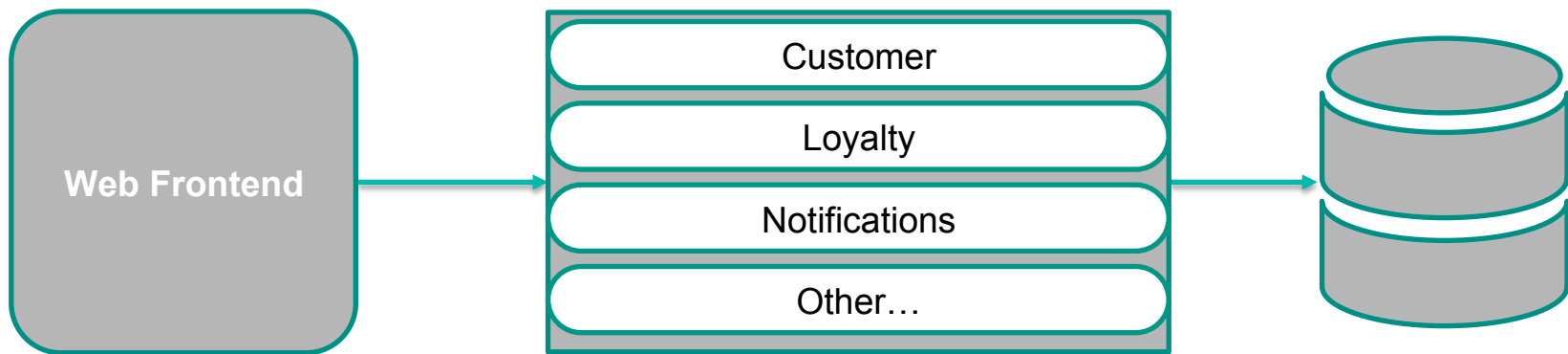




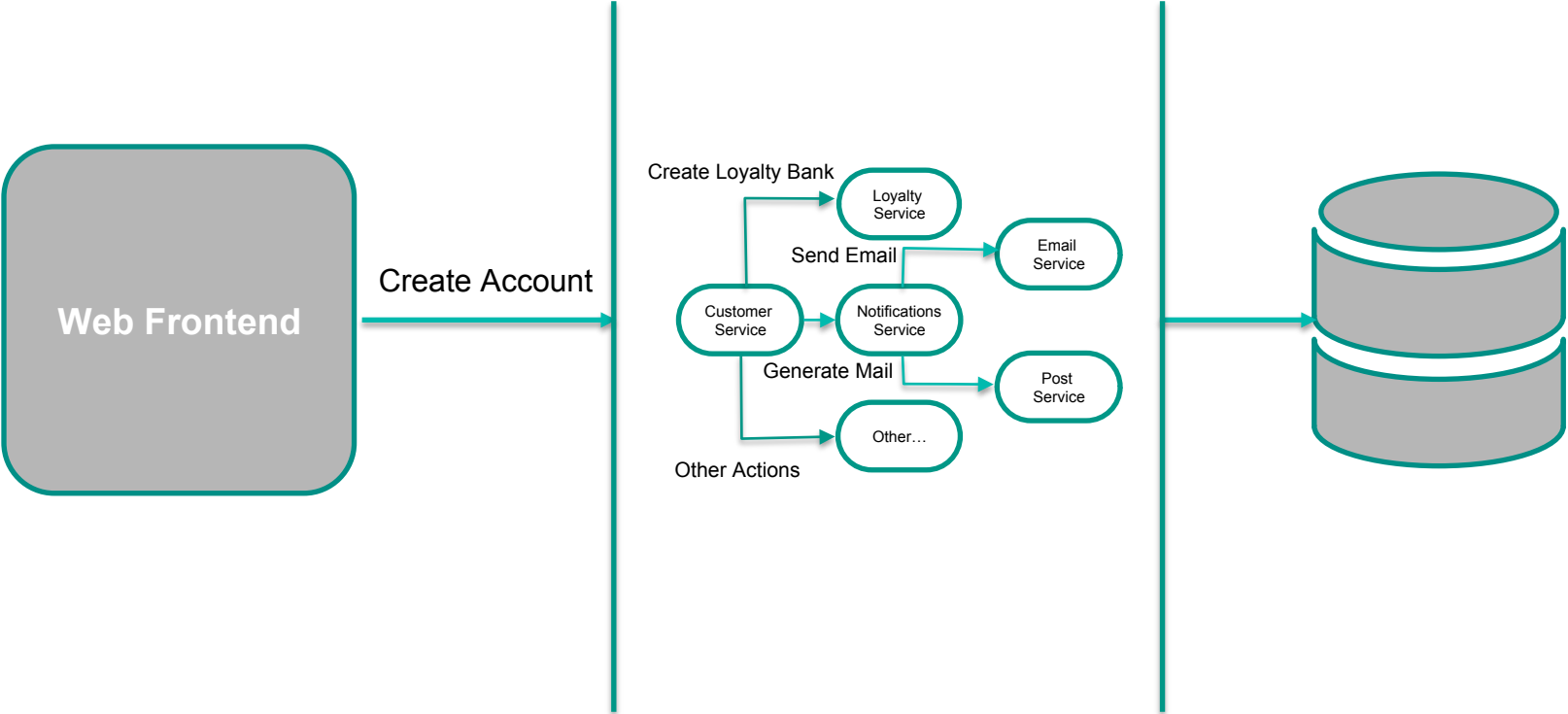
Pivotal®

Microservices Architectures

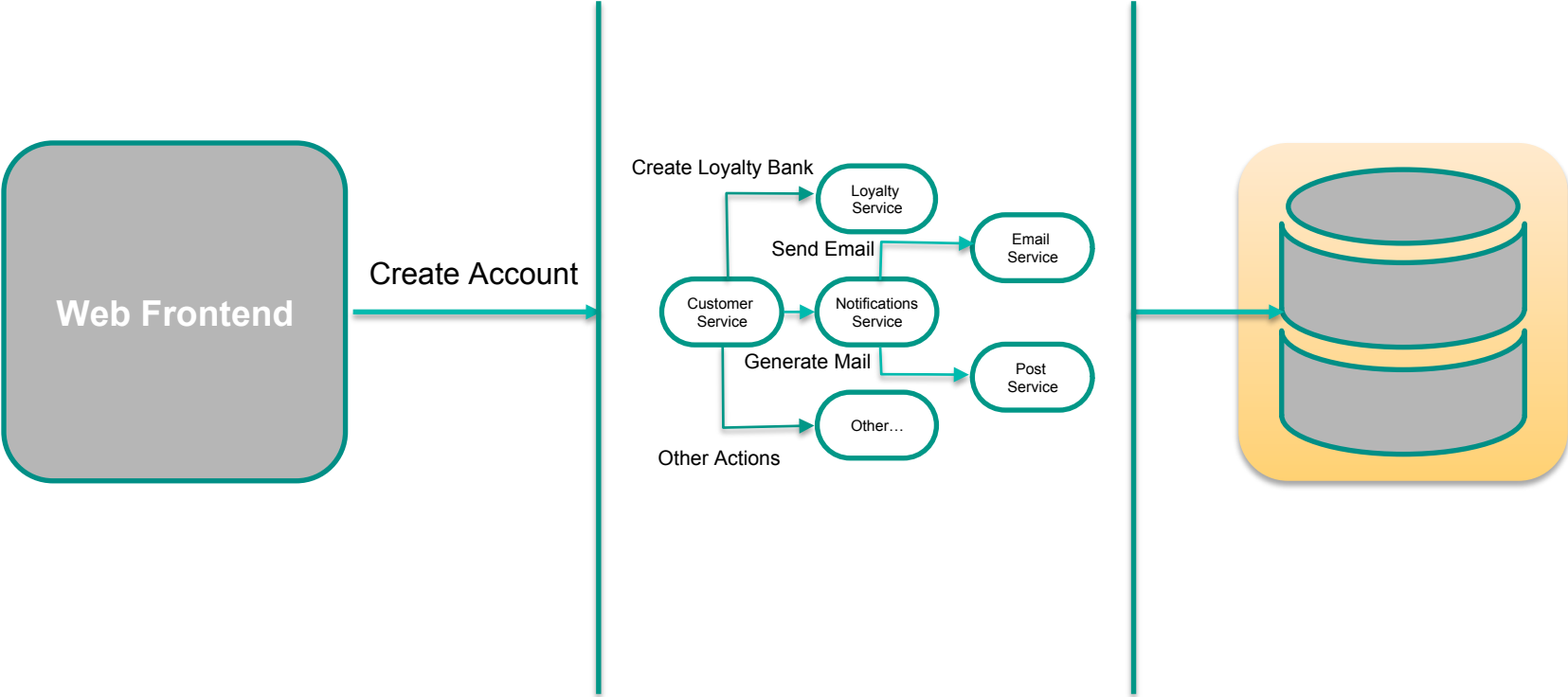




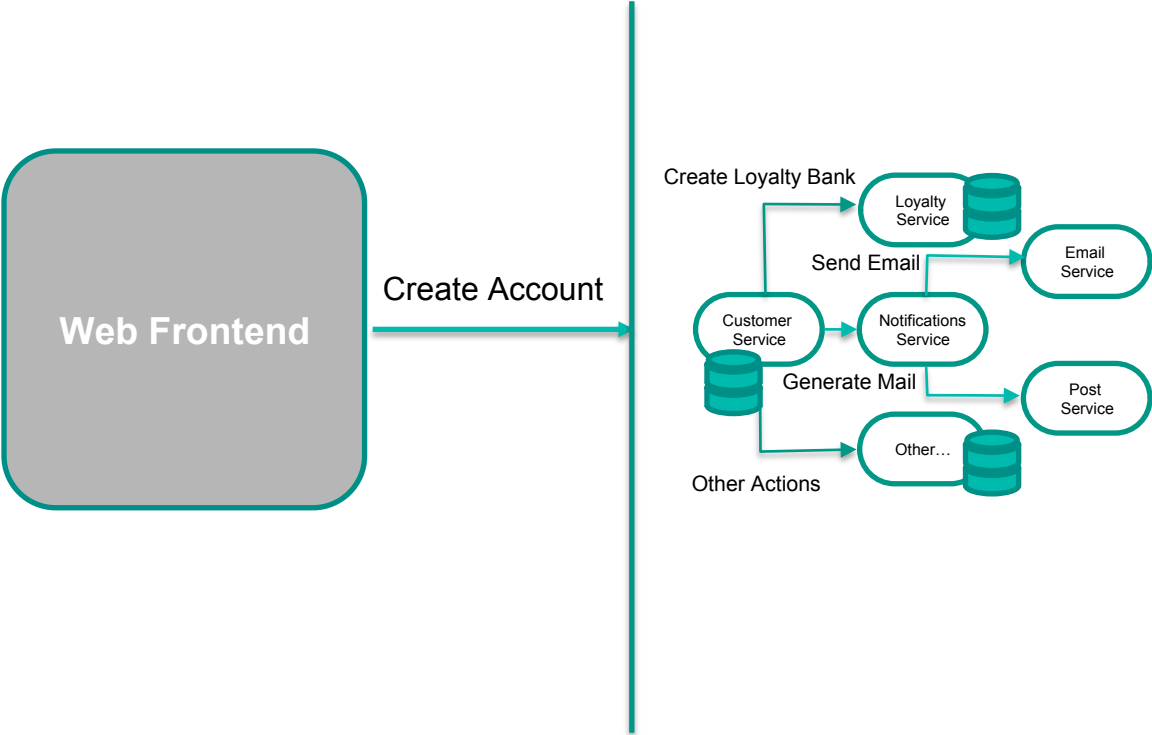
Core Business uServices



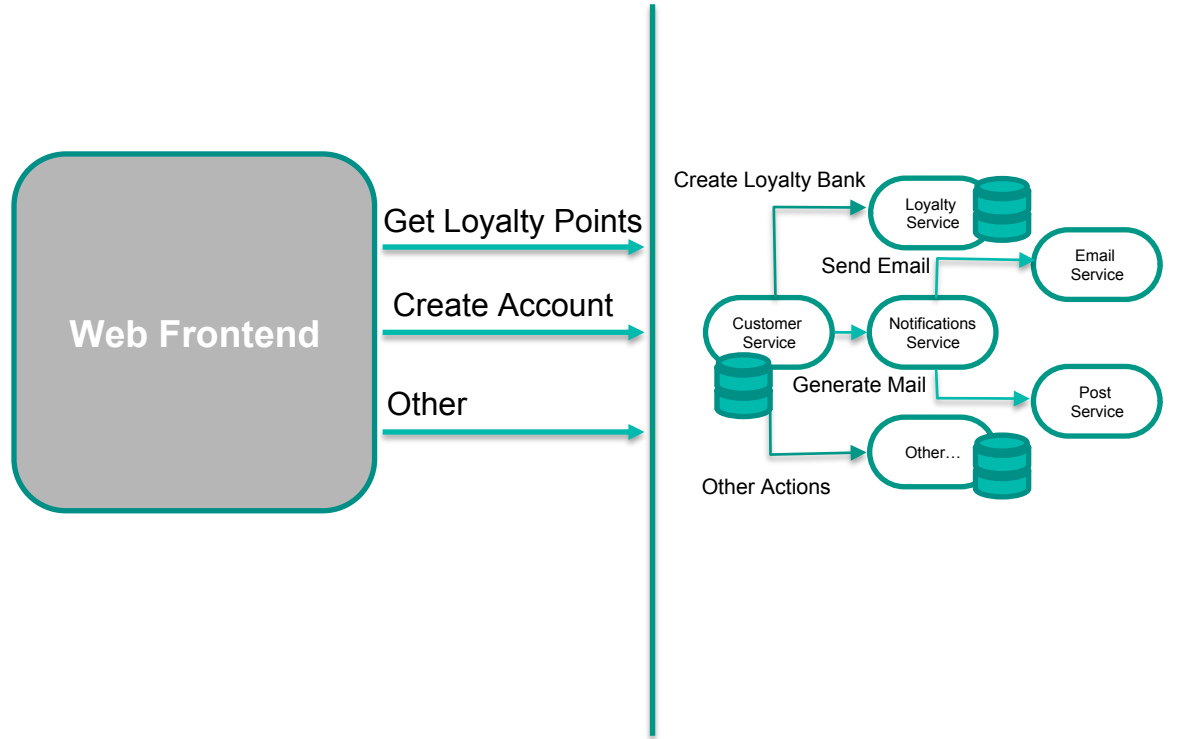
Core Business uServices



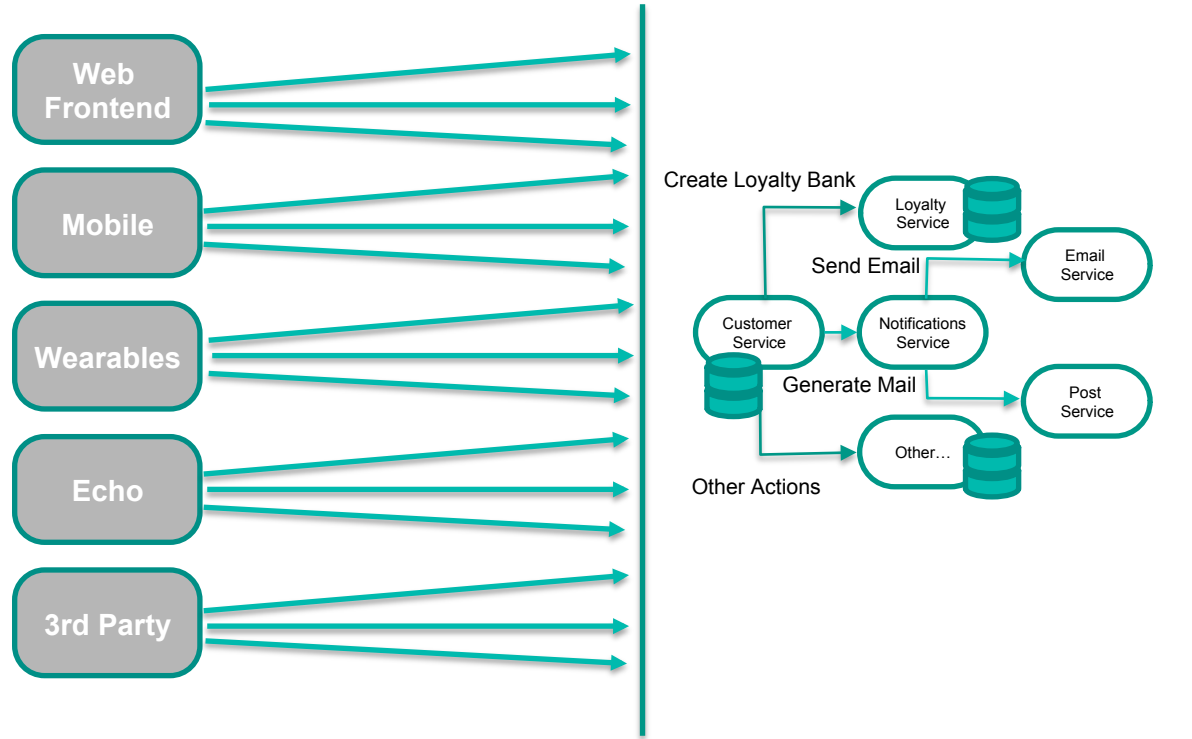
Core Business uServices



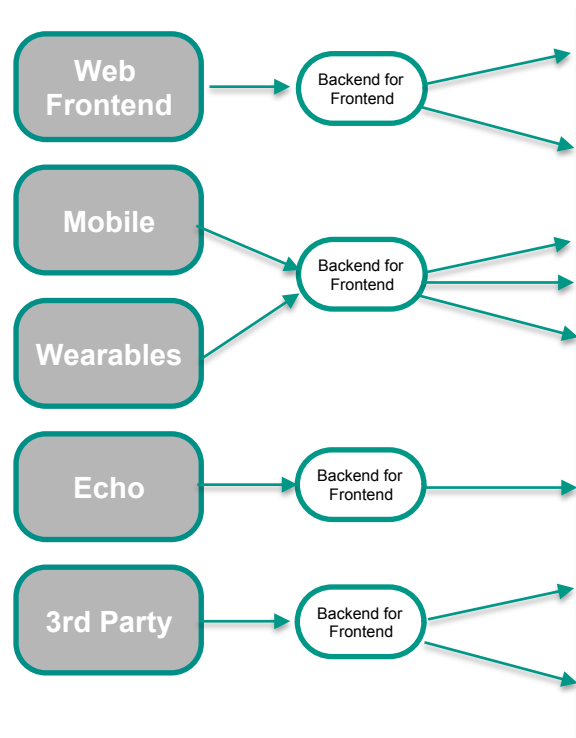
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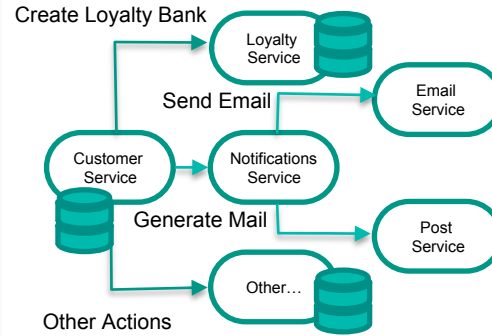
Core Business uServices

