BITAS Conference

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SINGAPORE COMPUTER SOCIETY

EnterpriseArchitectureChapter

IASA The Business Technology Architect Association

Achieving Sustainable Development Goals (SDG) through Enterprise Architecture Practice

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THE CONTEXT OF THE SUSTAINABLE DEVELOPMENT GOAL (SDG) 17-GOALS & ENVIRONMENT SOCIAL GOVERNANCE (ESG) KPIs

The **Sustainable Development Goals** (**SDGs**) is a shared blueprint with **17 interlinked global goals** designed **for peace and prosperity for people and the planet**, now and into the future. The SDGs were set up in 2015 by the United Nations General Assembly (UN-GA) and are intended to be achieved by 2030 and what is colloquially known as **Agenda 2030.**

Environmental, Social, and corporate Governance (**ESG**) is a framework designed to be integrated into an **organization's strategy to unlock enterprise value**. **Value creation** occurs when the scope of the **organizational objective to create shareholder value** is expanded to include the **identification, assessment and management of sustainability-related risks and opportunities in respect to all organizational stakeholders** (including customers and employees) and the **environment**.

THE CONTEXT OF SUSTAINABLE DEVELOPMENT GOALS (SDG-17 GOALS) WITH ENVIRONMENTAL, SOCIAL &

1. We need to know on family and income status
2. We need to know on foods demand & supply
3. We need to know on healthcare and lifestyle
4. We need to know on education level & result
5. We need to know on gender & employment
6. We need to know on clean water supply level
7. We need to know on energy usage & consumption volume
8. We need to know on GDP, Employment and Income level

9. We need to know on industry & transportation
10. We need to know on jobs and income level
11. We need to know on landscape and population
12. We need to know on wastage and energy usage
13. We need to know on satellite weather climate
14. We need to know on marine live and fishery
15. We need to know on flora and fauna statistics
16. We need to know on criminal and justice cases
17. We need to know on social activities and events

THE REALIZATION OF SDG GOALS & ESG KPIs NEED TO BE SUPPORTED BY THE TECHNOLOGY STACKS

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What Technology stacks come in mind to realize SDG Goals & ESG KPIs?

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THE TECHNOLOGY REQUIRED TO REALIZE SDG GOALS & ESG KPIs – ADOPTION OF IR4.0 TECHNOLOGIES

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THE EIGHT (8) OBSERVATIONS (PITFALLS) OF ESG REALIZATION TODAY

1.) Contact ESG Vendors for Solution

2.) Lack of Business & IT Strategy Integration

3.) Lack of Frameworks & Methods for sustaining ESG KPIs

8.) No Digital Enterprise Architecture (EA)

Environmental, social, and corporate governance

4.) Business as Usual - IT Projects lack of Integration

7.) Lack of Integrated Roadmap Plan

6.) Compliance Oriented Approach & Activities

5.) Not part of the Digital Transformation Journey

THE CONTEXT OF SUSTAINABLE DEVELOPMENT GOALS (SDG-17 GOALS) – GLOBAL AGENDA 2030

What will happen if we attempt to model the architecture with those 8 observations?

THE ARCHITECTURE OUTCOMES OF EIGHT (8) OBSERVATIONS – HAIRBALLS ARCHITECTURE

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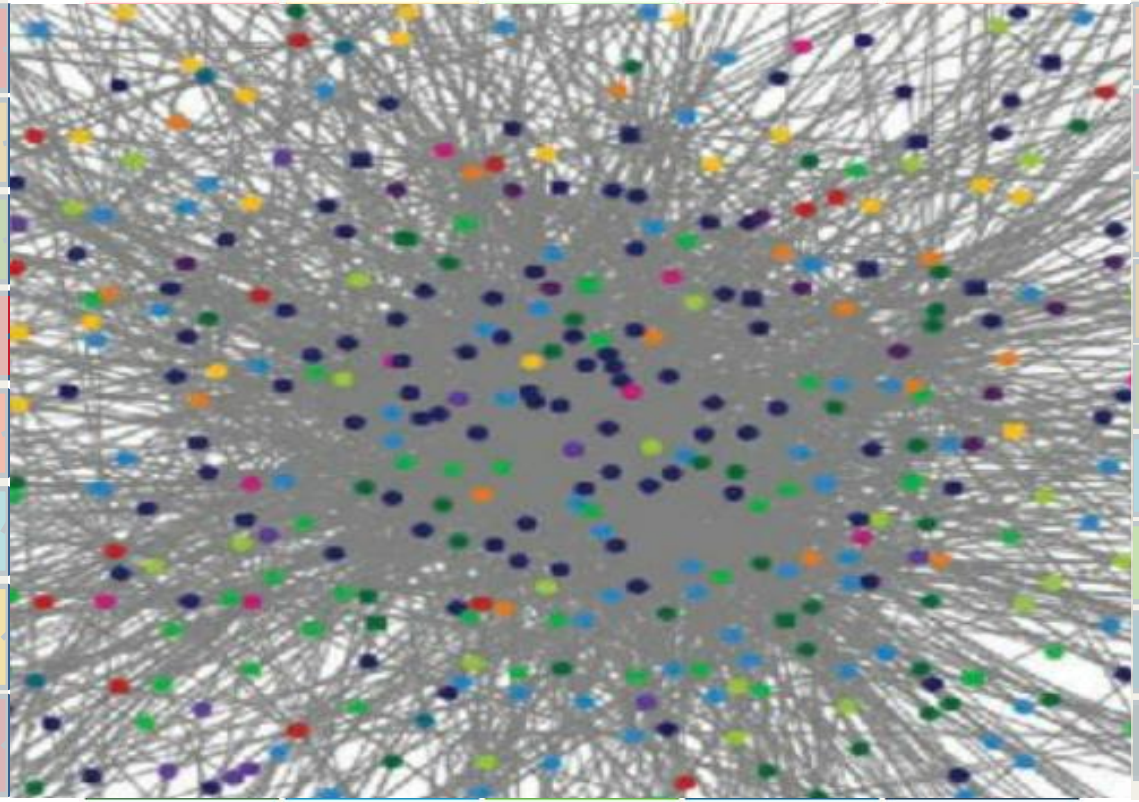

