

Societal Transformation Projects and the Role of Values and Cycles of Change (VRCC)

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The Research Question is:

What are the advantages and disadvantages of the RVCC in Projects?

Introduction

- It concerns Polymathic-holistic Project Management Concept (PPMC)
- This article analyses the role of CBBs and BBs in transformation projects and proposes the Applied Holistic Mathematical Model (AHMM) for Projects (AHMM4P).
- The transformation environment can be used by any team member without any prior computer sciences qualifications.
- *Many standards and agile methodologies exist; today they are very advanced and can support refinement processes.*
- *Adapted Flexible Frameworks like TOGAF and IDEs to support projects.*
- *The process of transforming a traditional business environment into sets of Composite Building Blocks (CBB).*

Introduction

- *The proposed framework uses measurable Critical Success Factors (CSF) and Critical Success Areas (CSA) to define the optimal VRCC*
- *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 VRCC is based on: 1) RP to generate BBs; 2) A Mathematical Model; 3) Framework; and 4) Digital Transformations (DT) ...*
- *VRCC identifies a Median Methodology (MDTCAS), OPMS to transform the Legacy Environment into a lean and automated system.*

Introduction

- *The VRCC supports Project's Complex Implementation Phase (PCIP) that requires a set of in-depth (Refinement) RP, DMS4VRCC, KMS4VRCC, EA, and implementation skills.*
- *The Architect of Adaptive Business Information System (AofABIS) is to be considered as the optimal choice.*

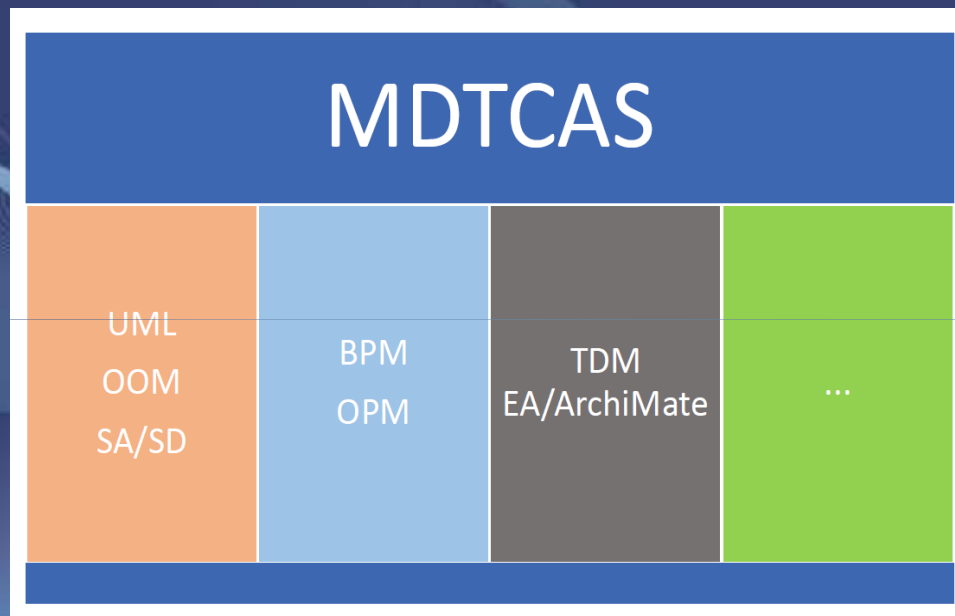


Figure 1 describes the relation between the MDTCAS and the Project's artefacts. The Framework's and RDP's interactions, include three components: 1) DMS4VRCC; 2) KMS4VRCC; and 3) VRCC

Keywords

- Project Management, and Cycles of change.
- Refinement, and MDTCAS.
- Manager's Profile.
- Business Transformation Projects.
- Enterprise Architecture.
- Mathematical Model.
- Artificial Intelligence.
- Profile Management.
- Human Resources.
- Critical Success Factors.
- Performance Indicators.