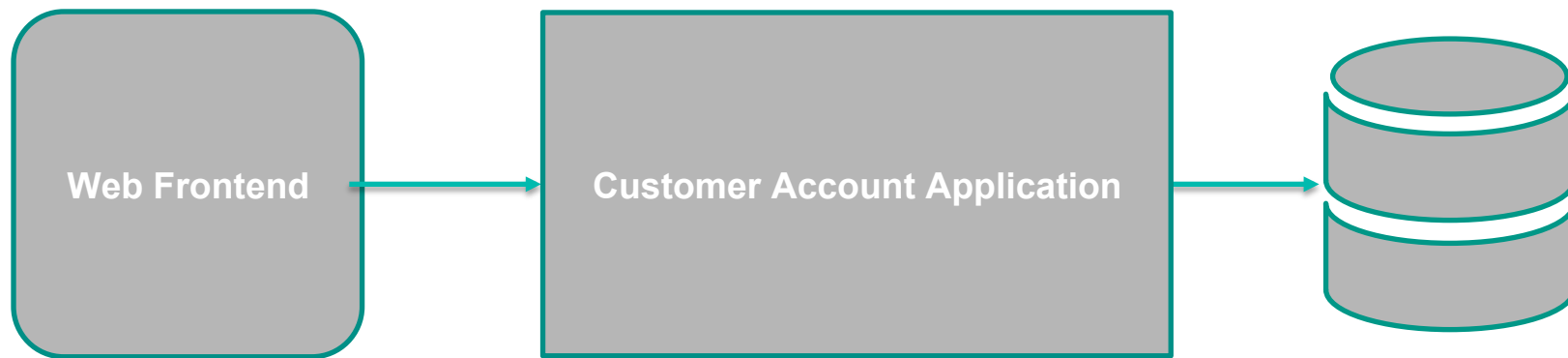


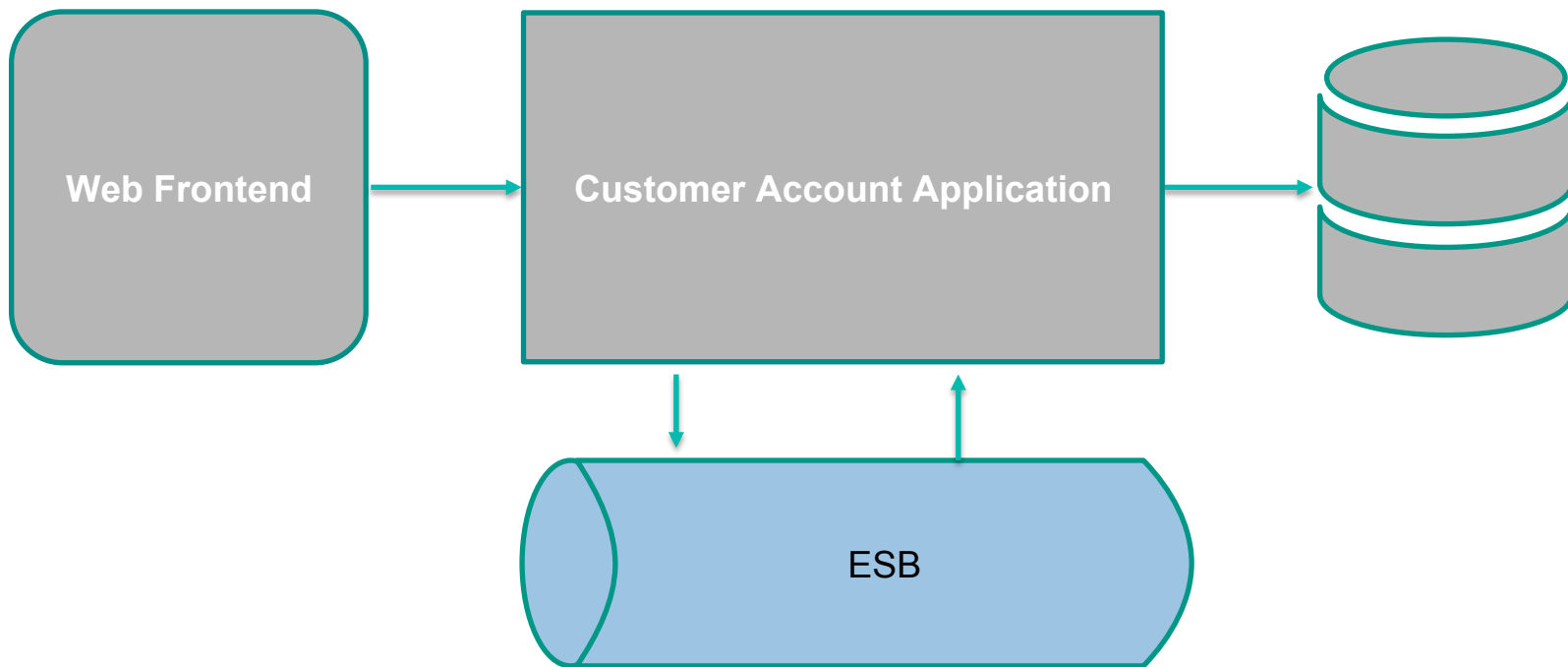
API Gateway uServices

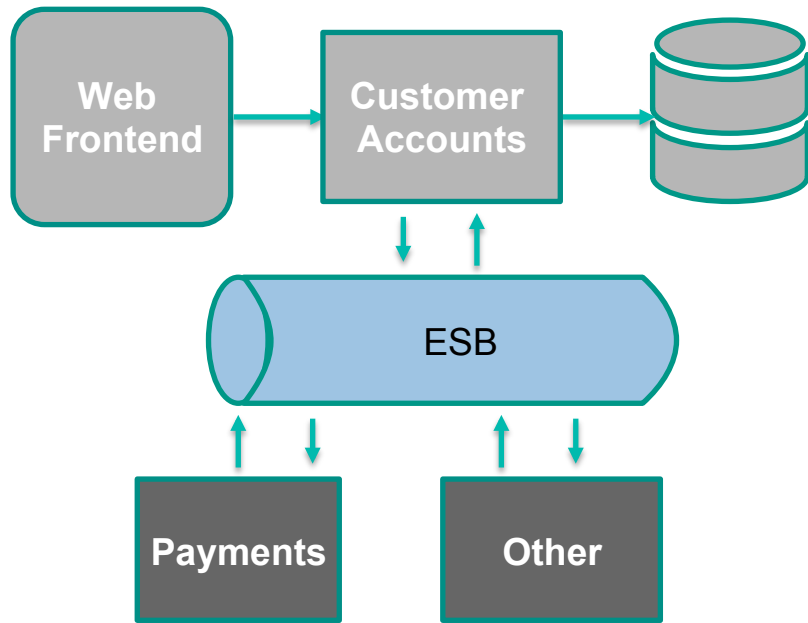


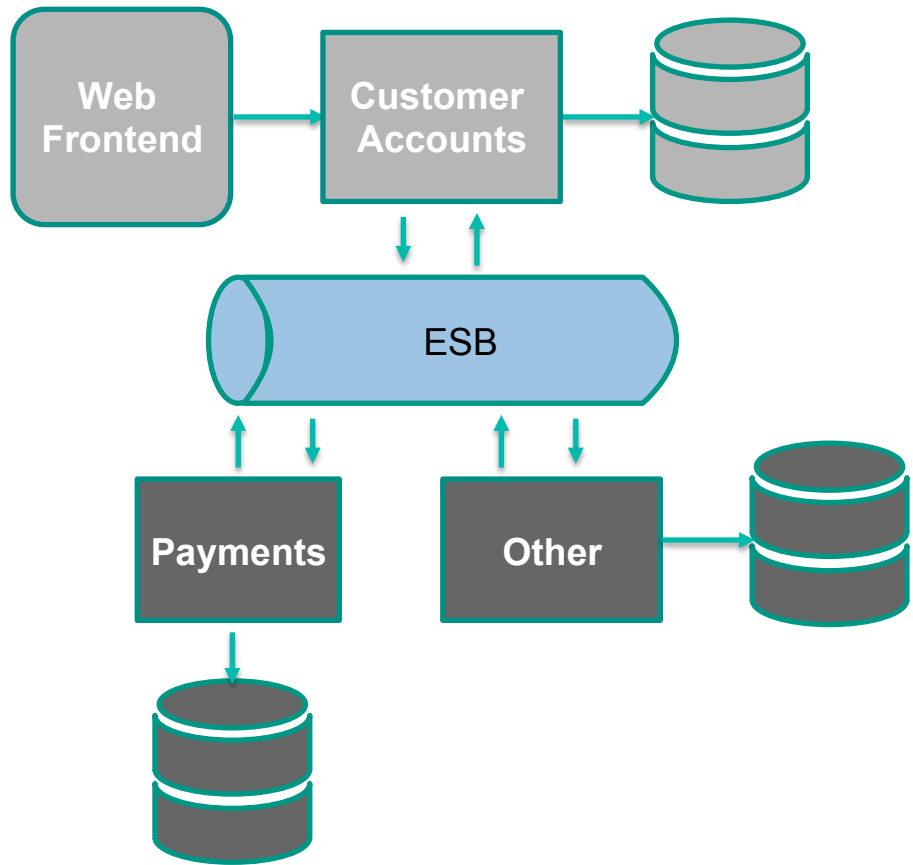
Core Business uServices



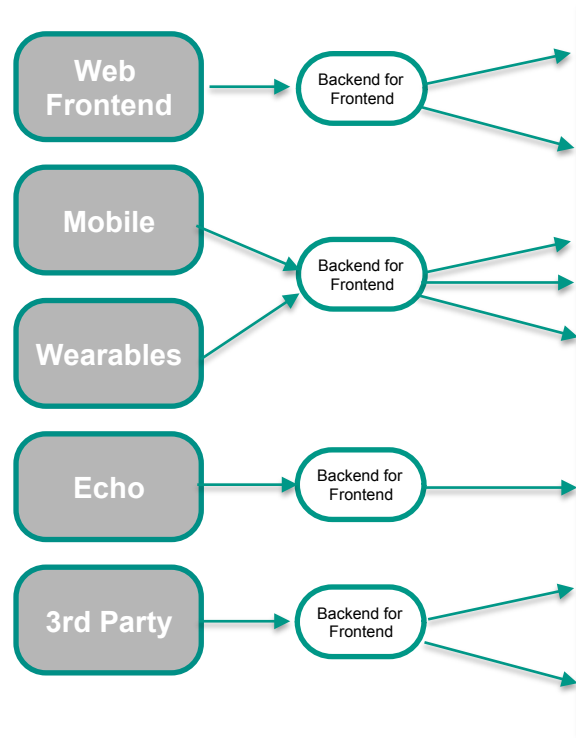




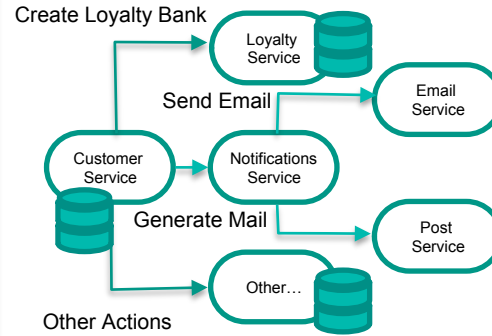