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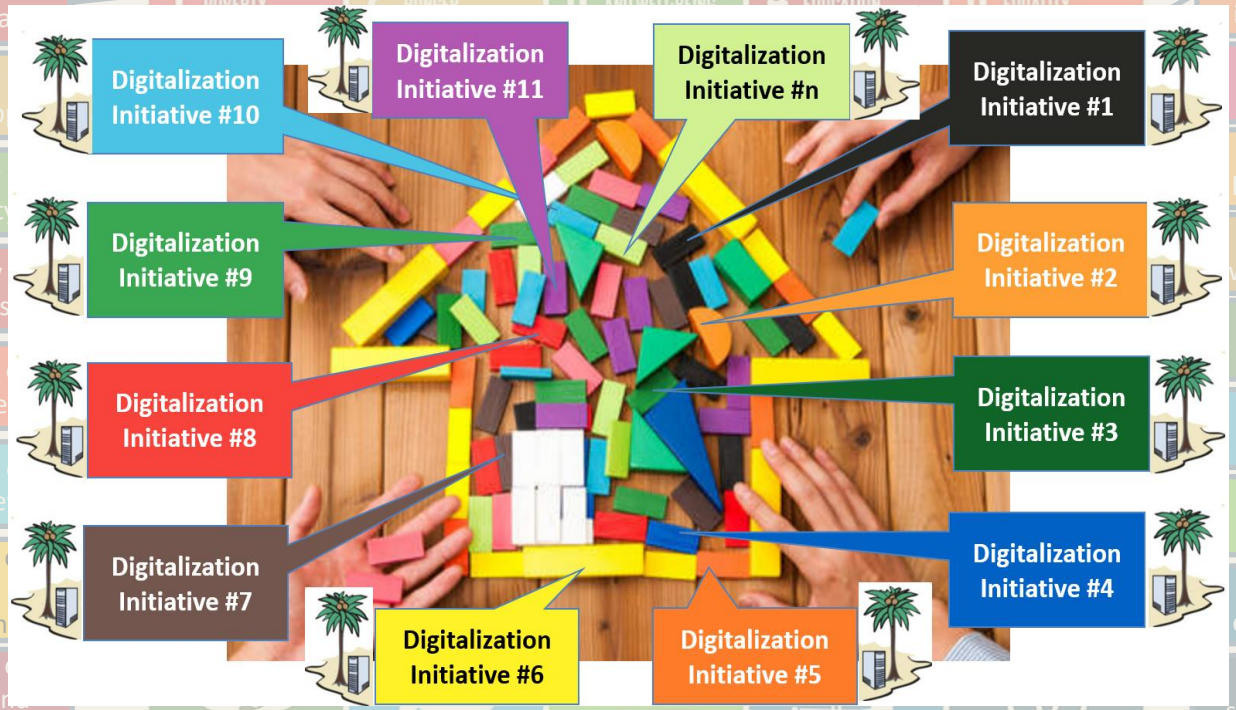
THE ARCHITECTURE OUTCOMES OF EIGHT (8) OBSERVATIONS – DUPLICATION OF DIGITAL



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THE ARCHITECTURE OUTCOMES OF EIGHT (8) OBSERVATIONS – PARTIALLY FIT OF BUSINESS & IT

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7. We need to know on energy usage & consumption volume
8. We need to know on GDP, Employment and Income level