An RP based Project generic pattern

- Project risk management.
- 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

- VRCC based Management.
- 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 Refinement/RP based VRCC approach



A Generic VRCC approach

- The goal is to attain the defined enterprise change cycles.
- This article's aim is to influence the attitude of a transformation project and implementing of VRCC.
- 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

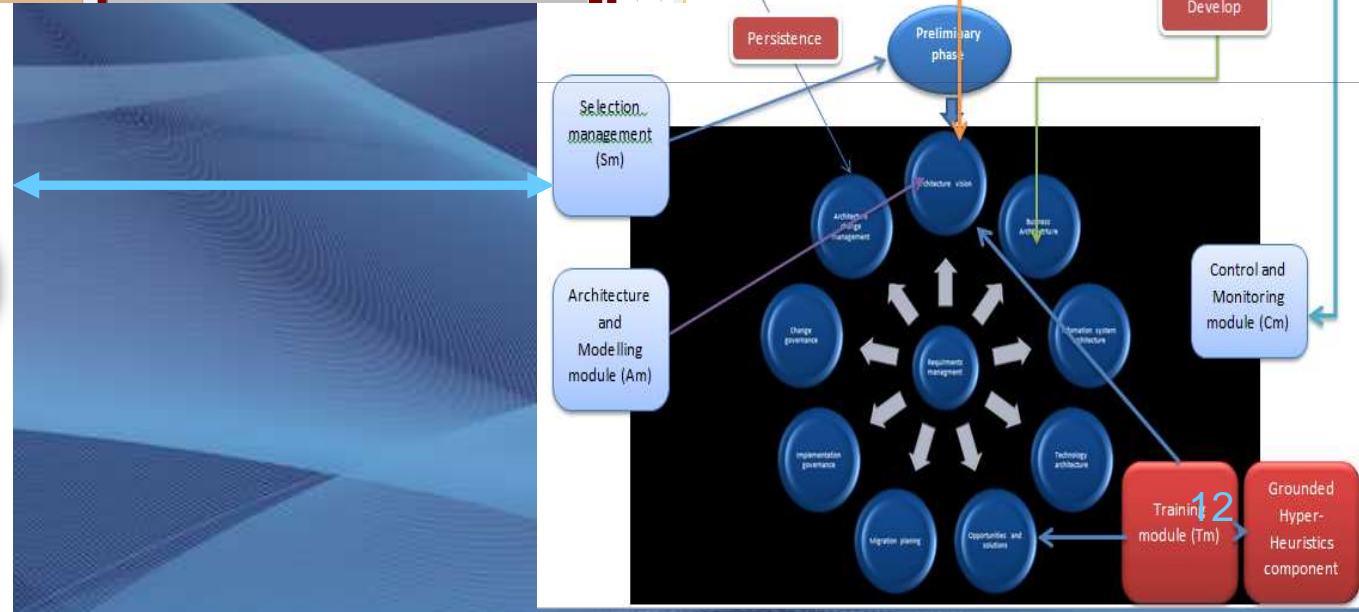
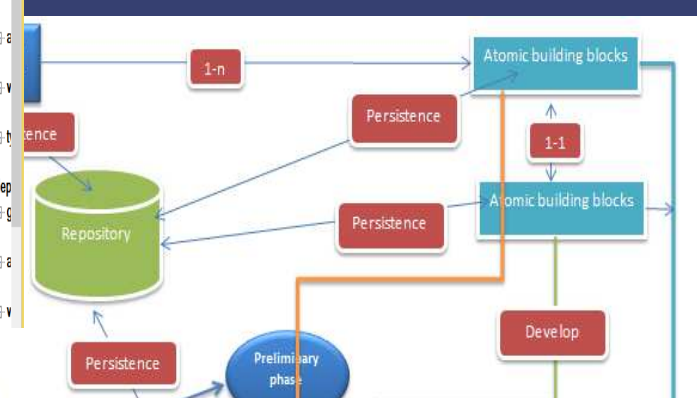
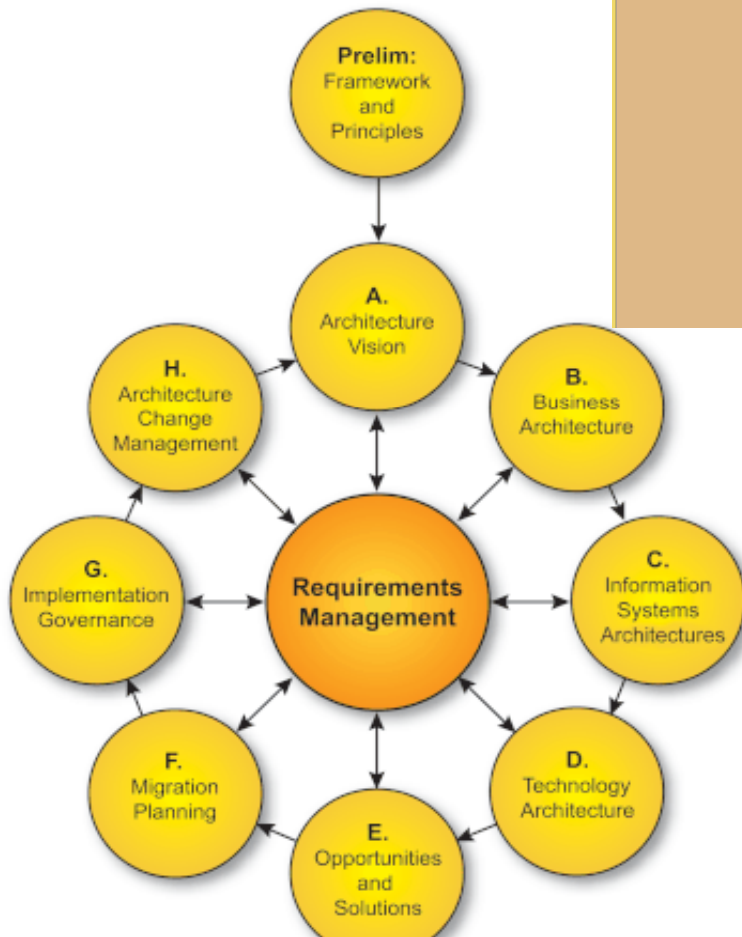
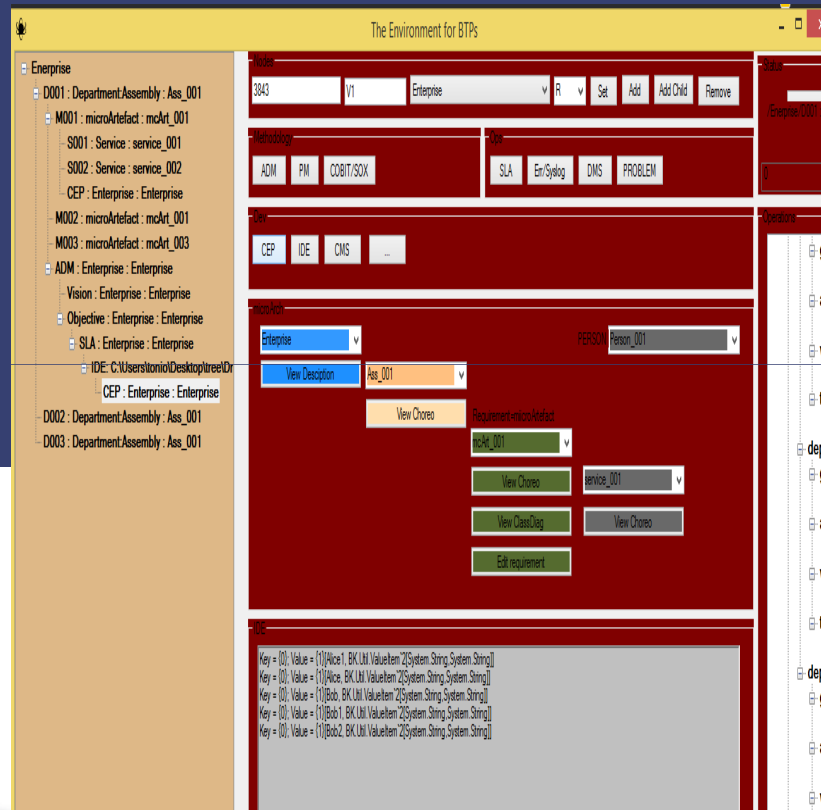
Using Applied Mathematical Models for Business Transformation



