

Business Transformation Projects– Estimating the Value of Transformation Projects (EVTP)

Antoine Trad

The Research Question is:

Which IHPTF4EVTP(C) characteristics and capability are needed to support Projects ?

Introduction

- It concerns Polymathic IHPTF estimations using EVTP.
- This article analyses the role of an in-house transformation framework and proposes the Applied Holistic Mathematical Model (AHMM) for the IHPTF (AHMM4EVTP).
- The EVTP related concepts can be used by any team member without any prior computer sciences qualifications.
- *There many approaches today and hey are very advanced and can support evaluation processes.*
- *Uses Frameworks like TOGAF and IDEs to support projects.*
- *The process of transforming a traditional business environment into sets of Composite Building Blocks (CBB). And evaluation patterns.*

Introduction

- *The proposed framework uses measurable Critical Success Factors (CSF) and Critical Success Areas (CSA) to define the optimal EVTP*
- *Project's complexity as well as the usage of underlying Decision-Making System (DMS) and enterprise architecture can be evaluated by a tuneable CSF based mathematical model.*
- *The IHIPTF is based on: 1) RP to generate BBs and patterns; 2) A Mathematical Model; 3) Framework; and 4) Digital Transformations (DT) based EVTP...*
- *IHIPTF identifies a Median Methodology (MDTCAS), Business processes to transform the Legacy Environment into a lean and automated system.*

Introduction

- *The IHPTF supports Project's Complex Implementation Phase (PCIP) that requires a set of in-depth (Refinement) RP, DMS, KMS, EA, and implementation skills.*
- *The Architect of Adaptive Business Information System (AofABIS) is to be considered as the optimal choice.*

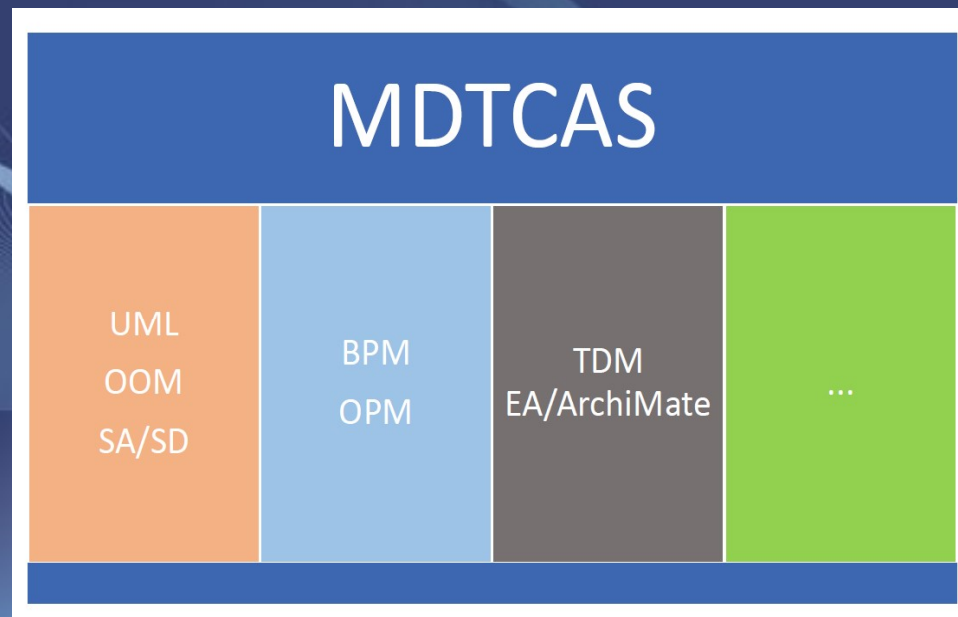


Figure 1 describes the relation between the MDTCAS and the Project's artefacts. The Framework's and RDP's interactions, include three components: 1) DMS; 2) KMS; and 3) IHPTF

Keywords

- Transformation Projects and Frameworks evaluation concepts.
- Refinement, and MDTCAS.
- Manager's Profile.
- Business Transformation Projects.
- Enterprise Architecture.
- Mathematical Model.
- Artificial Intelligence.
- Profile Management.
- Human Resources.
- Critical Success Factors.
- Performance Indicators.

