

An attempt to apply the Business Transformation Framework and Enterprise Architecture Framework for Managers in Business Innovation to explain the changes that followed the 9/11 attack

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Abstract

The 9/11 terrorist act has hit the epicentre of the Western hemisphere's societal, financial and cultural Megalopolis resulting in the American military actions in Iraq and Afghanistan that destabilized the whole Middle-Eastern region and Islamic sphere of influence. These retaliatory military actions culminated in 2005 and 2006 with the withdrawal of Western armed forces out of the whole Middle East; this event was accompanied by the withdrawal of the Syrian occupation forces from the Lebanon and the Israeli army's military adventure in the extreme south Lebanon. These military misadventures, signalled a discrepancy between the Western's financial giant and its military forces capacities that gained the reputation of a tiger of paper. The discrepancy or gap was deepened with the obvious loss of oil fields in the Middle East and in North Africa that are the very probable indirect cause for the 2007-2008 worldwide financial crisis that today is known as the sub-prime crisis. These crises caused and are still causing many world-wide instabilities like: the 2011 launch of the Arabic spring that was in fact the rise of Baghdadi's Islamic State, the regional Syrian civil war that looks more like a confrontation of global powers, the rise of far-right xenophobic currents in many Western countries, the European union's unbundling due to the BREXIT vote, the neo-feminist rise as a new societal alternative to the traditionally male dominated environments and the emergence of new global powers like China, Russia and India. The Western's influence faded away to be replaced by new regional and global powers... The 2001-2018 transformational societal period needs in-depth analysis that depends on measurable inter-related factors characterizing the reasons for the mentioned events and the everlasting financial and societal crisis to which are applied simplistic financial and accounting strategies. These strategies are based on rigid accountancy, austerity and superficial studies similar to the ones to invade Iraq. This research uses the historical financial and geopolitical crisis, extending from year 2001 until today, to present a major change triggered by a brutal and sudden societal transformation event [1]. The authors use the case of the 2008 crisis in an attempt to demonstrate this research's mathematical modelling method and analysis environments to deliver a set of explanations and recommendations. The authors apologize in advance for any possible offense created in discussing these historical, societal and political events. They based their research article on various sources of information and are aware of their possible bias or doubtful reliability. The authors fully respect completely opposite views that may legitimately exist. Political issues were used here just as an attempt to demonstrate whether the computerisation methodology applied in restructuring of business companies could be applied on a larger scale.

Introduction

An entity like a government, or enterprise may use an architecture methodology or other standard methodology to link events or requirements to its environment's organisational characteristics and to map their underlying resources, technologies, which are based on functional inter-related services [2]. Unfortunately, Business or Societal Transformation Managers (BTM), executive leaders or geopolitical analysts often simplify their analysis to complex problems by forwarding simplistic silo explanations. This article's main aim is to warn prospective BTMs of the possible pitfalls that may be encountered when confronting complex crisis, where event like the 9/11 is not an isolated one. In this article the authors offer a set of proven geopolitical and financial recommendations that would cover and support sudden societal transformation waves. This article is a part of a long series of articles related to Business Transformation Projects (BTP) and Enterprise Architecture (EA) that deal with the various aspects of frequent transformational changes. The implementation of such BTPs' geopolitical module requires the interaction of multiple heterogeneous disciplines and fields and it can be modelled with standardized methodologies. The authors have based their research on the main fact that only around 12% of organisations successfully terminate innovation-related business transformations projects [3]. A societal transformation is not just a set of isolated human, technology or infrastructure change event, but it is rather a set of interlinked major events that are ignited from one or more sources. That is why there is a need to adopt the right agility strategy to explain major shocks. The applied research methodology is based on a literature review of credible sources like the Gartner Inc., a quantitative-qualitative mixed methodology and on a proof of concept that is used to prove the related hypotheses and to offer a set of recommendations.

The applied research methodology

The automated societal pattern component

The Societal Transformation Pattern (STP) draws its knowledge, architecture, design and framework implementation from the services of various implementations of the actual research project and other research artefacts [4]. The STP promotes geopolitical driven global environment that use references to various types of interrelated events. The STP can be applied to many similar geopolitical and societal transformations; and this component is the focus of this research phase. The STP component is a part of the Geopolitical management module (Gm); Gm is also a part of the Selection management, Architecture-modelling, Control-monitoring, Decision-making, Training management, Project management, Finance management and Geopolitical management Framework (SmAmCmDmTmPmFmGmF, for simplification reasons, in further text the term *Environment* will be used), that is the major support for societal transformation's activities following major black swans [5].

