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THE 4th EXPLORATORY WORKHOP

"INFORMATION RESOURCES MANAGEMENT - ISSUES, CHALLENGES AND FUTURE TRENDS"

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WORKSHOP CONTENTS

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HOW CAN CREATE THE CLOUDS A BLUE SKY FOR THE FUTURE OF IT IN THE MILITARY

Capt. cdr. eng. Bogdan CREȚU

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INTRODUCTION

Although the military is a somewhat rigid and conservative organization where the change is hardly taking place, no one in this Universe, from atom to galaxies, is not exempt from the continuous move and transformation. So, where is going the IT in the Romanian Armed Forces? A cultural change is certainly needed. A change in the organizational culture.

I suggest you to analyze together a very controversial and apparently fuzzy concept from the IT world: **Cloud Computing.**

I. DEFINITION OF CLOUD COMPUTING

If the IT professionals certainly know what it means, has this concept a clear meaning for non-IT individuals or, more important, for managers? Are they prepared to use all the advantages of IT world?

It seems that the shortest and very clear definition of term *Cloud Computing* was given by the Gartner Group as "**a style of computing in which scalable and elastic IT-related capabilities are provided *as a service* using Internet technologies to multiple external customers**."[1]

The name *cloud computing* was inspired by the cloud symbol that's often used to represent the Internet in flowcharts and diagrams.

A cloud service has three distinct characteristics that differentiate it from traditional hosting:

- it is sold on demand, typically by the minute or the hour;
- it is elastic -- a user can have as much or as little of a service as they want at any given time;
- the service is fully managed by the provider (the consumer needs nothing but a personal computer and Internet access).

Significant innovations in virtualization and distributed computing, as well as improved access to high-speed Internet and a weak economy, have accelerated interest in cloud computing.

A cloud can be private or public. A **public cloud** sells services to anyone on the Internet. (Currently, Amazon Web Services is the largest public cloud provider.)

[1] Cearley W. David– *Cloud Computing – Key Initiative Overview*

A **private cloud** is a proprietary network or a data center that supplies hosted services to a limited number of people. When a service provider uses public cloud resources to create their private cloud, the result is called a **virtual private cloud**. Private or public, the goal of cloud computing is to provide easy, scalable access to computing resources and IT services.[2]

Cloud computing can help enterprises improve the creation and delivery of IT solutions by allowing them to access services more flexibly and cost-effectively. Enterprises that use public cloud services can potentially save money by leveraging a provider's elastically scalable, variably priced environment. However, public cloud computing also raises concerns about security, data management, trust, control and performance. Few enterprises will abandon on-premises models, but most will move toward private cloud computing models. Intense hype surrounds cloud computing, making it difficult to understand vendor options and strategies.[3]

The cloud services are broadly divided into three categories: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS).

Infrastructure-as-a-Service like Amazon Web Services provides virtual server instanceAPI) to start, stop, access and configure their virtual servers and storage. In the enterprise, cloud computing allows a company to pay for only as much capacity as is needed, and bring more online as soon as required. Because this pay-for-what-you-use model resembles the way electricity, fuel and water are consumed, it's sometimes referred to as utility computing.

Platform-as-a-service in the cloud is defined as a set of software and product development tools hosted on the provider's infrastructure. Developers create applications on the provider's platform over the Internet. PaaS providers may use APIs, website portals or gateway software installed on the customer's computer. Force.com, (an outgrowth of Salesforce.com) and GoogleApps are examples of PaaS. Developers need to know that currently, there are not standards for interoperability or data portability in the cloud. Some providers will not allow software created by their customers to be moved off the provider's platform.

In the software-as-a-service cloud model, the vendor supplies the hardware infrastructure, the software product and interacts with the user through a front-end portal. SaaS is a very broad market. Services can be anything from Web-based email to inventory control and database processing. Because the service provider hosts

[2] http://searchcloudcomputing.techtarget.com/definition/cloud-computing
[3] Cearley W. David– *Cloud Computing – Key Initiative Overview*

both the application and the data, the end user is free to use the service from anywhere.[4]

II. SERVICE MODELS IN DETAIL[5]

Service delivery in Cloud Computing comprises three different service models, namely Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS), and Software-as-a-Service (SaaS). The three service models or layer are completed by an end user layer that encapsulates the end user perspective on cloud services.

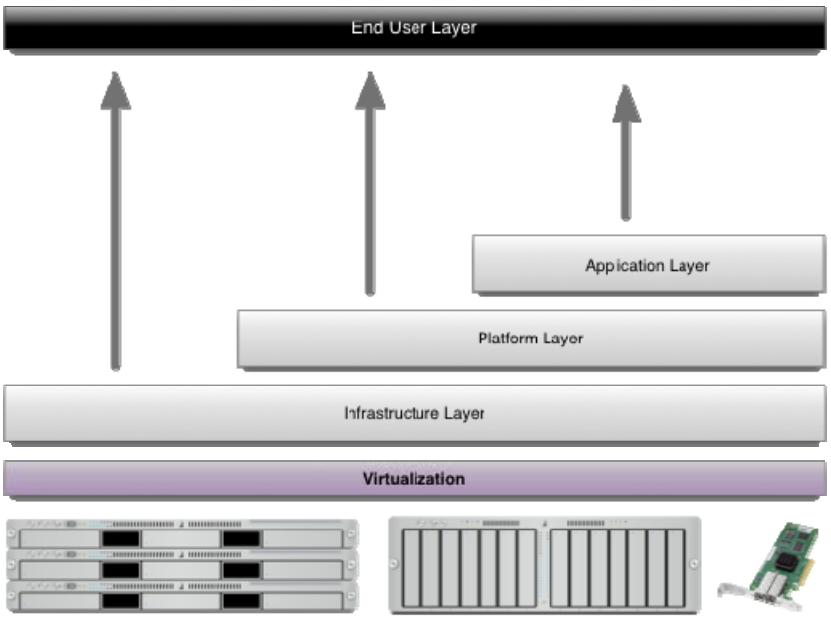


Figure 1: *Service models and end user layer*

If a cloud user accesses services on the infrastructure layer, for instance, she can run her own applications on the resources of a cloud infrastructure and remain responsible for the support, maintenance, and security of these applications herself. If she accesses a service on the application layer, these tasks are normally taken care of by the cloud service provider.

II.1. SaaS

Software-as-a-Service provides complete applications to a cloud's end user. It is mainly accessed through a web portal and service oriented architectures

[4] http://searchcloudcomputing.techtarget.com/definition/cloud-computing

based on web service technologies. Credit card or bank account details must be provided to enable the fees for the use of the services to be billed.

The services on the application layer can be seen as an extension of the ASP (application service provider) model, in which an application is run, maintained, and supported by a service vendor. The main differences between the services on the application layer and the classic ASP model are the encapsulation of the application as a service, the dynamic procurement, and billing by units of consumption (pay as you go). However, both models pursue the goal of focusing on core competencies by outsourcing applications.

