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Enterprise Architecture Framework (EAF) Selection: MODAF, TOGAF or Zachman Framework?

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Contents

- **Benefits of EA: The benefits of adopting an EA approach which can then be used to guide the selection of a suitable EAF.**
- **Structure of an EAF: Defining common core components.**
- **EAF Comparison: Highlighting some of the key similarities and differences between the three EAFs.**
- **Strengths and Weaknesses of the EAFs.**

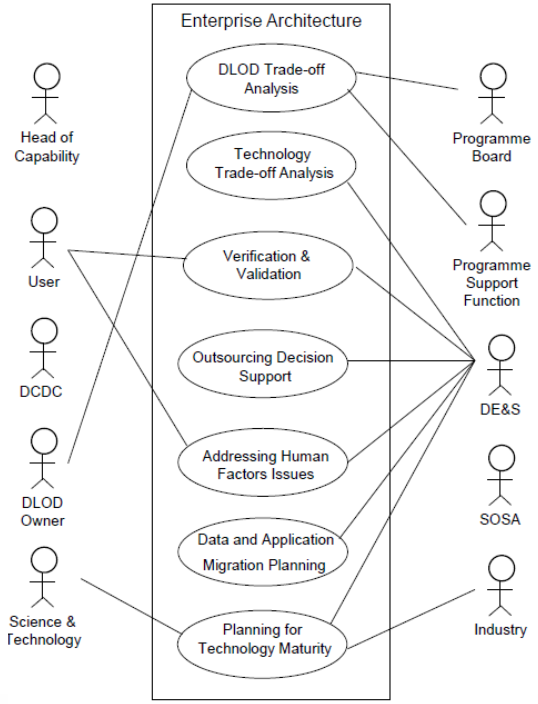
Benefits of Adopting EA

- **It is essential that the expected benefits of adopting an EA approach are well understood. These may include[1]:**
  - **Improving decision making and planning.**
  - **Providing a mechanism for managing change.**
  - **Enabling the effective communication about the enterprise with the aim of identifying inconsistencies or incorrect assumptions thus avoiding expensive corrective activity.**
  - **Improving the alignment between business strategy and solution development.**
  - **Increasing commonality and coherency in the way that an enterprise undertakes its business.**
  - **Governing the identification, selection, and development of standards.**
  - **Analysing the model to identify and articulate potential issues and opportunities.**

1 – Paternoster (2013)

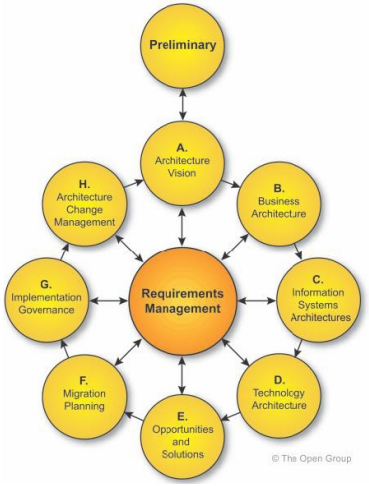
EA Use Cases

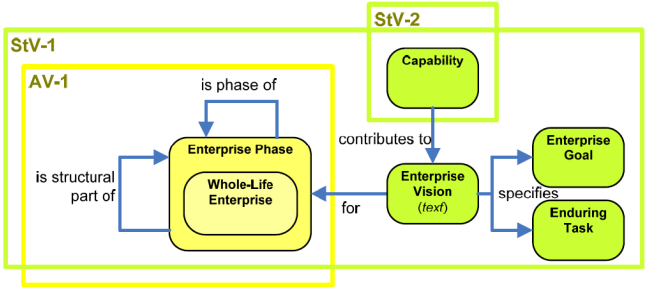
- **The selection of a suitable EA Framework requires an understanding of how it will be used to deliver the desired benefits.**
- **As such, a set of 25 generic EA Use Cases were derived from the literature review.**
- **The Use Cases were then mapped to the relevant Defence acquisition stakeholders in order to establish the utility of EA within the context of the MoD enterprise.**



Components of an EAF

- **There are two key components of an Enterprise Architecture Framework:**
  - ***Architecture Development*[2] / *Architecture Governance*[3] which describes the management aspects of EA that are needed to realise the benefits.**
  - **Architecture Description[2] / Modelling Concepts[3] which is concerned with providing the specifications for constructing EA models in a consistent and coherent fashion.**

