Subject Area Model
Conceptual Data Model

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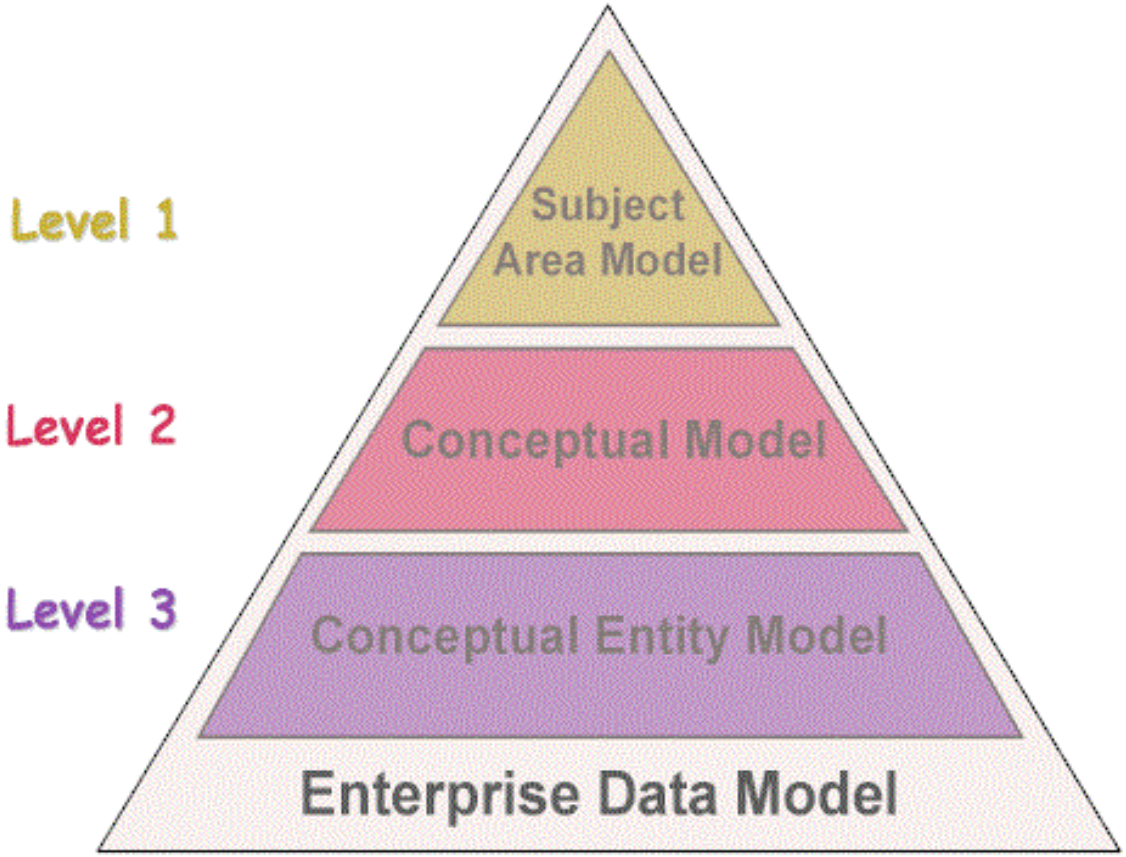
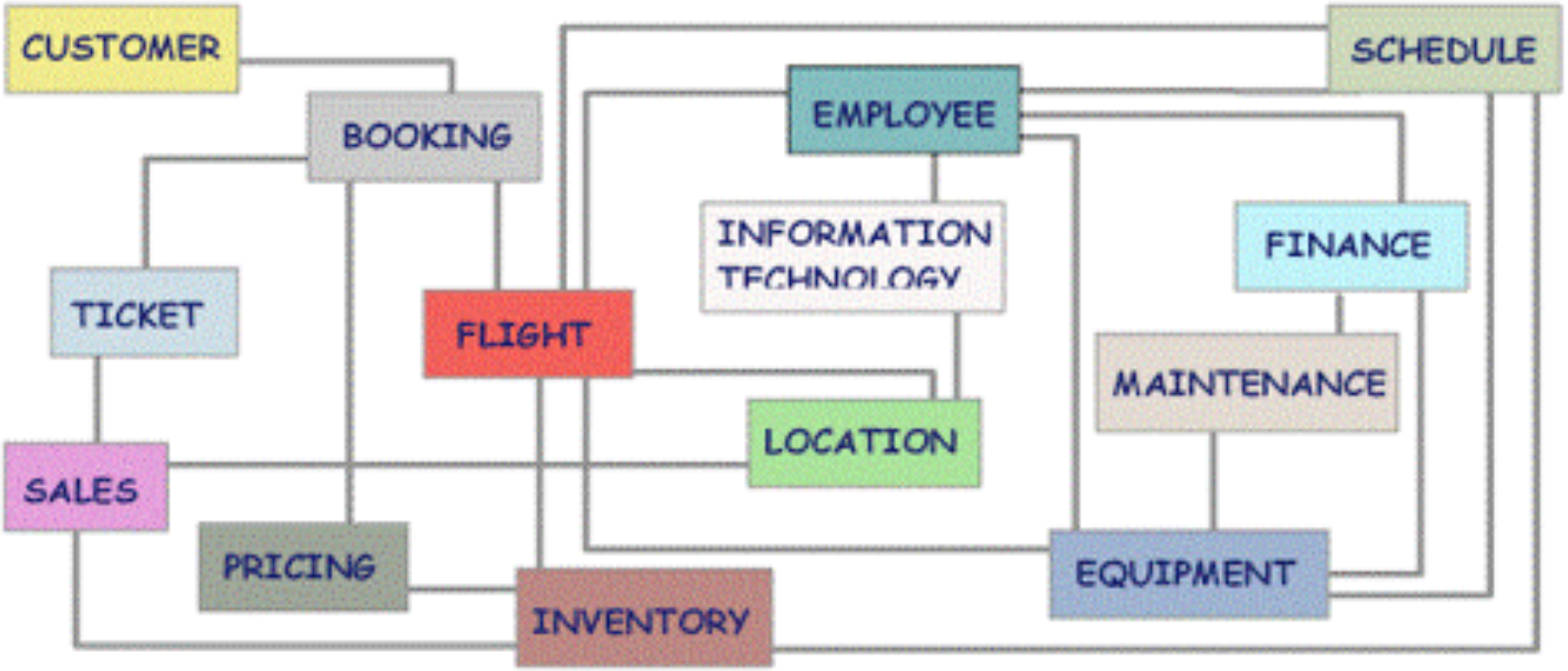
Enterprise Data Model



Enterprise Data Model is an integrated view of the data produced and consumed across an entire Organization.

