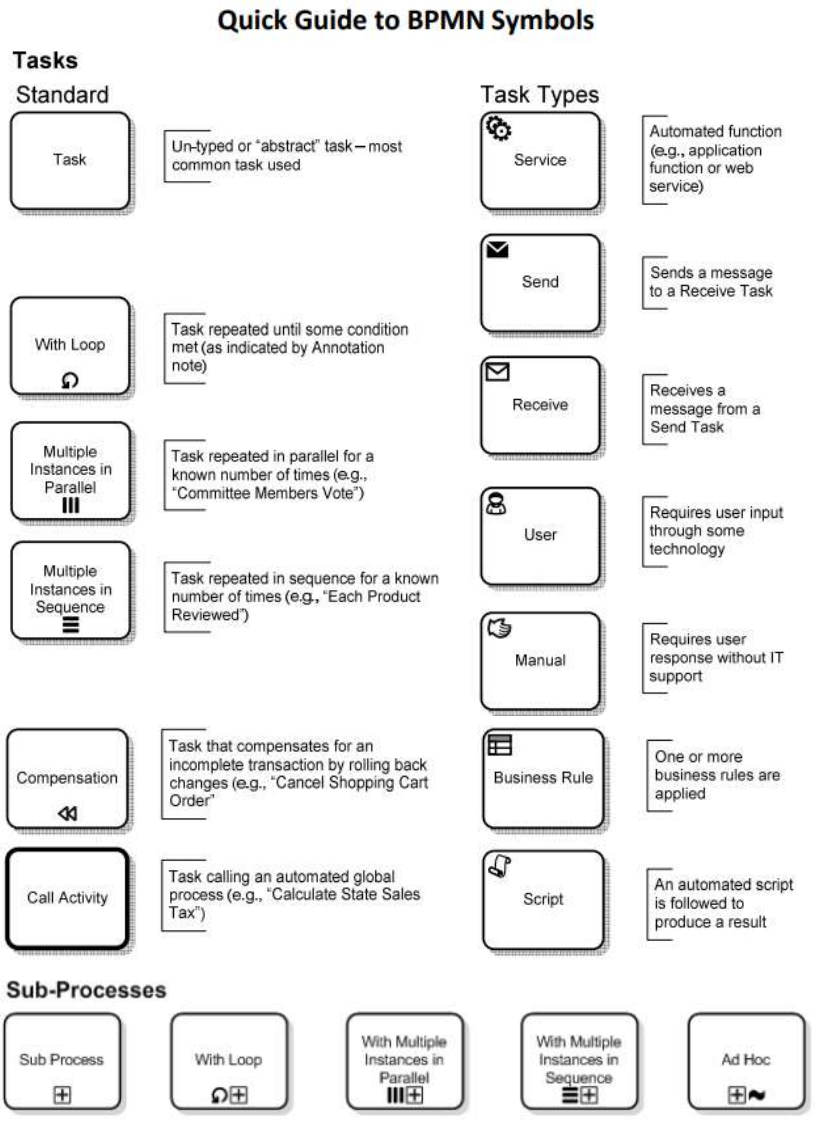
EIS Project Low Level Architectures

IV. LESSON PROPER

Business Process Model Notation

- Business Process Model and Notation (BPMN) is the global standard for process modelling and one of the most important components of successful Business-IT-Alignment.
- Many software products support the standard; you are less dependent on any particular vendor's products.
- Simplicity
- Power of expression
- Implementation in IT



Quick Guide to BPMN Symbols

Gateways

Exclusive – where ONLY ONE OF MANY paths must be taken
(Decision: yes / no)

Exclusive

Inclusive – where ONE OR MORE paths must be taken
(Condiments: ketchup, mustard, relish, no condiment)

Inclusive

Parallel – where ALL paths must be taken
(Florida Vacation: book flight, hotel, and car)

Parallel

Complex – where SOME BUT NOT ALL paths must be taken
(Employment Application: 2 references required from three possible sources)

Complex

Flows

Sequence Flow connects Tasks and Gateways and indicates order of process flow

Message Flow indicates information flowing from one Pool to another

Data Association connects a Data Object to another object such as a Task or Sub-Task

Association connects text or an Artifact to another object such as a Task or Sub-Task

Swim Lanes

Pool — A Pool is a container for partitioning activities from other Pools. For example, a Pool might represent an organization and contain several Lanes representing departments within the organization.