The research process

The BTP's global research topic's and the final research question (hypothesis #1-1) is: "Which business transformation manager characteristics and which type of support should be assured in the implementation phase of a business transformation project?" The targeted business domain is any business environment that uses: 1) Internet, automation and engineering technologies; and 2) frequent transformation iterations. For this phase of research, the sub-question (hypothesis #1-2) is: "What is the impact of the 9/11 terrorist event on global finance?".

Critical Success Areas and Factors

Critical Success Area (CSA) is a category of Critical Success Factors (CSF) where in turn a CSF is a set of Key Performance Indicators (KPIs), where a KPI corresponds to a single requirement. CSFs for a BTP or a business environment are a limited number of business sub-areas in which values are satisfactory if ensuring successful competitive business performance. CSFs reflect performance areas that map to strategic goals and defined financial constraints. The BTP must select the right CSFs in order to survive and to prepare for competition. For that goal the BTP must find the Critical Success Areas (CSAs) that require constant and special care in real-time; in addition to that, it needs important attention from the business environment's executive management. Critical success factors for any business are the limited number of areas in which results, if they meet business goals, would ensure successful competitive performance for the organization. Therefore, CSFs reflect performance areas that must meet strategic goals and the defined societal and financial constraints, if a sane business future is desired for the target business environment. Measurements are used to evaluate performance in each CSA, where CSFs can be internal and/or external; like for example: 1) geopolitical gaps analysis CSF; and 2) the role of resources like oil CSF; and many others. The *Environment's* method is to select the CSA category and the corresponding CSFs that are to be used to audit the strategic societal objectives [34]. Once the initial set of CSFs has been identified, then the BTP has to use the decision-making module to verify the CSFs and to give them the right weightings. The analyst should identify an initial set of CSFs to be used for the performance measurement system. Hence CSFs are the most important mapping/relation between influence factor sets and decision-making systems; that all defines the STP[6][7].

Neural networks-oriented system

The *Environment's* Decision making (Dm) module is conceptually based on a mixed method combining Action Research (AR), tree heuristics and directed quantitative analysis. The authors believe that qualitative and quantitative methods can be united in a single method. AR is applied in education research and this fact supports the BTP's capability to build finance and business intelligence microartefacts in a continuous learning process. This process inspects and learns from configurable intelligent risk and financial microartefacts that are found in the decision-making subsystem. The decision-making subsystem is generic and can be applied to any financial field and is considered to be easily adaptable; where its basic neural networks algorithm is based on: 1) Neural Networks and Enterprise Architecture's (NNEA) concept; and 2) Agnostic Implementation Environment (AIE). These components are all parts of the decision-making module and they all support the transformation process by building specialized risk and finance microartefacts, where these microartefacts are instances of building blocks [35][36]. The unfortunate 9/11 terrorist attack was not the first collective suicide attack, in fact it was preceded by many other similar actions in Paris, Beirut, Cairo, Bagdad, Nairobi, etc... [8].

The origins of terrorism and the pre 9/11 events

The roots of the terrorism phenomena are anchored in the history of an extremist sect, who was once based in Aleppo Syria, more precisely in the 11th-12th centuries whose terrorist methods gave the English language a new word, *assassin* that came from the Arabic word *hishesh* that denotes a person who smokes grass. In reality these professional assassins were drugged to achieve their terrorist acts. The word 'Assassin' was brought back to Europe from Syria by the Christian Crusaders, and has acquired the meaning of a murderer. The word assassin was originally applied to the members of the extremist Muslim religious sect that is a branch of the Ismailis movement whose leader was known as the Old Man of the Mountain.

Their beliefs and their methods made them a by-word for both fanaticism and terrorism in Syria, Persia the whole Middle-East in the 11th and 12th centuries, and the subject of myth and legend [8]. This sect is considered to be the origin and inspiration of organized terrorism which saw its fire reignited in the Lebanese uncivil war [9].

1975, the Lebanese uncivil war

1975, April 13th, is the official start of a well-financed and planned 15-year Lebanese uncivil war [10]. This war had various phases, where the first phase, was known as the two years war, was a confrontation between the Lebanese Forces and rebellious groups. The two years was of indescribable brutality, where massacres on civilian populations were the main method to intimidate the enemy. This spiralled more and more violence to intimidate the opponent that resulted in the use of human bombs and suicide associations aimed to break and totally annihilate the opponent armedbrigades who seemed to adapt and were even able to hit back with equal and unfortunate brutality. To be more precise, the first major terrorist attack took place in 1978 in the district of Akawi in Beirut, killing many people and this event can be considered as the jumpstart of a new-old terrorist culture[39]. In 1979, the Iranian revolutionary movement toppled the USA backed Shah of Iran and established a strategic alliance with Syria. For the Lebanon this meant more confusion that culminated with terrorist attacks on the American and French Army Barracks in Beirut in 1982 near the Airport of Beirut and 1983 blasting the Drakkar building. Western forces decided to leave the Lebanon, running away from the rebirth of terrorism, the withdrawal of Western forces was a terrible mistake because it showed the West's weaknesses. These actions were the first well organized terrorist attacks which inspired many self-financed freelance terrorists like Al Qaeda's Osama Bin Laden [11].