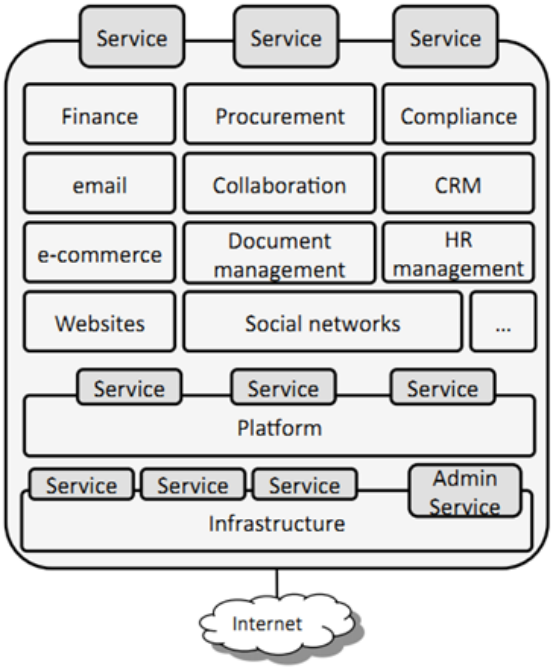


Figure 2: *Software-as-a-Service (SaaS) Stack*

II.2. PaaS

PaaS comprises the environment for developing and provisioning cloud applications. The principal users of this layer are developers seeking to develop and run a cloud application for a particular platform. They are supported by the platform operators with an open or proprietary language, a set of essential basic services to facilitate communication, monitoring, or service billing, and various other components, for instance to facilitate startup or ensure an application's scalability and/or elasticity (see figure 3). Distributing the application to the underlying infrastructure is normally the responsibility of the cloud platform

[5] http://www.cloud-competence-center.com/understanding/cloud-computing-service-models/

operator. The services offered on a cloud platform tend to represent a compromise between complexity and flexibility that allows applications to be implemented quickly and loaded in the cloud without much configuration. Restrictions regarding the programming languages supported, the programming model, the ability to access resources, and persistency are possible downsides.

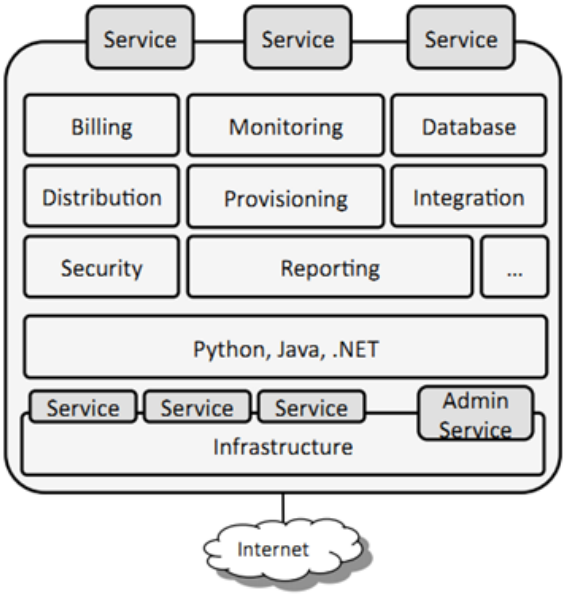


Figure 3: *Platform-as-a-Service (PaaS) Stack*

II.3. IaaS

The services on the infrastructure layer are used to access essential IT resources that are combined under the heading Infrastructure-as-a-Service (IaaS). These essential IT resources include services linked to computing resources, data storage resources, and the communications channel. They enable existing applications to be provisioned on cloud resources and new services implemented on the higher layers.

Physical resources are abstracted by virtualization, which means they can then be shared by several operating systems and end user environments on the virtual resources – ideally, without any mutual interference. These virtualized resources usually comprise CPU and RAM, data storage resources (elastic block store and databases), and network resources as displayed in figure 4.

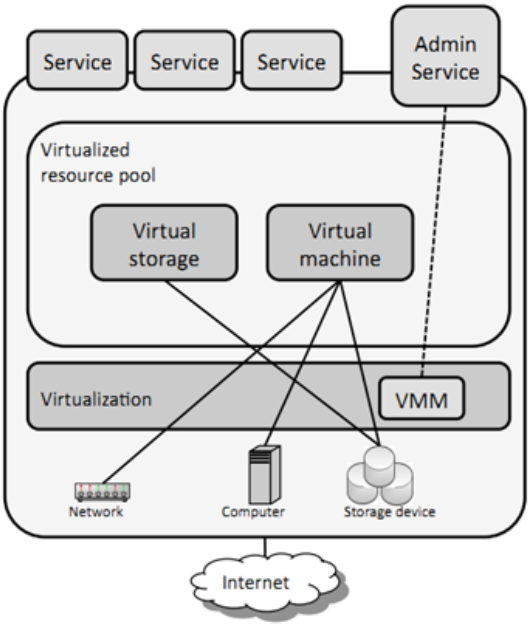
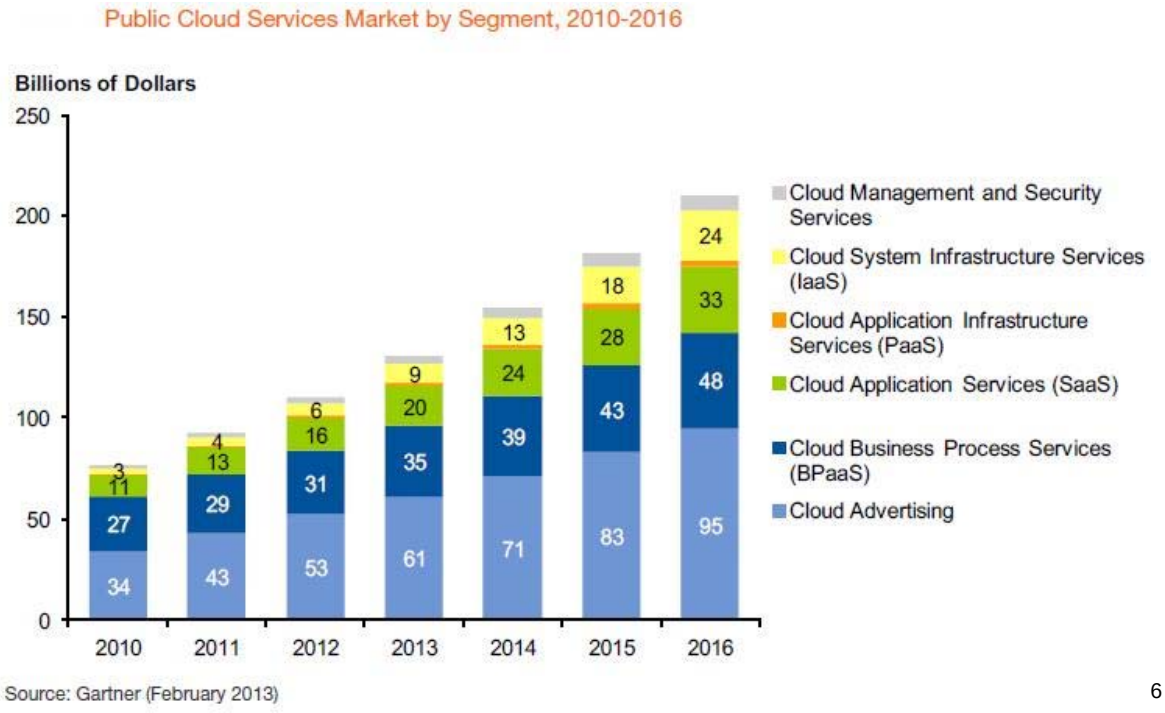