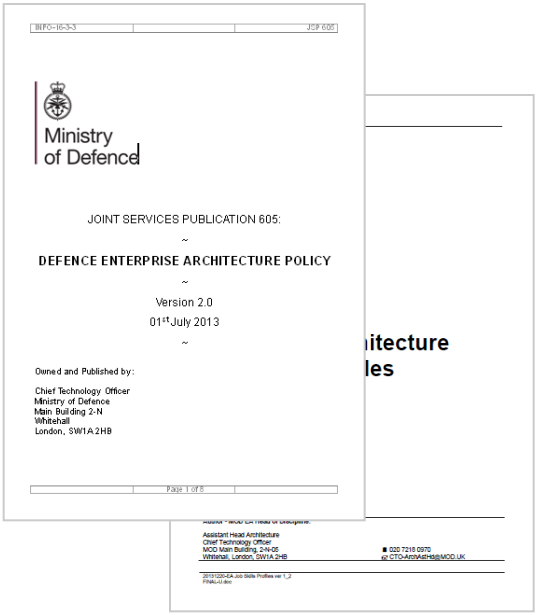




2 - Schöenherr (2009)
3 - Franke et al. (2009)

Defence EA Policy

- Defence EA policy[4] states that, “all architectures shall be developed using the MOD Architecture Framework (MODAF) and shall adhere to the MODAF Meta Model.”
- The MoD’s EA Job Skills Profile[5] also identifies the Zachman Framework and TOGAF as competencies required when undertaking particular EA roles.
- This implies that the Zachman Framework and TOGAF could be considered as alternative EAFs to MODAF.


Ministry of Defence

JOINT SERVICES PUBLICATION 605:

DEFENCE ENTERPRISE ARCHITECTURE POLICY

Version 2.0

01st July 2013

Owned and Published by:

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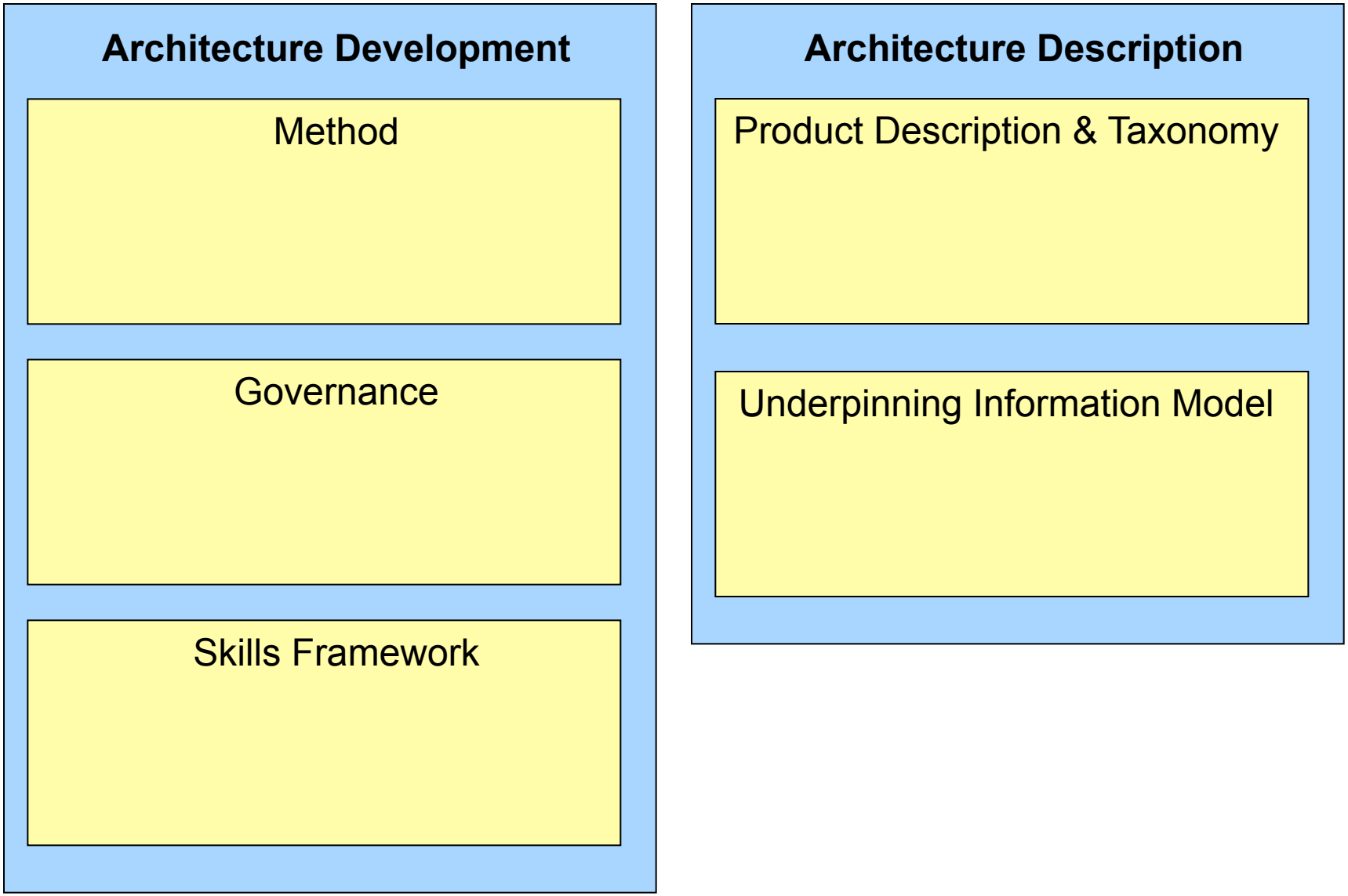
