Conceptual Framework for Consumer Electronic Enterprise Architecture

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EIS
ENTERPRISE
INFORMATION SYSTEMS

Outline

- Objectives
- Key Components of EA
- Business Architecture
- IT Architecture
- Demo
- Difficulties and Challenges
- Documentation Strategy
- Poster

Objectives

Comprehensive

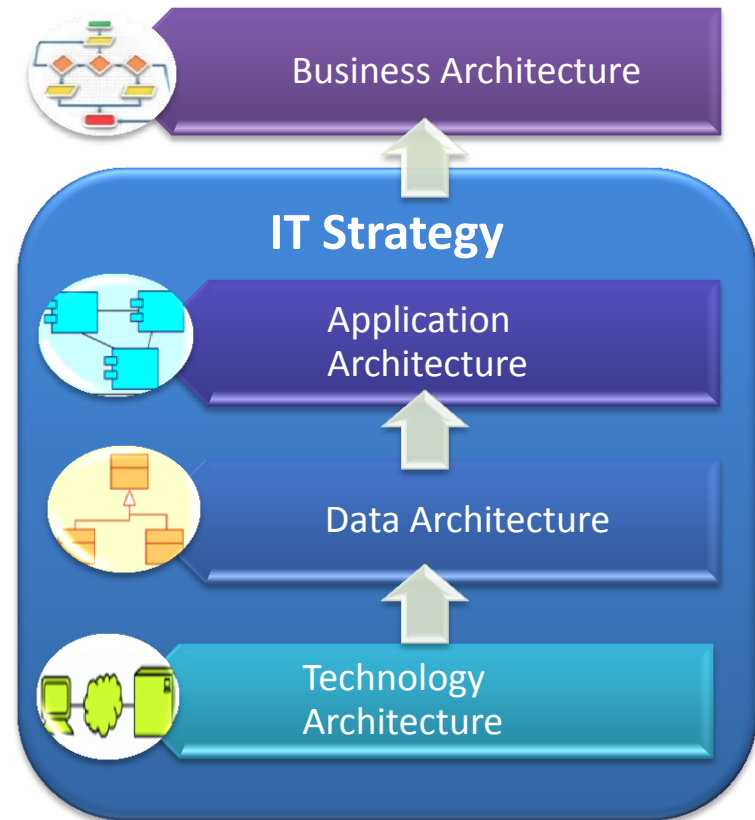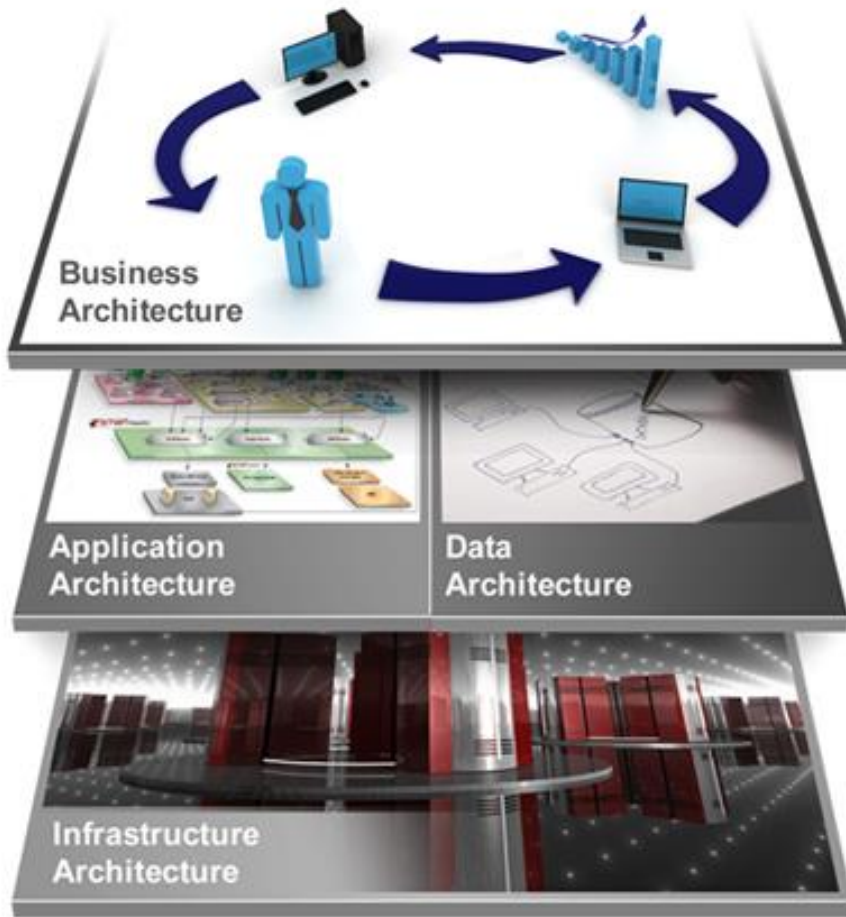- Well specified, detailed model of the enterprise and its components

Consistent

- Model contains consistent terminology

Unambiguous

- No ambiguous situations in model and between its states

The primary goal of EA is to make the organization as efficient and effective as possible!

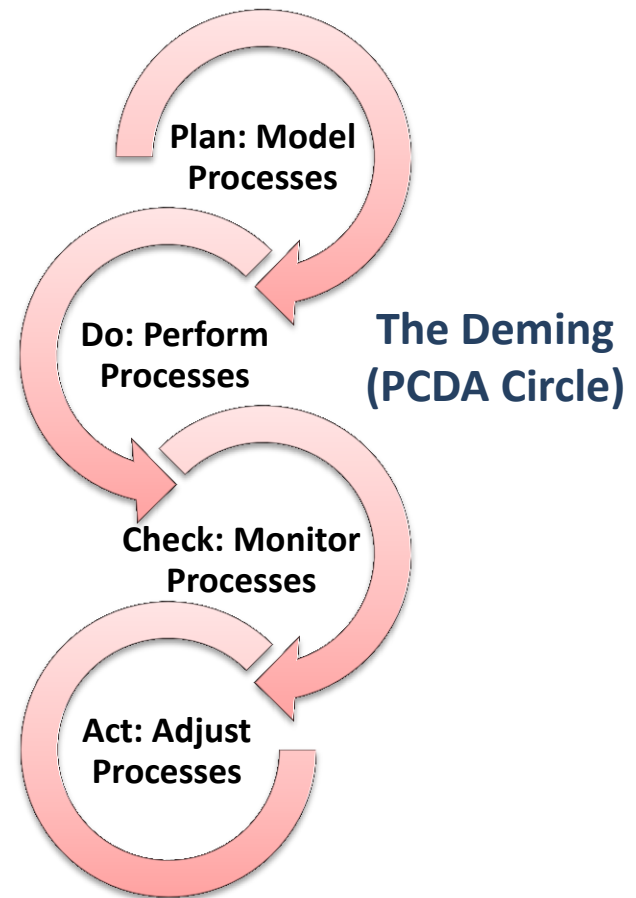# Key Components of Enterprise Architecture

What is a Business Process

- A Business Process consists of a set of activities that are performed in coordination in an organizational and technical envioroment. These activities jointly realize a business goal (service or product).

Business Processes

Realizes

Product

Service
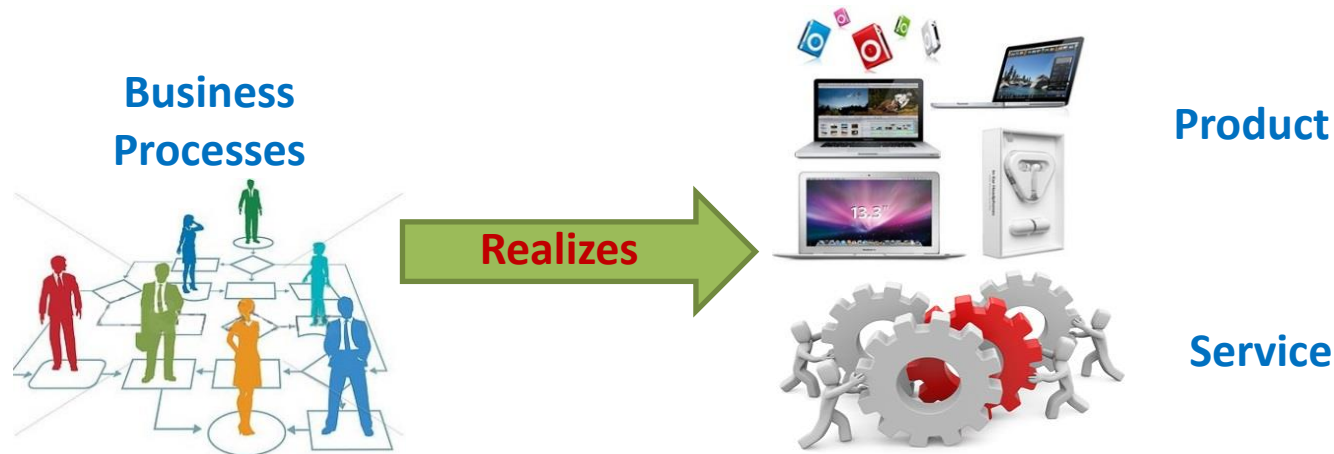
- Each Business Process is enacted by a single organization, but it may interact with business processes performed by other organizations.

