




ENTERPRISE SYSTEM ARCHITECTURE: ZACHMAN FRAMEWORK

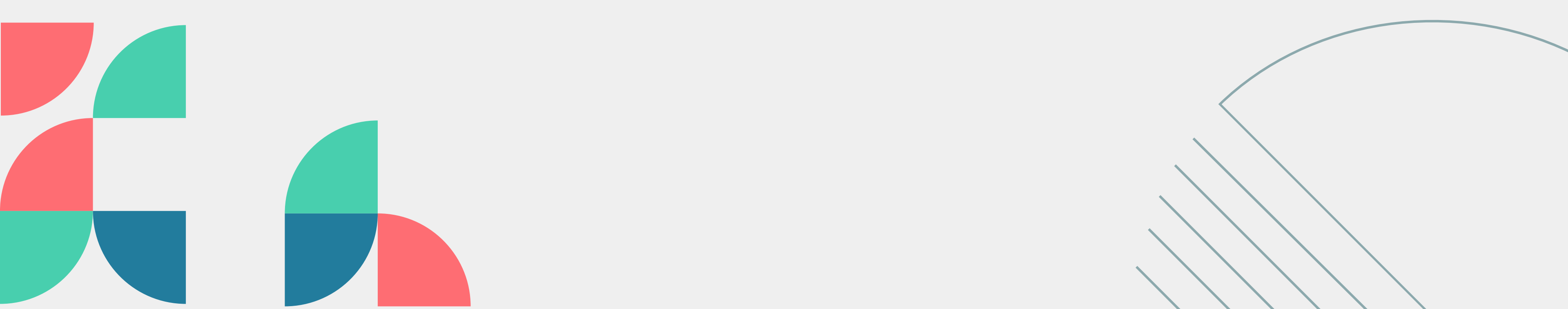
Group 17

Muhammad Izzuddin Bin Shabirn A21EC0083
Muhammad Adam Fahmi Bin Mohd Taufiq A21EC0061







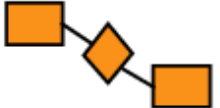
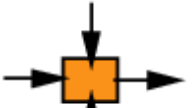

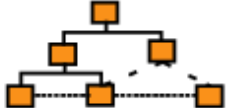


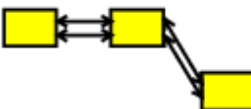
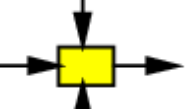
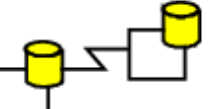
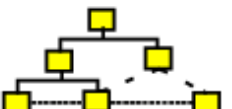


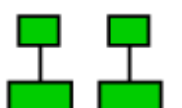















INTRODUCTION

- Developed by John Zachman in the 1980s
 - Use two-dimensional matrix
 - The current version is 3.0
 - Ontology
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DEFINITION: ZACHMAN FRAMEWORK

