Cloud Native Impact on Enterprise Architecture and Solution Design

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{codemotion}
Online Tech Conference
- English edition -

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Cloud Native

Impact on Enterprise Architecture and Solution Design

Agenda

1. Introductions
2. Enterprise Architecture
3. Domain Driven Design
4. Cloud Native Impact Analysis
5. Wrap Up

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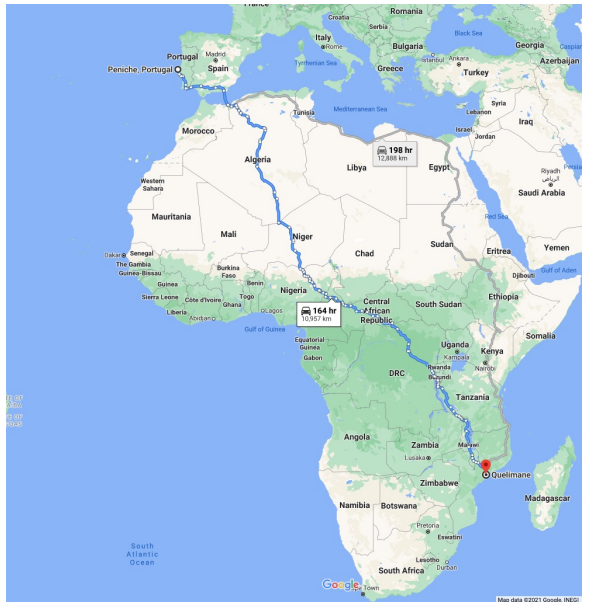

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Introductions

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fernandoharris

fharris

Enterprise Architecture: Enabling Change

Architecture	Level	Actor	Restrictions	Boundary	Output/Model
Organization	Organization	-	Communications	Organizational	Responsibilities and functions
Business	Processes	Owner	Usability	Conceptual	Processes identification
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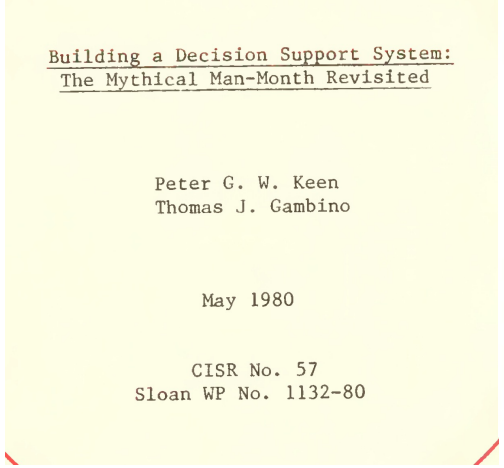
Levels of Enterprise Architecture, adapted from Sowa and Zachman (1992) and Gama et al. (2007)

Enterprise Architecture: Managing Complexity



Building a Decision Support System:
The Mythical Man-Month Revisited

Peter G. W. Keen
Thomas J. Gambino

May 1980

CISR No. 57
Sloan WP No. 1132-80

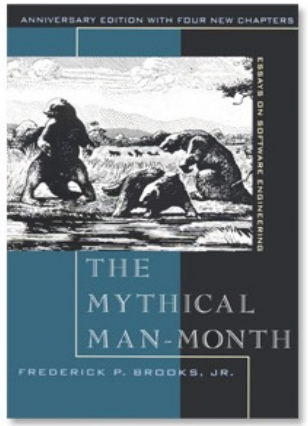
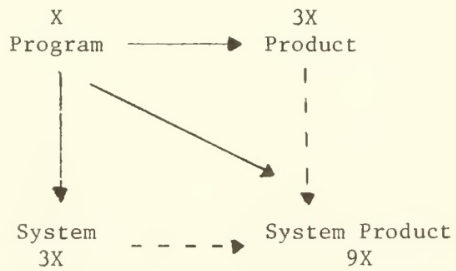
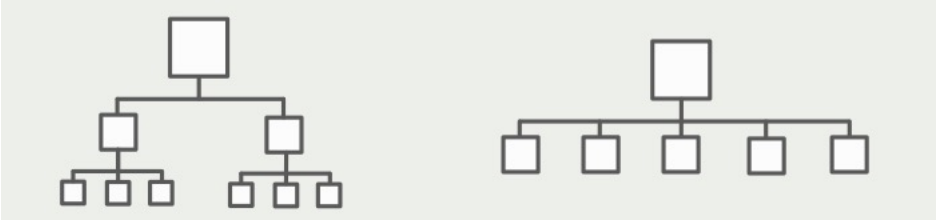


