

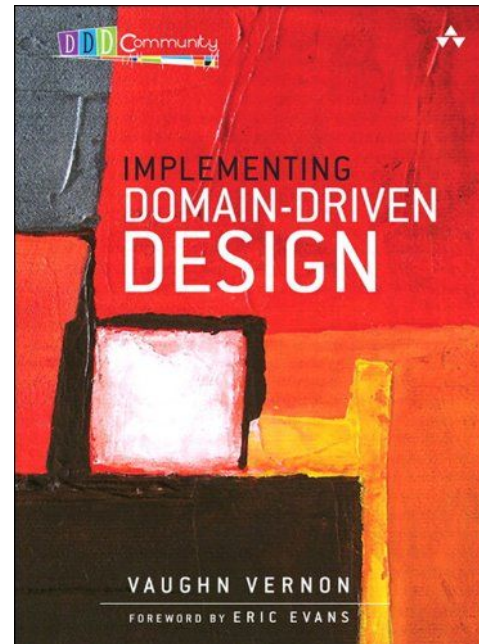
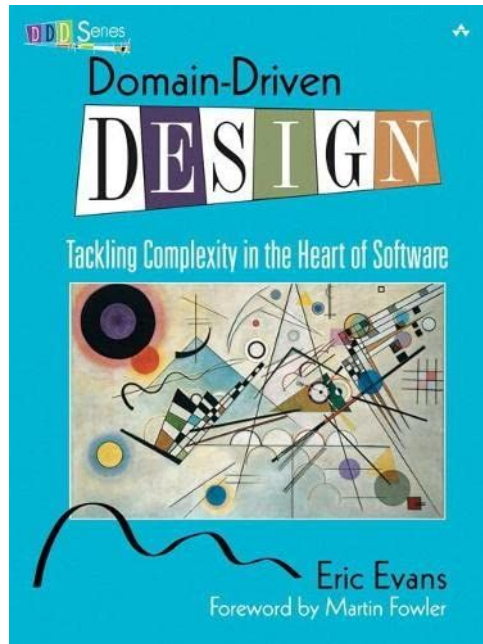
Engenharia de Software

Conceitos de Domain-Driven Design
Prof. Dr. Erik Aceiro Antonio

Objetivos

Domain-Driven Design

- Terminologia
 - Domínio - o que é ?
 - Especialistas em Domínio
 - Exemplo ACME
- Arquitetura & Design



Perspectiva de Domínio em relação a linguagem

“Uma esfera de conhecimento, influencia ou atividade



Perspectiva de Domínio em relação ao negócio

“Um campo | indústria na qual o negócio opera



Perspectiva de Domínio em relação a Tecnologia

“Representa um espaço de problema

eCommerce

eCommerce

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User Experience | Front End

Business

Logic | Rules | Flow

Data
Layer

Gateway

Adapters

Interfaces

Perspectiva de Domínio em relação a Tecnologia

“Representa um espaço de problema

eCommerce

Social Media

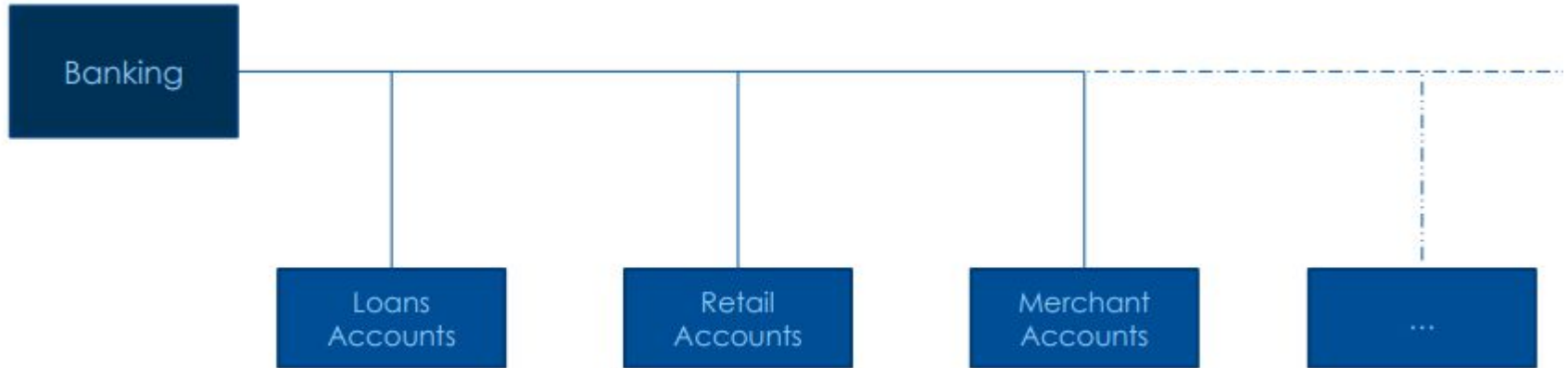
Media
Streaming

Resource
Planning



Sub-domínios

“Cada domínio consiste de sub-domínios



Especialista de domínio

Banking



Accounts Expert

Banking



Retail Accounts Expert



Merchant Accounts Expert



Loans Accounts Expert



Compliance & Regulatory



ACME Travel

Travel & Leisure industry



Travel Advisor





There are multiple experts within a domain !!!



Travel Advisor



Partner Contracts



Accounts



Customer Support

... ..

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Quiz



Considere um exemplo

- Quais domínios você conhece ?
- Quais sub-domínios você conhece dentro de cada domínio
- Quais os experts de domínio você conhece

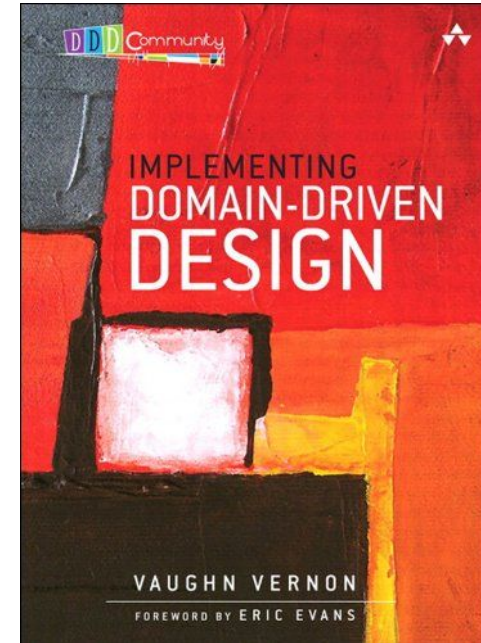
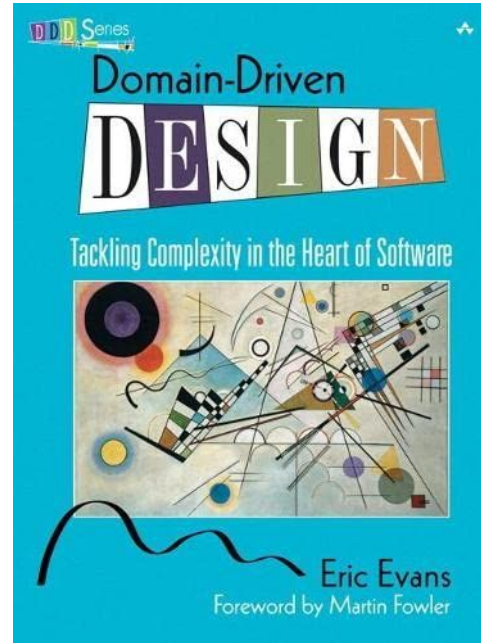
Revisão