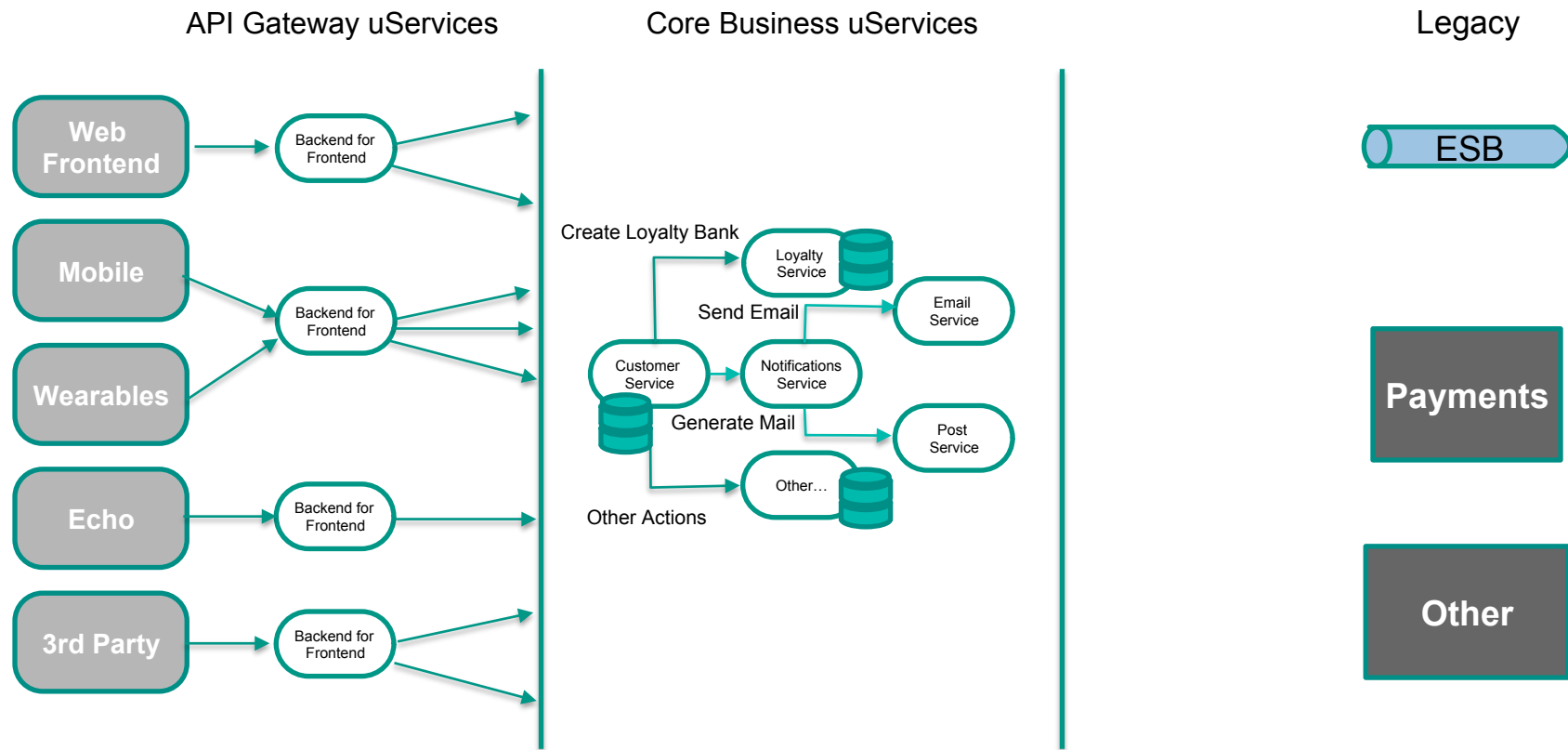


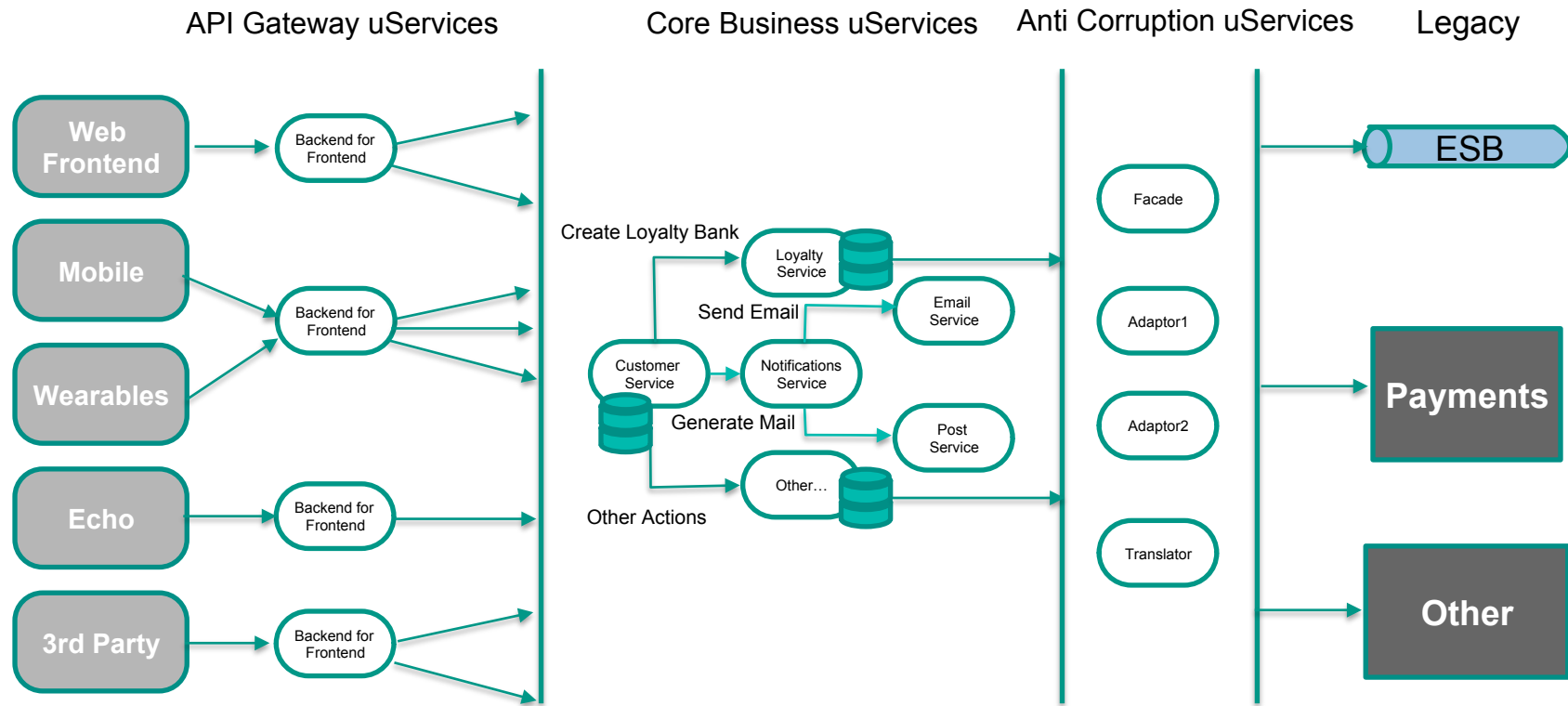
API Gateway uServices

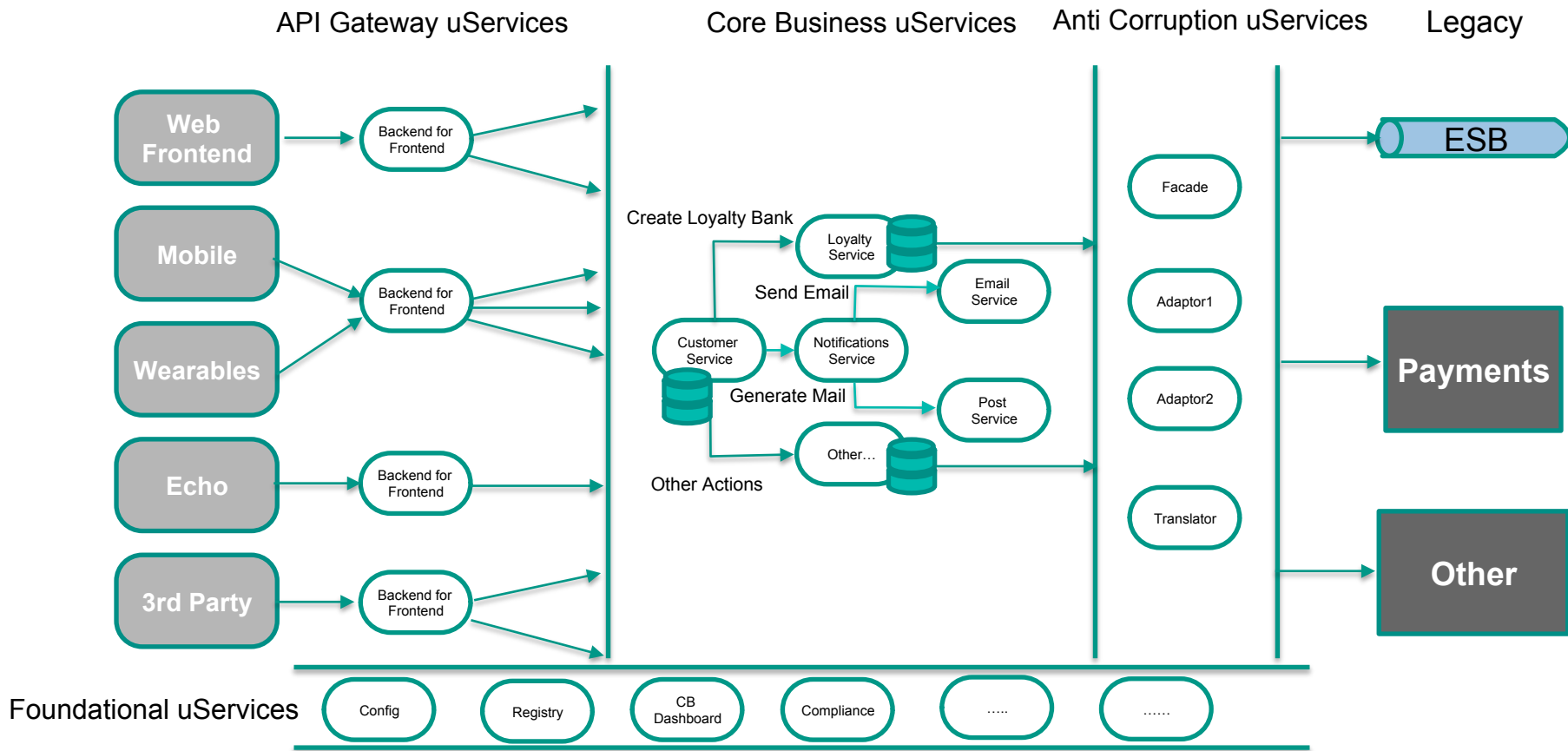


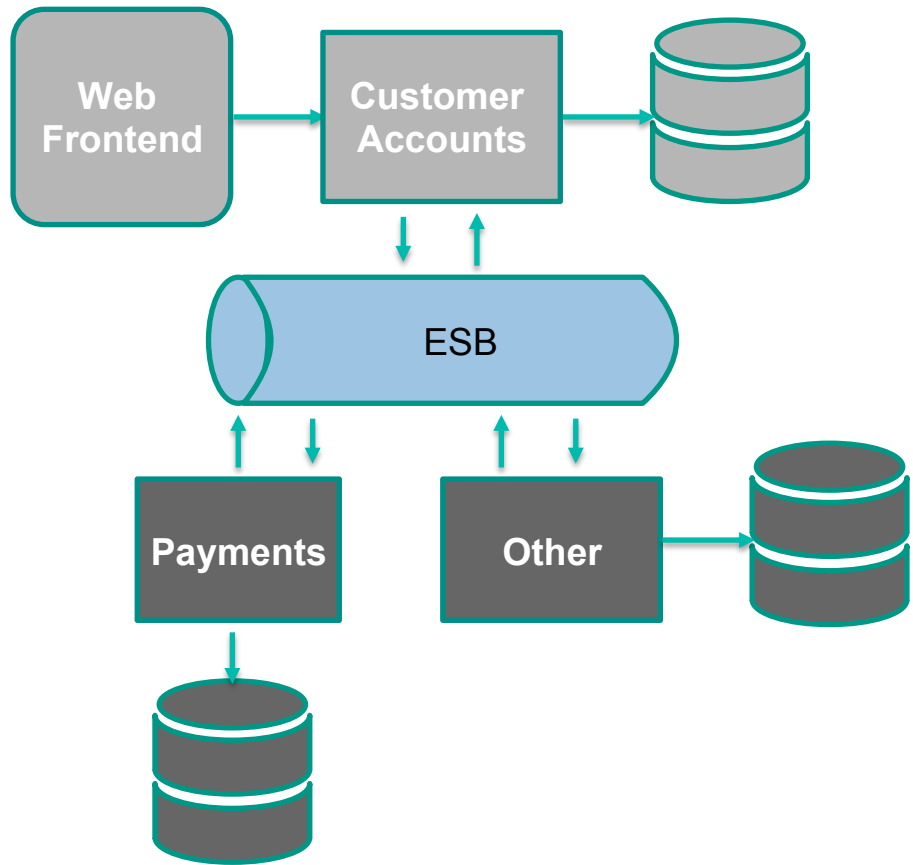
Core Business uServices

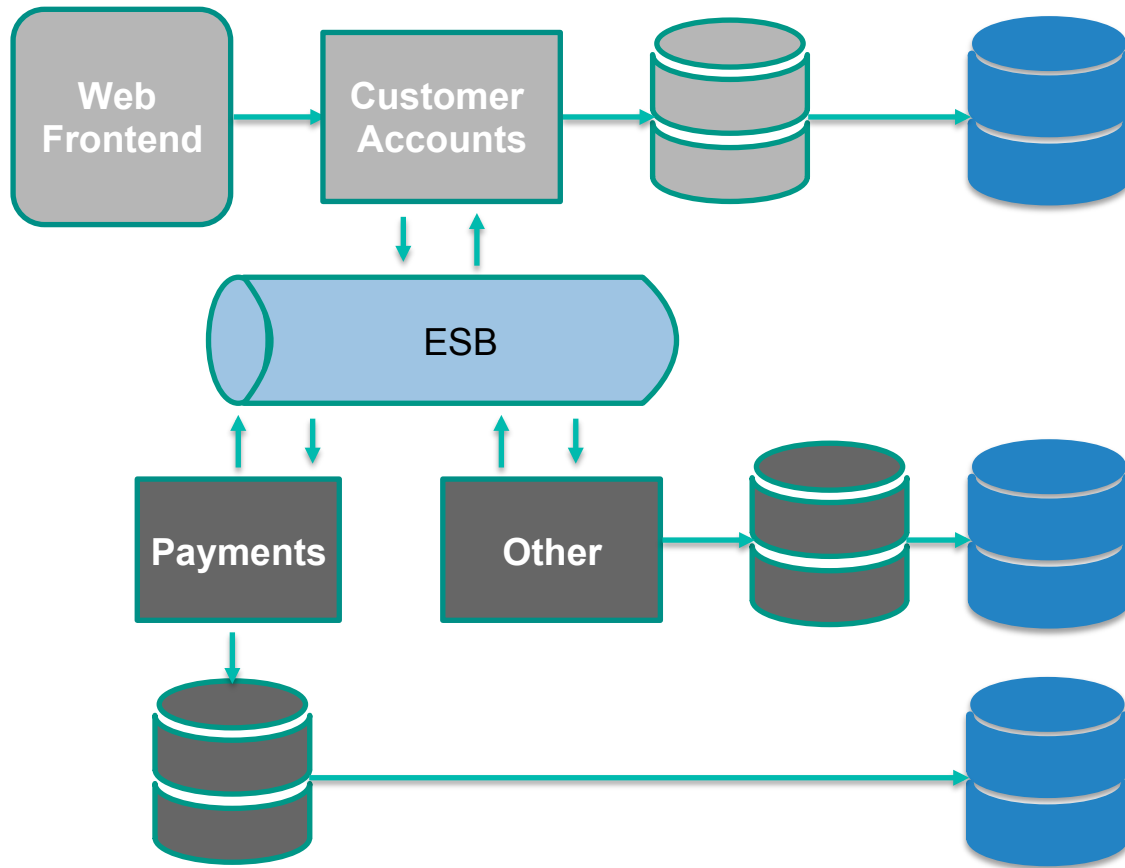