FIGURE I: Brook's Assessment of Relative Programming Effort

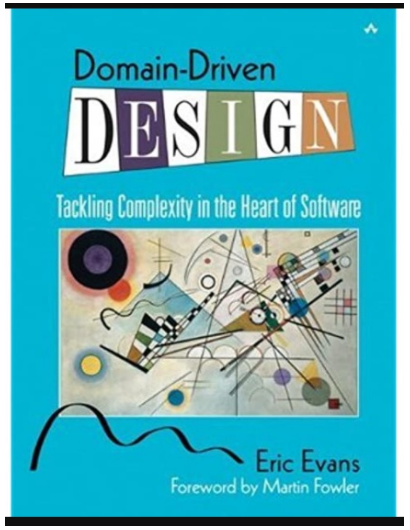


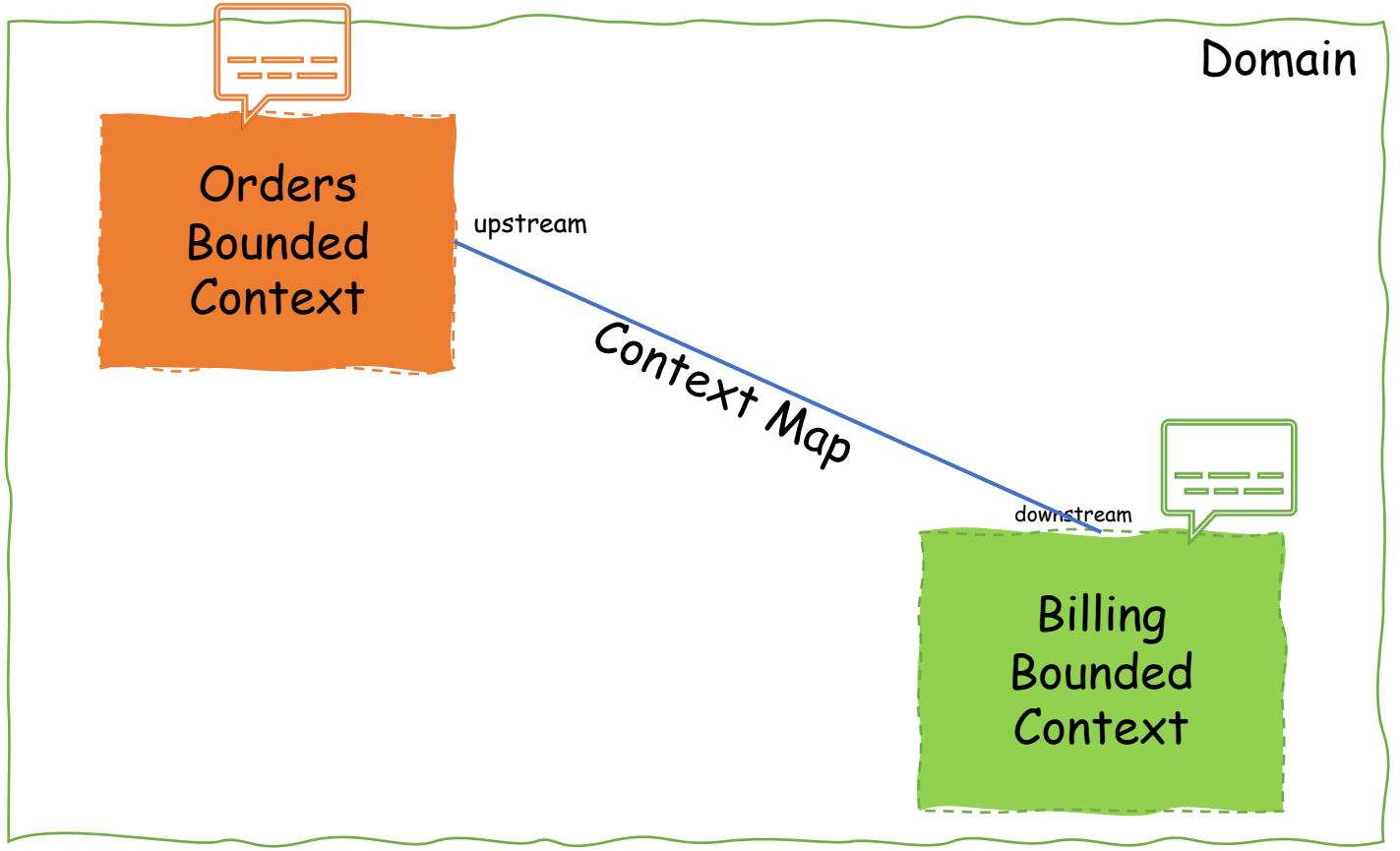


Any organization that designs a system (defined broadly) will produce a design whose structure is a copy of the organization's communication structure. — Melvin E. Conway, 1967

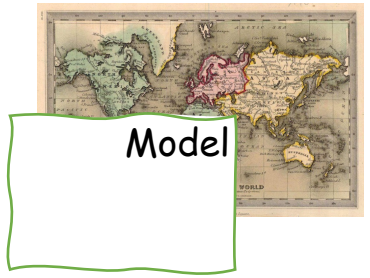
Domain Driven Design: Strategic thinking

