Understanding Business Processes and Data Simultaneously

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Agenda

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- Introduction
- Challenges we face
- Elements of good requirements
- Synchronise models
- Questions

About the Presenter

Joan Pournara

Joan has specialised in business analysis for more than 25 years and is currently involved in Enterprise Business Architecture.

She was the first South African to qualify as a CBAP® (Certified Business Analysis Professional) and has also trained in TOGAF and Zachman Frameworks.

Joan is the Director of Education on the Board of the IIBA®-SA Chapter that she co-founded.

Joan lectures in Business Analysis for ESI-International (an IIBA™ Endorsed Education Provider) and is an Executive Consultant in Business Architecture and Analysis, consulting to organizations at a strategic level and providing mentoring and coaching at a tactical level.

Joan is an accredited practitioner of the NBI Profile instruments which she uses when assessing business analysis skills and behaviours.

Challenges we are faced with:

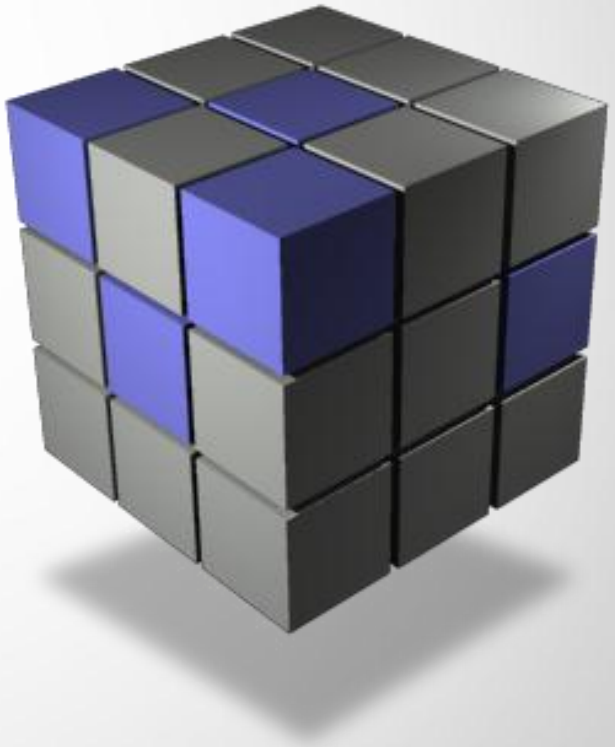
What systems development and other related challenges have you experienced in your job as a Business Analyst?

Challenges

- Integration does not occur between systems
- Redundant data and databases proliferate
- System design occurs before analysis
- Existing technology constrains solutions
- Multiple systems perform the same function
- System development does not align with the business
- Delivered systems fail to meet business needs
- New approaches to software development creates confusion
- Data is not managed correctly

How do we meet these challenges?…

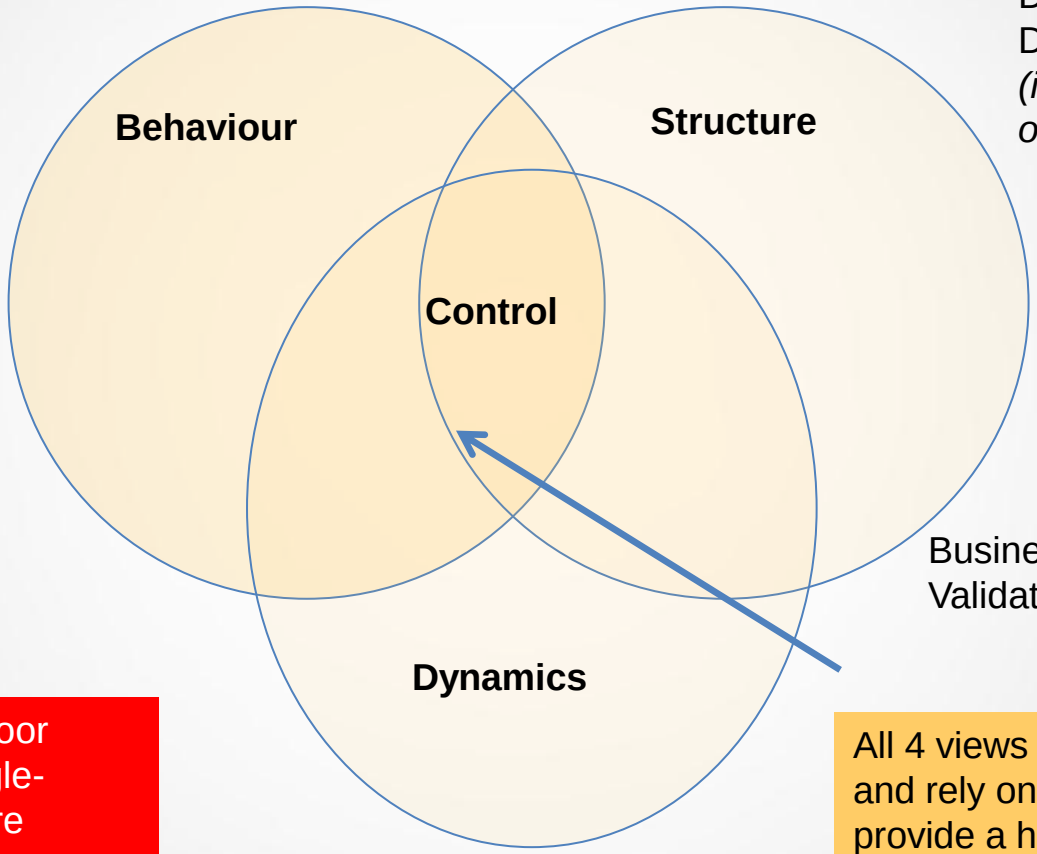
- Perform data analysis early in the requirements phase
- Synchronize data and process modeling
- Define naming standards
- Agree data definitions