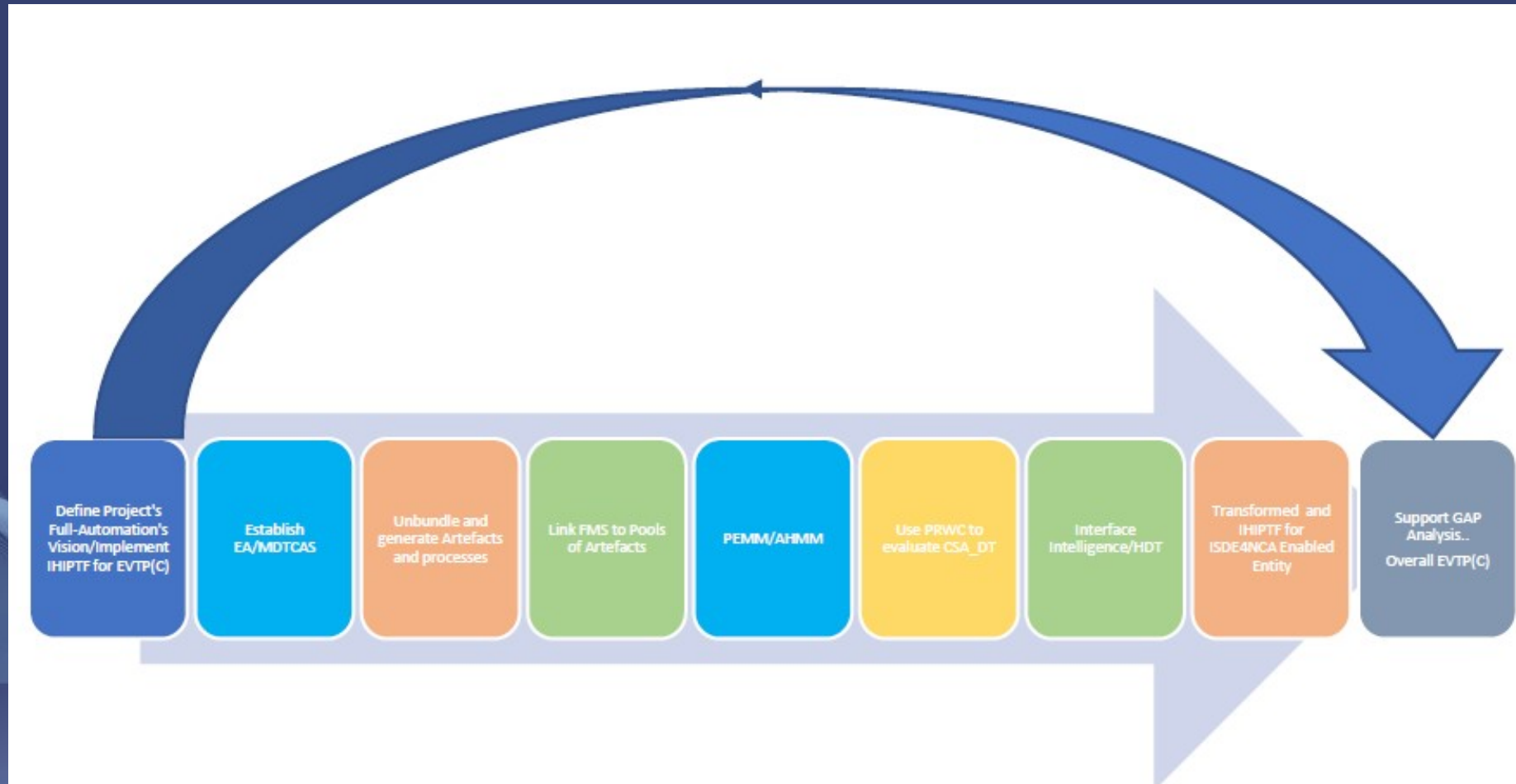
A Project 's generic evaluation pattern

- A set of patterns that can support the EVTP.
- Refinement concepts.
- Agile Methodologies and Business CSFs.
- Standards, like TOGAF, UML...
- Holistic EA concept and AI fields.
- Atomic architecture development method.
- Mapping concept and the Conceptual view.
- Atomic services and their granularity.
- Services' registries and integration / APIs.
- Service life cycle management / Agility
- Atomic artefacts.

AGNOSTIC IMPLEMENTATION ENVIRONMENTS

- IHPTF based Projects.
- AI based development.
- The holistic meta-architecture concept.
- The micro enterprise components.
- The micro architecture concept.
- The business artefacts concept.
- The micro artefact concept.
- The choreography pattern of atomic services.
- The management of atomic and micro services.
- The neurons based decision making system.
- The fast and continuous development and deployment concept for a BTP global architecture.

