

# GENERAL & APPLICATION CONTROLS IN AN ERP ENVIRONMENT

Presentation by:

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# About the Presenter: Jona Owitti, CISA



***Specialisation / Interest:*** Information Systems (IS) Auditing;  
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# Presentation Title and Conference Theme



## ❑ Presentation Title:

- General and Application Controls in an Enterprise Resource Planning (ERP) Environment: Is it time for the Financial Services Sector to review the Agenda?

## ❑ Conference Theme:

- Stability and Growth in the Agile Financial Services Environment

# Presentation Agenda



## Controls in an ERP Environment

- ☐ Introduction
- ☐ The Journey & The Process: The Case of ERP
- ☐ The General Controls
- ☐ The Application Controls
- ☐ Is it Time to Review the Agenda?
- ☐ Questions, Comments, and Discussions

# Separator



## Introduction

# Definition(s) – 1 of 2



## Enterprise Resource Planning (ERP)

- A packaged business software system that allows an organization to automate and integrate the majority of its business processes, share common data and practices across the entire organization, and produce and access information in a real-time environment
- Examples: SAP, Oracle Financials, JDEdwards

# Definition(s) – 2 of 2



## General Computer Controls (ITGC)

- Controls, other than application controls, that relate to the environment within which computer-based application systems are developed, maintained and operated, and that is therefore applicable to applications.

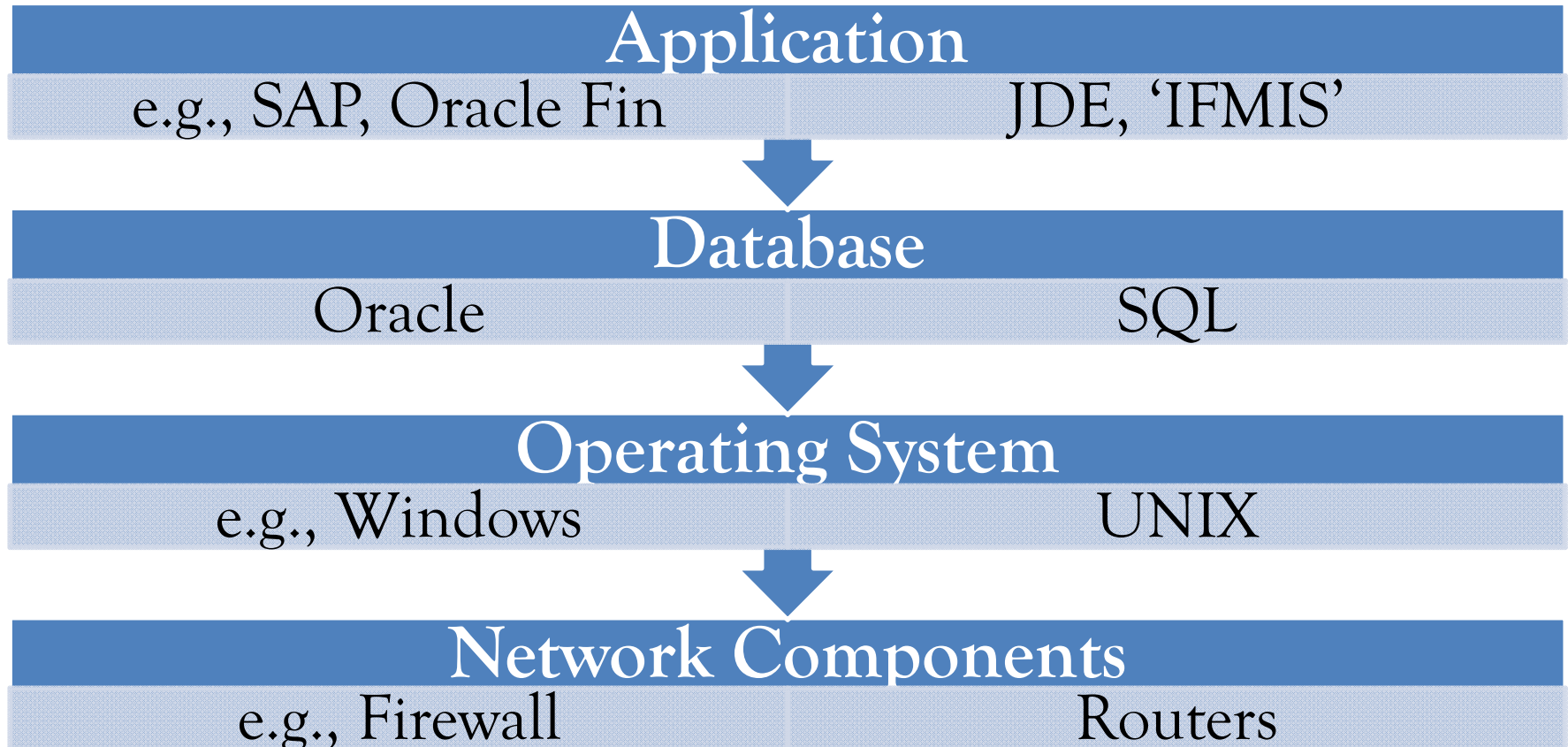
## Application Controls (AP)

- The policies, procedures and activities designed to provide reasonable assurance that objectives relevant to a given automated solution (application) are achieved.

# Typical IT Infrastructure



It is all about: Protection of Information Assets (CIA)





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The Journey and The Process: The ERP Case

# The Journey / The Process



Acquire, Develop



Implement / 'Go Live'



Operate / Monitor



Scalability

# System Development Life Cycle (SDLC)



- ❑ Traditional SDLC Approach
  - Phase 1: Feasibility Study
  - Phase 2: Requirements Definition
  - Phase 3A: Software Selection & Acquisition (*purchased systems*)
  - Phase 3B: Design (*in-house development*)
  - Phase 4A: Development (*in-house development*)
  - Phase 4B: Configuration (*purchased systems*)
  - Phase 5: Final Testing and Implementation
  - Phase 6: Post-Implementation
- ❑ Purchased packages now common: So, **Design** and **Development** phases of the traditional life cycle are being replaced by the **Selection** and **Configuration** phases.

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## General Controls

# IT General Controls (ITGC)



## General Controls include:

- ☐ Operations (include: BYOD, remote access, outsourced operations)
- ☐ Change Management (e.g., program changes, patching)
- ☐ Backups
- ☐ Business Continuity (BCP, DRP)

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## Application Controls

# Application Controls



**Application Controls are:**

- ❑ Input, Processing (consider SoD), Output functions
- ❑ Include methods of ensuring that:
  - Only complete, accurate and valid data are entered and updated in a computer system
  - Processing accomplishes the correct task
  - Processing results meet the expectations
  - Data are maintained

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Is it time to review the Agenda?



# Financial Services in a 'Digital World' (Is time to review the Agenda?)



**Digital World:** Inter connected through **digital** devices, media or simply **digital** marketing services that are available to every one 24/7. The **digital world** is full of opportunities (**BUT**, beware of risks). The Internet enables connection whenever we consider it necessary.

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Concluding Thought

# Technical Controls vs The Human Factor



A company can spend hundreds of thousands of dollars on firewalls, intrusion detection systems and encryption and other security technologies, but if an attacker can call one trusted person within the company, and that person complies, and if the attacker gets in, then all that money spent on technology is essentially wasted.

— *Kevin Mitnick* —

**AZ QUOTES**

# Questions, Comments and Discussion



Questions, Comments and Discussion

Thank You.