Airline Subject Area Model



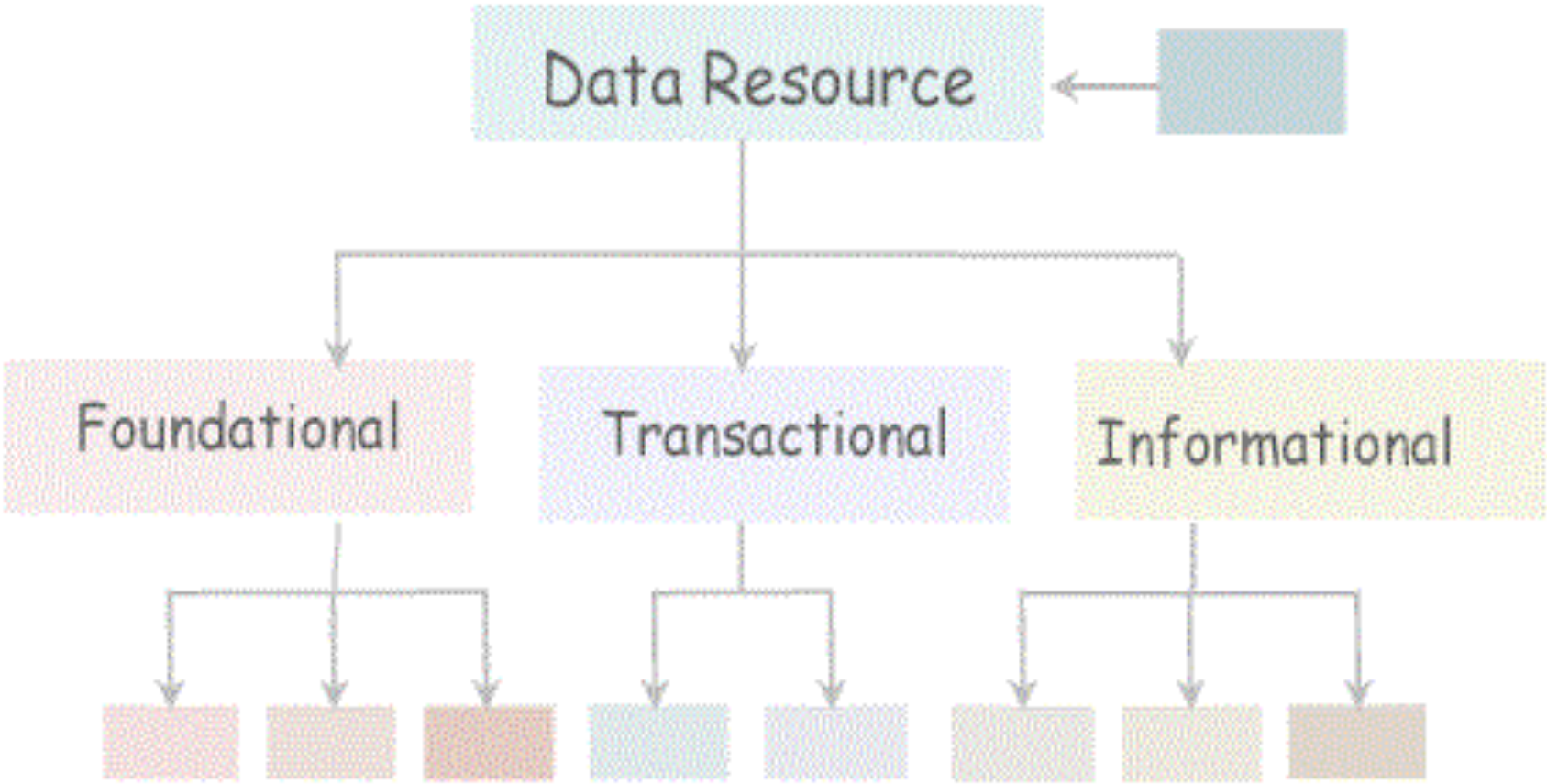
Subject Area Model

- Subject Areas can be grouped by three high-level business categories—Revenue, Operation, and Support.

Airline Example:

- **Revenue** Ticket, Booking, Sales, Inventory, Pricing
- **Operation** Flight, Location, Equipment, Maintenance, Schedule
- **Support** IT, Finance, Employee, Customer

Subject Area Data Taxonomy



Subject Area Data Taxonomy

Airline SA Example:

- **Foundational** - Equipment, IT, Employee, Sales, Location, Customer
- **Transactional** - Ticket, Booking, Flight, Finance.
- **Informational** - Pricing, Inventory, Schedules

Taxonomy: the science of naming, categorizing and classifying things in a hierarchical manner, based on a set of criteria.

Subject Area Model

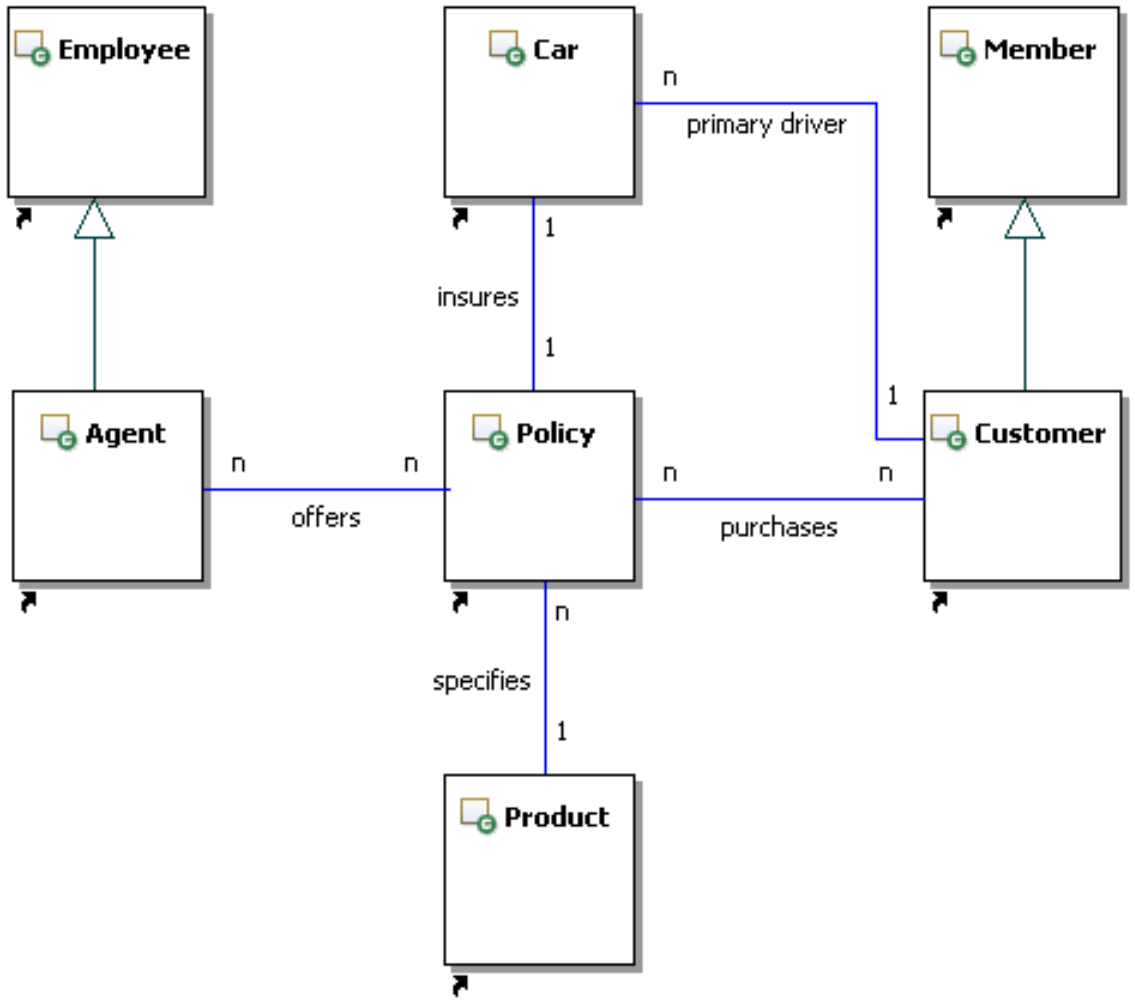
- Purpose: to provide the structure for organizing an Enterprise Data Model (EDM) by business subjects rather than by applications or data systems. Fundamental Objective is the idea of “divide and conquer”.