A Generic approach



A Generic EVTP approach

- The goal is to attain the defined enterprise change and EVTP cycles.
- This article's aim is to influence the attitude of a transformation project and implementing an EVTP.
- The research concept is a part of the framework, which is composed of various modules.
- The used mixed method can be considered as a natural complement to conventional Quantitative Analysis and Qualitative Analysis methods presented in the Proof of Concept (PoC).

THE MATHEMATICAL MODEL

- The hyper evolution of information technology methodologies and business engineering disciplines made transformation project's management very complex and these facts for the Environment to have a central decision making module that is based on a mixed method.
- The mathematical model or the decision making module selects one solution that has a value based on factors.
- The evaluation value attached to each node in the tree is a state with complex data and functions containing many constraints. The decision tree's implementation is an HDT object that can be used and tested in the proof of concept



Event:

The Open Group London 2014

Business Transformation Manager Profile

Dr. Antoine Trad

The riskiest factor in transforming a traditional business environment (BE) into a lean and automated BE is the role of the business and (e-)business transformation manager (BTM) in the implementation part of the business transformation project (BTP). The basic profile of such a business transformation manager has not been sufficiently investigated in a holistic manner in order to design the BTM's profile; and that is the main goal of the author's research (Trad, Kalpic, IMRA, 2013).

This research based presentation deals with the optimal profile of the BTM that has to manage the implementation phase of complex business transformation projects. These business transformation projects require a specific set of business architecture and implementation skills, especially for the final and very difficult implementation phase. The BTP's implementation phase is the major cause of high failure rates (CapGemini, 2009).

The authors have constructed their research on the main fact that only around 12% of business organizations successfully finish innovation-related business transformations projects (Tidd, Bessant, 2009). Therefore, there is a tremendous need for more research on the BTM profile. Business transformation projects require BTMs who have the necessary business and information technology architectural skills such as TOGAF® for the implementation of complex business process management (BPM) based systems (Kelada, DBA Thesis, 2009).

Key takeaways: TOGAF, architect of adaptive business information systems, business transformation projects, business transformation manager's profile, transformation project implementation, business integration, innovation failure rate and (e-)business