1 NO POVERTY | 2 ZERO HUNGER | 3 GOOD HEALTH AND WELL-BEING | 4 QUALITY EDUCATION | 5 GENDER EQUALITY

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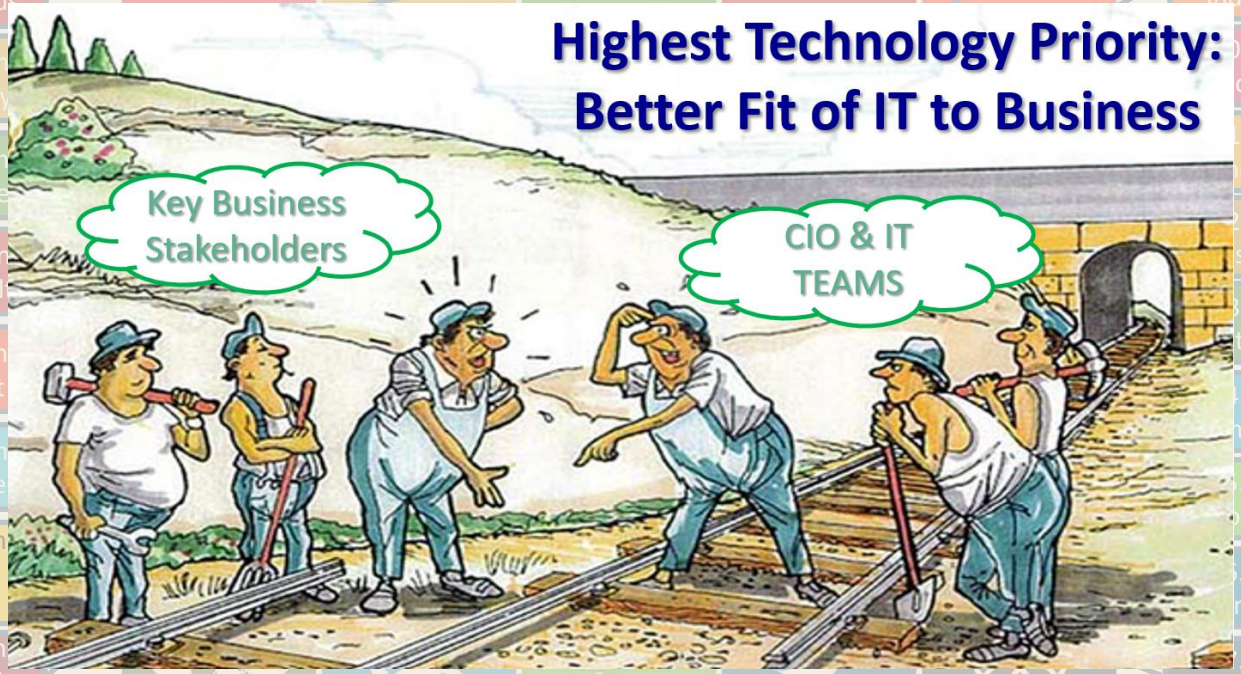
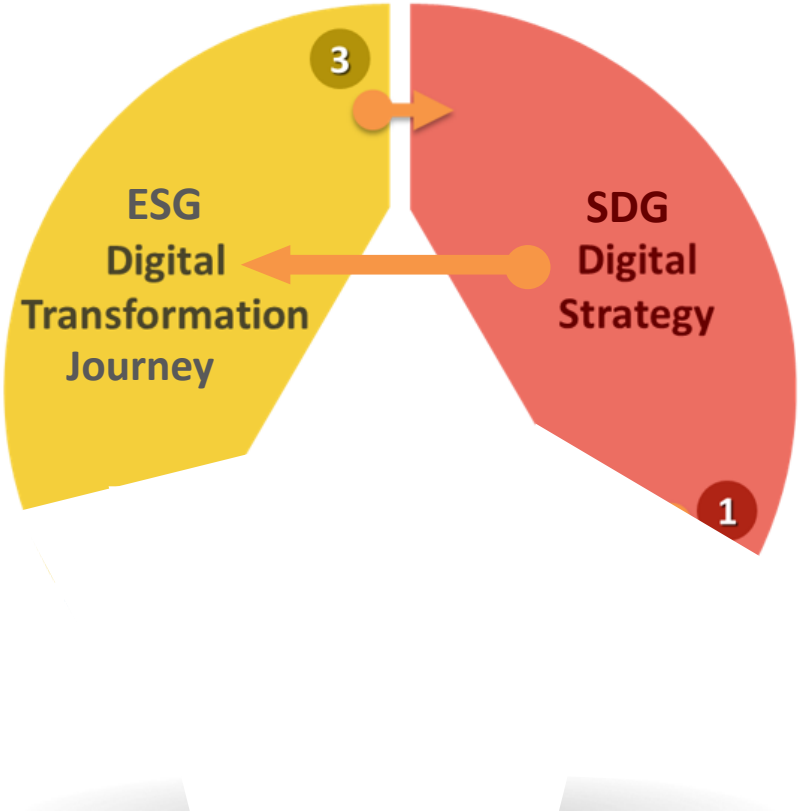