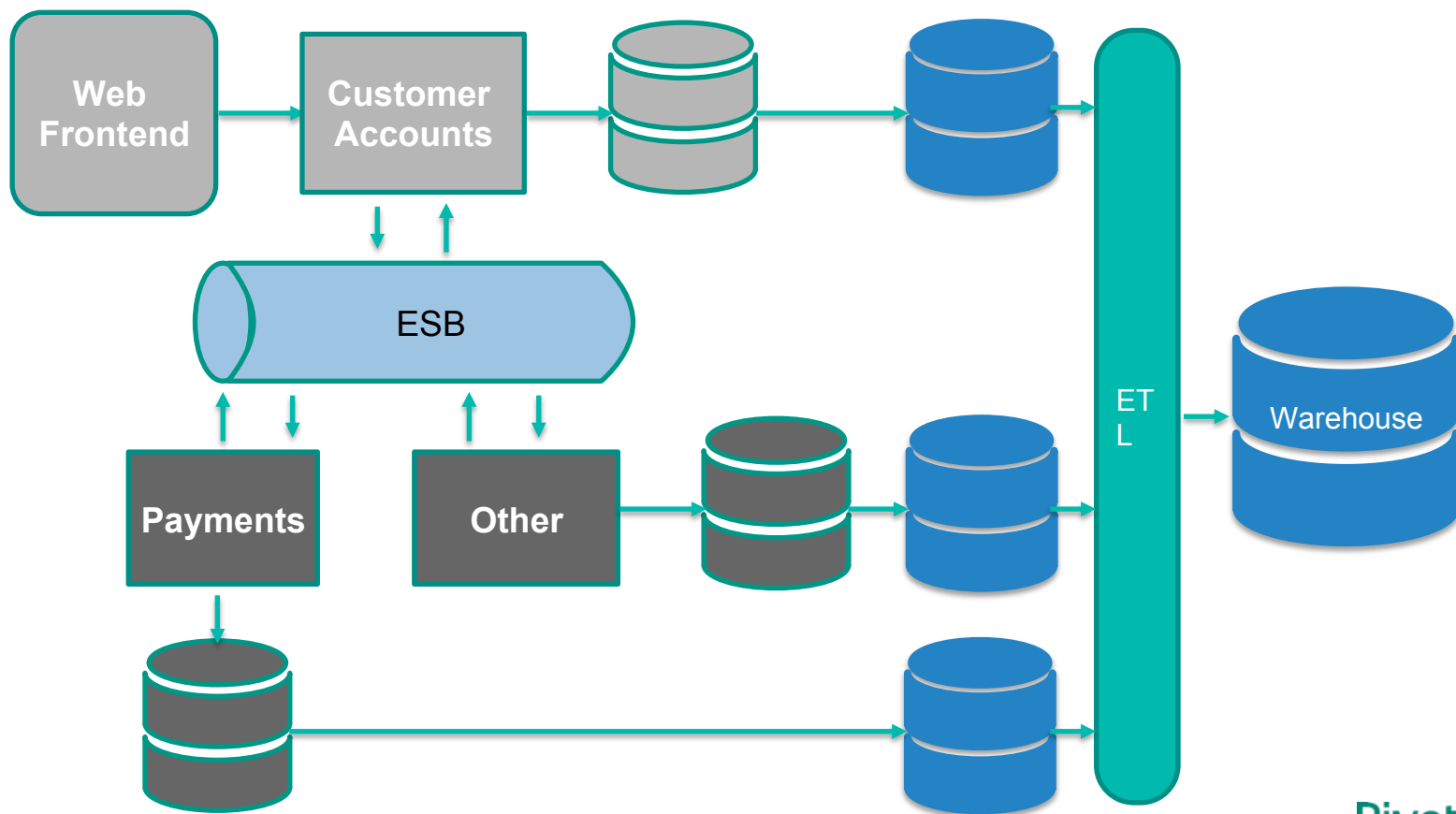


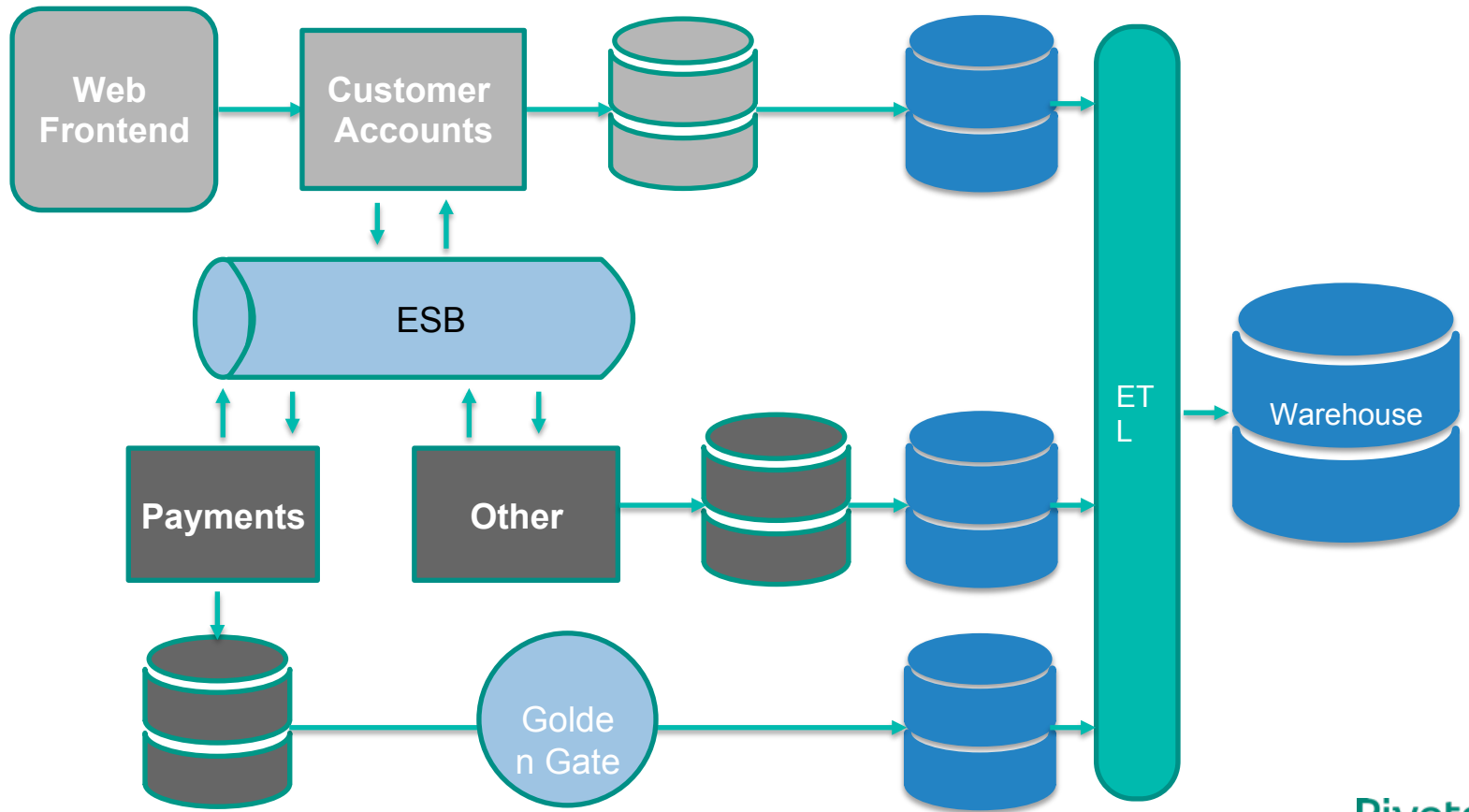


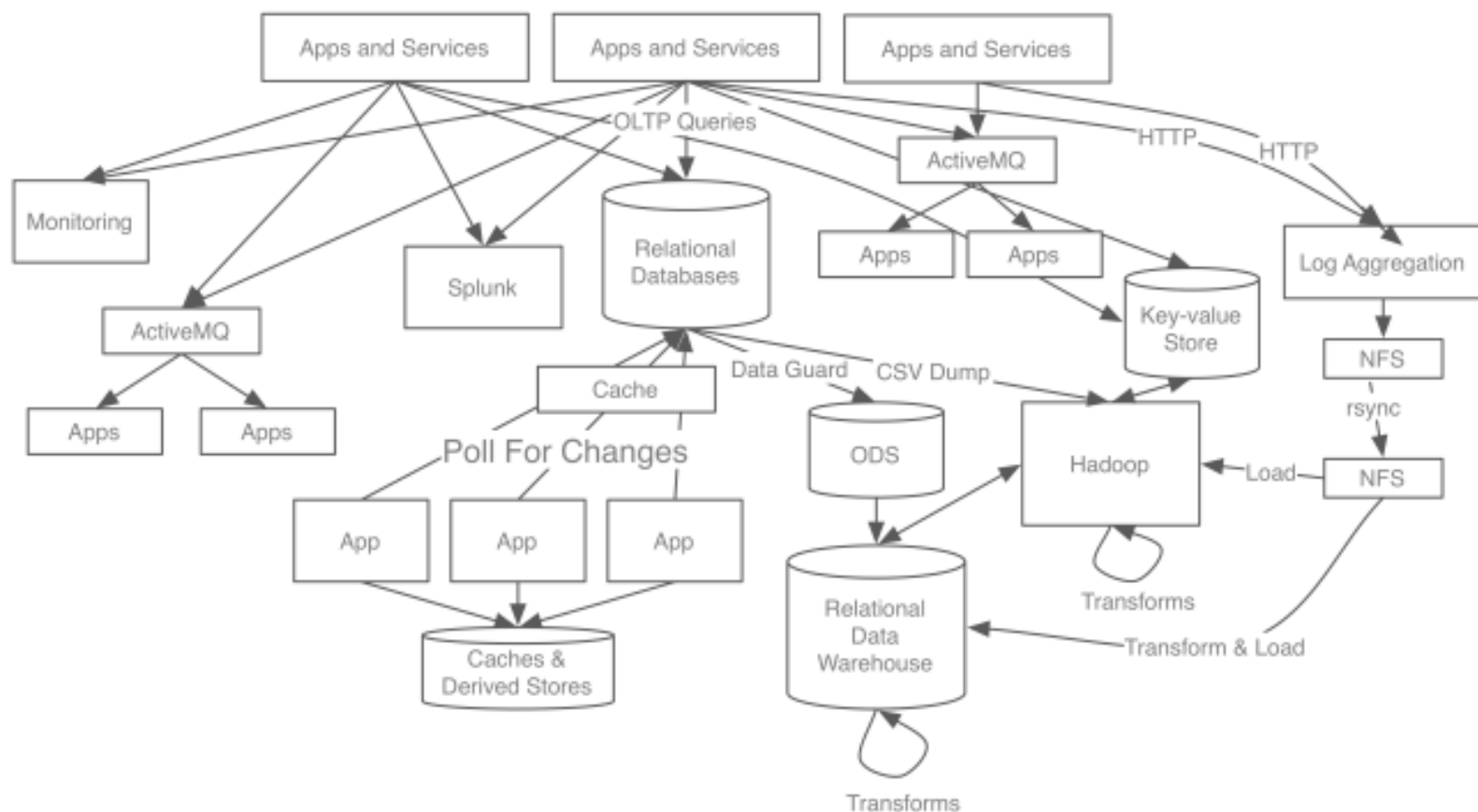


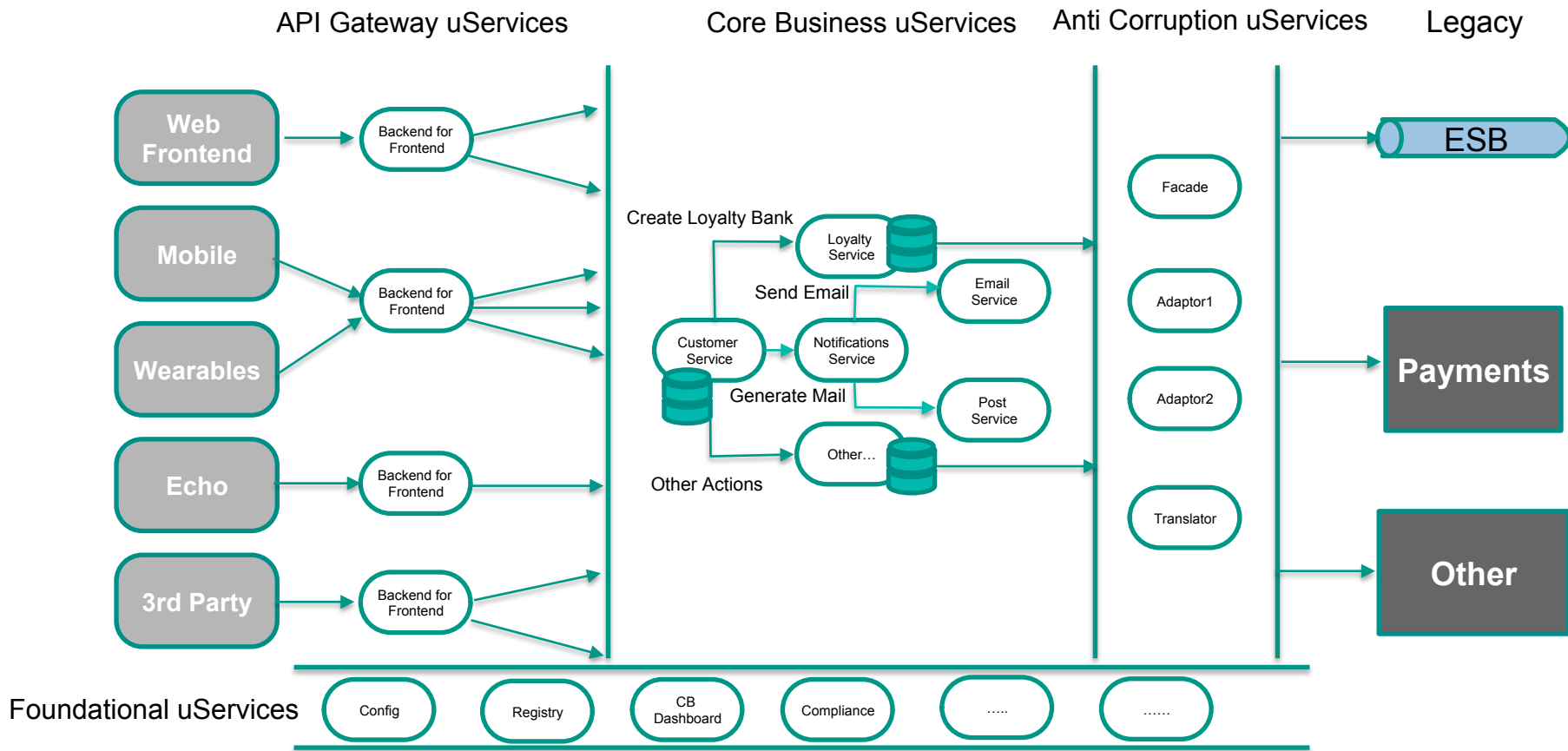




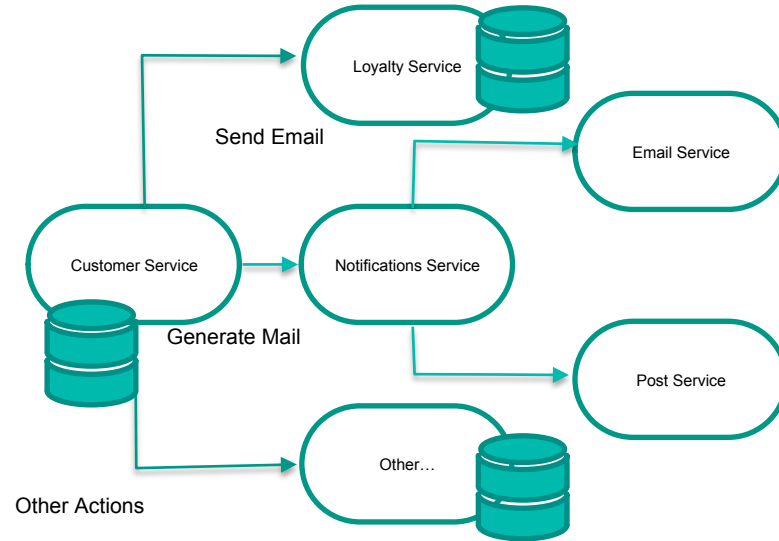






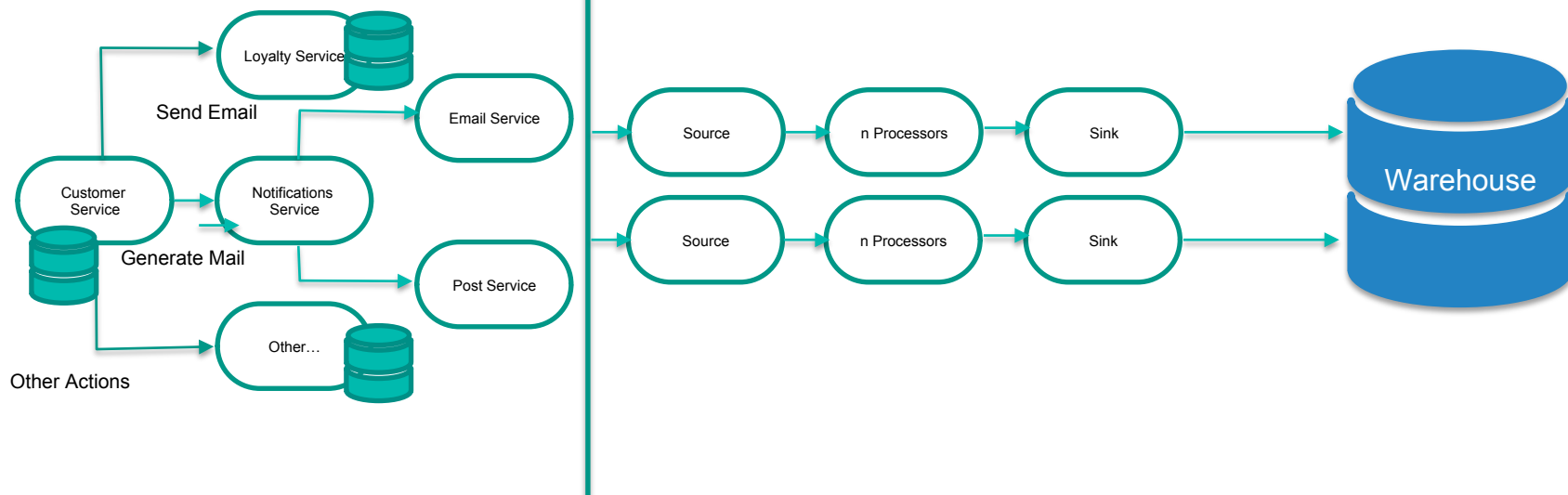


Core Business uServices