Elements of good requirements

Requirements 4-dimensional Views

User Stories
Process Maps
Use Cases
Scenarios
Activity diagrams
Workflow models
(process; action; function; task; script)



Data Models
Data Dictionary
(information; data; objects)

Process models cannot stand alone and must trace to data and business rules

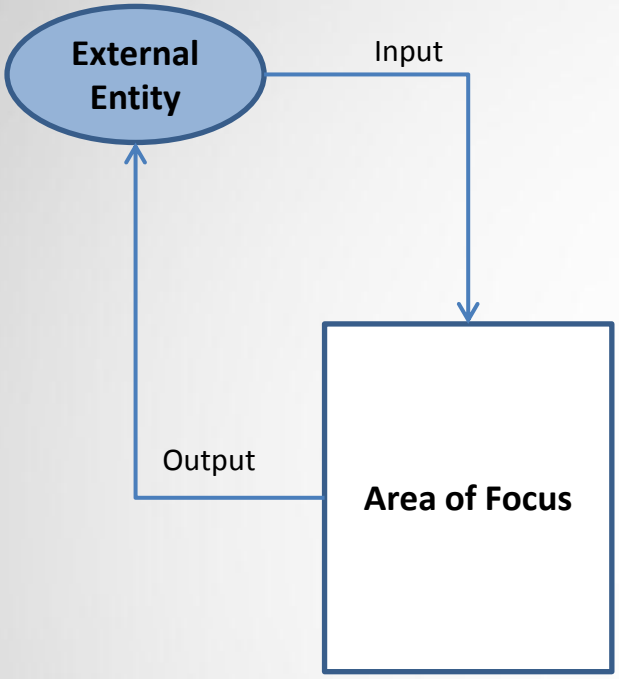
Business Rules
Validation Rules

There is a high risk of poor requirements when single-dimension only views are performed – Scott Ambler

Event/Response
State Diagrams
(time; lifecycles)

All 4 views are important and rely on each other to provide a holistic perspective of the requirement. -