Lane — A Lane is a container for partitioning activities from other Lanes. For example, a Lane might represent a department, a role, or infrastructure within an organization.

Artifacts

Annotation — An Annotation conveys additional information about the process

Data Object — A Data Object indicates what information is required or produced by an Activity

Group — A Group logically associates multiple activities without affecting the process flow

Quick Guide to BPMN Symbols

Some Commonly Used Events

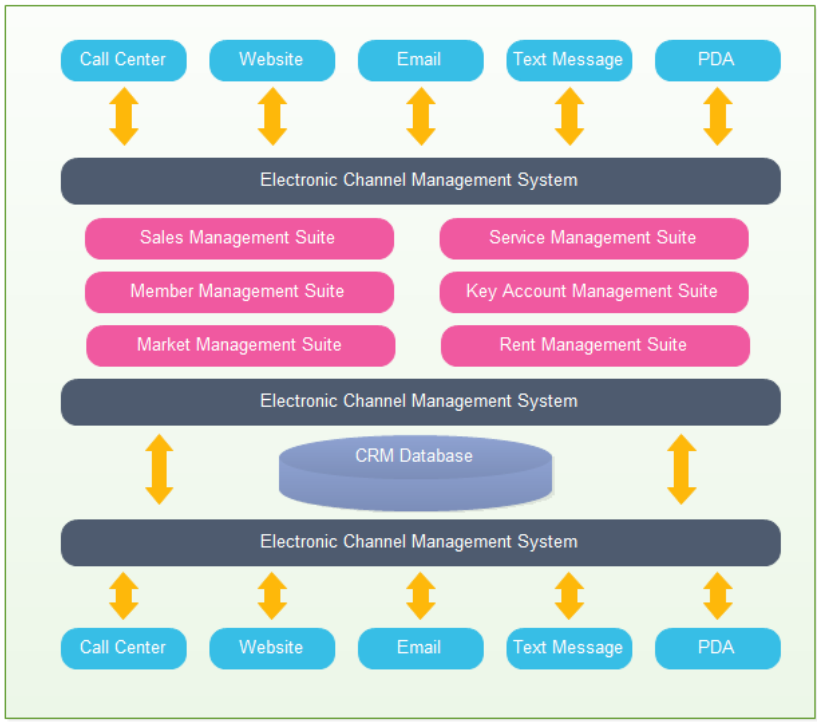
Classification and When to Use	Start	Intermediate	End
Unspecified – when no specific event type is indicated	 Start		 End
Timer – when process requires a preset time to begin or continue, or when delay is necessary			
Conditional – when some criteria must be met			
Error – when an error occurred			
Message – when a message or materials object is sent (throw) or received (catch)		 Throw Catch	
Link – when flow continues to another page		 Throw Catch	
Cancel – when the process should be stopped			
Terminate – when the process ends abnormally			

Additional Events Types exist for "escalation", "compensation", "signal", "mulitple", and "parallel multiple"

Application Architecture

Applications architecture is the high-level structure of an application system. It's the process of defining a structured solution that meets all the technical and operational requirements while optimizing common quality attributes such as performance, security, and manageability.