- A subject area is a high-level category for the related business concepts of **central and critical** interest to the business (Shacklette)

- A high-level classification of data representing a group of concepts pertaining to a major topic of interest to an organization.

Subject Area Modeling Notation

- The SAM draws out the relationships defined in the BIM Vocabulary (Aggregation, Generalization, Association)
- Example: "An Agent sells Policies to Customers…"
- Example: "A Customer is a Member that has purchased a policy…"



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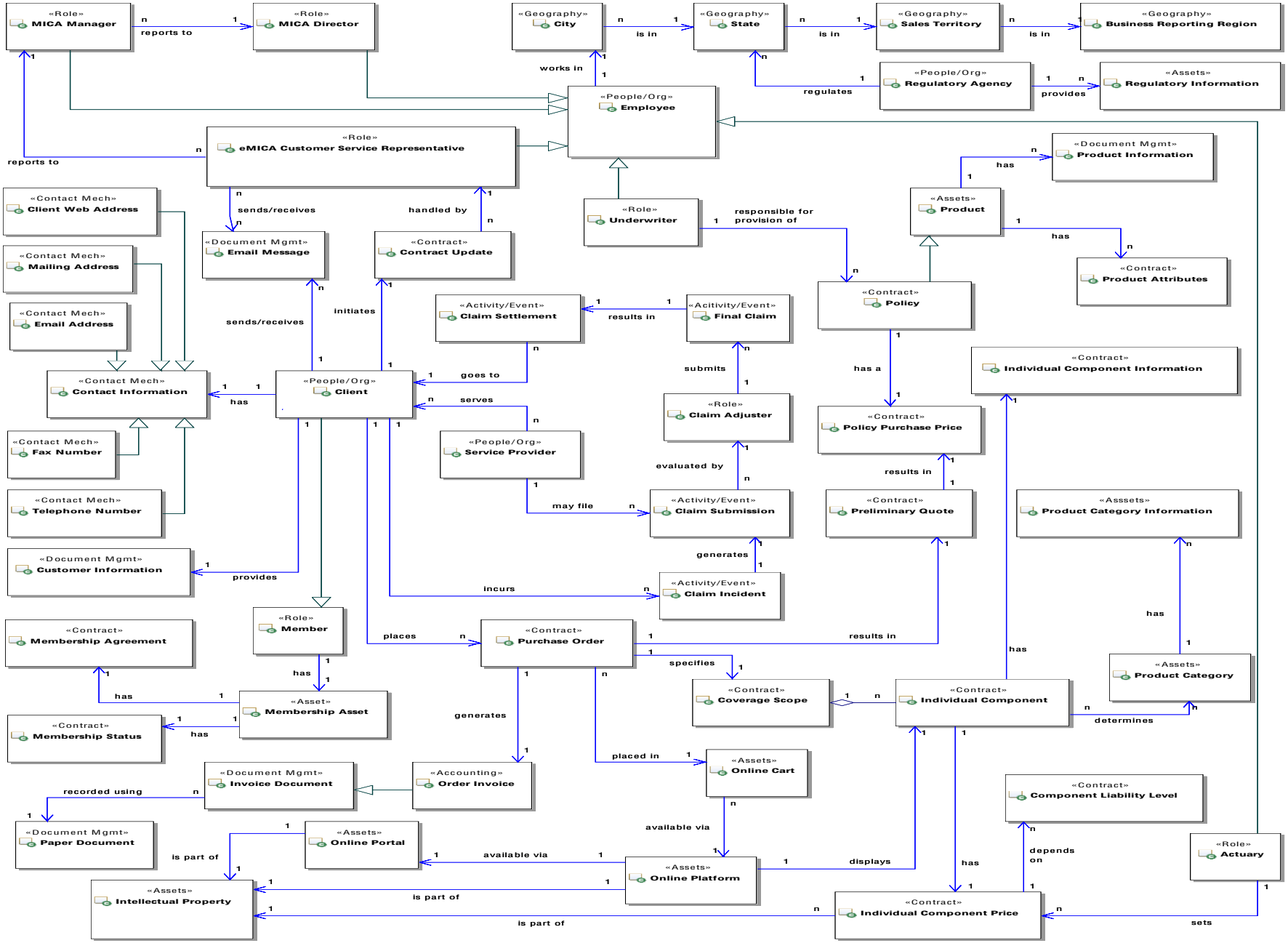