Figure 4: *Infrastructure-as-a-Service (IaaS) Stack*

Gartner predicts that Infrastructure-as-a-Service (IaaS) will achieve a compound annual growth rate (CAGR) of 41.3% through 2016, the fastest growing area of public cloud computing the research firm tracks. The following graphic provides insights into relative market size by each public cloud services market segment:



[6]

[6] http://www.forbes.com/sites/louiscolumbus/2013/02/19/gartner-predicts-infrastructure-services-will-accelerate-cloud-computing-growth/

Figure 5: *Prediction for public cloud services*

III. RETURN ON INVESTMENT FROM CLOUD COMPUTING[7]

III.1. Cloud Computing Key Performance Indicators and Metrics

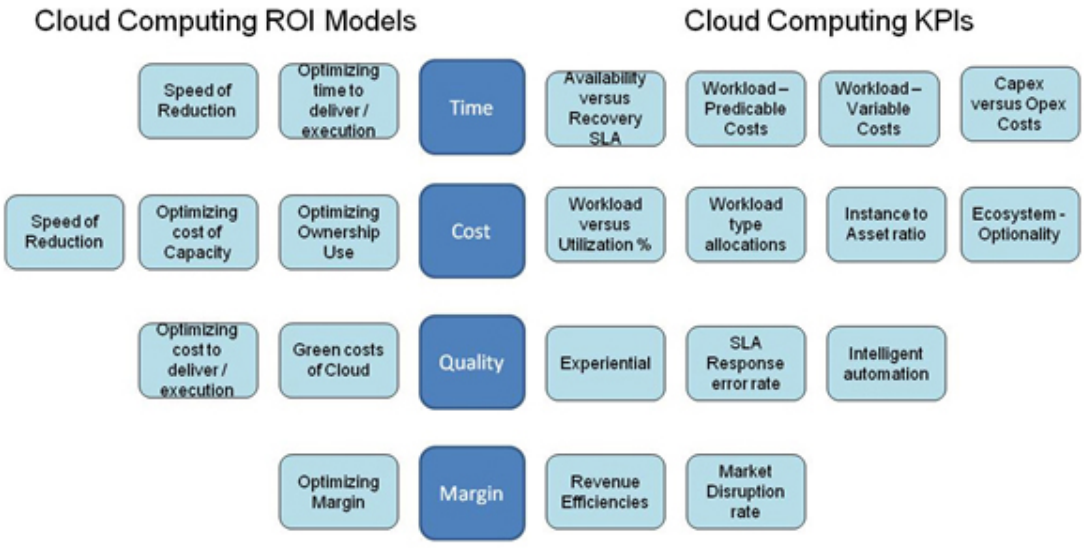
Cloud Computing introduces an expanded context for service-oriented business and IT.

Developing ROI models that show how Cloud Computing adoption can benefit both business and IT consumers and providers involves examining the key technology features and business operating model changes.

This section gives an overview of ROI models to support Cloud Computing assessments and business cases in two aspects:

- Key Performance Indicator ratios that target Cloud Computing adoption, comparing specific metrics of traditional IT with Cloud Computing solutions. These have been classified as cost, time, quality, and profitability indicators relating to Cloud Computing characteristics.
- Key Return on Investment savings models that demonstrate cost, time, quality, compliance, revenue, and profitability improvement by comparing traditional IT with Cloud Computing solutions.

The overview of Cloud Computing ROI models considers both indicators and ROI viewpoints.



[7] The Open Group – *Building Return on Investment from Cloud Computing*

Figure 6 – *Cloud Computing ROI models and KPIs*

III.2. Cloud ROI Cost Indicator Ratios

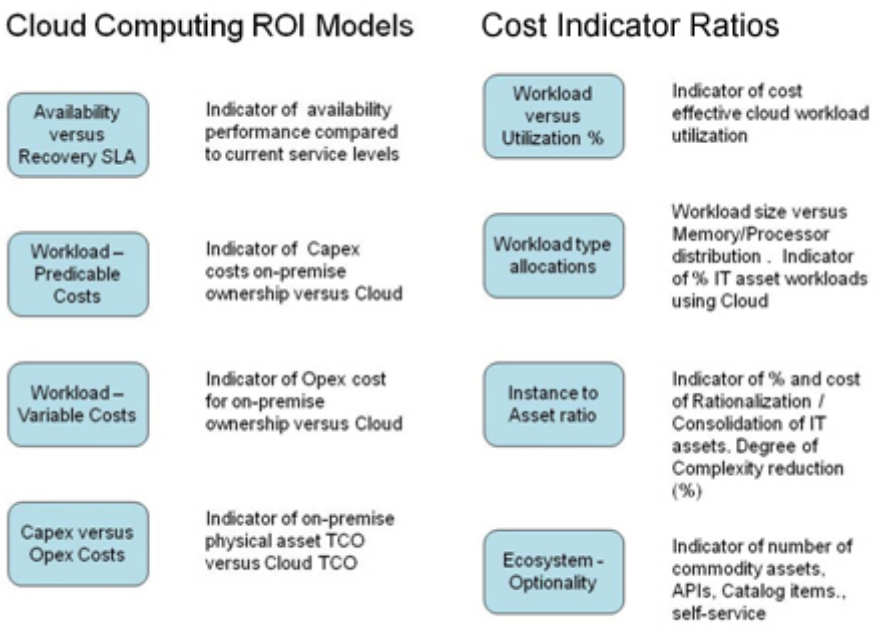


Figure 7 – *Cloud Computing ROI Models – Cost Indicator Ratios*.

