

API-First: An Agile Approach to Data Management



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Stress on the business

Excess inventory levels

Competitive pressure on price

Fraud levels rising

Regulatory compliance challenges

Problems with data integration

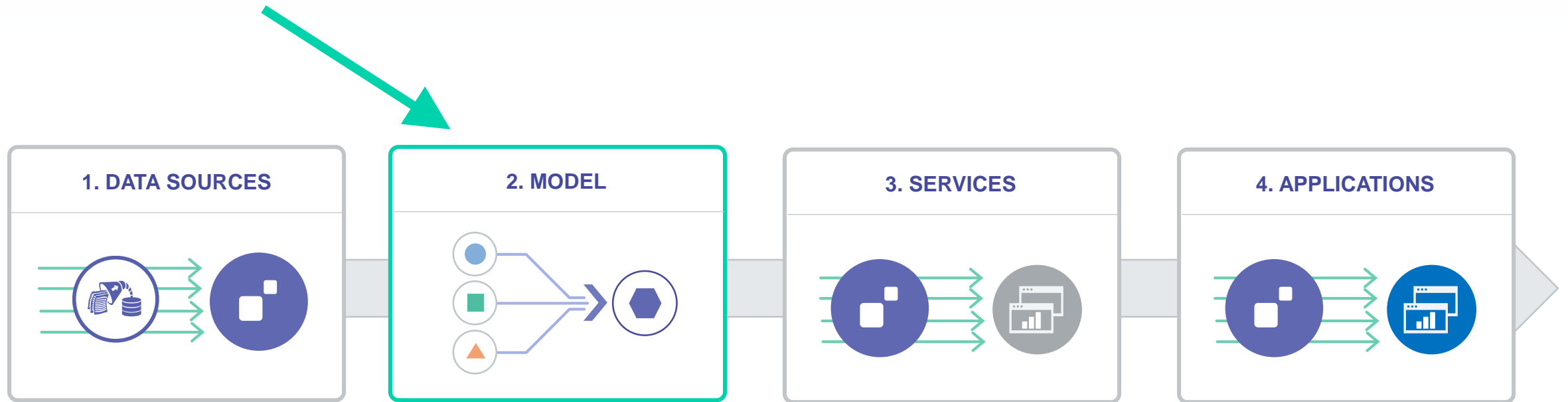


“It’s an opportunity.”

