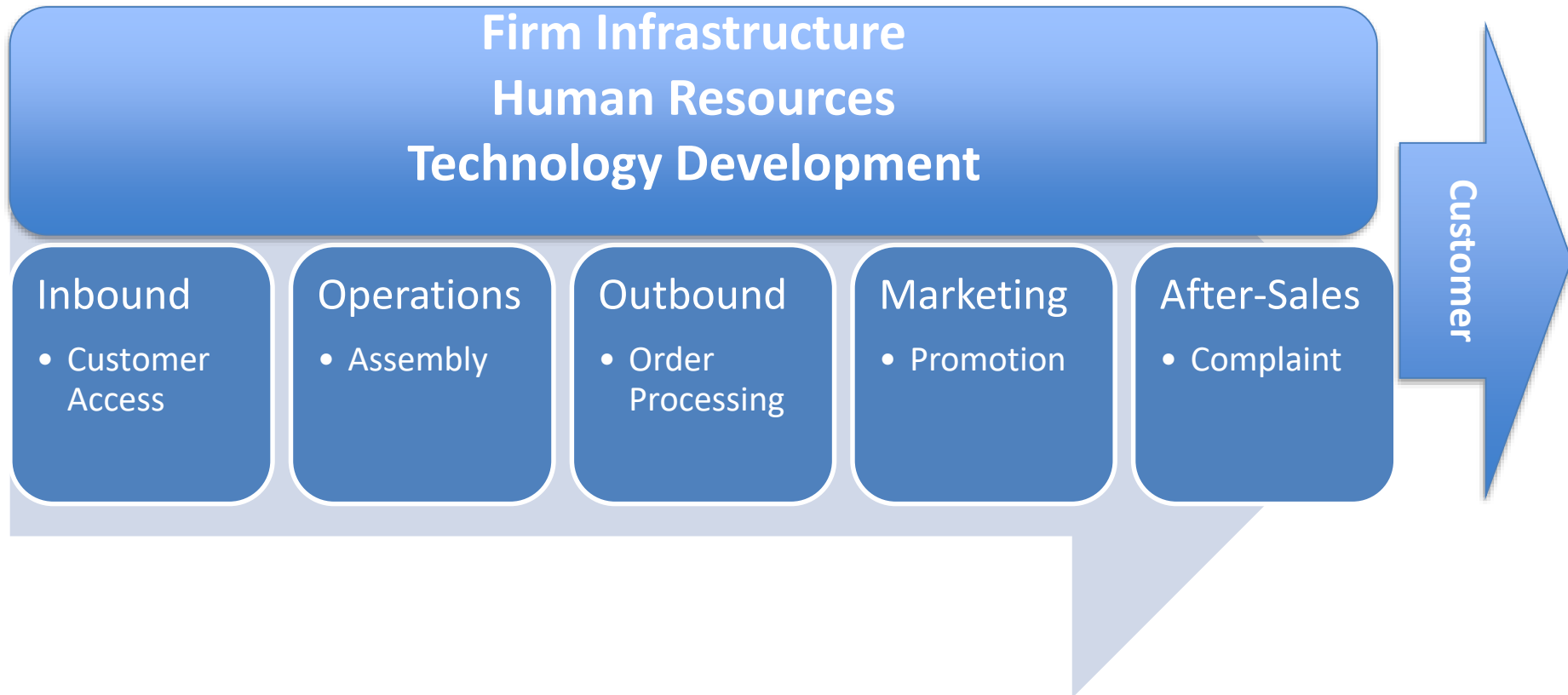# ICT Governance

Amr BadrElDin
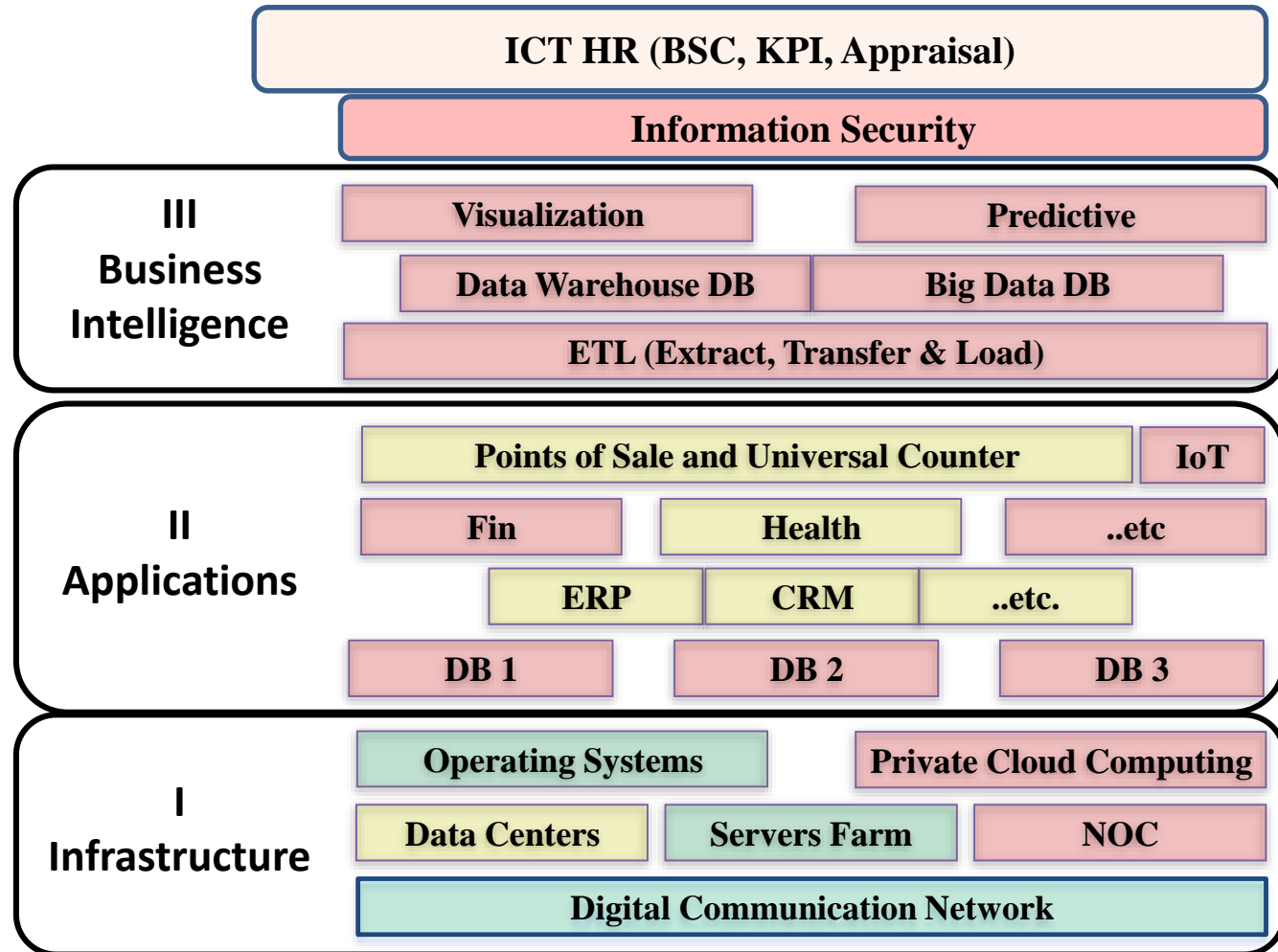
Associate. Prof. AUC (F)

Introduction

- ## Value Chain:
  - Developed by Michael Porter early 1990s
  - Tool for disaggregating a company into its strategically relevant activities.

**Firm Infrastructure
Human Resources
Technology Development**

Inbound	Operations	Outbound	Marketing	After-Sales
• Customer Access	• Assembly	• Order Processing	• Promotion	• Complaint

Customer

ICT Value Chain

- **The restriction is imposed where only downward calls are allowed.**

- **Each layer can only use services provided by the layer below.**

ICT HR (BSC, KPI, Appraisal)

Information Security

III Business Intelligence

Visualization	Predictive
Data Warehouse DB	Big Data DB

ETL (Extract, Transfer & Load)

II Applications

Points of Sale and Universal Counter	IoT

Fin	Health	..etc

ERP	CRM	..etc.

