



# ***System Approach in Designing e-Business***

**Course prepared for:**

***4<sup>th</sup> topic : System Approach as Platform for e-Business***

**Pertemuan 7: - eBusiness and Eco-System**

**- eBusiness: Concept & Context**

***Source:***

- Steven Alter, *Information System, The Foundation of E-Business*, Prentice Hall, Fourth Edition, 2002.
- Husni S. Sastramihardja, *Course Hands Out*, 2019



# Concepts in construction of e-business

Konsep diperlukan dalam mengkonstruksi e-Business

**Business  
Concept**

**System  
Concept**

**Technology  
Concept**

**e-Business**

**Customer  
Concept**

**Concept  
Construction**





# *System Approach to Design e-Business*

## *The Concept...*

**Eco-System: .....**

**Enterprise System: .....**

**Business System: .....**

**eBusiness System: .....**

**Function Areas: .....**

**Specific Concept (regulacy, policy, technology, etc...\_**

## **Fondation for approaching to Design e-Business:**

- (1) Find and Defining Concepts & Principles (Raison d'être) of "Roles & Contribution" of an e-business in supporting the sustainable advantages for "corporate business";**
- (2) Following the Engineering Principles & Methodes to plan, develop, and maintain the application of e-business for certain purpose.**
- (3) General idea of the Engineering Cycle consist of 5 phases: Problem definition, System analysis, System design, System implementation, System operation (& maintenance).**
- (4) System Consideration**
- (5) System Requirement**
- (6) System Specification**



# Engineering Cycle



***What is the TARGET ???***



**EE** : rooted in both (organizational & information system) sciences ←  
supported by 3 concepts (Enterprise Ontology, E-Architecture, E-Governance).

**E-Ontology**: Understanding of an enterprise in a way that is fully independent of any implementation

The (one and only) E-ontological model shows the essence of its operation:

- The starting point for designing & implementing all kinds of changes;
- Extremely stable over time; most changes appear to be changes in the implementation.

**E-Architecture**: Concerns the (identification, specification, & application of “design principles”),

which come in addition to the specific requirements of every change project.

“Design principles”: The operational shape of an enterprise’s strategic basis (mission, vision).

- Only in this way can one achieve & guarantee that the operations of an enterprise are fully compliant with its mission & strategies.

**E-Governance**: Organizational conditions for incorporating E-ontology & E-architecture in an enterprise’s practice

- ← the EE approach feasible & beneficial.



Adapted from Source: Jan A.P. Hoogervorst, *Enterprise Governance & Enterprise Engineering*. 117, Sogeti Nederland B.V., Diemen, The Netherlands, 2009

**ENTERPRISE: Consciously coordinated social entity with a relatively identifiable boundary, that functions on a relatively continuous basis to achieve a common goal or a set of goals [Robbin 1990, page 4 in Jan A.P. Hoogervorst, 2009].**

## Specific characteristics:

**Enterprise is a - social entity; goal orientation;  
consciously & intentionally created or designed; &  
beg to the question as to “how enterprise must be designed”.**

Important to make the intended system function (relative to the system environment) →  
part of the system definition.

This provides the following characteristics of a system [Dietz 2006]:

## **SYSTEM: Function (C, E, P, S)**

**C = the system *composition*:** the set of system elements

**E = the system *environment*:** the elements outside the system with which the system interacts

**P = the system *production*:** the products or services that *C* delivers to *E*

**S = the system *structure*:** the interaction relationships between the elements of *C* mutually, and  
between the elements of *C* and the elements of *E*.



# **HSS: Boundary Layers Of Enterprise System**





# Engineering Cycle

## The Concept...

### Alternative Definition & Views of E-Business

*Adapted from Source:* Steven Alter, Information System, The Foundation of E-Business, Prentice-Hall, 4th Edition, 2002

→ Try to understand for your Case, and define the vision of your business system .....

- E-BUSINESS:**
- (1).** The practice of performing & coordinating Critical BPs (designing product etc...) through the extensive use of computer & communication technology & computerized data;
  - (2)** Everything having to do with the application of ICT to the conduct of business between company and consumer;
  - (3)** Includes e-commerce & covers internal processes such as Production, Inventory management, Product development, Risk management, finance, knowledge management, Human resource;
  - (4)** The use of internet & other digital technology for organizational communication & coordination and the management of the firm;
  - (5)** Computer complex fusion of BPs enterprise application & organizational structure necessary to create a high performance business model;
  - (6)** [IBM] "a Secure, flexible & integrated approach to delivering differential business value by combining the systems and processes that run core-business operation with the simplicity and reach made possible by internet technology.