Now it’s Carla’s problem

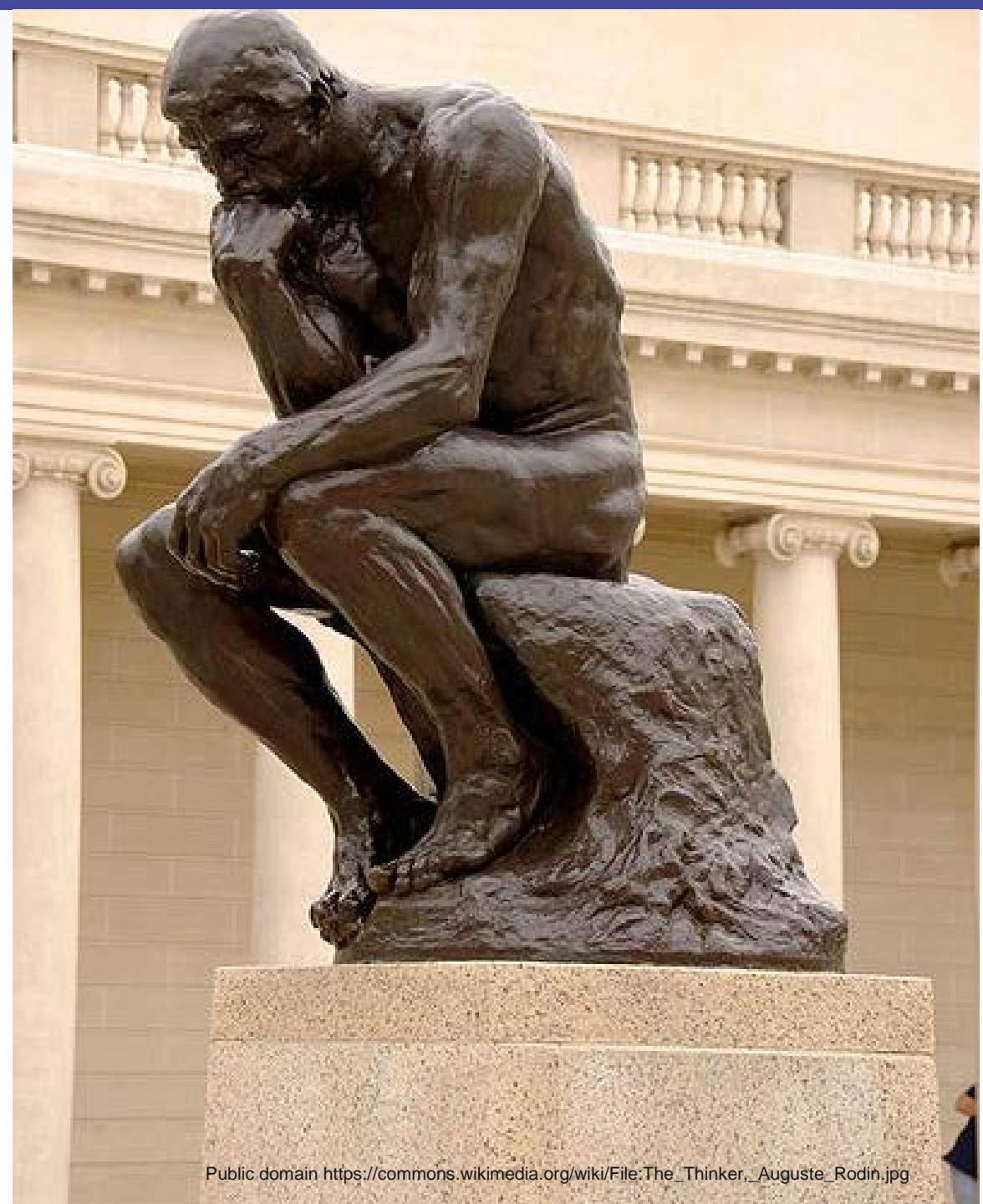


Data First Design

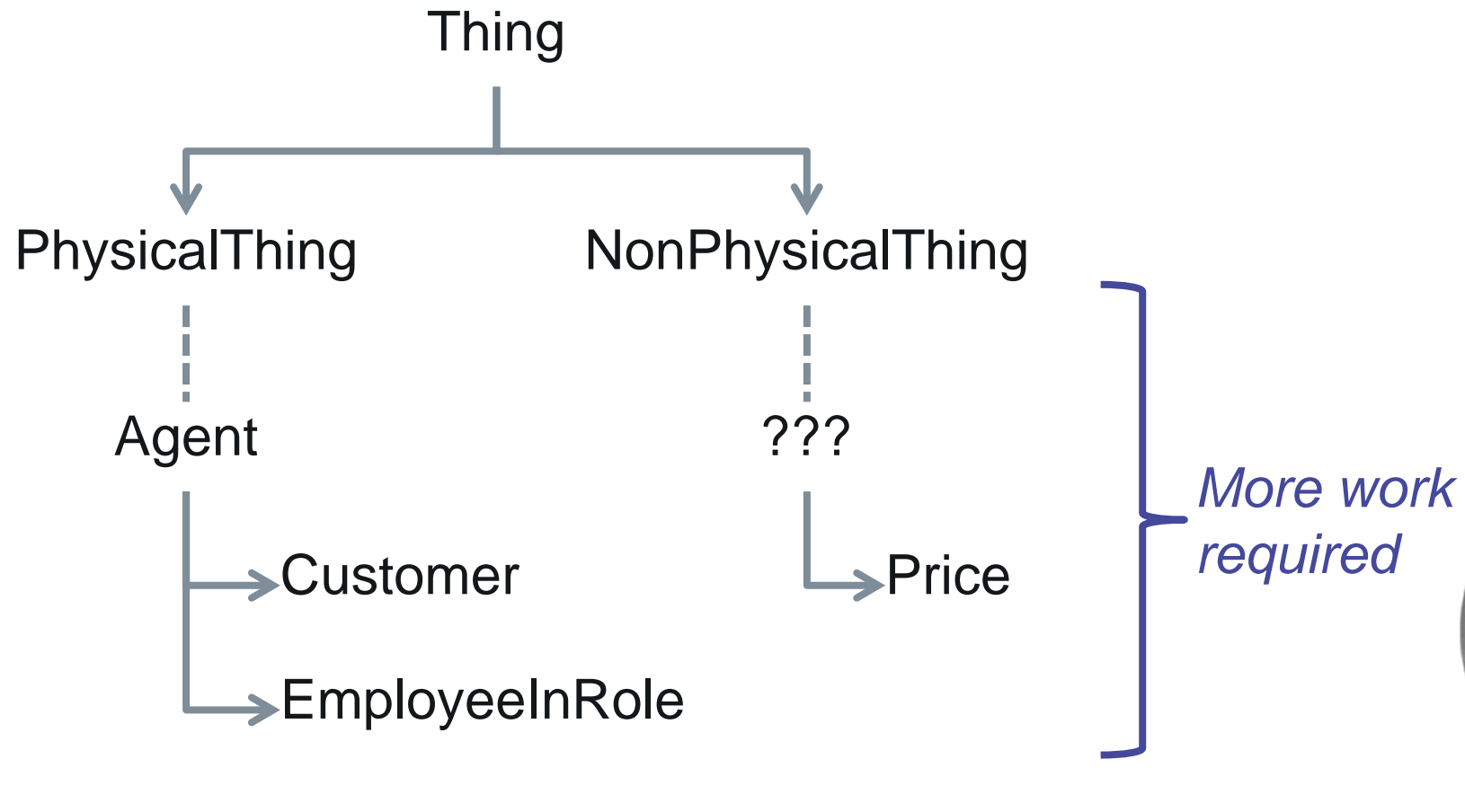


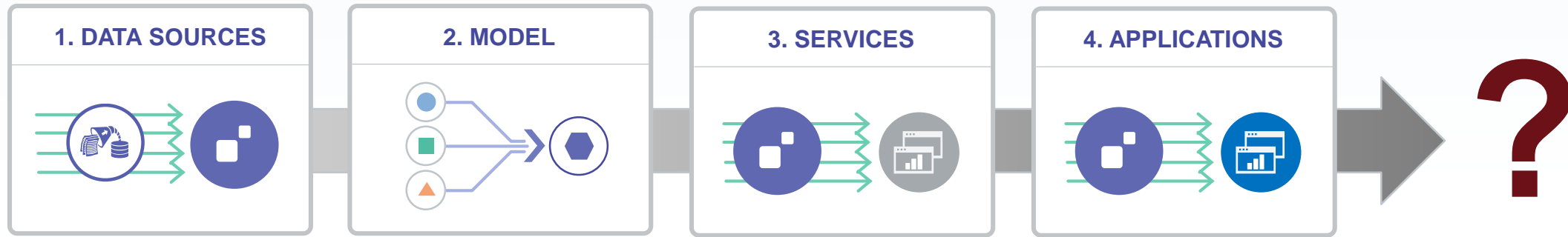
A Model for Integration

- + Customer in CRM, order, and support systems
 - + Product in order and inventory systems
 - + Staff in HR and support systems
 - + ...
- = reconcile the semantics, vocabularies, structures, identity, properties, formats, ...