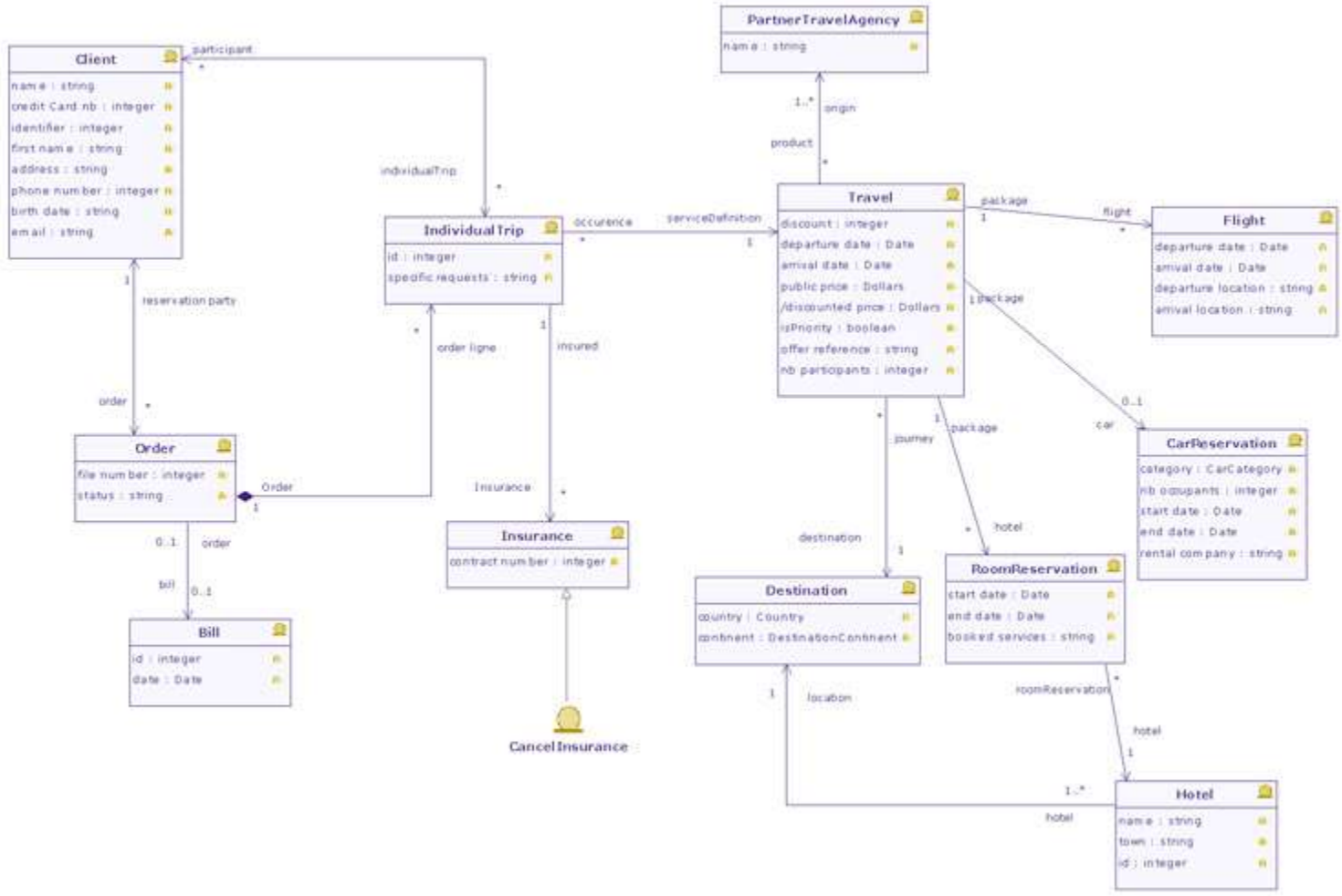
Example:



Data Architecture

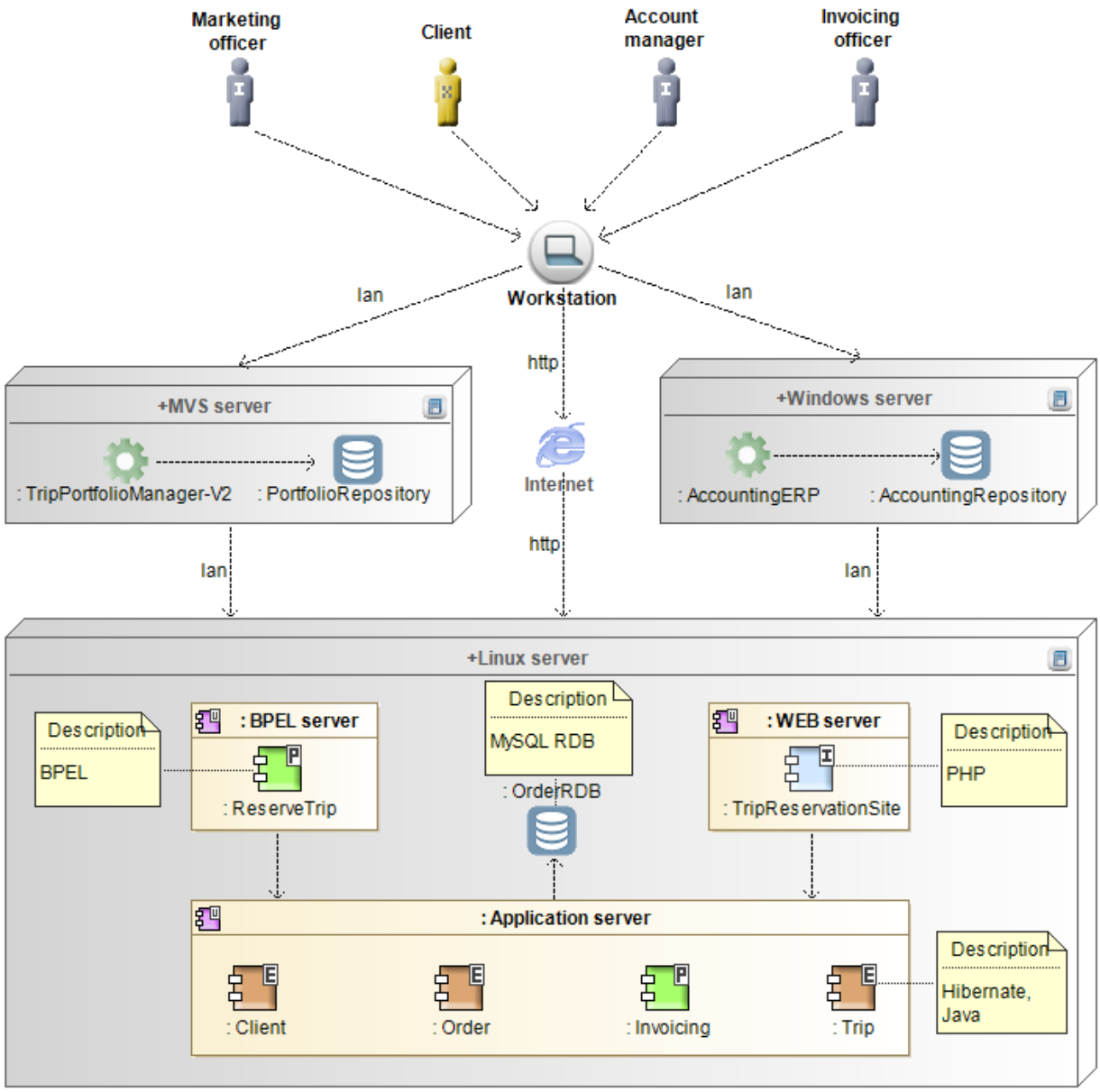
Class diagrams

The key purpose of the **class diagram** is to depict the relationships among the critical **data entities** (or classes) within the enterprise. This diagram is developed to clearly present these relationships and to help understand the lower-level data models for the enterprise.



Technology Architecture

An **environments and locations diagram** depicts which locations host which **applications**, identifies what technologies and/or applications are used at which **locations**, and finally identifies the locations from which **business users** typically interact with the applications. This diagram should also show the existence and location of different deployment environments, including non-production environments, such as development and pre-production.


Marketing officer
Client
Account manager
Invoicing officer
Workstation
lan
lan
http
+MVS server
: TripPortfolioManager-V2
: PortfolioRepository
Internet
+Windows server
: AccountingERP
: AccountingRepository
http
lan
lan
+Linux server
Description
BPEL
: BPEL server
: ReserveTrip
Description
MySQL RDB
: OrderRDB
: WEB server
: TripReservationSite
Description
PHP
: Application server
: Client
: Order
: Invoicing
: Trip
Description
Hibernate, Java