Context Diagram – high level of abstraction



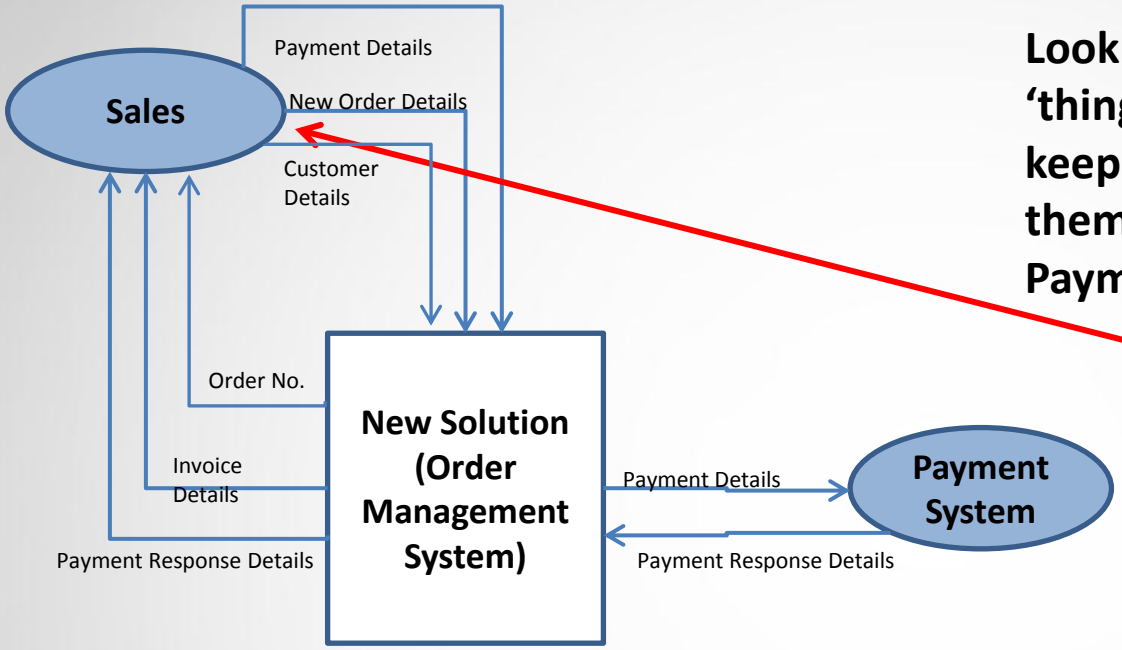
Use a Context Diagram to understand the **organization** and the external entities that trigger inputs and receive outputs from the organization. By working with stakeholders, I very quickly understand the organization or Business Unit under discussion.

Area of Focus = Organization or Solution

External Entity = Customers, Suppliers, Systems, Business Units, Roles. Any Individual or Group of Individuals who interact with the area of focus and about whom the organization wishes to keep information.

