Application Architecture

Vision

Object-Relational Database Implementation Model

Party Role / Customer

Assignment for role: Application Architect, Telia

Juri Lunin | 25.07.2023

Background
Mission Objectives

- Elevate Customer Experience & Optimise Business Units Operations

  - Customer Base | Organisations bring new individuals + vice-versa

  - Smart CRM | Data Management & Analytics, Communication Automation

  - Service Quality | Lean interactions between Customers & Business Units

- Brand & Market Development

  - Customer Experience | Design of Customer Journey & Product Lifecycle

  - Marketing Strategy | ML for Macro-Trends & Customer Profile

Background
Design Considerations

- Cross-Country (Nordic & Baltic) | Flexibility & Localisation for Territory Values

- Global Coverage | Compliance to Regional Privacy & Security Standards

- Business Units | Business Network, Industry Digitalisation, Cloud & Security, Mobility, Contact Center, Wholesale, IoT, Crowd Insights

- 25M Customers 19k colleagues | Shared, Scaleable, Redundant & Fast

- Compliant to Tele Management Forum guidelines and frameworks

Guidelines
TM Forum Frameworks

GB922 Customer Domain Business Entities | Version 22.5.0
GB922 Party Business Entities | Version 19.0.1
GB991 Core Frameworks (Concepts and Principles) | Version 22.5.0