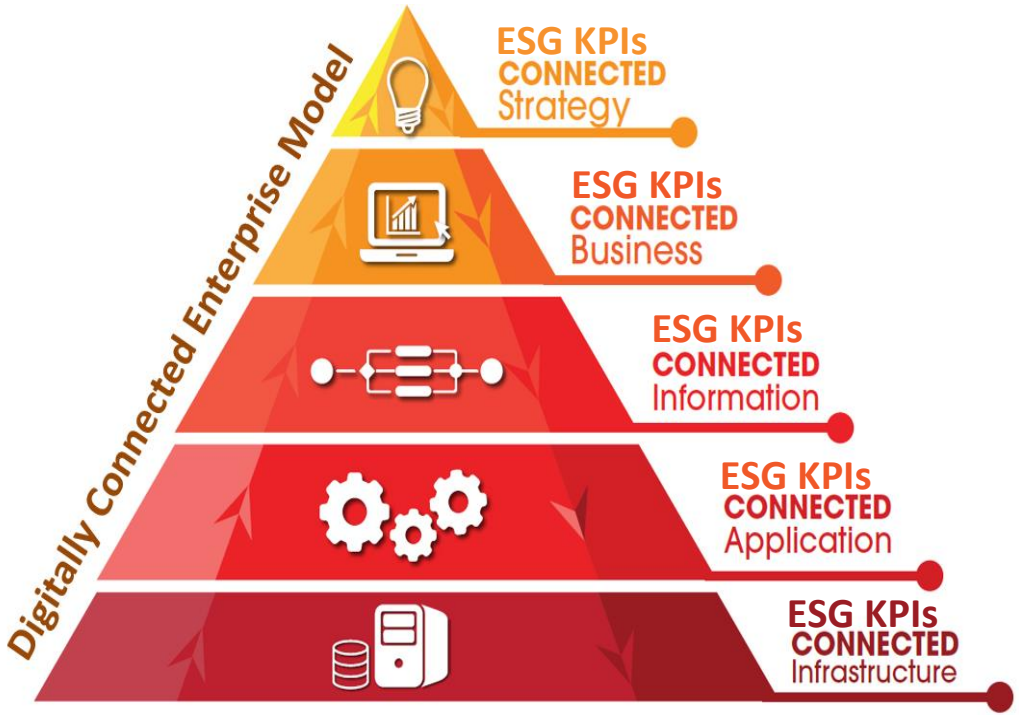
DIGITAL EA IN REALIZING SDG STRATEGIES & DRIVING SUCCESSFUL DIGITAL TRANSFORMATION IN REALIZING ESG KPIs

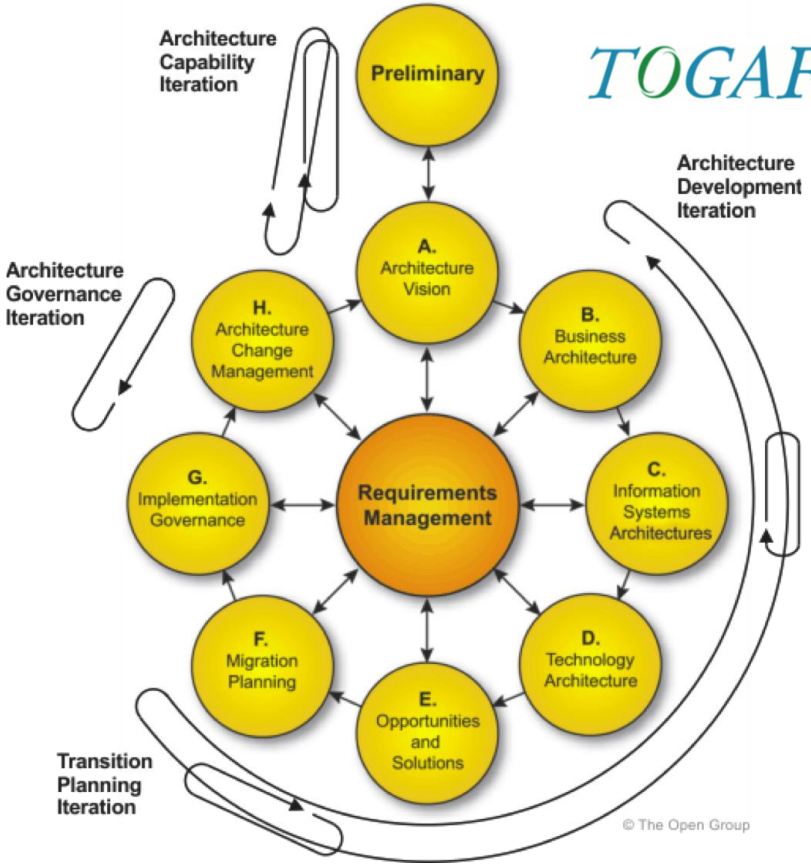


1 The **Outcome Statement** about organization's Digital Positioning in terms of **Goals, Capability** and **Drivers** in the context of the technology adoption

