



**The 6<sup>th</sup> International Scientific Conference  
“DEFENSE RESOURCES MANAGEMENT  
IN THE 21st CENTURY”  
Braşov, December 02-03, 2011**



**PLANNING BASED ON CAPABILITIES, THE KEY  
TOOL BOTH BUSINESS PLANNING AND DEFENCE OF  
NATO AND THE ARMIES OF THE MEMBERS STATES**

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**Abstract:**

*As expected, the implications of financial and economic crisis facing humanity after 2008 strongly affected and the defence policy, both at the Nor-Atlantic Alliance and member or non-member states. Based on this fact, the approach aims, at the beginning, a presentation of using common elements in planning and running of the business and, accordingly, defence planning. Further, given the fact that a capability can be used in several scenarios or scenario can encompass more capabilities, stressing the need to prioritize objectives and goals of the adopted strategy. Finally the approach presents a personal view about the main elements of the defence planning process, the Romanian Armed Forces should consider them, with emphasis on developing capabilities for forces to be able to participate in fulfilling the full range of NATO mission.*

**Key words:** *capability; defence planning; capabilities-based planning; scenario planning;*

## **1. Introduction**

Planning based on capabilities is a method of defence and business planning techniques, focusing both on business purpose and to meet the highest requirements in the field is used. It is also used to coordinate projects in areas difficult corporate function which together allow the achievement of capabilities involved (eg, defense: *digital communications, implementation supervision, recognition and indication of targets*, etc.).

***Any solid defence planning systems and force development can be successfully implemented only if there is a minimum and clearly stated government policy to guide planners.***

Thomas-Durrell Young

## **2 Capability based planning**

In the business, *capabilities-based planning* focuses on planning, implementation and delivery of strategic business capabilities of enterprises. It is oriented / and run by the business, combining efforts of all lines of business necessary to achieve the desired capability.

Capabilities-based planning is compatible, in almost all cases, with corporate business models and is especially useful in organizations where the response of latent capabilities (eg, emergency preparedness unit) is required, and where the same resources are involved in multiple functions. The need for these capabilities is often discovered and highlighted using *business scenarios* (as I will present below).

In terms of *information technology*, capabilities-based planning is particularly relevant (eg, establishment of a consolidated corporate data center, ensuring necessary data

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and related services). Entrepreneurial capabilities principal architects *will be involved<sup>1</sup>* in managing a construction in the training of personnel and other management tasks to implement changes and entrepreneurial architecture requirements. In the past, many projects have been less successful, even if effective, their implementation was brilliant, as related to other tasks (business process redesign, training of customer support, training, infrastructure and so on), they *were not controlled* by architects and planners entrepreneurial and often have not been completed satisfactorily.

On the other hand, the projects were usually described in terms of technical results and not as business results, making it difficult for business to appreciate what was sent<sup>2</sup>, making the entrepreneurial architects often to lose sight of the ultimate objective of business. The capabilities-based planning, development stages used in architecture, in the context of business results, *clearly link* the vision, architectures and implementation plans and transfer line with business strategies and corporate business plans.

In the many management teams horizontal interoperability and common services are emerging as cornerstones of e-government<sup>3</sup> implementation, and capabilities-based management is, in many ways, also important. In the private sector, the concepts of supply chain management and service oriented architecture (SOA)<sup>4</sup> forces increasingly more planners / managers to lead, both horizontally and vertically, and this is achieved using capabilities (design, implementation, use, etc.).

Capabilities-Based Planning has long been rooted in defence, the U.S., UK, Australia, and Canada, associated mechanisms of governance and rigorously derived capabilities (design capabilities) is developing, especially in systems engineering. These concepts are also easily transferable to other areas, such as the IT.

From a business perspective and IT architecture, *capabilities-based planning* is a powerful mechanism that ensures that strategic business plan to business lead *top-down approach*, is also adaptable to channel technical capabilities *bottom-up emergence* of innovations. Regardless of the corporate structure itself and the defence, they will have to deal with the insurance of the business capabilities, which will require *coordination* and *alignment* in the vertical lines of business.

Capabilities are based and run business, ideally, on /and by business. A key challenge is that benefits are often not collected at the level of entrepreneurship and business line and therefore *the portfolio oriented projects tend to become a Business Development Line, rather than a corporate perspective.* Ensuring management capacity is a *challenge* and a way of establishing a *perspective* within an organization, a powerful mechanism to ensure synergy of business value, which will be reflected in profitability and stock value.