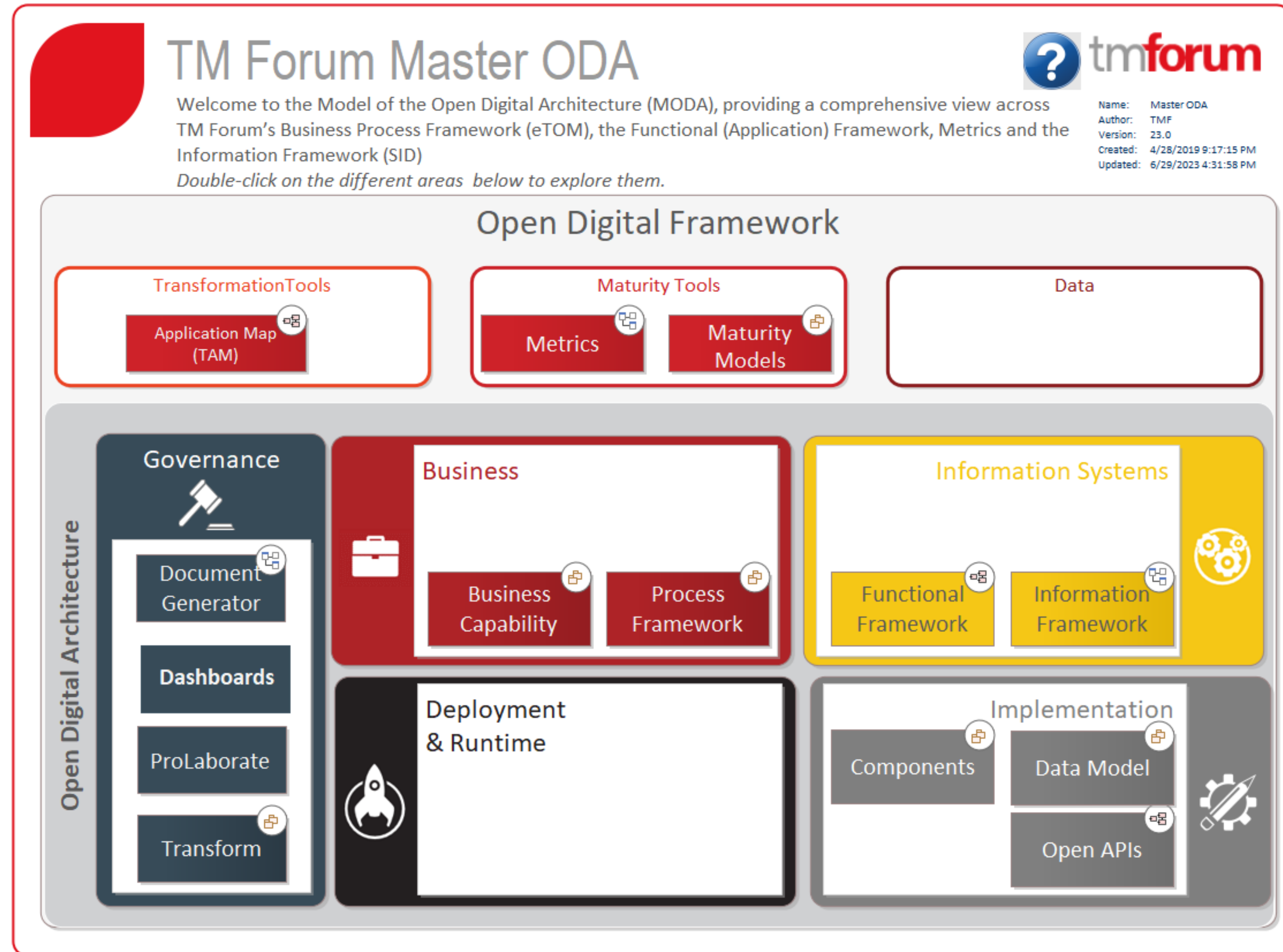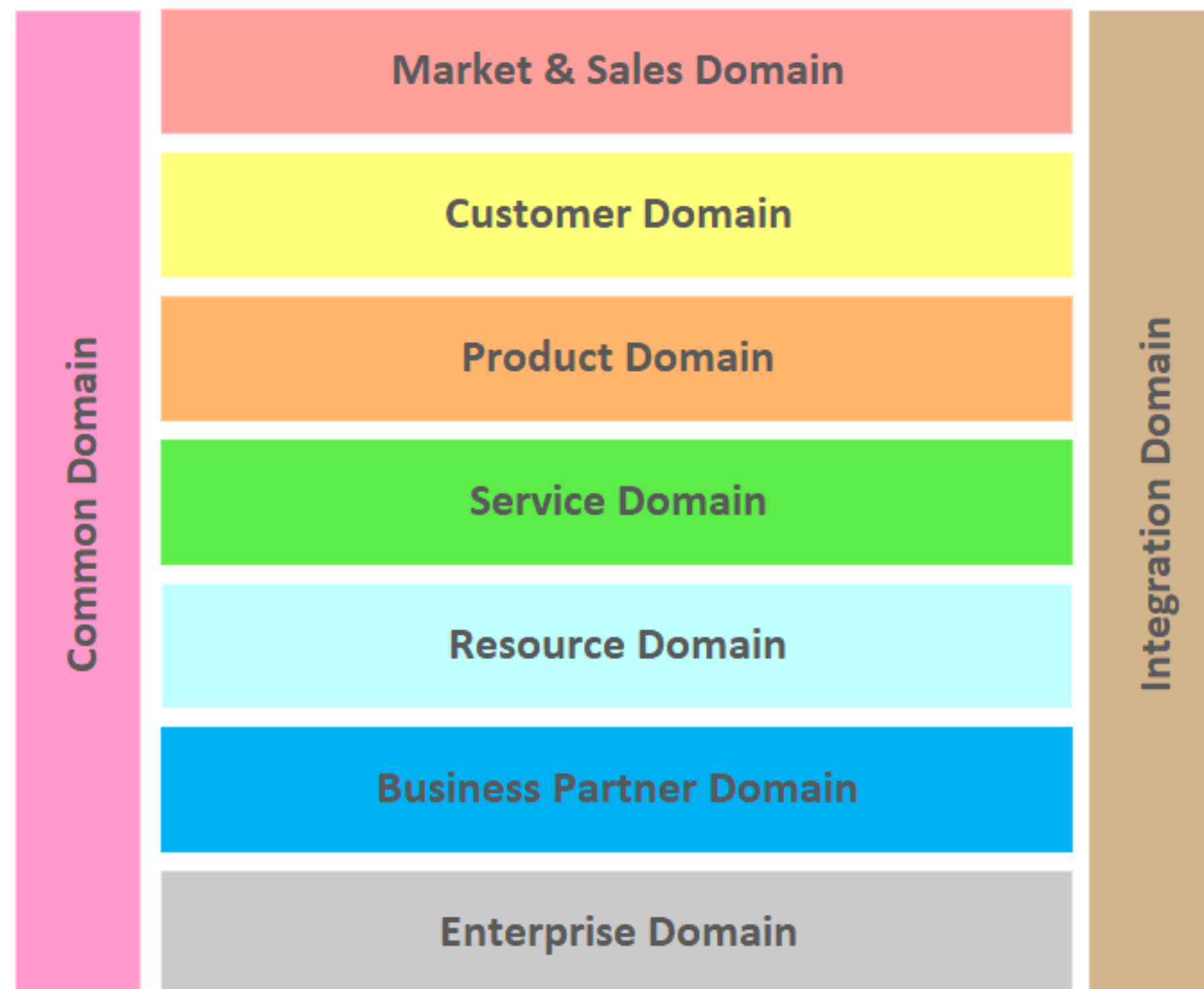TM Forum Open Digital Architecture (ODA)
1. The Business Process Framework (aka eTOM)
2. The Information Framework (aka as SID)
3. The Functional Framework
TM Forum Master ODA https://www.tmforum.org/oda/moda/