1991, the collapse of the Soviet Union

In the early nineties, the west with the United States' leadership, became the lonely super-power that earned the title of the global police and peacemaker. The domination was so flagrant that the United States permitted itself to intervene directly in conflicts like in ex-Yugoslav republics, where in the cases of Croatia, Bosnia and Kosovo, it was predominantly regarded as a just and human intervention. This domination seemed to be total, except and until the 9/11 disaster and the rise of a multi-lateral world.

9/11 2001, the disastrous terrorist attack

The 9/11 terrorist act has hit the epicentre of the Western hemisphere's societal, financial and cultural Megalopolis resulting with American military actions in Somalia, Iraq and Afghanistan that destabilized the whole Middle-Eastern region and ignited the Islamic world to confront the West. These actions culminated in 2005 and 2006 with the unfortunate withdrawal of Western armed forces out of the Middle East; the withdrawal of Assad's Syrian forces from the Lebanon and the Israeli army's very probably intended debacle in the Lebanon. These military defeats and helplessness, signalled a discrepancy between the mighty Western financial giant and its fading military forces that gained the reputation of a tiger of paper that impressed nobody; not even poorly equipped and prepared primitive Bedouins [12].

9/11 terrorist event's critical success factors

This section's set of filtered CSFs, KPIs and their weightings are:

Critical Success Factors	KPIs	Weightings
CSF_9/11_HistoricalRoots	DeeplyRooted ▾	From 1 to 10. 10 Selected

CSF_9/11_RebirthOfTerrorism	AlarmingSigns ▼	From 1 to 10. 10 Selected
CSF_9/11_Attack	Finalized ▼	From 1 to 10. 10 Selected
CSF_9/11_SovietUnionCollapse	TotalDominance ▼	From 1 to 10. 10 Selected
CSF_9/11_InterventionsIraqAfganistan	Debacle ▼	From 1 to 10. 10 Selected

Table 1. The 9/11 critical success factors

The modules chain linked to the retaliation for the 9/11 terrorist event reasons

As shown in Table 1, the pre 9/11 terrorist events listed factors are the direct cause for the 9/11 terrorist attack. This section's deduction is that the United States, the then only super power was touched in its epicentre and was hurt in its inner soul; had retaliated to give the Islamic fundamentalists a final blow and in the same time seize the opportunity to lay its financial hands on the rich oil fields of the Middle-East. As geopolitically nobody could stop the United States, except France who had a bold and just attitude, the next focus will be on the period of retaliation and the combat.

2001 to 2007 the period of retaliation and the major defeat

After being hit at its epicentre, the United States retaliated to the monstrous terrorist attack that symbolized a peek in the mad jihadist arrogance that has already hit in Beirut, Bagdad, Paris, Nairobi and other world capitals; without worrying to be punished.

The invasion of Iraq

The United States decided to invade Saddam Hussein's Iraq that was on the brink of a civil war between the Shia majority and the Sunni minority backed by the 400,000 men-strong elite presidential brigade that became the core armed force of Baghdadi's Islamic State. Three years later, the United States has withdrawn its troops from Iraq after having lost in front of a hit and run Bedouin jihadist guerrilla and defacto handing over the country to the Islamic Republic of Iran [13].

Invasion of Afghanistan

The United States decided to invade also the Islamic Talibani Afghanistan that has become literally a terrorist haven and then after a while the United States has withdrawn its troops from Afghanistan after having lost in front of a militant Talibani and this fact handed the country to the Islamic Republic of Iran's and the Pashtouni Pakistan influences [14].

The seize of Saudi Arabia

40 years of faulty politics in the Middle-East and the post 9/11 retaliation, accompanied with the United States' harsh and clumsy military moves; ended with a logical military debacle and the expansion of the Shia Islamic Republic of Iran's influence in the whole region creating what is known as the Shia Crescent that extends from the Southern Pakistan to in the heart of the Arab Saudi Kingdom that counts a very important Shia population who inhabit the Saudi regions rich with oil and gaz. Facts forced the United States to dig in the Arab Saudi Kingdom's deserts, encircled with a mighty enemy force from the north, east and south. The Arab Saudi Kingdom faces a total implosion scenario that is due to: 1) the rise of

the Iranian Genie; 2) the collapse of Sunni pan-Arab states; 3) backing the terrorist Sunni Islamic State in Iraq, Syria and Lebanon; 4) the dramatic strategic weakening of the West; 5) internal demography and Shia population; 6) the decrease of the price of oil... [15]. The latest visit of the crowned king of Saudi Arabia to Moscow, its principal enemy, is a major sign of an agonizing and injured kingdom.