DB 1	DB 2	DB 3

I Infrastructure

Operating Systems	Private Cloud Computing

Data Centers	Servers Farm	NOC

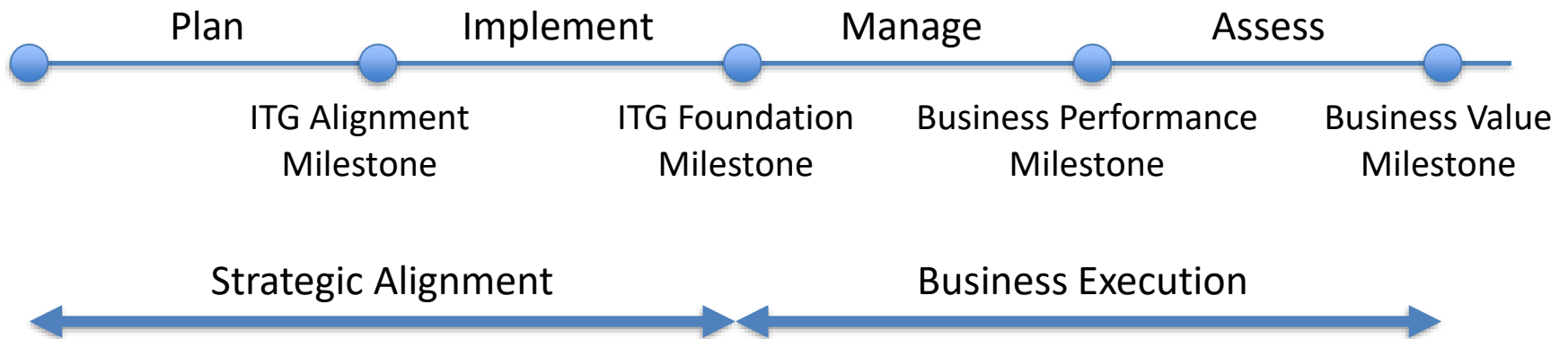**Digital Communication Network**

ICT Governance

- ICT governance is the rules within the ICT value chain that insure sustainability, upgradability, ..etc. (Rules of the Rules)

    - The Innovation Value Chain (HBR)
        - Governance

- **Governance is the process of establishing:**
    - **Chains of responsibility, authority, and communication.**
    - **Measurement, policy, standards, and control mechanisms to enable people to carry out their roles and responsibilities**

