

Assessing and Enhancing Applications using Cisco DevNet Techniques

EVALUATING THE GLOBOMANTICS CRM APPLICATION



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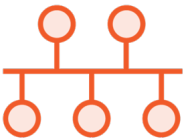
Suggested Prerequisite Courses



Getting Started with Software Development using Cisco DevNet



Consuming Cisco APIs and Understanding Application DevOps



Managing Cisco Networks via Infrastructure as Code



Agenda



Wait, what CRM app?

Architectural patterns

Application evaluation criteria

- Lots of "ities"



Your Role at Globomantics



Demo



A quick look into the CRM app

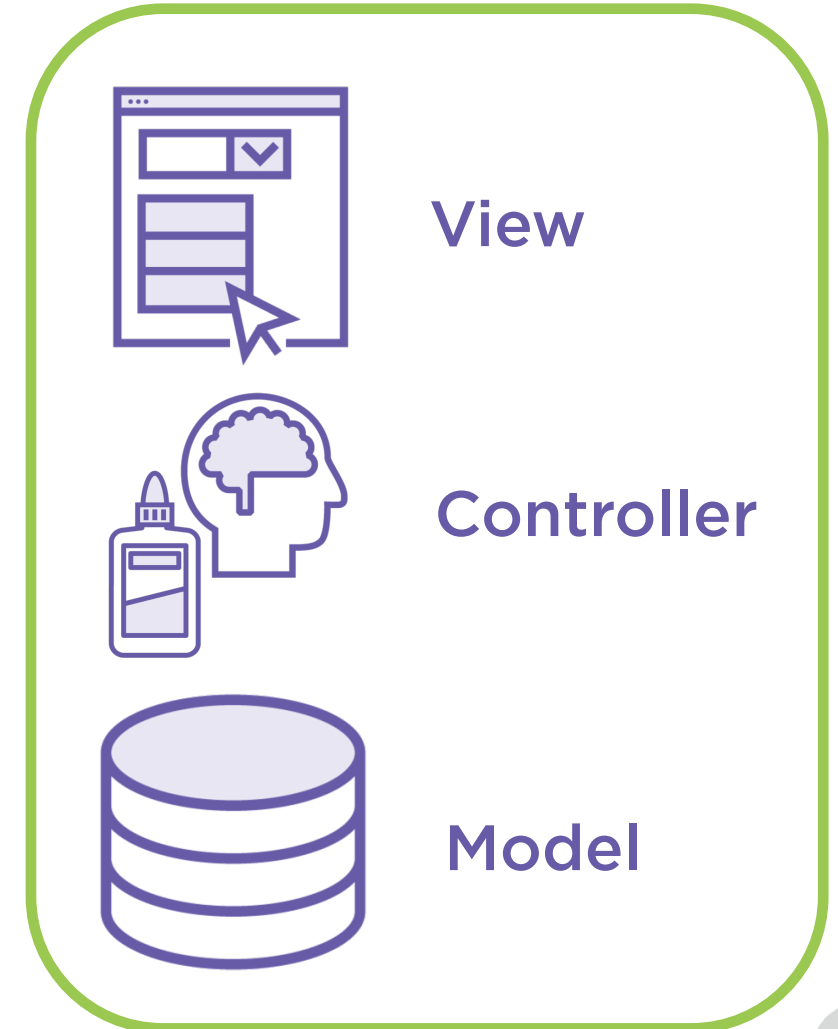


Architectural Pattern: Monolithic

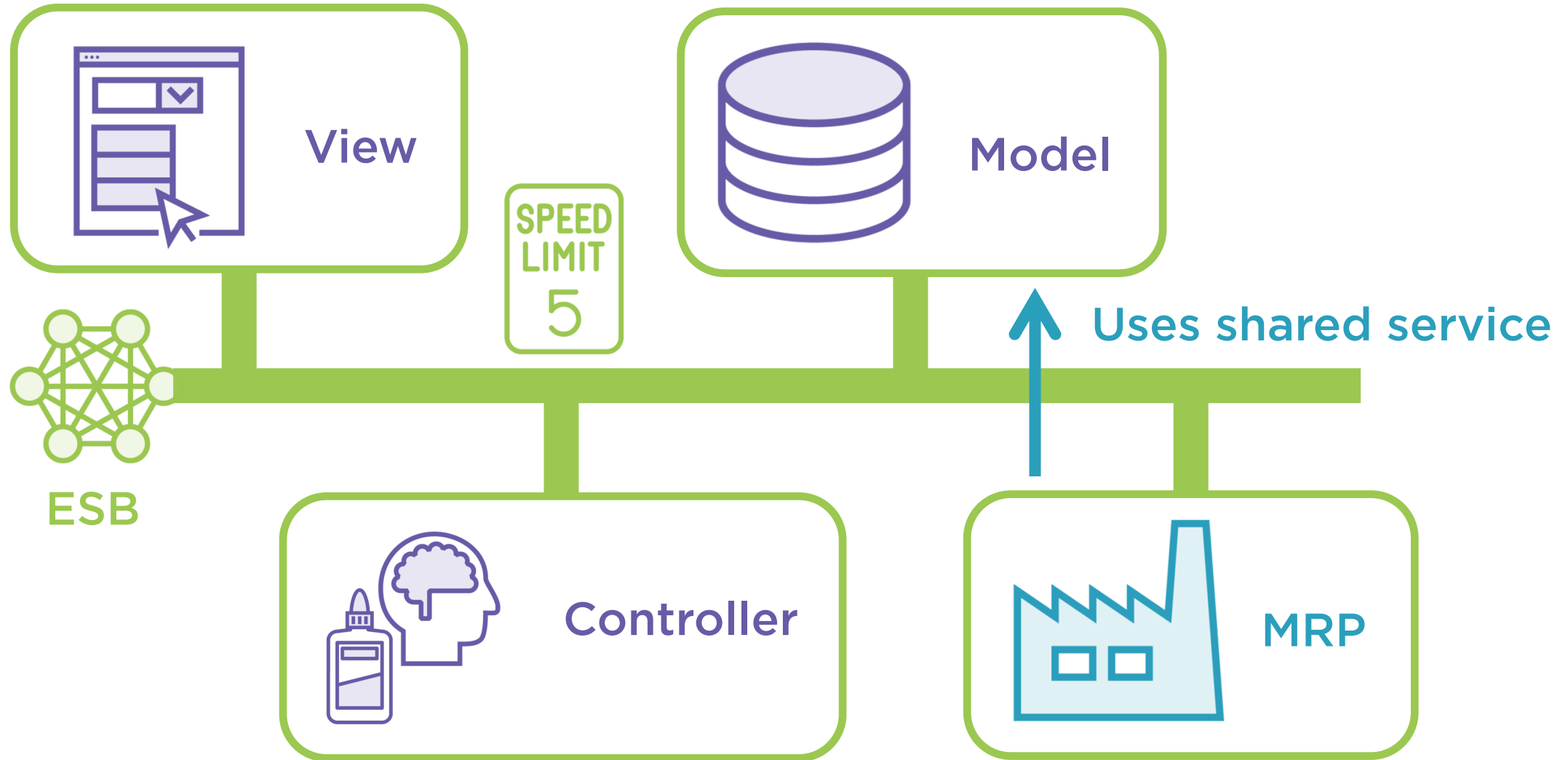
"I think it's time to swap out MySQL for mongodb."