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<sup>1</sup> Hence the importance of rethinking traditional organizational schemes, with who Romanian military management thinking is familiar, with all the efforts made on their own or with support from others (I mean the period 2002-2004 when all central level decision-making structures - departments, divisions central major fold) failed to discard.

<sup>2</sup> And I must admit that this side is fully revealed in the acquisition of the RoAF (Romanian Armed Forces) structures, either at central level or the services and of those which took over the task through outsourcing (eg, GIARA or ROMTTEHNICA), which has made many of executed contracts to reflect inconsistency in terms of business requirements, which has seriously impacted on the performance of many programs.

<sup>3</sup> A trend followed and in RoAF during the restructuring and modernization process of those, in the period 2005-2010, where they provide horizontal interoperability and common services. The idea remained only a wish because the services had anarchy understand the important role of the *programme director* (autocracy trend was still strong and only remove the more determined supporters has led to its abandonment in part).

<sup>4</sup> Services Oriented Architecture

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Capabilities should be identified using the same order as specifications of goals and business scenarios; in particular, they should follow the SMART<sup>5</sup> guidelines<sup>5</sup> to avoid ambiguity.

As outlined in the theoretical approaches and case studies on *the concept of capabilities-based planning*, many capabilities are "horizontal" and go contrary to the normal vertical corporate governance. Most often, *management direction* and corporate *management framework* is based on line business metrics and business metrics rather than the entrepreneurial architecture and therefore must ensure also a function of the horizontal targeting enterprise (and a line of business) designed to optimize service delivery. It is not surprising that *planning* and *architecture based on entrepreneurial capabilities* are mutually supportive, operating both corporate and often contrary nature has to face business challenges, its support is crucial for the construction of *entrepreneurial* success and it makes sense to align with planners and corporate capabilities to support the business of vertical lines (Figure 1).

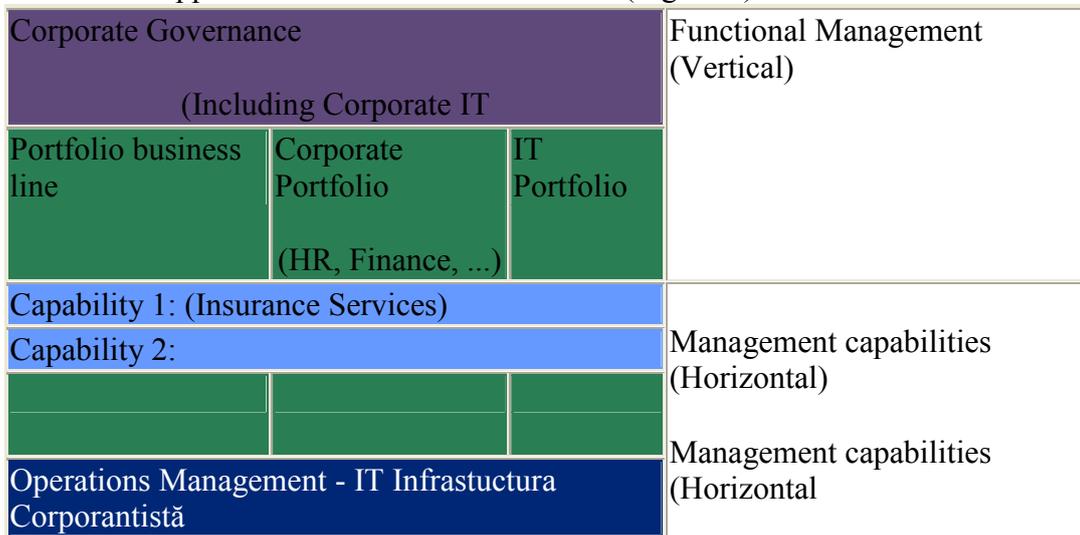


Figure -1: The concept of Based on Planning Capabilities

Capabilities within the organizational structure of business (as seen in Fig. 1) can also be vertical and managed. In fact, the requirements of leading capabilities, often, organizational design, but within an organization, business process transformation, it can, finally, impose the need for capabilities.

