Transformation Projects and Virtual Military Strategy

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Abstract

Major conflicts and wars are the fundament and important drivers for strong economies and their expansions. Military institutions are the ones who drive major technological transformation, evolution and innovation trends; like the USA's Défense Advanced Research Projects Agency (DARPA), which developed the Internet… Military technology transformation and innovation projects depend on financing capacities, geopolitics, economical strategies and demography. Countries, Armies, and institutions (or simply Entities) are increasingly using avant-garde technologies to gain substantial defence, geopolitical and economic advantages. Entities are today, facing new challenges and eventual risks, when implementing their vital organizational defence concept and distributed Information and Communication System (ICS). It is important to find the right balance between, Optimal Innovative Military Technology (OIMT), biotech's evolution, military strategy, geopolitical context, combative capabilities, and the evolution of demography, which is probably, the most important factor. The stability of an Entity depends on a well-defined OIMT Strategy to support the Entity's evolution. This article proposes the fundaments of Artificial Intelligence (AI) to support Virtual Reality (VR) for OIMT (VR4OIMT) integration. The author's Applied Holistic Mathematical Model (AHMM) for VR (AHMM4VR) is the result of research on AI based VR, business, financial and organizational transformations using a mathematical model's concept (Trad & Kalpić, 2020a). The AI based VR4OIMT manages and evaluates VR activities in projects, which are complex. Weightings of factors and areas are used as variables in the VR4OIMT. VR's main problem is peoples' addiction and subject areas' complexities, due to the excessive use if VR based videogames which have exponentially expended and making decisions based on simple simulations (Acer, 2018).

Key words

Transformation Projects, Virtual Reality, Strategy, Enterprise Architecture, Geopolitics and Holism, Security, Artificial Intelligence, Manager's Profile, Enterprise Architecture, Critical Success Factor

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Introduction

The problem in designing the VR4OIMT, is the choice of the starting point (or the jump-start) and the related process, which manages the *Entity's* automated holistic intelligence (Merriam-Webster, 2020a), which can be: 1) The ability to learn or understand or to manage new or revisited situations, by using skilled use of reason; and 2) The ability to apply knowledge to manipulate environments or to think abstractly as measured by an objective criterion. AI based VR supports the ability of an automated and monitored *Entity* to perform intelligent-cognitive tasks/scenarios and to react flexibly to its environment on demand and in real-time. VR needs a global approach for VR4OIMT and is supported by a Decision-Making System for VR (DMS4VR) that can optimally integrate into an *Entity*, which can be a Military organization or a civil virtual Activity (vActivity) team. AI uses a Natural Language Programming (NLP)

that can be adopted by VR4OIMT teams (Myers, Pane & Ko, 2004). The VR4OIMT uses an Enterprise Architecture Integration Pattern for VR (EAIP4VR) methodology as the *Entity's* skeleton and Development & Operations (DevOps) process manager.

Background

A Transformation Project (simply the *Project*) that is based on an ICS can support *Entities* to integrate complex VR4OIMT activities. The DMS4VR is used to solve VR4OIMT requests or problems by offering a set of possible solutions in the form of actions and recommendations. The DMS4VR uses a central qualitative method based on the author's Heuristic Decision Tree (HDT) that in turn uses targeted quantitative methods at its nodes. The DMS4VR supports the VR4OIMT by using its multi-objective and Critical Success Factor (CSF) mechanisms. This research uses existing industry standards, like for example The Open Group's Architecture Framework's (TOGAF) and its Architecture Development Method (ADM) (The Open Group, 2011a). A transformation manager (or simply the *Manager*) can integrate an DMS4VR in the *Project's* roadmap to support its risky VR4OIMT's integration process. The research's methodology is based on 1) A multi-domain Literature Review Initiative (LRI); 2) A mixed qualitative and quantitative methodology; 3) VR4OIMT major references and trends analyses; and 4) An engineering-oriented Proof of Concept (PoC) (or a controlled experiment), which is the optimal for AI based engineering research projects (Easterbrook, Singer, Storey, & Damian, 2008). The DMS4VR interacts with AI and VR analysts by means of an interface in order to manage the CSFs and to launch the HDT based reasoning process. The research's main strength is the classification of CSF sets in Critical Success Areas (CSA) and their usage in the DMS4VR. VR4OIMT based tactics are the basis of modern warfare, in which technology strategy includes the design, planning, coordination, preparing and directing military activities to meet the *Entity's* strategic objectives.

Tactical scenarios are used to implement a strategy, by applying short-term and long-term decisions on the *Entity's* military activities, like in the cases of the usage of technology, biotech, and weapons in confrontations. The known military specialist *Carl von Clausewitz* defines tactics as: *Tactics is the art of using troops in battle; strategy is the art of using battles to win the war*. Winning a war, opens new markets and business opportunities… The VR4OIMT supports the notion of scope and the nature of modern warfare, as well as the context in which *Entities* in conflict, can develop strategic technologies, like biotech. Strategy means, *the art of the general* (from the Greek term *strategos*) is the vision that directs the VR4OIMT. The actual change in the scope and meaning of VR4OIMT and tactics is due to the vast changes and evolution of innovative technologies. *Entity's* technology or ICS capacities, enables the processing and coordination of its various organizations, which have a large set of applications and resources. The DMS4VR and technological evolutions have enabled the transformation of legacy systems. VR4OIMT's central element is EAIP4VR that supports Defense strategies in their defense operations. This Research and Development Project (RDP) will offer a resultant set of recommendation to support the VR4OIMT in various contexts.

The Research and Development Project's Structure

The main topic of the research is related to *Project*s, VR and VR4OIMT; this article's RQ is: "How can the VR4OIMT support an *Entity*?".

The Research Basics

The VR4OIMT is a part of the Selection management, Architecture-modelling, Control-monitoring, Decision making, Training management, Project management, Finance management, Geopolitical management, Knowledge management and Implementation management Framework (SmAmCmDmTmPmFmGmKmImF, for simplification reasons, in further text instead of the term *Transformation Research & Architecture Development framework, just TRADf* will be used.

The Mechanics of CSFs Evaluation

The research for VR4OIMT processing starts with the first phase (PHASE_1), called the feasibility phase, which checks if the *Project's* and VR4OIMT statuses. Then it evaluates the success rate, by using the most important CSFs, by using *TRADf's* Dynamic Rules for AI (DR4AI). DR4AI artefacts are organised, parsed and weighted by DMS4VR's engine. If PHASE_1's results are satisfying and credible, then it is possible to move to the second phase (PHASE_2).

Natural AI Predisposition

Quantum's Support

AI's approach has an important impact on VR systems and the way professionals prepare for simulations, real-world actions, competitions, or exams. AI based automation can implement robots to prepare athletes in traditional activities. Quantum for AI (Q4AI) is a cross-functional or a holistic field that is used for building quantum algorithms which can support computational tasks within AI fields like Machine Learning for VR (ML4VR). Knowing that Q4AI has a holistic approach.

A Holistic View

Holism promotes a view presenting the *whole*, like an *Entity*, as set of strongly interconnected modules, which cannot exist independently in the ICS. The ICS can be regarded as the sum of its modules. Holism is the opposite of a localized approach that creates isolated isles of knowledge modules. Holism is the approach where modules should be viewed as wholes of a unique system, not only a collection of ad-hoc algorithms, as it is often applied. *The term Holism was coined by Jan Smuts in his 1926 book Holism and Evolution*.

Approaches and Contradictions

To analyse various requirements of AI based VR, there is a need to understand various existing contradictions and problems. And above all imagination, as Albert Einstein defines: *Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution…* (Einstein, & Shaw, 2012).