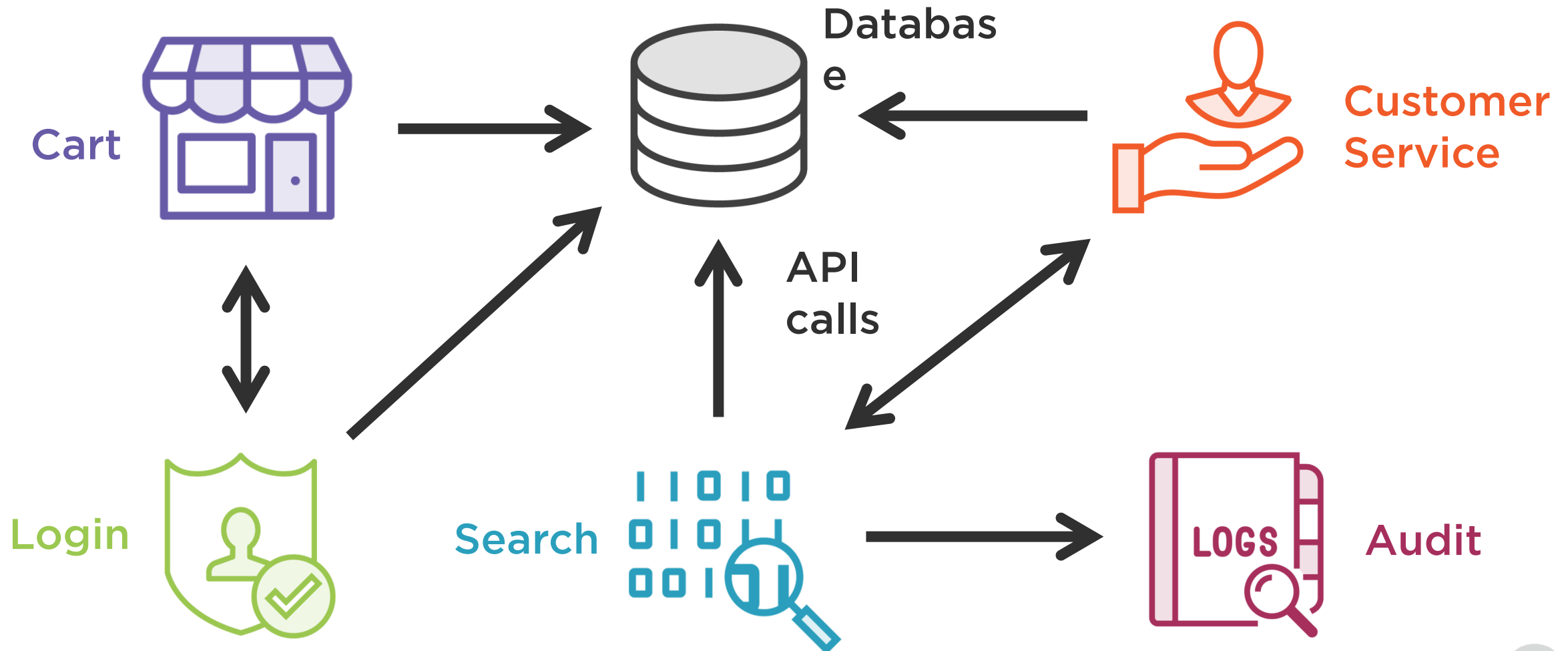
Tight coupling of components will make that very difficult.