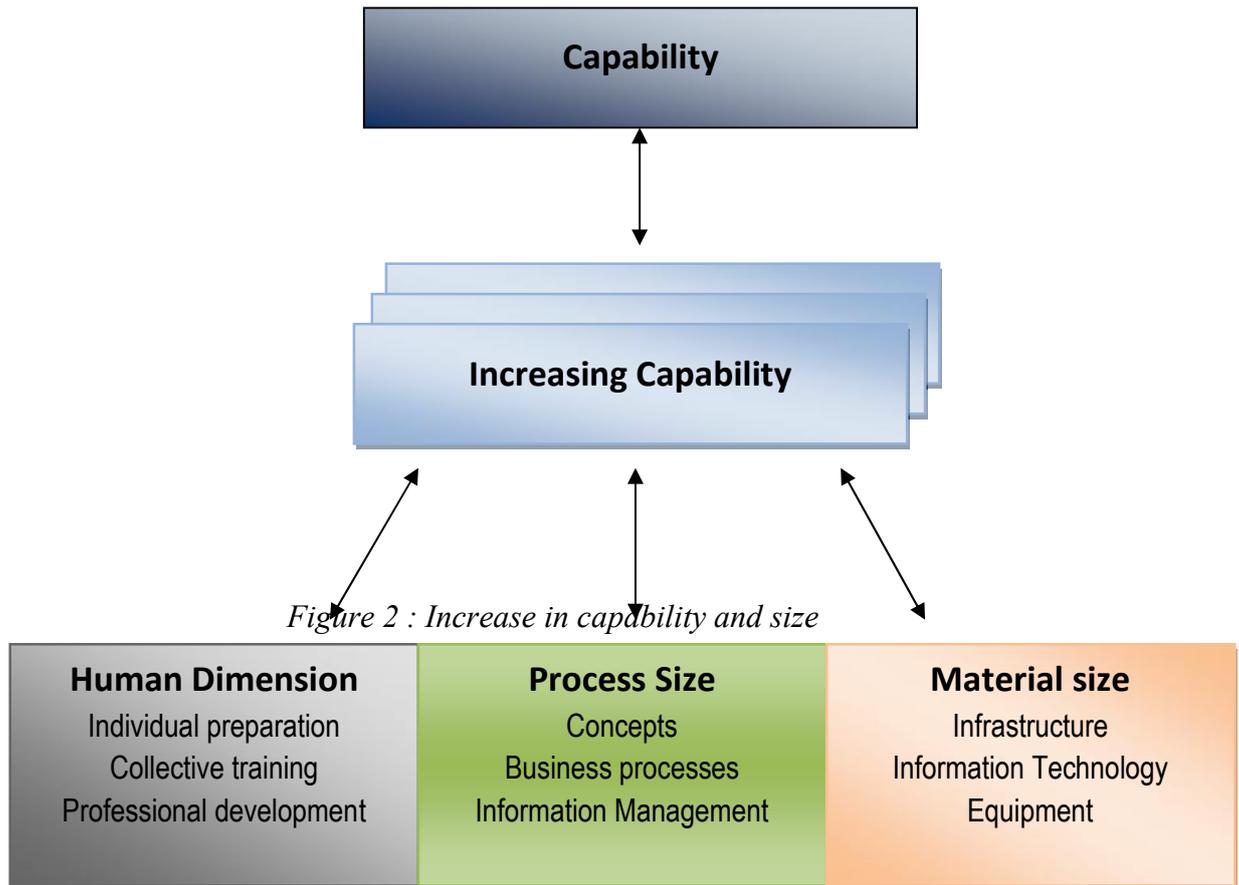
The *Vertical Capabilities* are easier to handle and supported by horizontal entrepreneurial architecture, but is still a challenge when services are streamlined and enterprise-wide business lines benefit from shared services that do not directly control (these control indirectly through IT governance, the Board of Modelling the Transformation, as they were created and used for preliminary planning phase of implementation of governance).

For a successful planning based on capabilities, we must manage carefully their *size* and *increase*, elements of which I will turn below.

<sup>5</sup> Guidelines SMART goal setting say, in fact, that the objectives should be: Specific, Measurable, Achievable, Profitable, and Timely

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In terms of *size capability*, they are designed / created, taking into account the different dimensions that overlap functional corporate portfolios. Each organization has a different set, but similar size. An example set, the defence could include personnel, research and development, infrastructure / facilities, concepts / processes, information management, and materials (Canadian Department of National Defence). Whatever the size selected, they must be well explained and understood (Fig. 2).