Antoine Trad and Doreen Kalpic

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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 approximately 54 results in 0.05 seconds. The top results are:

- Business Transformation Projects An Enterprise Architecture Applied Mathematical Model's Proof of Concept**
A Trad, D Kalpić - 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 ...
☆ 👁 Spominje se 3 puta Srodni članci
- [PDF] Business Transformation Projectst-An Intelligence Driven Development for Enterprise Architecture and Asset Management-The Basics**
A Trad, D Kalpić - ICAMCS Journal, 2018 - pdfs.semanticscholar.org
... scenarios that are sets of interactive services. Keywords—Applied **mathematical model**, Qualitative heuristics, Quantitative, **Decision making**, **Enterprise architecture** and **Business transformation**. Antoine Tiad is with the Institute of ...
☆ 👁 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 ...
☆ 👁 Spominje se 8 puta Srodni članci Svih 5 inačica
- A Neural Networks portable and Agnostic Implementation Environment for Business Transformation Projects the basic structure**
A Trad, D Kalpić - 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** ...
☆ 👁 Spominje se 11 puta Srodni članci
- A neural networks portable and Agnostic Implementation Environment for Business Transformation Projects the framework**
A Trad, D Kalpić - 2017 IEEE International Conference on ..., 2017 - ieeexplore.ieee.org
... the functional domain covers: information analysis and **decision making** for BTf ... An Intelligent Neural Networks Microartefact Patterns' Based **Enterprise Architecture** Model ... Networks Portable and Agnostic Implementation Environment for **Business Transformation Projects-The** ...
☆ 👁 Spominje se 7 puta Srodni članci Svih 2 inačica
- A Transformation Framework Proposal for Managers in Business Innovation and**
rfrfr sciencedirect.com

The Mathematical Model

- The applied AHMM4P's basics nomenclature: In this *Project* OR modules run on a pool of synchronized AHMM4P threads, in which, each AHMM4P 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

- **Learning based and not data based..**
- **AI based DMS4VRCC: 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 DMS4VRCC.**
- **DT based Projects replaces traditional methods ...**
- **Manager as a Cross-Functional Architect / Agile Project Management / Enterprise Architecture**
- **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 VRCC

- **VRCC for Projects.**
- **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

VRCC's *Factors*' concept

Societal Transformation Projects

Entity's set of CSAs

CSFs for VRCC

CSFs for ICS

CSFs for GAC

...