Eric Evans



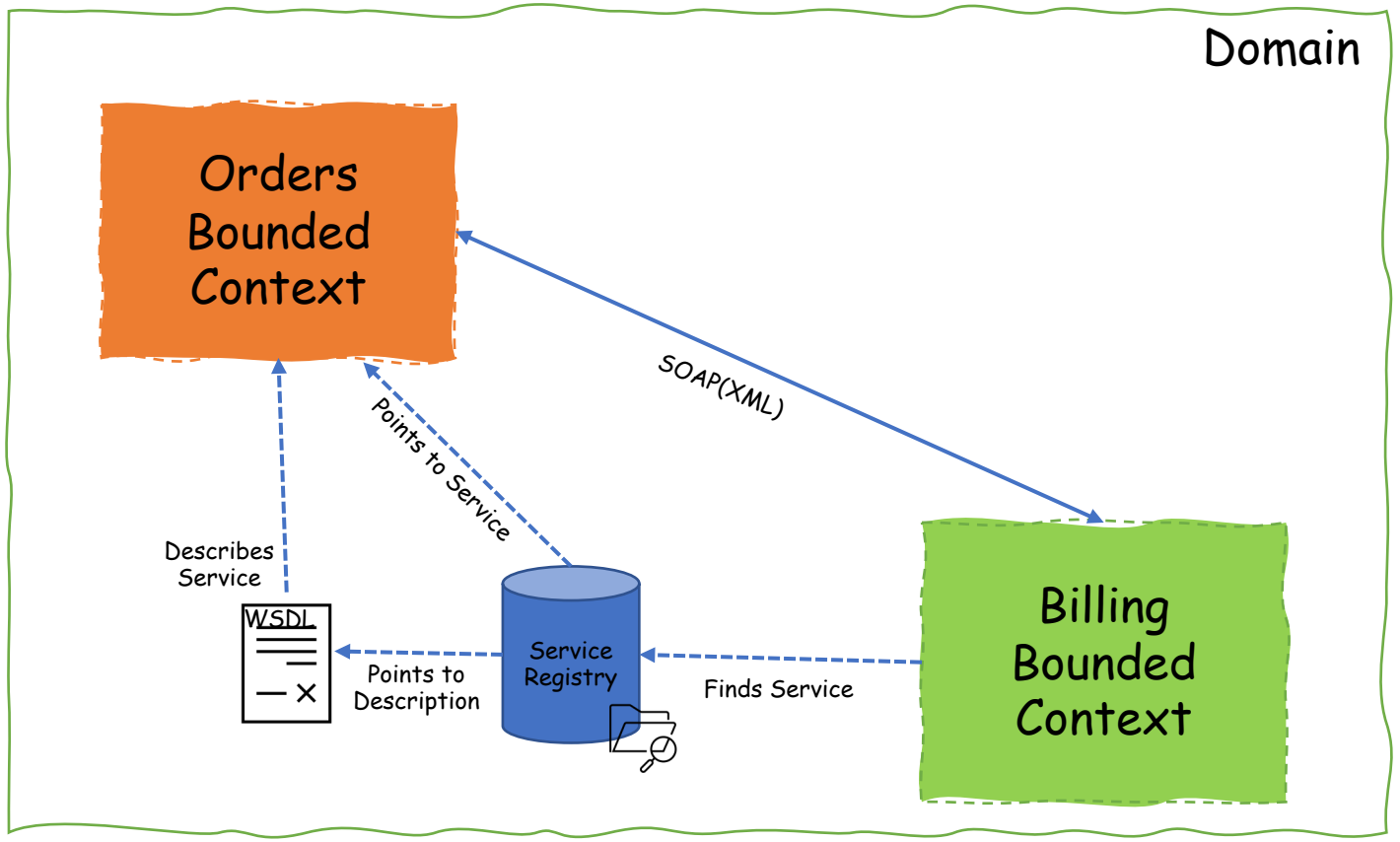


Ubiquitous Language



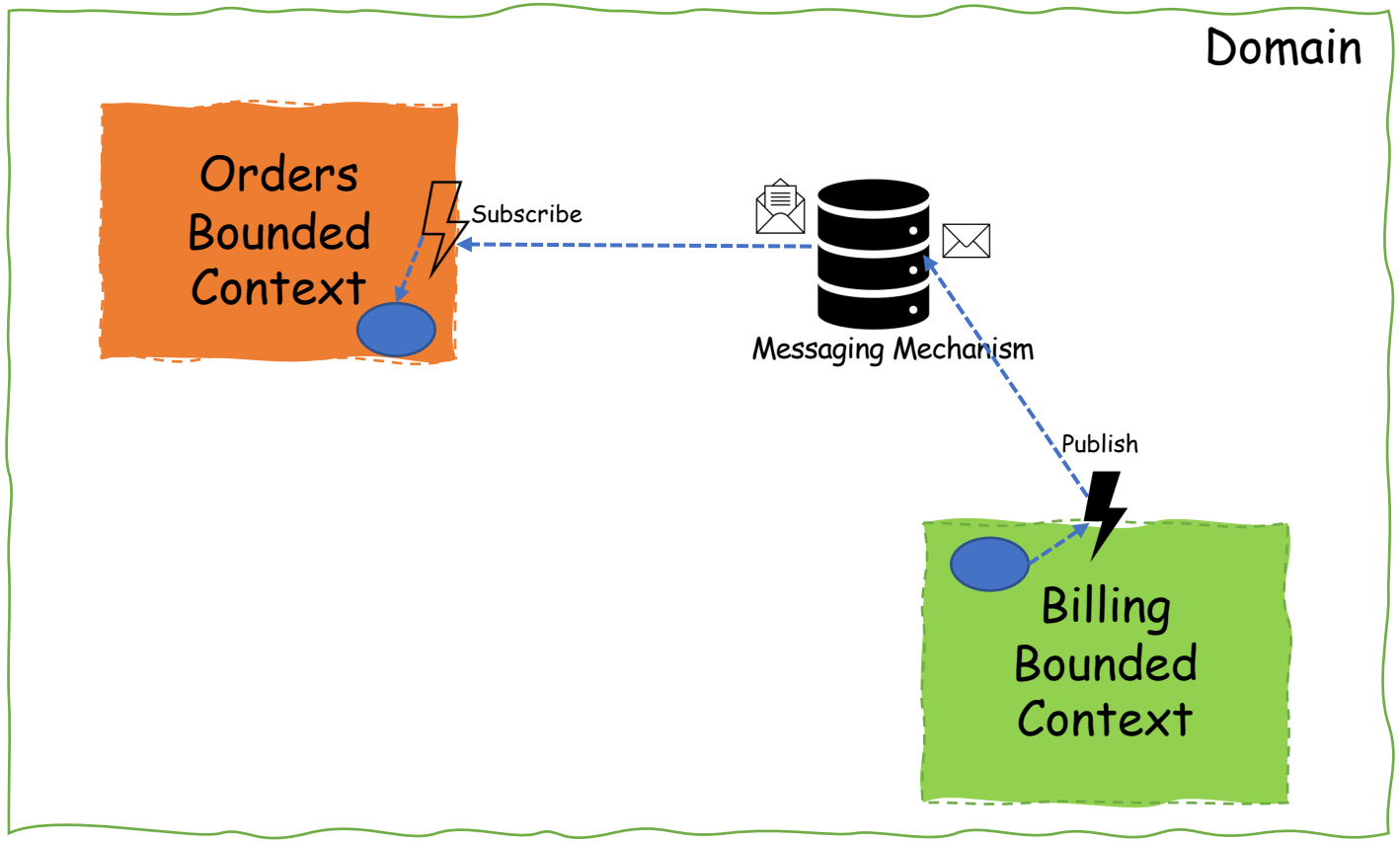