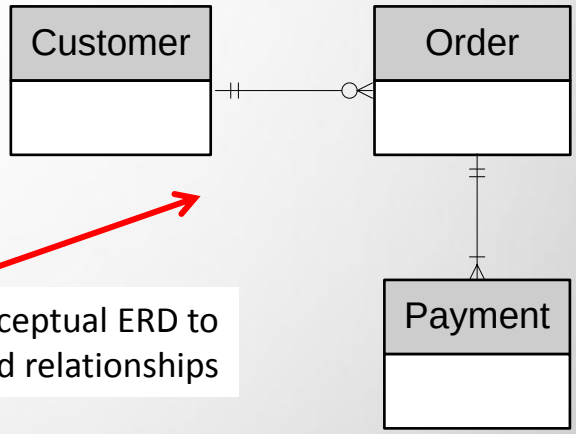
Inputs and Outputs = information flows

Context Diagram – and Conceptual ERD



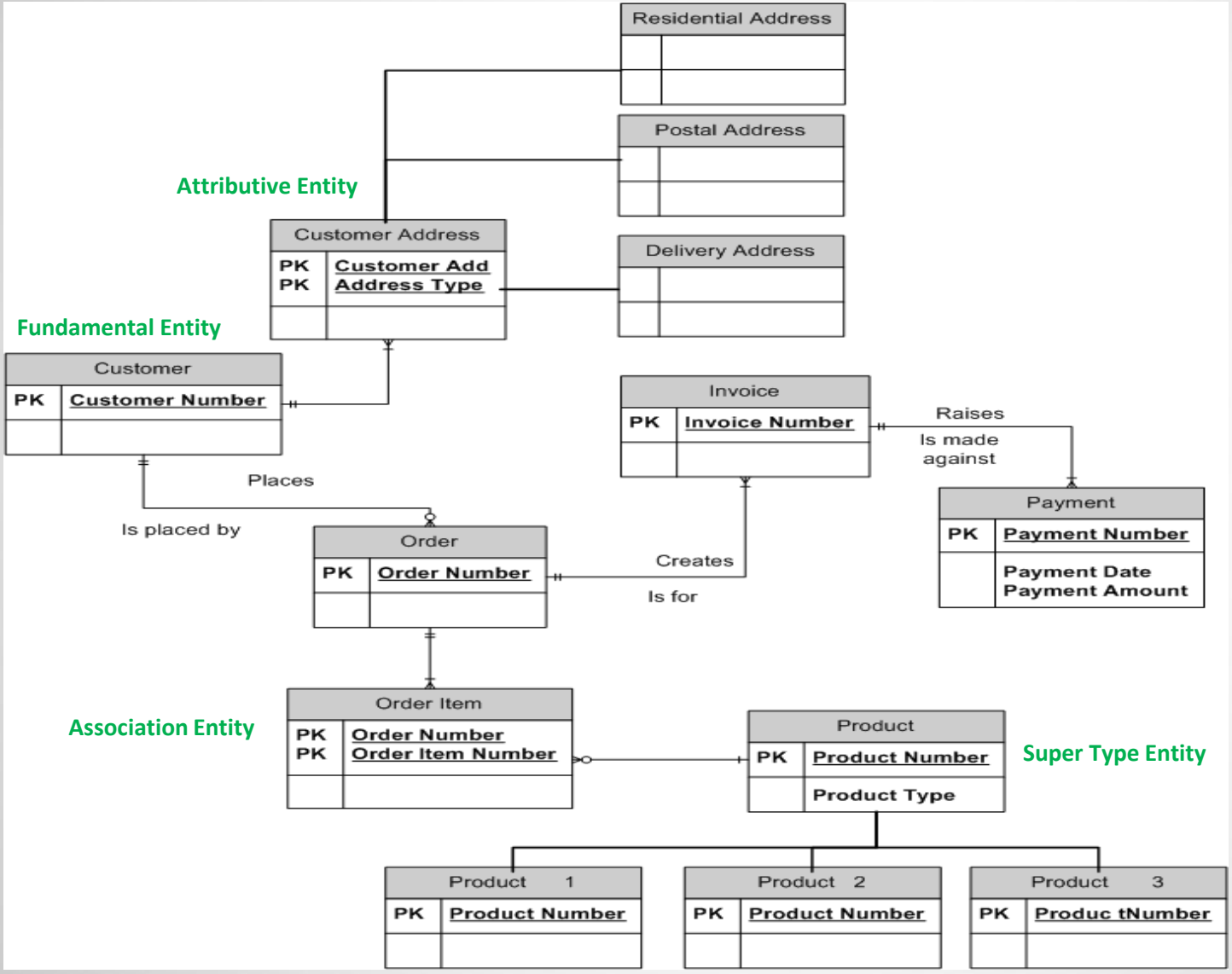
Look for clues that describe those 'things' (nouns) the business will need to keep information in order to manage them. For example, Customer, Order, Payment, Invoice.

Using a Context Diagram to understand the **new system** and the external entities that trigger inputs and receive outputs from the new system. By working with stakeholders, I very quickly understand the requirements the new system must provide.