Domínio = uma esfera de conhecimento, influencia ou atividade

- Contém um mapa de MULTIPLOS sub-domínios
- Requer múltiplos Especialistas de Domínio para dar suporte para as necessidades de negócios

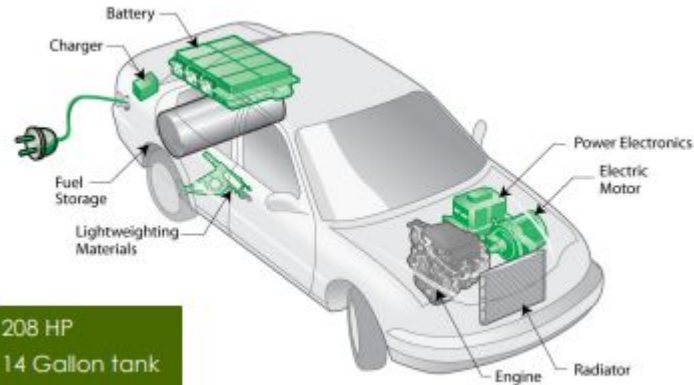
Arquitetura & Design

- Modelo Conceitual
- Modelo Arquitetural
- Arquitetura x Design



Modelo Conceitual

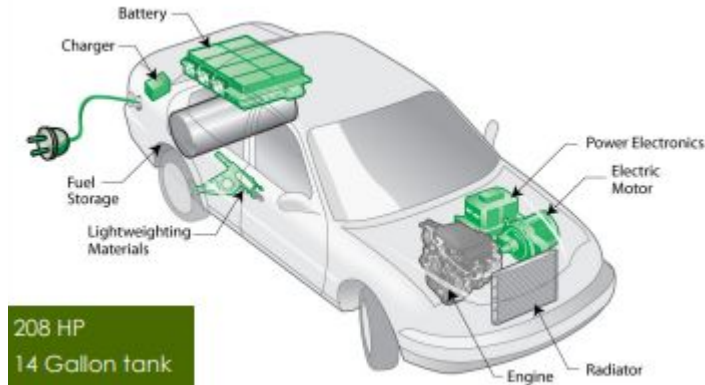
“Uma representação de um sistema feito a partir da composição de conceitos



208 HP
14 Gallon tank
70 kWh battery

Modelo Conceitual

- Melhorar a compreensão
- Aproximar as ideias
- Reduzir o gap conceitual
- Documentação



208 HP
14 Gallon tank
70 kWh battery

Software Modelo Conceitual

Terminologia comum para os conceitos de domínio
Identificar diferentes partes de um sistema

Relacionamento entre conceitos
Elementos de fundação

Modelo de arquitetura
Visualização da representação do sistema

Modelo de Arquitetura

“Representação estrutural de uma solução que agrupa os requisitos de um espaço de problema

- Alto nível de abstração de partes e soluções
- Representação da visão de requisitos
- Ajudar a responder questões de *stakeholders*