Benefit of Process Modeling

- Representation of Processes

- Analysis of Processes

- Continuous Improvement of Processes

- A basis for IT Support

- A solid basis for Process Management

Plan: Model Processes

Do: Perform Processes

Check: Monitor Processes

Act: Adjust Processes

The Deming (PCDA Circle)

What is BPMN?

Business Process Model and Notation

- **Business Process**

  A collection of related, structured activities which

  produce a specific service or product for a particular

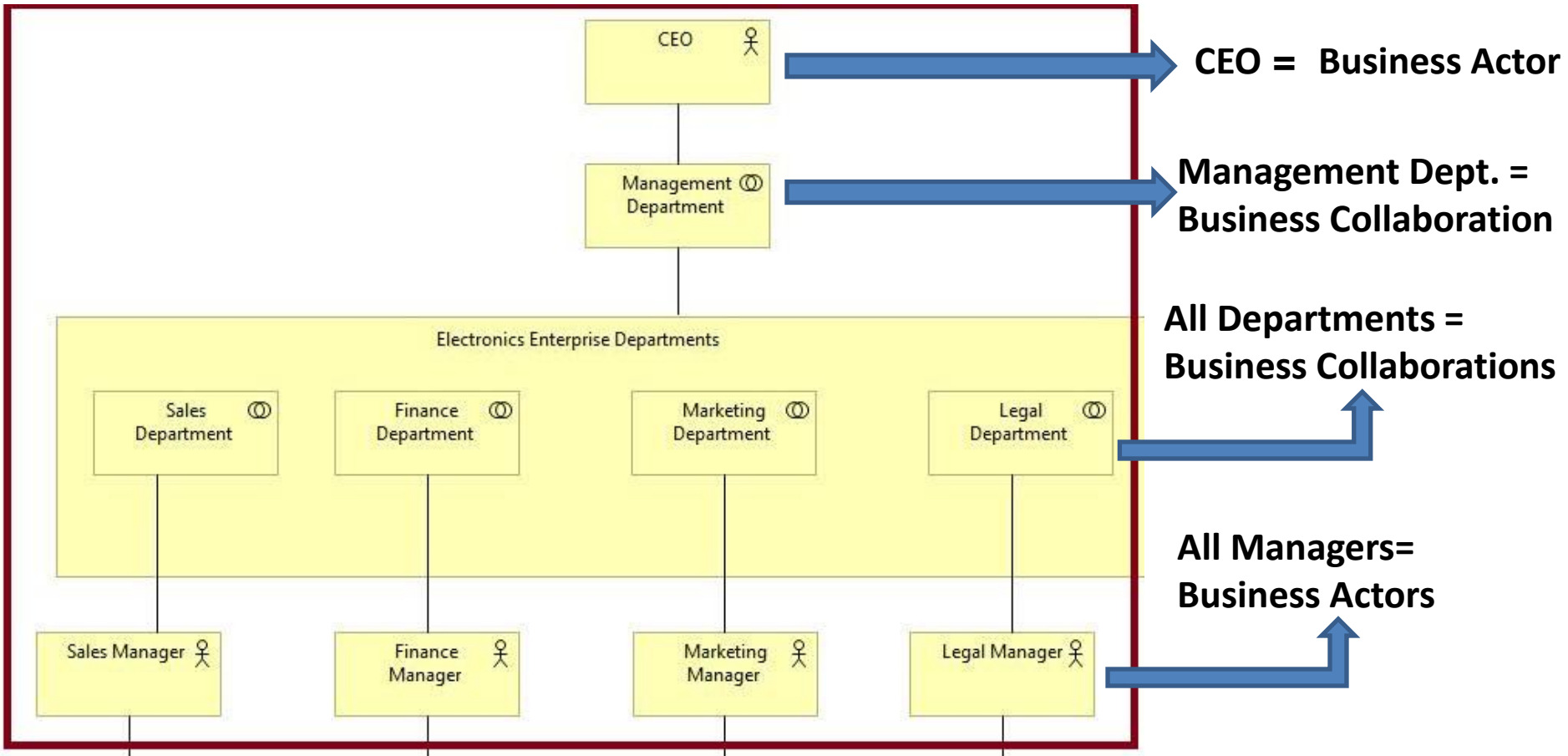 customer

- **Model**

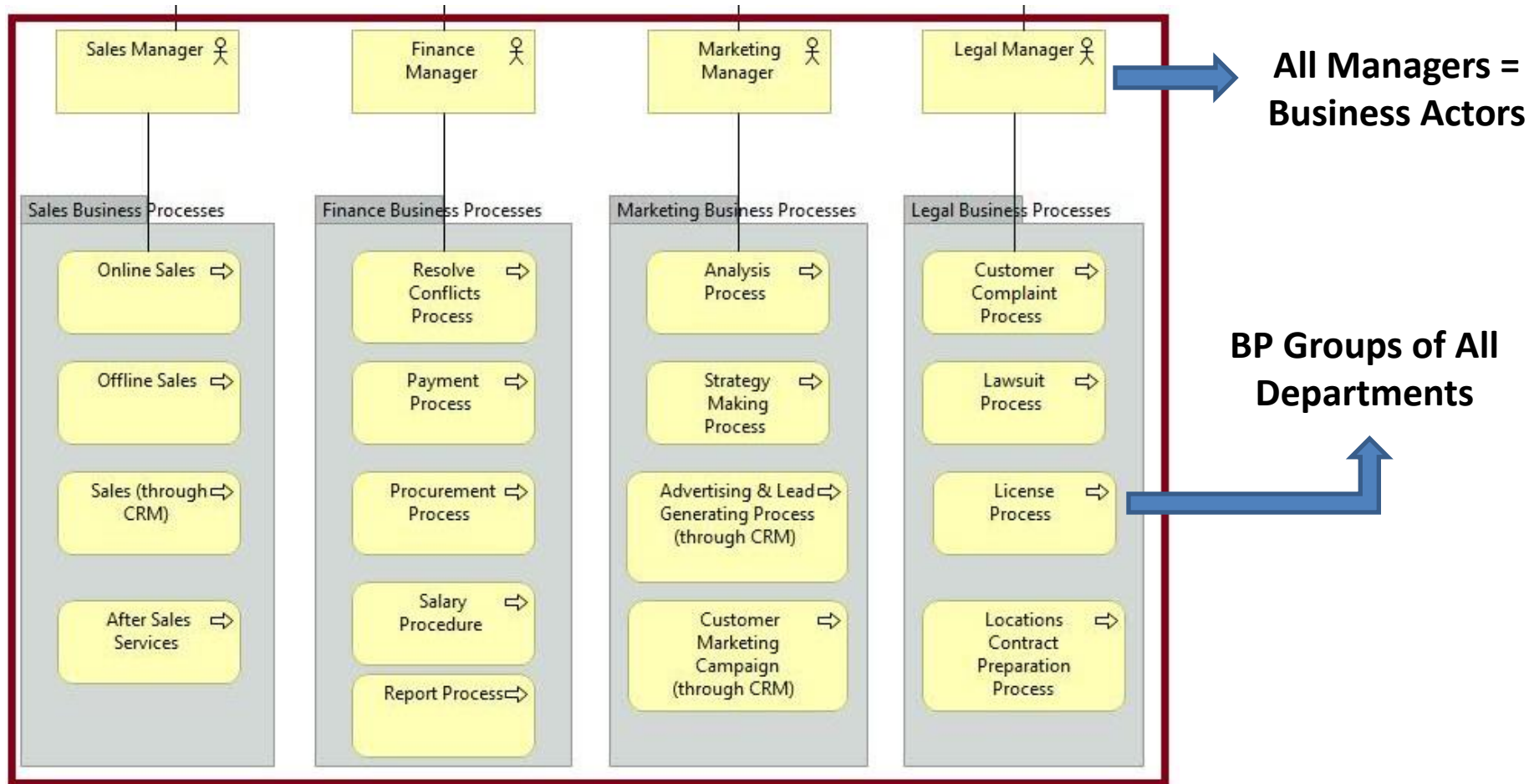 A representation of a business process

- **Notation**

  A set of elements (languages) + rules used for

  representing a business process in a business

 process model(Diagrams)