The Syrian occupier pull out of Lebanon

The United States' retaliations for the 9/11 terrorist attack has shaken all established official and unofficial agreements and the Lebanon found itself loosened from the 1991 USA-Syrian agreement on the Lebanon, which admitted the incredible annexation of the Lebanese Republic by the Syrians. Assad Syrian bloody squads moved in the Lebanon massively to assassinate citizens, politicians and artists. The most known cases are the assassinations of Pierre Gemayel Junior, Gebran Tueni and Rafic Harriri that has resulted in the expulsion of the Syrian terrorist army and their allied murderous brigands [16].

The proxy war in the south of Lebanon

The Syrian serial killings ignited an instability in the Lebanon and the Islamic Republic of Iran's proxy Lebanese militias fought a delegated consulting war against Israel. Officially this proxy war was lost by the Israeli Defence Forces; the probable reasons for this new-old war was to distract the massacre of Lebanese citizens by the Syrians [17].

The retaliation critical success factors

This section's set of filtered CSFs, KPIs and their weightings are:

Critical Success Factors	KPIs	Weightings
CSF_Retaliatio_n_Invasions	Fiasco	From 1 to 10. 10 Selected
CSF_Retaliatio_n_Agreements	Fallen	From 1 to 10. 08 Selected
CSF_Retaliatio_n_Influence	Fading	From 1 to 10. 08 Selected

Table 2. The retaliation critical success factors

The modules linked chain to the financial crisis reasons

As we see in Table 2, the 9/11 retaliation factors are the direct source for 2007-2008 financial crisis. This section's deduction is that the United States lost its super power title and its financial system collapsed to create a worldwide financial crisis. The collapse of the paper tiger, caused a gap and a vacuum to be seized, the further focus will be 2007-2008 financial crisis.

2007-2008 financial crisis

The unbundling process

Societal antifragility-based unbundling is a lot more than simple financial gains or losses, where robust societies might not be resistant to sudden problems, like in this case of the 9/11 attack. The societal antifragile unbundling of an agonising societal and financial system was ready and there was a need for a major change. A societal antifragility concept can help in having a holistic and broad guide to non-predictive decision making operations [32][33]. This current research cluster proposes an efficient approach to: 1) societal predictions; 2) proactive risk management; and 3) financial crisis explanations and eventually recommendations; that are the basic structures of a societal agile organizational environment [18][19].

The loss of influence and the geopolitical misbalance – the gap

The paper tiger was torn and its real military effect that is mainly due to a low level of combative readiness, seemed to have evaporated and this fact meant no more oil to plunder and no more blind aggression toward concurrent actors like Russia, China and other regional players. Russia replaced the United States in the Middle-East and East-Europe where it established and confirmed its new role as a global power. The financial gap is due to losing markets that cracked the cash-in cash-out system and the financial body had to re-level to meet this sinking old tired giant [20]. The sinking giant's helpless trials to get out of troublesome waters destabilized many regions in the world like the Arab Spring movement that culminated in the bloody Syrian civil war [16].

Cash in cash out overflow

The modern financial system is based on a virtual asset management system that has a Cash In Cash Out (CICO) money input and output systems. The gap created a CICO suspicion that in turn generated panic and in the traditional human silo logic that was translated simply in the Subprime, LIBOR and many other crises. Whereas the lack of oil-generated money widened the gap.

LIBOR down slide

An important factor in frequent transformations and changes are the roles of the national finance control bodies, business transformation managers, finance analysts and enterprise architects who should be supported by the optimal business transformation framework that includes a strategy model of global budgeting and credit management that are based on LIBOR that has been dropping sharply for a long time since begin of 2009; as shown in Figure 1 [21].