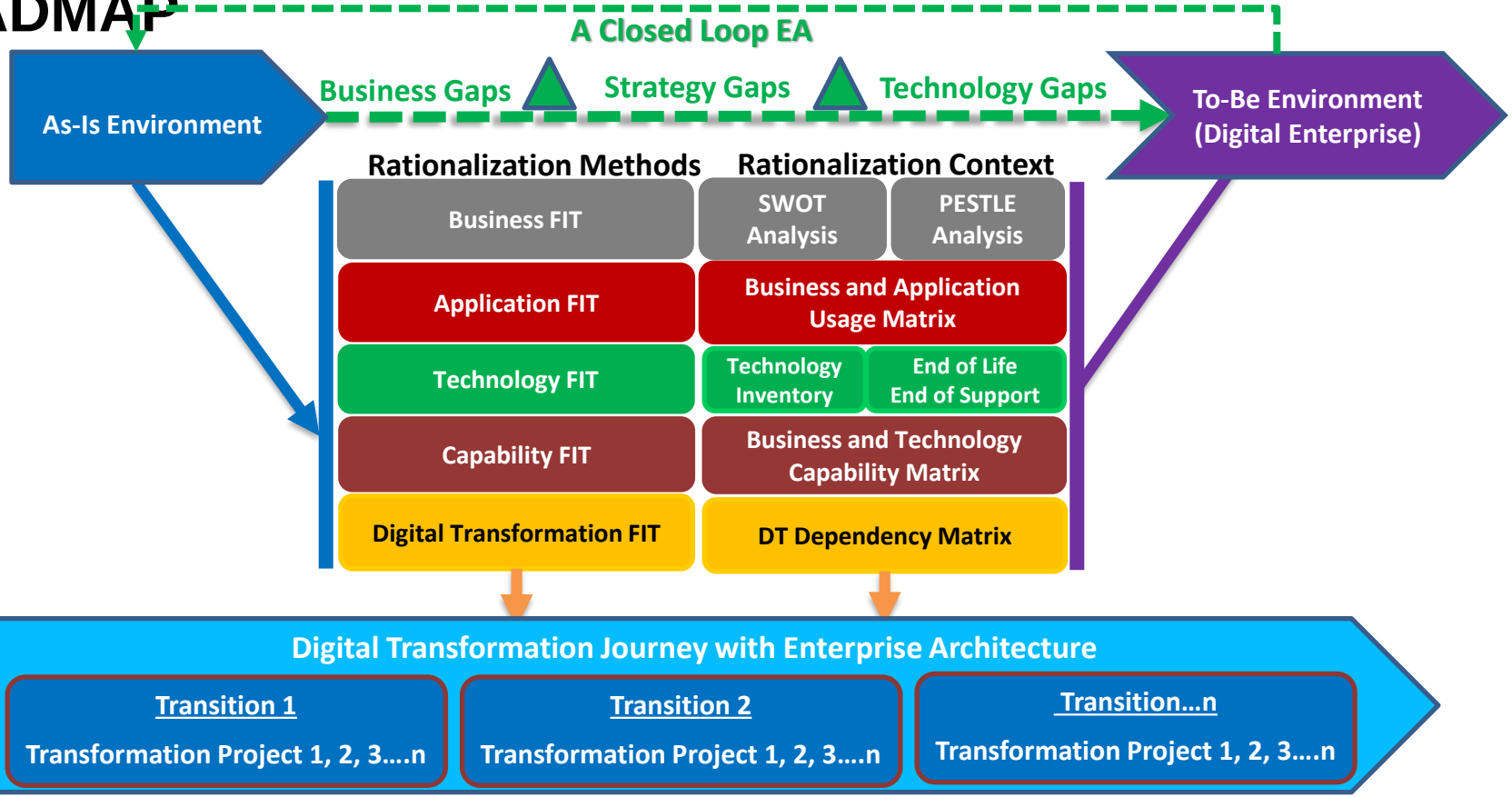
3 The **continuous transformation** of the **existing business** through **technology innovations** and **exploitations**

DIGITAL EA VISION – DIGITALLY CONNECTED ENTERPRISE MODEL





DIGITAL TRANSFORMATION JOURNEY & EA REALIZATION ROADMAP



BUSINESS & IT STRATEGY INTEGRATION WITH DIGITAL EA & 3Cs

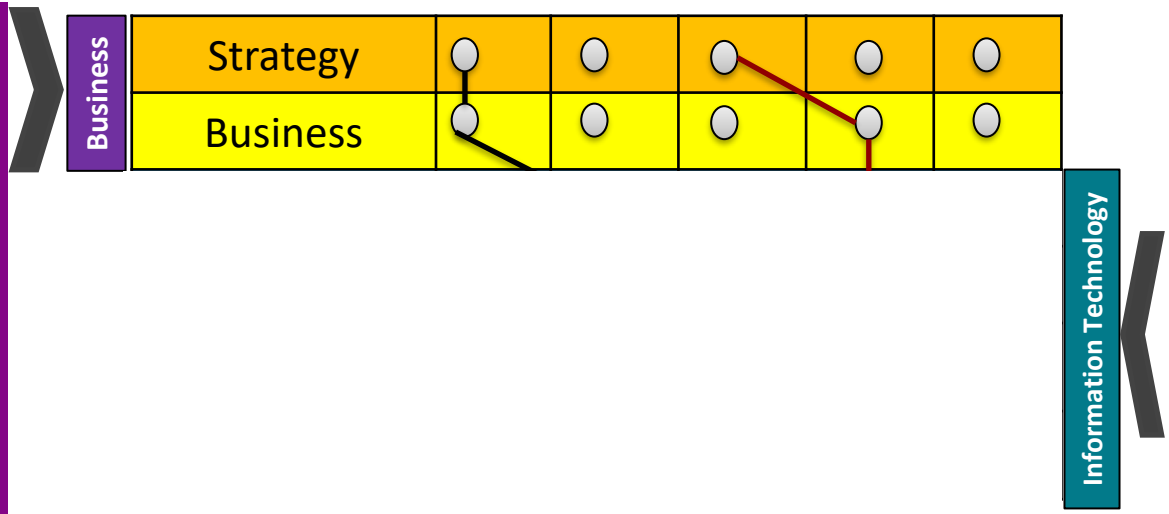
Digital EA Addresses 3Cs of Business & IT Strategy Integration

