




























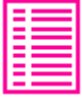








Zachman Framework

THE FRAMEWORK

	<u>DATA</u> Focus: Entities/Relationship (What)	<u>FUNCTION</u> Focus: Processes and Functions (How is data used)	<u>NETWORK</u> Focus: Nodes/Links (Where)	<u>PEOPLE</u> Focus: Agents/Work (Who)	<u>TIME</u> Focus: Time Cycle (When)	<u>MOTIVATION</u> Focus: Ends/Means (Why)
<u>SCOPE</u> Focus: External Drivers and Requirements Perspective of : Planner						
<u>ENTERPRISE</u> <u>MODEL</u> Focus: Business Process Models Perspective of : Owner						
<u>SYSTEM</u> <u>MODEL</u> Focus: Logical Models, Requirements definition Perspective of : Architect/Designer						

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<p><u>TECHNOLOGY MODEL</u></p> <p>Focus: Physical Models, Solution definition and development</p> <p>Perspective of : Builder</p>						
<p><u>COMPONENTS</u></p> <p>Focus: Deployment, as-built</p> <p>Perspective of : Sub Contractor</p>						
<p><u>FUNCTIONING SYSTEM</u></p> <p>Focus: Evaluation</p> <p>Perspective of : User</p>						

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PARTICIPANT PERSPECTIVES IN THE ZACHMAN FRAMEWORK

The Zachman Framework was designed to include IS Architecture representations for all participants involved in the development, management, maintenance, and usage of the organization's information systems. Each such perspective provides a unique and valuable point of view on the IS Architecture. These perspectives are often successive ones: there is an obvious chronological sequence from planner to owner to architect to builder to subcontractor to user. However, the subsequent perspectives are NOT a step-wise refinement of IS Architecture detail. Each of these perspectives provides requirements and constraints on the IS Architecture. Each perspective is therefore a complete representation of the IS from a particular point of view. Together they provide a complete description of the architecture. Each of the perspectives (rows) of the framework is further described below:

SCOPE	
Perspective of:	Planner
Description:	The planner is concerned with a general description of the IS and the positioning the IS in the contexts of its internal and external environment. Planning not only identifies the major components of the IS but also addresses its financial viability (costs and benefits), constraints (often imposed internally by legacy systems and externally by the need to connect with other organizations), and scope (what will be part of the IS and what will not).
ENTERPRISE MODEL	
Perspective	Owner

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of:	
Description:	In general, the owner is interested in the business deliverable, its functionalities, and how it will be used. Within the established plan, the owner usually imposes specific constraints and requirements on the system, such as organizational policies and practices, the need for flexible data retrieval, and required response times.
SYSTEM MODEL	
Perspective of:	Architect/Designer
Description:	The architect needs to understand the IS from both the business perspective and the technical perspective. The architect works with the IS specifications provided by the planner and the owner to produce a design that will both fulfill the owner's functional expectations and can be technically realized by the builder. Consequently the architect must not only be able to correctly interpret the owner's requirements and constraints but he or she must also be aware of technical possibilities and limitations of IS development platforms, the required interactions with existing systems, government regulations which affect implementation (such as data transmission), and so forth. Often this requires the architect to develop matching sets of functional representations and technical specifications.
TECHNOLOGY MODEL	
Perspective	Builder

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of:

Description: The builder manages the process of producing and assembling the components of the IS. This requires a thorough understanding of the architect's specifications for the system. In addition, the builder must know the materials to work with (databases, programming languages, operating systems, etc.) the tools to work with (CASE-tools, compilers, etc.) and the ways in which the development work can be organized to meet completion deadlines.

COMPONENTS

Perspective

of:

Subcontractor

Description: The subcontractor builds specific parts of a product. Often these parts are produced out-of-context (which in many cases ensures their reusability) based on very detailed component specifications provided by the builder. It is the builder's responsibility to provide the subcontractor with sufficiently detailed component specifications. It is the subcontractor's responsibility to produce the component exactly according to the provided specifications. By the way, a subcontractor may be external to the organization but does not have to be. Subcontractor views can also be useful for communicating product specifications in a large, highly specialized Information Systems division of an organization.