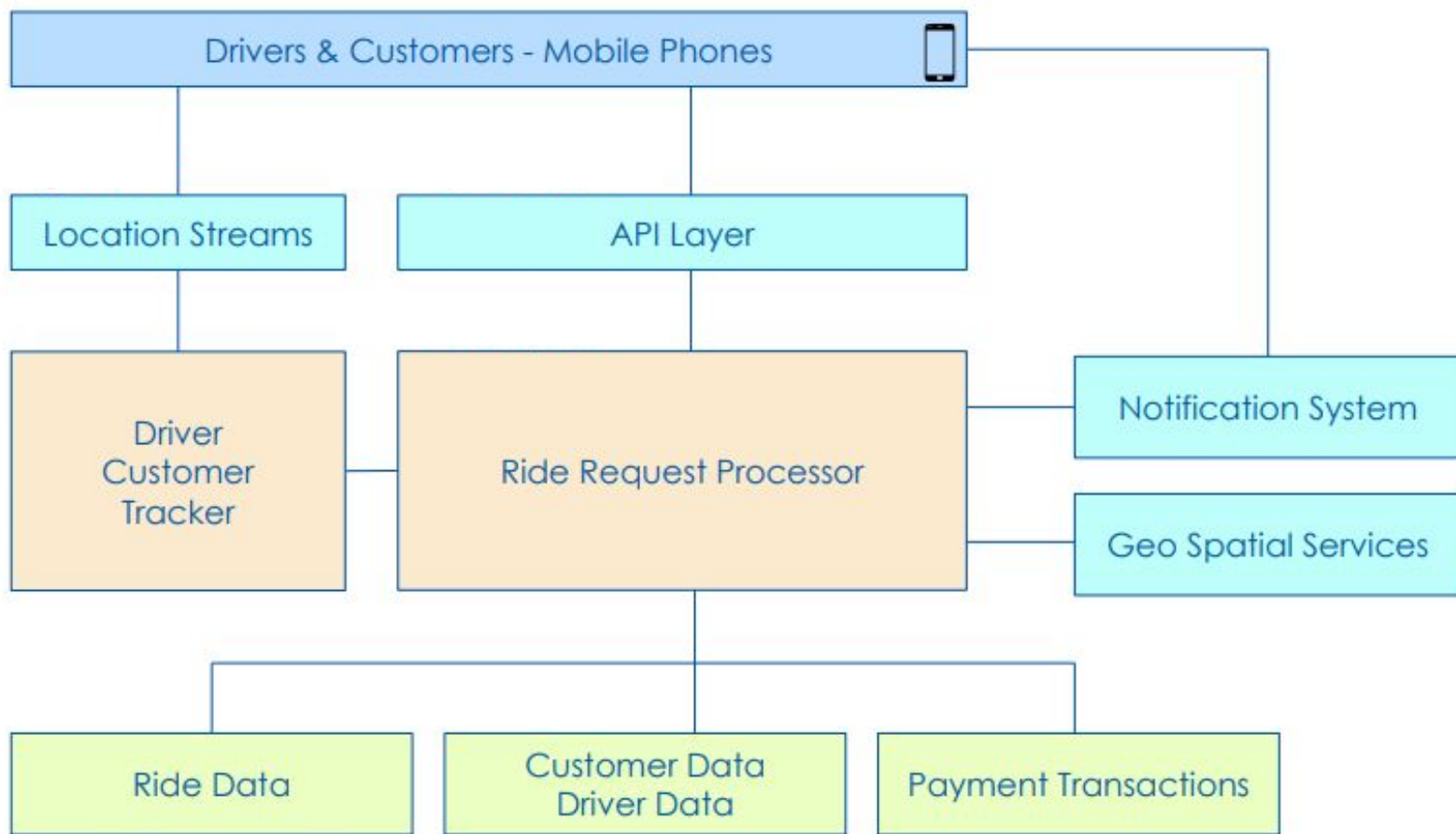
Arquitetura vs Design

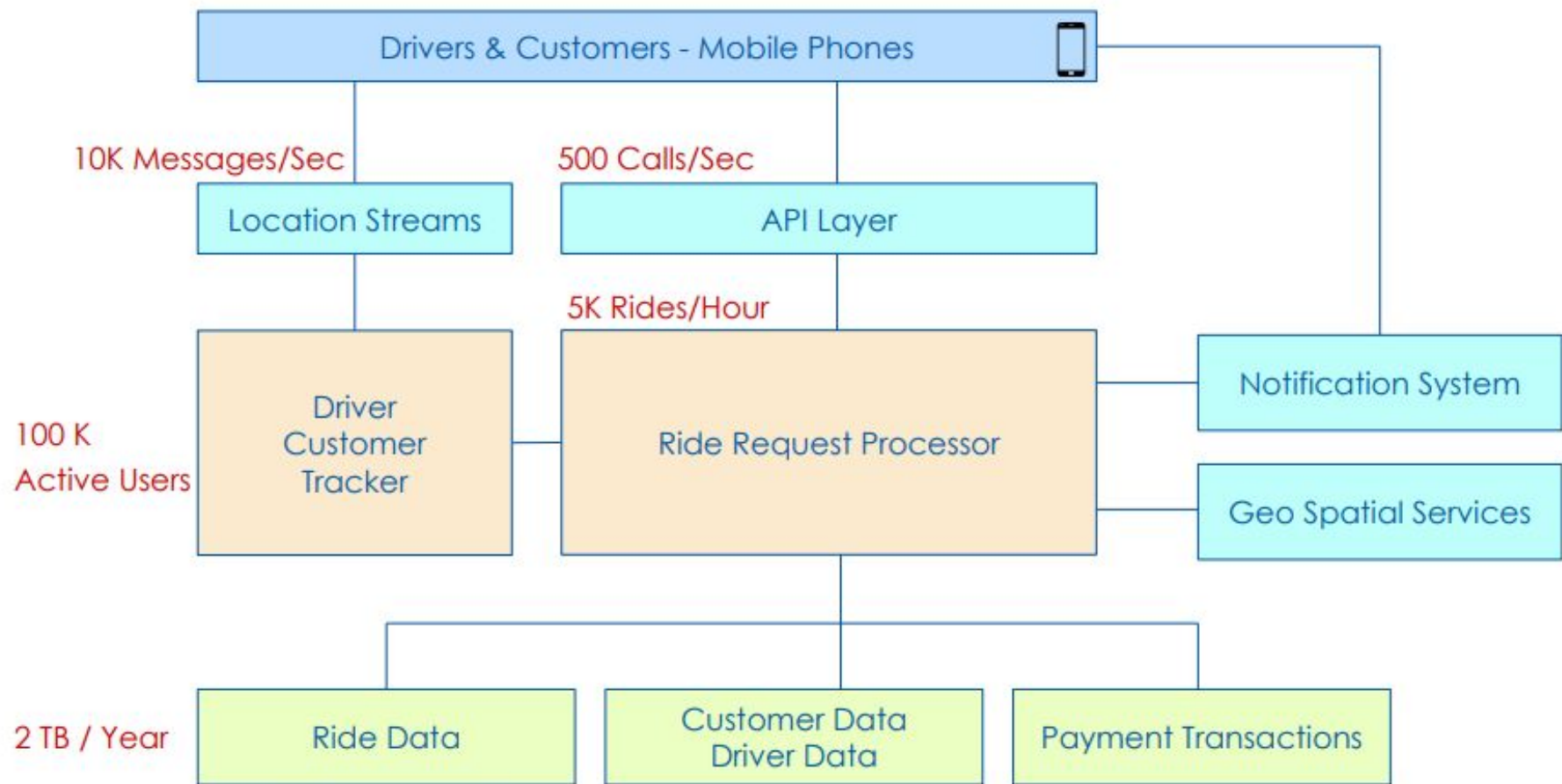
“Arquitetura = alto nível | skeleton | foco de longo prazo