Premier Reference Source

Using Applied Mathematical Models for Business Transformation

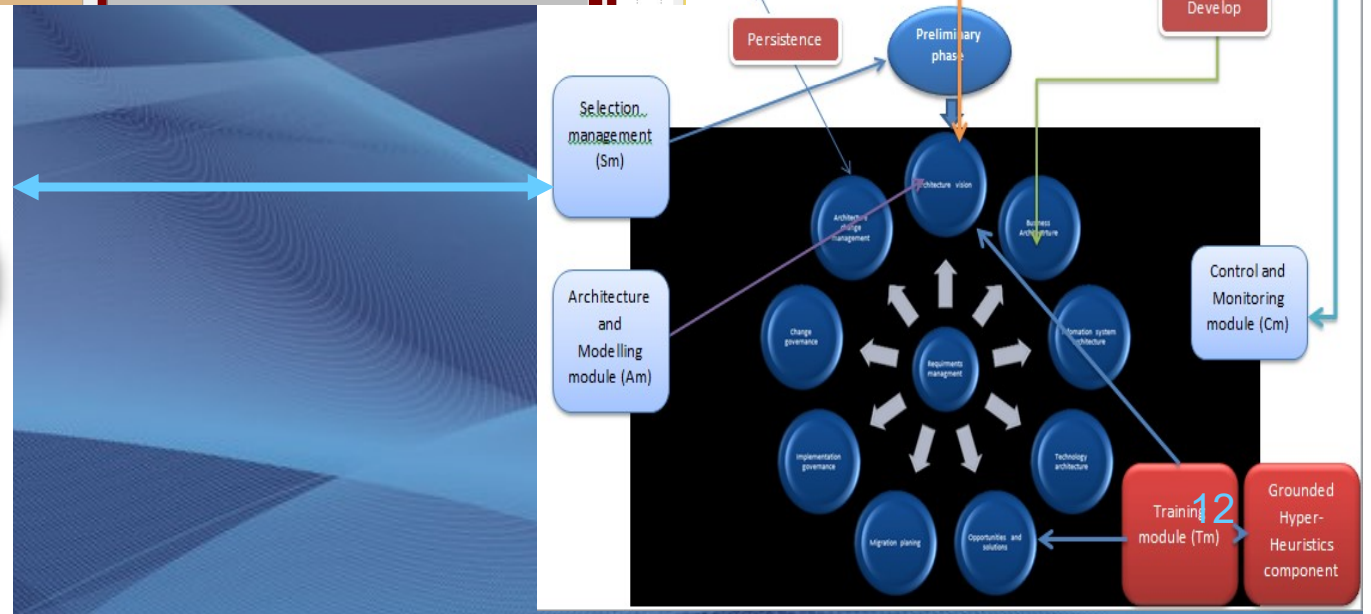
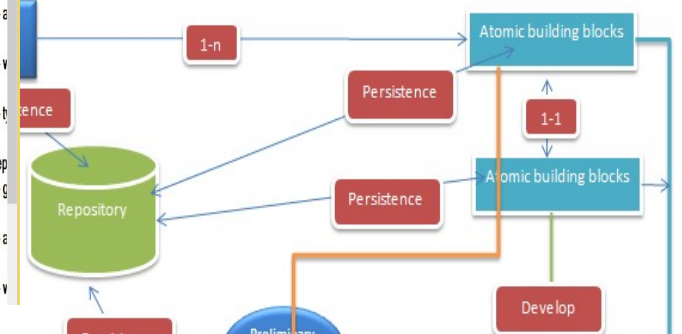
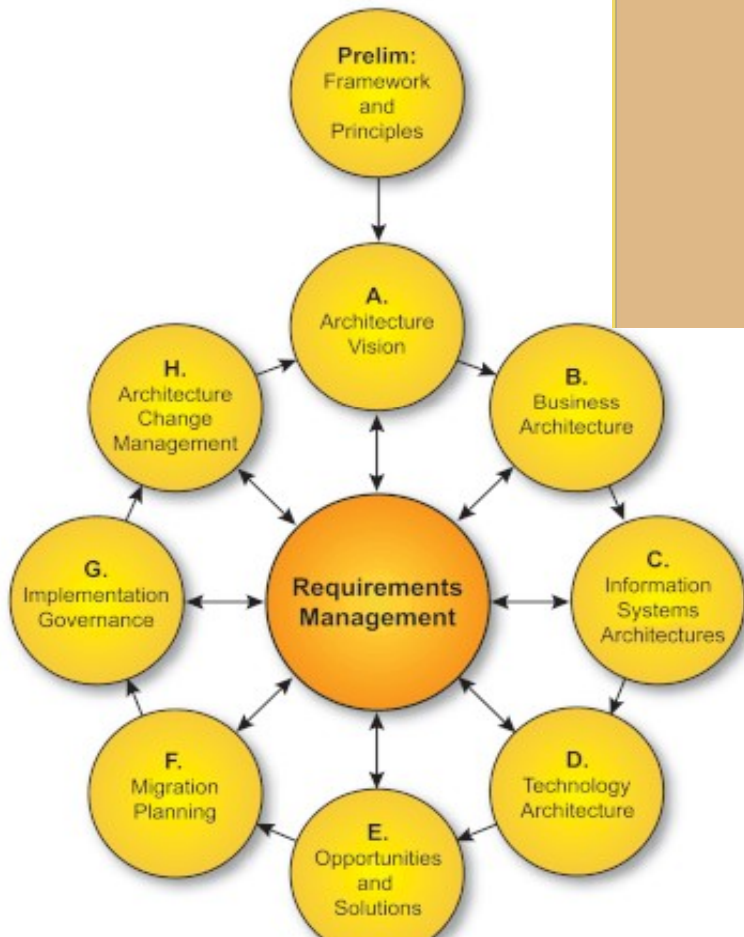
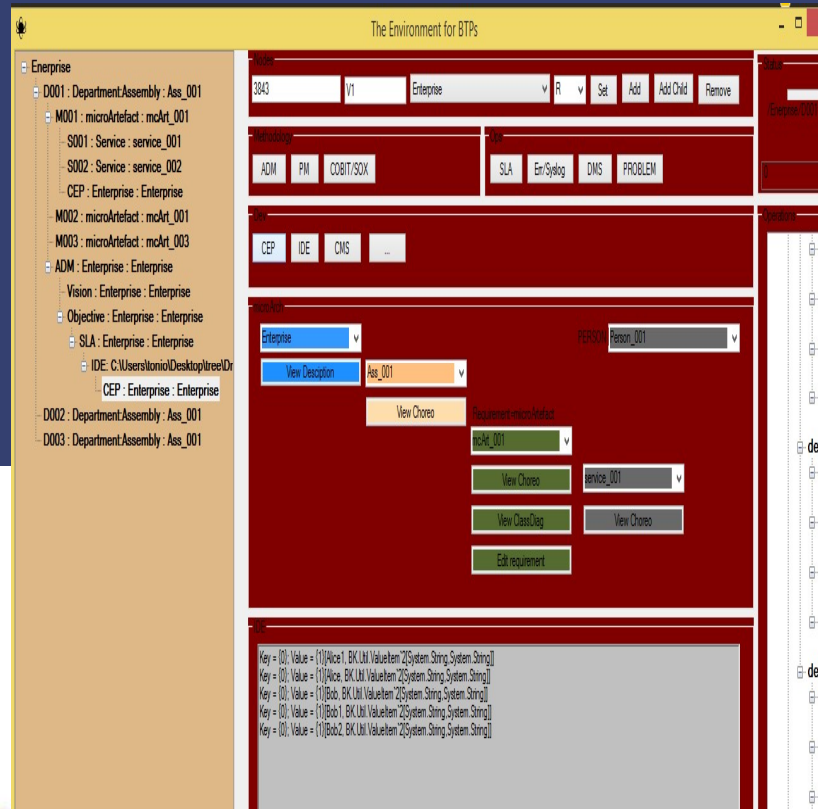