«Role» MICA Manager
reports to
«Role» MICA Director
«Geography» City
is in
«Geography» State
is in
«Geography» Sales Territory
is in
«Geography» Business Reporting Region
works in
«People/Org» Employee
regulates
«People/Org» Regulatory Agency
provides
«Assets» Regulatory Information
reports to
«Role» eMICA Customer Service Representative
«Contact Mech» Client Web Address
«Contact Mech» Mailing Address
«Contact Mech» Email Address
«Contact Mech» Contact Information
«Contact Mech» Fax Number
«Contact Mech» Telephone Number
sends/receives
«Document Mgmt» Email Message
handled by
«Contract» Contract Update
«Role» Underwriter
responsible for provision of
«Assets» Product
has
«Document Mgmt» Product Information
has
«Contract» Product Attributes
«Contract» Policy
sends/receives
initiates
«Activity/Event» Claim Settlement
results in
«Acitivity/Event» Final Claim
«People/Org» Client
has
goes to
serves
«People/Org» Service Provider
submits
«Role» Claim Adjuster
has a
«Contract» Policy Purchase Price
«Contract» Individual Component Information
evaluated by
results in
«Contract» Preliminary Quote
«Asssets» Product Category Information
may file
«Activity/Event» Claim Submission
generates
«Activity/Event» Claim Incident
«Document Mgmt» Customer Information
provides
incurs
«Role» Member
places
«Contract» Purchase Order
results in
«Contract» Membership Agreement
has
«Asset» Membership Asset
has
«Contract» Membership Status
has
specifies
«Contract» Coverage Scope
«Contract» Individual Component
has
«Assets» Product Category
has
determines
generates
placed in
«Assets» Online Cart
«Document Mgmt» Invoice Document
«Accounting» Order Invoice
recorded using
«Document Mgmt» Paper Document
is part of
«Assets» Online Portal
available via
available via
«Assets» Online Platform
displays
«Contract» Component Liability Level
depends on
«Role» Actuary
«Assets» Intellectual Property
is part of
is part of
«Contract» Individual Component Price
has
sets

1.1, sam

SAM in short, before we move to CDM

- The Subject Area Model allows the enterprise to pull itself out from and above the project-driven view of the functioning business and look at the real things that are important to the business, and how those real things relate to one another