Domain Driven Design: Tactical thinking

Context Maps: RPC



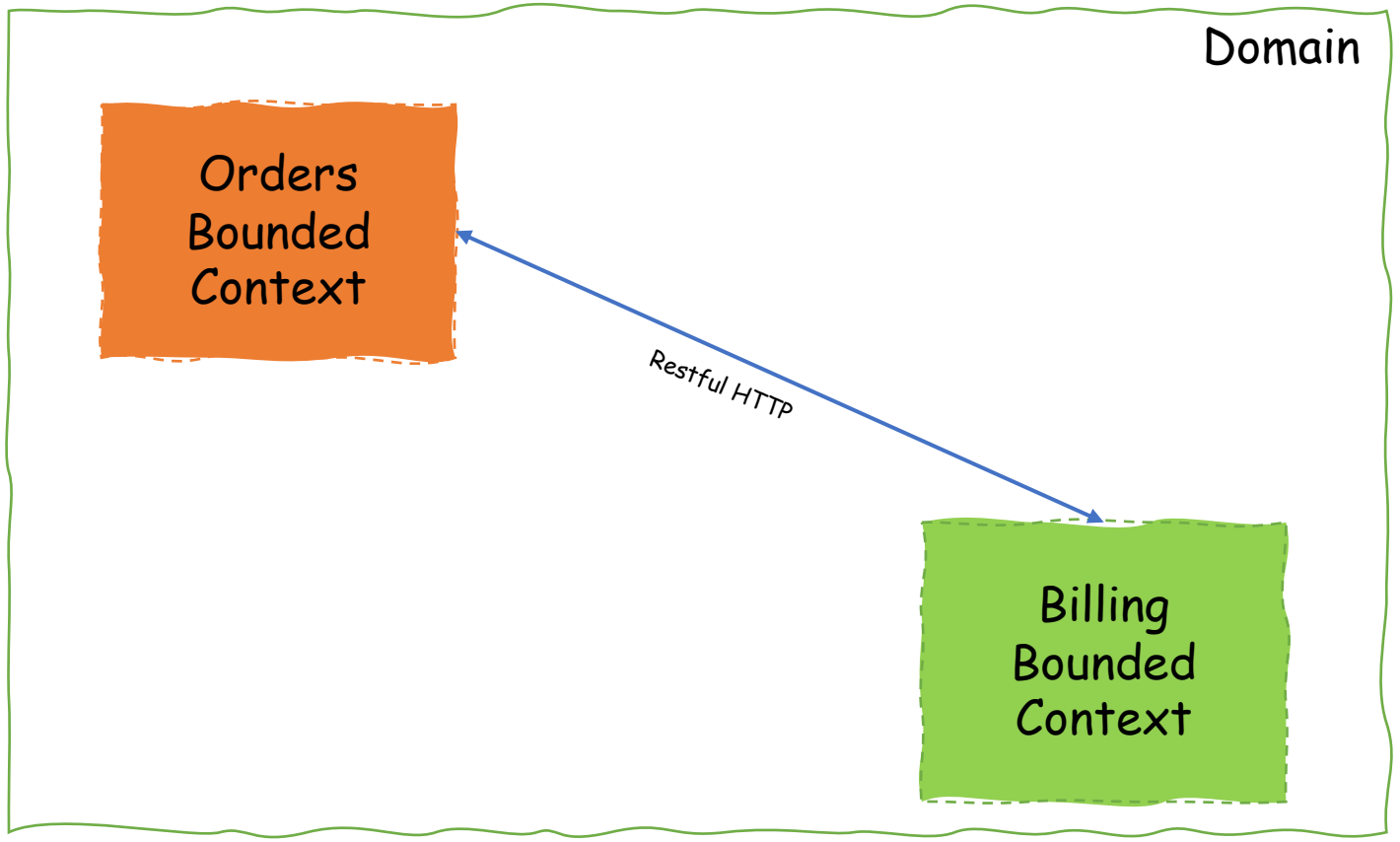
Domain Driven Design: Tactical thinking