Antoine Trad and Demir Kalpic

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ELSEVIER

IT IS A CONCRETE FRAMEWORK...



Lead

- This research project's main keywords are: 1) Artificial Intelligence; 2) Enterprise Architecture; 3) Business Transformation Projects; 4) Business Transformation Manager; 5) Applied Mathematical Models; 6) Neural Networks; 7) Holisms; 8) Risk Management; 9) Decision Making Systems; 10) Artificial Intelligence; 11) Knowledge Management Systems; and 12) Innovation.
- Using the scholar engine, in Google's search portal, in which the authors combined the previously mentioned keywords and key topics; the results have shown clearly the uniqueness and the absolute lead of the authors' methodology, research and works .
- From this point of view and facts the authors consider their works on the mentioned topics as successful and useful; so the main topics will be introduced.
- Using the scholar engine, in Google's scholar search where the author combined his research's keywords and key topics; the results have shown clearly the uniqueness and the absolute international lead of the author's methodology, research and works.

The screenshot shows a Google Scholar search results page. The search query is "enterprise architecture" "decision making" "business transformation" "mathem". The results are sorted by relevance, showing 54 results. The top results are:

- Business Transformation Projects An Enterprise Architecture Applied Mathematical Model's Proof of Concept**
A Trad, D Kaljic - 2018 International Conference on Applied ... 2018 - ieeexplore.ieee.org
... The EAM uses critical success factors sets, actions and applicable solutions for **business transformation** and **enterprise architecture** projects ... The result of the processing of the **decision making** module, as illustrated in Table VI, shows clearly that the EAM is not an ...
☆ 0 0 Spominje se 3 puta Srodni članci
- Business Transformation Projectst-An Intelligence Driven Development for Enterprise Architecture and Asset Management-The Basics**
A Trad, D Kaljic - ICAMCE Journal, 2018 - pofs.semanticscholar.org
... scenarios that are sets of interactive services. Keywords—Applied **mathematical model**. Qualitative heuristics, Quantitative, **Decision making**, **Enterprise architecture** and **Business transformation**. Antoine Trad is with the Institute of ...
☆ 0 0 Spominje se 2 puta Srodni članci
- The Business Transformation Framework and Enterprise Architecture Framework for Managers in Business Innovation: Knowledge Management in Global Software ..**
A Trad - Human Factors in Global Software Engineering, 2019 - igi-global.com
... 41 The **Business Transformation** Framework and **Enterprise Architecture** Framework ... is a part of the Environment that uses 2 to support just-in-time **decision-making** ... The Enterprise AMM (EAMM) is the combination of an **enterprise architecture** and transformation methodologies ...
☆ 0 0 Spominje se 6 puta Srodni članci Svih 5 inačica
- A Neural Networks portable and Agnostic Implementation Environment for Business Transformation Projects the basic structure**
A Trad, D Kaljic - 2017 IEEE International Conference on ... 2017 - ieeexplore.ieee.org
... combined with the AIE delivers: 1) a real **decision making** component in ... An Intelligent Neural Networks Micro Artefact Patterns' Based **Enterprise Architecture** Model ... A Neural Networks Portable and Agnostic Implementation Environment for **Business Transformation** Projects-The ...
☆ 0 0 Spominje se 11 puta Srodni članci
- A neural networks portable and Agnostic Implementation Environment: for Business Transformation Projects the framework**
A Trad, D Kaljic - 2017 IEEE International Conference on ... 2017 - ieeexplore.ieee.org
... the functional domain covers information analysis and **decision making** for ETP ... An Intelligent Neural Networks Micro artefact Patterns' Based **Enterprise Architecture** Model ... Networks Portable and Agnostic Implementation Environment for **Business Transformation** Projects-The ...
☆ 0 0 Spominje se 7 puta Srodni članci Svih 2 inačica
- A Transformation Framework Proposal for Managers in Business Innovation and**
☆ 0 0 Spominje se 7 puta Srodni članci Svih 2 inačica