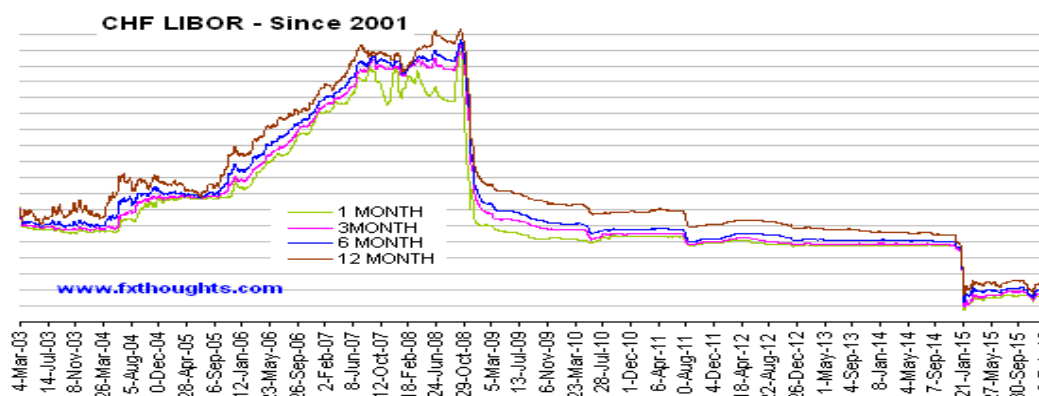


Figure 1. LIBOR interest system degradation [21].

Subprime debacle

As shown in Figure 2, the LIBOR was closely linked to the Subprime mortgage debt system; the LIBOR was closely defined to cover the Subprime losses [23]. The deterministic LIBOR artefact caused all related financial products to collapse and it seems that the governance methods were defiant and the legal systems have been handicapped. The CICO resultant multitude of crisis generated a global growth and employment downslide.

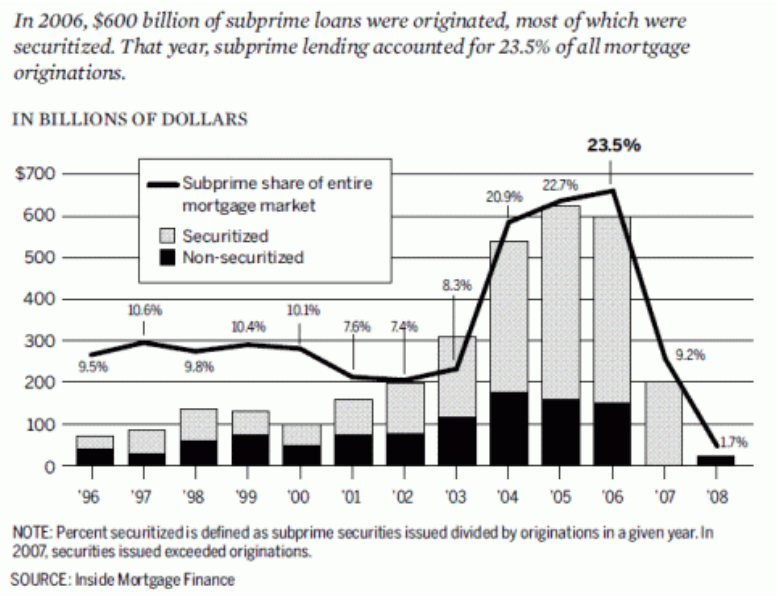


Figure 2. The Italian labour force [22].

Growth and employment

As presented in Figure 3, the financial crisis effect is moderately serious on the UK's GDP but the UK economy is very robust and it stayed solvable due to the important volume that is managed by the London financial hub and its financial institutions. The UK citizens took the hardest hit and the level of joblessness rose to nearly 8% in the period; as shown in Figure 4.

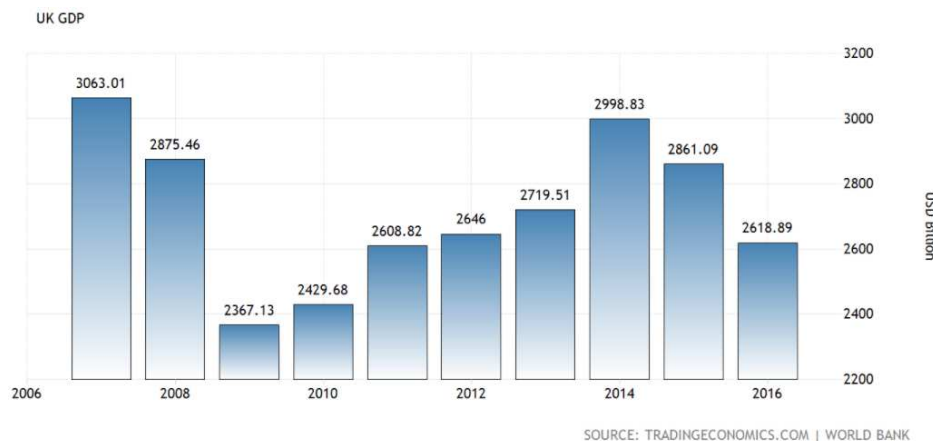


Figure 3. The UK GDP [24].