Availability *versus* recovery SLA:

- Indicator of availability performance compared to current service levels

Workload – predictable costs:

- Indicator of CAPEX cost on-premise ownership *versus* Cloud

Workload – variable costs:

- Indicator of OPEX cost for on-premise ownership *versus* Cloud; indicator of burst cost

CAPEX *versus* OPEX costs:

- Indicator of on-premise physical asset TCO *versus* Cloud TCO

Workload *versus* utilization %:

- Indicator of cost-effective Cloud workload utilization

Workload type allocations:

- Workload size *versus* memory/processor distribution; indicator of % IT asset workloads using Cloud

Instance to asset ratio:

- Indicator of % and cost of rationalization/consolidation of IT assets; degree of complexity reduction

Ecosystem – optionality:

- Indicator of number of commodity assets, APIs, catalog items, self service

III.3. Cloud ROI Time Indicator Ratios

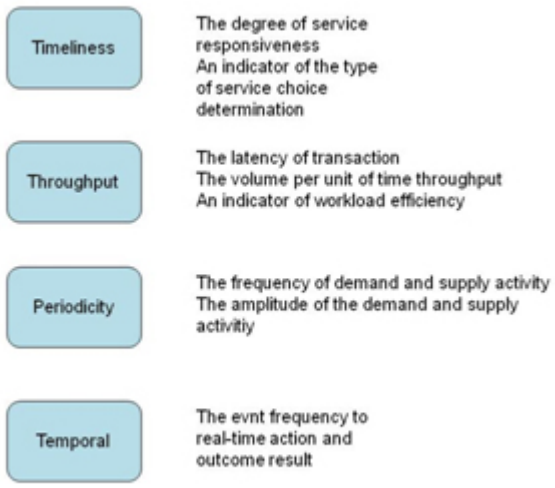


Figure 8 – *Cloud Computing ROI Models – Time Indicator Ratios*

Timeliness:

- The degree of service responsiveness
- An indicator of the type of service choice determination

Throughput:

- The latency of transactions
- The volume per unit of time throughput
- An indicator of the workload efficiency

Periodicity:

- The frequency of demand and supply activity
- The amplitude of the demand and supply activity

Temporal:

- The event frequency to real-time action and outcome result

III.4. Cloud ROI Quality Indicator Ratios

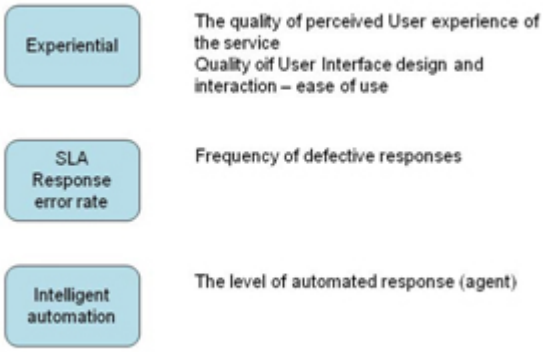


Figure 9 – *Cloud ROI Quality Indicator Ratios*

Experiential:

- The quality of perceived user experience
- The quality of User Interface (UI) design and interaction – ease-of-use

SLAresponse error rate:

- Frequency of defective responses

Intelligent automation:

- The level of automation response (agent)

III.5. Cloud ROI Quality Profitability Indicator Ratios

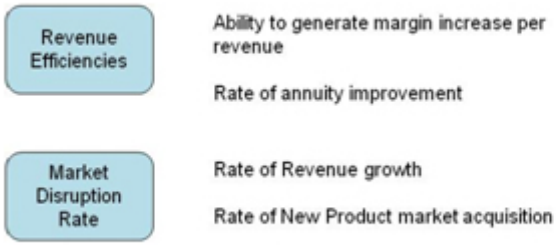


Figure 10 – *Cloud ROI Profitability Indicator Ratios*

Revenue efficiencies:

- Ability to generate margin increase/budget efficiency per margin
- Rate of annuity revenue

Market disruption rate:

- Rate of revenue growth

- Rate of new market acquisition

III.6. Cloud ROI Quality Savings Models

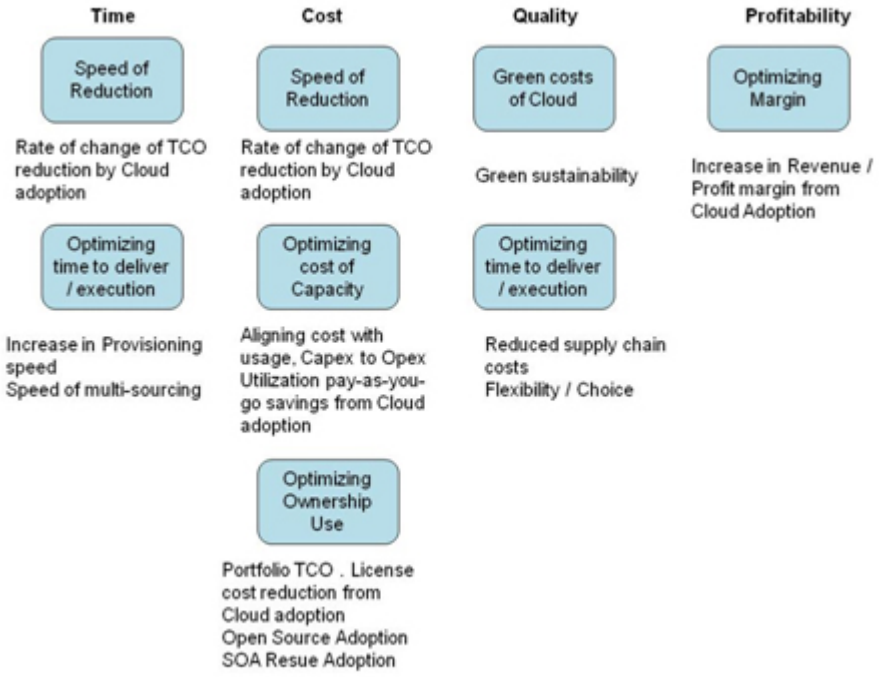


Figure 11 – *Cloud Computing ROI Savings Models*

Speed of time reduction:

- Compression of time reduction by Cloud adoption
- Rate of change of TCO reduction by Cloud adoption

Optimizing time to deliver/execution:

- Increase in provisioning speed
- Speed of multi-sourcing

Speed of cost reduction:

- Compression of cost reduction by Cloud adoption
- Rate of change of TCO reduction by Cloud adoption

Optimizing cost of capacity:

- Aligning cost with usage, CAPEX to OPEX utilization pay-as-you-go savings from Cloud adoption
- Elastic scaling cost improvements

Optimizing ownership use:

- Portfolio TCO , license cost reduction from Cloud adoption

- Open Source adoption
- SOA re-use adoption

Green costs of Cloud:

- Green sustainability

Optimizing time to deliver/execution:

- Increase in provisioning speed
- Reduced supplycchain costs
- Speed of multi-sourcing
- Flexibility/choice

Optimizing margin:

- Increase in revenue/profit margin from Cloud adoption

IV. CLOUD COMPUTING IN THE MILITARY

In the military, some certain steps can be done to fully implement a wide series of cloud services:

- rise to the proper classification level of the military private network;
- carefully design and build its own strong datacenter;
- hire IT professionals for operating the datacenter;
- secure private cloud

Some examples of cloud services for the military:

- IaaS (network, storage, compute)
- PaaS (databases, identity)
- SaaS (eLearning, HR management, logistics management, C2, document management, bussiness intelligence, monitoring, security solutions etc.)

CONCLUSIONS

Cloud computing is spreading fast all over the world with certain advantages for customers. It seems to be the perfect solution for a world in crisis, with lower and lower budget. We can say that the customers of cloud services can do more with less resources.