The Mathematical Model

- The applied AHMM4EVTP's basics nomenclature: In this *Project* OR modules run on a pool of synchronized AHMM4EVTP threads, in which, each AHMM4EVTP thread launch's an HDT process

Basic Mathematical Model's (BMM) Nomenclature

<i>Iteration</i>	= An integer variable " <i>i</i> " that denotes a <i>Project/ADM</i> iteration	
microRequirement	= KPI	(B1)
CSF	= Σ KPI	(B2)
Requirement	= CSF = \bigcup microRequirement	(B3)
CSA	= Σ CSF	(B4)
microKnowledgeArtefact	= \bigcup knowledgeItem(s)	(B4)
neuron	= action->data + microKnowledgeArtefact	(B5)
microArtefact / neural network	= \bigcup neurons	(B6)
microArtefactScenario	= \bigcup microartefact	(B9)
AI/Decision Making	= \bigcup microArtefactScenario	(B10)
microEntity	= \bigcup microArtefact	(B7)
Entity or Enterprise	= \bigcup microEntity	(B8)
EntityIntelligence	= \bigcup AI/Decision Making	(B11)
BMM(<i>Iteration</i>) as an instance	= EntityIntelligence(<i>Iteration</i>)	(B12)

The Generic AHMM's Formulation

$$\text{AHMM} = \bigcup \text{ADM}s + \text{BMM}s \quad (13)$$

The Role of AI/Qualitative Models

- Learning based and not data based..
- **AI based DMS: AI systems management refers to expert systems and global systems modelling; which is supported by the EA's mapping concept. AI systems management is an approach for building and deploying intelligent systems and it replaces conventional concepts with DMS. That supports the EVTP.**
- **DT based Projects replaces traditional methods ... And supports the EVTP.**
- **Manager as a Polymathic EVTP.**
- **Understanding Organizations and the CSFs that can influence their survival and competitiveness, is only the first step towards a successful Project.**