*Figure 2 : Increase in capability and size*

Figure 2: Increase the capability and size

To be made available a capability will require *long time* (specifics will be a function of vertical organization and industry) and will involve, normally, several projects with various delivery steps. In addition, the capability has to provide, as soon as possible, interested parties' real business value and maintain a pace to achieve the goal of architecture and associate executive support and corporate funding. It is therefore useful in sharing *capability increases (phase) capability*, providing separate solutions, visible and measurable, and to ensure the item to focus architectural transition and the results of numerous interdependent projects. These results are critical success factors (CSF) which provides continuous support capabilities.

*To communicate* to community beneficiaries the gradual and complex evolution of the capability *is essential* to establish the first offer and keep it in transition, being, in the same time, a proven approach to describe how a capability will evolve over time. Architect selected capability issues that are important to community stakeholders, as lines radiating from the centre (Fig. 3). In each line, the architect draw points representing "points of capability" significant ("*lower*" - points closest to the centre capability; "*superiority*" - the

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point furthest from the centre capability). With these "markers" defined, it can, by joining points in a closed-loop capability, to demonstrate in a simple formula how each "growth capability", in relation to the previous increase, which, of course, requires that each capability point to be formally defined and "labelled" in a way that is meaningful to stakeholders. The diagram below describes the *capability of increasing 0*, as *starting capability*.

They are extracted directly from the corporate strategic plan by corporate strategic planners (who are including and / or architects entrepreneurship) and meet the goals, objectives and strategies of the company. Most organizations will also have an annual business plan describing how they intend to do in the next period of budget implementation, in order to achieve the strategic objectives of the company.

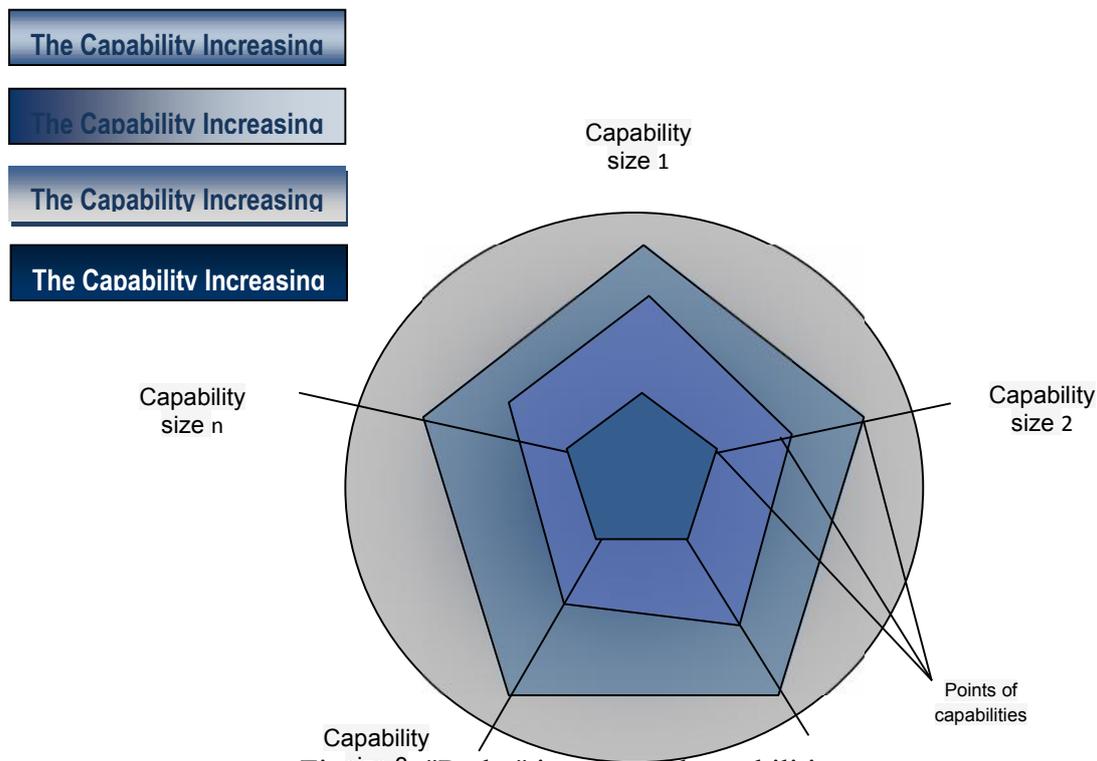


Figure 3: "Radar" incremental capabilities

The relationship between capabilities, architecture and entrepreneurial projects illustrate the essential link between basic planning capabilities, entrepreneurial and management architecture portfolio / project (Fig. 3). On the left side of Fig. 3, management capability is aligned with entrepreneurial architecture. The key problem is that all architectures will be expressed in terms of business results and value, rather than in terms of IT (eg creating a server), thus ensuring alignment of IT with business.