Organizational Structure

CEO = Business Actor

Management Dept. = Business Collaboration

All Departments = Business Collaborations

All Managers= Business Actors
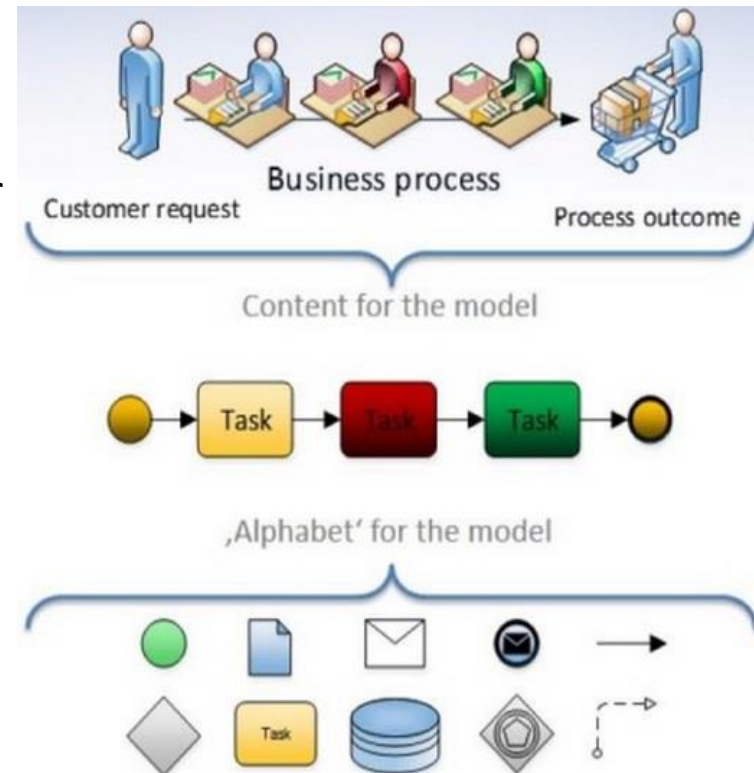
Business Processes for each Departments

All Managers = Business Actors

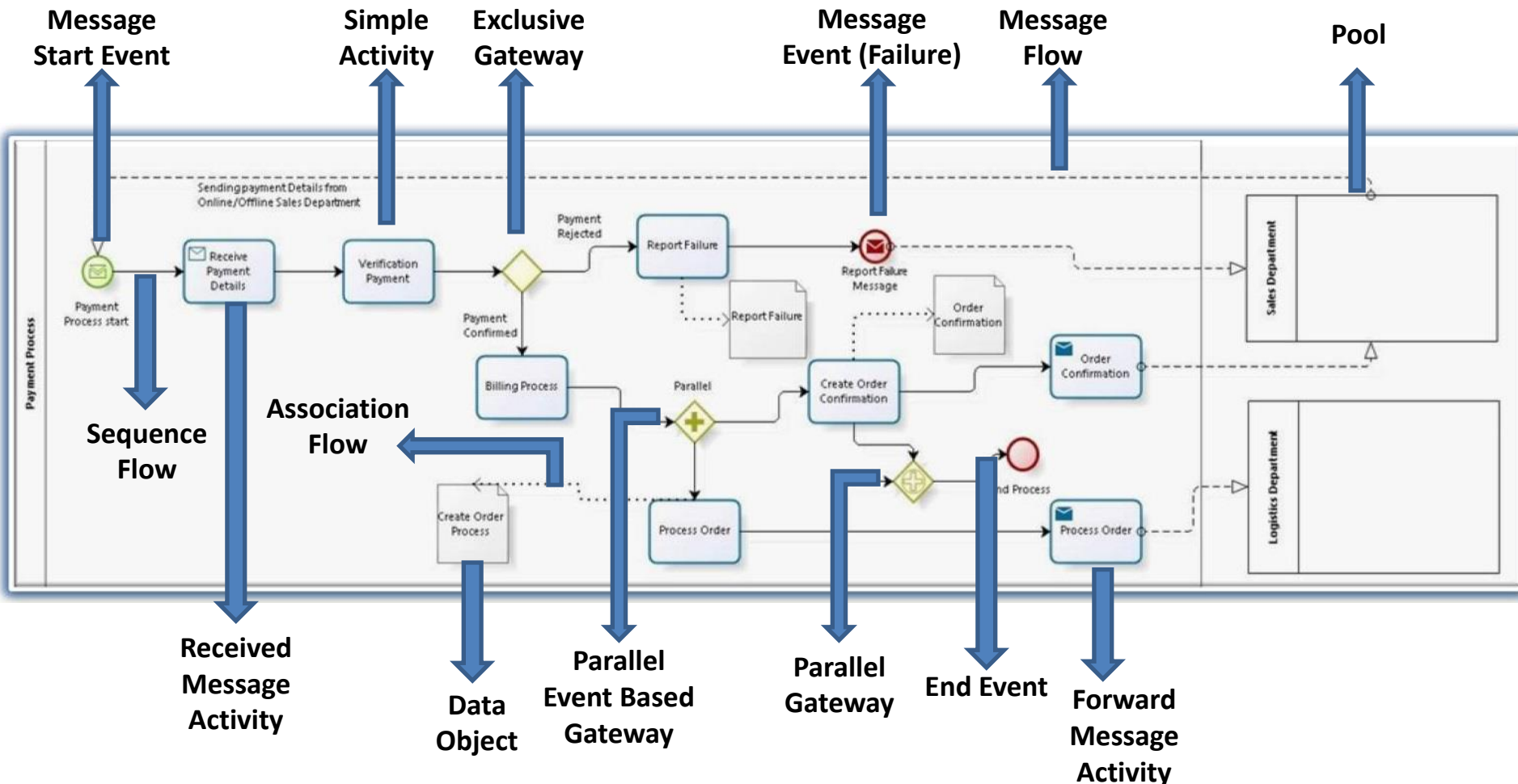BP Groups of All Departments
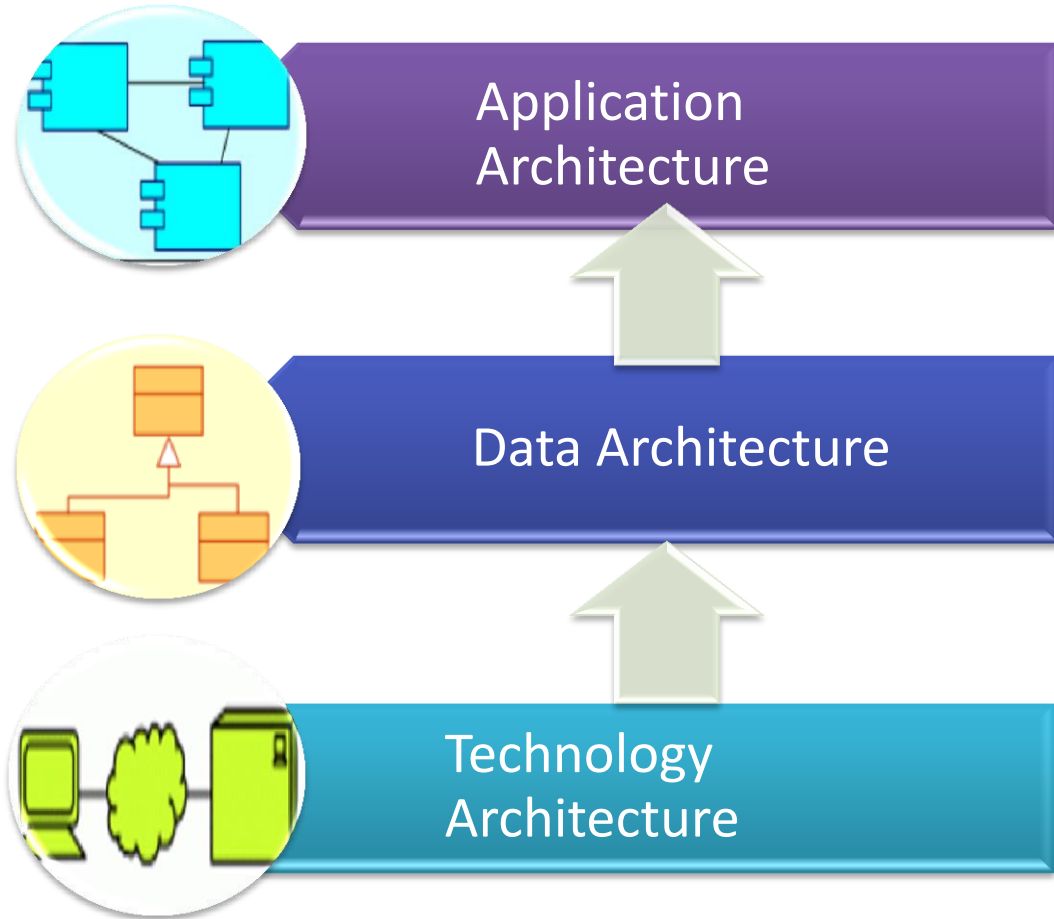
Basic BPMN Elements