	DATA <i>What</i>	FUNCTION <i>How</i>	NETWORK <i>Where</i>	PEOPLE <i>Who</i>	TIME <i>When</i>	MOTIVATION <i>Why</i>
SCOPE (CONTEXTUAL)	List of Things Important to the Business 	List of Processes the Business Performs 	List of Locations in which the Business Operates 	List of Organizations Important to the Business 	List of Events Significant to the Business 	List of Business Goals/Strat 
<i>Planner</i>	ENTITY = Class of Business Thing	Function = Class of Business Process	Node = Major Business Location	People = Major Organizations	Time = Major Business Event	Ends/Mean=Major Bus. Goal/ Critical Success Factor
ENTERPRISE MODEL (CONCEPTUAL)	e.g. Semantic Model 	e.g. Business Process Model 	e.g. Business Logistics System 	e.g. Work Flow Model 	e.g. Master Schedule 	e.g. Business Plan 
<i>Owner</i>	Ent = Business Entity ReIn = Business Relationship	Proc. = Business Process I/O = Business Resources	Node = Business Location Link = Business Linkage	People = Organization Unit Work = Work Product	Time = Business Event Cycle = Business Cycle	End = Business Objective Means = Business Strategy
SYSTEM MODEL (LOGICAL)	e.g. Logical Data Model 	e.g. Application Architecture 	e.g. Distributed System Architecture 	e.g. Human Interface Architecture 	e.g. Processing Structure 	e.g., Business Rule Model 
<i>Designer</i>	Ent = Data Entity ReIn = Data Relationship	Proc. = Application Function I/O = User Views	Node = I/S Function (Processor, Storage, etc.) Link = Line Characteristics	People = Role Work = Deliverable	Time = System Event Cycle = Processing Cycle	End = Structural Assertion Means = Action Assertion
TECHNOLOGY MODEL (PHYSICAL)	e.g. Physical Data Model 	e.g. System Design 	e.g. Technology Architecture 	e.g. Presentation Architecture 	e.g. Control Structure 	e.g. Rule Design 
<i>Builder</i>	Ent = Segment/Table/etc. ReIn = Pointer/Key/etc.	Proc.= Computer Function I/O = Data Elements/Sets	Node = Hardware/System Software Link = Line Specifications	People = User Work = Screen Format	Time = Execute Cycle = Component Cycle	End = Condition Means = Action
DETAILED REPRESENTATIONS (OUT-OF-CONTEXT)	e.g. Data Definition 	e.g. Program 	e.g. Network Architecture 	e.g. Security Architecture 	e.g. Timing Definition 	e.g. Rule Specification 
<i>Sub-Contractor</i>	Ent = Field ReIn = Address	Proc.= Language Stmt I/O = Control Block	Node = Addresses Link = Protocols	People = Identity Work = Job	Time = Interrupt Cycle = Machine Cycle	End = Sub-condition Means = Step
FUNCTIONING ENTERPRISE	e.g. DATA	e.g. FUNCTION	e.g. NETWORK	e.g. ORGANIZATION	e.g. SCHEDULE	e.g. STRATEGY

- Column, six interrogatives: 'What', 'How', 'When', 'Who', 'Where', 'Why'
- Define stakeholder perspectives

- **'What':** Data, business concepts, facts, and semantics.
- **'How':** Methods, functions, and technology implementation procedures.
- **'When':** Timing, occurrences, and sequences of events.
- **'Who':** Individuals, their responsibilities, and roles.
- **'Where':** Specific network characteristics like location.
- **'Why':** Motivation and reasons behind goals and objectives.