“Design = detalhamento | foco na implementação

Architecture & Design for a Rideshare System

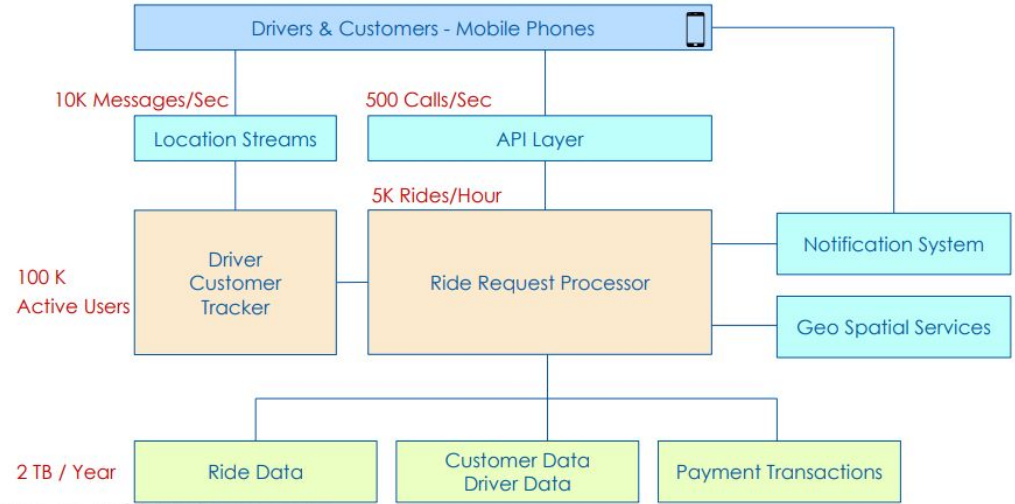


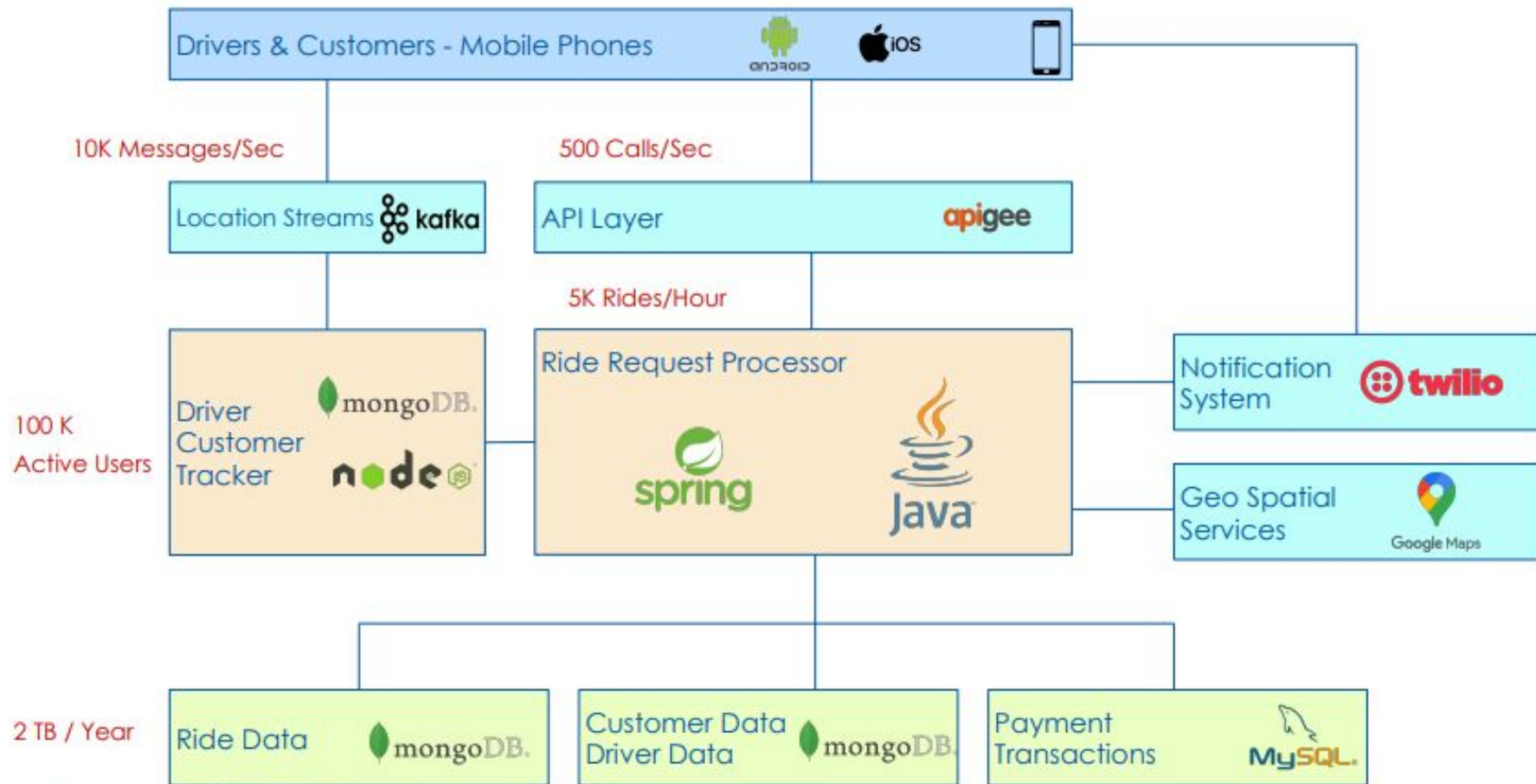




Pense sobre o Design

Quiz





Diagramas de Modelagem

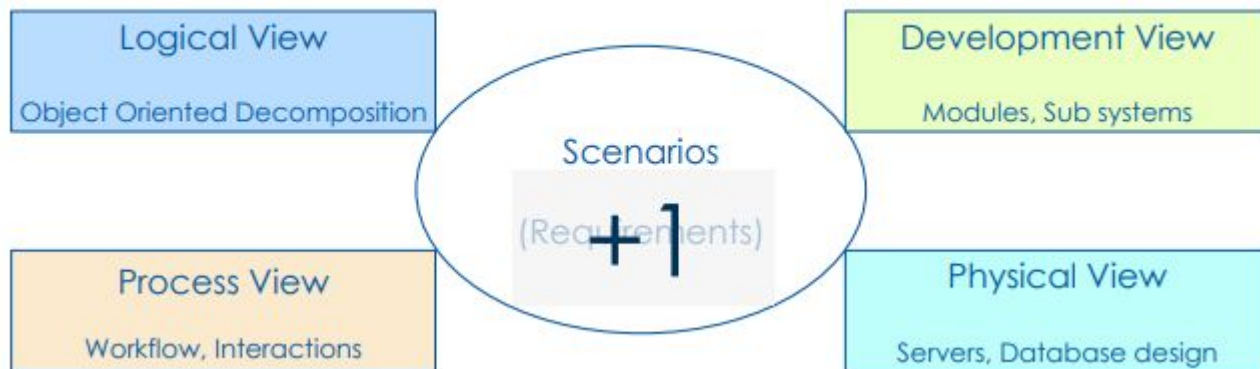
Múltiplas visões e maneiras de modelagem