- **Flow Objects**
  - Events
  - Activities
  - Gateways

- **Connecting Objects**
  - Sequence flows
  - Message flows
  - Assosiations

- **Swimlanes**
  - Pools
  - Lanes
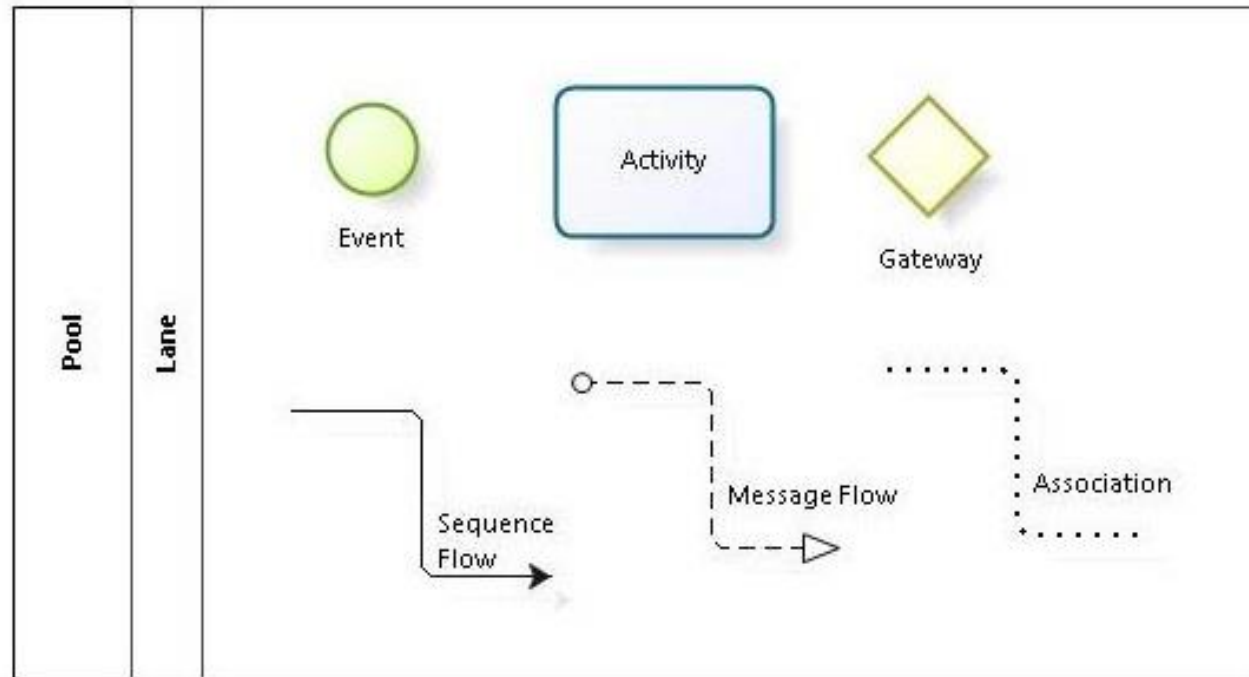
Payment Business Process

IT Architecture

ArchiMate
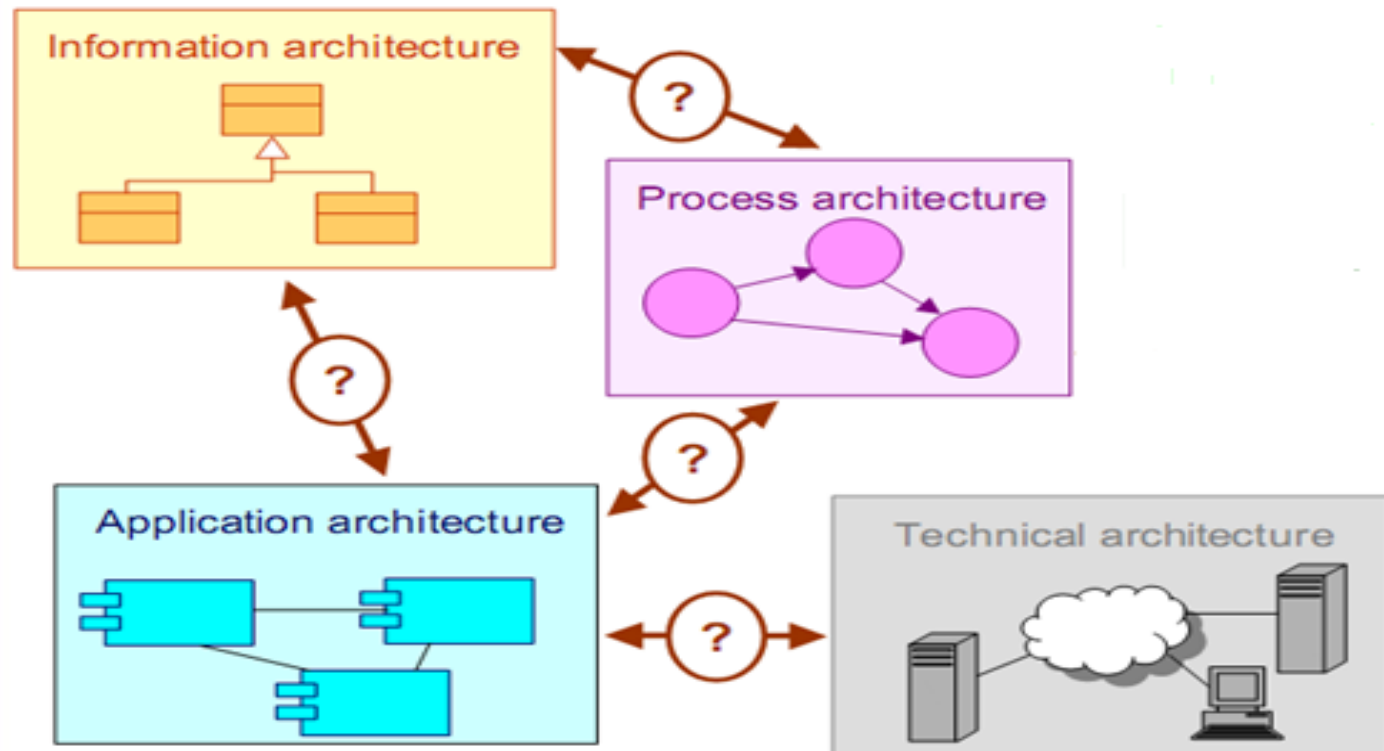
Application Architecture

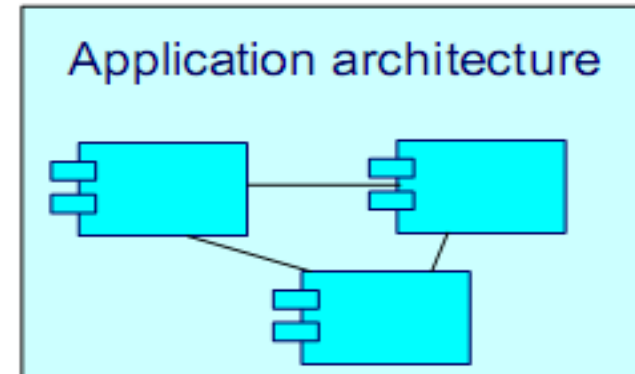Data Architecture

Technology Architecture

What is ArchiMate?