Common Constructs and Artefacts

For all AI and VR domains can be classified using the following constructs and artefacts:

- LRI: where before starting an AI based VR processing task, there is a need to verify the analysed subject and any existing evidence (references) that can support the RQ. This is done in PHASE_1.
- CSFs: can map to any type of variable, like for example a dependent or independent variable.
- A tree, the HDT: is a generic problem-solving tree can be applied to all the defined domains.
- Goal Function for AI (GF4AI) output asserts if the expected result was met.
- Rules define the CSFs (or variables) limitations and if violated, related actions are to be launched.
- Iterations define, the maximum number and current iteration value.
- Data as an input, define the sets of input data.
- Data as an output, defines the type of output data storage.
- Processing success defines, the success conditions for each iteration.
- Error coefficient defines the tolerance to be respected.

Data Science Integration for AI based and VR4OIMT

Data Science Integration for AI (DSI4AI) main characteristics are (Le Baher, 2019):

The understanding of the integration of complex AI algorithms, which can be a hideous task. Nevertheless, it is useful to get insights for future analysis of various CSFs like performance indicators.

In a performance-oriented environment, the main goal is to maximize the CSF related to *Project's* success. Most of quantitative Key Performance Indicators (KPI) are correlated and are related to the selected CSFs, with a configurated *kill participation* and assists in achieving maximum values. *Kill participation* is the percentage of a team's hits in which a player participates.

The 1st iteration concerns teams in which players who achieved the needed level of *kills,* in organised/grouped competitions are better rewarded. It is observed that values are anti-correlated to optimal values. KPIs could give hints about VR activities and supports in-depth analysis.

A vision supports the role for farming, gold earned or damage outputs. *First blood* presence is slightly correlated to the win-rate and should not be a significant CSF. It should not be considered as the main feature for futures DSI4AI based VR4OIMT.

The Architecture Development Method and the optimal Strategy

In the actual age of distributed fast changes, random pandemics, geopolitical instability, AI, complexity, knowledge, economy, and technology, VR4OIMT becomes the most important strategic objective. The ADM is the most used EAIP4VR delivery process, and this article presents which VR4OIMT artifacts are relevant to ADM's phases, which makes the VR4OIMT integrated with the EAIP4VR. This enables, that security frameworks, like SABSA which interfaces TOGAF, that provides common EAIP4VR models to improve secured information exchange between *Project* modules and delimiters. *TRADf* englobes TOGAF, other standard methodologies, and their artifacts.

VR4OIMT'S Basics

Today the world is witnessing unprecedented technological and biotech changes; new adversaries with different alliances, have emerged, alongside traditional threats. These new facts might alter/change the current world-wide order; mainly due to substantial and rapidly modernizing military capabilities and their VR4OIMT. The unfortunate evolution of terrorist groups and non-state militias who have access to sophisticated technologies, biotech, and weapons. Therefore, biotech research has become a major CSF in the global VR4OIMT competition. Classification of actual military types of maneuvers and their variations are a part of the VR4OIMT. New technology and weapons have not drastically changed the existing classical types of offensive maneuvering, like penetration, envelopment, defensive-offensive maneuvers and turning movements. The penetration is one of the oldest maneuver types and is a main attack strategy that attempts to penetrate enemy lines, while at the same time, secondary attacks on other enemy lines prevent the freeing of enemy's reserves. Defensive-offensive maneuvers include attack from a defensive position after the attacking enemy has been slowed down. Turning maneuvers are indirect approaches that attempt to swing wide around an enemy's flank to threaten its supply and communication lines (Cheyney, 2021).

Selecting Entity VR4OIMT CSFs

Selecting the *Entity's* VR4OIMT CSFs is based on the following facts and resources: 1) ICS; 2) Actors and boundaries; 3) Used and connected components; 4) Technical and military functional requirements; 5) Established national defense strategies, objectives and goals; 5) Applied defense and security policies; 6) Sustainability, robustness, proactivity and competition; 7) Geopolitical, national/societal and geo-economical statuses; and their correlation; 8) Behavioral sciences, propaganda and parapsychology mirage, which can alienate the main objectives; 9) Fulgurant evolution of biotech; and 10) The *Entity's* Organized Domain Global Predators' Pattern (EODGPP) for destabilizations and attacks, where the targeted domains, can be national biotech attacks, destabilizations & civil-wars, national security, finance,

logistics, geopolitics or other; it can be even used for a combination of these fields. The main objective is to block and to have the needed information on security and technology services that identifies probable aggressors (or other types of attack patterns).

AHMM4VR and Common Constructs

Common Constructs & Constraints and Rule based Engines for VR

Constraints and DR4AI characteristics are:

- AI defines a set of assertions, stored in a database which maintains VR' data.
- Centralization in one data space, where the rule engines are optimized.
- A rule set is a representation of an expert's knowledge and corresponds to a CSF.
- The integration of a rule engine and a scripting engine in an AI based VR.
- Critical Success Areas, Factors and Related Project Items
- CSF for VR characteristics are:
- A CSF corresponds to a microartefact scenario (a set of actions).
- CSFs are important for the mapping between the AI's resources, VR requirements, microartefacts' scenarios and the VR4OIMT platform.

The RDP starts with PHASE_1, that checks whether the whole undertaking makes sense.

The Basic Nomenclature

The AHMM4VR has a defined nomenclature to facilitate AI's usage needed to solve VR problems. When using AHMM4VR for problem solving, starting with the tree's initial state that has a related GF4AI. The solution is the path through the HDT, where is given a root state, and which satisfies the GF4AI (Tolos, 2018).

Heuristics, ML4VR, Empirics and Action Research

An AHMM4VR instance can launch a qualitative beam-search based heuristic processes (Della Croce & T'kindt, 2002), where weightings and ratings concept support VR requests. Actions Research (AR) can be considered as a set of continuous beam-search heuristics processing phases and is synchronized with ADM's phases. Fast transformation requests may provoke an important set of events and problems that can be hard to predict and solve. The AHMM4VR is responsible for the qualitative heuristic process to support VR4OIMT's problem solving process and it synchronizes a set of AHMM4VR instances. AR based HDT enables reflective practice that is the basis of a holistic approach to develop VR solutions DMS4VR (Leitch, & Day, 2006).

The Applied Transformation Mathematical Model

The model of an VR based Transformation Mathematical Model (VRTMM), abstracts the *Project* for a given *Entity*. The GF4AI of the VRTMM's formula can be optimized by using constraints and with extra variables that need to be tuned using the AHMM4VR. The variable for maximization or minimization can be, for example, can be the *Project* success (Sankaralingam, Ferris, Nowatzki, Estan, Wood & Vaish, 2013). The VRTMM is the combination of AI based VR, *Project* and the ADM.

The Applied Holistic Mathematical Model for VR4OIMT

The AHMM4VR nomenclature is showed in Figure 1, in a simplified form to be understandable on the cost of a holistic formulation vision (Trad, & Kalpić, 2020a). The VR4OIMT uses the AHMM4VR that is formalized as shown in Figure 1, and AHMM4VR' main artefacts are:

- Basic VR4OIMT actions = support of sovereignty, integrity, and secrecy.

- VR4OIMT = A set of basic VR4OIMT actions to counter warfare, attacks, and major failures.
- National Security and security = security of national territory + the defined goals of protecting assets.
- Organizational Security = includes national territory + technology + security.
- *Entity* (or national) Security = ∑ Organizational Security.

Basic Mathematical Model's (BMM) Nomenclature

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

Figure 1. The AHMM4VR nomenclature.

AHMM's Application and Instantiation for National Security and DS

Domain	= MTS	(14)
AHMM(*Domain*)	= ⋃ ADMs + BMMs(*Domain*)	(15)

Figure 2. The AHMM4VR nomenclature.