- Propósito
- Perspectiva | Pontos de vista
- Nível de detalhes

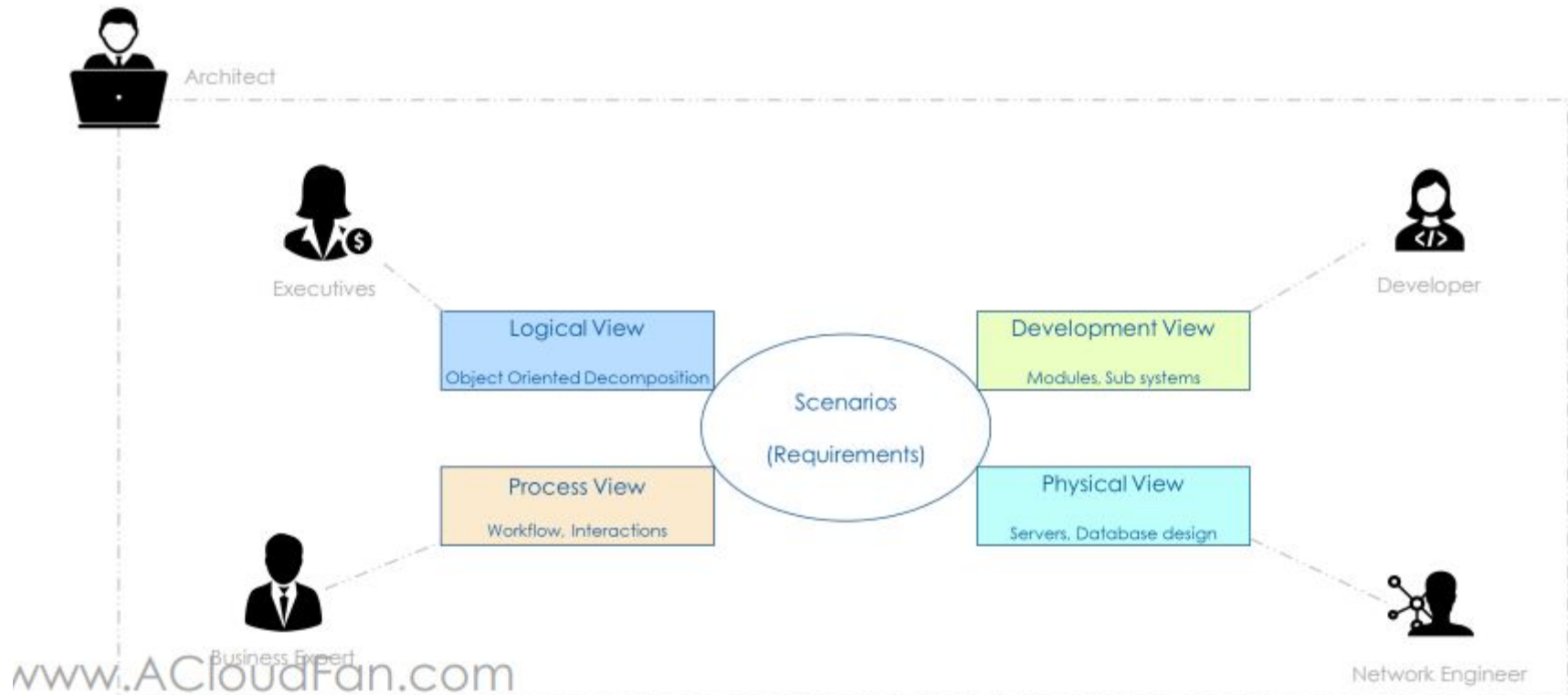
4+1 Architectural View Model



4+1 Visão de Arquitetura



Stakeholder Interests | Concerns





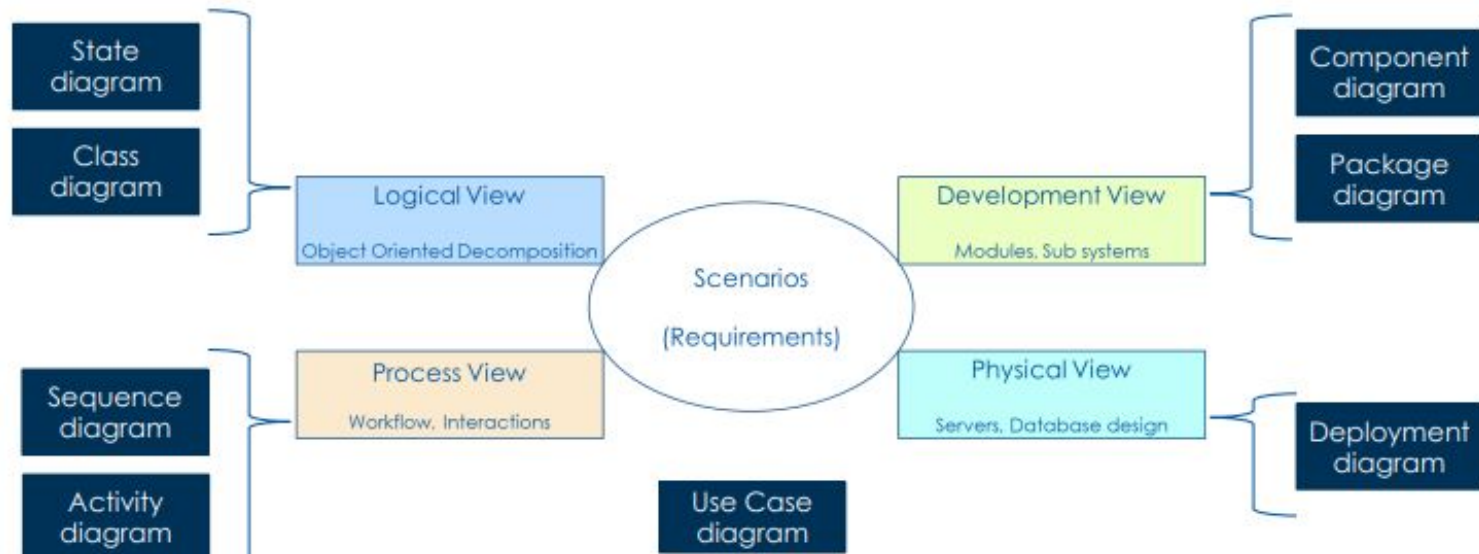
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- Um conjunto de diagramas
- Um conjunto de Notação



<http://www.omg.org/uml>

A standard set of diagrams (14)



Estilos de arquiteturas de software

“Conjunto de elementos e padrões reutilizáveis que podem ser usados para solucionar um problema comum

**Organizados por
Categorias**

Communication

- Service Oriented Architecture (SOA)
- Message Bus Architecture

Structure

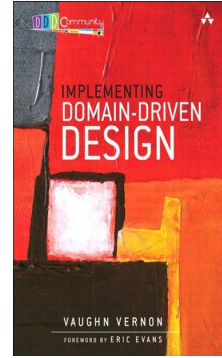
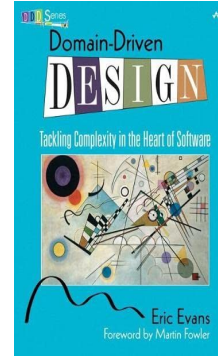
- Layered architectures
- Object Oriented Architecture & Design

Deployment

- Client Servers
- 3 Tier Architecture

Data

- Database Centric Design
- Data Flow Diagrams



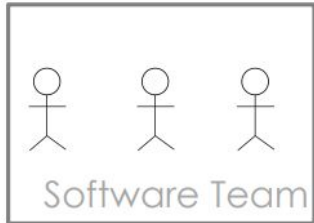
Domain

- Domain Driven Design

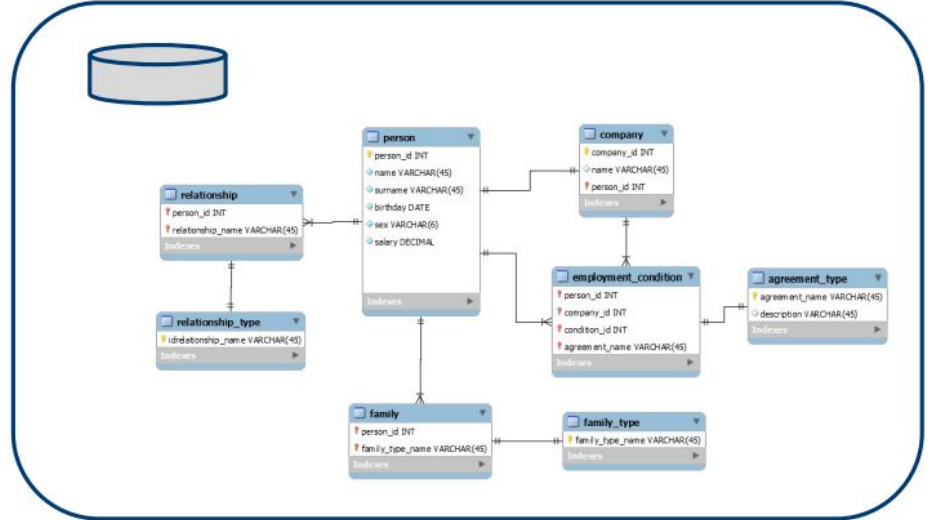
Focus is on Business Domain rather than technology