- Row, six perspectives: planner, owner, designer, builder, sub-contractor, user

ZACHMAN FRAMEWORK IMPLEMENTATION

1

Introduce the
framework

2

Understand the
perspective

3

Identify the
stakeholder

4

Define key elements

5

Create the Zachman
grid

6

Fill in the grid

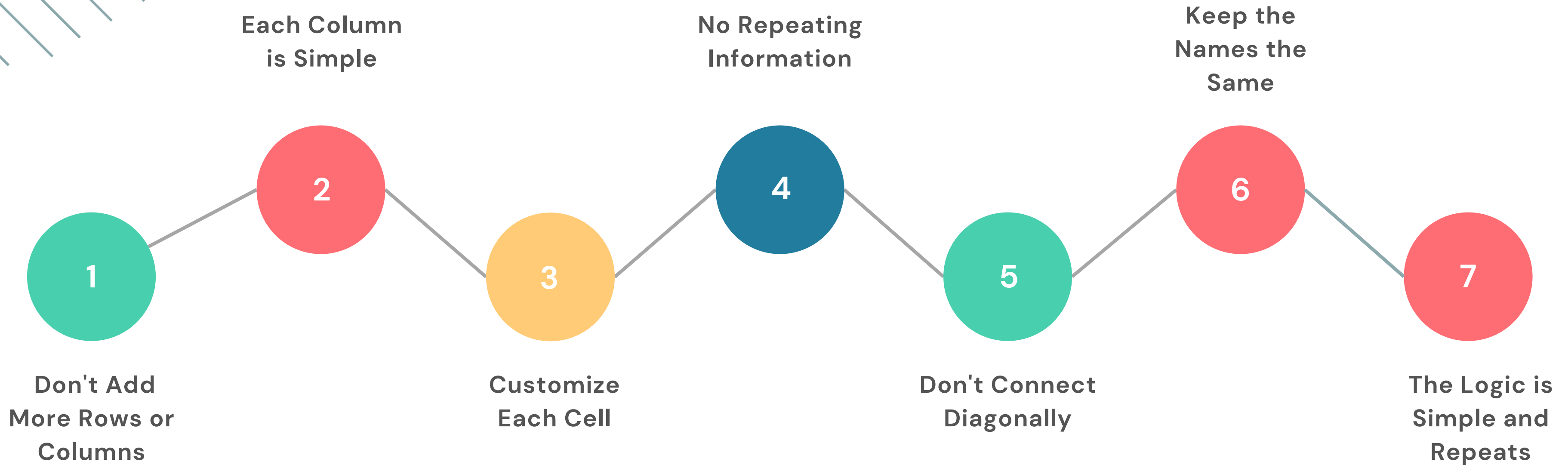
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Maintain and update

8

Integrate the process

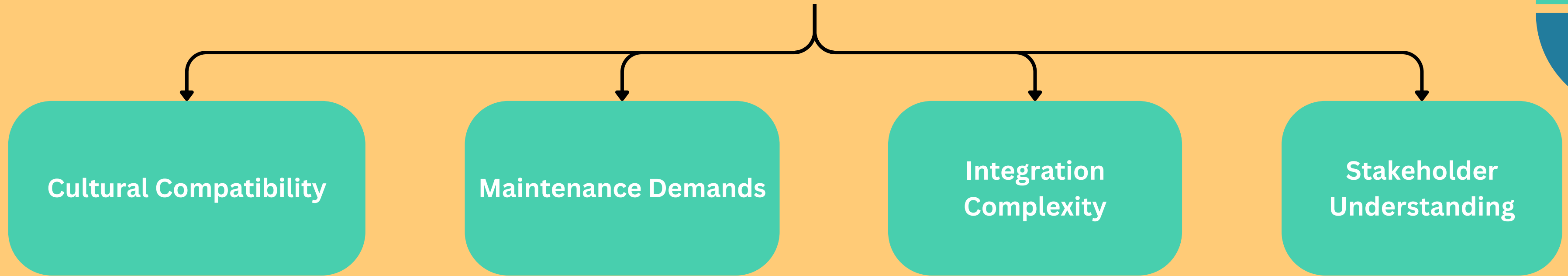
ZACHMAN RULES



COMPARATIVE ANALYSIS

	Zachman Framework	TOGAF (The Open Group Architecture Framework)
<i>Characteristics</i>	<ul style="list-style-type: none">• Descriptive• Conceptual• Matrix Structured	<ul style="list-style-type: none">• Prescriptive• Adaptable• Open Standard
<i>Pros</i>	<ul style="list-style-type: none">• Common Vocabulary• Holistic View• Flexible	<ul style="list-style-type: none">• Methodology• Interoperability• Scalability
<i>Cons</i>	<ul style="list-style-type: none">• Lack of Implementation Guidance• Complexity• Limited Scalability	<ul style="list-style-type: none">• Complexity• Lack of Agility• Dependency on Documentation

CRITICAL ANALYSIS ON THE CHALLENGES



While the Zachman Framework offers a robust model for enterprise architecture, overcoming these challenges requires strategic planning, change management, and stakeholder engagement.

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CONCLUSION

- Zachman Framework is like brainstorming
- make complex items easy to understand