First Iteration of Conceptual ERD to identify entities and relationships

Conceptual ERD....refine to Logical state

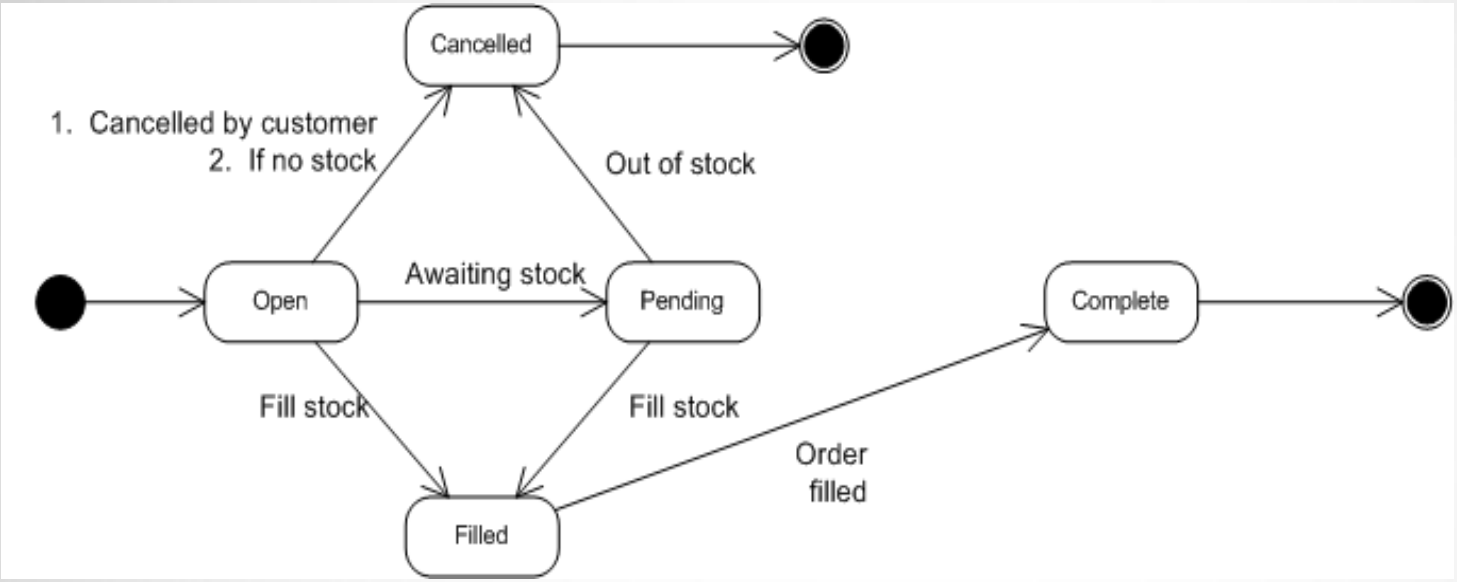


Continue to refine the ERD through active listening skills when interacting with stakeholders and logical understanding of the business and interpretation of business rules.

Identify attributes and unique identifiers until the model is normalised.

State Diagram ..... Defines entity lifecycle

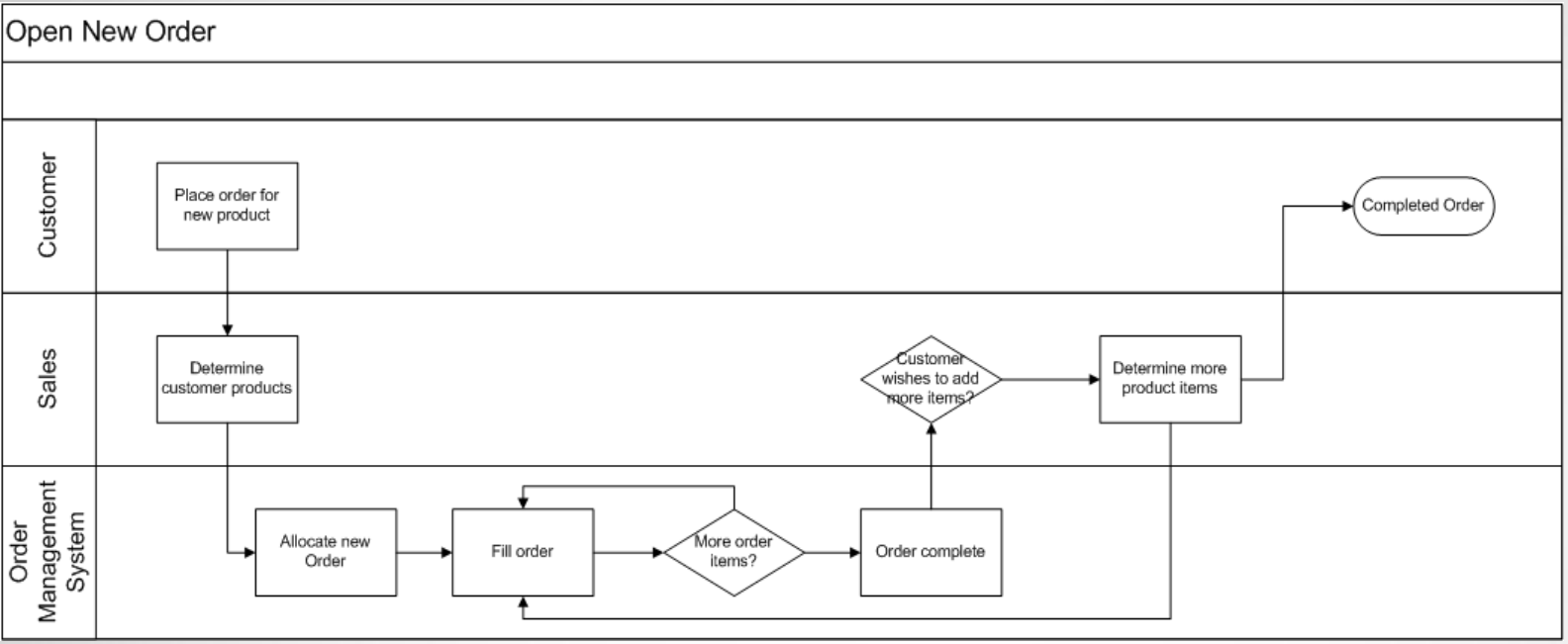
Order Entity



Through knowledge of each state an entity will transition through during its lifecycle, helps to identify the processes to be documented that identify the steps involved to complete the process.