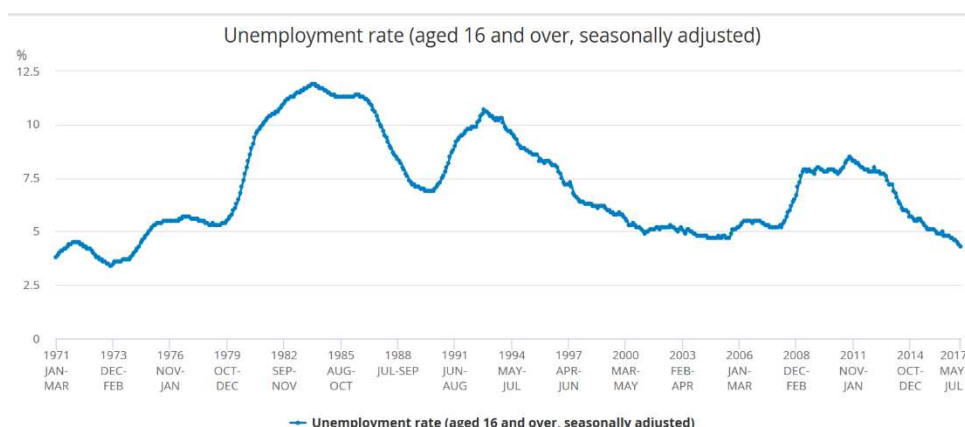


Figure 4. The UK jobless rate [25].

The rise of global and regional financial superpowers

The dismantlement of the Western tiger paper that led to a financial gap, was very quickly filled with new incomers like China and India, where China has become a new power in the financial global coalition.

The 2007-2008 financial crisis critical success factors

This section's (CSA: FinancialCrisis) set of filtered CSFs, KPIs and their weightings are:

Critical Success Factors	KPIs	Weightings
CSF_FinancialCrisis_UnbundlingProcess	Started	From 1 to 10. 10 Selected
CSF_FinancialCrisis_TheGap	Established	From 1 to 10. 10 Selected
CSF_FinancialCrisis_CashInCashOut	Disrupted	From 1 to 10. 08 Selected
CSF_FinancialCrisis_LIBOR	CriminalAct	From 1 to 10. 10 Selected
CSF_FinancialCrisis_Subprime	CriminalAct	From 1 to 10. 10 Selected
CSF_FinancialCrisis_GrowthEmployment	GlobalPhenomena	From 1 to 10. 08 Selected
CSF_FinancialCrisis_ChinaIndia	Confirmed	From 1 to 10. 09 Selected

Table 3. The financial crisis factors and indicators

The modules chain linked to the post-financial crisis reasons

As we see in Table 3, the financial crisis factors are the direct source for various crises that followed. This section's deduction is that the United States and the UK are trying to create an Anglo-Saxon axe of power.

Post financial crisis phase

The newly formed gap created vacuum and many regions in the world became struggle fields to be fought for. The Western powers found themselves swallowed by the gap and the Anglo-Saxon post world war two dominance came to an end.

The Anglo-Saxon disorientation

The USA's and UK's military misadventures in the Middle-East, Southern-Asia, Africa, Afghanistan have put an end to the decades of global military dominance and have created a disorientation in the USA and the UK that resulted with Donald Trump's election using the motto let's make the USA great again. In the UK the disorientation created a schism with the European Union and resulted with the BREXIT vote. The disorientation gave a new alliance between the endangered nations like the USA, UK, Switzerland and Russia. The Anglo-Saxon dominated Western powers found themselves swallowed by the gap and the westerner defeated male gender, found its dominance fade and replaced by aggressive feminist groups like the neo-feminist movement.

The rise of neo-feminism

The resulting gap that is due to the loss of the traditional system of power and the loss of credibility of the masculine factor opened a wide door to a new type of extremism known as neo-feminism. This extremist utopia sees the masculine gender as the source of major troubles, like violence, financial crisis, wars,... This movement saw its peak with its total engagement of FEMEN in the Ukraine conflict and has very quickly calmed down when it faced the brutal reality of war.

Eastern Europe and Ukraine

The militant neo-feminist push brought tensions in Eastern Europe and inflamed Ukraine that has promoted the rise of Vladimir Putin's Russia.

The rise of tsarist Russia

The conflict in Eastern Europe and more specifically in Ukraine, showed that Russia has an impressive military readiness level and a very efficient army. The Russian army that also intervened in Syria and was capable of achieving in a few months what the Western powers could not achieve in decades. The Syrian civil war is a chapter of the Arab spring movement that resulted also from the gap.

The European Union and France

The European Union is surrounded with unquiet regions like: 1) Ukraine and East Europe; 2) the Balkans; 3) Northern Africa; 4) Middle-East; and 5) the UK's BREXIT that puts it in a totally locked-in situation from the outside. From the inside, it is also facing two major challenges, the far-right and the neo-feminist movements. France is showing a will to handle the fatal situation by trying to equalise its forces and drive Europe in this delicate phase. The European Union, the only safe haven, is facing implosion and very probably it will shrink to some-kind of a Franco-German driven entity. Today France stands as the only Western credible power because of its military capability, tolerance and obstinacy in preserving the European Union.