- **ArchiMate** offers a common language for describing the construction and operation of business processes, organizational structures, information flows, IT systems, and technical infrastructure.
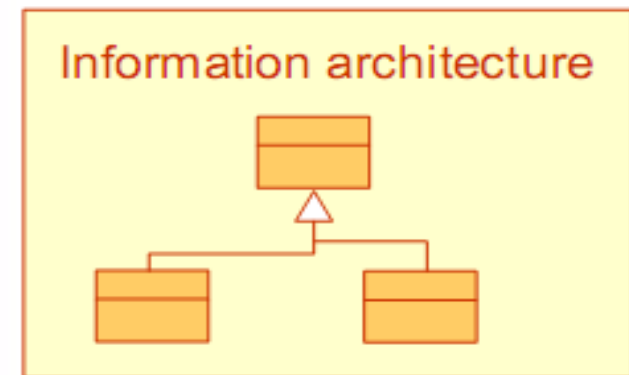
IT Architecture

Applications Architecture is the science and art of ensuring the suite of applications being used by an organization to create the composite architecture is scalable, reliable, available and manageable.
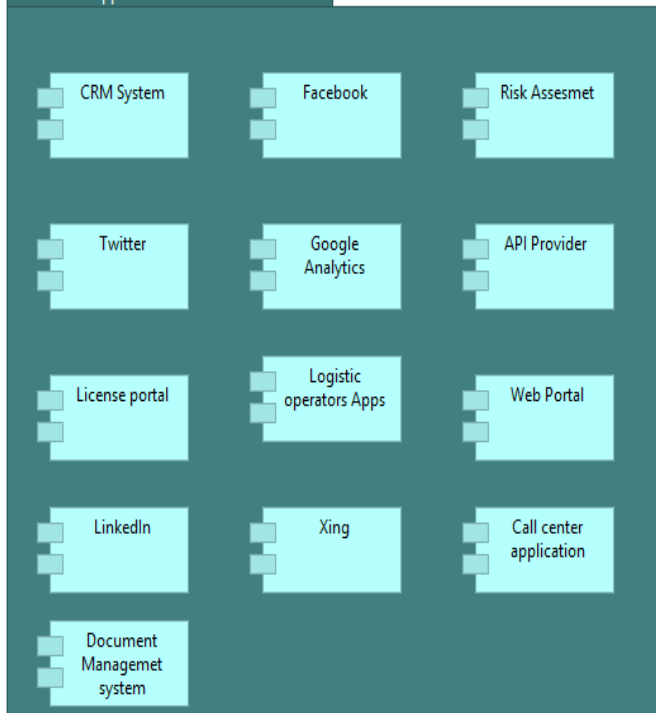

Application architecture

Data Architecture is composed of models, policies, rules or standards that govern which data is collected, and how it is stored, arranged, integrated, and put to use in data systems and in organizations
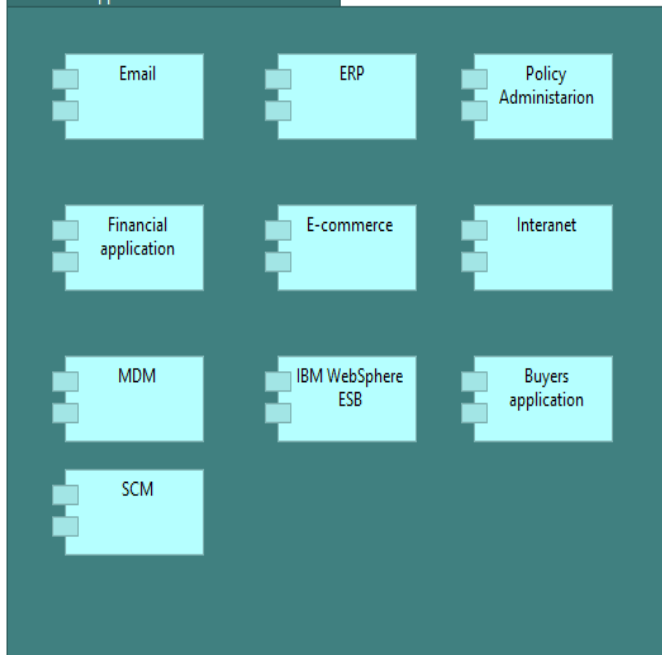

Information architecture

Application Architecture Demo

Application Landscape

Front office applications

- CRM System
- Facebook
- Risk Assesmet
- Twitter
- Google Analytics
- API Provider
- License portal
- Logistic operators Apps
- Web Portal
- LinkedIn
- Xing
- Call center application
- Document Managemet system

Back office applications

- Email
- ERP
- Policy Administarion
- Financial application
- E-commerce
- Interanet
- MDM
- IBM WebSphere ESB
- Buyers application
- SCM

Archimate Notation

Active Structure Concepts

- Application component
- Application collaboration
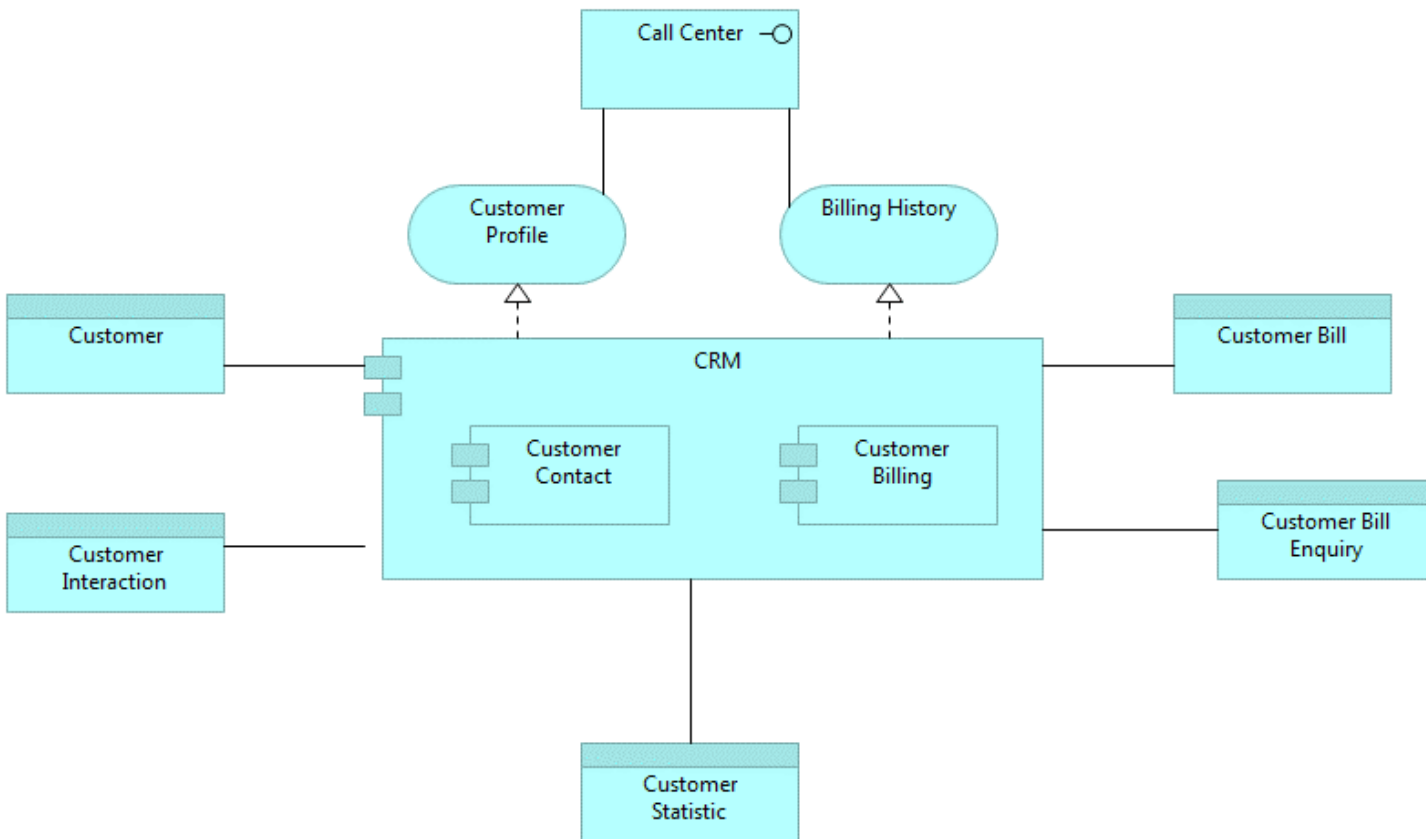- Application interface
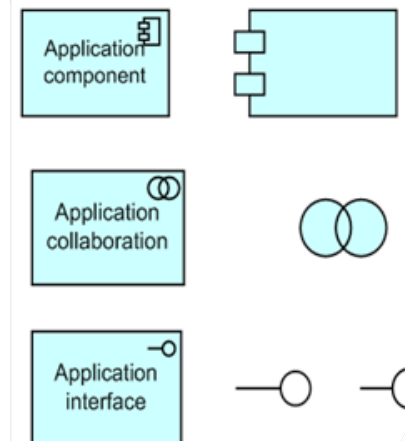
Application Architecture Demo