The Enterprise-Wide Model





Questioning Data First

Integrate all of the data before any use?

No feedback or course correction?

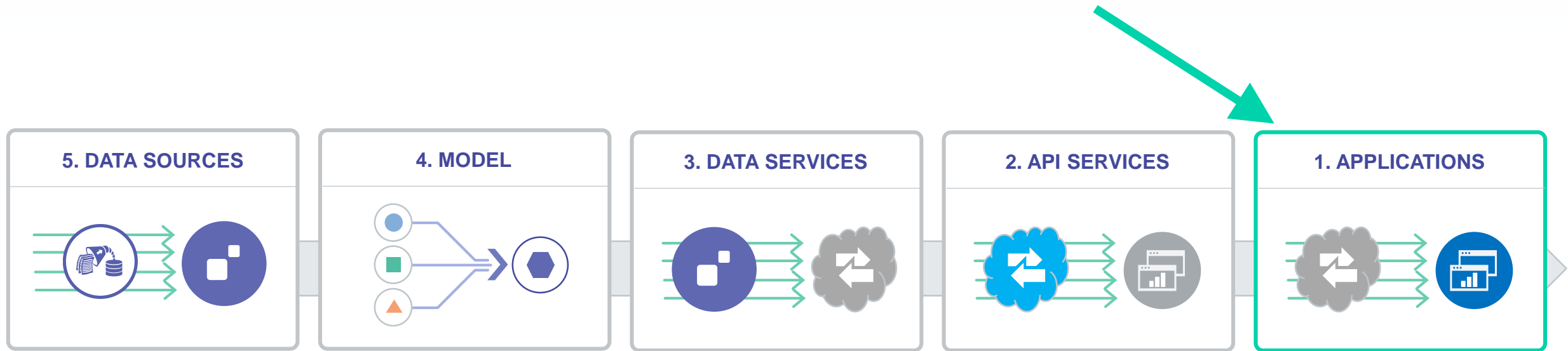
Waste of effort on the unused data?

Transport data to clients for joins and grouping?

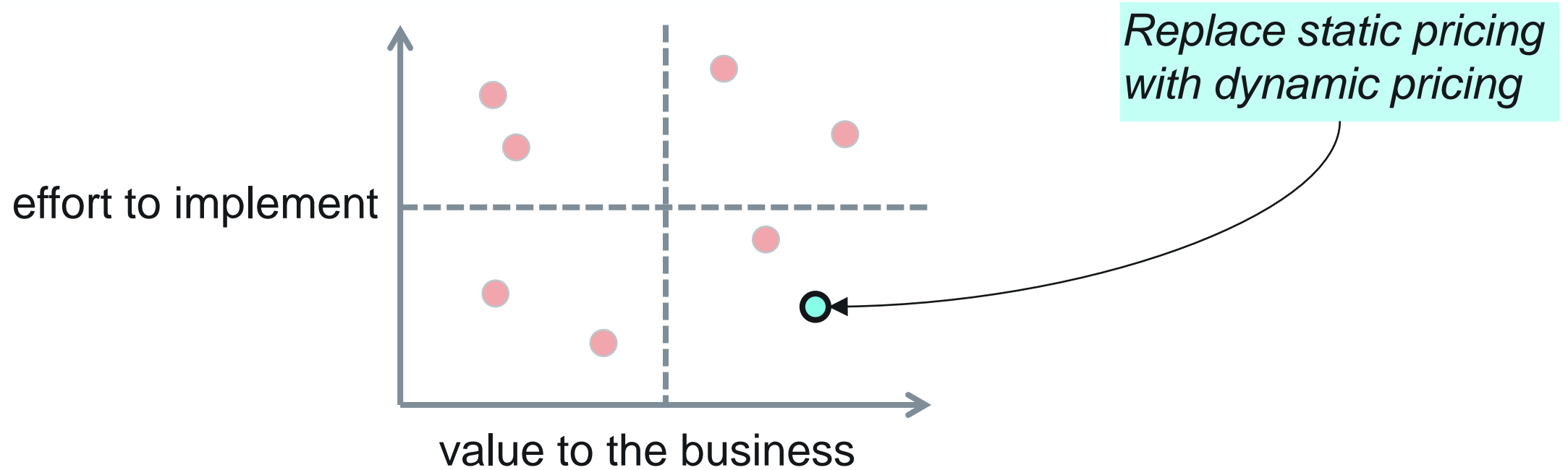
Transfer domain expertise to app developers?