But who can forecast the “weather” for the IT in Romanian Armed Forces? Certainly those who are at the decision level. If the weather is difficult to influence and usually we can only predict it, this type of computing clouds could be the subject of a human decision, taken for a future clear sky over the IT in Romanian Armed Forces.

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THE COMPETENCIES OF THE CIO.
AN ANALYSIS OF THE FEDERAL US CIO COUNCIL MEMBER'S BACKGROUND

Cpt. Cdor. (N) eng. Gabriel RUSU

CONTENTS

INTRODUCTION

For most large organizations, the role of the chief information officer (CIO) has become increasingly complex and challenging as information technology (IT) has become critical infrastructure. At the beginning, were identified a set of initial critical competencies of the CIO. The role of the modern CIO has become increasingly business focused and strategic. How a CIO leads and manages the IT staff will largely influence how successful a CIO is in the role. The CIO needs to have high level understanding of key technology knowledge so personal knowledge is also critical in the role.

I. INFORMATION RESOURCES MANAGEMENT (IRM) FOUNDATIONS

What Information Resources Management (IRM) is?

According to Section 3502 (7) of Title 44, United States Code (Paperwork Reduction Act of 1995), Information Resources Management means “The process of managing information resources to accomplish the mission and to improve organizational performance.”

The term 'Information Resources' includes “information and related resources, such as personnel, equipment, funds and information technology.” [Section 3502 (6) of Title 44, United States Code, Paperwork Reduction Act of 1995.]

The term 'Information Resources Management' includes the management of information resources, e.g. printed materials and electronic information, various technologies and equipment that manipulate these resources, and the people who generate, organize, and disseminate those resources - Gary D. Blass et al. "Finding Government Information: The Federal Information Locator System (FILS)", Government Information Quarterly, JAI Press, Inc., Greenwich, Connecticut. Vol. 8, No. 1, pp. 11-32. 1991.

Information Resource Management (IRM) is a management concept that brings together individual’s knowledge and skills, information, organizational goals and objectives, and information technology, with final goal: using IRM to effectively accomplish the organization's mission.

Taking account by the basis of the IRM theory, we will find that this concept is an interdisciplinary one and it is based on organization theory, management theory,

human relations theory, economic theory, cognitive psychology, cultural anthropology, computer science etc.

As result, the person (or persons) from an enterprise/organization responsible for the information technology and computer systems that support enterprise goals, must be very skilled in various domains.

I.1. IRM HISTORY

The earliest effort to place information and knowledge in an economic context of significance to business and government, and established the concept of information economy was made by the Princeton economist Fritz Machlup in 1962. But Adrian McDonough – Microeconomist - Economics & Business Management is the person that understands the role of information for the economic performance and said in 1963: "**Treat information as a resource**".

In 1973, Marc Uri Porat – Economist - U.S. Department of Commerce, defined the U.S. information economy and measured the U.S. information economy.

In the early 70', USA enters in a state in which everything was based on information, but Information Resources were not yet managed. From here result the need of a theoretical and legal framework related on Information Resources Management.

I.2. POLITICAL GENESIS OF INFORMATION RESOURCES MANAGEMENT

In 1975, was established the USA Congressional Commission for analyze and assess information as a resource. The USA Congressional Commission findings were that information was considered a "free good", information was not managed, the computer acquisitions were done with little accountability and big information handling costs. Commission's perspectives and concerns were that information is a valuable resource for the government and citizens, has a cost, is not a free good and information resources must be managed (collect only information needed, information should be integrated and information should be shared). Also, it was revealed the rising cost of information technology as a significant portion of programs cost, and information costs are largely hidden and invisible.

Conclusion: the commission provided a model for Information Resources Management (IRM) legislation.

In 1979 John Diebold brings IRM concept to business: “Information is a supplementary capital beside the physical assets. Successful organizations will use information…

- as a major resource and structure it as efficiently as they do with other assets . . .
- as a capability that allows them to change tactical plans more rapidly . . .
- primarily for planning and decision making . . .
- to measure performance and the organizations responsiveness to its growing and varied constituencies …
- to form instantaneous bonds with the customer . . .
- for tracking product performance, liability and product
- maintenance on a longer-term basis.”

In order to implementing IRM, in 1980, from the Paperwork Reduction Act, were required to all agencies to establish a new management function, called “Information Resources Management” or “IRM”. Paperwork Reduction Act establishes some issues:

- Minimize paperwork burden;
- Minimize information costs;
- Maximize information usefulness;
- Coordinate information policy;
- Ensure effective information technology acquisition to improve service delivery;
- Ensure information management consistent with law.

  All governments are “information industries” (including Ministry of Defense).
- All (military) organizations collect information, provide information, and use information.
- There should be plans to significantly reform, and strengthen the role of information and information technology in providing “Organizations that work better and cost less.”

In 1996, the Clinger-Cohen Information Technology Management Reform Act opens a new era in Information Resources Management (IRM) by introducing a number of significant reform initiatives:

- Acknowledge the criticality of information systems to effective governmental performance,
- Focus on organization management and effectiveness,
- Update policies for information technology acquisition,
- Establish a mechanism for holding organization's leaders and their information systems accountable for achieving efficiency and effectiveness in all operations.

But how to put into practice even the most perfect law/policy? By having the right people in the right positions!

The Clinger-Cohen Act establish in each military/civilian organization a **Chief Information Officer** (CIO) - to focus on IRM management.

Also, the Clinger-Cohen Act establishes issues or problems to deal with:

- Information assurance and network security;
- Privacy, confidentiality, and accessibility of information;
- Records retention and e-mail preservation;
- Electronic submission of paperwork and public key infrastructure;
- Information technology acquisition and contracting;
- E-commerce;
- Management reform, institutional change, and electronic government.

The central IRM policy functions reside within the Office of Information and Regulatory Affairs (OIRA), and Office of Management and Budget (aka Ministry of Finance). As a result: a direct responsibility and accountability linkage between Office of Management and Budget (OMB) and the organizations heads regarding the IRM domain.

II. CHIEF INFORMATION OFFICER (CIO)

Chief information officer (CIO) is a term that emerged in the 1970s as a result of the increased importance placed on IT by organizations (Rockart, Ball & Bullen 1982; Stephens & Ledbetter 1992; Gottschalk 1999). CIO is a job title commonly given to the most senior IT executive in an organization responsible for the management of the ICT infrastructure that supports organization goals. Broadbent and Kitzis (2005) offer a more recent definition: 'the most senior executive

responsible for identifying information and technology needs and then delivering services to meet those needs'.[1]

"Short for Chief **I**nformation **O**fficer, CIO is a job title given to someone within an enterprise who heads, at the executive board level, information technology within an organization. The CIO is largely responsible for the computer systems and the information technology (IT) that support the organization, and works within the organization's budget to oversee the IT implementation, often reporting to the organization's **C**hief **F**inancial **O**fficer (CFO). Within the organization, the job of a CIO is to overall derive greater demonstrable business value from IT spent. CIO is a job title that is most commonly used in the military, enterprise and larger business organizations."[2]

As information technology (IT), or information communication technology (ICT) and systems have become more important, the CIO has come to be viewed in many organizations as a key contributor in formulating strategic goals. The importance of the CIO position has risen greatly as information technology has become a more important part of business. The CIO may be a member of the executive board of the organization.