Application Behavior Viewpoint
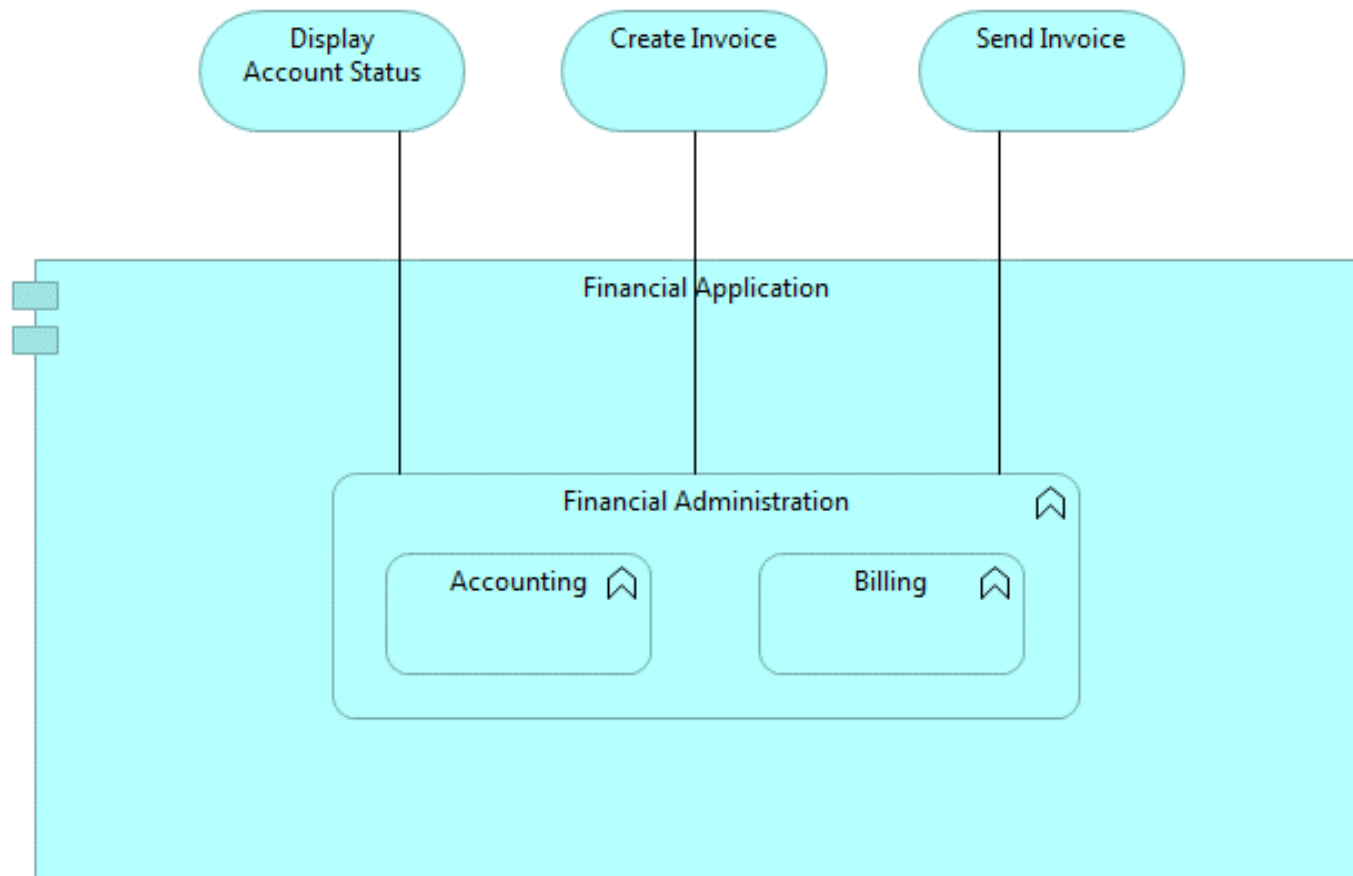
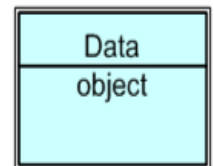# Application Architecture Demo
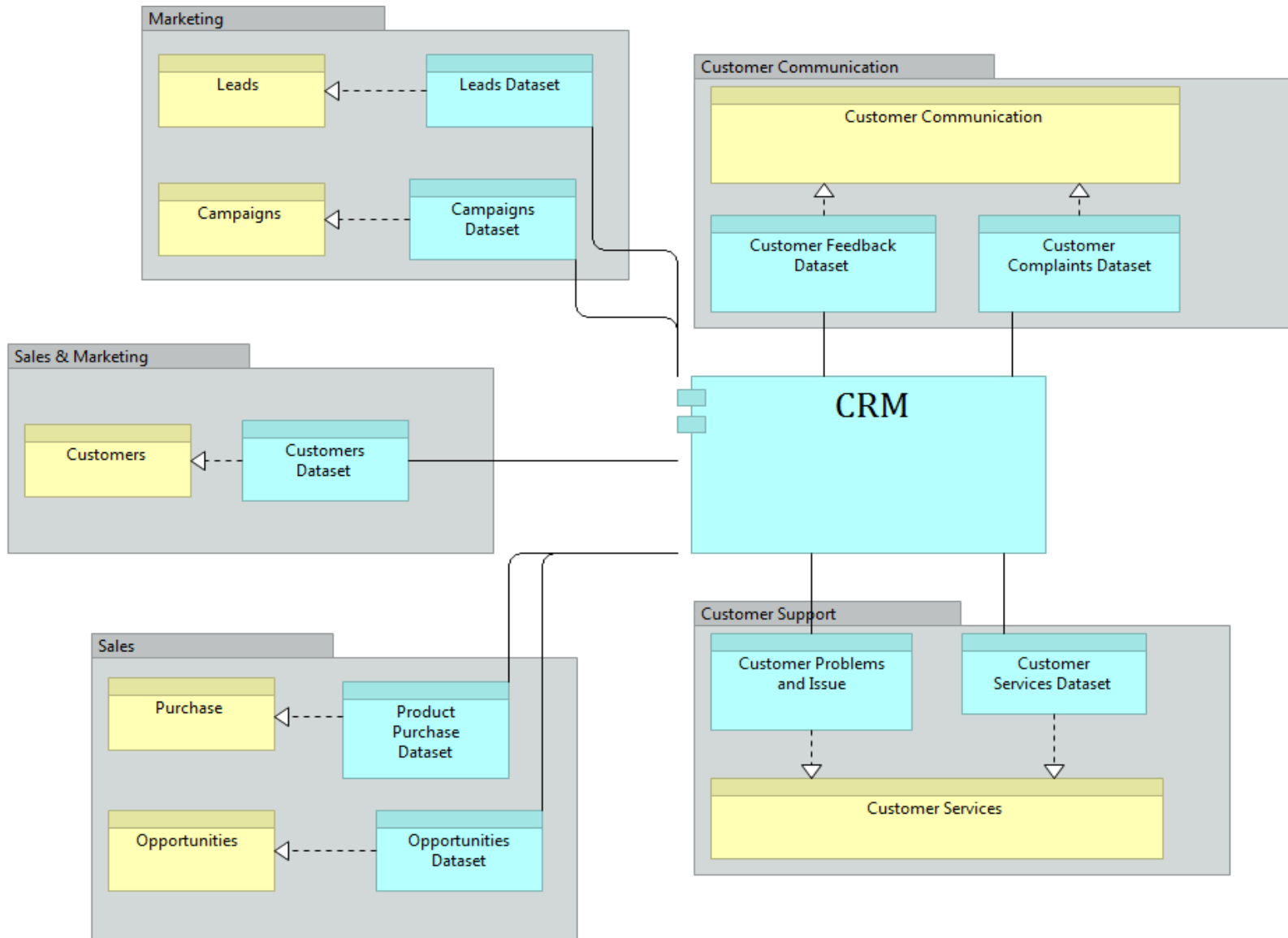
Application Structure Viewpoint