Foco no core de domínio

Focus is on core data in the domain

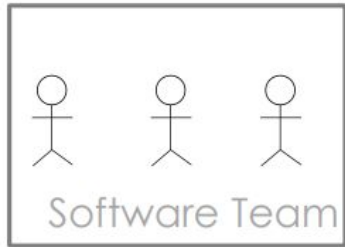


Develops

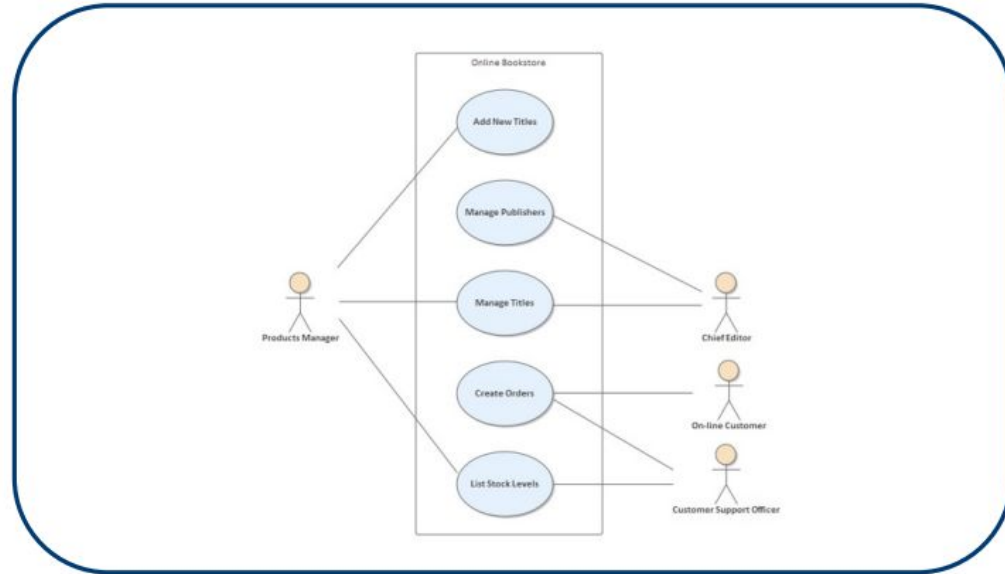


Foco no core de negócios - Use Cases

Focus is on core use cases in the business

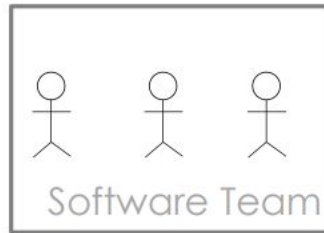


Develops

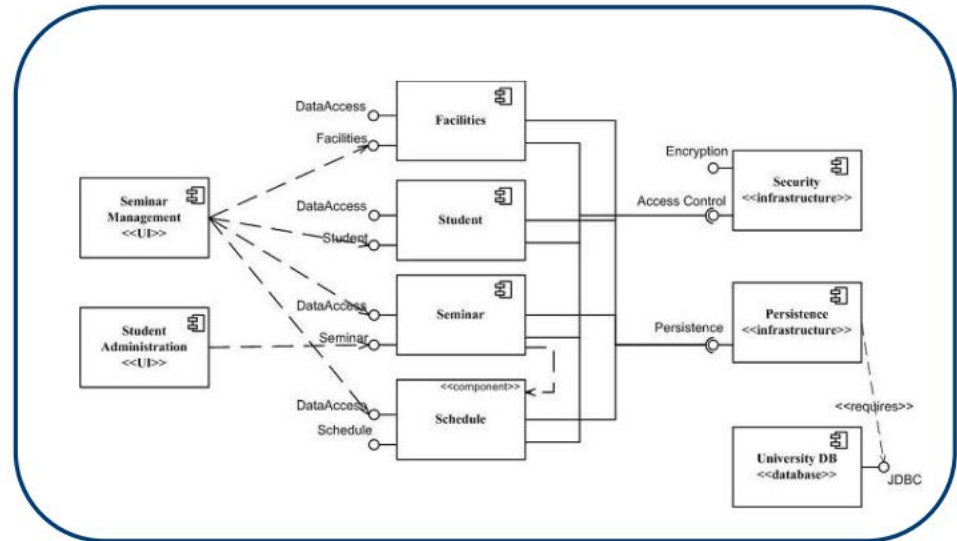


Foco na capacidade core como serviços

Focus is on core capabilities exposed as services

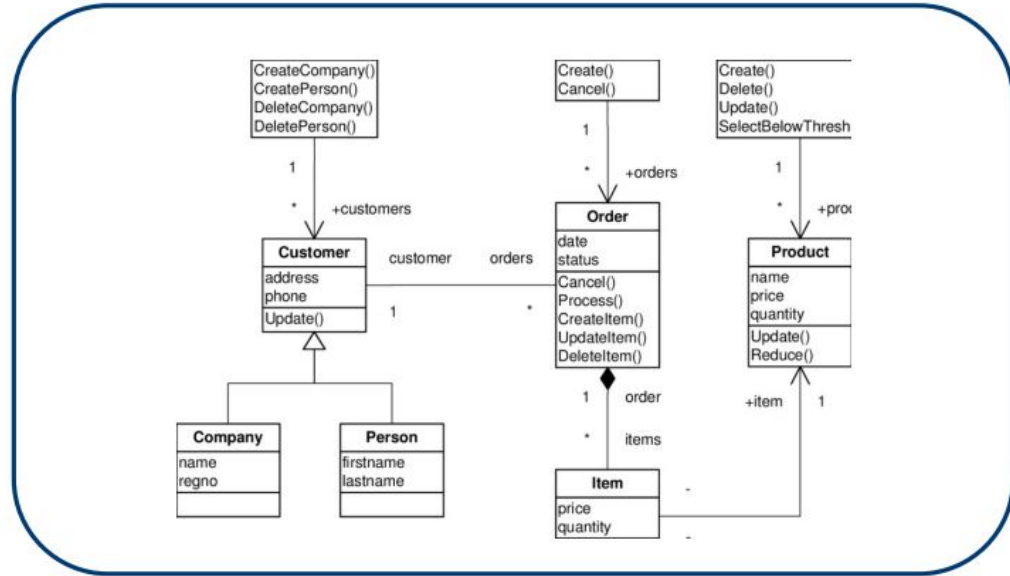
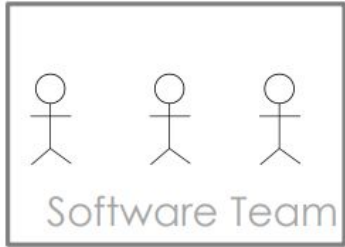