The intention is that the corporate strategic direction to drive *the architectural vision* of Phase A (Fig. 4), and organizing the company, which will be the basis for creating portfolios.

Specific capabilities targeted for completion will be the focus of the definition of *Architecture* (Phases B, C, and D - Fig. ...), and based on identified work packages will be designed project phase E (Fig. 4).

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Capability increases will be the guiding elements for *the transition architectures* (Phase E), which will structure the project development, delivery will be coordinated through effective implementation and Migration Plans (phase F).

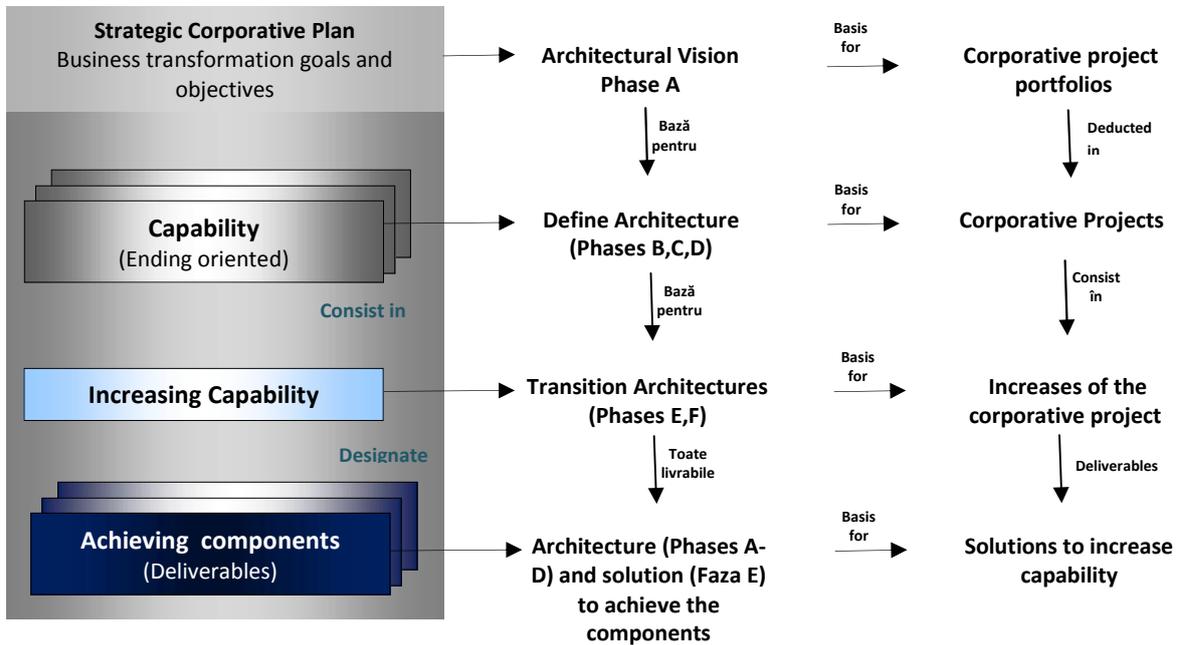


Figure 4: The relationship between capabilities, architecture and entrepreneurial projects

*Managers of capabilities* (Defence Chiefs' Resources of the services) will carry out tasks similar to those of *portfolio managers* (personnel of the Department for Armaments). On the other hand, portfolios will align projects and increases the project to deliver continuous business value, which implies concern for portfolio managers to coordinate their projects and achieve optimal design and the delivery of *solutions blocks* (SBBs<sup>6</sup>). Ideally, capabilities' managers will manage, also, the year funding to be able to use the transition architectures as gate in the transformation process. Coordination between portfolio managers and the capabilities will be made at corporate level (eg, SMG; DPAP).