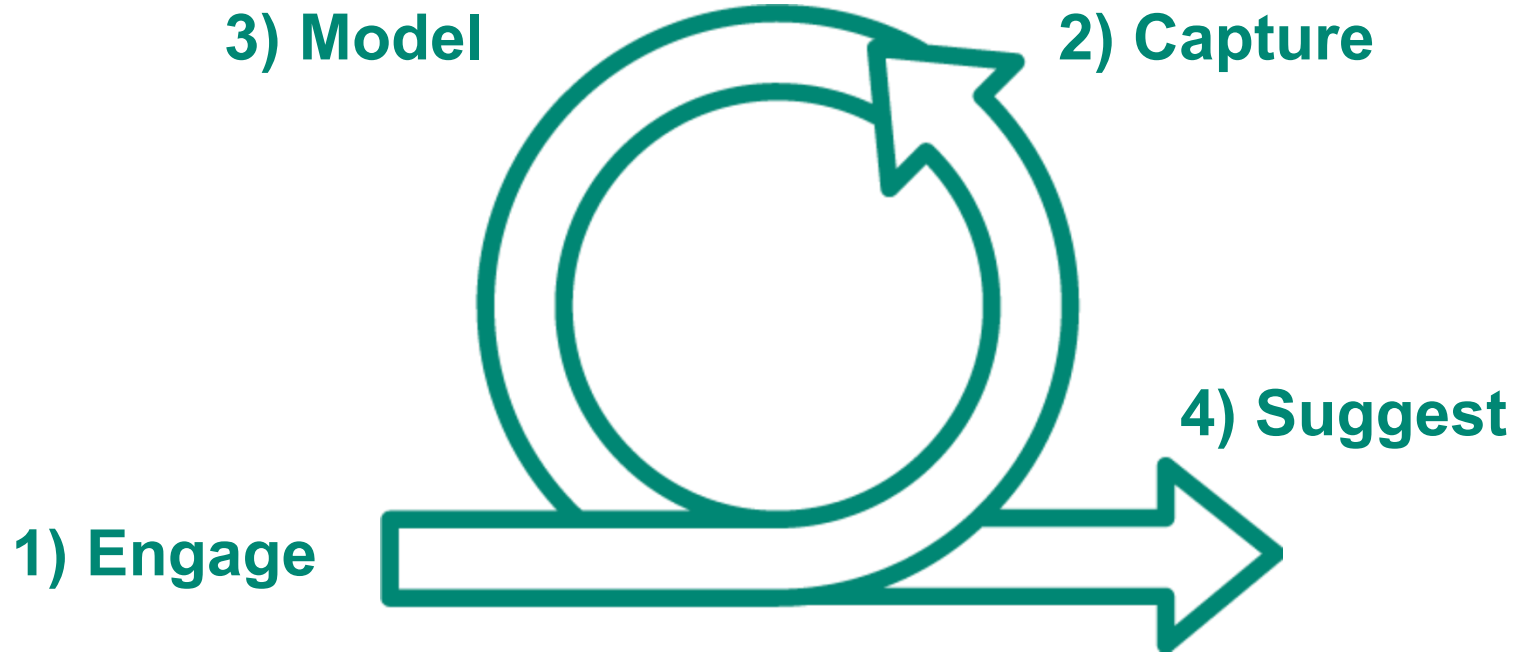


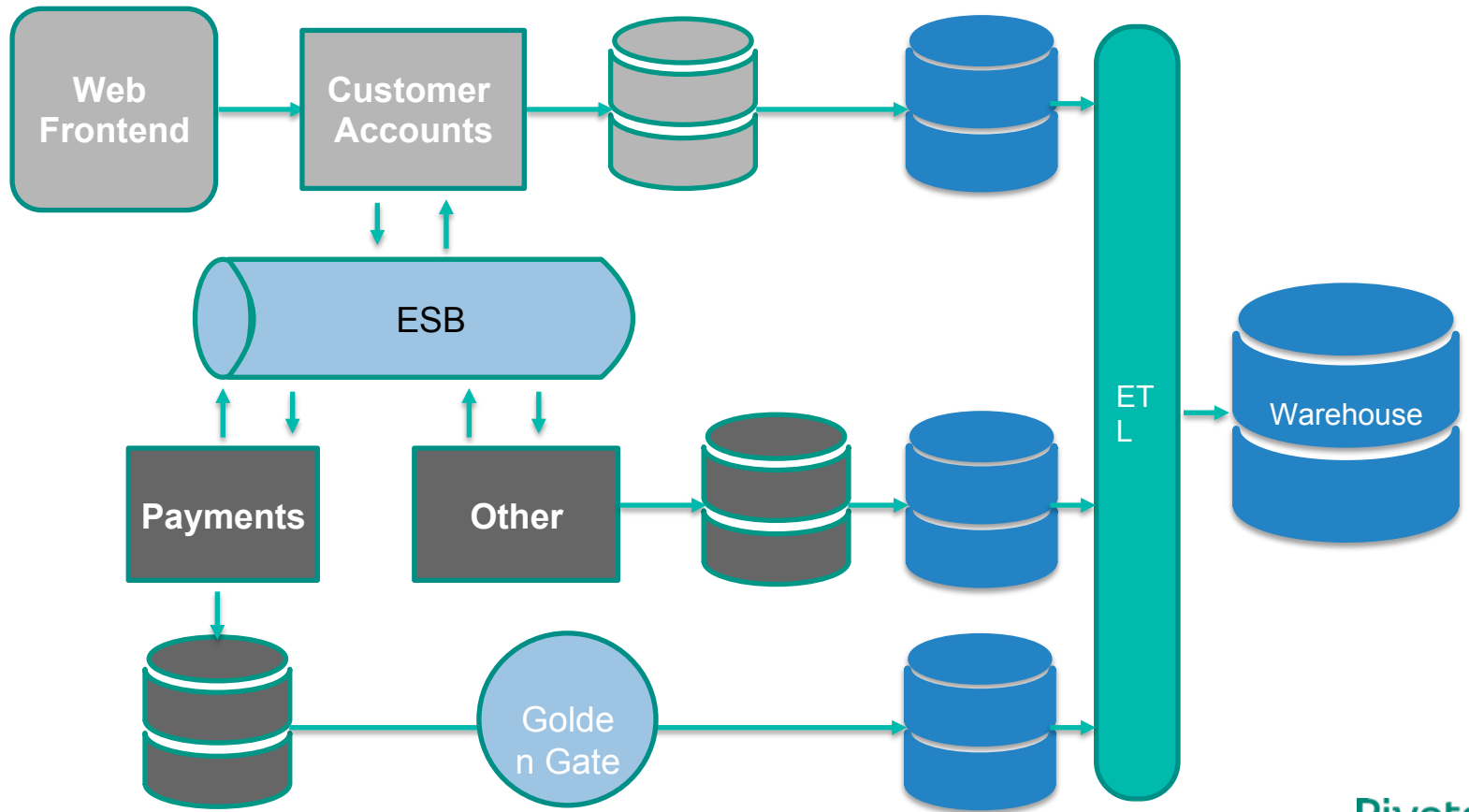
Core Business uServices

Data uServices



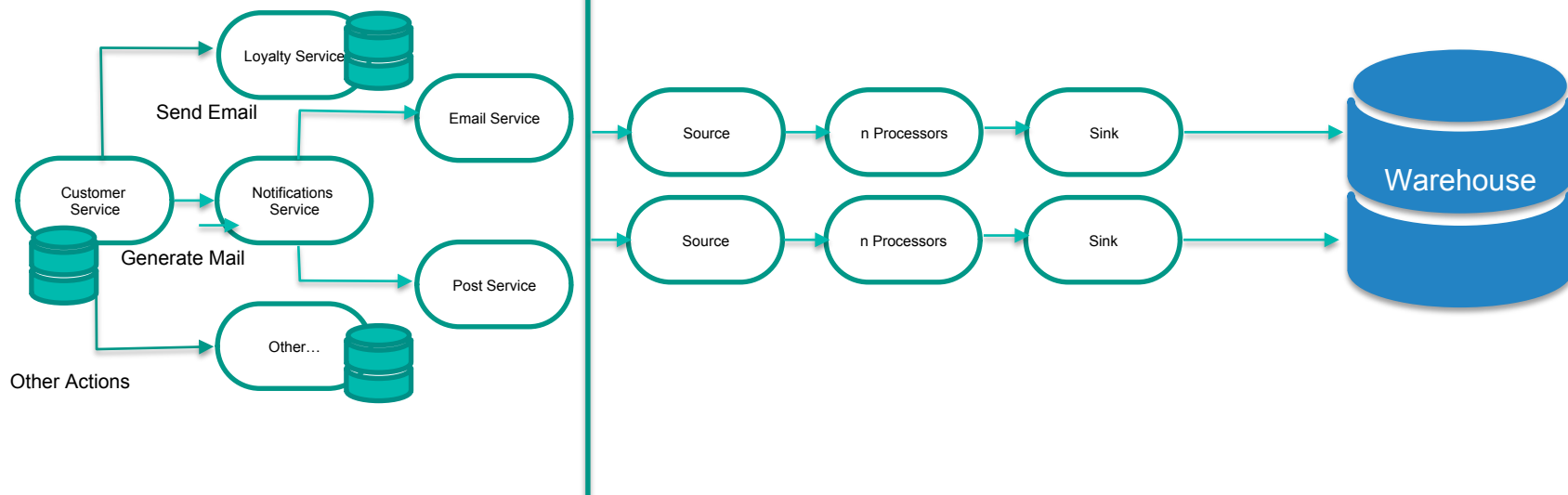
What about Smart Apps





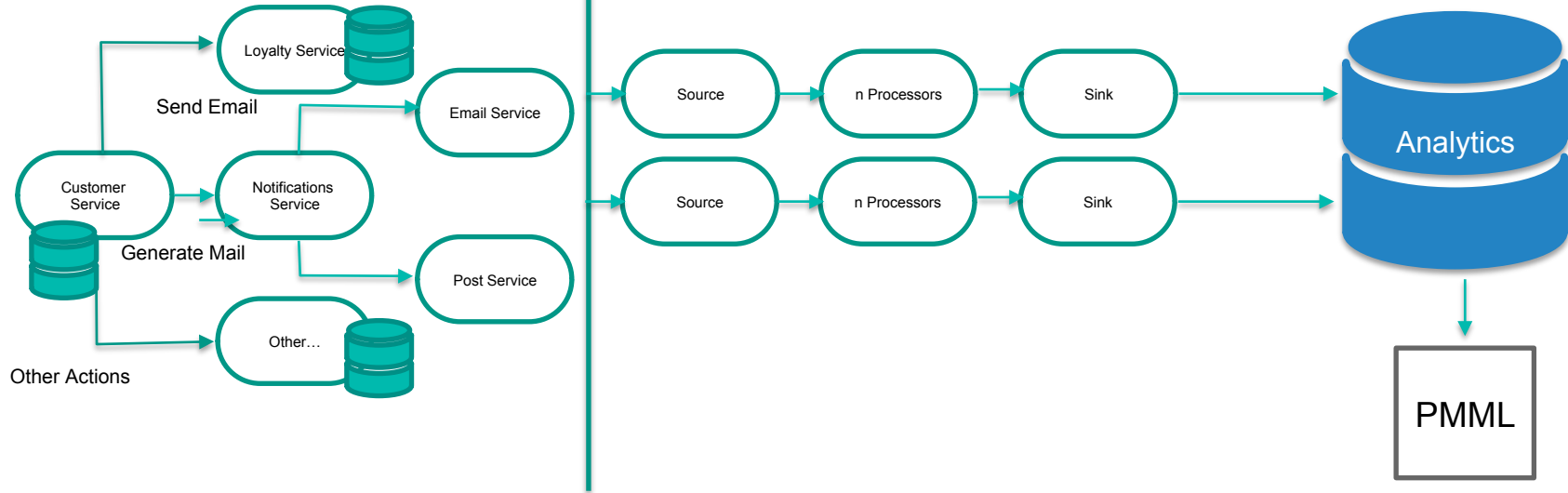
Core Business uServices

Data uServices



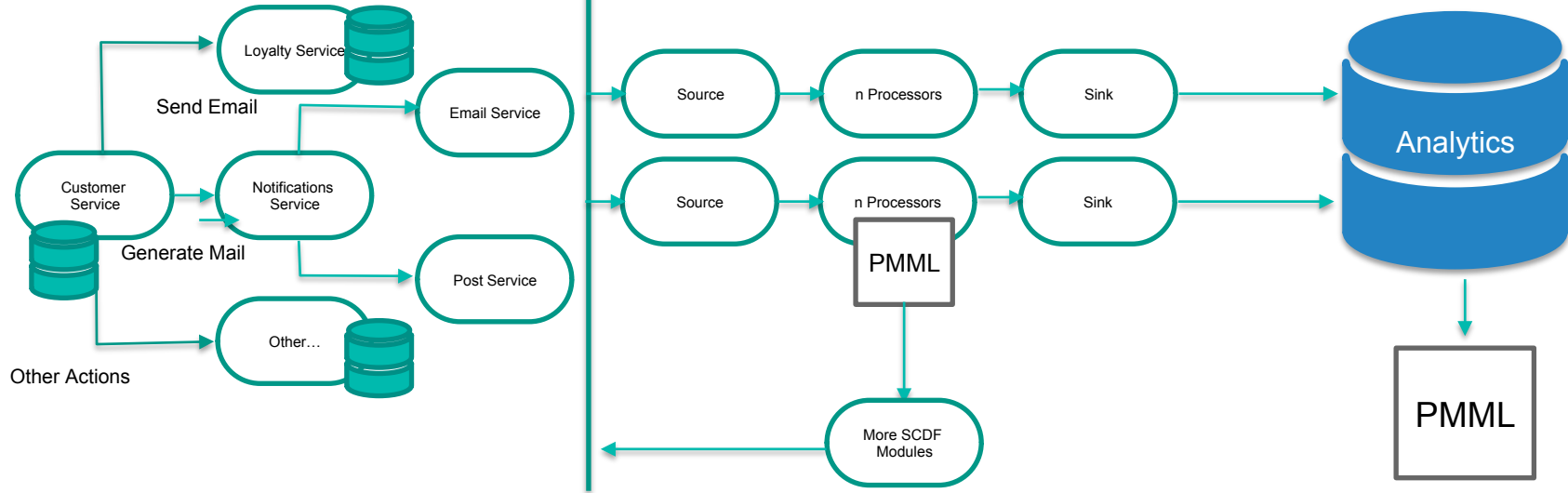