FUNCTIONING SYSTEM

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Perspective of:	User
Description:	The user's perspective is the interface and functionality of the final product. The user perspective, then, is the product of all planning, designing, and development activities that went before. When the information system has been completed, it can be compared against the original objectives and requirements of the planner and the owner. Changes from these objectives and requirements should be either justified or else may become problematic in the future.

QUICK PERSPECTIVES SUMMARY

PERSPECTIVE	PURPOSE	PRODUCT	CONSTRAINT (Constraints are additive.)
PLANNER	Define scope	Scope definition	Financial and regulatory
OWNER	Describe real-world product	Business model	Policy and usage
DESIGNER	Describe abstract product	System model	Environmental and technical
BUILDER	Describe product construction and assembly	Technology model	Construction and technological state of the are and available equipment and tools
SUBCONTRACTOR	Describe component construction	Out-of-context models	Implementation and integration

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FOCUSES/ABSTRACTIONS IN THE ZACHMAN FRAMEWORK

While the rows in the Zachman framework describe the views of the IS participants, the columns each depict a different focus on the IS itself. (As Zachman put it: "The same product can be described, for different purposes, in different ways, resulting in different types of descriptions.") Together, these six interacting focuses describe the entire IS architecture. Each of the focuses (columns) of the framework is further described below:

WHAT is it made of?	
Object of focus:	Data
Focus items:	Entities Relations
Description:	This column describes the stuff that organizational information is made of: Data. However, data needs to be related to other data for it to make sense in context. (A lonely zip-code is rather useless, but as part of a customer's address it becomes valuable!) This column, then, also needs to describe the relationships that must be maintained among the data.
HOW does it function?	
Object of focus:	Processes & Functions
Focus items:	Functions Arguments / Inputs & Outputs

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<p>Description: This column provides a functional description of the information system: How does the organization do its work? How are orders filled? How is inventory maintained? Or in the context of an is: How is the data used? This column often describes an input-process-output model.</p>
<p>WHERE are things located?</p>
<p>Object of focus: Network</p> <p>Focus items: Nodes Links</p> <p>Description: This column shows where the work and information flows within the enterprise. This may be among desks in a single building or among offices distributed around the world. If all of an organization's locations are to be connected, the nature of these connections must be properly identified first.</p>
<p>WHO is involved?</p>
<p>Object of focus: People</p> <p>Focus items: Agents Work</p> <p>Description: This column deals with the allocation of work and the structure of authority and responsibility in the organization. It describes people (employees) within the</p>

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enterprise and the work (or work products) they perform.	
WHEN do things happen?	
Object of focus:	Time
Focus items:	Time Cycle
Description:	This column is used to design the event-to-event relationships that establish the performance criteria and quantitative levels for enterprise resources.
WHY are things done?	
Object of focus:	Motivation
Focus items:	Ends Means
Description:	This column describes the motivation of the enterprise where the ends are objectives or goals and the means are strategies or methods.

QUICK DIMENSIONS SUMMARY

DIMENSION	QUESTION ADDRESSED	SAMPLE PRODUCT IN HOUSE CONSTRUCTION	SAMPLE PRODUCT IN SYSTEMS DEVELOPMENT
ENTITIES	What?	House, room	Employee, department

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ACTIVITIES	How?	Play, eat, sew	Hire employee, promote employee
LOCATIONS	Where?	Placement on lot, relationship of rooms to each other	Headquarters, district office
PEOPLE	Who?	Occupants, guests, pets	Human Resources Department, Recruiter
TIME	When?	Construction sequence	During interview, each January
MOTIVATIONS	Why?	Accommodate growing family, reduce lawn maintenance	Ensure adequate staffing levels, ensure adequately skilled staff

Reference: Information Technology Council Omaha, Nebraska.