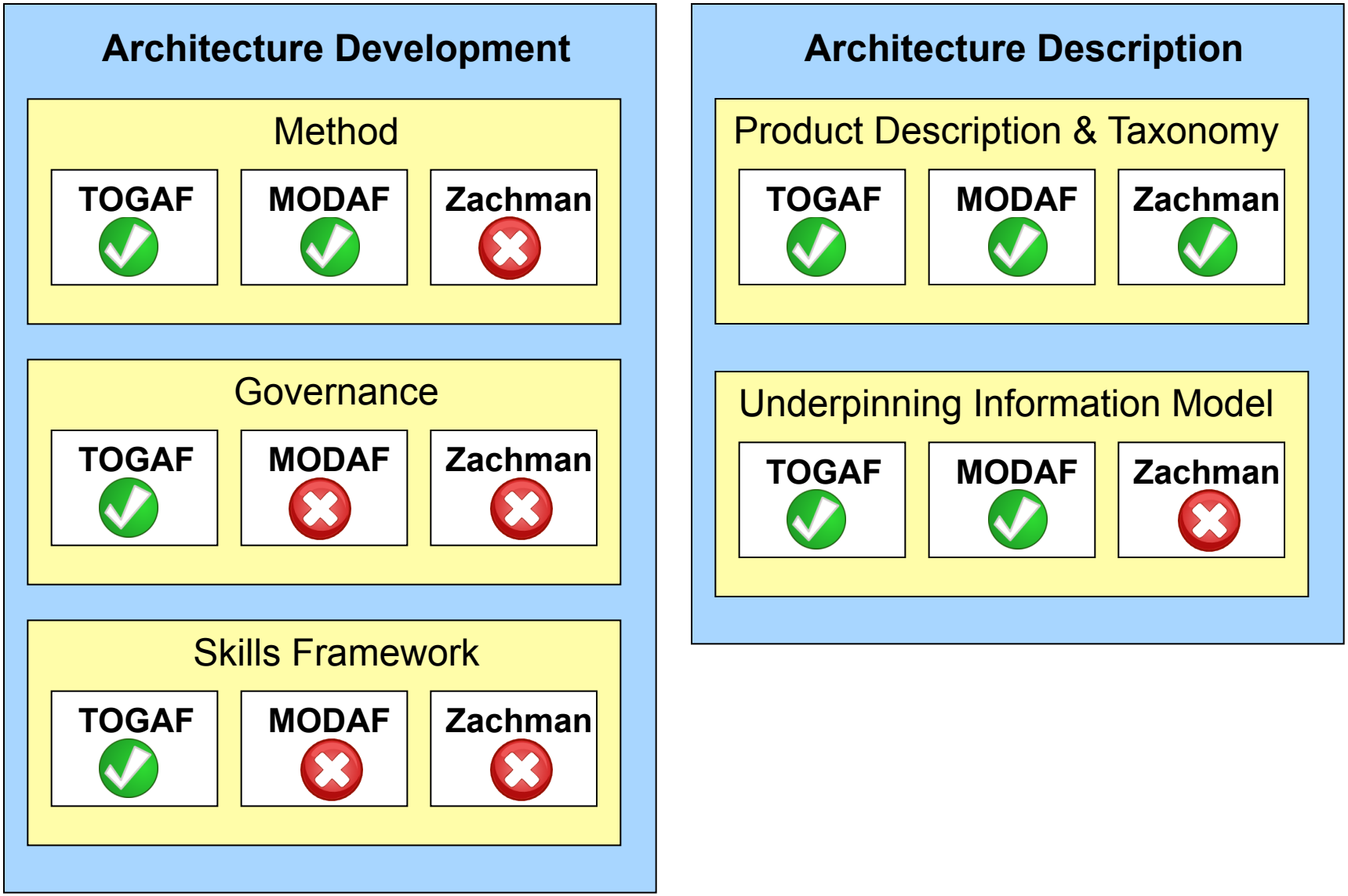
4 – Ministry of Defence (2011)
5 – Ministry of Defence (2010)