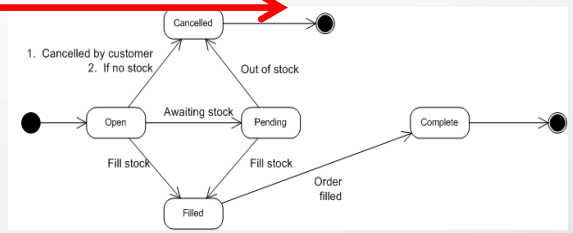
Example: Open new Order
Cancel Order
Update Order

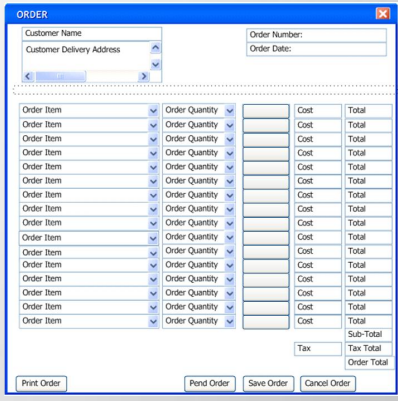
Build Process / Activity Diagram



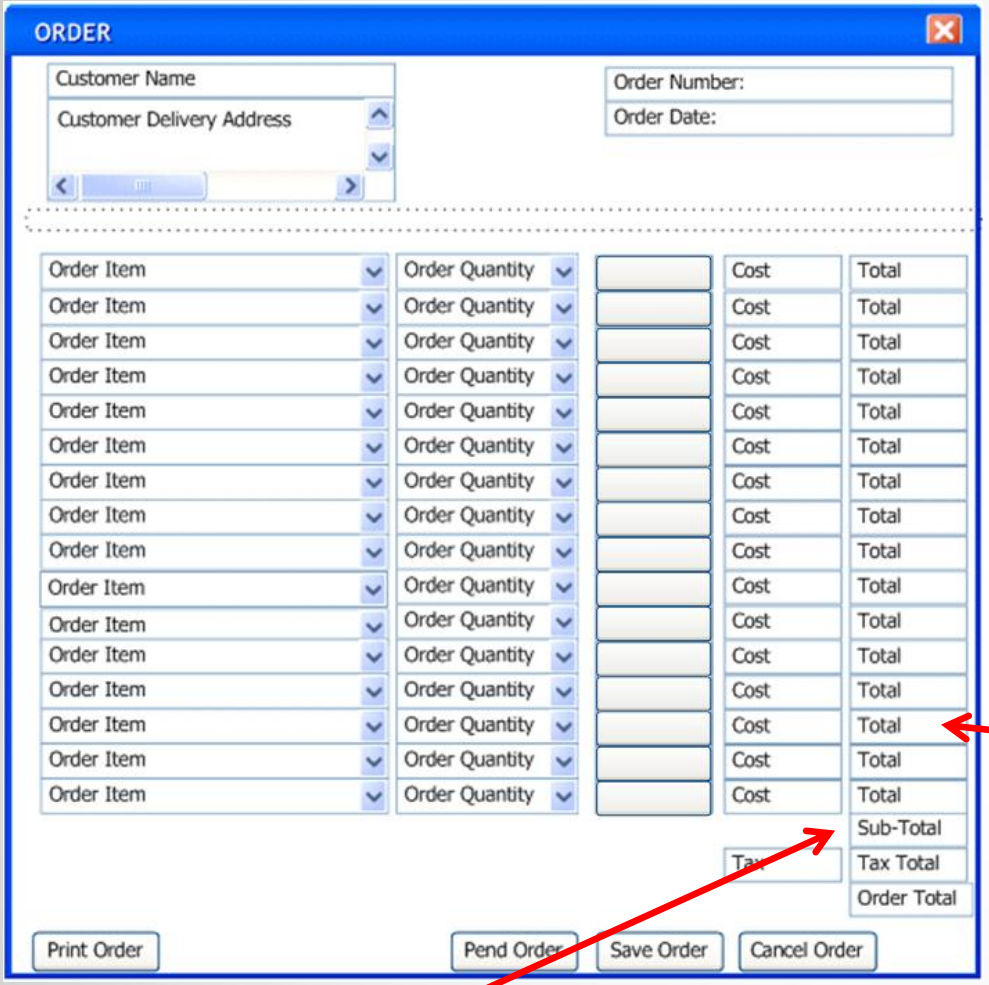
First iteration, build the process model based on knowledge from Context diagram – external entities inputs and outputs.