Designing from implementation – not for use

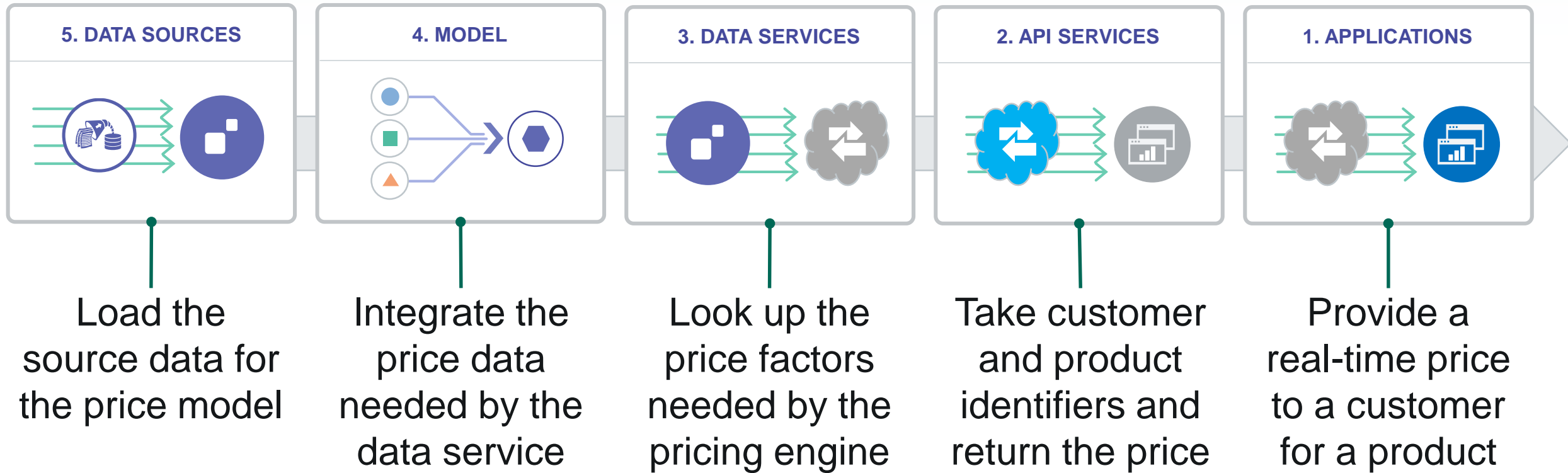
API First Design



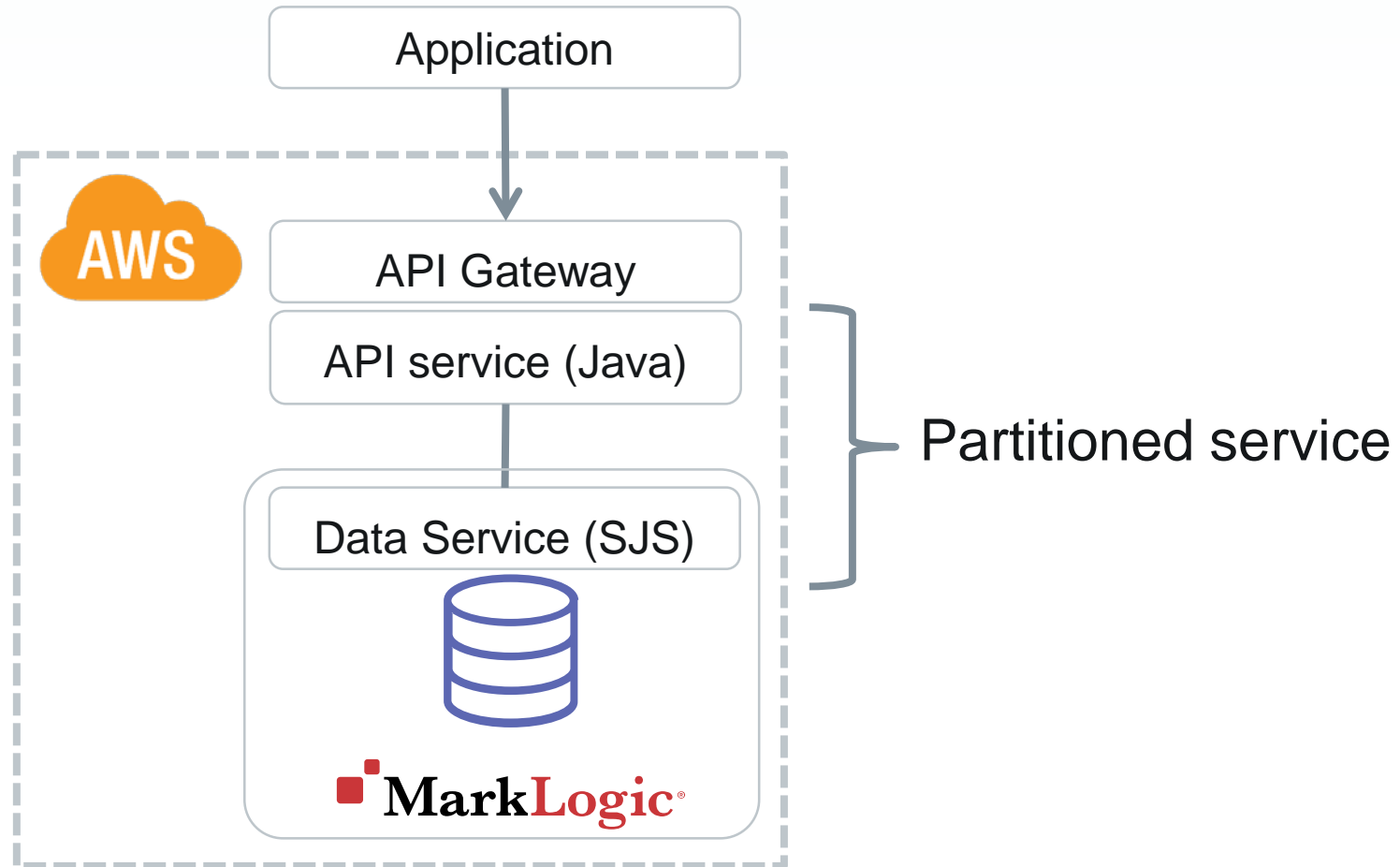
Identifying the First Application