Capabilities-based planning<sup>7</sup> is a business planning *versatile example*, very useful in terms of business architecture, which helps to align IT with the business environment, respectively, to focus IT architects on creating continuous business value. This implies a detailing and quantifying data strategy, which is "active" part for each strategic plan and helps to identify approaches that meet the goals and objectives and the appropriate

<sup>6</sup> Solution Building Blocks - making a building block is therefore simply defined a set of features to meet business needs. How the features, products, and custom developments are assembled in blocks will vary greatly between individual architectures. Each organization must decide for itself what arrangement of building blocks work best for him. A good choice of building blocks can lead to improvement of the entire old system, interoperability and flexibility in creating new systems and applications. <http://pubs.opengroup.org/architecture/togaf8-doc/arch/chap32.html>

<sup>7</sup> Give addressing critical about through interaction with the customer management and deep knowledge of business practices and a commitment to innovation and adaptation. StratCure™ provides a development project, managed and collaboration- ValueMetrics, LLC. StratCure™ - officially developed in December 2007.

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capabilities, defining, ultimately, functional aspects of a strategy. *They do not define material solutions, but rather, a collection of functional components to enable successful implementation of a strategy.* Therefore a capability could be implemented by any number of solutions, such as information technology, processes, staff / skills, equipment, etc. The result of this activity is a structured environment and related analysis, to assess the efficiency of alternative strategic approach and finally, material solutions.

Important component of the strategic plan, the *capability (ties)* describes function (s) of a defined strategy, organizations / structures in all areas - especially those of defence - and encouraged them to define and analyze several strategies for to ensure achievement of results.

Also, defining capabilities means „to parameterize" every strategy and describes the functional components of an effective given approach, the method enabling alternative strategies. The capabilities defined by this methodology can be reused in several strategies and / or strategic areas, distinguished between by quantification, as shown below. This functionality eliminates redundancy and significantly reduces time to develop alternative strategies, contingency plans and alternatives for disaster situations.

From another perspective, while capacity defines a functional requirement for a given strategy, in order to successfully identify and analyze alternatives for the ***quantification capabilities***, we must be applied "*efficiency measures*", in relation to each requirement in part and its strategic context. This quantification singularize needs capabilities in terms of defined scenario and strategic context and, although a given capability is often necessary capacity in several strategic alternatives or contingencies, provides efficient implementation concepts and distinctive features for each instance of that capability. An example of this is in the business sector, where StratCure™<sup>8</sup> provides a unique design meta-model, referred to as R2R<sup>9</sup>, to achieve this distinction, which allows to define a data diagram, whose connections are determined by the relationship between them and lead to an advanced analysis, by providing a context that relates to areas of analysis.

***Analysis capabilities*** in the context described above, is a comprehensive process that provides an analytical and functionality model algorithm - "*out-of-the-box*"<sup>10</sup>, that allows users to customize the algorithms in order to meet organizational needs. The ability to customize algorithms is essential for planning, because it allows organizations to understand the impact of the analysis of changes through the concept of "*what-if*"<sup>11</sup>, with prioritized schemes and alternative techniques. Building on the innovative *sandbox* functionality<sup>14</sup>, alternative scenarios can be saved as the organization and set to trigger alert when a saved scenario is viable.

## **2. Conclusion**

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<sup>8</sup> StratCure™ Enterprise Management Solution (<http://stratcure.net/default.aspx>)

<sup>9</sup> Roadmap to Redesign

<sup>10</sup> An avant-garde thinking which is oriented in the divergent directions, so as to involve a variety of aspects and which sometimes leads to new ideas and solutions, combined with creativity. "Out of the box" thinking is an expression describing the noncompliance, creative thinking.

<sup>11</sup> "**what-if**" approach using general brainstorming, loosely structured interview aimed at:

1. *Postulate* potential upsets that can lead to crashes or system performance problems
2. *Insurance* that adequate safeguard is taken against these problems.

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When NATO speaks about “soft defence”, these new strategic concepts of armed forces member states provide an important opportunity to strengthen efforts to reform and institutional modernization and development of new capabilities for the Alliance, in order to implement its new strategic concept.

***“The power is used to create power. The powerlessness serves to reinforce the powerlessness”***

To achieve these goals, NATO began a process of transformation separately to assess current capabilities, future requirements following a period of 5-10 years. The aim was to develop specific sets of initiatives and reforms that were approved by the Heads of State and Government at the Lisbon Summit in November 2010. This process should be based on developing the new Strategic Concept and running parallel with the implementation of new capabilities. In a rapidly changing security environment, such a trial delay until after completion of the Strategic Concept would increase risks for the Member States and the default for the Alliance.