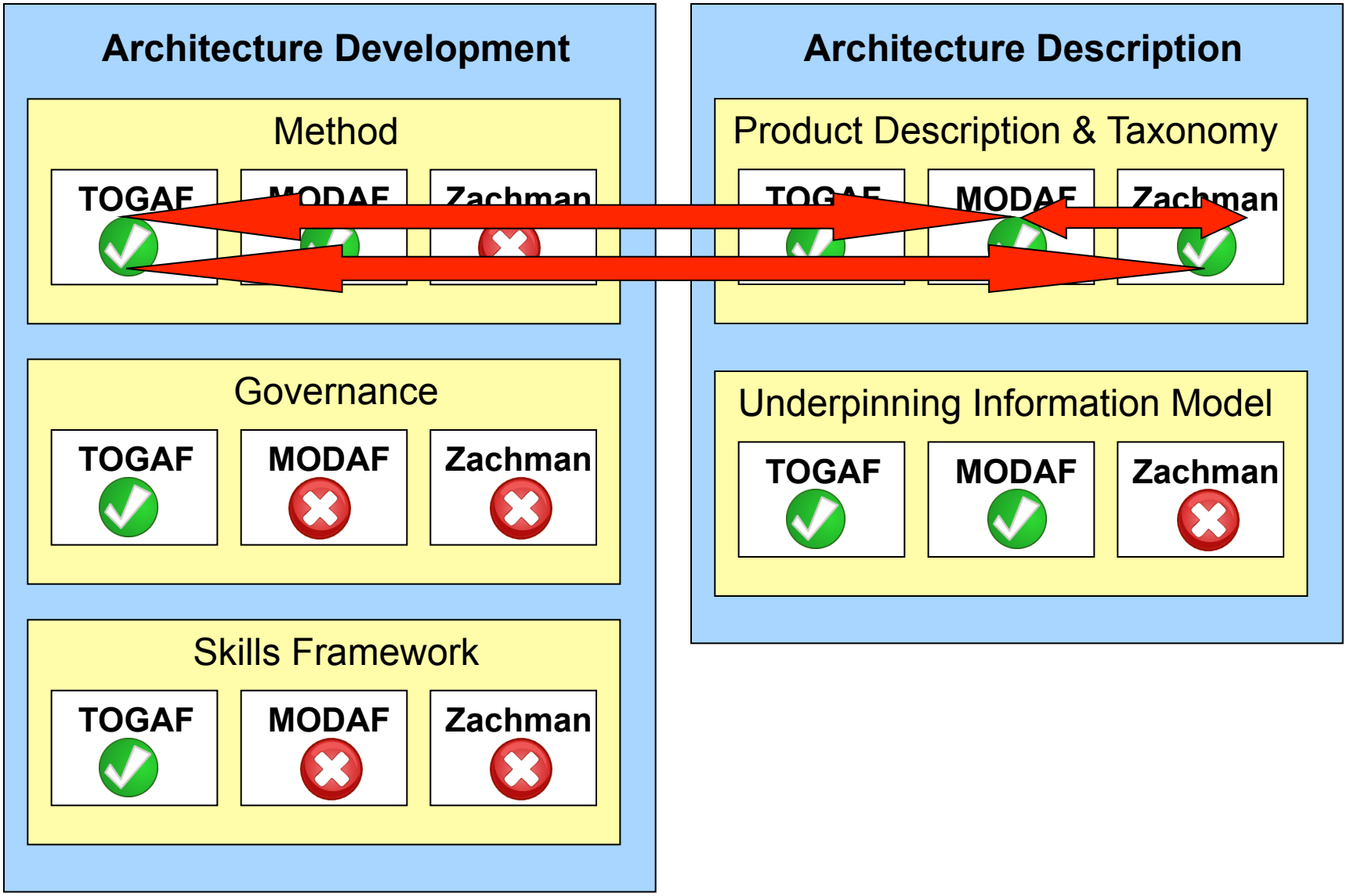
Components of an EAF



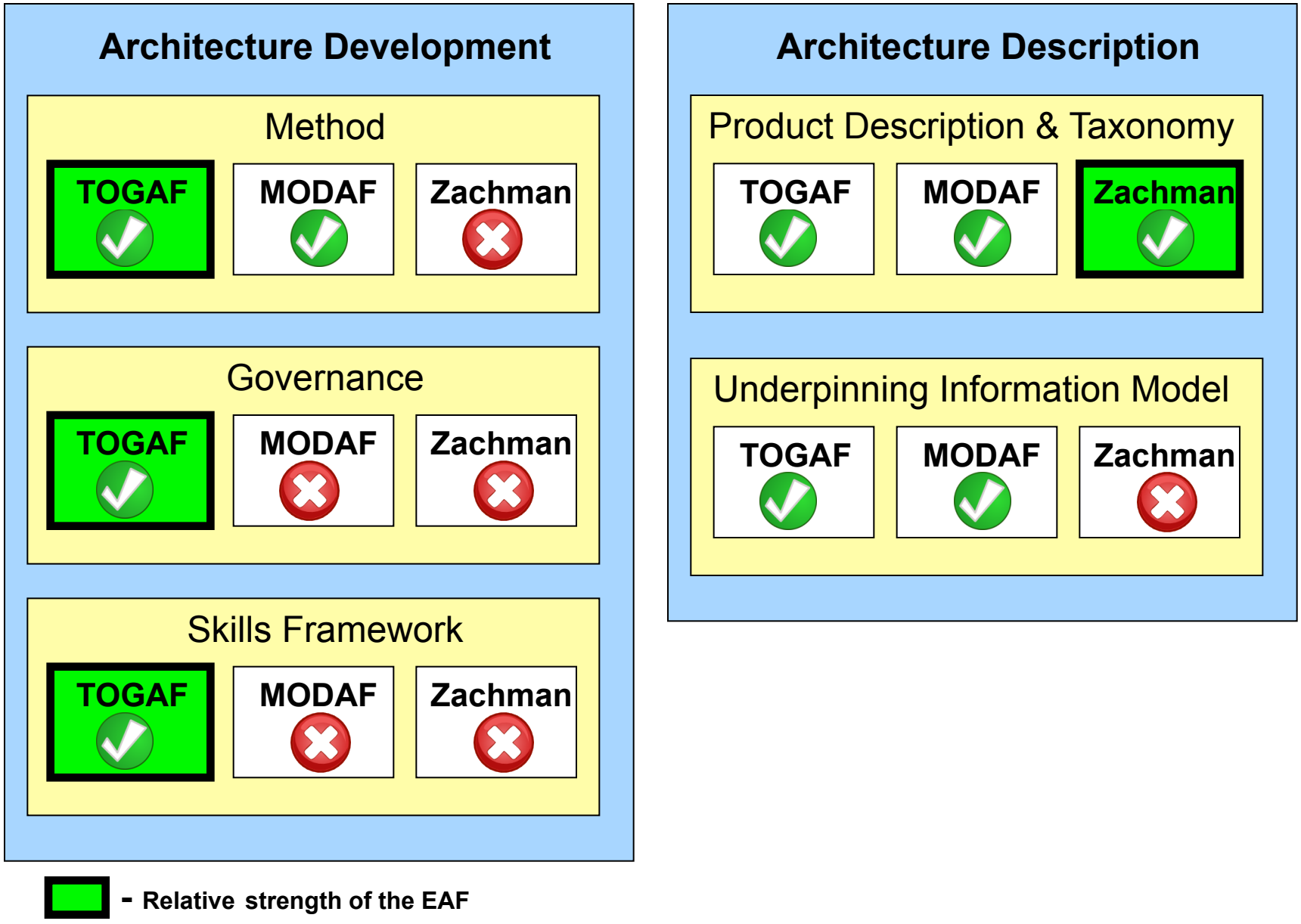
EAF Similarities and Differences



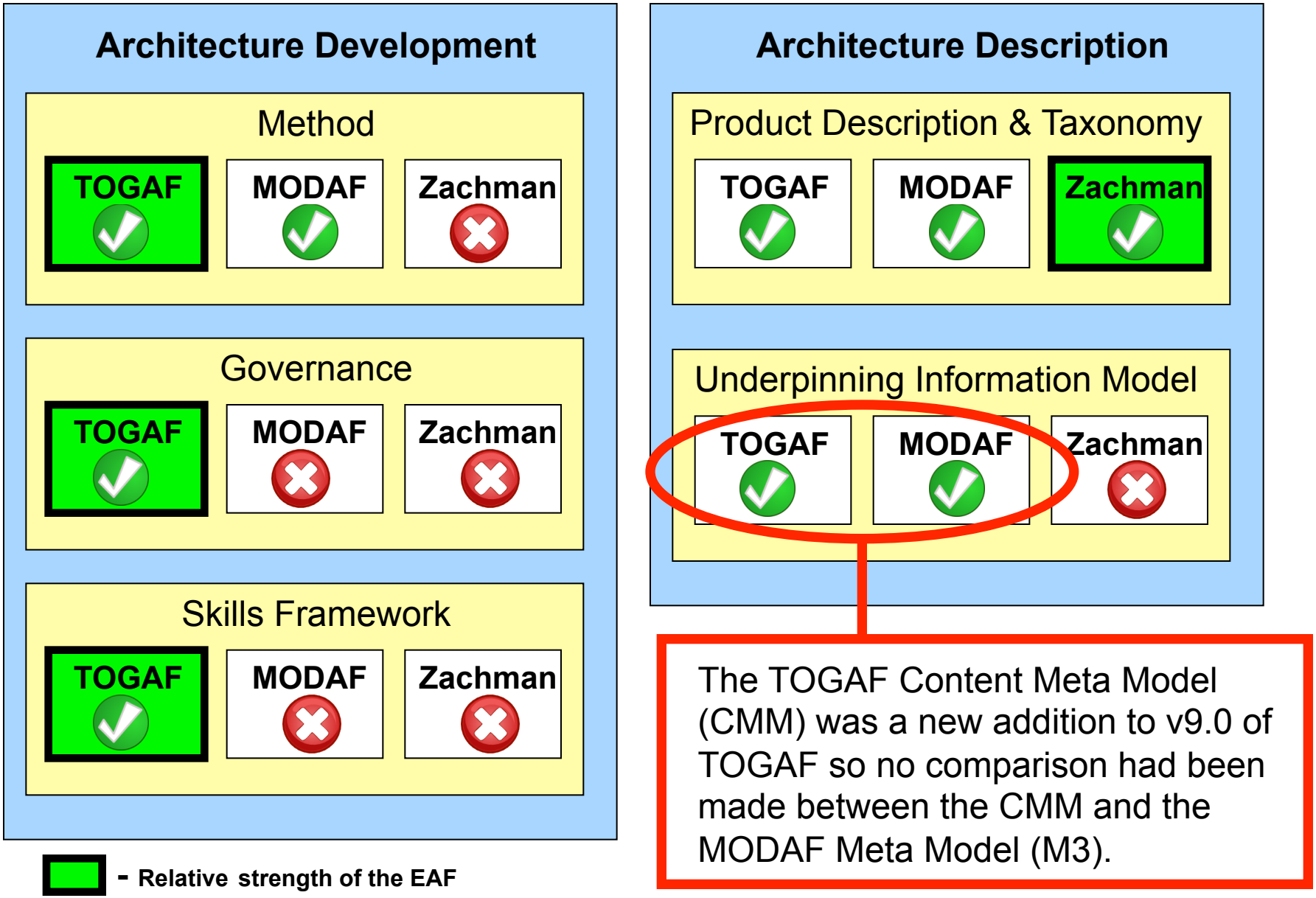
Mapping Between the EAFs



Strengths of the EAFs



The Gap in the Literature

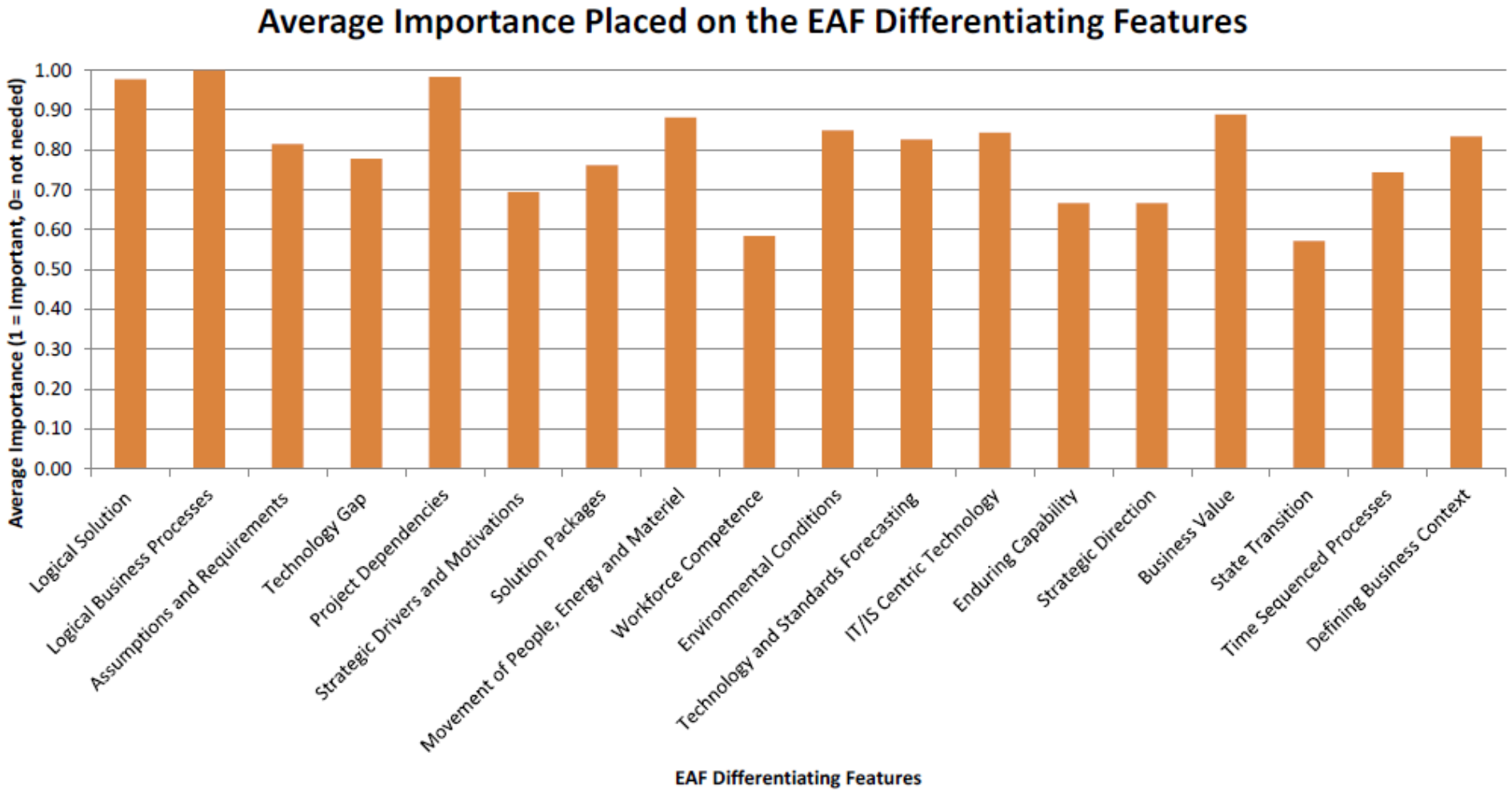


CMM and M3 Differentiating Features

- **A semantic mapping of the TOGAF CMM and the M3 identified 18 key differentiating features.**
- **The effect that these differentiating features had on the EA Use Cases was then assessed as positive, negative or neutral and their importance gauged via interviews with the relevant stakeholders.**

The differentiating features
Logical Business Processes
Project Dependencies
Logical Solution
Movement of People, Energy and Materiel
Environmental Conditions
Business Value
IT/IS Centric Technology
Technology and Standards Forecasting
Solution Packages
Assumptions and Requirements
Defining Business Context
Time Sequenced Processes
Strategic Drivers and Motivations
Technology Gap
Enduring Capability
Strategic Direction
Workforce Competence
State Transition