Context Maps: Messaging



Domain Driven Design: Tactical thinking

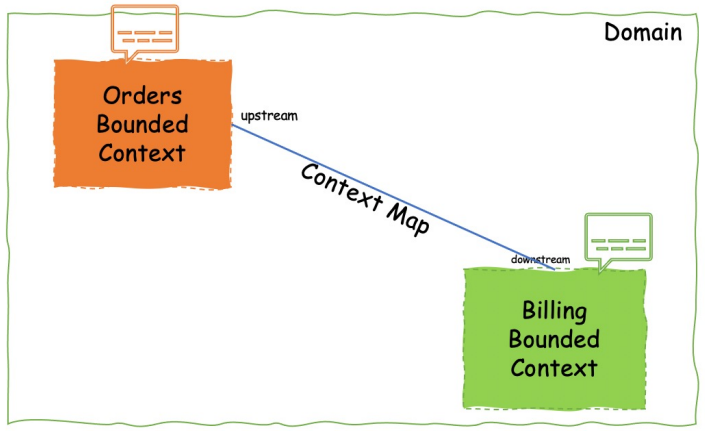
Context Maps: RESTful HTTP



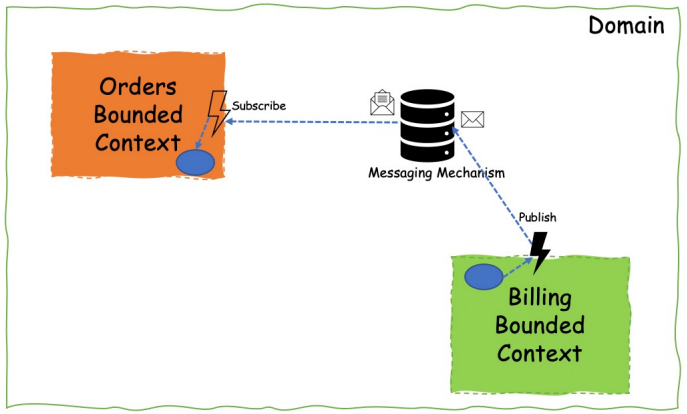
Method	Meaning
GET	Read
POST	Insert
PUT or PATCH	Update or Insert
DELETE	Delete