Architectural Pattern: Service-oriented



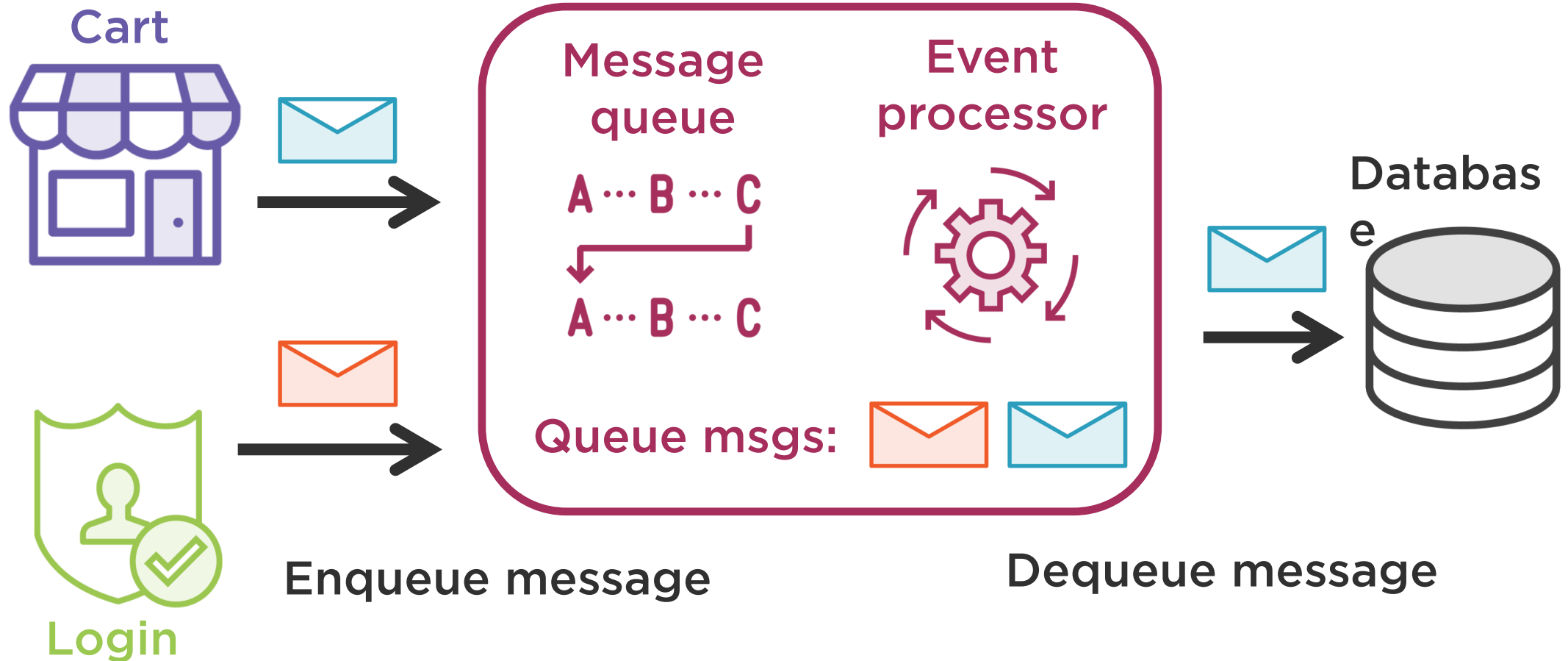