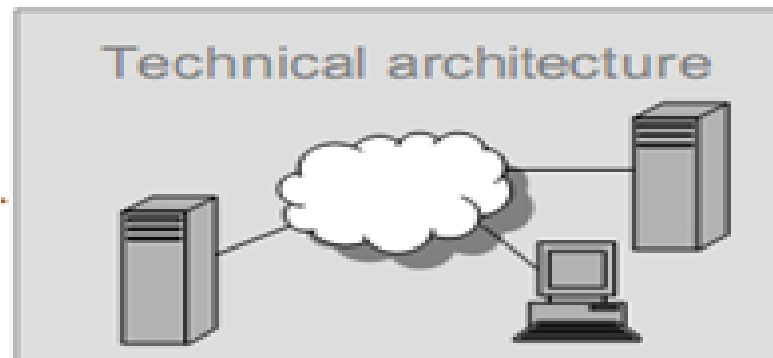**Archimate Notation**

Data Architecture Demo
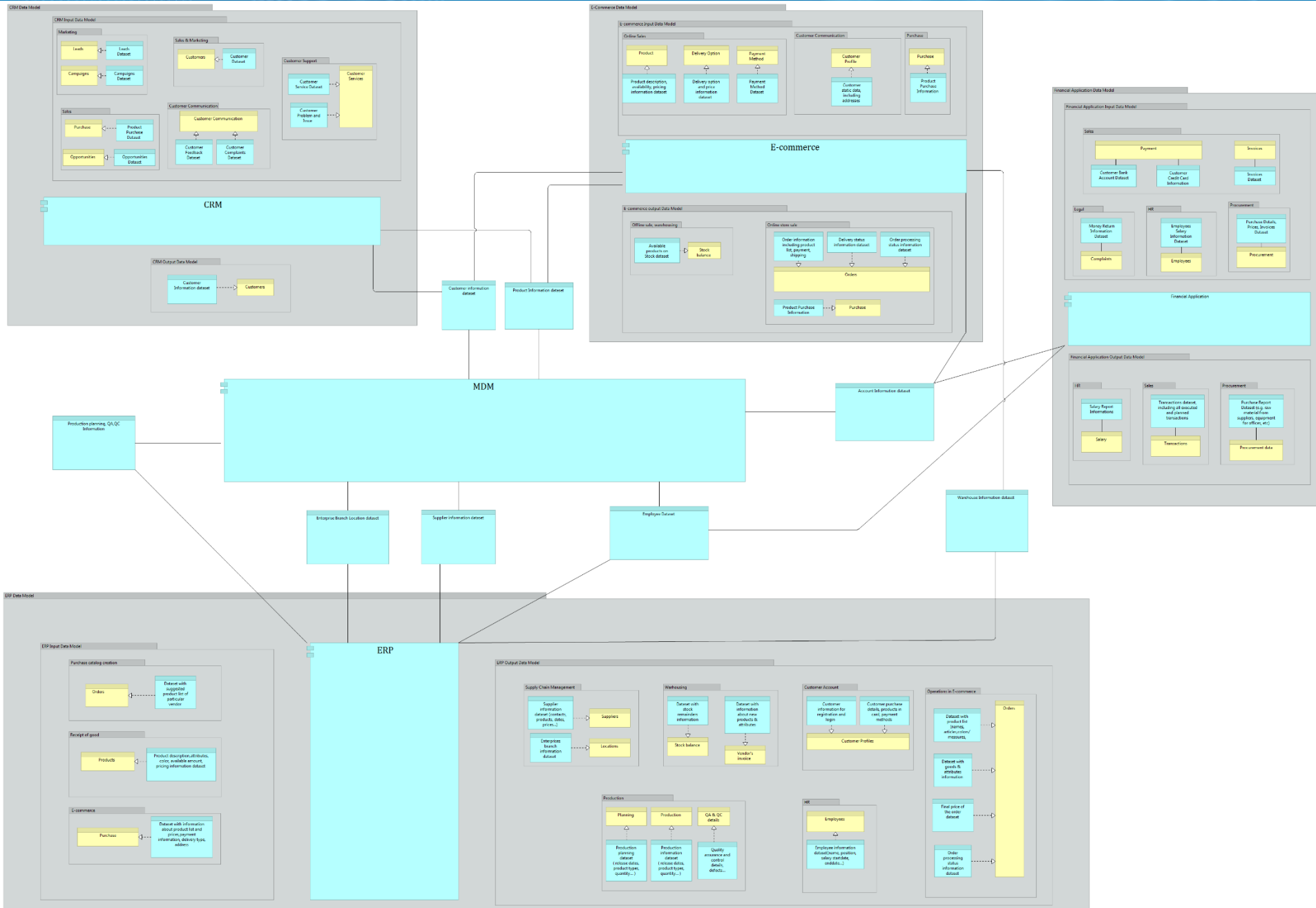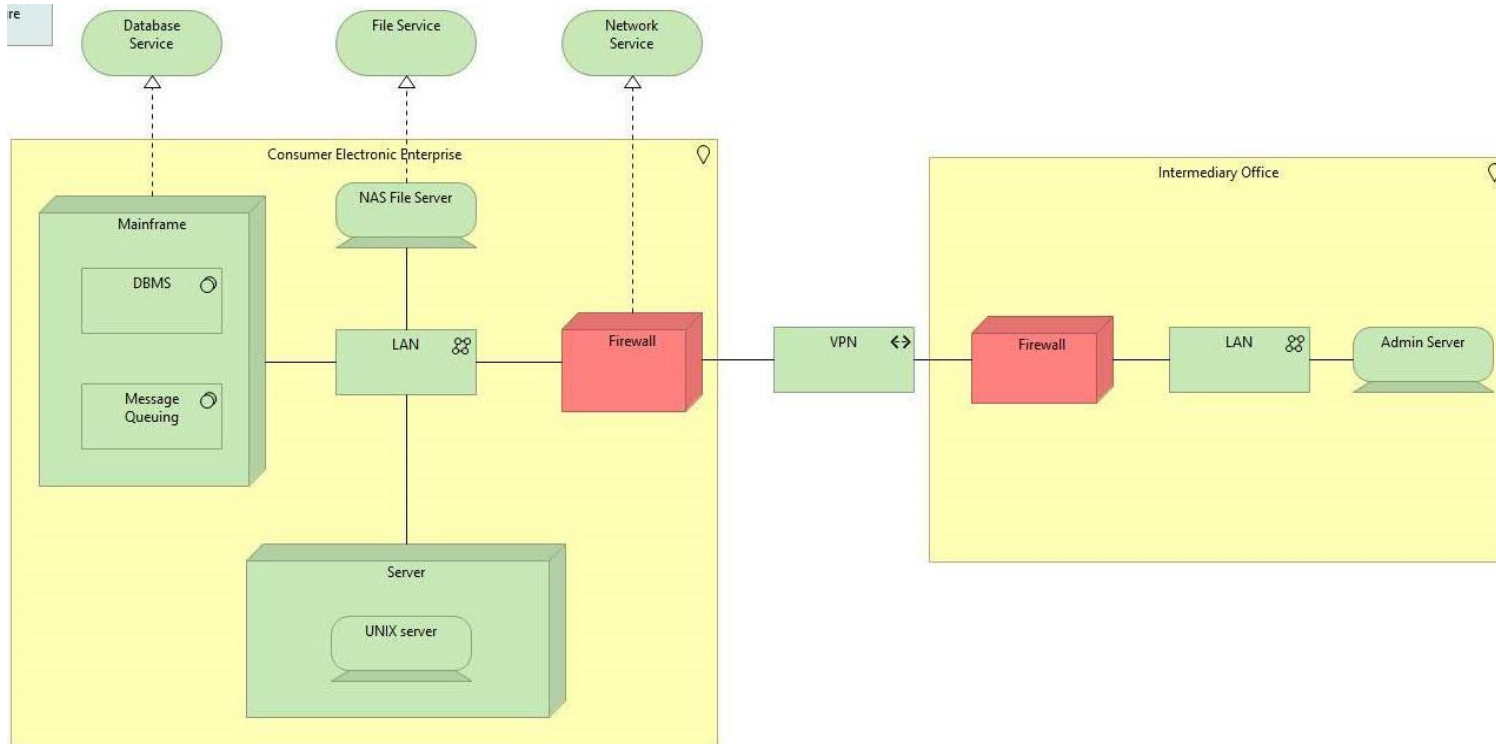
Data Architecture Demo