Perceived Importance of Differentiating Features



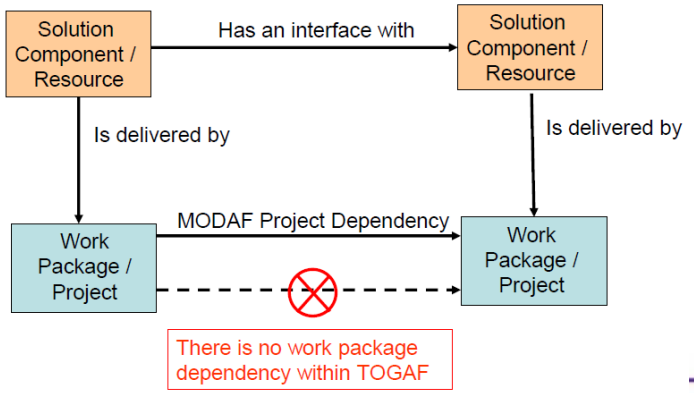
Top 5 Differentiating Features

Pros for the M3

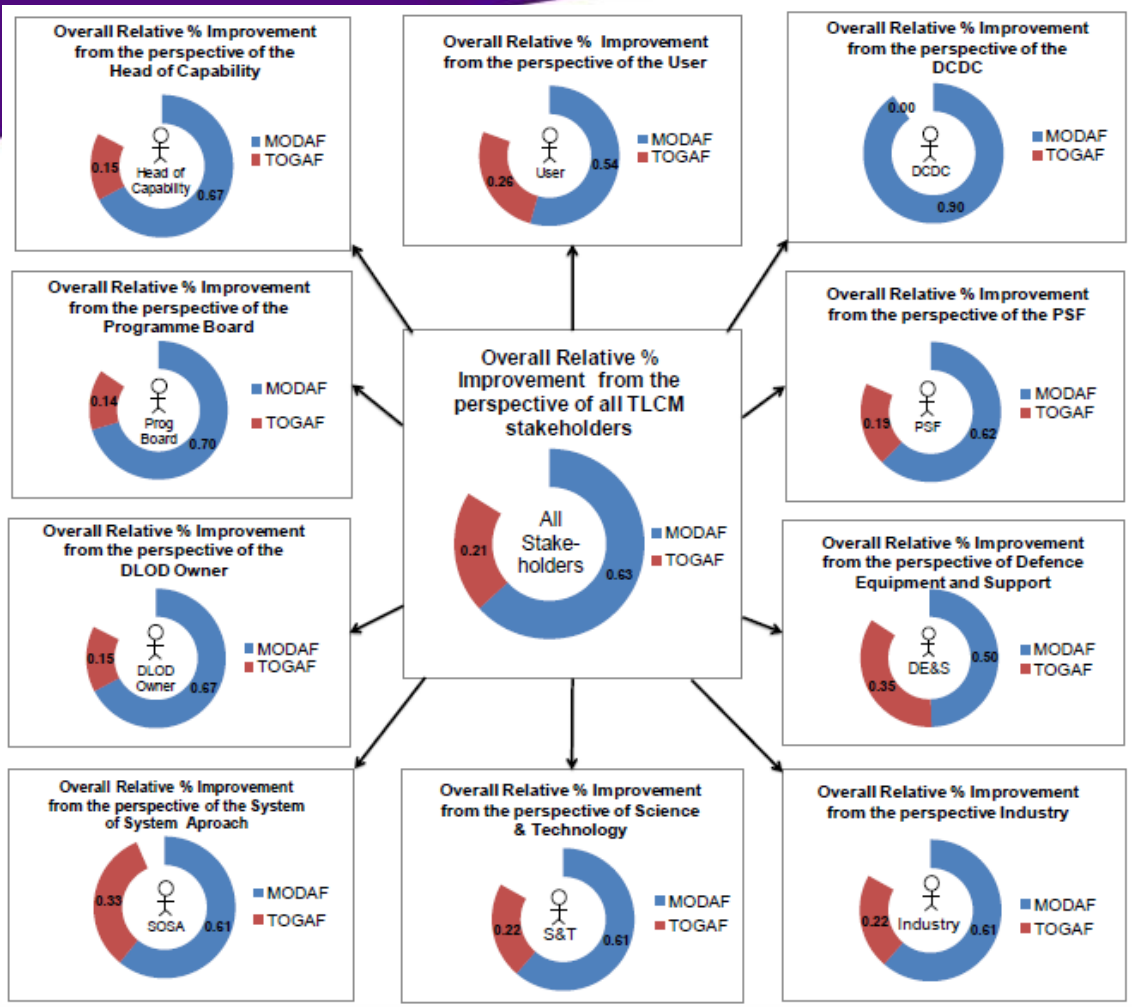
- **Logical Business Processes** – The M3 allows the modelling of generic business processes that are entirely conceptual and independent from organisational and solution constraints.
- **Project Dependencies** - The M3 is capable of modelling the dependencies between project milestones.
- **Movement of People, Energy and Materiel** – The M3 can model the flow of more than just information.

Pros for the TOGAF CMM

- **Logical Solution** – The CMM explicitly allows the modelling of logical solution components.
- **Business Value** – The CMM enables the modelling of the business value being delivered by projects and programmes.



Perceived Suitability of TOGAF CMM & M3



- **Within the context of the Defence enterprise, the M3 was deemed to be more suitable than the TOGAF CMM.***
- **That is not to say that the TOGAF CMM could not be applied within the Defence enterprise or indeed be more suitable than the M3 in certain circumstances.**

* Given the scope, assumptions and limitations of this research

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Conclusions

- Zachman v3.0, TOGAF v9.1 and MODAF v1.2 all have their own strengths and weaknesses.
- In selecting the most suitable EAF it is essential to understand its intended use.
- The M3 was deemed more suitable than the TOGAF CMM within the context of the Defence enterprise due mainly to its ability to extend beyond the IT/IS office based environment.
- Consideration should be given to a hybrid framework that draws upon the strengths of all three EAFs.

Questions?

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