II.1. ROLE OF THE CIO

A role is the set of responsibilities and/or expected results associated with a job. Complex positions in an organization such as the CIO may include a large number of tasks, which are sometimes referred to as functions (McNamara 1997).

In time, the role of the CIO has changed significantly from the technology administrator to the senior executive responsible for aligning ICT with the business goals and leveraging ICT to achieve the strategic vision of an organization.

The CIO role has become much more strategic, with the CIO often sitting on the executive management board. As IT (ICT) has become more important, the CIO has become a key contributor in formulating the strategic goals of an organization. In many companies, the CIO reports directly to the Chief Executive Officer (CEO). In some companies, the CIO sits on the executive board. In most cases, the CIO delegates technical decisions to employees more familiar with details. Usually, a CIO

[1] 18th Australasian Conference on Information Systems Critical Competencies for Modern CIO, 5-7 Dec 2007, Toowoomba, Lane
[2] (http://www.webopedia.com/TERM/C/CIO.html)

proposes the IT infrastructure that an organization will need to achieve its goals and then works within a budget to implement the strategic IT plan.

II.2. COMPETENCIES REQUIRED FOR THE CIO ROLE

Competencies are general descriptions of advanced knowledge, skills and abilities needed to perform a role in the organization. Competencies are typically built up over time through experience. Competencies can be described in terms such that they can be measured.

The modern CIO has multiple roles and responsibilities and needs to have a broad range of critical competencies to carry out their key roles and responsibilities.

In general, no specific qualification is typical for CIOs, but many of them have degrees in computer science, information systems, or software engineering. In order to strengthen their business management skills the number of CIOs that gained an MBA (Master of Business Administration) is increasing.

More recently CIOs' leadership capabilities, strategic perspectives and business perspicacity have taken precedence over technical skills. It is usually for CIOs to be appointed from the business side of the organization, especially if they have project management skills.

"A CIO needs a solid foundation in information technology, project management, and business management. As such, some of the common components of a successful CIO might include the following:

- Project Management
- PMP Certification
- MBA Programs
- MIS Degrees
- CIS Degrees
- Information Technology Certifications"[3]

An online survey[4] was used to collect quantitative and qualitative data to determine the important competencies for the role of the modern CIO. According to that survey, the table below shows the critical competencies confirmed as important for the role of the modern CIO, and classifies each competency in terms of the type of primary role and knowledge.

[3] (http://jobsearchtech.about.com/od/careersintechnology/a/CIO.htm)

Table no. 1. Classification of critical competencies for CIO based on primary role type and knowledge type

Competencies of the CIO	**Primary role type**	**Knowledge Type**
Leadership	Business strategist	Know how to be
Strategic Planning for the Organization's Information and Technology (IT) Infrastructure	IT Strategist	Know how to be
Business Alignment & Innovation with IT	Business Strategist	Know what
Human Resource Management	Functional leader	Know how to be
Managing business relationships with IT	Business Strategist	Know what
IT Budgeting and Control	Business Strategist	Know what
Business process management	Business Strategist	Know how
Project management	IT Strategist	Know how
IT architecture management	IT Strategist	Know how
Knowledge/Intellectual Capital Management	Business Strategist	Know how
Communication skills – particularly board level	Business strategist	Know how to be
Change leadership	Technology advocate	Know how
Change management	Change Agent	Know how
Ability to adapt to constant change	IT strategist	Know how to be

Table no. 1 shows that the role of the CIO has become more business focused and strategic as the primary role of business strategist and IT strategist, and the higher levels of knowledge and soft skills (know how to be; know how) dominate the role of the CIO, whereas specific practical knowledge and hard skills (know what) are less important in the role.

[4] 18th Australasian Conference on Information Systems Critical Competencies for Modern CIO, 5-7 Dec 2007, Toowoomba, Lane

III. FEDERAL U.S. CIO COUNCIL

Until 2002, several documents regarding IRM were elaborated, implemented and even revoked. By the Executive Order 13011, Federal Information Technology, on July 16, 1996, (now, revoked) was established the Chief Information Officers (CIO) Council. The Congress certified the CIO Council's existence by a law, in the E-Government Act of 2002.

"The CIO Council serves as the principal interagency forum for improving practices in the design, modernization, use, sharing, and performance of Federal Government agency information resources. The Council's role includes developing recommendations for information technology management policies, procedures, and standards; identifying opportunities to share information resources; and assessing and addressing the needs of the Federal Government's IT workforce. The Chair of the CIO Council is the Deputy Director for Management for the Office of Management and Budget (OMB) and the Vice Chair is elected by the CIO Council from its membership. Membership on the Council is comprised of CIOs and Deputy CIOs from the main agencies of the U.S. federal government."[5]

"The Federal Chief Information Officer is the administrator of the Office of Electronic Government, which in turn is part of the Office of Management and Budget. The position is appointed by the President and does not require senate confirmation. It was created by the E-Government Act of 2002.

The US CIO oversees federal technology spending, federal IT policy, and strategic planning of all Federal IT investments. The CIO is charged with establishing a government-wide enterprise architecture that ensures system interoperability, information-sharing, and maintains effective information security and privacy controls across the Federal Government.

Vivek Kundra is the first person to use the title Federal Chief Information Officer. Previous holders of the office used the title Administrator for E-government and Information Technology at the Office of Management and Budget.

On August 4, 2011, Steven VanRoekel was named on to be the second Chief Information Officer of the United States."[6]

[5] (http://govitwiki.com/wiki/Federal_CIO_Council)
[6] From Wikipedia, the free encyclopedia

III.1. FEDERAL U.S. CIO COUNCIL STRUCTURE[7]

III.1.1. LEADERSHIP

The Chairperson of the Council is the Office of Management and Budget's Deputy Directory for Management. The Federal Chief Information Officer is the Director of the Council and leads its activities on behalf of the Chairperson. Steven VanRoekel is currently serving as the Federal CIO and as the acting Deputy Directory for Management.

The CIO Council, from among its members, elects a Vice-Chairperson of the Council. The Vice-Chairperson is an agency CIO who serves for two consecutive one-year terms.

III.1.2. GROUPS

The CIO Council is comprised of three committees that align with Federal IT priorities: Innovate, Deliver, and Protect. These committees, the Innovation Committee (Innovate), Portfolio Management Committee (Deliver), and Information Security and Identity Management Committee (Protect), manage specific projects on behalf of the Council. The Council also collaborates closely with two task forces to help share and disseminate agency best practices and lessons learned across two key initiatives, Data Center Consolidation and Shared Services. In addition, the Council supports and conducts ongoing information exchange with a number of self-organizing Communities of Practice (CoPs) which address important IT topics and issues. Currently, these include the Privacy, Accessibility, and IT Workforce CoPs. By working within a structure that combines formal committees, short-term, agile working groups, and communities of knowledge experts, the Council ensures that the most relevant and pressing Federal IT topics are addressed across the Federal CIO community.