The Role of Defence Strategy

USA's Department of Defense (DoD) constant technology priorities jeopardizes its capacity to win a long-term technology competition, it needs a systematic and holistic approach, using the VR4OIMT in order to prioritize technology change and investments. Today's ICS' evolution is the leading trend and the highest DoD's priority is VR4OIMT for digital technologies developed by the private sector. The DoD must invest in major technology sectors, such as hypersonics or directed energy weapons, which have real operational values. Technology is the artifact needed to achieve military superiority, but alone it cannot give a decisive advantage and is an enabler for gaining superiority. Combined with the right organization, training and concepts for war activities, technological advantages can make combats asymmetric, but the human factor is the most decisive CSF. By using advanced OIMT like, GPS and precision-guided weapons, the USA defeated Iraq's army during the Persian Gulf War. But afterwards the USA was fatigued and chased out, which confirms that technology must be accompanied by reality, human,

demography, and ideology CSFs. Today *Entities* invest in biotech, long-range ballistic and cruise missiles, integrated in air defenses, counter-space weapons to blind military spy satellites and Cyberweapons to disable logistics. The USA must transform its VR4OIMT to face military aggressions. Military technology is driven by the private sectors because the military does not have the resources to support avantgarde technologies; knowing that the USA has a 700 billion USD defense budget. The VR4OIMT must support long-term OIMT competition. The VR4OIMT is not a person-driven approach, but a framework, which can be used for identifying military priorities. The current person-driven approach must be replaced by a strategic process for setting military priorities. The dominant technology is the ICS, which is leading to exponential growth in digital capabilities (networks and data). The VR4OIMT must incorporate this trend to outcompete adversaries (Scharre, & Riikonen, 2020).

Major Military Technologies

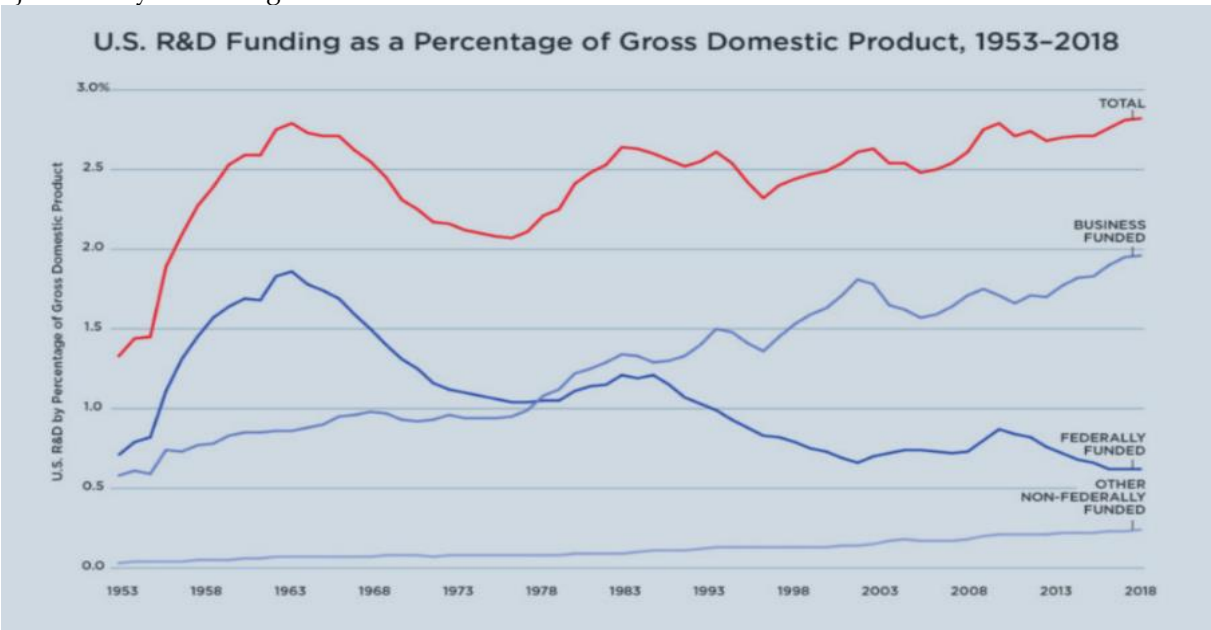

Figure 3. The RDP trends.

The VR4OIMT recommends to invest in major technologies, such as directed energy weapons or hypersonic missiles, when there are clear military values. Non-digital technologies such as materials, optics, energy, and power are improving, but not as fast as ICS, and they are less likely to offer transformative changes in warfare.

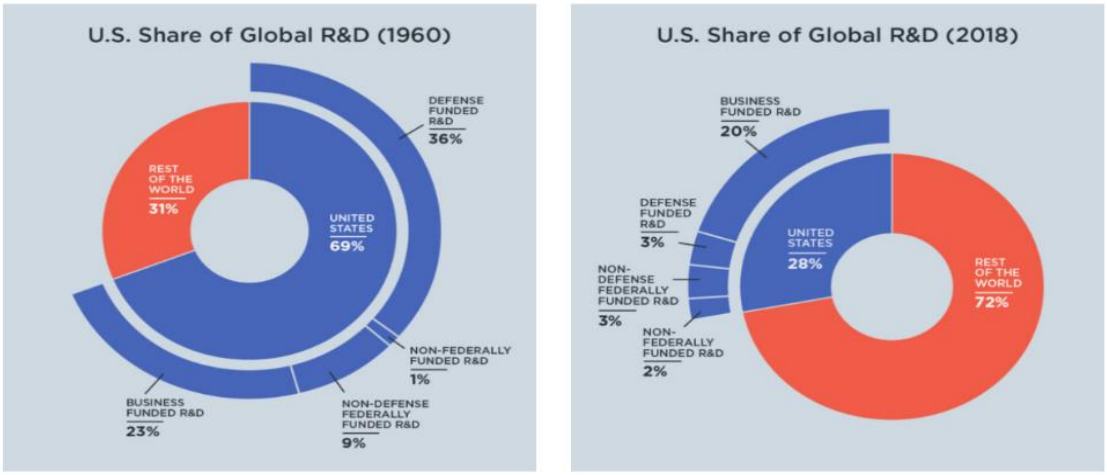

Figure 4. The RDP trends.

The VR4OIMT recommends also to invest in paradigm-shifting *wild card* technologies that have a low-likelihood of reaching operationally relevant maturity, like quantum technologies (quantum computing, communications, and sensing), brain-computer interfaces, AI, and nanotechnology; supporting these areas can be important changes in these areas. The VR4OIMT supports N-tiered investment strategy for critical technologies. As shown in Figure 4, the current global RDP trends in ICS and the rationale for this VR4OIMT. USA' RDP ecosystem has shifted dramatically over the past several decades and the DoD is not the dominant player in RDP's landscape. In the 1960s, the USA funded two-thirds of the RDP and the DoD alone funded about half of national RDP. As shown in Figures 3 and 4, today, the DoD contributes with one-tenth of USA's RDP and its overall share has declined to less than one quarter, where the private sector has filled the rest. DoD's drive on global technology development has vanished due to the shrinking share of RDP spending. In the fierce competition for OIMT lead, the most important CSF is the *Entity's* capacity to combine national public spending, demography, and ideology; that explains USA's decline and China's fulgurant dominance.

ICS' Revolution and Dominance

The most important CSF and trend in the global ICS' ecosystem is information dominance and revolution. ICS has an exponential growth in various areas, like data, networks, AI, and processing power… There are about 22 billion connected devices today, with an annual growth of 10 percent. Internet of Things (IoT) devices include, smart meters, medical devices, and industrial applications, are growing fast. These IoT devices generate data that is managed across the network that trafficked 250+ exabytes per month in 2020. Internet Protocol (IP) traffic is growing fast, at a rate of 26 percent per year and is expected to increase to nearly 400 exabytes per month by 2022. As shown in Figure 5, ICS processing power for AI *Projects* has increased 300,000-fold from 2012 to 2018, which is doubling every few months. This growth in ICS contrasts with its growth in physical attributes (speed, range, scalability, payload, endurance). The most important changes in military competition will come partially from evolution of OIMT capabilities; and the VR4OIMT must include the abilities to sense the environment and transmit information and make optimal decisions. Military technology include mainly: Helicopters, planes, tanks, submarines and missiles and the role of AI will make a difference.