Balanced Score Cards

- Balanced Scorecards
  - Originated by Drs. Robert Kaplan (Harvard Business School) and David Norton
  - The balanced scorecard is a strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to
    - align business activities to the vision and strategy of the organization,
    - improve internal and external communications,
    - and monitor organization performance against strategic goals
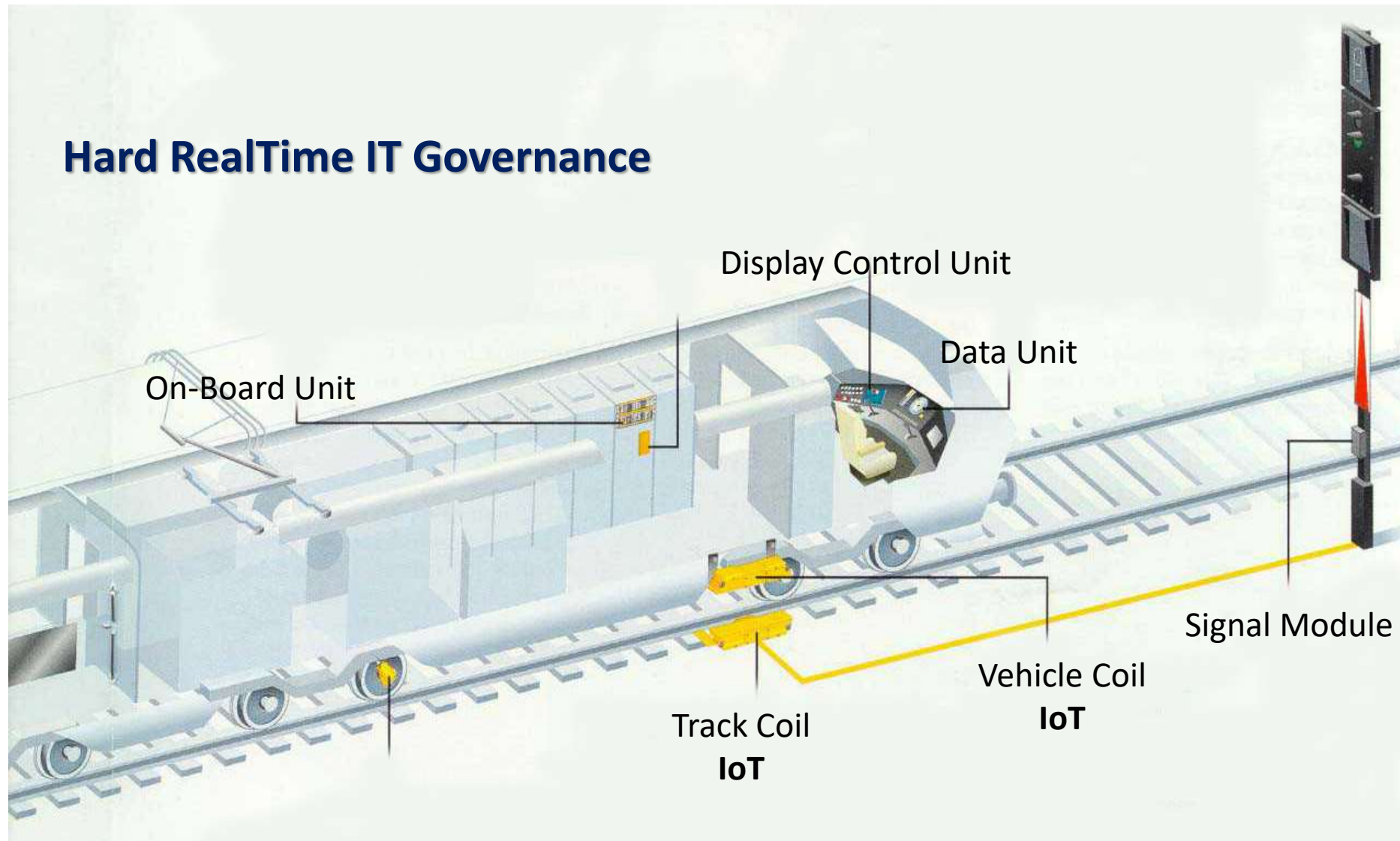
IT Governance Approach

- ## IT Governance Approach
  - Iterative approach to planning, designing, implementing, deploying, monitoring, controlling, and changing the operational processes of business operations that rely on information technology.

Plan	Implement	Manage	Assess

ITG Alignment Milestone   ITG Foundation Milestone   Business Performance Milestone   Business Value Milestone

Strategic Alignment   Business Execution

1. Aligned Business and IT Strategy
2. Business Performance Baselined
3. Business Value Delivery Assessed
4. ITG Foundation Baselined

Example 1: Scarce Resources

Developed:

Egypt Frequency Spectrum May, 2003

Example 2: Railway

Hard RealTime IT Governance

Display Control Unit

Data Unit

On-Board Unit

Signal Module

Vehicle Coil
IoT

Track Coil
IoT

Example 3: FinTech

- I-Score
  - The Egyptian Credit Bureau

- Central Bank of Egypt
  - Internet Banking Regulations

Organizations & Committees

- ISO/IEC 27001
  - International Organization for Standardization
- PCI-DSS
  - Payment Card Industry Data Security Standard
- Basel Accord
  - Three series of banking regulations (capital risk, market risk, and operation risk)
- The Central Bank of Egypt
  - 2018: Internet Banking Regulations

Organizations & Committees

- COSO Committee of Sponsoring Organizations of the Treadway Commission.
  - Internal Control- Integrated Framework Principles.
  - Control Environment, Risk Assessment, Control Activities, Information & Communication, Monitoring Activities. www.coso.org
- NIST National Institute of Standards and Technology
  - 2018: Framework for Improving Critical Infrastructure Cybersecurity.
  - The Five Functions of the Cybersecurity Framework: Identify, Protect, Detect, Respond, and Recover.
- ISO/IEC 27001
  - International Organization for Standardization
- PCI-DSS
  - Payment Card Industry Data Security Standard
- Basel Accord
  - Three series of banking regulations (capital risk, market risk, and operation risk)

Thank You