Technical Architecture

offers infrastructural services (e.g., processing, storage and communication services) needed to run applications, realized by computer and communication hardware and system software
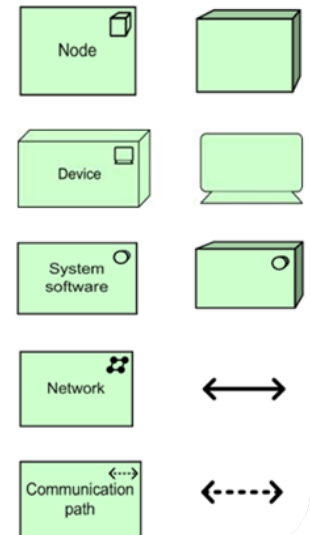
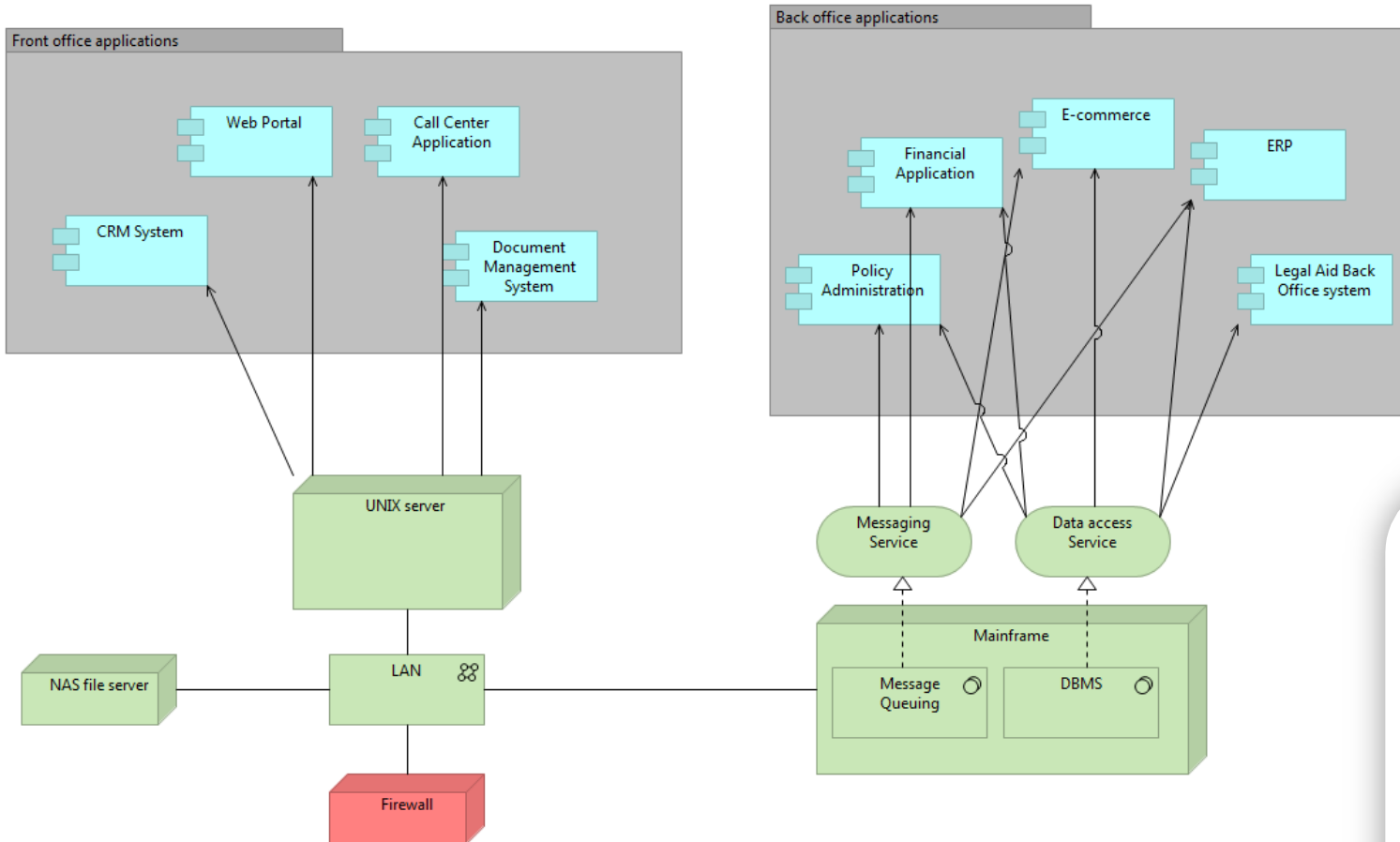# Infrastructure Architecture Demo

Infrastructure Landscape

Archimate Notation

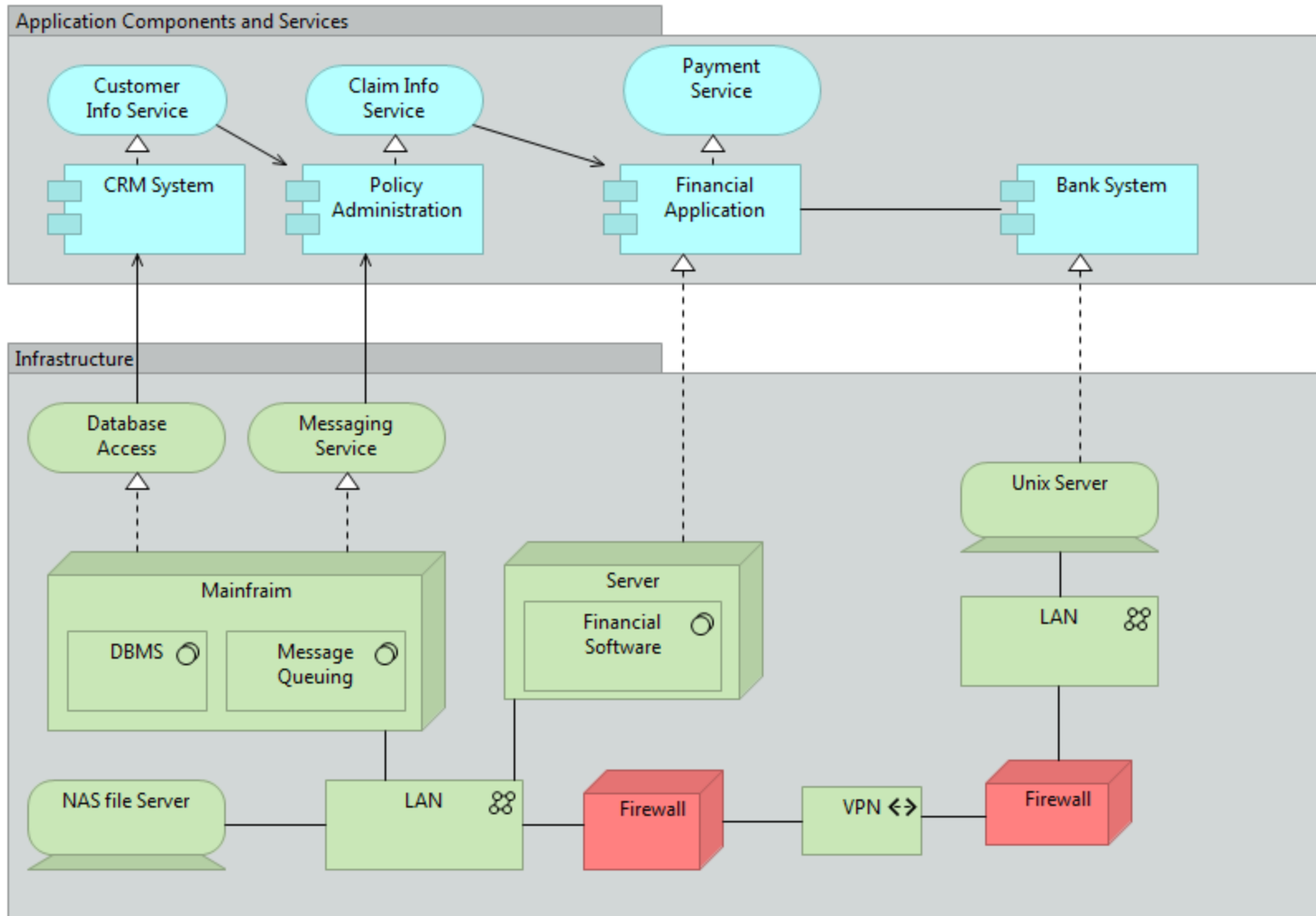# Infrastructure Architecture Demo

Infrastructure Usage Viewpoint

Infrastructure Deployment Viewpoint

Difficulties and Challenges

- Getting information about business processes for each domain and department

- Selecting a tool (we required tool with both BPMN and Archimate notations to automatically keep diagrams and entities consistent, we found one, but was it expired in between, so we had a problem to switch to other tools and redraw all our diagrams)

- Maintain consistency between two tools (later we switched to 2 different tools for BPMN and Archimate, and it was a challenge to maintain consistency for entities between them)

Documentation Strategy

Documentation consists of two main parts:

- **Technical System Documentation**

Contains detailed information about implemented EA models

  - **Components:**
    - Framework and Architecture Layers
    - Organizational Structure of EA
    - Business Process Models
    - Application, Data and Technology Architecture

- **User Manual**

Describes BPMN and Archimate notations and helps user to understand the models.

Q & A