As a army of a NATO member state, I appreciate that the planning initiatives of the Romanian Armed Forces have to focus around *five sets of skills*, which should be considered *the highest priorities*.

First, military commanders, available to NATO, must acquire and demonstrate *the ability to participate in the Joint Forces in order to carry out basic mission* of the Alliance's collective defence under Article 5. This mainly involves a reorientation of command and staff personnel to the planning, preparation, performed in support of Article 5.

Second, in order the Romanian forces available for NATO to perform any mission inside and outside NATO, they must be both *deployable* and *sustainable*. These capabilities are fundamental in the process of resizing forces downwards, so that any structure to provide for deployment to hundreds or thousands of miles to perform such tasks is non-Article 5 and Article 5. Therefore, the *ability to deploy and support* are essential for the *future*.

Thirdly, the capabilities of *command, control, communications, computers, intelligence, surveillance and reconnaissance* (C4ISR) are more important than ever before, allowing those forces to work together with those of other Member States of the Alliance. These capabilities should be the highest priority for future investment.

Fourth, after several years since the concept of *Comprehensive Approach* (CA) was generally accepted as the best approach to solve conflicts efforts, to work with civil partners remain separate. Therefore, in the alternative only for C4ISR, major investments must make the forces *operational* for all missions of this *central concept*.

Finally, the Romanian Armed must develop more *robust “defence diplomacy” strategy*, using the full range of tools at its disposal, intended to shape the environment by strengthening partnerships, participation in the stabilization of problem of the areas and those in approach to developing cooperation with older opponents.

Given the realities of resources allocated to defence capabilities, to prioritize is a fundamental requirement to implement the reforms, in order to achieve greater efficacy and efficiency and more multilateral solutions, because - *any state can not secure alone its borders, independence and sovereignty*.

**References:**

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- [1] *Thomas-Durell Young* Capabilities-Based Defense Planning: Techniques Applicable to NATO and Partnership for Peace Countries;
- [2] *Richard Hodge and Geoff Walpole*, A Systems Approach to Defence Capability Planning - A Work in Progress - [http://www.chforum.org/library/aust\\_defence.shtml](http://www.chforum.org/library/aust_defence.shtml) ;
- [3] *John Woodhouse*, Asset Management, February 2001, pg 1 of 7 - <http://www.scribd.com/doc/36643090/Am-Basic-Intro> ;
- [4] The Open Group Architecture Framework, [http://pubs.opengroup.org/architecture/togaf8-doc/arch/welcome.html#tag\\_02\\_02](http://pubs.opengroup.org/architecture/togaf8-doc/arch/welcome.html#tag_02_02) ;
- [5] Three Dimensions of Power, <http://www.scribd.com/doc/4850452/Three-Dimensions-of-Power> ,
- [1] Capabilities-Based Planning Overview, DHS / SLGCP / OPIA / Policy and Planning Branch, [http://www.scd.hawaii.gov/grant\\_docs/Capabilities\\_Based\\_Planning\\_Overview\\_12\\_17.pdf](http://www.scd.hawaii.gov/grant_docs/Capabilities_Based_Planning_Overview_12_17.pdf) ;
- [6] *Todor Tagarev*, Introduction to Program-Based Defense Resource Management, The Quarterly Journal, SPRING-SUMMER
- [7] *Enterprise Management Solution StratCure™*, Revolutionizing Strategic Planning & Analysis, *Capability Planning*, <http://stratcure.net/capplan.aspx> ;
- [8] *StratCure Enterprise Management Solution™*, Revolutionizing Strategic Planning & Analysis, *Strategic Planning*, <http://stratcure.net/stratplan.aspx> ;
- [9] *StratCure\_Overview-1.ppt*, [stratcure.net / Documents / StratCure\\_Overview.ppt](http://stratcure.net/Documents/StratCure_Overview.ppt)
- [10] *Center for Technology and National Security Policy National Defense University*, Defense Capabilities for Future Affordable NATO Missions, 23februarie, 2010; [http://www.ndu.edu/CTNSP/docUploaded/NATO\\_Affordable% 20Defense% 20Capabilities.pdf](http://www.ndu.edu/CTNSP/docUploaded/NATO_Affordable%20Defense%20Capabilities.pdf)