1. Planner

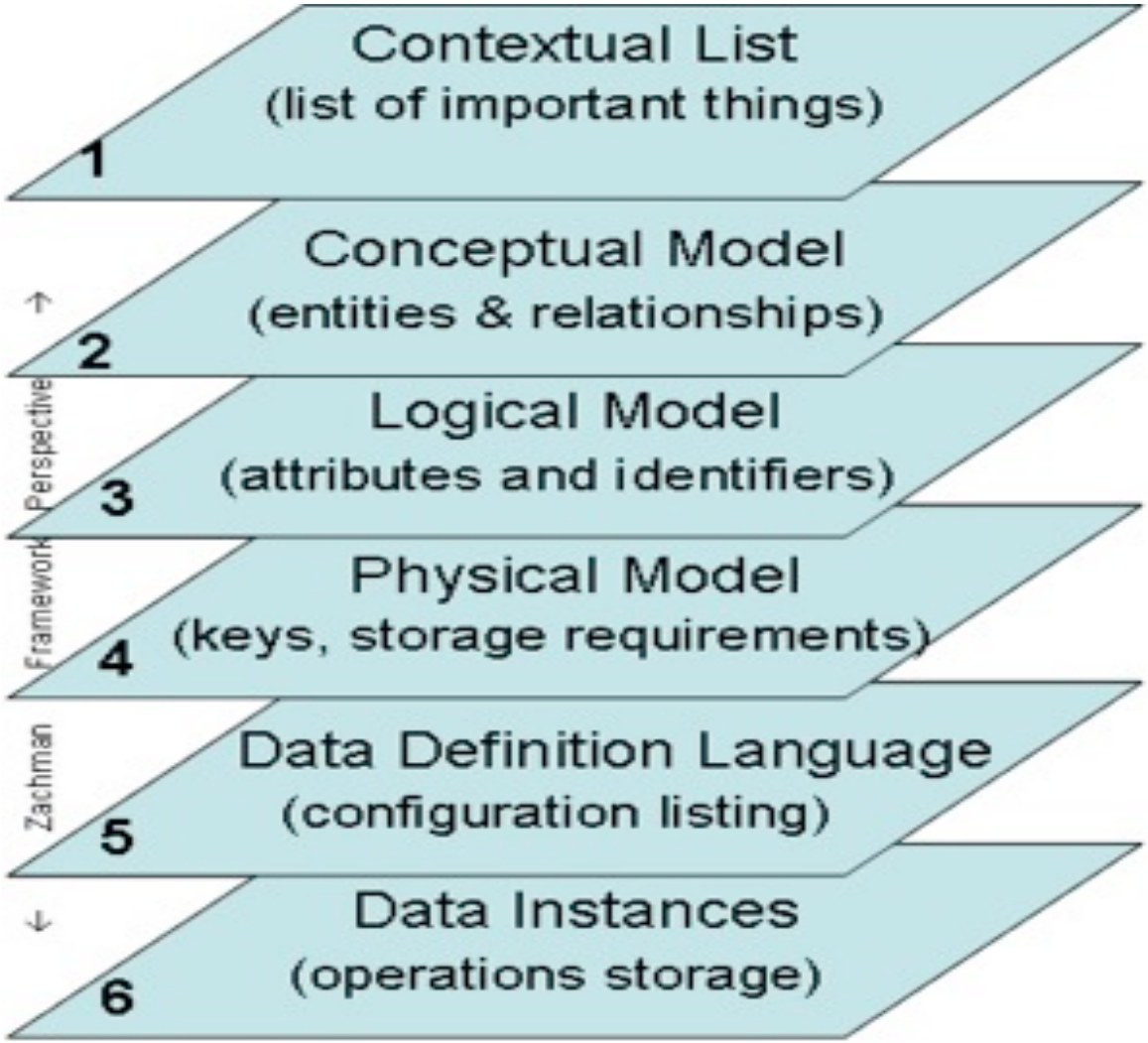
2. Business Owner

3. Architect/ Designer

4. Implementer

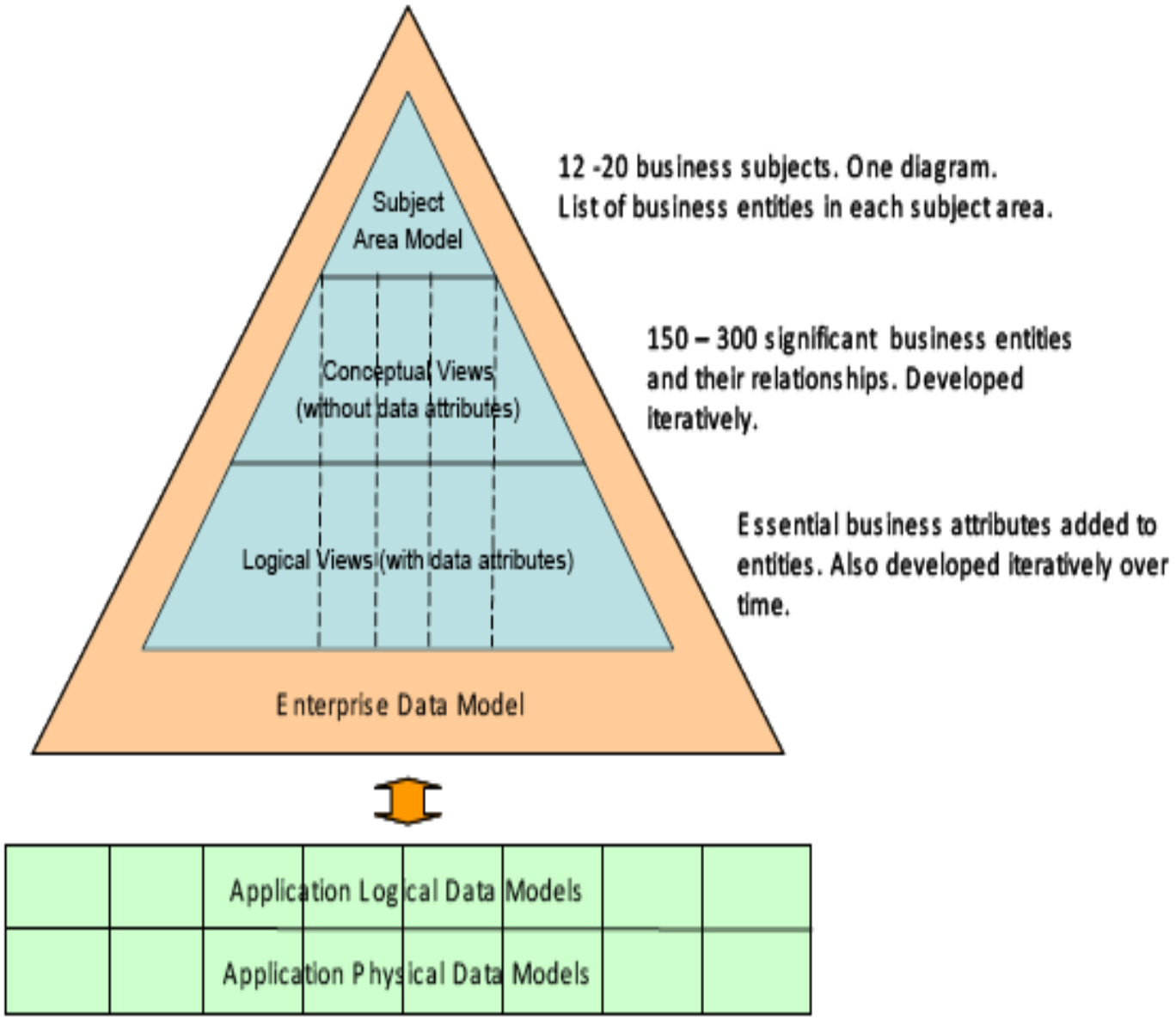
5. Subcontractor

6. Functioning System

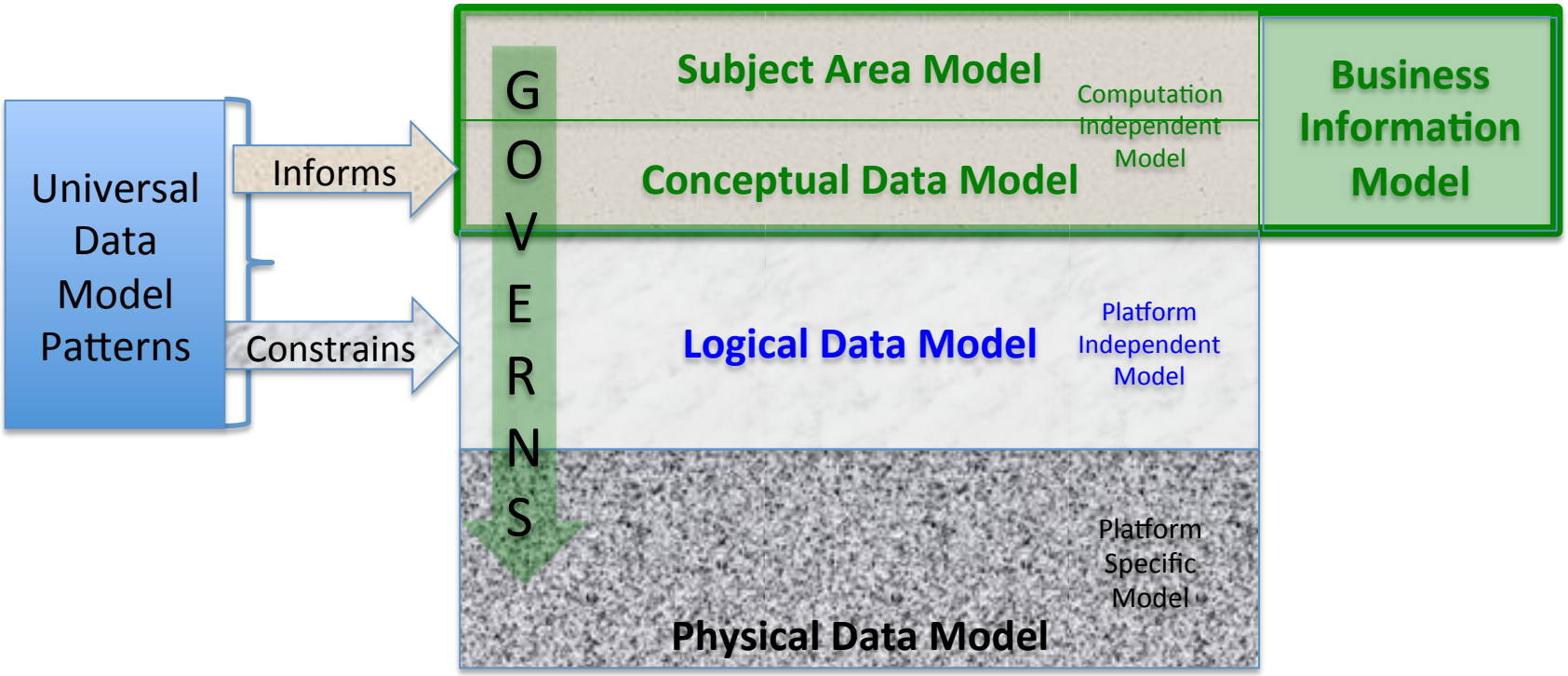


Conceptual Data Model (CDM) Snap Shot

- Second Level of the EDM
- Created from the definition and identification of major business concepts of each subject area.
- Also high-level data model, with an average of 10-12 concepts per subject area.
- Concepts convey a much greater business detail than the subject areas.
- CDM is comprised of concepts, definitions, and their relationships.