The Arab spring, Israel and the Syrian civil war

The resulting gap destabilized the middle east and Africa in which practically all governing systems were changed and generated the Syrian civil that came as a demonstration of the newly created regional (Iran) and global (Russia) super-powers. These changes will probably change the balance of powers in the epic Arab-Israeli war(s) that seems to become a global struggle.

Latin Americas counter revolutions

The resulting gap is destabilizing Latin America where from the left oriented evolution of the last three decades, there is a right-wing oriented spring that is not really changing the decades of rather humanistic orientation.

The African continent

The African continent that is facing major demographic changes, desertification and Islamic extremism in its northern and central parts, has again become a central point of interest for the global powers. The African continent's issues can be regarded as a start of a major change in the sense that the West, especially the USA and Europe are losing influence and control in this part of the world.

South-Asian spring and the rise of China as a super power

The spring phenomena has spread to south-east Asia where tensions have been high between the USA and North-Korea, accompanied by tension between the USA and China. These tensions can be regarded as a start of a major change in the sense that the West, especially USA are losing influence and credibility in this part of the world. This transformation will result in the up-rise of China as a super power.

The beloved oil fields

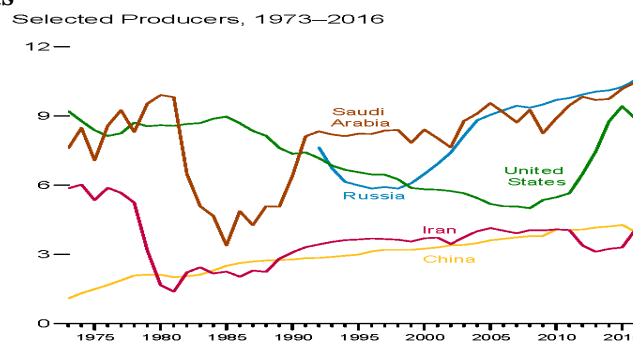


Figure 5. The world major producers [37].

The gap was generated because of the loss of oil fields and as shown in Figure 5, Russia, China and Iran have surpassed the traditional Western governed oil producers like the USA and Saudi Arabia. On the same figure we see that the USA has opened its oil reserves to face the widening of the gap.

Winners and losers

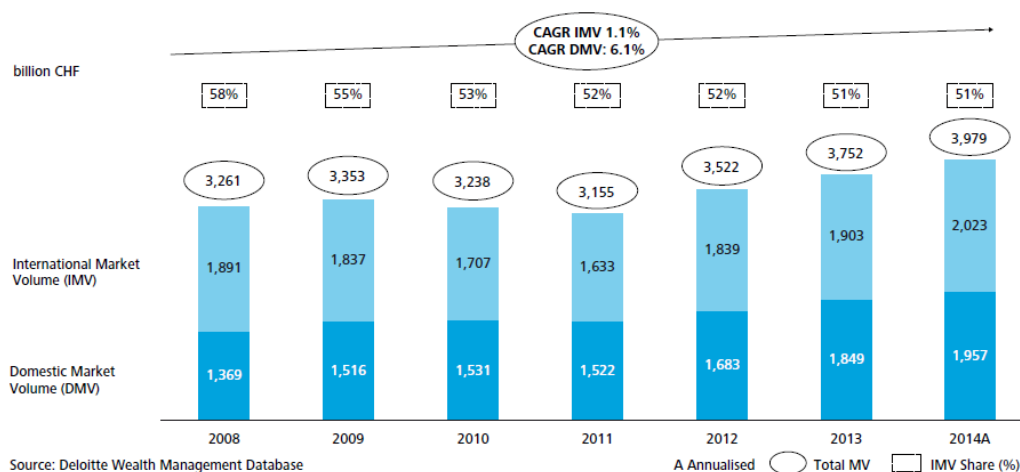


Figure 6. Swiss wealth management keeps rising [38].

Symbolically the 9/11 terrorist event can be considered as an initial event for a major change where the biggest losers are the USA and European Union. As money cannot just vanish, there is a winner who knew how to profit from the series of dramatic events. The winner is Switzerland who stayed loyal to its very long tradition that is based on a motto: ... when a country goes bad, collect its fortune from its fleeing and desperate population; the same conduct was observed during world war two and in the latest immigration waves, where the Swiss police stripped the immigrants from all they have owned. As shown in Figure 6, the Swiss wealth deposits kept rising although the worldwide situation was declining.