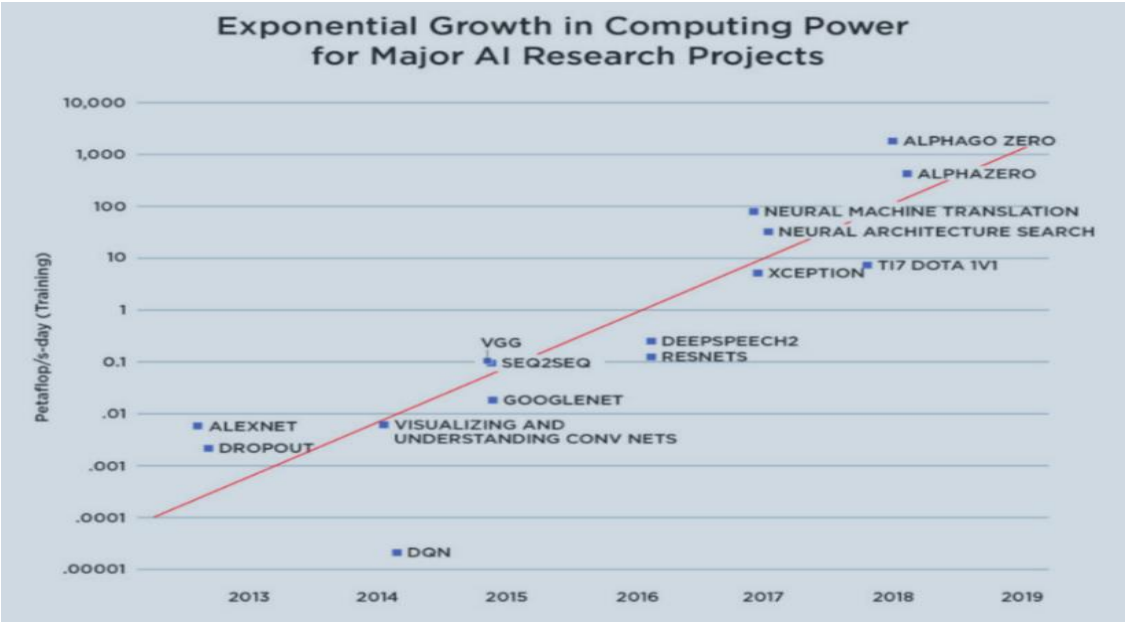

Figure 5. AI Projects' trends.

Major Military Technologies and Strategy

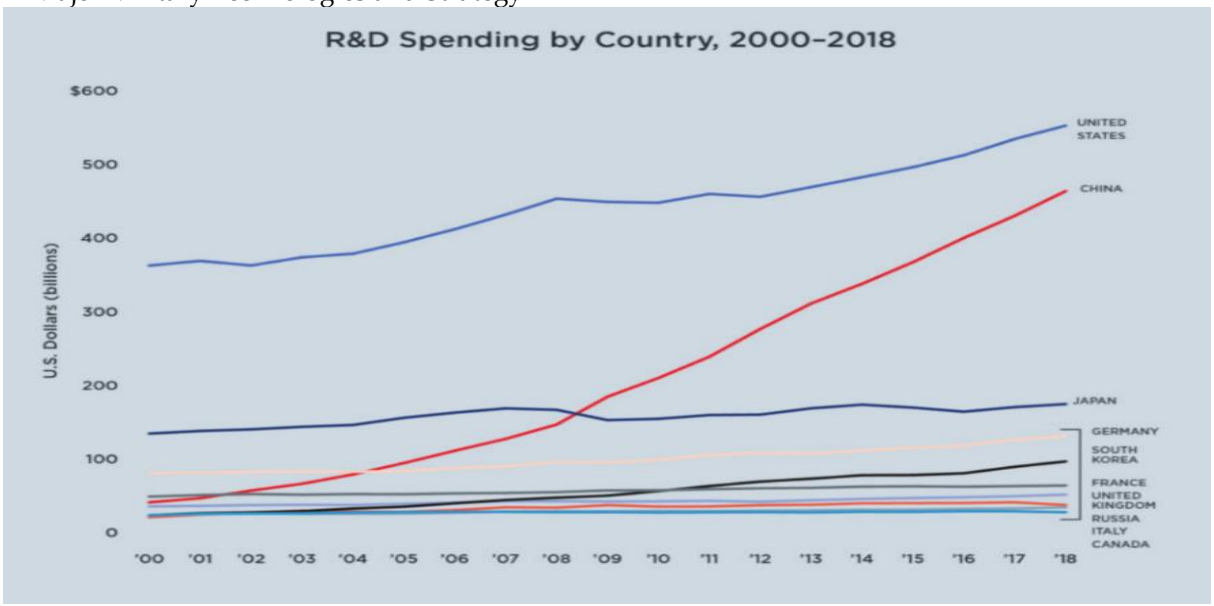

Figure 6. Spending by major players.

There is major technology that do not have financial benefits and, in such cases, the VR4OIMT proposes, to invest and develop them, because nontangible CSFs can be the most crucial ones, like in the cases of actual pandemics. VR4OIMT intangible values include high-energy lasers, hypersonic missiles, stealth, armor and above all the human CSF. The progress of specific technology is slow compared to ICS' evolution, like materials, optics, energy, and power, which present important technological growth rates. The VR4OIMT must consider technology which will not bring financial benefits, but rather intangible

transformative benefits to military activities; the intangible effects will be felt on the longer-term. As already mentioned, investments alone in right rentable technology is not recommended, an *Entity* must enforce its OIMT's capabilities along with other intangible CSFs. OIMT is a crucial CSF for economic competitiveness and financial benefits, which is supported by political and military capacities; but also, by mammothlike companies like Google and others. As shown in Figure 6, China will overtake the USA in national RDP activities, knowing that China is already a leader in various domains, like: AI, genomics, and quantum technologies. The VR4OIMT must support a national technology concept that manages the *Entity's* government, private sector, and allies, in order to be ready for competition. Between the years 1998 and 2018, China's national RDP spending had an average of 15 percent annually and it is closing the gap with the USA. USA's RDP spending was 13 times that of China's in 1998 and China surpassed the USA in 2020. *Allen Institute for Artificial Intelligence* confirms that China overtook the USA in the most-cited 50 percent of AI research papers in 2019 and will surpass the USA in the most-cited 1 percent of AI research papers by 2025.

The VR4OIMT must encourage the public sector and its important priorities are increasing RDP spending; improving human capital through science; technology, engineering, and mathematics education; and accepting high-qualified immigration. There is also a need to: improve data, processing resources; integrating existing standards; enforce policy and regulatory ecosystem. Partnerships and alliances are needed for a global technology ecosystem that becomes mature and at the same time stays competitive, open, and secure. A global technology ecosystem dominated by China would be a major change and an important challenge for the West. Therefore, the European Union and France must develop their own strategy.

Cyberwarfare

Since World War II (WWII), the primary VR4OIMT and tactical advances is the emergence of amphibious warfare. The principal significance of that phase that was supported by massive coalitions dedicated to build a major offensive against Germanic Nazis. The development of nuclear warfare, which continued after WWII, introduced a new VR4OIMT based on nuclear strategy and tactics; that introduced immense destructive possibilities, meant also that warfare had limited VR4OIMT goals. The use of conventional tactics with technologically very advanced arms, would predominate in *limited* wars that followed WWII. That resulted in the need to keep wars limited and that has produced strategies based on small, mobile forces, armed with light weapons, and trained in guerrilla tactics, that can be rapidly used (Cheyney, 2021).