Architectural Pattern: Microservices



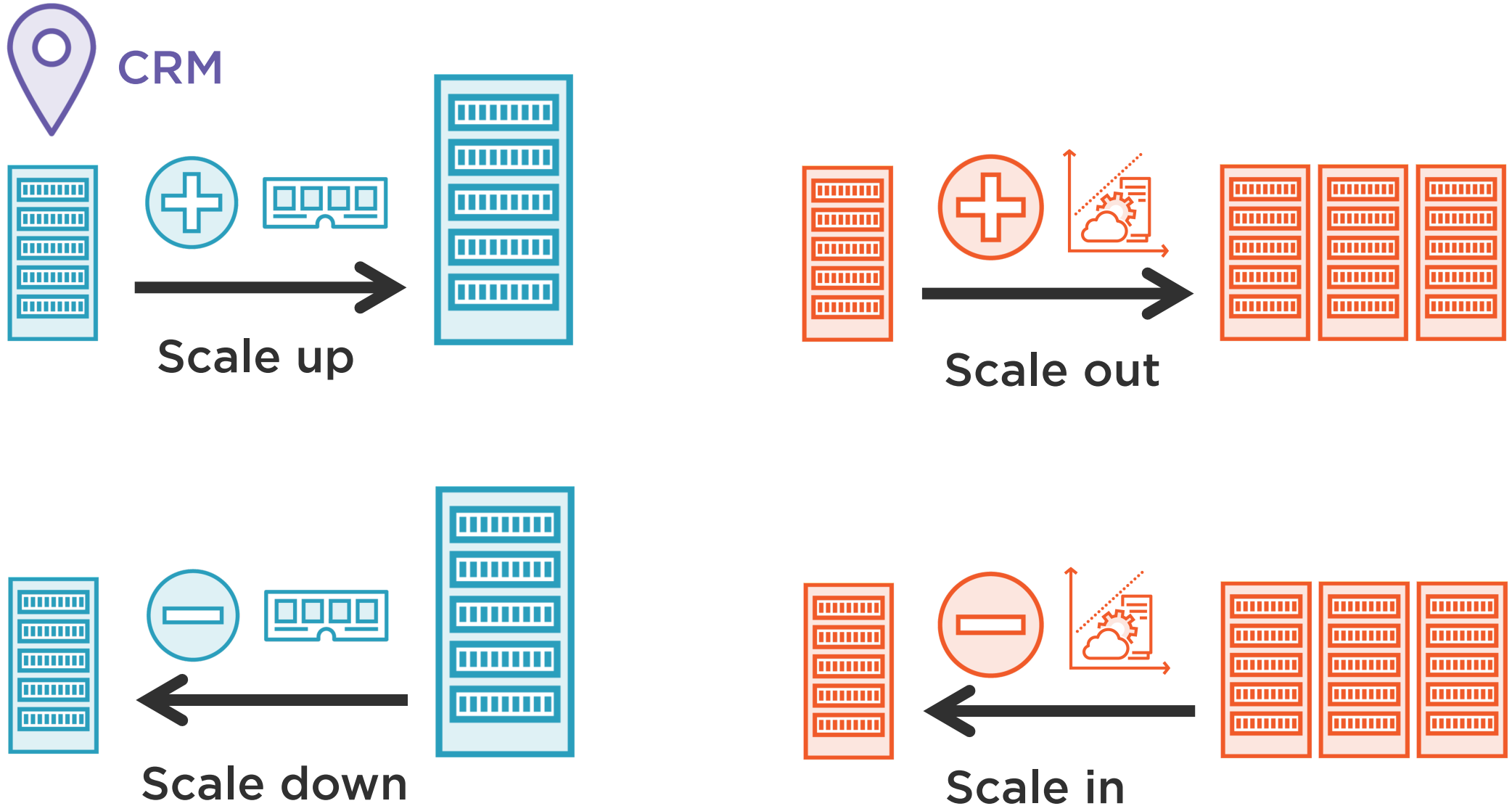
Event-driven