III.1.3. COMMITTEES

1. Information Security and Identity Management Committee (ISIMC)

[7] https://cio.gov/

The Information Security and Identity Management Committee (ISIMC) provides a forum on the CIO Council that enables agency Chief Information Officers (CIOs) and Chief Information Security Officers (CISOs) to collaborate on identifying and developing policy recommendations for high-priority security and identity management initiatives aimed at enhancing the security posture and protection of Federal networks, information, and information systems.

2. Innovation Committee

To enable the transformation to a 21st Century Government that serves the American people more effectively, agencies have been innovating with less and strategically investing in information technology (IT). The Innovation Committee focuses on relevant topics such as the use of modern technologies to deliver digital services to citizens and businesses, deployment of mobile technology within Government, modular IT development strategies, and using Federal data as a strategic resource to enable agency mission delivery and grow the economy.

3. Portfolio Management Committee

Information technology plays a vital role in virtually every Government operation and action. Sound management of information technology (IT) resources ensures that the Federal Government maximizes the return on its investment in Federal IT and uses technology to meet customer needs and advance mission-focused objectives. The Portfolio Management Committee focuses on agency-wide best practices in the areas of; governance and management processes, optimization of commodity IT resources (including data centers, cloud computing, and purchasing contracts), the use of IT shared services platforms, and enterprise architecture.

III.1.4. COMMUNITIES OF PRACTICE

1. Accessibility

The Accessibility Community of Practice ensures that agencies monitor their accessibility performance and consider a variety of internal controls, holding agency managers accountable for providing an accessible environment.

2. IT Workforce

The IT Workforce Community of Practice advocates for strategies to help develop and maintain an effective IT workforce.

3. Privacy

The Privacy Community of Practice improves agency practices for the protection of privacy, serving as the interagency coordination group for Senior Agency Officials for Privacy (SAOPs), Chief Privacy Officers (CPOs), and senior agency officials with primary responsibility for agency-wide privacy oversight, policy, and compliance.

III.1.5. TASK FORCES

1. Data Center Consolidation Task Force

The CIO Council launched a government-wide Data Center Consolidation Task Force comprised of the data center program managers, facilities managers, and sustainability officers. The Data Center Consolidation Task Force will be responsible for working together to share progress toward the Federal Government's consolidation goals.

2. Shared Service Task Force

The mission of the Shared Services Task Force is to promote and advance the use of inter-agency shared services for Commodity IT, Support and Mission Services. The Task Force is composed of agency shared services representatives who represent the Federal shared service consumer community (the customers) of shared services.

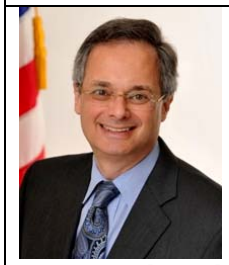
III.2. MEMBER'S BACKGROUND

The Federal U.S. CIO Council is formed by 55 members, CIOs and deputies, representative for all departments of U.S. Govern and not only.

We will not analyze the background of all the members of the Council, but only some of them, which will be considered representative, shown in the Table no. 2, presented below.

Table no. 2 – Background of some Federal U.S. CIO Council members, and their derived competencies /skills and expertise.

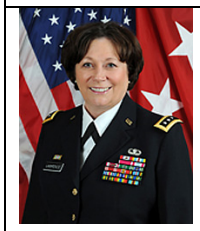
FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Mr. Steven VanRoekel** U.S. Chief Information Officer Office of Management & Budget	Steven VanRoekel is the second Chief Information Officer of the United States, appointed by President Obama on August 5th, 2011. Prior to his position in the White House, Mr. VanRoekel held two positions in the Obama Administration: Executive Director of Citizen and Organizational Engagement at the United States Agency for International Development (USAID) and Managing Director of the Federal Communications Commission (FCC). At the FCC, Mr. VanRoekel oversaw all operational, technical, financial, and human resource aspects of the agency. He also led the FCC's efforts to introduce new technology and social media into the agency. Mr. VanRoekel worked at Microsoft Corporation from 1994 to 2009, most recently as a Senior Director in the Windows Server and Tools Division. He received a B.A. in Management of Information Systems from Iowa State University.	- Leadership skills; - Management of technical, financial, and human resource; - Communications; - Business Alignment & Innovation with IT - Political support; - Bachelor of Arts degree in Management of Information Systems;
 **Mr. Darren B. Ash** Chief Information Officer Nuclear Regulatory Commission	Mr. Darren B. Ash is the Deputy Executive Director for Corporate Management in the Executive Director's Office of the U.S. Nuclear Regulatory Commission (NRC). Mr. Ash provides policy direction, leadership, and oversight for information technology (IT), information management, information systems security, space planning and facilities management, rulemaking, acquisition management, and centralized administrative service activities at the NRC. He also serves as the agency's Chief Information Officer, Chief Freedom of Information Act Officer, and Senior Accountable Official for Data Quality.	- Leadership skills; - IT expertise; - Information management; - Information systems security; - Acquisition management.