Design for Dynamic Pricing

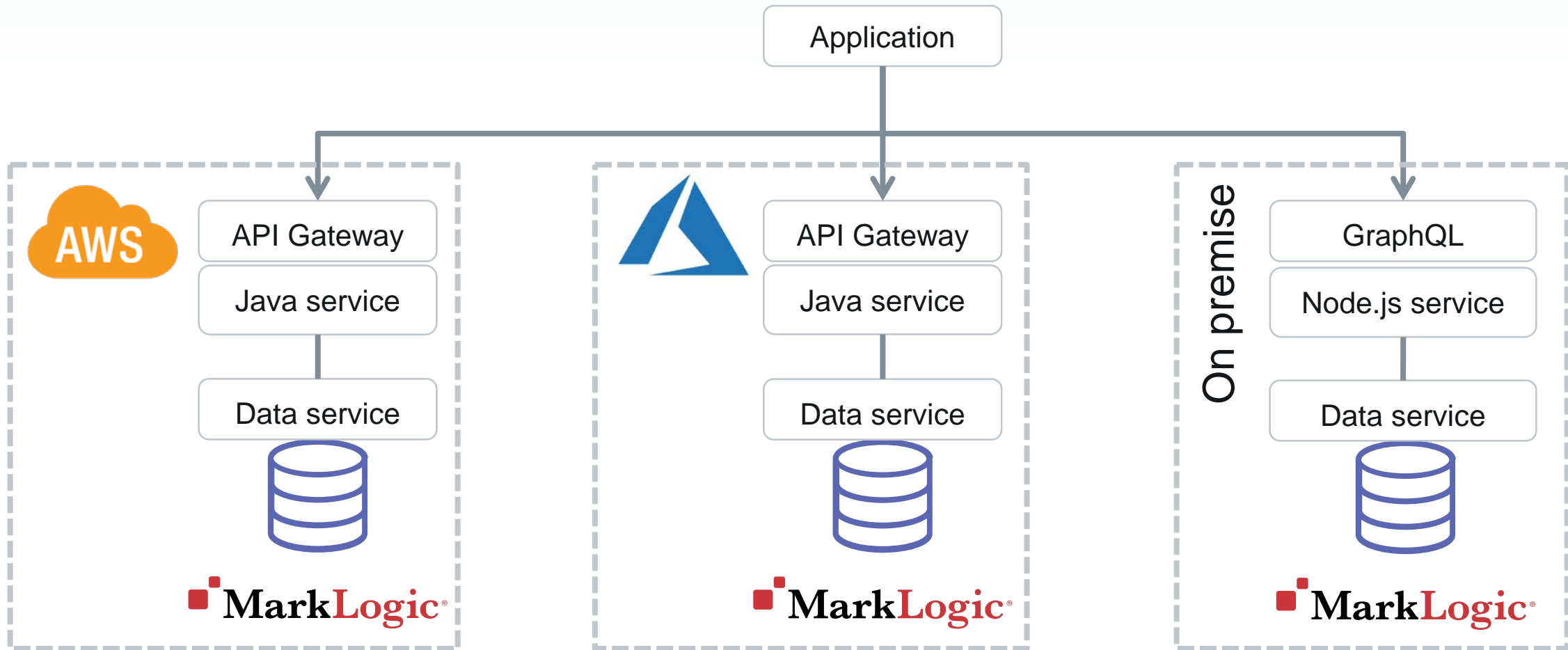


Stack for the Price Dynamically Service



Demo

Alternative Stacks