Microservices Design

(Publishers)

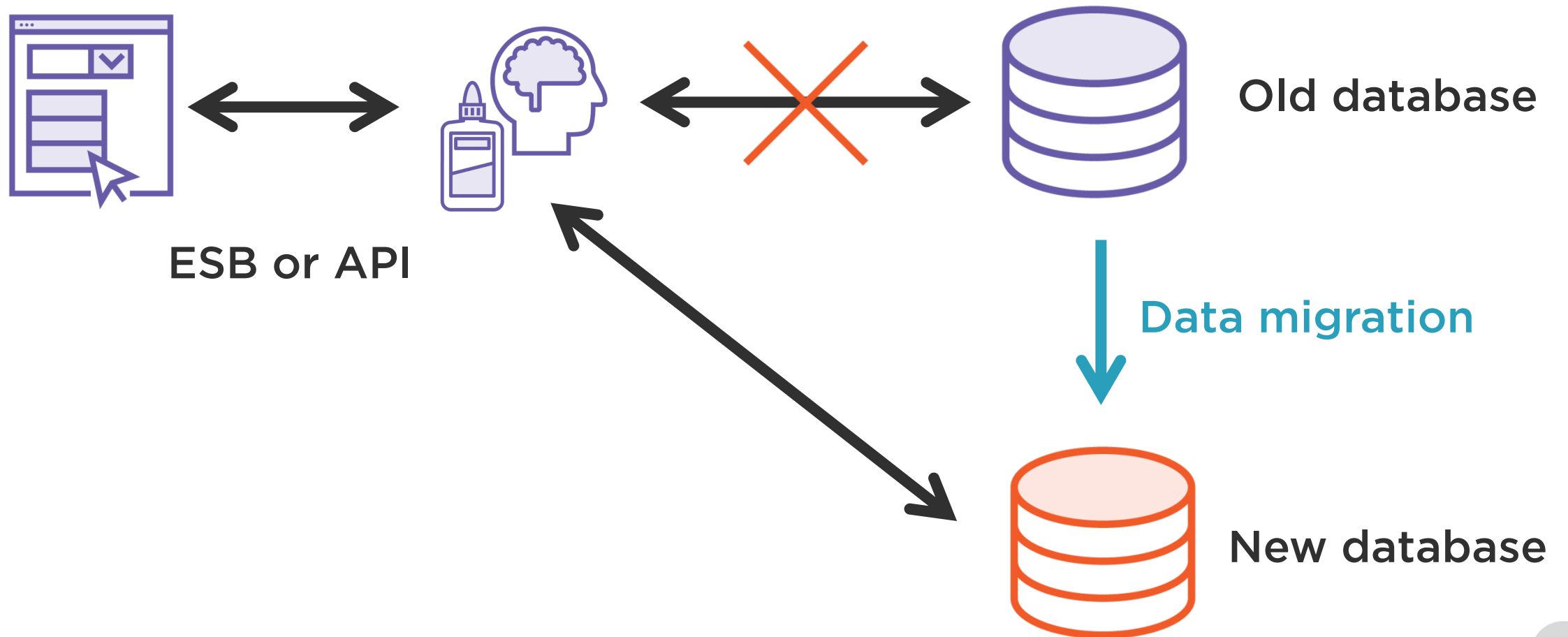
(Subscribers)