# Define the Context

## EXPLORING YOUR CONTEXT

DEFINE BP & FA of Business → Requirement & Technology

| <i>Consideration</i> | <i>Requirement</i> | <i>Specification</i> |                        |
|----------------------|--------------------|----------------------|------------------------|
| Function Area        | Business Process   | System Requirement   | Roles of IT Technology |
|                      |                    |                      |                        |
|                      |                    |                      |                        |
|                      |                    |                      |                        |
|                      |                    |                      |                        |
|                      |                    |                      |                        |

You have your own focus, OK ? → fill up the table

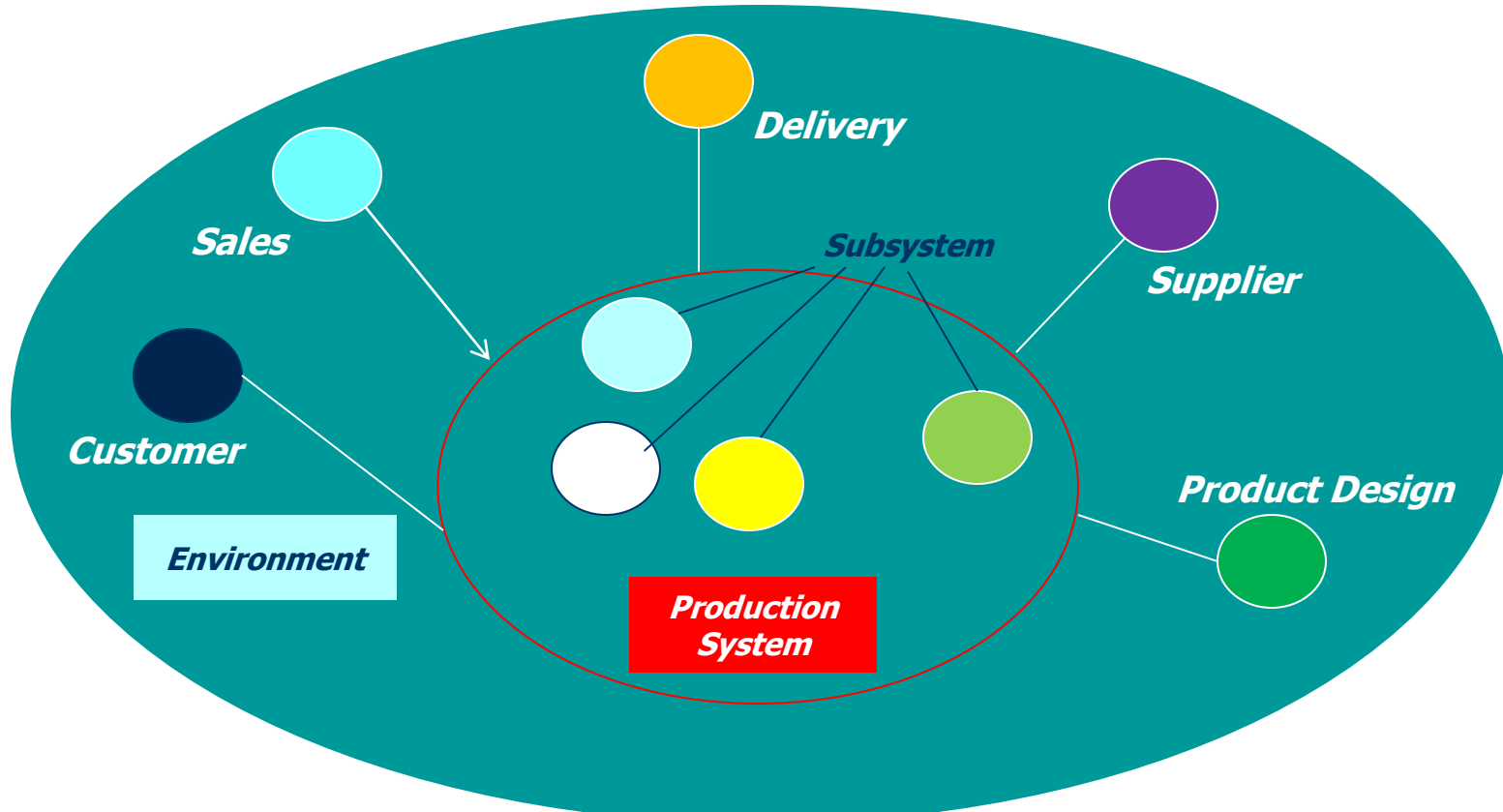


# Define the Context

## Structuring your idea of business system

WORK SYSTEM → The Context

System in which human participants and/or machines perform a business process

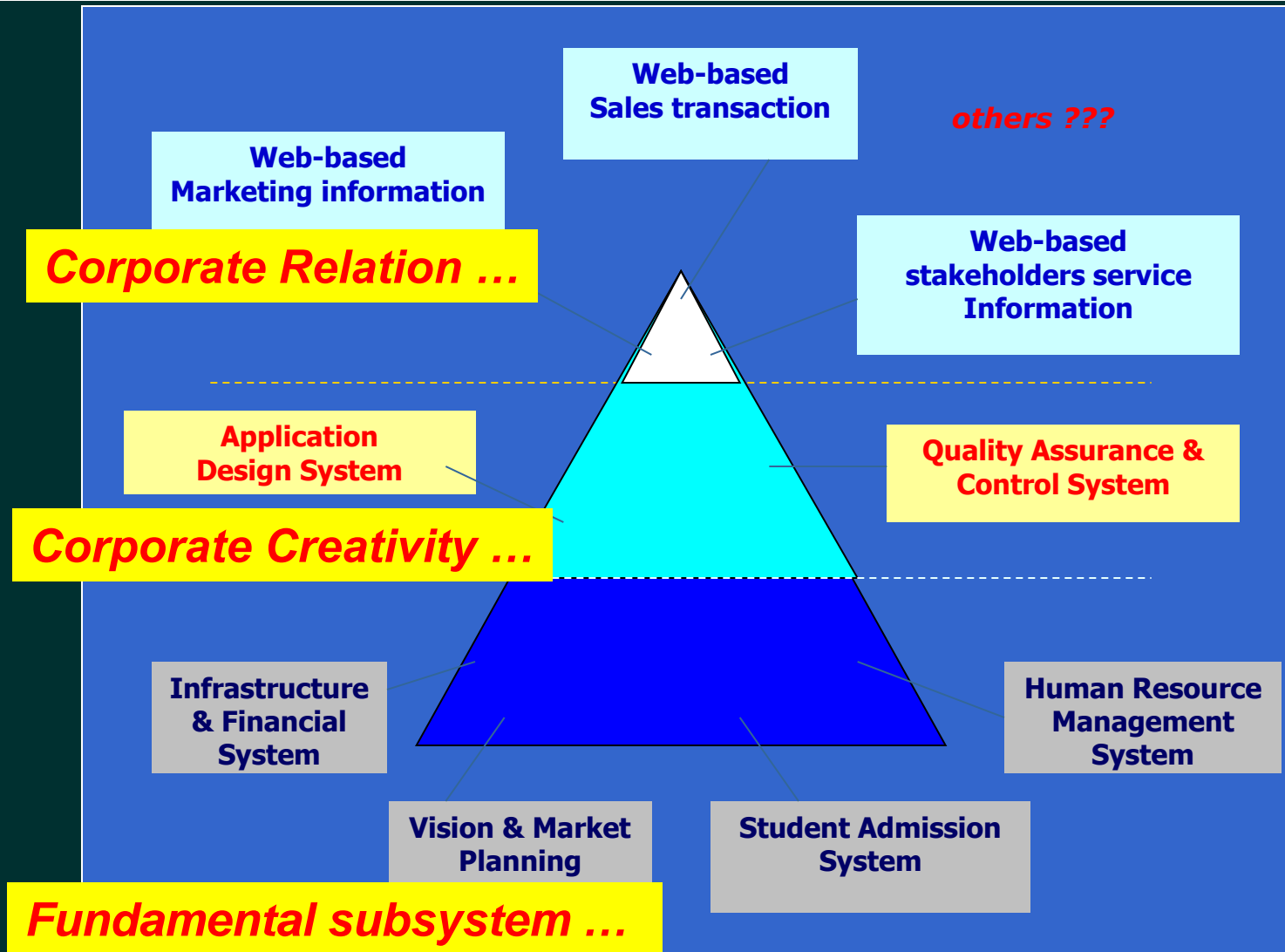


→ Use Data Flow Diagram  
to explore "the detail of your Business Process"



# ... IT IS ABOUT "CREATIVITY" ...

Adapted from Steven Alter, Information System, The Foundation of E-Business, Prentice Hall, Fourth Edition, 2002.



## Daftar Referensi

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