USAGE OF EA/AI based IHPTF

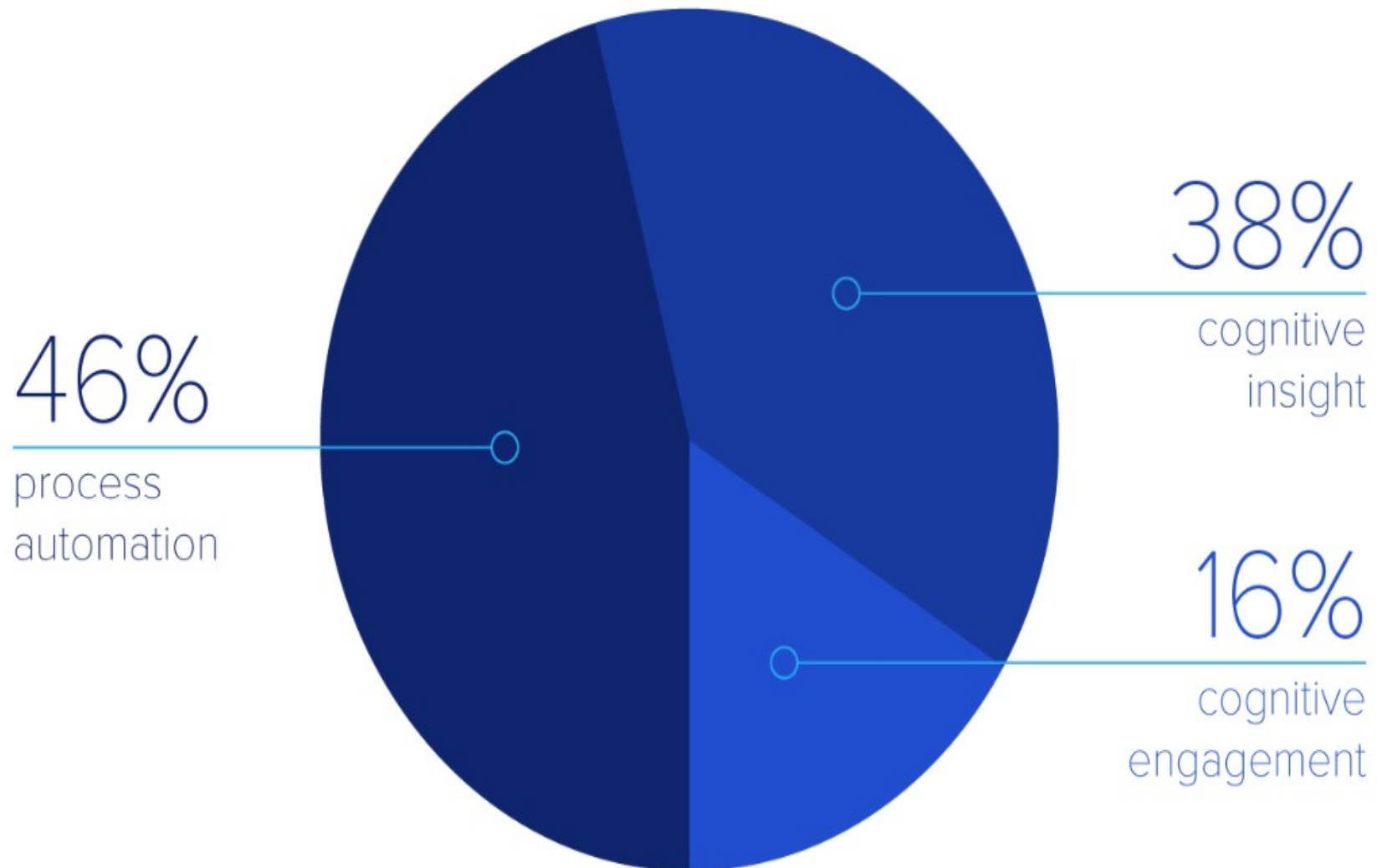
- **IHPTF for Projects that includes EVTP technics...**
- **Qualitative: HDT... AR... Learning based.**
- **CBB, BBs,... Artefacts...**
- **Unit of Work as the Building Block**
- **EA, Technology, Services and Standards**
- **Enterprise Security Strategies**
- **Resources, Artefacts, Factors Management and Qualification Procedures**
- **The ADM and Phases**
- **Business Architecture**
- **A Complex and Risky Process**
- **The Knowledge Management System**
- **The Decision-Making System**

The Needed Skills... Just for EA

IT Architect Roles	Architecture Board Member	Architecture Sponsor	IT Architecture Manager	IT Architecture Technology	IT Architecture Data	IT Architecture Application	IT Architecture Business	Program or Project Manager	IT Designer
Enterprise Architecture Skills									
Business Modelling	2	2	4	3	3	4	4	2	2
Business Process Design	1	1	4	3	3	4	4	2	2
Role Design	2	2	4	3	3	4	4	2	2
Organization Design	2	2	4	3	3	4	4	2	2
Data Design	1	1	3	3	4	3	3	2	3
Application Design	1	1	3	3	3	4	3	2	3
Systems Integration	1	1	4	4	3	3	3	2	2
IT Industry Standards	1	1	4	4	4	4	3	2	3
Services Design	2	2	4	4	3	4	3	2	2
Architecture Principles Design	2	2	4	4	4	4	4	2	2
Architecture Views & Viewpoints Design	2	2	4	4	4	4	4	2	2
Building Block Design	1	1	4	4	4	4	4	2	3
Solutions Modelling	1	1	4	4	4	4	4	2	3
Benefits Analysis	2	2	4	4	4	4	4	4	2
Business Inter-working	3	3	4	3	3	4	4	3	1
Systems Behavior	1	1	4	4	4	4	3	3	2
Project Management	1	1	3	3	3	3	3	4	2

AI Types for the EVTP

AI Projects by Type



DT's Implementation

- **Projects and DT's goal is to have a common platform of Blocks, BPMs and other artefacts which improve Entity's Time-to-Market (TtM).**
- **DTs are strategic objectives, but Projects' digitizations are complex and have XHFRs.**
- **The DT uses the IHITF to disassemble legacy systems and enable the use of TDM, MDTCAS, and EA digitized models and to define DT's scope.**
- **A successful DT is the base of a successful Project that needs Polymathic skills.**