TM Frameworks
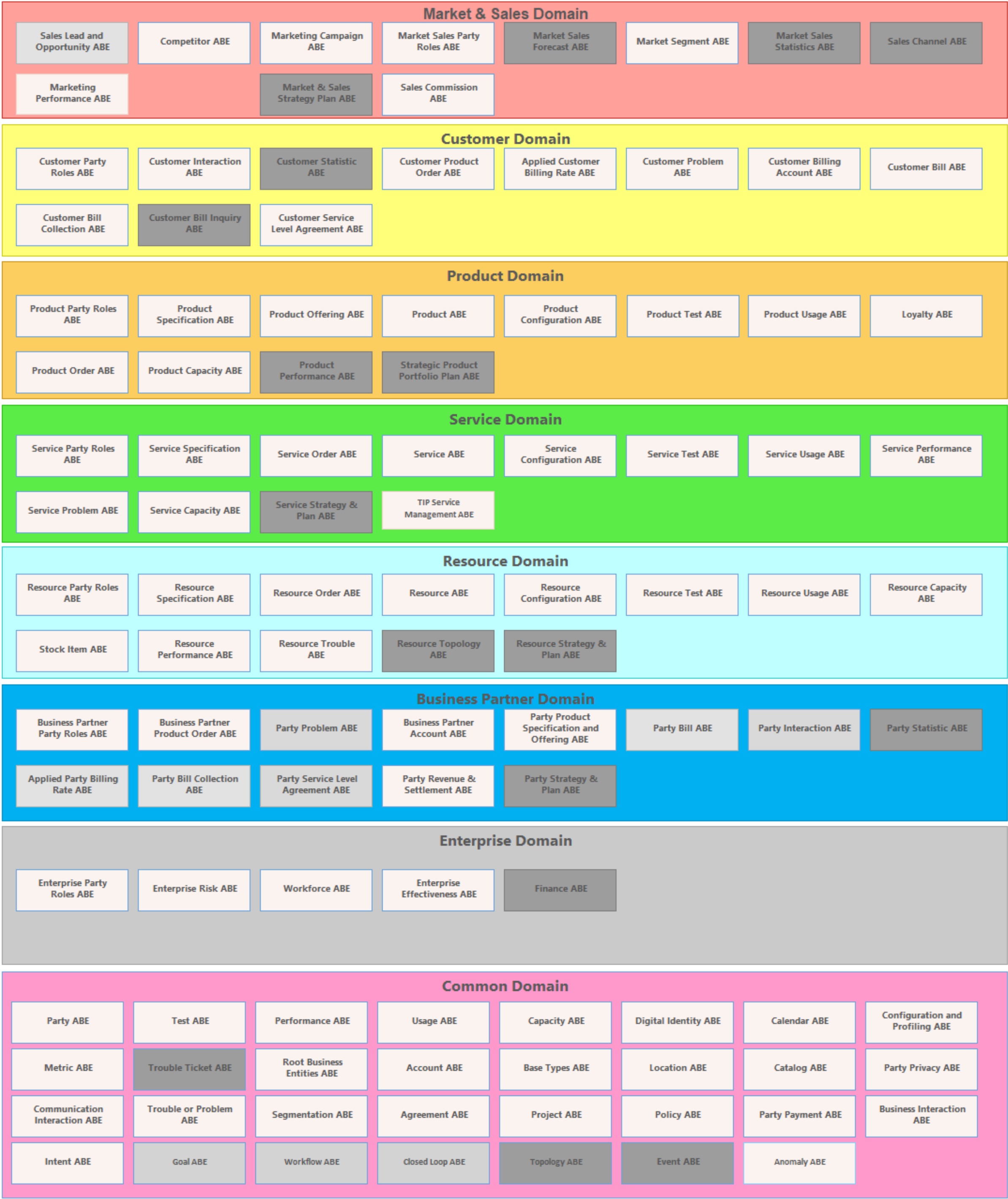## Business & Information

- Domains from Open Digital

TM Frameworks
Focus: Information / Customer

- Focus: Information Framework

  - Customer Domain

    - Customer PartyRole ABE

- Consider: Business Framework. &

  - Other Domains, esp.:

    - Market & Sales

    - Service | Product

Teamwork & IS Lifecycle
Database Planning

- Identify enterprise plans and goals with IS needs

- Evaluate current IS for strengths & weaknesses

- Include opportunities for competitive advantage

- Plan DB to support Mission Objectives

  - => Mission Statement to be met

Teamwork & IS Lifecycle
System definition

- Define scope and boundaries of DB

  - Interfaces with other IS parts in Enterprise

  - Current users & applications

  - Future users & applications

- Definition of user roles: Customers, Partners and Enterprise users

  - then User Views

Teamwork & IS Lifecycle
Requirements & Analysis

- Requirements specification & management (centralised + view integration)

- User View Integrations

  - PartyRole / Customer (Customer | Buyer + Service | Product + CSR + M&S)

  - PartyRole / Buyer (Buyer | Customer + Service | Product + CSR + M&S)

  - PartyRole / CustomerServiceRepresentative (CSR + Customer | Buyer + Service | Product + M&S)

Teamwork & IS Lifecycle
Database design & Applications design

- <u>IS to support Enterprise operations & objectives</u>

  - DB design approach: Agile (Top-down + Modular)

  - Applications design: Agile (Modular in parallel with DB)