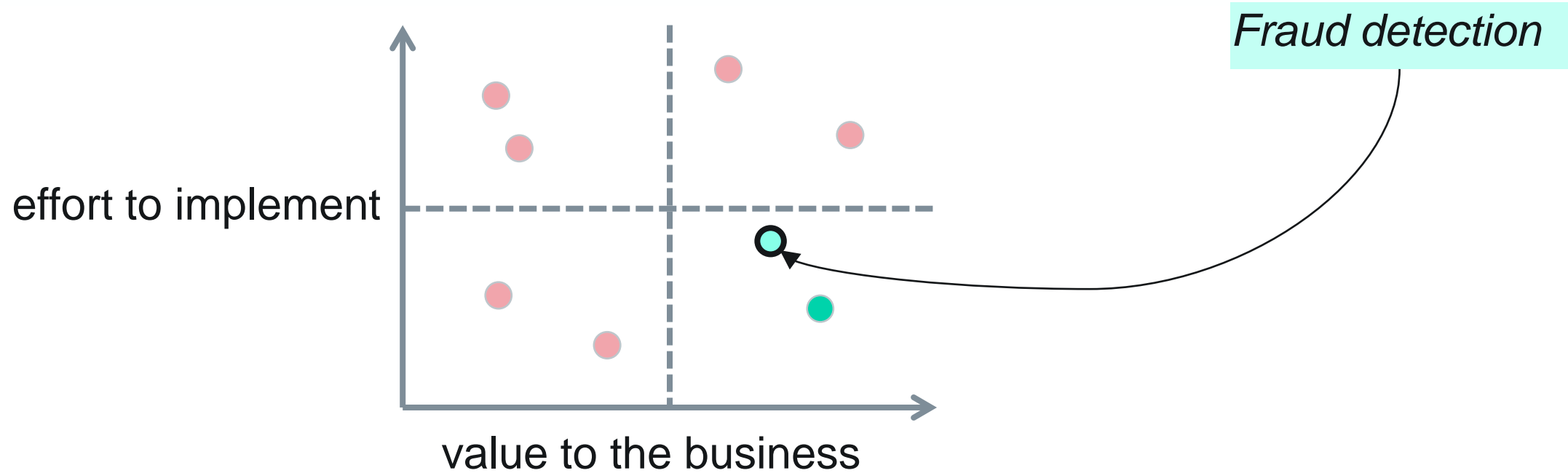




“Great progress.”

It’s still Carla’s problem

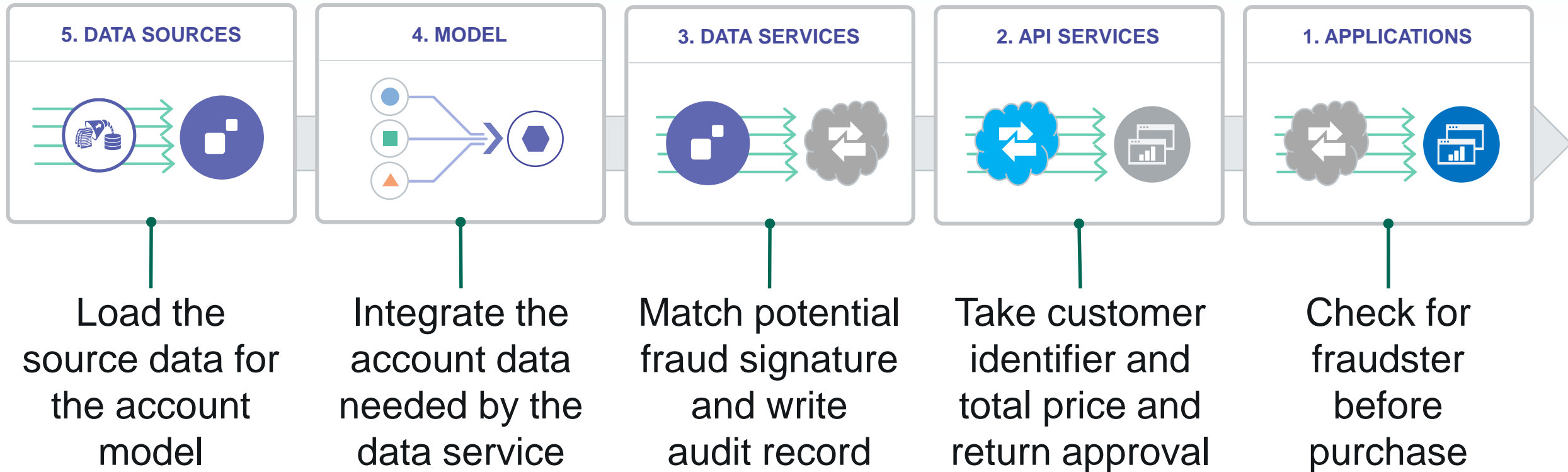
Identifying the ^{Second}~~First~~ Application