The IHPTF PoC's phase 1 outcome is 8.70

CSA Category of CSFs/KPIs	Transformation Capability	Average Result	Table
The RDP's Integration	Mature	From 1 to 10. 9.20	1
Team's Setup	Risky	From 1 to 10. 8.50	2
Disassembling Process	Risky	From 1 to 10. 8.50	3
PEMM's Implementation	Risky	From 1 to 10. 8.25	4
FMS' Integration	Risky	From 1 to 10. 8.50	5
AHMM's Integration	Mature	From 1 to 10. 9.20	6
PRWC's Integration	Feasible	From 1 to 10. 9.0	7
TDM' Integration	Feasible	From 1 to 10. 8.60	8
Intelligence's Integration	Mature	From 1 to 10. 9.20	9
APD's Integration	Risky	From 1 to 10. 8.20	10
IHPTF4EVTP/Phase's 1 Outcome	Risky	From 1 to 10. 8.70	11

Evaluate First Phase

The EAVC

- **he EAVC is based on the valuation of the Entity's assets.**
- **The IHPTF to align of Enterprise Asset Management (EAM) and EA; where the Assets Alignment Pattern (AAP) offers a solutions in the form of design, technical, and managerial recommendations.**
- **Support for Organizational Asset Management (OAM) which can be applied to any type of asset management concept, in order to support the evolution of organizational, national, or enterprise asset management.**
- **Support the Holistic Project Asset Management Concept (HPAMC) to optimize asset/wealth creation/management in transformed Entities.**
- **The Intelligence Driven Development for Enterprise Architecture and Asset Management to support the EAM.**
- **Entity's valuation, also known as business valuation, is the process of assessing the total economic/financial value of Entity's assets that can be used for sale value and tax reporting.**

The EAVC

- **Applies: Book Value, Discounted Cash Flows Market Capitalization** measures publicly traded Entity's value, **-Enterprise Value** is calculated by combining Entity's debt and equity, **Earnings Before Interest, Taxes, Depreciation, Present Value of a Growing Perpetuity Formula.**
- **And such environments face XHFRs and need adapted environments.**

Resulting XHFRs

- **Various sources show the limitations and emerging trends of transformational methodologies' weakness and the failure of continuous improvement initiatives or XHFRs,...**
- **The majority of transformational initiatives have XHFRs which is similar to any other organizational transformation initiative.**
- **The first limitation is viewed as a gap in the sense that it addresses XHFRs in many Entities that is more than 60%.**
- **Because of various types of complexities these XHFRs that happen to Entities across different APDs, transformational initiatives are stopped...**
- **Mainly due to massive costs.**
- **...**
- **.**

EVTPC's Integration

- **IHIPTF4EVTP's GAPA for all CSAs (GAPA4Project) includes and targeted GAPA evaluations:**
 - **The RDP's Integration.**
 - **Team's Setup.**
 - **Disassembling Process.**
 - **PEMM's Implementation.**
 - **FMS' Integration.**
 - **AHMM's Integration.**
 - **PRWC's Integration.**
 - **TDM' Integration.**
 - **Intelligence's Integration.**
 - **APD's Integration.**

Conclusion

- This RDP proposes a set of recommendations and technics on how to implement a IHIPTF4EVTP, EVTP, EAVC, and GAPA4Projects for any type of APD. The IHIPTF4EVTP uses Evaluations, GAPA, HDT, and Factors to iteratively assert Project's feasibility and because of the low score of (rounded) 8.70 (Table 11) implies that it is "Risky" Project, and the resultant recommendations are:
- EVTPC is an Entity evaluation concept that can include the EAVC.
- The IHIPTF4EVTP shows how to implement an IHI and Anti-Locked-In (ALI) transformation framework and GAPA for all CSAs.
- The GAPA and Evaluations can estimate Projects' progress.
- This RDP uses a specific QQRMM concept and ignores statistical/quantitative approach.
- The PRLR proved the existence of an important knowledge gap and XHFRs.

Conclusion

- **The AHMM4EVTP and ELP based HDT supports Intelligence.**
- **The HDT supports IHIPTF4EVTP's modules reasoning, like in the case of the PRWC.**
- **Cross-functional/Polymathic skills are needed.**
- **The IHIPTF4EVTP uses the MDTCAS to interface existing frameworks, standards and methodologies, like TOGAF, SWOT, Six-Sigma's environments...**
- **The PoC checked IHIPTF4EVTP's feasibility.**
- **The IHIPTF4EVTP integration is complex and "Risky".**