Domain Driven Design: Distributed Architectures

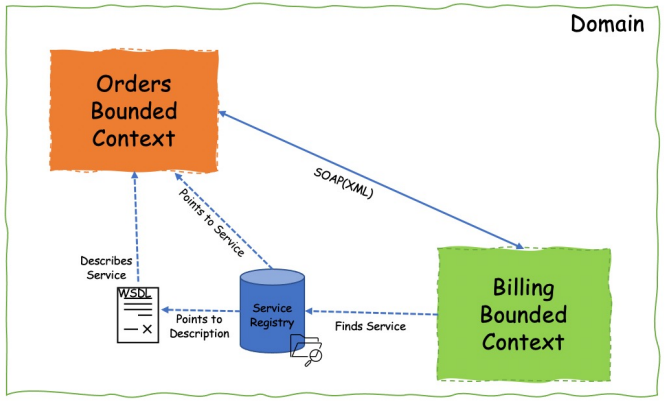
Domain Driven Design



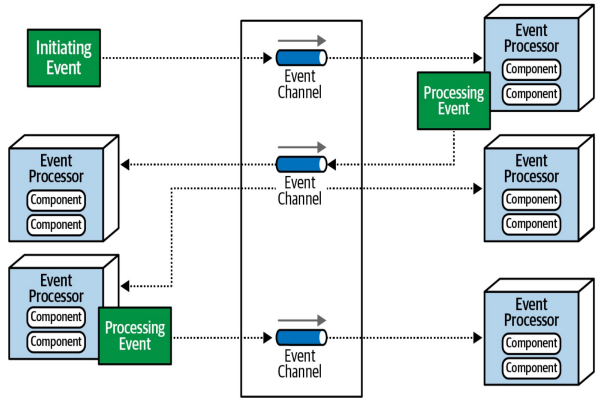
Event Based Partnerships



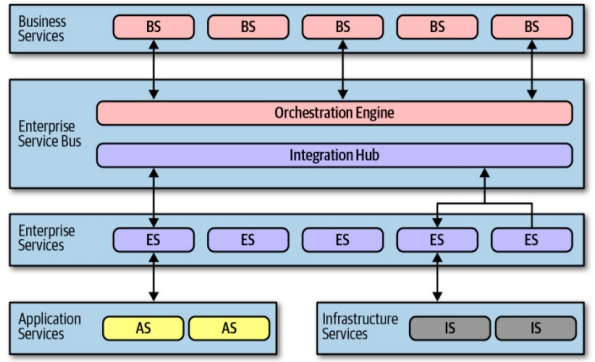
Service Based Partnerships



Event Driven Architectures

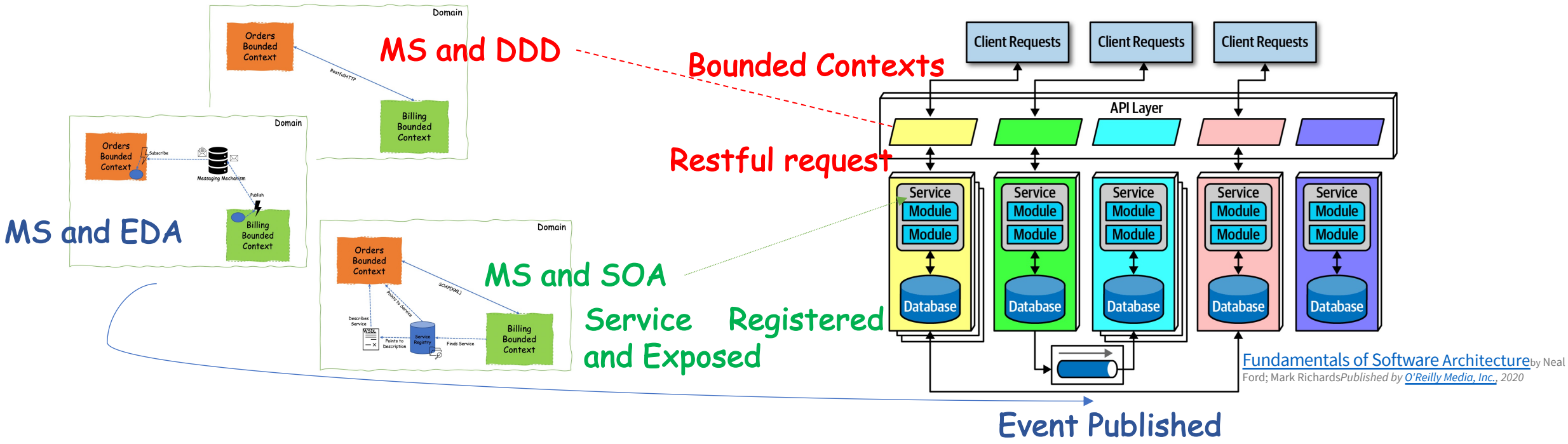


Service Oriented Architectures



Fundamentals of Software Architecture by Neal Ford; Mark Richards *Published by O'Reilly Media, Inc., 2020*

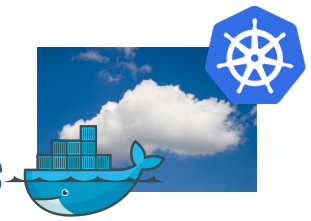
Domain Driven Design: Distributed Architectures