Subject
Area Model
Conceptual Views
(without data attributes)
Logical Views (with data attributes)
Enterprise Data Model
12 -20 business subjects. One diagram.
List of business entities in each subject area.
150 – 300 significant business entities
and their relationships. Developed
iteratively.
Essential business attributes added to
entities. Also developed iteratively over
time.
Application Logical Data Models
Application Physical Data Models

CDM is used to confirm and clarify the scope and definitions of subject areas and their relationships.



In other words…

- Subject area relationships can become a concept within an Enterprise Conceptual Model.

- Sometimes, subject area definitions are updated from discoveries made during the development of CDM.

  Did this happen to you when you were developing your own CDM?

Anyone has different perspectives on CDM?

- A CDM is a description of business entities and their relationships that together provide a conceptual view of the entities and relationships that support the mission of the business (Shacklette).

- Purpose:

--Capture business requirements

--Provide validation of mutual understanding

--Convey to the business that requirements are understood

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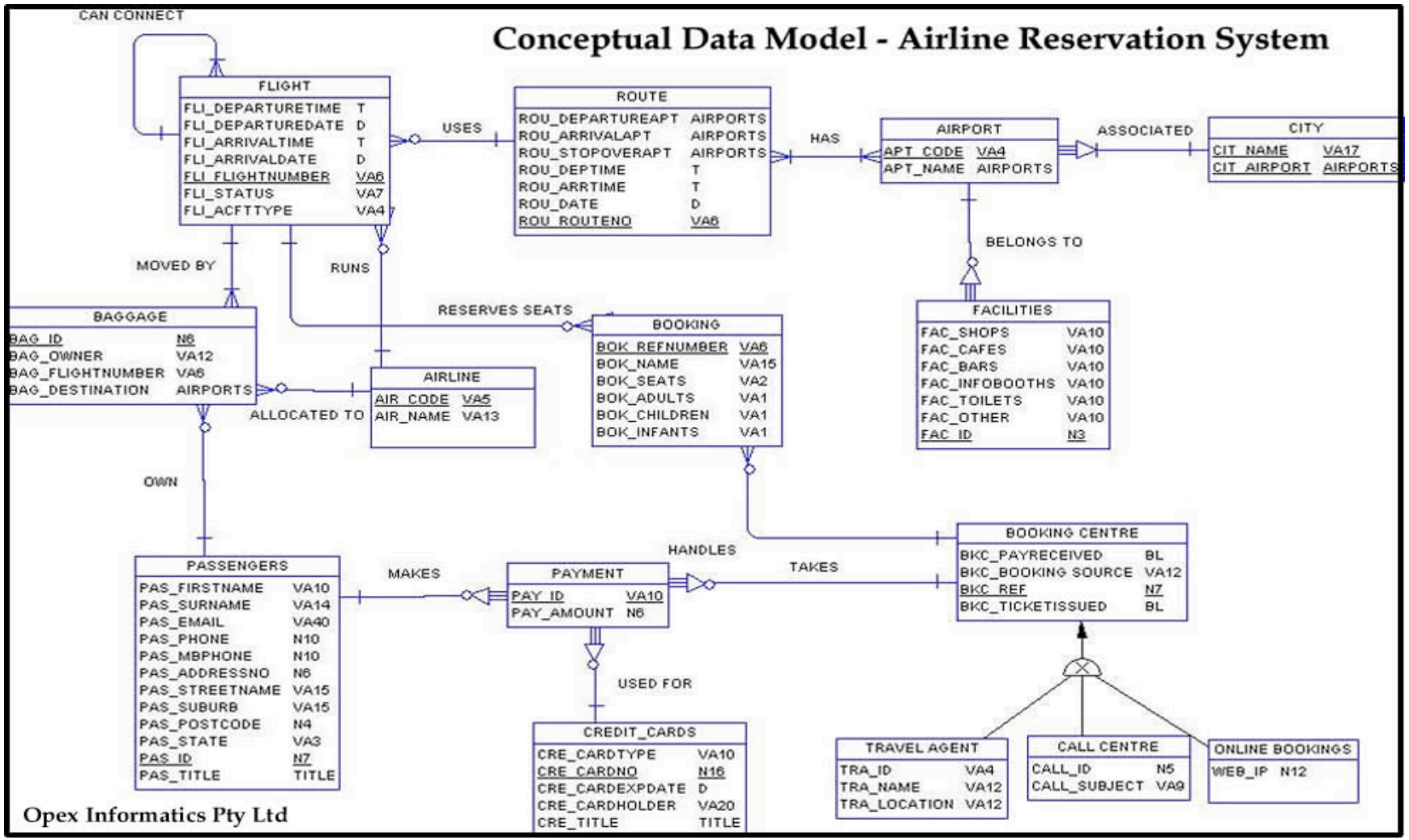
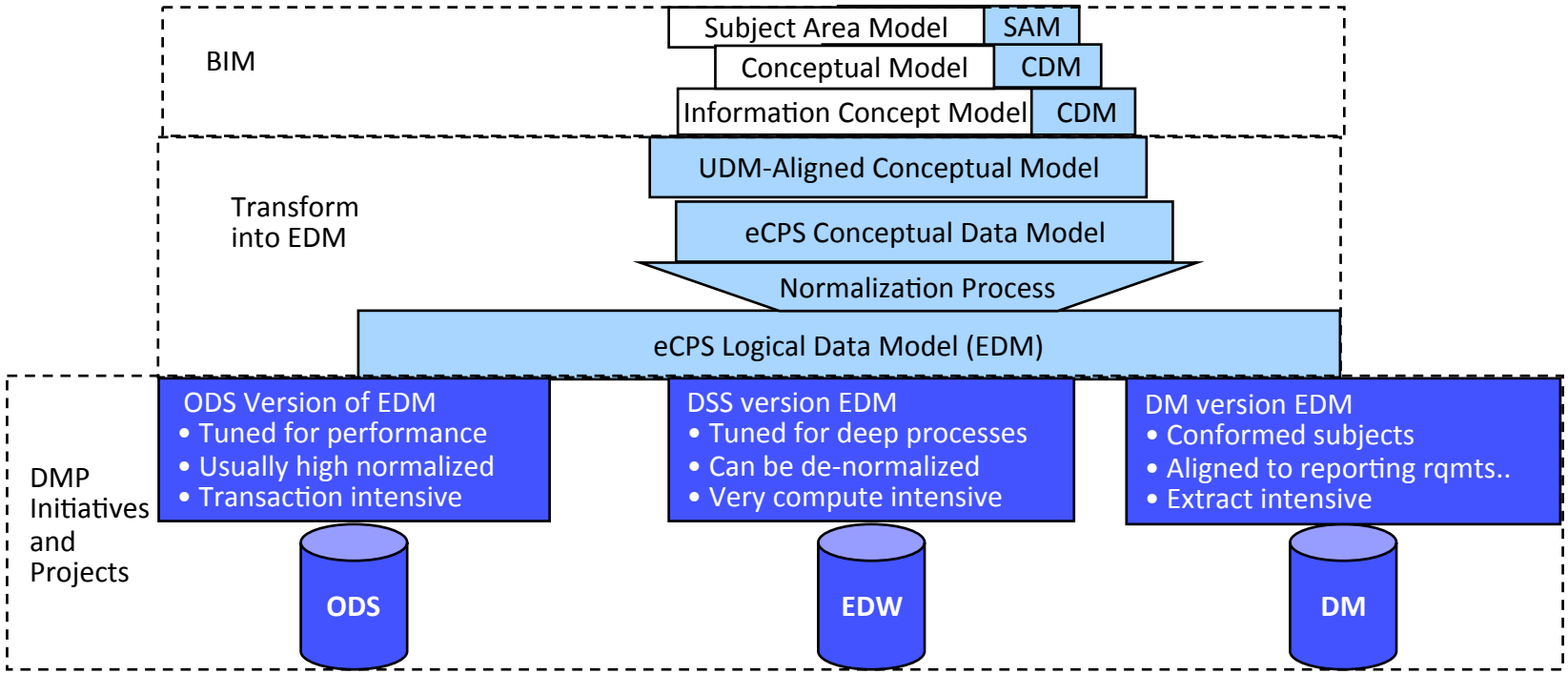