  - DB Conceptual & Apps UX design

  - DB Logical & Apps Transaction design

  - DB Prototyping & Apps UI design

  - Implementation, Data Conversion & Loading, Test, Deploy, Maintain

Database Design
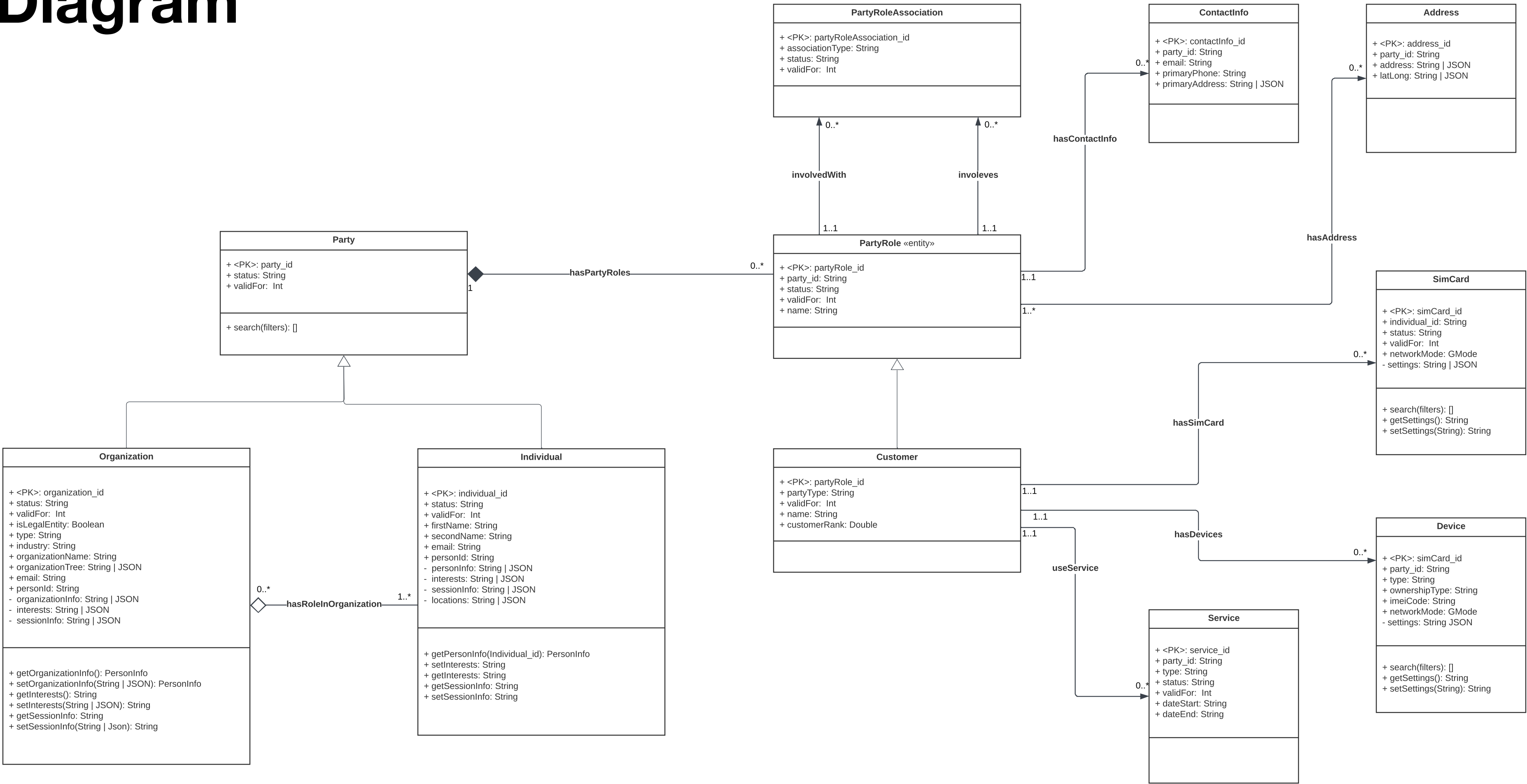## Scope: PartyRole / Customer

- Parties: individuals & organisations

- Activities: acquire, use, pay, support for services & products

- Strategy to Readiness: customer strategies, capabilities, customer lifecycle management