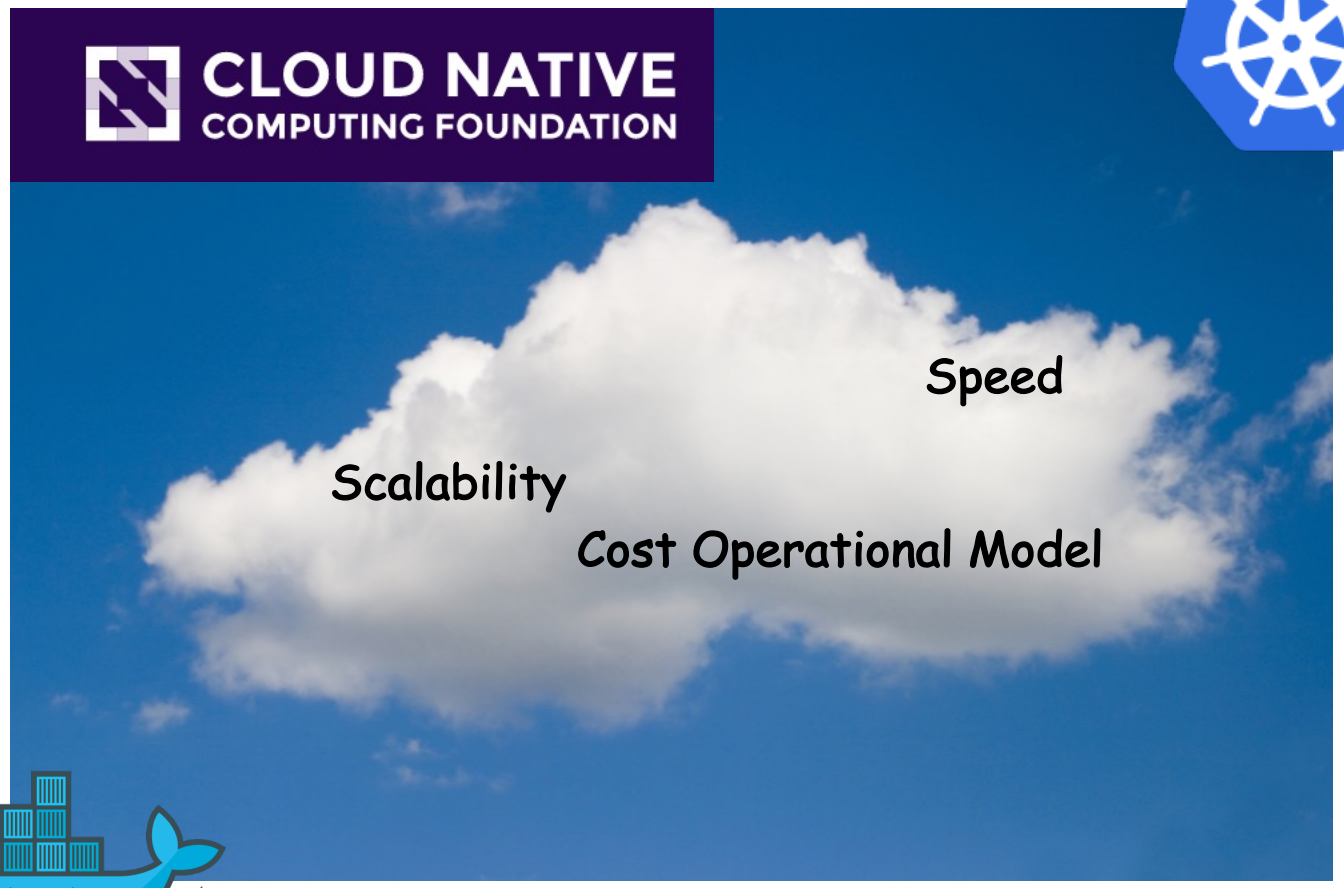
Cloud Native → Twelve-Factor App

Agile Manifesto

→ Operational Benefits



Cloud Native: Operational Benefits



…containers, service meshes, microservices, immutable infrastructure, and declarative APIs …

These techniques enable **loosely coupled systems** that are **resilient**, **manageable**, and **observable**. Combined with **robust automation**, they allow engineers to make **high-impact changes frequently** and **predictably with minimal toil**.

Cloud Native: Impact on Enterprise Architecture

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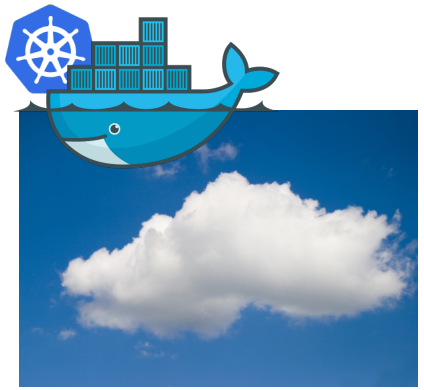
Wrap Up



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The '**Inverse Conway Maneuver**'.

Distributed Architectures such as **EDA** or **SOA** under principles of **DDD** created the conditions to forge **Microservices**.

…but it's the **Cloud Native operational attributes** which will release Microservices full potential to the organization.

Thank you

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 @HarrisNando

 fernandoharris

 fharris