Collating the Dots | Connecting the Dots | Correcting the Dots

Digitally Connected Enterprise Model with Digital EA

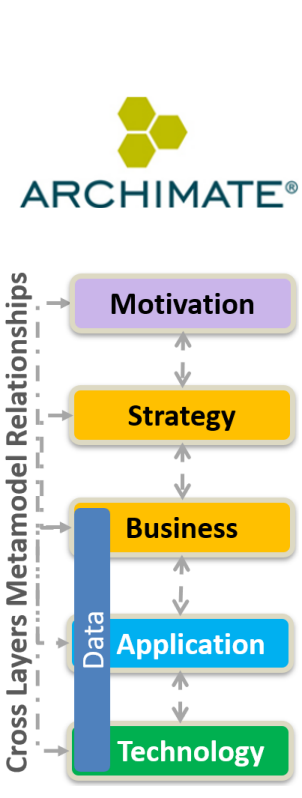
Business Strategy

- Strategic aspirations
- Business model
- Business architecture
- Execution model
- Business process
- Risk analysis
- Business initiative
- Corporate governance



IT Strategy

- Application Architecture
- Data Architecture
- Technology Architecture
- IT Plan
- IT Security
- IT Solutions
- IT Portfolios
- IT Governance
- Cybersecurity



Motivation – Why?

Strategy – How?

Implementation – When by What?

Behavior & Structure – With What?