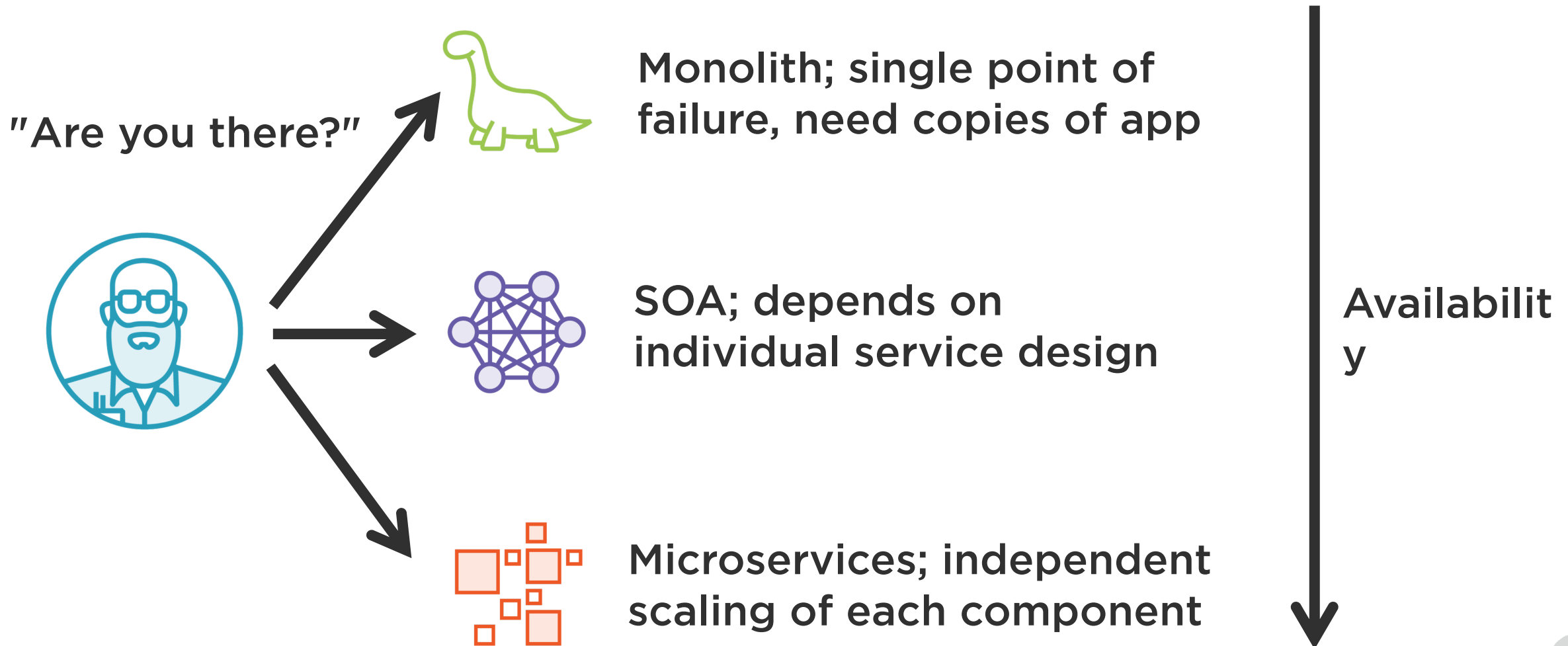
Evaluation Criteria: Scalability



Evaluation Criteria: Modularity

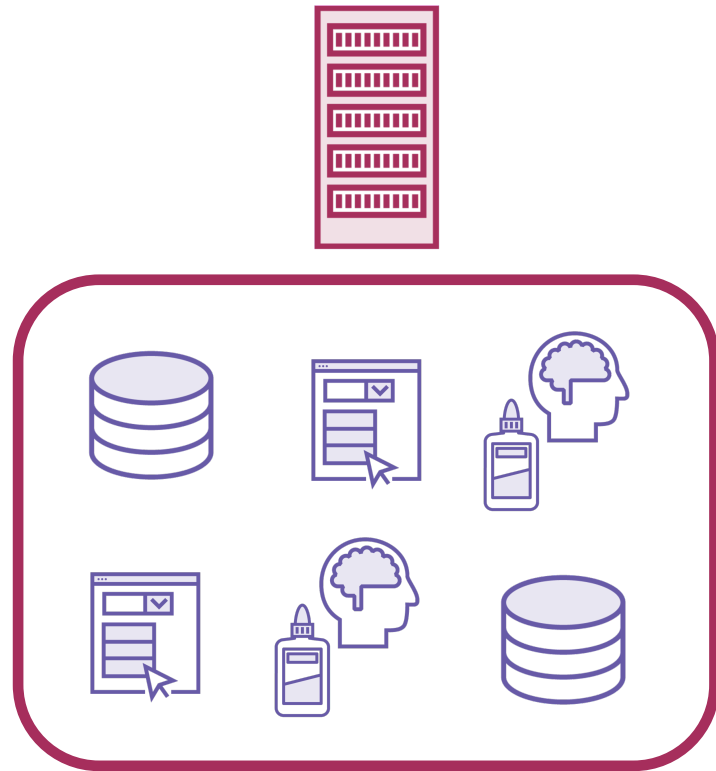


Evaluation Criteria: App High Availability



Evaluation Criteria: Network High Availability

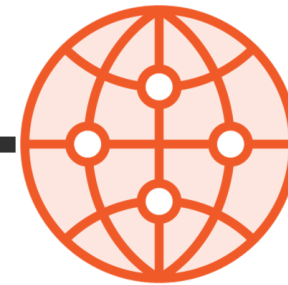
Microservices in a single server



Private data center



Internet



Public cloud



Evaluation Criteria: Latency



Monolith; fastest, low potential for bottlenecks



SOA; service and ESB dependent



Microservices; high potential for processing queues

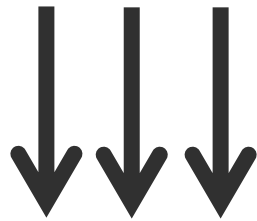


Evaluation Criteria: Rate Limiting



"We need those account balances!"