Cyberattacks and Protection

The possible types of Cyberattacks are: 1) Denial-of-Service (DoS) and Distributed Denial-of-Service (DDoS) attacks; 2) Man-in-the-Middle (MitM) attacks are simple types of digital attacks; 3) Phishing and spear-phishing, are attacks in which Cybercriminals target the ICS by email attachments; 4) Drive-by attack or Drive by download attacks; 5) Password attack, password cracking or dictionary attacks are attacks by Cyberhackers; 6) Structured Language Query (SQL) injection attack; 7) Cross-Site-Scripting (XSS) attacks are injections, in which malicious scripts are injected in trusted websites; and 8) Eavesdropping attack, also known as a sniffing or snooping attacks. The most common motivations for Cyberattacks are geopolitical changes, financial greediness, lack of ethics, immoral education and other. Financial greediness can drive to major criminal acts, like, the gigantic financial irregularities, which are related to fraud and money laundering that damage many *Entities*, and this case it is related to major global financial institutions, like the Union des Banques Suisse (UBS) (Stupples, Sazonov, & Woolley, 2019), in which 32 trillion US dollars are *hidden*. Under the cover of bank secrecy… An *Entity's* VR4OIMT

may counter these types of threats: 1) Cybercrime, which includes a single Cyberattacker or groups, attacking *Entities* for financial gains or to cause damage; 2) Cyberattack, often involves politically motivated information gathering for various ideological purposes; and 3) Cyberterrorism, it is used to undermine the ICS and to cause panic; it originates from various anonymous groups. The VR4OIMT proposed actions and predispositions used to support the *Entity's* global stability, security and to reduce risks of possible Cyberattacks and to offer possible protections.

A Cybersecurity attack is possible when the attacker gains the right to attack. These rights must be hardened in order to avoid the following scenarios: 1) Systemic password management; 2) Using screen lock and face recognition when mowing away; 3) Block the used of email attached files from anonymous email address; 4) Not using anti-virus software, 5) Sharing personal info (and client or server nodes); 6) Not reporting security loops to company; 7) Not using proper paper Documents; 8) Non-secured digital Data (while at rest and in motion); 9) Unsecured way of Information handling; and 10) Providing of information over phone.

Financial Cybercrime Schemes

The integration of Finance for Technologies (FinTech) and ICS is crucial for an *Entity* and its financial controls critical system(s). Today such FinTech standards and fields are robust, resilient and can be applied as automated synchronized (block) chains; to enable the traditional financial environments to become a part of a networked financial world. FinTech platforms can be applied to support an VR4OIMT and risks mitigation, in order to avoid locked-in situations. EODGPP locked-in scenarios, when building the financial structure of the future transformed *Entity*, must be blocked. The *Project* team and VR4OIMT must be cautious of eventual financial locked-in situation(s), which is a major stability and VR4OIMT problem. Even though some countries like Switzerland offer attractive financial and tax package(s), this country applies a coordinated legal and financial locked-in trap; it is sealed and represents an unwritten concept that can at any moment sweep out the financial resources from an *Entity* and even powerful countries like the USA, UK and France; and can ruin many *Entities* like Lebanon and even powerful countries like France, who saw its richness dilapidated by Swiss banks. This locked-in Swiss EODGPP model, combines: 1) Specific culture and mentality; 2) The power of Swiss law; 3) Too Big to Fail state banks; 4) Banking secrecy that protects financial crimes; 5) Ultraliberal economy; 6) rejection of local and global standards; and laws; 7) Isolationism and racism; and 8) A finance supportive political environment for collective plundering. Swiss banks and other Swiss financial institutions are under no supervision whatsoever; and are free to hit and run. That indirectly makes this *Entity* the financial and malware industry's super protector that sets up fortifications against any possible legal intrusion; even when these institutions are executing massive irregular, criminal and illegal activities.

The author refers to this phenomenon as an instance of the Black Swan phenomena or simply the directed Swiss Black Swan, which *Entity's* (and countries) should try to avoid and penalize. It is probably wiser to pay more taxes and social services then to face such phenomena and traps (International Monetary Fund, 200). The major problem with combating such a EODGPP based system that is has a hermetically closed environment, characterized by the following: 1) Police and information services, block any attempt to pursue financial criminal acts; 2) The legal system, ignores any attempt to investigate financial criminal acts; 3) Legal support too expensive, to discourage any action of law enforcing; 4) Psychological harassment, to discredit investigators; 5) Intolerance and discrimination, to block any foreign request; 6) A powerful global network, to embed and hide various dubious operations; 7) Financial guerrilla-like and hit and run tactics, to confiscate wealth; and 8) Occurrence of financial locked-in situations and corrupt politicians. Financial havens target to become leaders in FinTech, which is not very assuring; because FinTech should combat state criminality and enforce global security and

international law. It is recommended to avoid any form of financial and technological collaboration with EODGPP oriented *Entities,* like Switzerland.

Secure Development and Operations

DevOps processes must continuously update the *Entity's* infrastructure patches, software applications, operating system… The *Entity* should benefit from the latest methodologies that support applications' changes and which can be opportunities for Cyberattacks, that makes security a critical CFS. To enforce VR4OIMT against Cyberattacks, Secure DevOps (SecDevOps) can be integrated with the ADM. SecDevOps integrates security in the *Project*, by using sets of best practices designed to support *Entities'* implementation processes. Applications' implementation is coordinated by SecDevOps process managed by agile methodologies. The VR4OIMT uses agile methodologies to identify patterns for managing requirements (Mees, 2017).

Legal Constraints

The VR4OIMT supports the *Entity's* legal integration and constraints and to achieve this legal support, CSFs are selected and asserted, to monitor the used artefacts. These CSFs manage the differences in Cybertechnologies' local and international laws. An *Entity* must have the capacity to proactively recognize erroneous Cybertransactions and Cyberattacks, in a systemic manner (Daellenbach & McNickle, 2005).

Biowarfare

Biowarfare can be defined as an intentional application of biological artefacts, like, bacteria, viruses, fungi and toxins, as military weapons in warfare activities. The organized application of microorganisms, like toxins, is an ancient military discipline that is today reinvented. Biowarfare is the actual major strategic domain for any *Entity*, in which biotech is its fundament; the intriguing question is *are the current pandemic waves a prelude to what can be described as possible Biowarfare…*

Biotech as a Major Military Technology

The Chinese People's Liberation Army (PLA) is conducting RDP on gene editing, human performance enhancement, ***viruses*** and other, which is a new type of warfare and advances in biotechnology and genetic engineering have various applications in medicine and in alarming implications in technology. China's VR4OIMT has highlighted biology as a major priority and the PLA is a forefront of expanding and exploiting this OIMT knowledge. PLA's key interests are reflected in strategic writings and RDP that presents advances in biology are contributing to changing the form and nature of warfare, that is formulated as follows:

In the 2010's, War for Biological Dominance publication, Guo Jiwei, a professor with the Third Military Medical University, emphasizes the impact of biology on future warfare, or simply Biowarfare.

In 2015, then-president of the Academy of Military Medical Sciences, He Fuchu argued that biotechnology will become the new *strategic commanding heights* of national defense, from biomaterials to *brain control* weapons. Maj. Gen. He, has since become the vice president of the Academy of Military Sciences, which leads China's military science enterprise…

Biology is among seven *new domains of warfare* discussed in a 2017 book by Zhang Shibo, a retired general and former president of the National Defense University, who concludes: *Modern biotechnology development is gradually showing strong signs characteristic of an offensive capability*, including the possibility that *specific ethnic genetic attacks* could be employed.

The 2017's edition of Science of Military Strategy, a textbook published by the PLA's National Defense University, which is authoritative, debuted a section about biology as a domain of military

struggle, similarly mentioning the potential for new kinds of biological warfare to include *specific ethnic genetic attacks*.