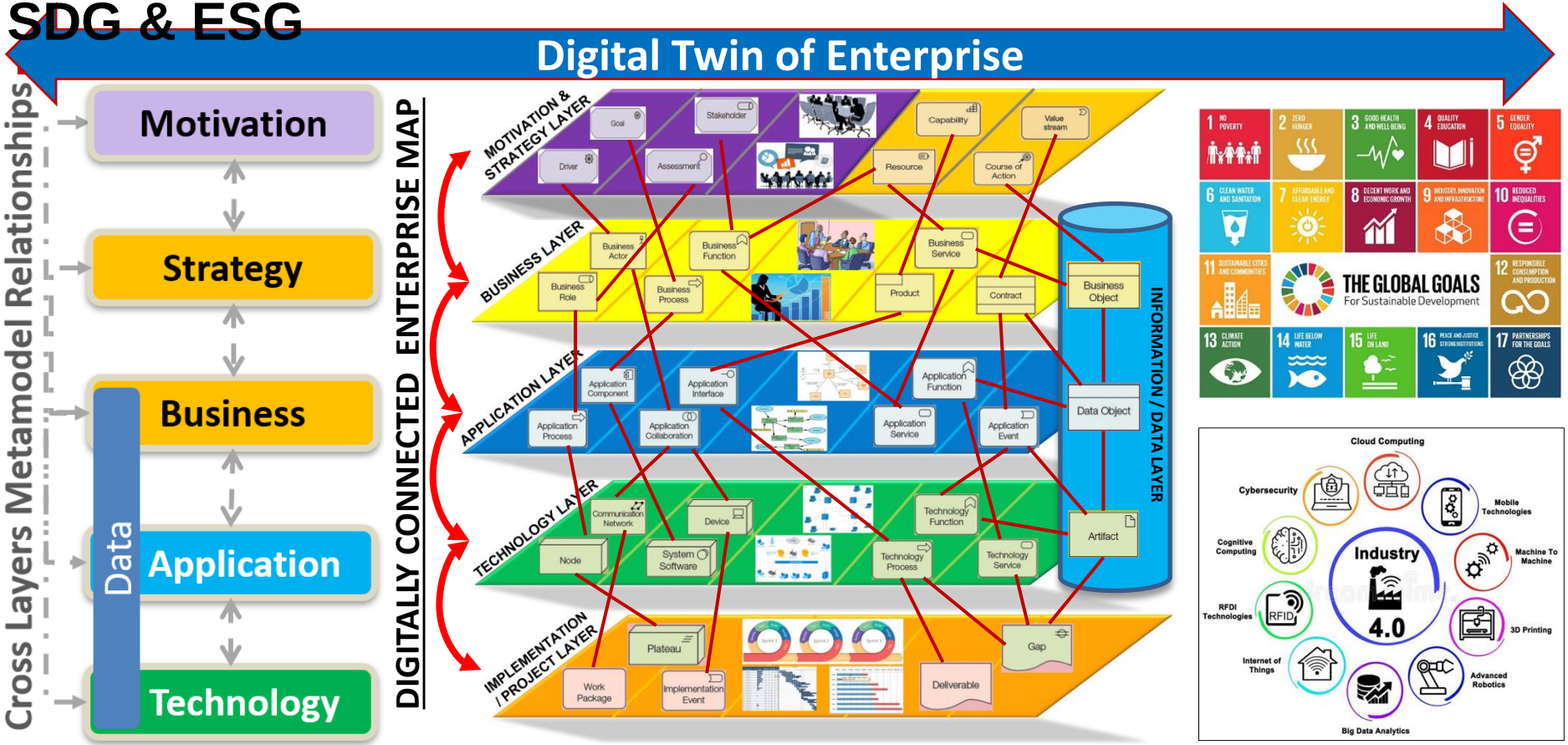
Business Layer

Application Layer

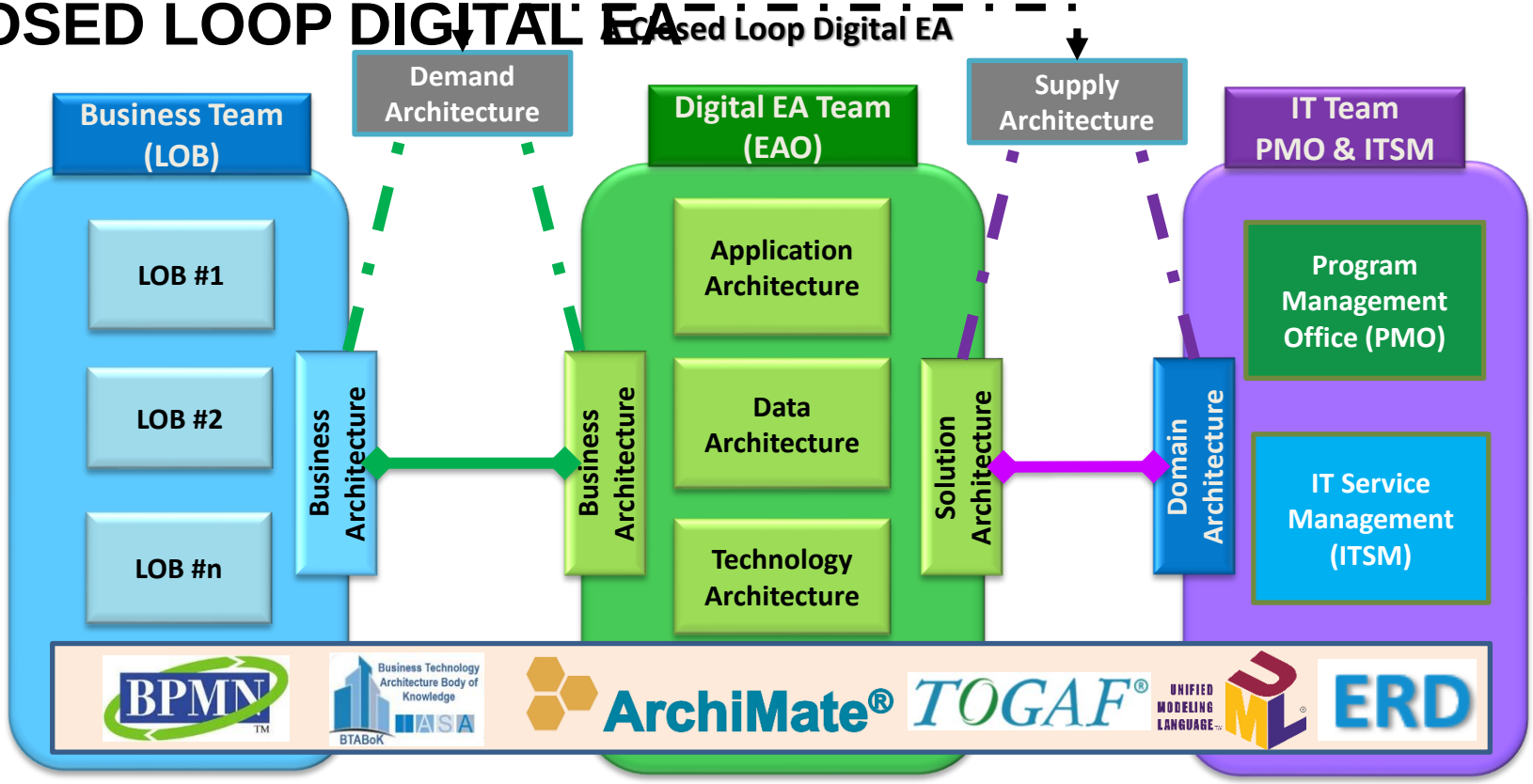
Technology Layer

The Connected Enterprise Model - Why, How, With What & When by What?