Refine the activity diagram in further iterations as more information and knowledge is uncovered from the data model, business rules, screen prototypes.



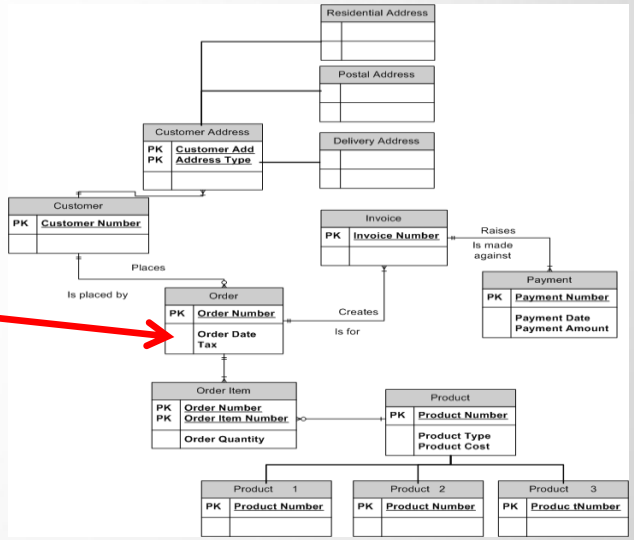


Build Screen Prototypes

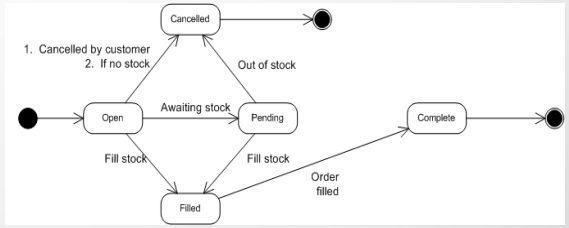


First iteration. Build a screen prototype to aide stakeholders to visualise and to think creatively about the business needs.

Refine the ERD diagram with attributes as they are identified. For example, Order Item quantity, cost, Tax calculation. Identify derive data.



Only show derived data on the entity diagram if it is necessary to ease communication and understanding for stakeholders