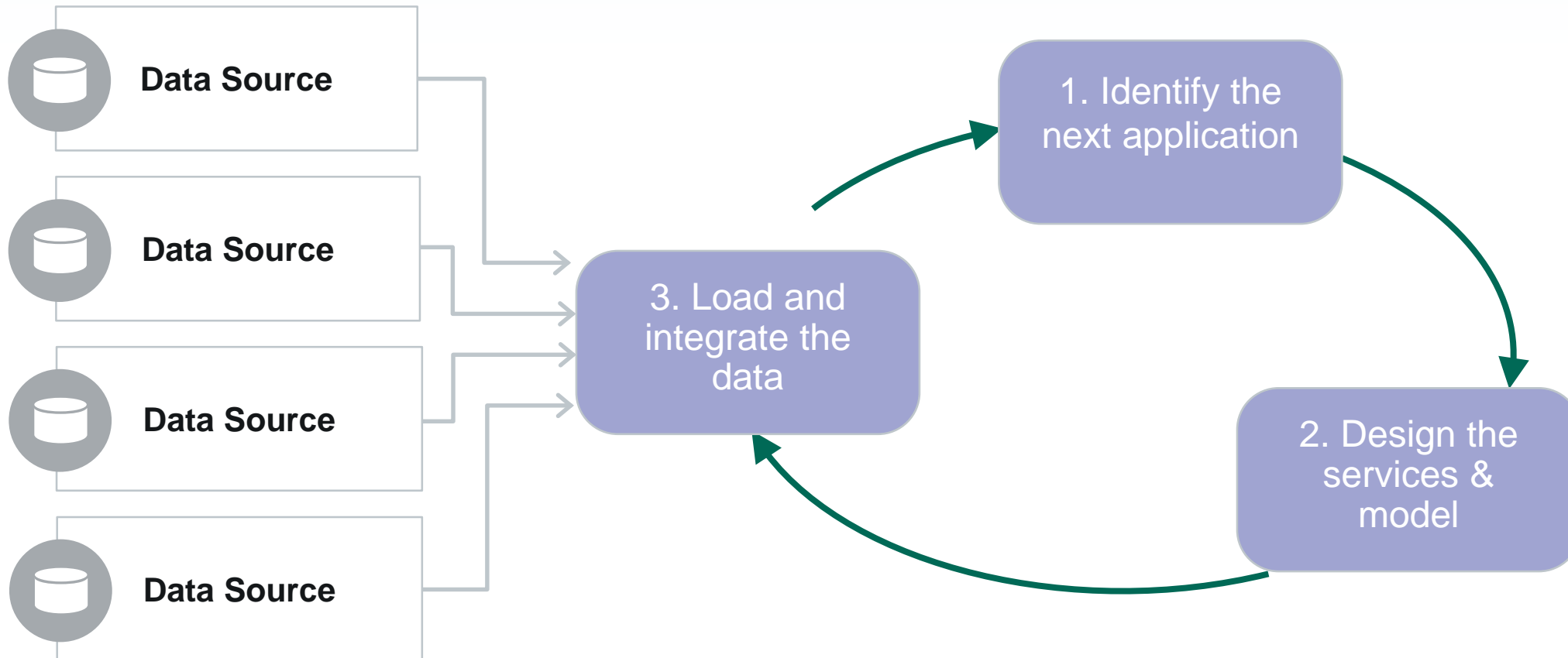
Developer Roles in Partitioned Services



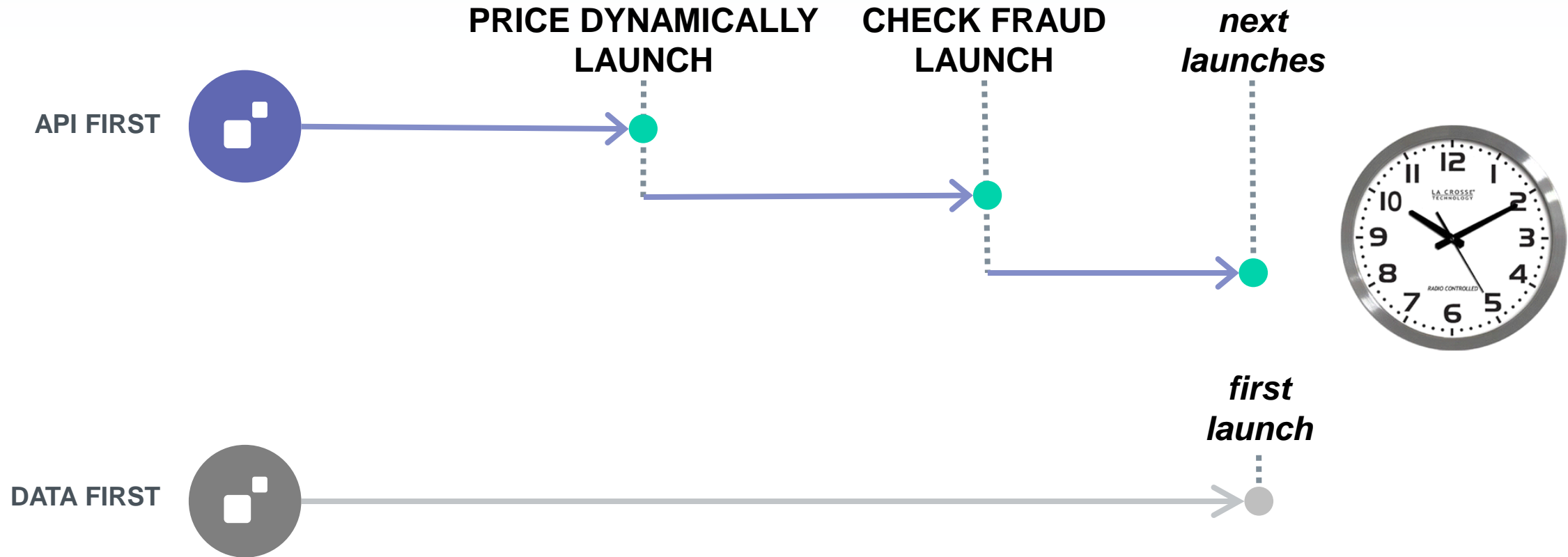
Design for Check Fraud Service



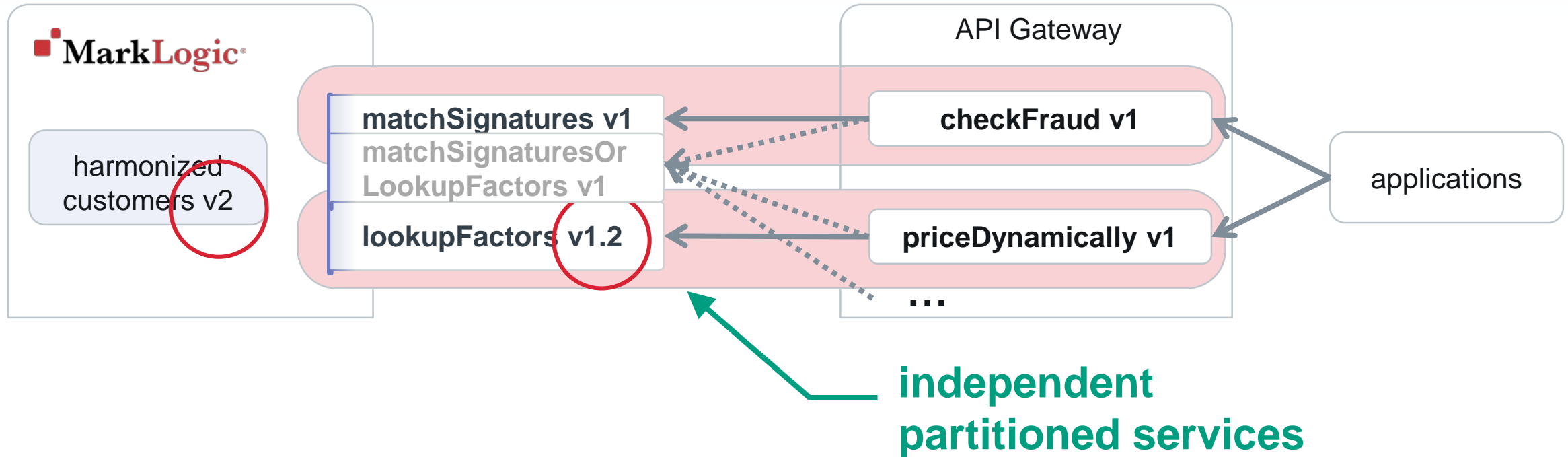
Iterative Expansion of the Solution



Time to Value



Evolving the Model and APIs



API First Summarized

- **Feasible now:** an agile approach to design
 - Limit the scope to the minimum requirements for the next application
 - Execute the business logic in the middle tier – the data logic close to the persisted data
 - Success is iterative expansion of the set of APIs and the integrated model
- **Coming soon:** easier rapid development of partitioned API services
 - Declare a database function, generate the Java class, and write the function endpoint
- **Requested:** your feedback

Questions?