The Post financial crisis phase critical success factors

This section's (CSA: PostFinancialCrisis) set of filtered CSFs, KPIs and their weightings are:

Critical Success Factors	KPIs	Weightings
CSF_PostFinancialCrisis_AngloSaxonDisorientation	AdvancedState	From 1 to 10. 08 Selected
CSF_PostFinancialCrisis_NeoFeminism	Declining	From 1 to 10. 09 Selected
CSF_PostFinancialCrisis_EastEuropeUkraine	RussianUpperHand	From 1 to 10. 09 Selected
CSF_PostFinancialCrisis_Russia	GloballyDominant	From 1 to 10. 07 Selected
CSF_PostFinancialCrisis_EU	Dismemberment	From 1 to 10. 06 Selected
CSF_FinancialCrisis_MiddleEast	Ravaged	From 1 to 10. 10 Selected
CSF_FinancialCrisis_LatinAmerica	Confusion	From 1 to 10. 07 Selected
CSF_FinancialCrisis_Africa	ProblemsOverflow	From 1 to 10. 09 Selected
CSF_FinancialCrisis_AsiaChina	TheRise	From 1 to 10. 08 Selected
CSF_FinancialCrisis_WinnersAndLosers	Switzerland	From 1 to 10. 10 Selected

Table 4. The post financial crisis factors and indicators

Proof of concept

The proof of concept was built using the *Environment* that has been built using the Microsoft Visual Studio .NET development environment; the proof of concept is based on the CSFs' and KPI indicators binding to a requirement, where the research model was prototyped using Sparxsystem's Enterprise Architect environment [26]. The research model uses services that make calls to microartefacts. The reasoning model represents the relations between the model's requirement, microartefacts or building block [27].

Critical success areas, factors and indicators setup

The initial values have been presented in this article in tables 1 to 4. Critical success factors' indicators bind requirements to various legal acts, frameworks, standards, rules and service agreements; they can be selected from the *Environment's* widget. As shown in Figure 1, the factors and indicators are stored in an XML file where the link CSA, CSF, KPI and requirements are presented. In Figure 1 the REQ_ID refers to a special section of the requirements XML document that contains also the needed information on actions and constraints to solve the problem [28][29].

```
<REQS>
  <Set>EngineeringStrategyApplication</Set>
  <REQ ID="DefiningGlobalStrategy_001">
    <name>DefiningGlobalStrategy</name>
    <Problems>
      <Problem>Unexistent</Problem>
      <Action>Setup</Action>
      <Action>Ignore</Action>
      <Action>Audit</Action>
    </Problems>
  </REQ>
```

Figure 7. Requirements and actions mapping in the *Environment*.

Solution providing

The decision-making system provides that the environment must define a setup phase if the critical success factors permit, otherwise just ignore this phase [30][31].

Conclusion and geopolitical recommendations

The *Environment's* component's holistic integration is an important factor for the geopolitical and financial evolution and stability. Many industries have been implementing *Environment* like local solutions to respond to probable financial, risk and legal problems and challenges in various domains. This research phase is part of a series of publications related to transformation projects. This research is based on mixed action research model; where critical success factors and areas are offered to help change managers to decrease the chances of failure or try to estimate incoming dangers. The most important recommendation that was generated by the previous research phases was that a transformation manager must be an architect of adaptive systems. In this research phase and article, the main issue is how to integrate the *Environment's* component in a geopolitical context that is related to the post phase of the 9/11 terrorist attack on the USA.

The resources discovered in literature review and the *Environment's* proof of concept proved the feasibility of this research's phase and defined a related set of recommendations on how to implement an *Environment* component. The authors present the *Environment's* *Environment* list of managerial recommendations that are sorted by their importance:

- The proof of concept: proved the research project's feasibility by implementing the STP defined pattern.
- The 9/11 terrorist event was a major worldwide societal change.
- The West lost its military combativity readiness.
- The West is facing a major mutli-folded crisis and we are in the beginning phase of its dismembering.
- A gap was created by the lack of cash in that the USA to open its oil wells.
- France will emerge as a new regional and world power; and will lead the European Union.
- Germany may join in con-dominium, especially if it gets rid of its (rightfully earned, but maybe obsolete)historical complex of guilt and its excessive need to act always super correctly.
- The wold has become multilateral, where global powers like China and Russia and emerging.
- Implement Critical Success Areas (CSA) that is a category of Critical Success Factors (CSF) strategy where in turn a CSF is a set of Key Performance Indicators (KPI), one KPI corresponds to a single geopoliticalrequirement.
- Application of the antifragility concept can help in having a holistic and broad guide to non-predictive decision-making operations under uncertainty.
- AnSTP-like component must be implemented in-house to interface it with the *Environment's*decision-making module and logs.

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