Core Business uServices

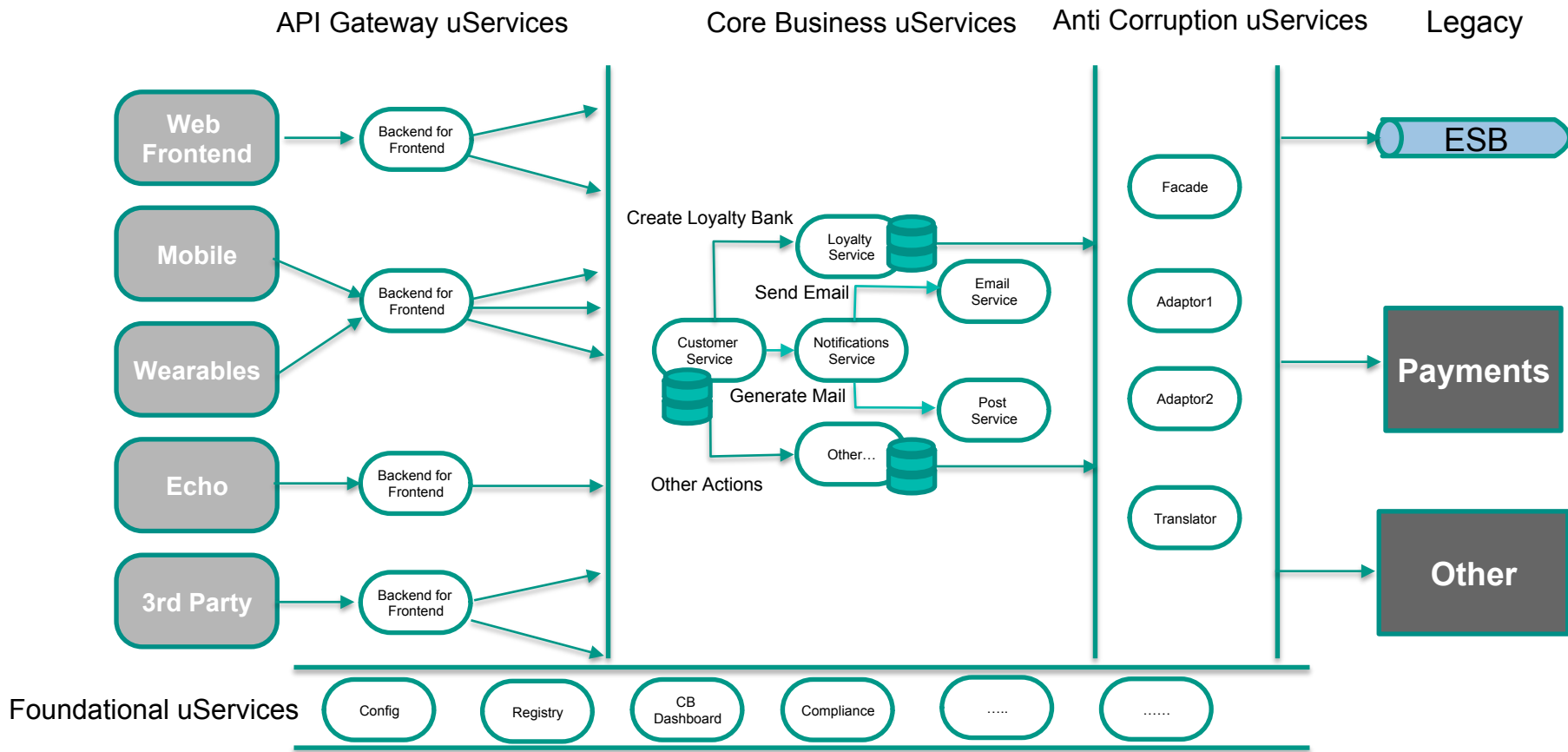
Data uServices



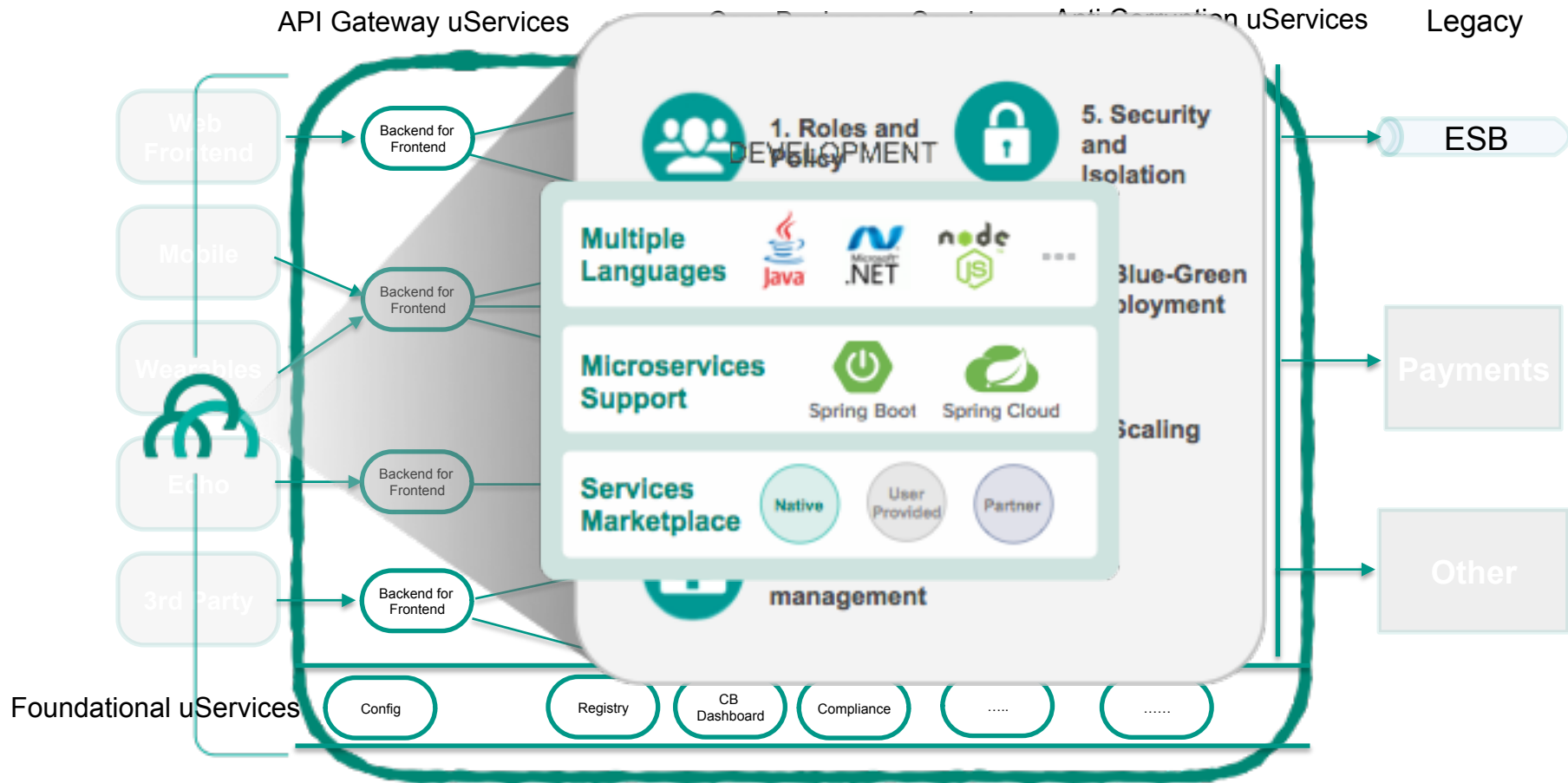
Core Business uServices

Data uServices

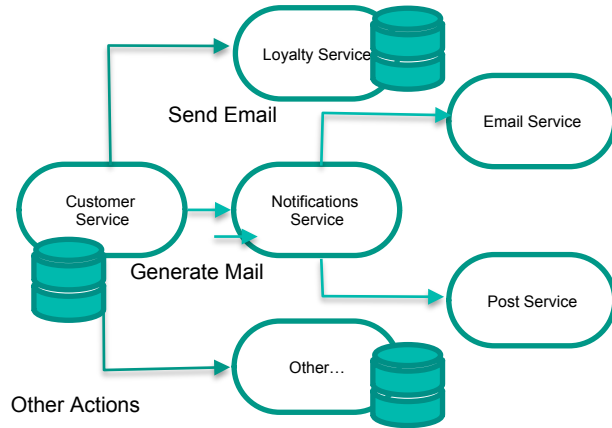




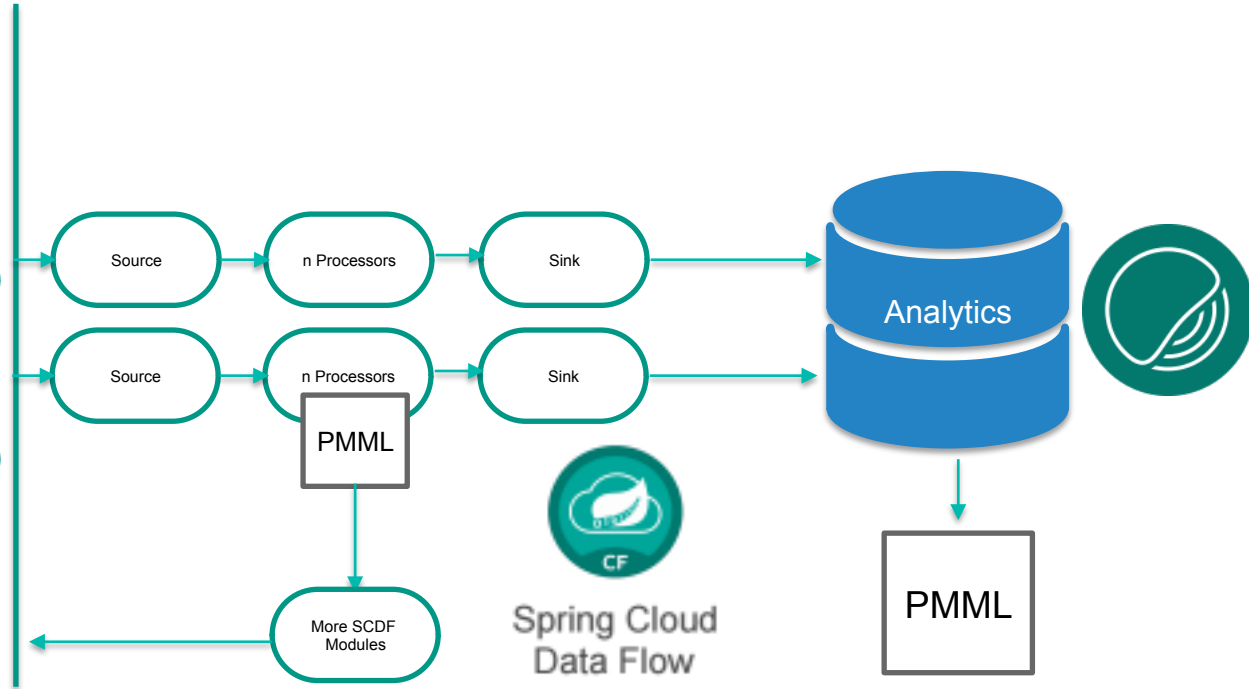
How do we help????