Develops



Arquitetura Orientada a Objetos

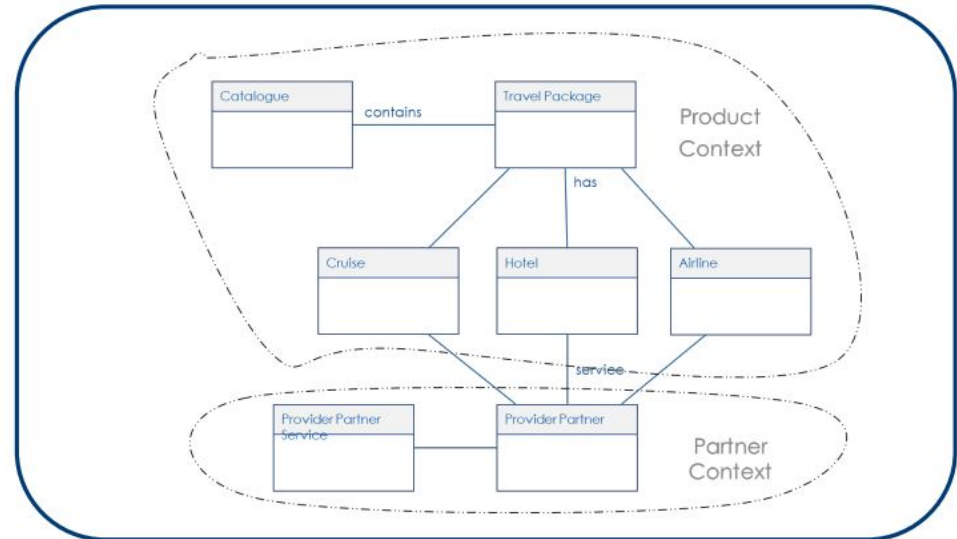
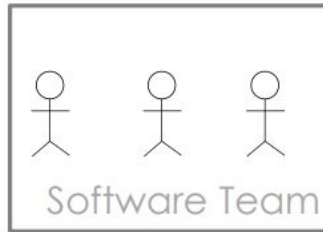
Focus is on identifying real work objects classes



Domain Driven Design

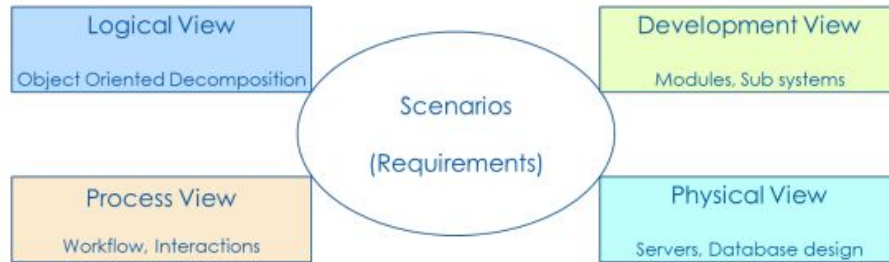
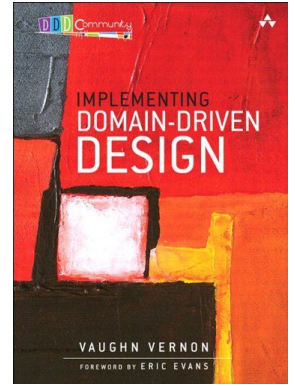
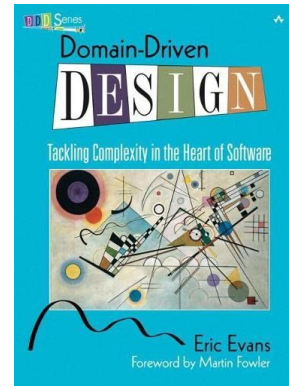


Focus is on the business domain



Resumo

“ DDD foca no domínio de negócios



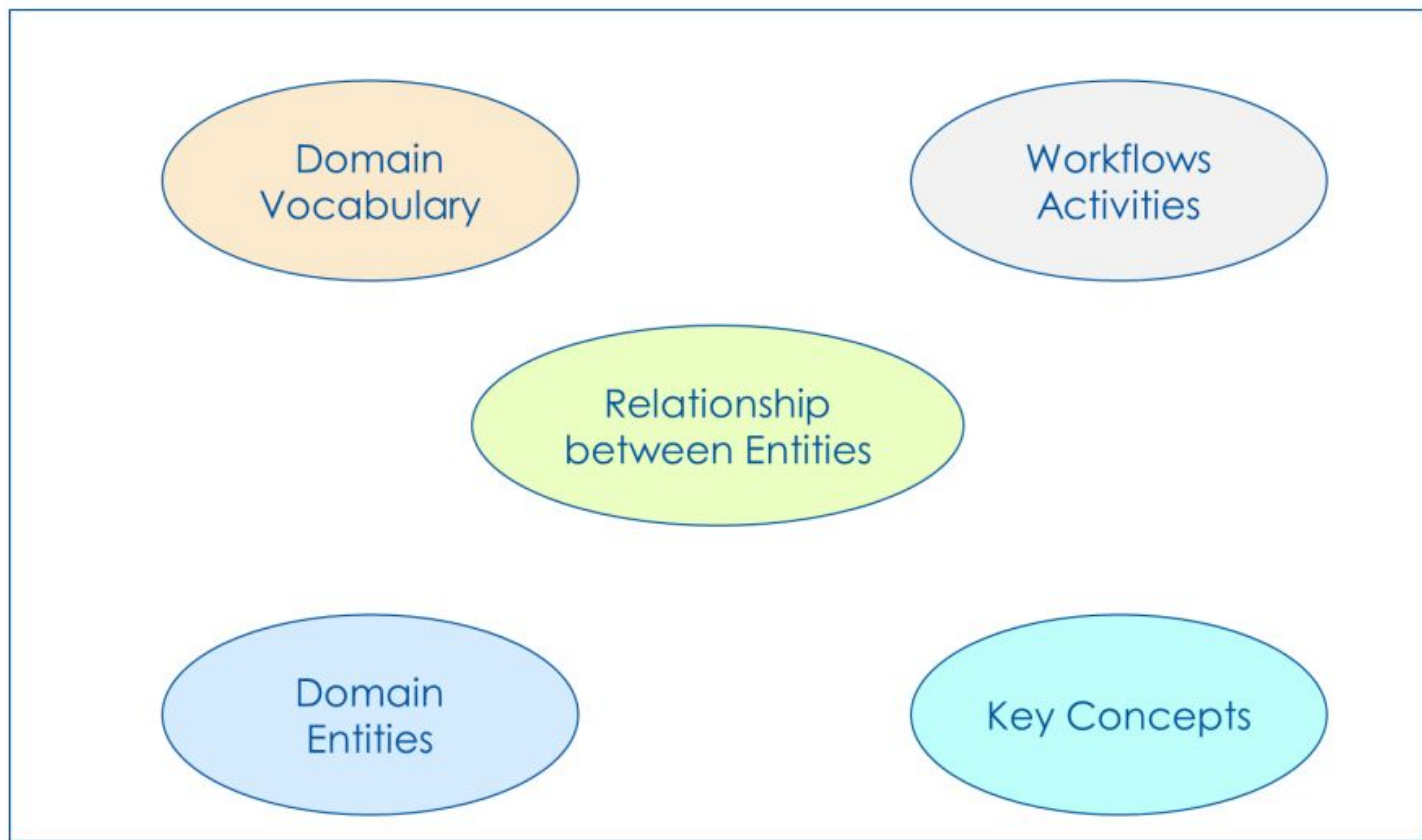
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Modelo de Domínio (Domain Model)