Following these lines of VR4OIMT approaches, the PLA is pursuing military applications for biology and looking into promising intersections with other disciplines, including brain science, supercomputing, and AI. Since 2016, the Central Military Commission has funded projects on military brain science, advanced biomimetic systems, biological and biomimetic materials, human performance enhancement, and *new concept* biotechnology.

The Role of AI

The intersection of OIMT, biotech, finance and AI can be a strategic Synergy. The complexity and the huge human genome characteristics, need immense big data infrastructure, that in turn needs AI and machine learning to analyze these characteristics. In 2016, the strategic value of genetic information, influenced the Chinese government to create the *National Genebank*, which is the largest genetic information database; its goal is to *develop and utilize China's valuable genetic resources, safeguard national security in bioinformatics, and enhance China's capability to seize the strategic commanding heights* in domains related to biotech and probably Biowarfare (Kania, & Vorndick, 2019).

VR4OIMT'S Advanced Topics

Nuclear modernization has become one of the least priorities and the actual priorities are: Biotech, Hypersonics, directed energy, Command, control & communications; Space offense & defence, Cybersecurity, AI & machine learning, Missile defence, Quantum science & computing, Microelectronics, Autonomy (which replaced nuclear weapons). But actual VR4OIMT's modernization priorities are Biotech innovation, AI and machine learning, Biowarfare, Autonomy, Cyber, Directed energy, fully networked command, Microelectronics, Quantum, Hypersonics, 5G, and Space technologies. Biotech, AI and autonomy are probably the number one priority for any VR4OIMT (Kania, & Vorndick, 2019).

Guidance on Security for the Architecture Domains

VR4OIMT's Security (VR4OIMT_SEC) requirements are pervasive in all *Entity's* (sub)domains and to all transformation phases. The VR4OIMT_SEC focuses mainly on the infrastructure that is not visible to other functions; it also focuses on the protection of the ICS and *Entity's* assets. VR4OIMT manages single-purpose components and measures the quality of the ICS, and the common artifacts are: 1) AI rules for handling of data/information assets; 2) Defined VR4OIMT_SEC policies, 3) Codified data/information assets' ownership and custody; 4) risk analysis documentation; and 5) Data classification policy documentation. The VR4OIMT_SEC has its own unique building blocks, collaborations, and interfaces; these blocks must interface with the *Entity's* ICS in an optimal manner, to support VR4OIMT_SEC's policies and to avoid interfering with ICS operations. VR4OIMT_SEC is effective to design and implement controls in the *Target Architecture* in the initial development cycle to support reengineering development and deployment. The VR4OIMT_SEC manages the normal flow of application's fallout, abnormal flows, failure modes and the possibilities in which the ICS and applications can be interrupted or attacked. All *Entities* have security concerns, and they should dedicate an VR4OIMT_SEC to support their *Projects*. In all ADM phases, recommendations are given on VR4OIMT_SEC's and general security management processes (The Open Group, 2011b).

The holistic strategic human resources system for AI

Concerning the Human Factors (HF) CSA, in the author's previous RDP works, he has concluded that a *manager* is Architect of Adaptive Business Information Systems (AofABIS), specialized in the implementation phase of a *Project* (Trad & Kalpić, 2020a). In the case of the VR4OIMT the AofABIS, can be enforced with this article's recommendations.

Critical Success Areas and Factors for VR

The sets of HFS CSFs are presented in the form of a real-world constraints, which affect VR's activities. *Managers* for AI based VR's integration might benefit from this RDP, while its ambition is to be considered as a major *Project* managerial and technical benefit.

Needed HF Skills for the Selected Profile's Skills

There is no concrete educational curriculum for a *Manager* for VR integration topics, where bookkeeping and political sciences profiles are chosen for such tasks. There is an essential need for more research on VR *Managers*' profiles and prerequisites. The needed skills must comprise the knowledge of VR's: 1) AI processes; 2) Automated process management; 3) Agile *Project* management; 4) VR team behaviour; 5) ICS architecture; 6) VR development kits; and 7) ICS' and VR's implementation skills. It is recommended to use AofABIS' profile for the selection for VR oriented *Managers*.

Training Requirements

Managers need hands-on skills and educational curriculum that includes the following set of skills: 1) VR architectures and processes management; 2) Complex VR integration initiatives; 3) Agile AI based development; 4) Knowledge Management System for VR (KMS4VR) management and integration; 5) VR's design; 6) DMS4VR management and integration; 7) VR4OIMT functional domains.

The Role of Education

Basic Educational Constraints

The role of VR4OIMT in education is described as follows (Acer, 2018):

- Higher education needs vActivity that have already gained its place in higher education systems worldwide.
- Like traditional athletes, successful videogame players in high schools are awarded with scholarships for their studies. The main motivation for this trend is the proven impact of high videogaming skills on Science, Technology, Engineering…
- The value of vActivity in education can make confusions between serious educational approach and mere entertainment.
- There are initiatives to convince parents about vActivity in the educational system, where their children will experience video gaming in an educational environment. Such an approach can make students more prepared for the future.
- A strong relation between vActivity and engineering subjects has been already proven. Competitive video gaming can enhance the development of engineering skills …

The Evolution of Behaviour

VR communities are heavily suffering from toxic behaviours, especially in competitions. There can generate negative behaviour, such as harassment and making barriers for players achieving high performance, to reduce players' efficiencies in order to make them leave the game. Sources indicate that the health players are at stake, they do not face identical challenges regarding a healthy lifestyle as the average population. The transformation of VR training and integrating it in the real world, is a way to integrate physical activity and other behaviours in training (Rudolf, Bickmann, Froböse, Tholl, Wechsler, & Grieben, 2020).

Holistic decision and knowledge making systems

AI Basic Structure-The Use of Heuristic Trees

The HDT is an abstract model, and it can be defined as a collection of nodes linked together through edges in a hierarchical structure. They have no cyclic relations and there is only one path to a particular node (Open4Tech, 2019). Knowing that there are different types of trees, like Binary Tree, Binary Search Tree, Red-Black tree, AVL tree, Heap, etc. The deciding factor on which tree to use, is mainly performance and flexibility. Since HDTs are data structures, performance is measured by inserting and retrieving data.

Evaluating the Decision

HDT's evaluation starts from the root to the right-hand side and moves to the left; and the main steps are:

- All nodes are labelled, and it starts with the closest node to the right-hand side, labelling the top and then the bottom nodes.
- Then, recursively moving from right to left, weighting VR4OIMT results.
- Finally, the optimal actions are offered, based on the option that gives the best results.

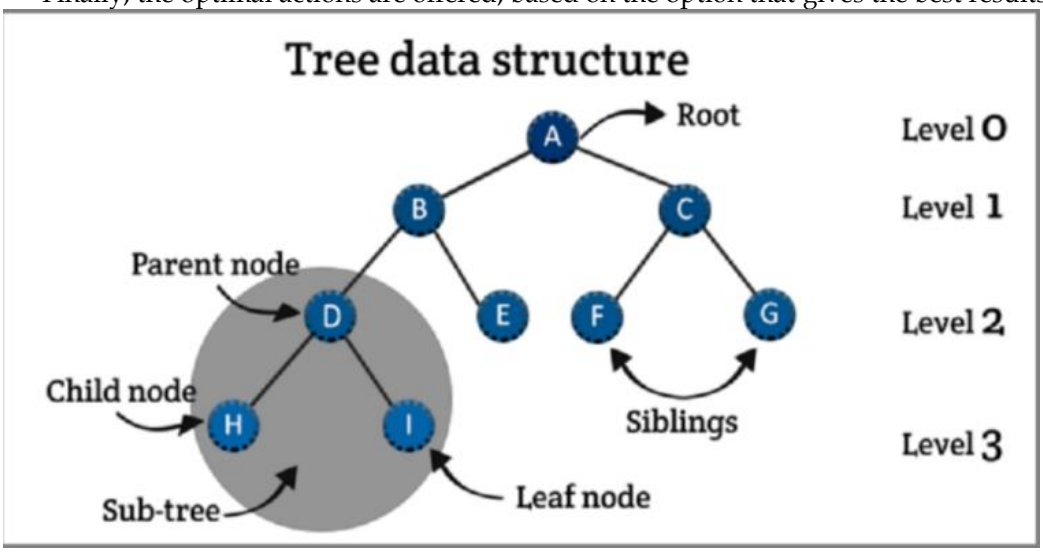

Figure 7. A heuristics decision tree.