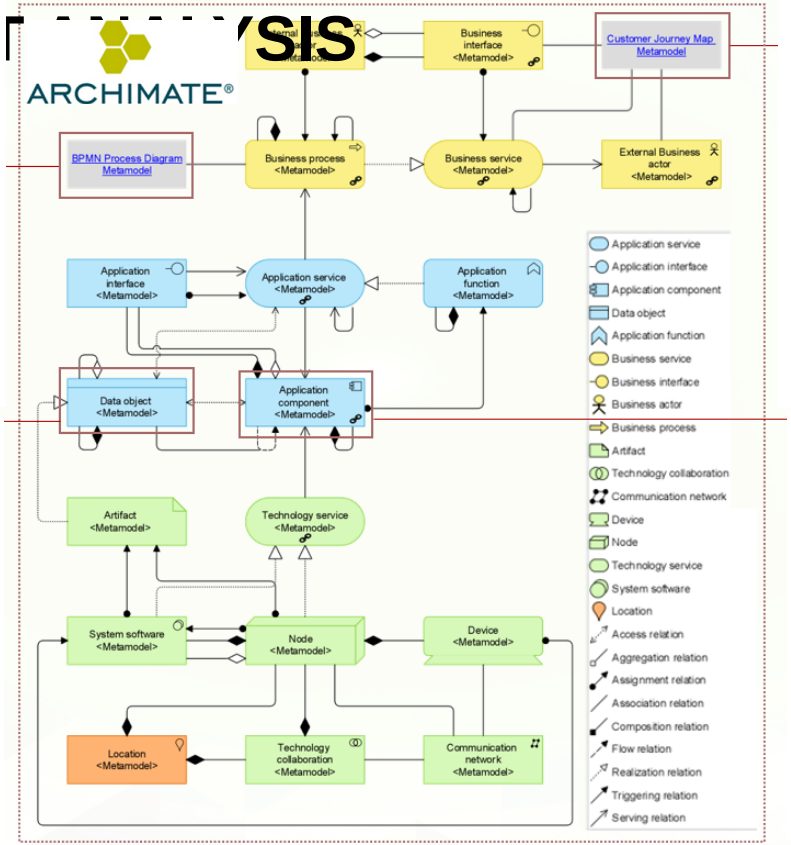
EXAMPLE – DIGITAL EA MODEL FOR REALIZATION OF SDG & ESG



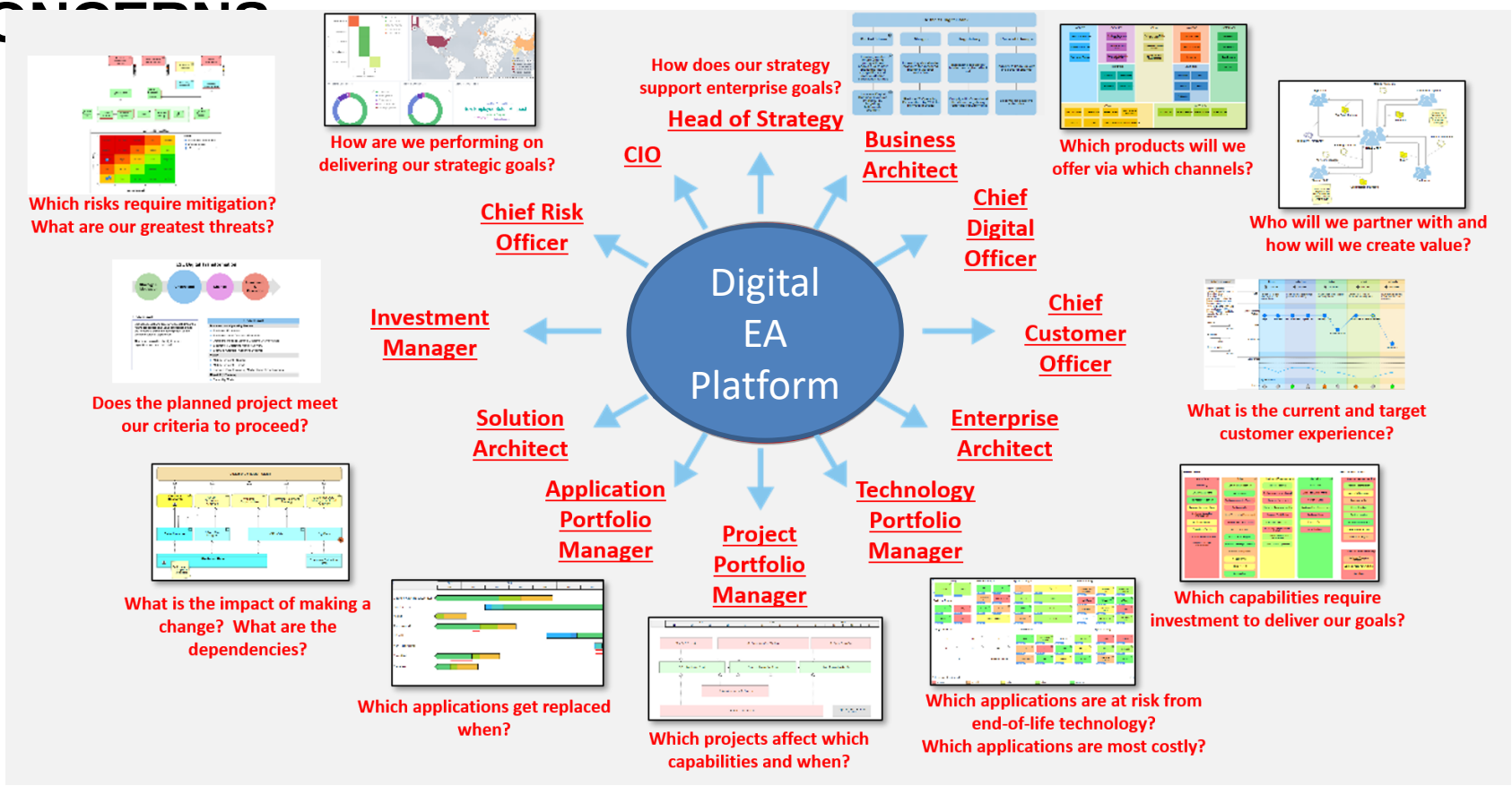
THE MODEL OF CONNECTED ENTERPRISE DIVISIONS ACROSS TEAMS & LINE OF BUSINESSES (LOB) – A CLOSED LOOP DIGITAL EA



EXAMPLE OF THE CONNECTED ENTERPRISE METAMODEL USING ArchiMate®, BPMN, ERD, CJM & UML



DIGITAL EA TO ADDRESS VARIOUS STAKEHOLDERS' CONCERNS



END OF PRESENTATION