“ Conhecimento organizado e estruturado do domínio que é relevante para solucionar um problema de negócio”

“ Problema de Negócio são os desafios e problemas atuais ou de longo prazo enfrentados pelo negócio que podem impedir que o negócio alcance seus objetivos.”

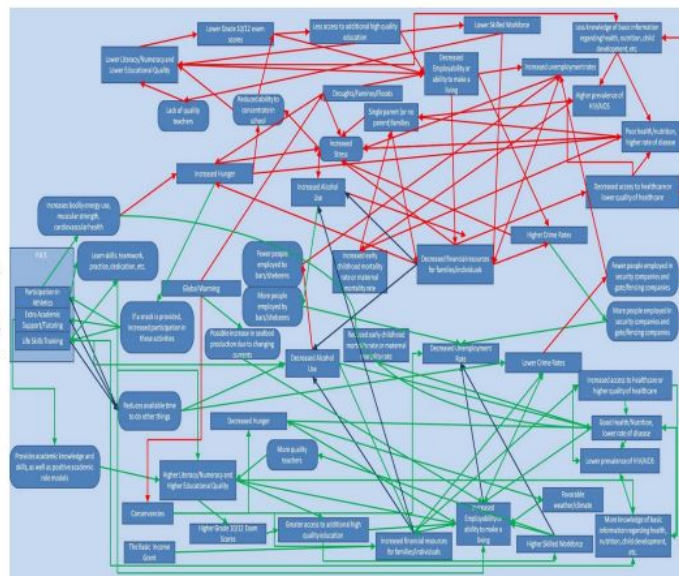
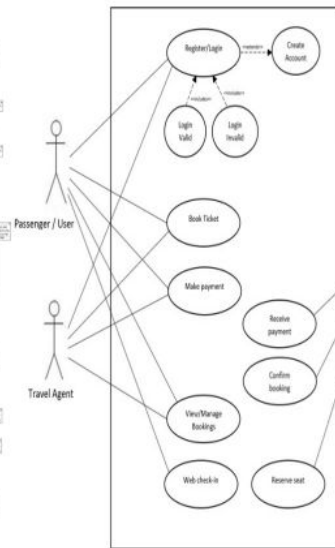
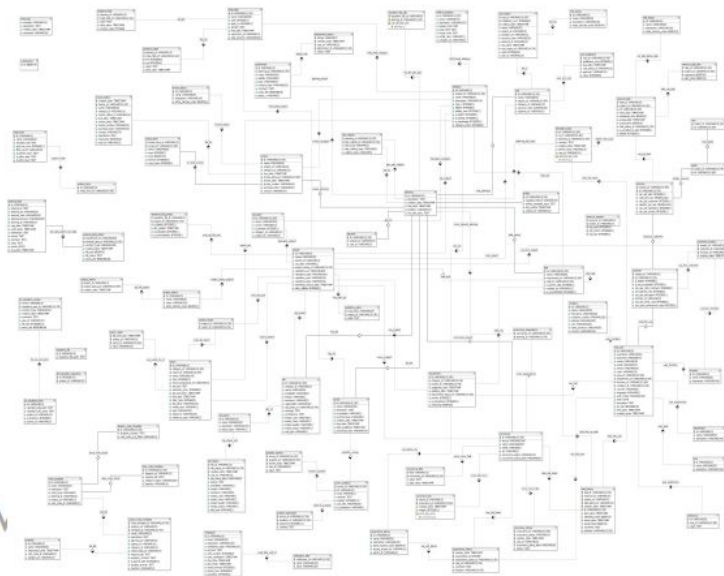
Domain Model



Also known as Unified Models

Also known as Canonical Models

Also known as Aggregate Models

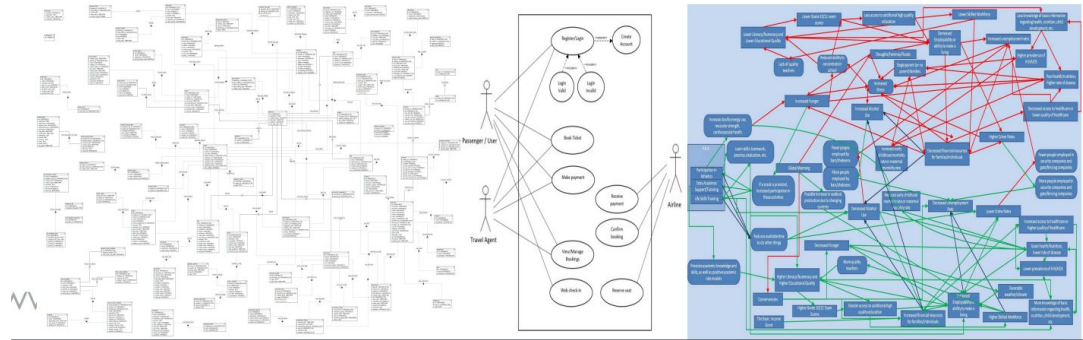


- Complexidade
- Linguística
- Dono (Ownership)
- Overlap
- Redundancia

Also known as Unified Models

Also known as Canonical Models

Also known as Aggregate Models



DDD

A abordagem Domain Driven Design fornece princípios e padrões para lidar com a desafios enfrentados com o desenvolvimento modelos de domínio complexos