AR based
Learning Process

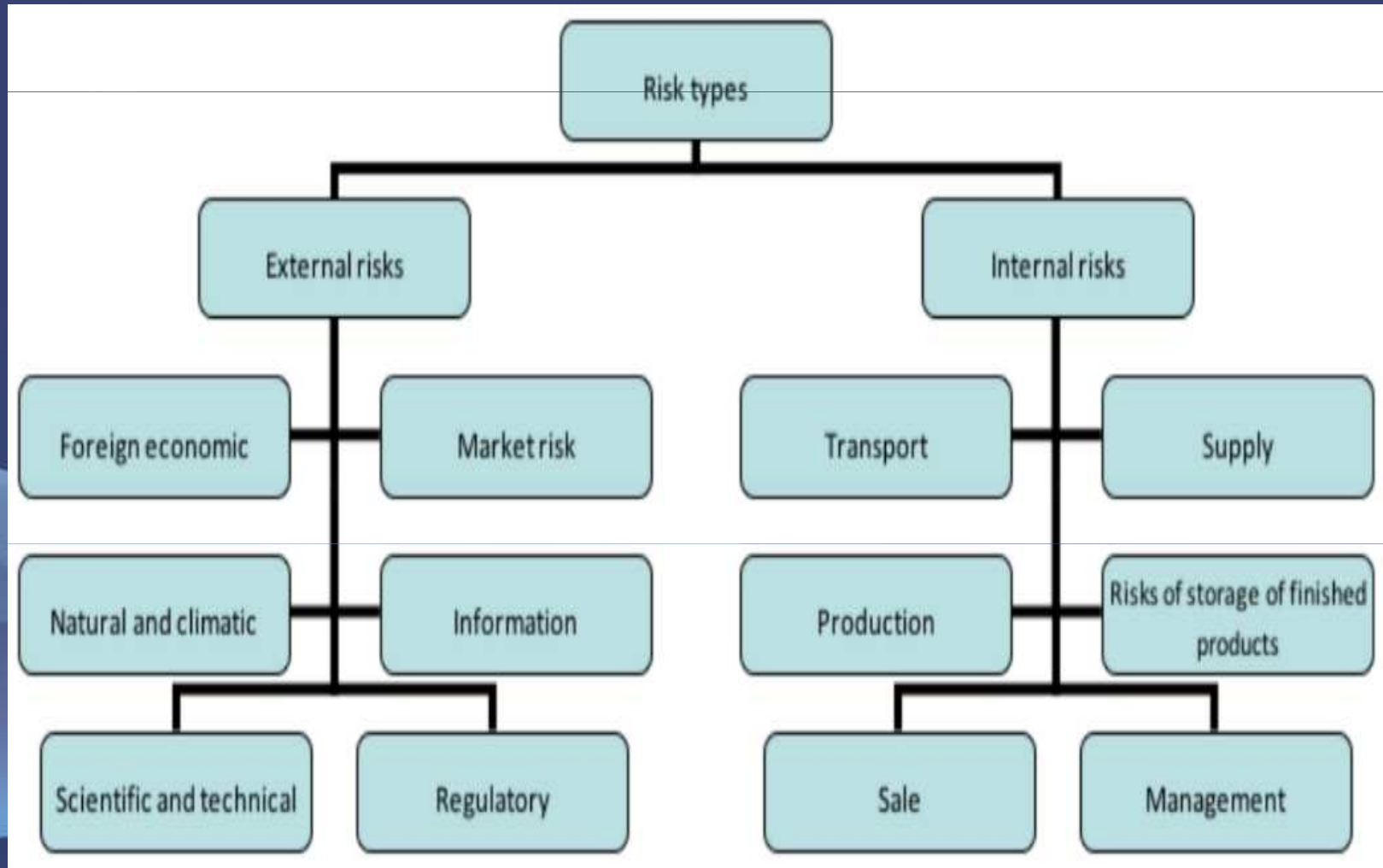
DMS4VRCC

KMS4VRCC

Reasoning
Interface

Qualitative
(HDT) and
Quantitative
Engine

VRCC-Types of risks



VRCC-Financial difficulties...

1,86 CHF

-19,41 (-91,26 %) ↓ od prvog dana

17. ožu 17:31 CET • Odricanje od odgovornosti

1D

5D

1M

6M

GDD

1G

5G

Maks.



VRCC-Main Difficulties

- **Finance.**
- **Demography.**
- **Geopolitical contexts...**
- **East/West divergence..**
- **Ecology...**

The VRCC PoC's phase 1 outcome is 8.24

CSA Category of CSFs/KPIs	Influences transformation management	Average Result
Applied Research Method	Feasible	From 1 to 10. 9.25
Transformational Societal Factors	Complex	From 1 to 10. 8.20
Political Societal Factors	VeryComplex	From 1 to 10. 7.75
Central Societal Factors	Very Complex	From 1 to 10 7.75

Evaluate First Phase

Conclusion

The set of VRCC's architecture, refinement, technical and managerial recommendations:

- The Framework was used to implement the *Project* and the literature review, and they acknowledged a knowledge gap, and it delivers a set of VRCC recommendations.
- The *Research* uses the AHMM4P's HDT for solving societal problems and drive the VRCC.
- This *Research* confirms the need for a *Manager's* optimal curriculum for societal changes.
- *Entities* can hardly cope with heterogeneous societal complexity, which is due to the hyper-evolution of technologies, finance, and competition.
- The *Project* and VRCC must be capable of implementing important societal changes.
- The VRCC is optimal to change the society, but it needs to use the right speed in order not to provoke SRtC.
- The VRCC needs be aware of locked-in and SOGFP and blocking its activities.
- The VRCC encompasses societal, political, and central factors of changes.
- The latest news on Switzerland's banking system's difficulties that are mainly due to lack of confidence and SOGFP misdeeds, confirm the author's research