Core Business uServices



Data uServices



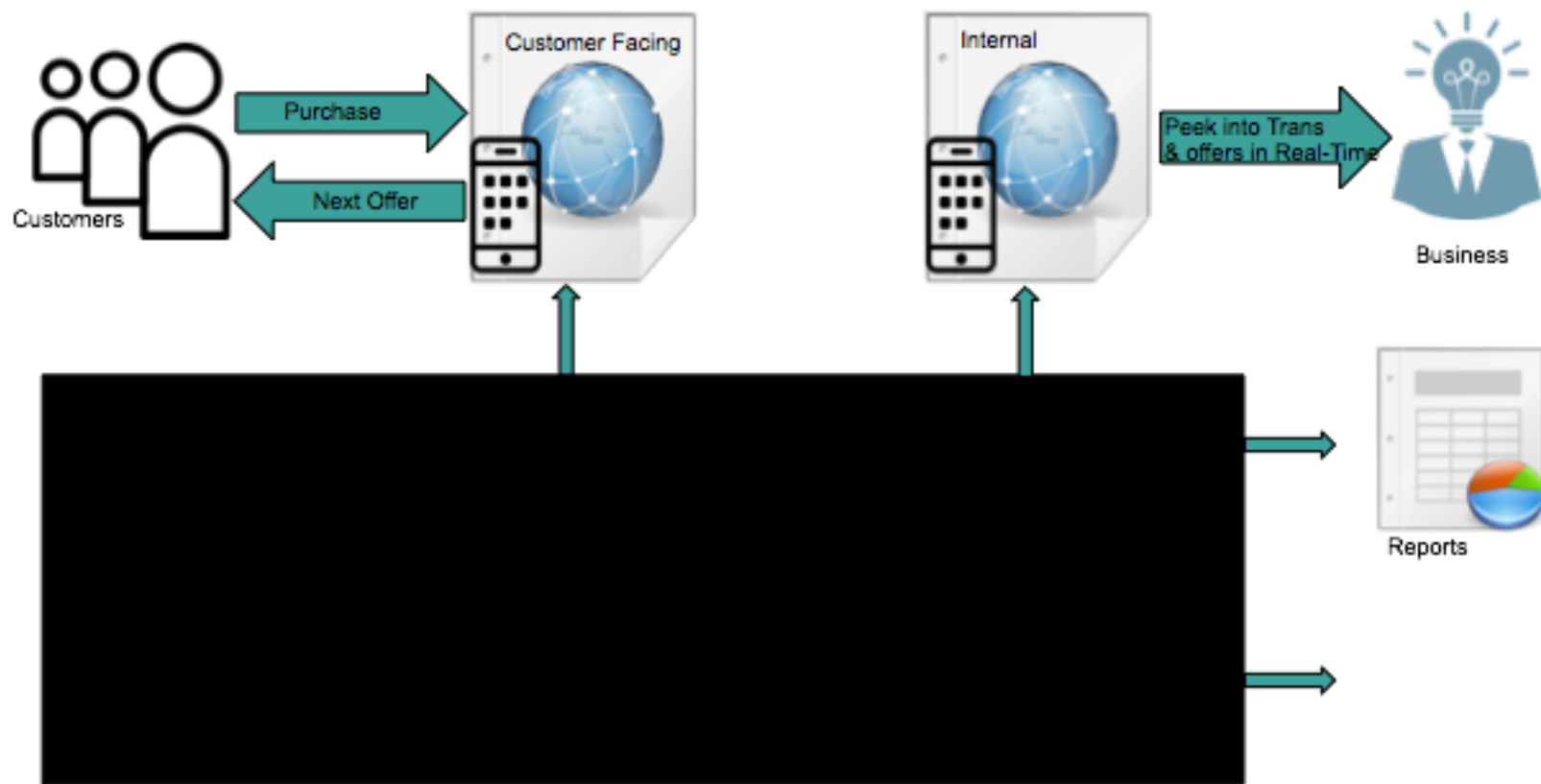
Other Considerations

- API / Service Versioning
- Documentation
- End to End Testing
- Organization
- Roles

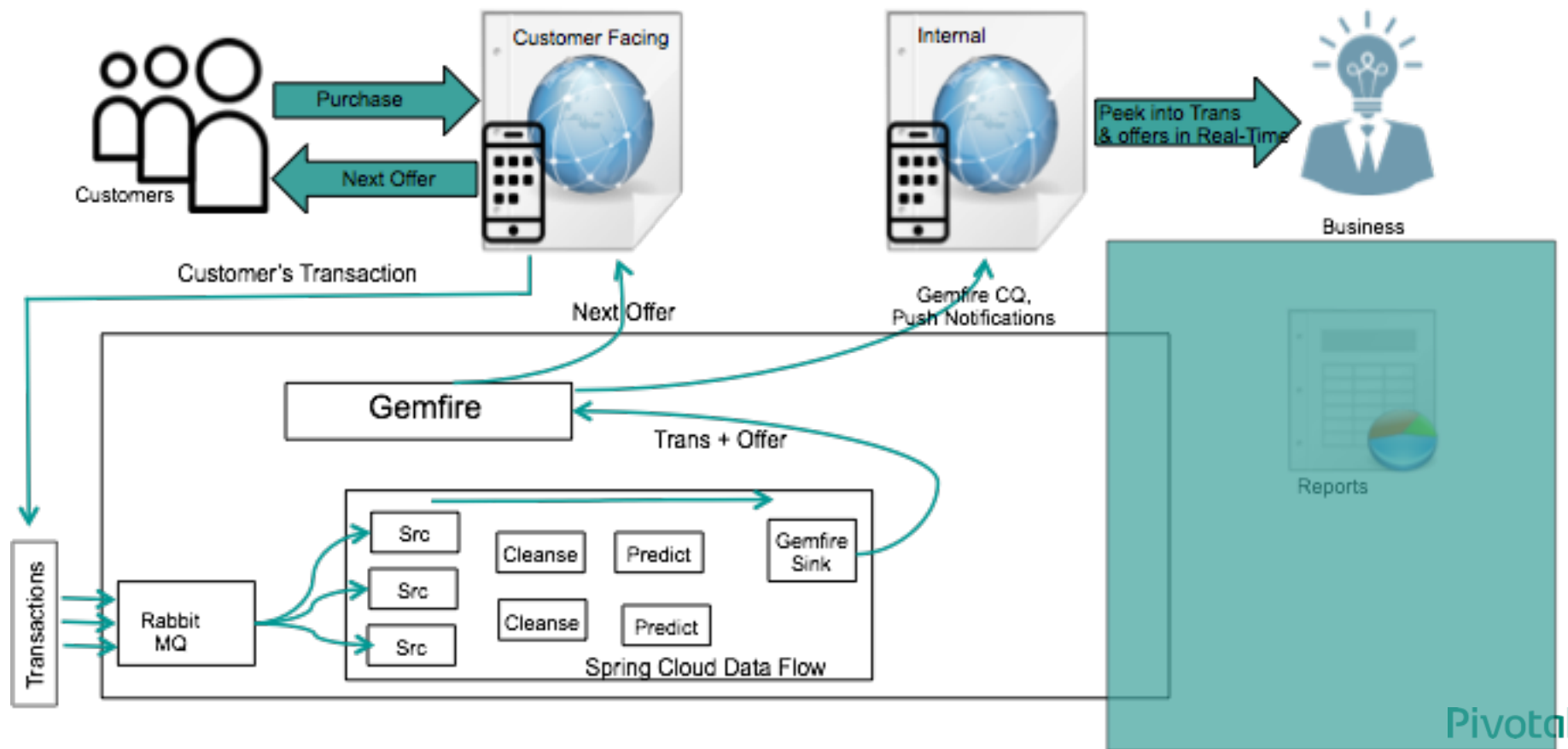
Summary

- Microservices - Benefits
- Persistence
- UI Interaction
- Legacy Integration
- Common Concerns
- Data Processing
- Pivotal

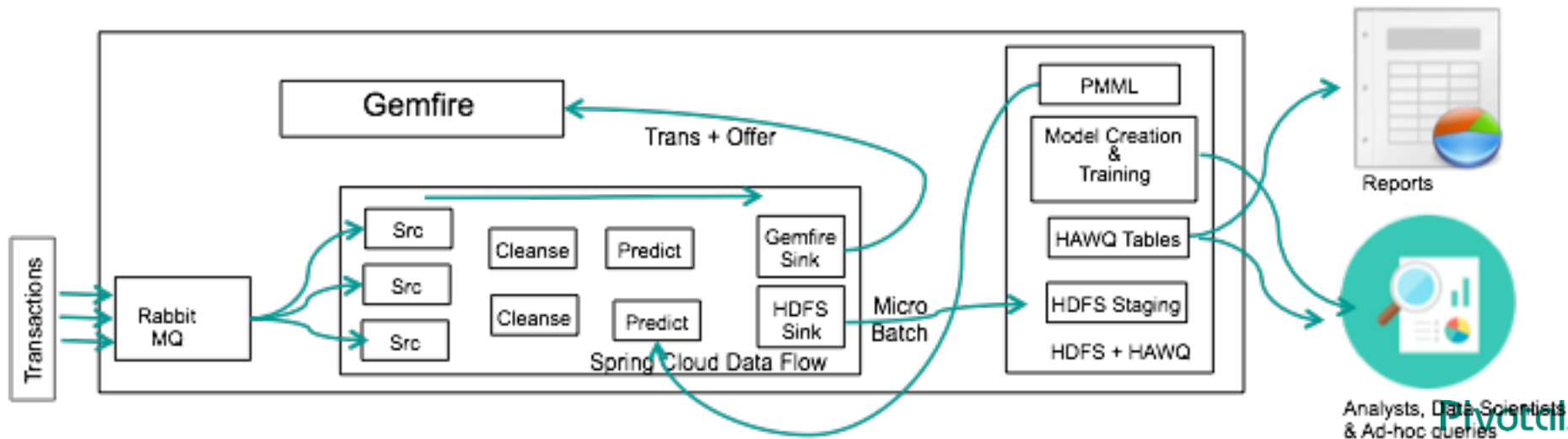
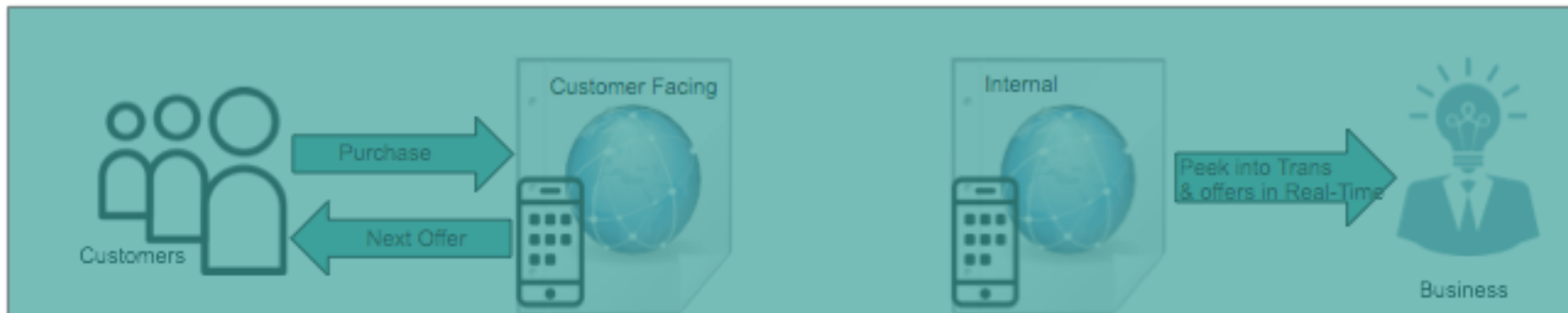
Synchrony Next Likely Purchase