Complex Decision based Systems

The DMS4VR supports VR4OIMT requests, which are processed by using an AHMM4VR's instance, that in turn is based on the selected CSAs and CSFs. The DMS4VR and KMS4VR have a *complex system's nature*.

Rule based Engine for AI

The VR4OIMT uses rules based DMS4VR and its main characteristics are the following (Krasner, 2020):

- It is rule-based and covers most of the so-called ML4VR.
- There are various manners to integrate VR where data plays a major role.
- Best practices can be used to choose the right AI methods.
- ML4VR can be used to store human knowledge into DMS4VR as rules.
- The DR4AI is optimal, but many rules can limit VR's capabilities.
- The Use of Machine Learning for VR

- The DMS4VR uses ML4VR, where its main characteristics are (Krasner, 2020):
- DR4AI is a static intelligence approach, in contrast with ML4VR which tries to simulate the brain.
- ML4VR can deduce new rules and eliminate the rules that are not useful.
- ML4VR learns in various ways, but *supervised training* is generally the first step in a ML4VR process.
- ML4VR interprets, classifies, and performs scenarios using unstructured data formats.
- To define VR's integration strategy that must begin with DMS4VR's integration.

Knowledge Management System for VR

This RDP relates and assembles VR microartefacts and resources; it links them also to the KMS4VR and automates autonomic NLP microartefacts' instances in all of the ADM's phases (The Open Group, 2011a). The VR based team must identify the initial set of CSAs and CSFs to be used in the KMS4VR and DMS4VR, through the use of HDT's interface.

The DMS4VR and VR4OIMT

The AHMM4VR based DMS4VR is managed by *TRADf*, where any *Project's* user can configure the types of NLP microartefacts and CSFs to be used; these NLP microartefacts are orchestrated by the AHMM4VR choreography engine. The AHMM4VR based DMS4VR' actions (or services) map to the various AI internal mechanisms to deliver concrete actions. The AHMM4VR formalism is implemented in all of the *Project*'s processes and the implementation of microartefacts to deliver a DMS4VR; such a set of actions can be modelled and managed by the AHMM4VR that is implemented with an experiment or a PoC (The Open Group, 2011a). The main impacts of DMS4VR on VR4OIMT are (Bailey, 2012):

- Rare initiatives have researched the relationship between complex DMS4VR usages and the VR world.
- Results show that some types of video games increase aggression, benefit visual-spatial processing, and produce various (mainly negative) effects on executive functioning and affective processing.
- These effects are relevant given the impact of executive functioning and affective processing on the quality of DMS4VR.
- DMS4VR is a crucial part of successfully achieving one's goals in many scenarios, including those encountered in VR4OIMT.
- The negative association between game experience and cognitive control is in particular focus because time spent in front of screen can be relatively high during late adolescence, which is an important period for the development.

THE ROLE OF THE VR PLATFORMS

Technological Fundaments-Basic Technologies

The platforms' main fundaments are (Alton, 2019):

- vActivity are being put to the forefront of the sporting world, where technology plays a crucial role in enabling players, from various platforms to share resources and to prevent injuries.
- Building vActivity infrastructure needs: 1) Agile networks; and 2) On-Premises and edge technology. Technology is the most important vActivity CSF for supporting a lab, which includes security, data centre, digital signage and cabling solutions.

- Network speed and agility are critical CSFs; one of the biggest issues that affects vActivity space is latency. Primarily, tournaments are broadcast via streaming platforms such as *Twitch and Steam*.
- Cloud companies are focused on building network stability and reducing latency to as much as 20% of standard acceptable lag for hard-core gamers, using Wi-Fi 6, 5G and edge computing.
- On-Premises solutions for security, for fraud detection, since activities are online; on-premises technology is preferred for vActivity.
- Basic specs are provided by the competition leagues and offer a preview on tech needs evolution. Specs includes guidelines on processing power, memory, hard drives, and graphics cards. Specialized companies support competitive specifications.
- Asset tagging helps in tracking of devices and managing their setup. VR can leverage features, like order management and managing upgrades, and services. Maintaining VR devices is a top consideration for long-term technology planning.
- Monitors trace the visual experience where monitors are used during gameplay, practice, and competitions. Monitors are critical, as they deliver the visual interface that enables tough competitions. A monitor has the graphics, size, and refresh capacities to offer a visual experience that pairs with a computer that processes gameplay at lighting speed.
- Another CSF to consider, is digital signage and large-screen video displays.
- Accessories like keyboards to headsets have an important role for gaming experience. Headsets allow your players to hear the gameplay and participate in team discussions via microphones.
- Cameras help to experience the thrill of vActivity. Video production, equipment and positioning are critical. Broadcast quality cameras geared toward the high-performance needs of the industry is not only a requirement in many leagues but also a necessity that provides audience engagement.
- Services for tuning vActivity components are essential, where keeping the platform on point is an important CSF. Laying the right technological foundation is a key to building VR solutions.

Using Rules Engines

Implementing VR4OIMT in complex technologies like the automation technologies for IoT can use the following rules engines:

- Rule's engines are based on forward chaining algorithms.
- Condition/action rules engines are supporting VR.
- Stream processing rules engines process data in motion, directly as they are produced or received.
- Event processing engines are the predecessors of stream engines and differ from them in the way they handle events.
- HDT are a concise visual representation for specifying which actions to perform, depending on given conditions. They are algorithms whose output is a set of actions. The information expressed in decision tables could also be represented as HDTs.

Trends

VR platforms' main trends are (Verdict, 2020):

- vActivity is the fastest growing gaming domain, this multiplayer VR has a spectacular growth over the last decade, having 10% of the 4.5 billion, and is expanding rapidly. Various brands are investing in vActivity, and the revenue believed to have surpassed $1bn in 2020.
- vActivity is expanding and in organised multiplayer gaming thousands of spectators are filling stadiums to participate in live events, and millions are following them on streaming platforms.
- As mobile vActivity is prominent, Nintendo is well-positioned with the Switch; with over 100 million PS4 users, Sony could attempt to bring consoles to the forefront of the market.
- VR4AI, using headsets and new games, is a fresh market for VR4AI vActivity that is emerging. The company HTC, with its Vive Focus Plus headset, and Facebook's Oculus, with the Quest, are major players in this area. VR4AI based vActivity allows people to join a healthier set of activities. This type of activities permits the loss of weight and become fit.
- AI is an integral stub for vActivity and includes ML4VR training platforms for skills and strategy development. Organisers like FaceIT are using Minerva, a community management tool that uses ML4VR, as an anti-fraud mechanism.
- DSI4AI, extracts insights from data used by *Entities* across VRSs. Teams such as Cloud9, Team Liquid, and Astralis have partnered with Microsoft, SAP, and Newzoo, to use data to develop VR strategies.
- Match-fixing includes two-thirds of vActivity, where executives believe match-fixing is a threat to the industry's legitimacy and growth, according to a 2019 survey by law firm Foley & Lardner and the vActivity Observer.