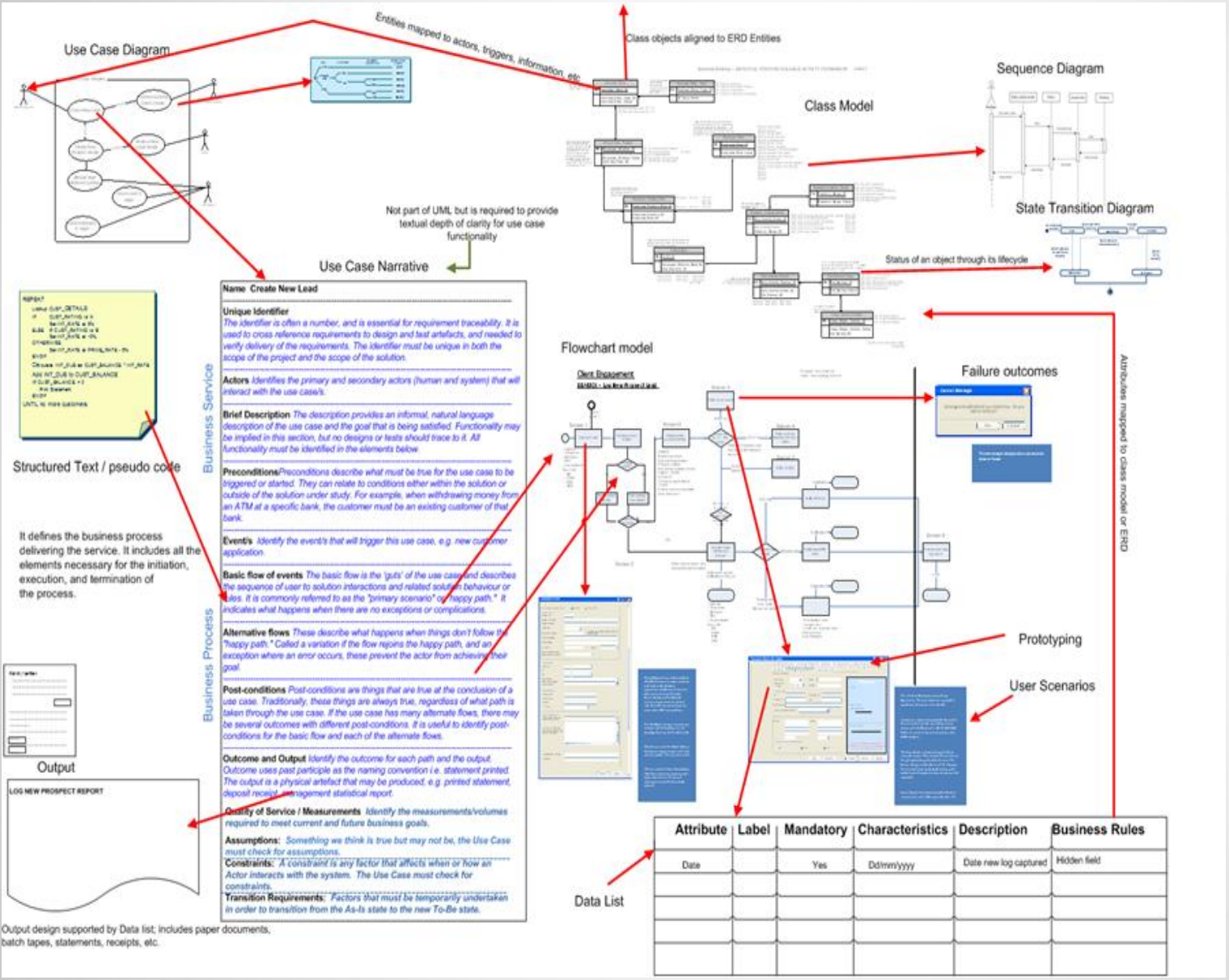


Order – Data List

Attribute Name	Screen Name	Description	Characteristic	Format	Validation
Order Number	Order Number	Unique number to be allocated to each order	AlphaNumeric 15	Mm/yy/( )	For each valid order, increment the order number by 1 If the order is cancelled before being filled, then roll back number
Order Date	Order Date	Date order is opened	Date	Dd/mm/yyyy	
Etc					

First iteration. Create a data list for each screen prototype. Assists to align attributes to the ERD and uncovers business validation rules.

A Requirements Set



The red arrows in the view indicate consistency and accuracy checks between the different analysis techniques and requirement elements. The elements are a set of requirements to realize one requirement use case.

The set of requirements is supported with a Stakeholder list of Roles and Responsibilities defining which stakeholders were involved in the creation, reviewing and approval of the requirements. A roles and permission matrix defines Actors and their responsibilities.

Things to consider

- Begin modeling data as early as possible in the analysis phase
- Identify those stakeholders who are comfortable with data. Use business scenarios to uncover data needs
- Refine the data model in iterations based on good data modeling principles until normalized
- Be aware of the data modeling approach – i.e. point in time versus a period over time
- Refine process models in iterations once the screen prototypes are designed and attributes identified.
- Designing deliverables (reports, documents, etc) will uncover further attributes that need to be stored.
- Validate models in iterations with different stakeholders who represent Business areas, IT and Testing for the purpose of finding defects early in the analysis phase.

Management Reports

Exception Reports

Customer Documents

Forms

Statutory Reports

Notices

Sales Reports

Using iServer

iServer allows you to:

- ✓ Link all models together to create traceability from Business Goals through to Test Cases within the SDLC
- ✓ standardize templates (Visio, Word and Excel) across business units and business analysis roles
- ✓ Links Enterprise Architecture elements to process models (As-Is to To-Be) and projects
- ✓ Bring organization knowledge together (usually scattered all over the organization)
- ✓ Facilitate impact analysis for improved business decision making.
- ✓ Store meta-data on objects for improved management decision and control
- ✓ Store test cases, procedure manuals and training manuals that align to processes (kept in one place)
- ✓ Facilitate one fact, one place. Avoids duplication and redundancy and encourages reuse.

Questions

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Do you have any questions?

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