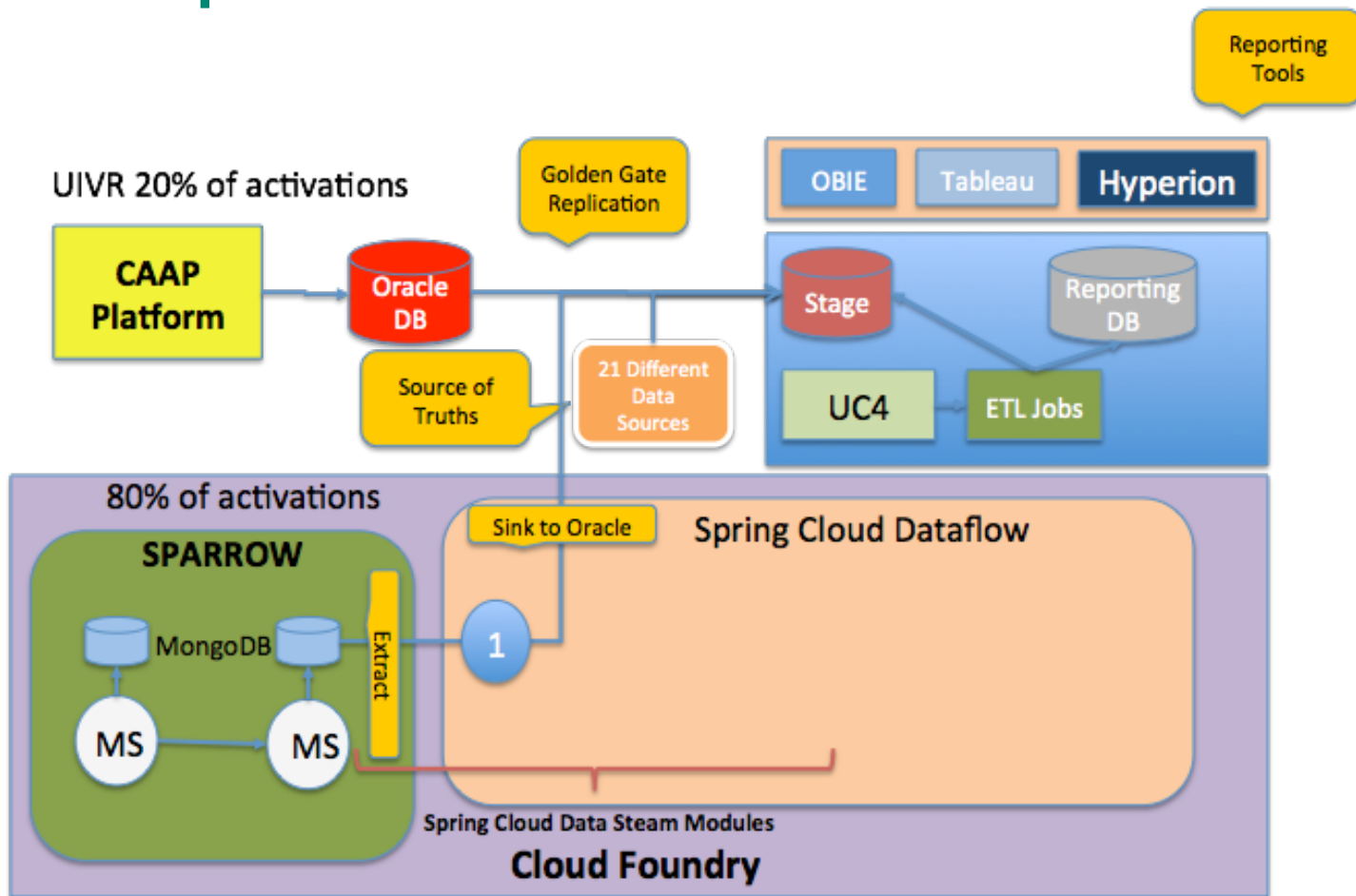
Synchrony Next Likely Purchase



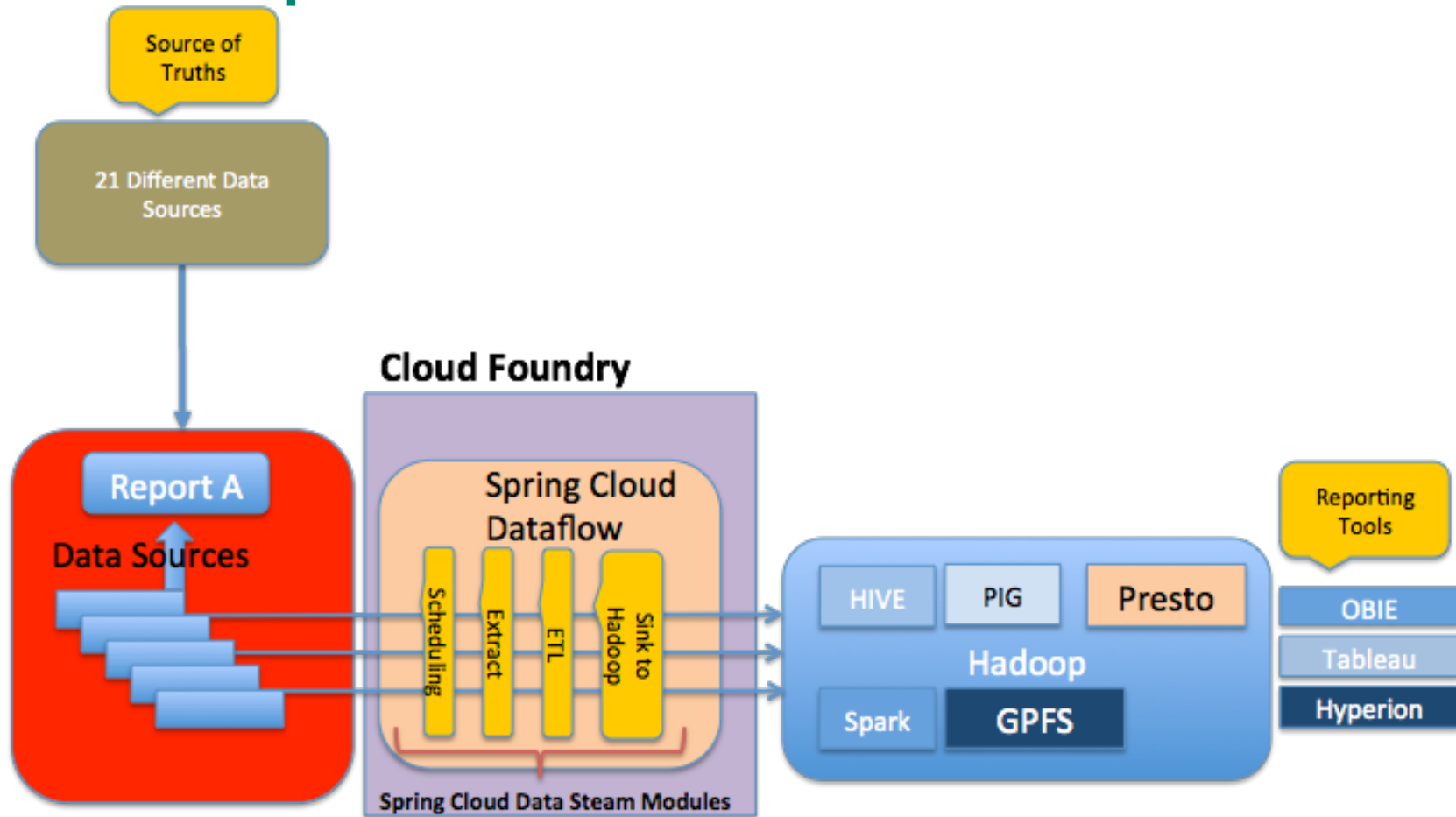
Synchrony Next Likely Purchase



Comcast Sparrow



Comcast Sparrow



Why should you care?

- Data Microservices:
 - Consume AI's
 - Drive BDS Sales
 - Show Thought Leadership around Data

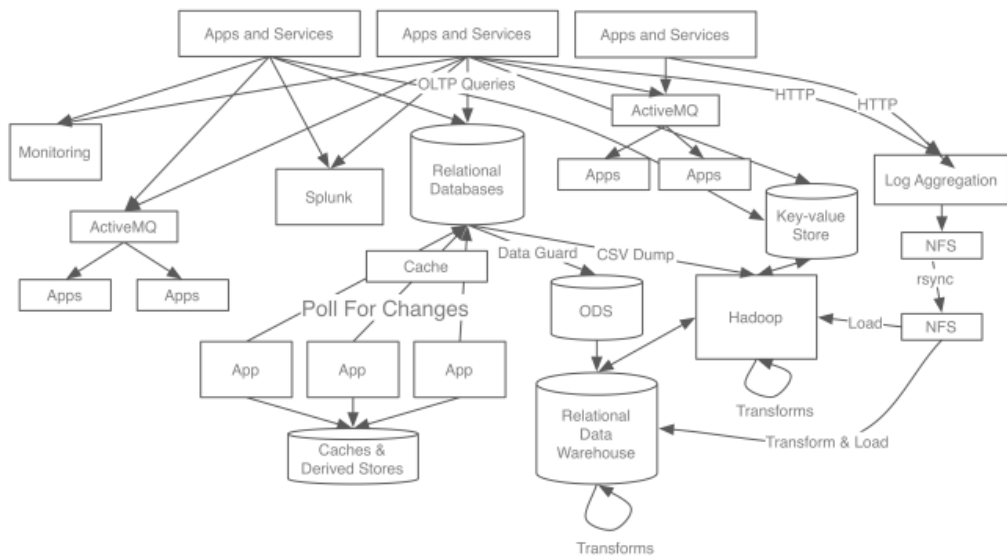
What kinds of things do they do?

- ETL (differs from old school ETL)
- Predictive Model Operationalization
- Stream & File Processing
- Event Driven Architectures (RMQ, Kafka)
- 'Brings computation closer to the data'

How do you sell it?

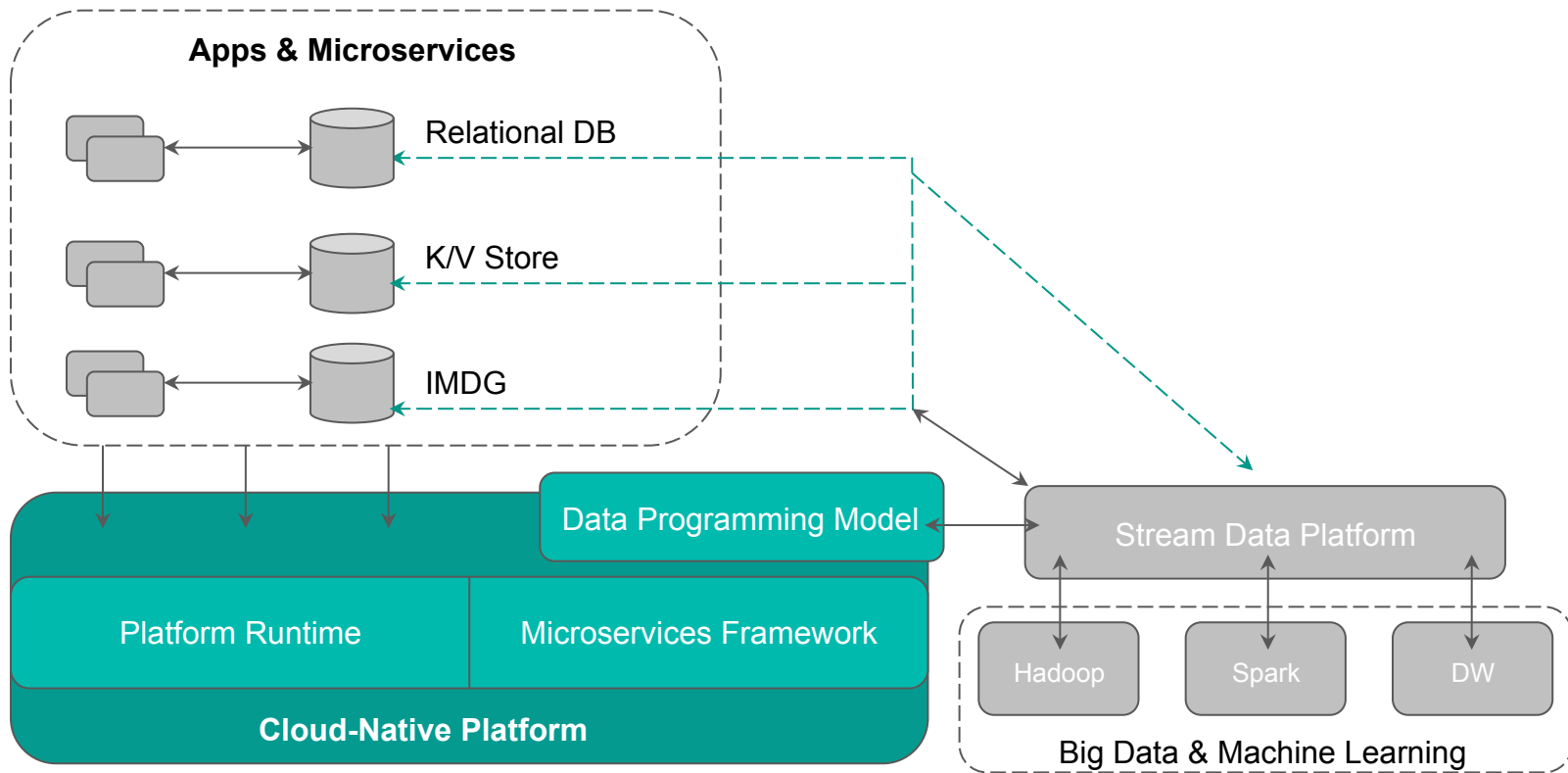
- ‘BI is Dead’ – Frank Buytendjik, Gartner – March 2016
 - We can provide a path forward for BI/Analytics Groups
 - We can make them look smart and forward thinking
- Ask the customer how they intend to make their apps smart
 - Do they have a plan?
 - How is the data going to get used to make the customer experience better?
 - If large amounts of data in play can they handle it with existing systems?
- Try to uncover difficulties in connecting to the data warehouse ‘Monolith’
 - Development times around EDW/EIM match those of application monoliths we’re decomposing all the time

Today's Enterprise Challenge

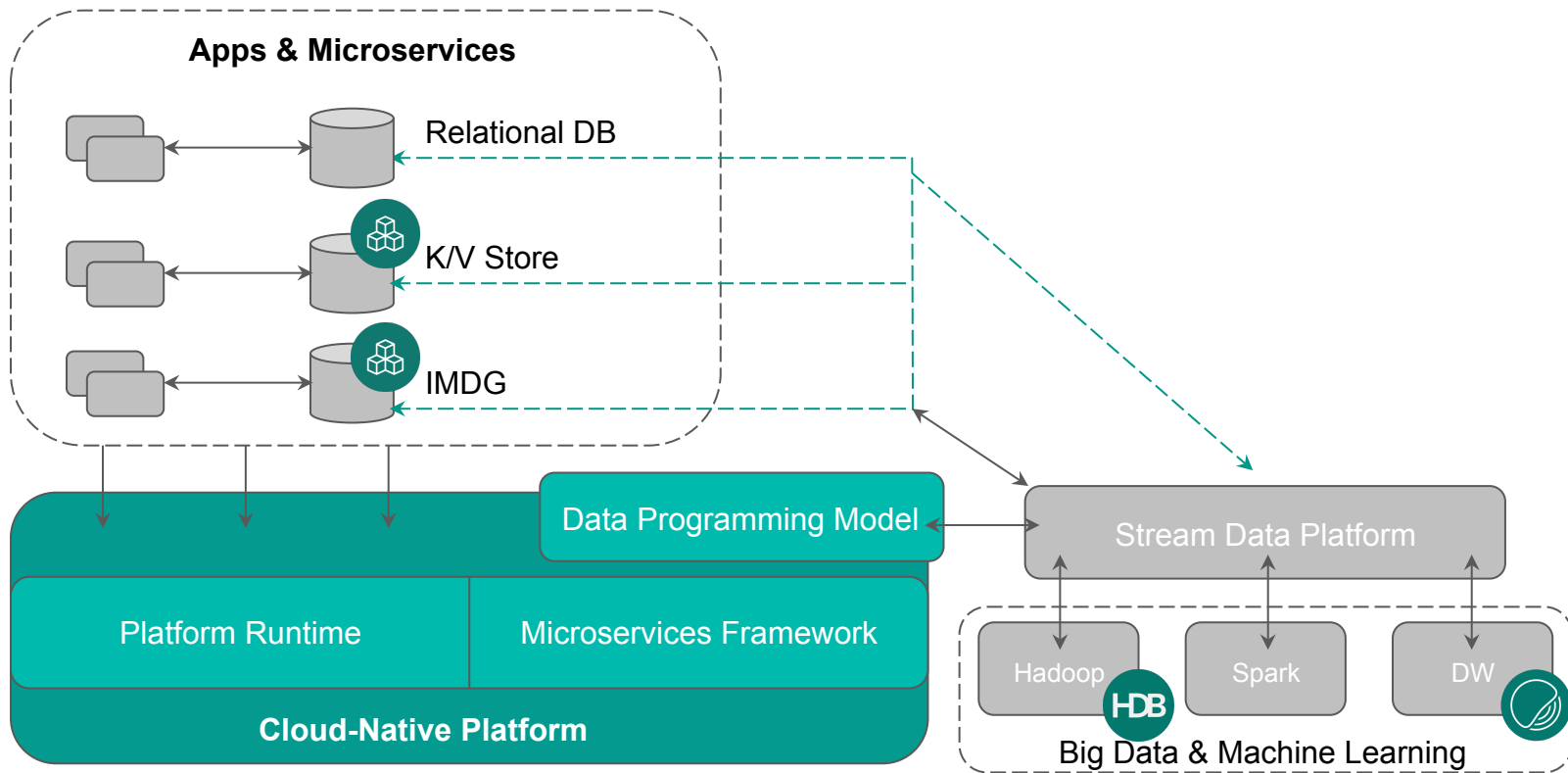


- Silo'd and aging database systems
- Spaghetti data pipelines
- Expensive, proprietary data management systems
- Lack of structured platforms for continuous software delivery
- Monolithic application architectures
- Batch-oriented data integration
- Limited operationalization of analytics
- Proprietary systems

Modern Cloud-Native Data Architecture



Modern Cloud-Native Data Architecture



What's in the Pipe?

- Comcast
 - C
- Synchrony
 - I