VR4OIMT'S Robustness

The powerful new technology of VR is here to stay, disruptive in impact and pervasive in presence, its significant computational capabilities and vast potential for deep learning applicable to a sea of use cases in daily life and commerce. And together with 5G connectivity, IoT, and the Cloud, AI will become part of the group of transformative technologies that are now converging and overlapping in new ways, giving rise to fresh opportunities and challenges alike. AI adoption will be heaviest in the automotive, manufacturing, healthcare, and in defence industries, with datacentre and cloud computing infrastructure forming the principal areas in which AI training will be carried out.

The Role of Big Data Integration for VR

The role Big Data Integration for VR (BGI4VR) main characteristics are (Wooden, 2021):

- BGI4VR analytics and hybrid cloud technologies are used to improve performance; vActivity teams and broadcasters are using innovative ways.
- Competing vActivity teams develop strategies, while operators want to provide more enhanced viewing experiences and better regulations. New analysis methods using rich data sets are generated by the matches, giving a detail view of how teams interact. Advanced tools for tracking and analysis of data generated by players, is used by DSI4AI initiatives.
- BGI4VR is revolutionising the future of vActivity, and the stakes are high. Success is often determined by strategy and the analysis of past performance. The secrets to success lie in BGI4VR and vActivity integration capacities.
- It is possible to collect statistical info on matches from websites, but the capacity to have deep analysis is not a simple task. That is why the best way of capturing huge amount of match information is by using AI algorithms that suggest improvements.

- Tools for measuring are evolving and VR4OIMT can simulate a team and process huge amounts of data. Using data based ML4VR (that does not replace human intuition) is the way to guide in practice.
- Like any form of high-profile competition, the betting industry has made moves to capitalise on huge viewership figures that vActivity generates. A subject of controversy is the pressure to make sure that everything stays within the rules.
- VR is going to get more entwined in the future, with potential for not only providing intelligence for marketing and professional performance, but also with regards to regulation.
- Cloud infrastructure and BGI4VR analytics is integrated in VRSs. Sophisticated APIs and cutting-edge fields, like ML4VR, support teams to prepare for competition. Data is a major game transformer.

THE IMPLEMENTATION'S POC

The CS

As mentioned, the CS is related to two cases, it includes an insurance claims system (CS_1) and an VR gaming case (CS_2), where AI is the VR4OIMT's main interface.

The PoC

The CS_1 Phase

The used CSFs have bindings to specific RDP resources, where the AI was designed using an NLP microartefacts. This article's table (and results) are illustrated in Table 1, which shows clearly that VR and VR4OIMT are not an independent component and in fact are strongly bounded to the *Project*'s overall architecture, and that is achieved by applying a holistic and cross-functional approach. *TRADf* and hence VR4OIMT's main constraints are that CSAs for simple RDP components, having an average result below 8.5 are ignored. AI represents the relationships between the VR4OIMT, this RDP's requirements, NLP scenarios and microartefacts, unique identifiers, and the selected CSAs.

	Critical Success Factors	KPIs	Weightings Ranges	Values
1	RDP4AI	Feasible	From 1 to 10.	9,5
2	AHMM4AI	Feasible	From 1 to 10.	9,6
3	ACS4AI	Feasible	From 1 to 10.	9,25
4	ICS	Feasible	From 1 to 10.	9,75
5	ADM4AI	Proven	From 1 to 10.	10
6	HR4AI	Feasible	From 1 to 10.	9,4
7	KMS4AI	Feasible	From 1 to 10.	9,25
8	DMS4AI	Feasible	From 1 to 10.	9,2
9	PLATFORM	Complex	From 1 to 10.	8,4

EvaPA

RESULT: 9,3722222

Table 1. The research's overall outcome is (rounded) 9,40

The CS_2 Phase-The Platform Setup

With these facts CS_1 is concluded, CS_2 then starts, with adapting the BGI4VR module to the data modelling part and it concerns the selected case studies, from the insurance domain and VR. ArchiSurance data architecture describes the main relationships between its conceptual business objects and the *Project*'s logical data objects. ArchiMate also defines the ICS's Information Structure viewpoint for the presented purpose; the Information Structure viewpoint is like the traditional data models. The used data viewpoints that the CS uses is the Logical Data diagram; that shows a subset of the objects that ArchiSurance defines. A component, the customer data, is in the insurance file, which contains: 1)

insurance requests for VRSs; 2) insurance policies for VRSs; and 3) damage claims. The purpose of the Data Dissemination diagram is to show the relationship between the entity sets data, business services, and application components. The diagram shows how the logical objects are to be implemented. Assigning VR requirements to data is a CSF that is related to the competition criticality of the VR infrastructure (Jonkers, Band, & Quartel, 2012).

The CS_2 Phase-Using the HDT

Like mentioned previously, the FIFA gaming environment was installed sharing a central server, in which all the games and teams' activities were stored, in the form of logs. Log records are scanned and mapped to the CSF and HDT models, by using the *TRADf* client's interface. From the *TRADf* client's interface, the NLP development setup and editing interface can be launched. Once the development setup interface is activated, the NLP interface can be launched to implement the needed Microartefact scripts to process the selected CSAs. These scripts make up the VR4OIMT and AI's set of actions that are processed in the background. The AHMM4VR based AI that generates actions which make calls to the DMS4VR, that manages the edited NLP scripts and flow. RDP's instance of the AHMM4VR and the selected CSFs, deliver the set of solutions. The HDT is applied on a specific CSF that is mapped to a specific VR based problem and a set of actions, like for example the game's central log server's resources overflow problem. In this PoC a resources problem was selected as using the log files of Kinect kit for gaming. The HDT algorithm uses punctual DSI4AI calls to quantitative methods.

Conclusion

Table 1 showed that VR4OIMT's implementation is a complex but not a very risky process; except for the platform resources' limits, and this article's PoC, has achieved the defined objectives. The VR4OIMT is mapped to the *Project*'s processes; where the selected set of CSFs are mapped to defined actions; like the ones presented in this article's PoC. The aggregation of all the *Project*'s CSA/CSF tables exceeds the defined minimum, the *Project* continues to its PoC or can be used for VR problem solving, by using HDT's algorithms with punctual calls to quantitative methods. This RDP's phase is part of a series of publications related to *Project*s which use mixed AR model; where CSFs are offered to help VR *specialists* to prepare for competitions. In this article, the focus is on the VR4OIMT, and VR integration processes and it is recommended to:

- *Project* has sub-projects, where the priority is to transform the DMS4VR and the existing ICS platform.
- A DMS4VR must be built to support *Managers* on various levels to manage the AI based VR4OIMT.
- Standard methodologies improve the robustness of VR's infrastructure, after unbundling the ancient infrastructure.
- A *Project* has to implement a AHMM4VR-like concept, to support vActivities and fraud situations. Fraud, cases that are organized by major financial institutions can be expected (Stupples, Sazonov, & Woolley, 2019).
- VR4OIMT supports the strategy and preparing defence strategies.
- The VR4OIMT supports a VR4OIMT to ensure an efficient global defense concept.
- Public OIMT should replace private sectors' investments. Profit making can be contra-productive.
- Cybersecurity should fit in the *Entity's* VR4OIMT.
- Conflicts, Biowarfare, wars, and military investments are the backbone of major economies.
- Military organizations are the ones who drive major technological transformation trends.
- Humans and their sustainable demography are *Entities*' main CSF.

- *Entities* are using technologies, biotech, and methodologies as the kernel of their VR4OIMT.
- FinTech would make financial operations more embedded, and abstract, which can support major financial crimes…
- To avoid any form of collaboration with doubtful financial EODGPP oriented organizations, like the Swiss ones.
- Cyberattacks and Cyberwarfare are advancing quickly especially the domains of biotech and Cybertechnologies.
- Modern biotechnology is showing offensive capabilities… Which alarming, having insight the actual pandemic situation.

TRADf englobes TOGAF and indirectly SABSA and other standard methodologies and artifacts, which facilitates the transformation process.

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