clicks Refresh 100 times



HTTP
request



Process
request



SQL query



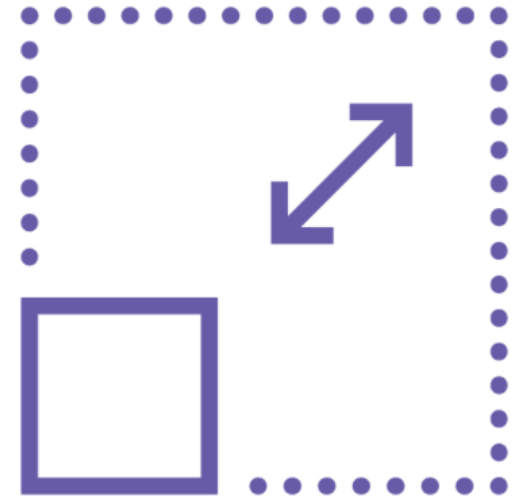
Evaluation Criteria: Maintainability



Testability

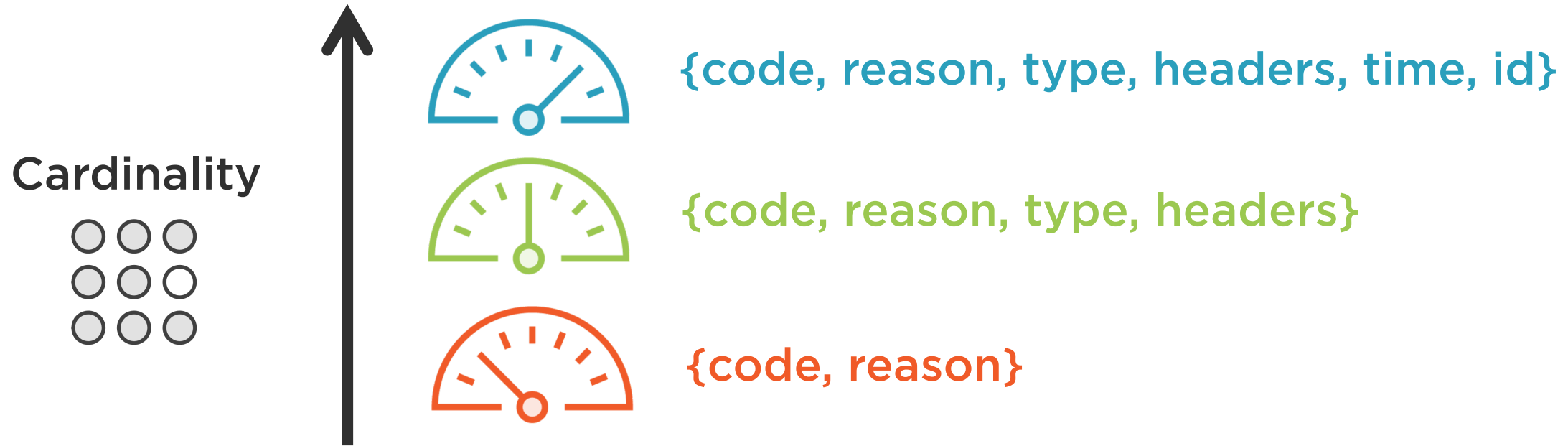


Understandability

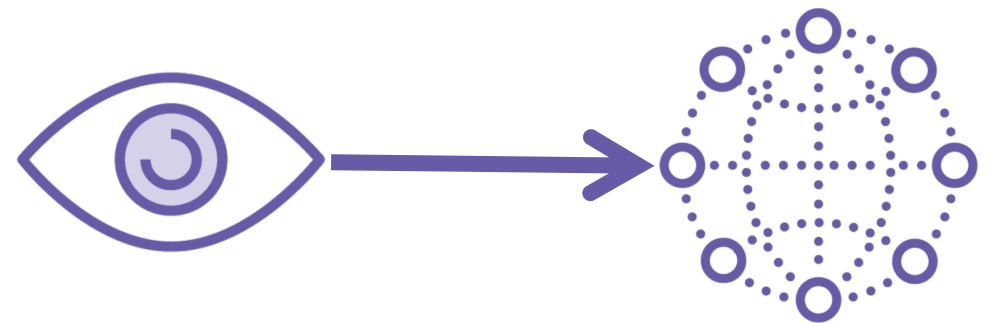


Modifiability

Evaluation Criteria: Observability



"Can I observe how the app and its components are interacting?"



Summary



Choose an architecture first

Evaluate existing apps before deciding

Practice on your own apps