CDM provides foundation for the logical and physical modeling, but not all CDM entities will be translated into physical entities.



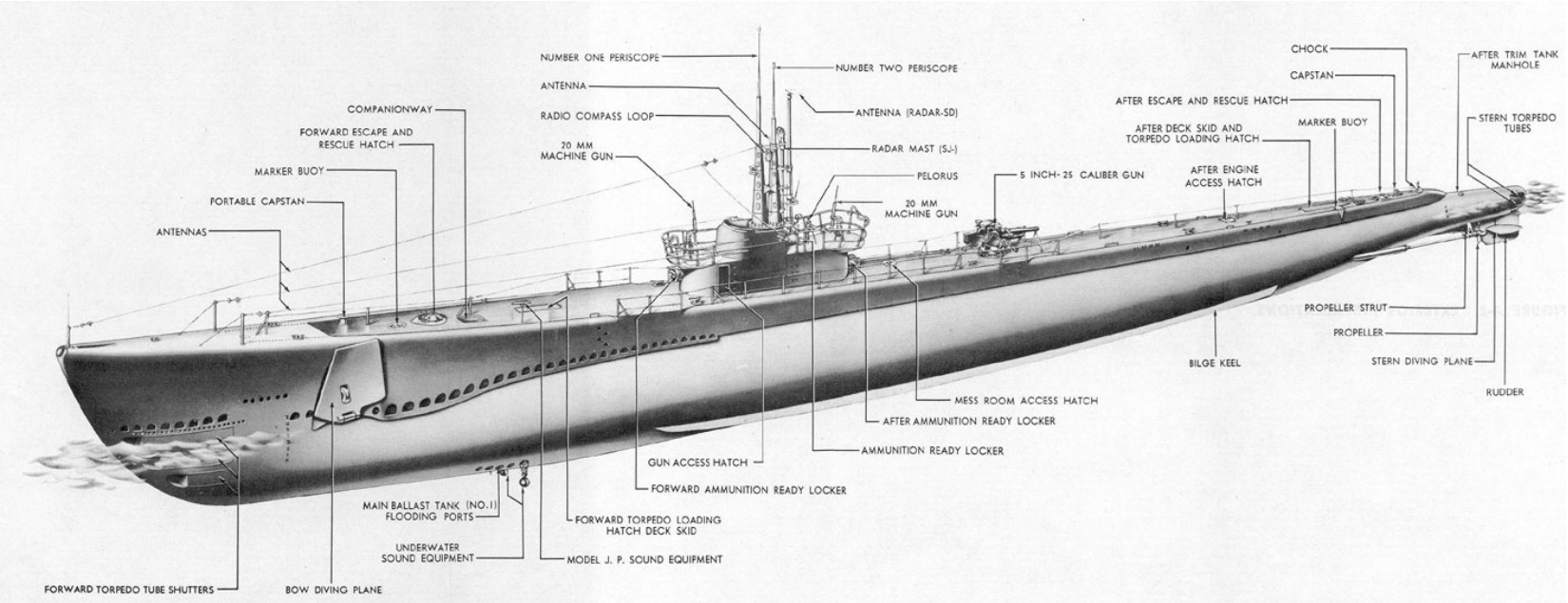
Logical Model

Activities:

- Gathering the data to be acted upon
- Controlling access to the data during the process execution
- Determining which work task in the process should be accomplished next
- Delivering the appropriate subset of the data to the corresponding work task
- Assuring that all necessary data exists and all required actions have been performed at each task

Logical Model

Representation of a business process, detailing all the activities in the process from gathering the initial data to reaching the desired outcome.



Physical Model

Items described in Physical Model are:

* Work tasks to be completed during the process

* The order in which the tasks should be executed

* Data needed to start the process execution

* Data required to start and finish each work task

* Rules needed to determine routing through the process

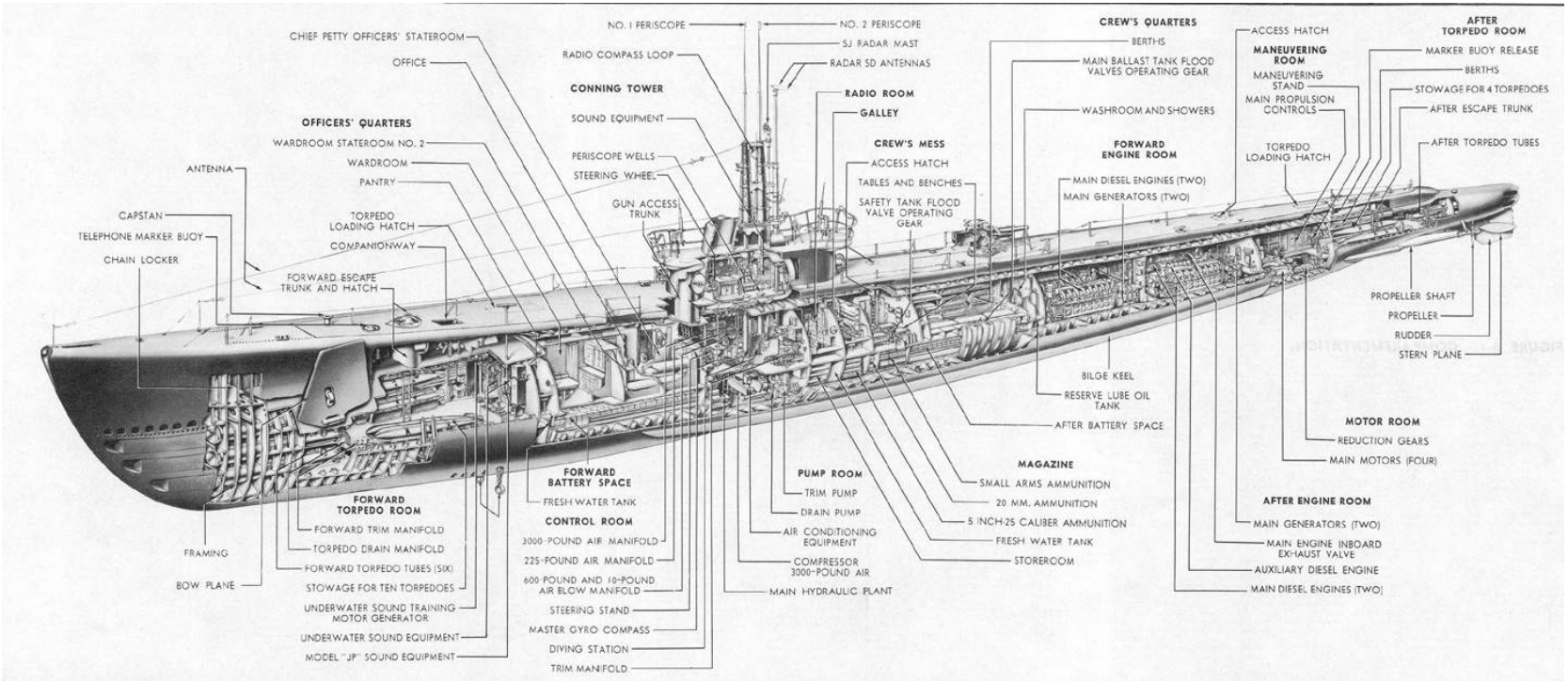
* Exception handling techniques

* At least one defined business outcome

* Roles and permissions of each process participant

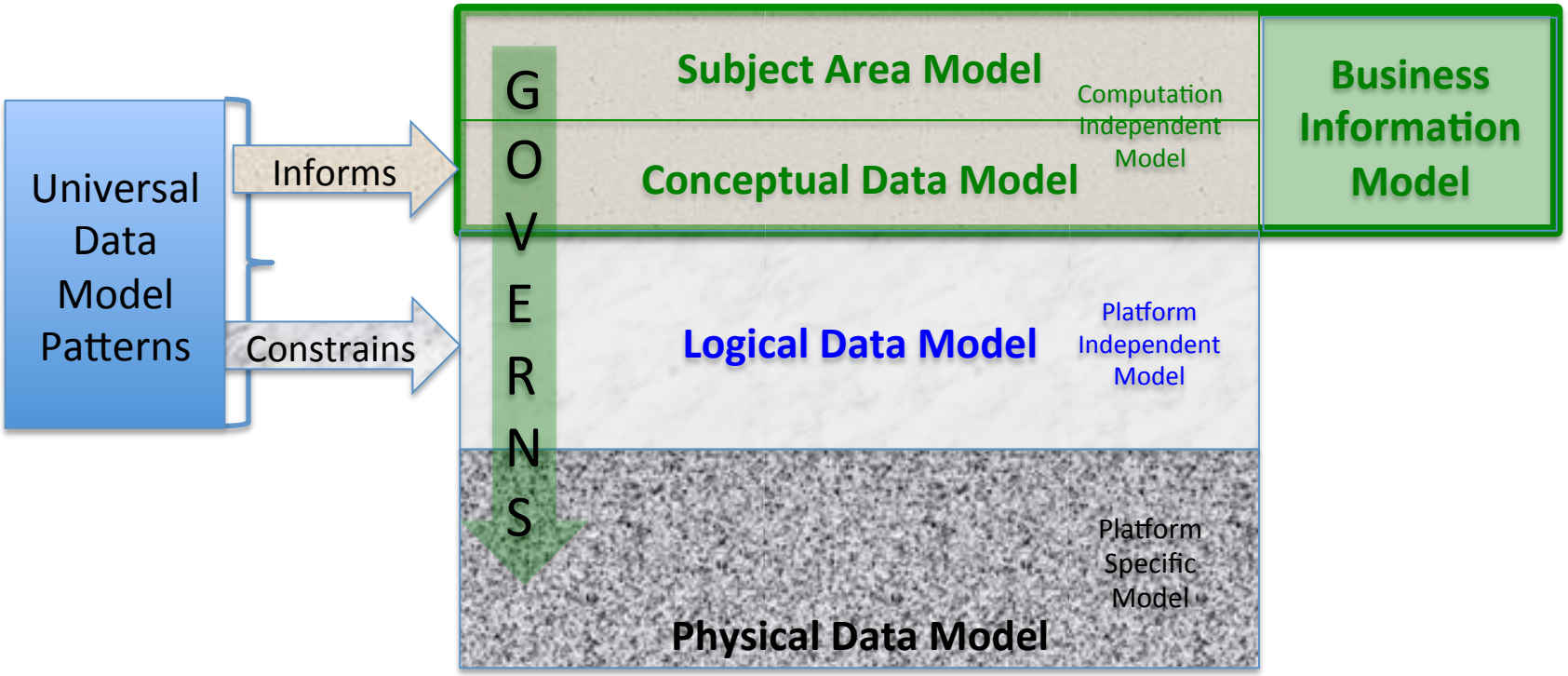
Physical Model

Physical modeling tool is used to forward engineer the logical model into the physical design.



Review

SAM, CDM and their purposes and differences.
A brief introduction of LDM, PDM.



Conclusion:

"the journey counts more than the destination."

The process of creating the EDM, in itself, is important because it provides opportunities for the business to work together in understanding the meaning, inter-workings, dependency and flow of its data across the organization.

In the day-to-day operations, many never get an opportunity to "look up" and see the bigger picture; see the enterprise data view; where data comes from, its transformation, where it goes, what happens to it, and where they fit in.

The modeling process gives this opportunity; bringing focus to data's importance. The "big picture" understanding and support from the business are essential in establishing a data quality program, data ownership, and data governance; all necessary within an enterprise data environment.

谢谢!
有问题吗?