- Operations: customer relationship management, data, privacy, interactions, communications, orders, accounts, balances, service level agreements (SLAs), training, problems, cases, invoices, payments, disputes, collections, loyalty, performance, usage statistics, analytics and support
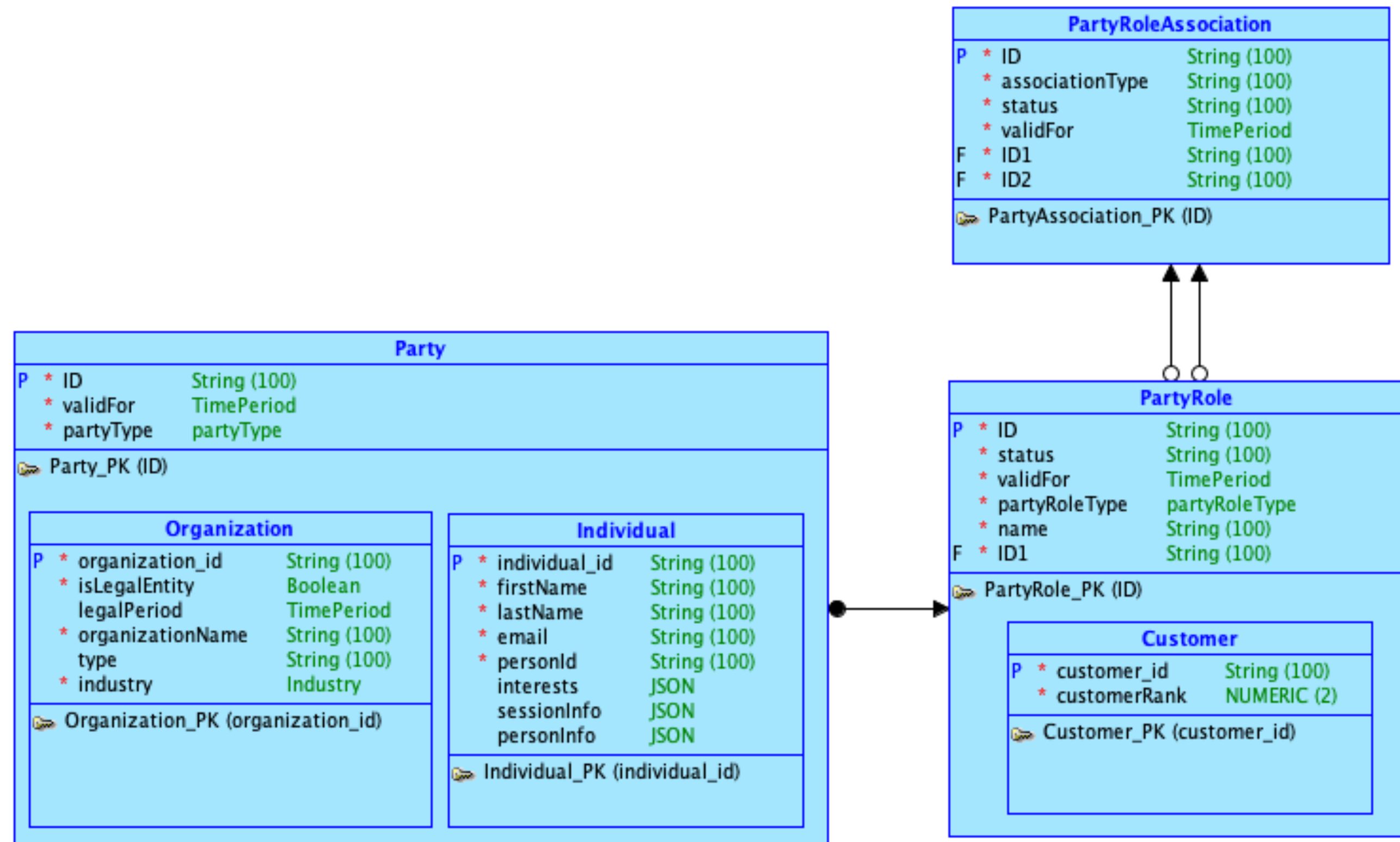
Database Design
Class Diagram

Database Design
Logical Diagram Party Role / Customer (draft)

Database Design
Relational Diagram Party Role / Customer (draft)