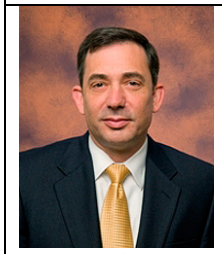
FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Mr. Frank Baitman** Chief Information Officer Department of Health & Human Services	Frank Baitman has held leadership positions in both the private and public sectors, focusing on innovation, technology and business strategy. He is currently the Chief Information Officer with the US Department of Health and Human Services (HHS). Frank served as a White House Entrepreneur-In-Residence on assignment at the Food and Drug Administration (FDA), where he helped to build a streamlined process for regulatory review and approval of innovative medical devices. As CIO for the US Social Security Administration, Frank focused on innovation and citizen-centered services while increasing agency efficiency through technology modernization and business process improvements. He co-chaired the Federal CIO Council's Accessibility Committee's efforts to improve services to Americans with disabilities, advocating the benefits of universal design. Frank has focused on innovation and invention, having worked as an independent strategy executive and consultant, with for-profit companies, nonprofits and universities. While at IBM Research he created a marketing group that shaped the division's research and development agenda; later as director of corporate strategy for IBM, he oversaw the Global Market Trends study which identified emerging business opportunities, launching the life science solutions and pervasive computing businesses. Frank has advised government agencies on public policy matters, including nuclear nonproliferation, physical security, and arms control verification measures, and worked with the Department of Energy's labs developing their technology transfer program. Frank received his Master's in Public Management at the University of Maryland at College Park; and his BA from the State University of New York at Albany.	- Experience in private and public sectors; - Promoter of innovation and invention; - Leadership; - Physical security; - BUSINESS Alignment & Innovation with IT; - Master in Public Management; - BA from the State University of New York at Albany.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Ms. Teresa M. Takai** Chief Information Officer Department of Defense	Teri Takai is the Acting Assistant Secretary of Defense for Networks and Information Integration and the Department of Defense Chief Information Officer (ASD (NII) / DoD CIO). She serves as the principal advisor to the Secretary of Defense for Information Management/Information Technology and Information Assurance as well as non-intelligence Space systems, critical satellite communications, navigation, and timing programs, spectrum and telecommunications. She provides strategy, leadership, and guidance to create a unified information management and technology vision for the Department and to ensure the delivery of information technology based capabilities required to support the broad set of Department missions. Ms. Takai served as CIO for the State of California. She advised the governor on the strategic management and direction of information technology resources as the state worked to modernize and transform the way California does business with its citizens. As California's CIO, Ms. Takai led more than 130 CIOs and 10,000 IT employees spread across the state's different agencies, departments, boards, commissions and offices. Teri pursued an agenda that supports viewing California's IT operations from an enterprise perspective, including: Forming a Project Management and Policy Office, release of the California Information Technology Strategic Plan, passage of the Governor's IT Reorganization Proposal, establishing a Capital Planning Process and directing agency consolidation activities. Ms. Takai served as Director of the Michigan Department of Information Technology (MDIT) since 2003, where she also served as the state's CIO. She restructured and consolidated Michigan's resources by merging the state's information technology into one centralized department to service 19 agencies. Ms. Takai led the state to being ranked number one four years in a row in digital government by the Center for Digital Government. In 2005, Ms. Takai was named "Public Official of the Year" by Governing magazine. She is also Past-President of the National Association of State Chief Information Officers and	- Experience in private and public sectors; - Management/Information Technology and Information Assurance; - Provides strategy, leadership, and guidance; - Satellite communications, navigation, and timing programs, spectrum and telecommunications; - Strategic management; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - Master of Arts degree in management; - Bachelor of Arts degree in mathematics.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
	currently serves on the Harvard Policy Group on Network-Enabled Services and Government. Ms. Takai worked for the Ford Motor Company for 30 years, where she led the development of the company's information technology strategic plan. She also held positions in technology at EDS and Federal-Mogul Corporation. Ms. Takai earned a Master of Arts degree in management and a Bachelor of Arts degree in mathematics from the University of Michigan.	
 **LTG Michael J. Basla** Chief, Information Dominance and Chief Information Officer Department of the Air Force	Lt. Gen. Michael J. Basla is the Chief, Information Dominance and Chief Information Officer, Office of the Secretary of the Air Force, the Pentagon, Washington, D.C. General Basla leads four directorates and supports 77,000 cyber operations and support personnel across the globe with a portfolio valued at $17 billion. He has overall responsibility for networks and network-centric policies, communications, information resources management, information assurance, and related matters for the Department of the Air Force. As Chief Information Officer, Lt. Gen. Basla provides oversight of portfolio management, delivers enterprise architecture, and enforces freedom of information act and privacy act laws. He integrates Air Force warfighting and mission support capabilities by networking air, space, and terrestrial assets. Additionally, he shapes doctrine, strategy, and policy for all cyberspace operations and support activities. General Basla graduating from Bishop Grimes High School. He received his commission in 1979 as a distinguished graduate of Officer Training School. General Basla has served in five operational communications units including commands at detachment, squadron and group levels. He has extensive joint experience including a tour as Director for C4 Systems, Joint Task Force Southwest Asia in Saudi Arabia where he delivered integrated network operations in support of United Nations security resolution enforcement against Iraq. He has served on the staffs of the Joint Staff, U.S. Transportation Command, Headquarters U.S. Air Force, Air Mobility Command and Air Force Communications Command. In 2005, General Basla received the Eugene M. Zuckert Award, which honors one general officer or senior executive service	- Leadership; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - Cyber operations; - Human resources; - Networks and network-centric policies; - Communications; - Information resources management; - Information assurance; - Organizing, equipping, training, and maintaining mission-ready space and cyberspace forces and capabilities;

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
	member each year for outstanding management achievements by a Department of the Air Force Manager. He was Vice Commander, Air Force Space Command, Peterson Air Force Base, Colo., where he assisted the commander in organizing, equipping, training, and maintaining mission-ready space and cyberspace forces and capabilities for North American Aerospace Defense Command, U.S. Strategic Command and the other functional and geographic combatant commands with missile warning, positioning, navigation and timing, communications and cyber capabilities.	
 **Mr. Terry Halvorsen** Chief Information Officer Department of the Navy	Terry Halvorsen was appointed in November 2010 to serve as the Department of the Navy (DON) CIO. In this capacity, he is the DON's senior official and advisor on matters related to Information Management (IM), Information Technology (IT)/cyberspace (including national security systems) and Information Resources Management (IRM). He develops strategies, policies, plans, architectures, standards and guidance, and provides process transformation support for the entire DON. He ensures that the development and acquisition of IT systems are interoperable and consistent with the Department's objectives and vision. He also serves as the Department's Cyber/IT Workforce Community Leader, Critical Infrastructure Assurance Officer and the Senior Military Component Official for Privacy and Civil Liberties. Mr. Halvorsen was the Deputy Commander, Navy Cyber Forces. He began serving in this position in January 2010 as part of the Navy Cyber reorganization. Previous to this, Mr. Halvorsen served as the Deputy Commander, Naval Network Warfare Command. He provided leadership for over 16,000 military and civilian personnel, supporting over 300 ships and approximately 800,000 computer network users, all globally dispersed. In this position he was responsible for the business performance of Navy network operations, space operations, information operations and knowledge management. Mr. Halvorsen was directly involved in establishing governance structure, processes and mechanisms to optimize over $8 billion in Navy resources. Mr. Halvorsen entered the Senior Executive Service in July 2004 as the Executive Director,	- Leadership; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - Naval Network Warfare Command; - Human resources; - business performance; - Curriculum Instructional Standards Officer for Navy Cryptology Training; - Financial and technical management; - Degree in History; - Master's Degree in Educational Technology from the University of West Florida.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
	Naval Personnel Development Command. Mr. Halvorsen was selected as the Director of Task Force Excel Atlantic, charged with improving the effectiveness and efficiency of Navy training. He also served as the Manpower, Personnel, Training and Education CIO and Acting Executive Director, Naval Education and Training Command. Mr. Halvorsen entered Federal Civil Service in 1985 as the Curriculum Instructional Standards Officer for Navy Cryptology Training. He has held numerous positions in the training community to include Deputy for C41 Training, Director Training Policy and Standards, and Director of Assessment, where he was one of the principal architects of the Navy's training reengineering efforts. He graduated with honors from Widener University with a degree in History. He was a distinguished military graduate and a George C. Marshall award winner. Following graduation, Mr. Halvorsen was commissioned a Regular Army 2LT in May 1980 and later obtained a Master's Degree in Educational Technology from the University of West Florida. Mr. Halvorsen's served several active and reserve tours with the Army, and was recalled to active duty numerous times in support of operations.	
 **LTG Susan S. Lawrence** Chief Information Officer Department of the Army	Lt. Gen. Susan S. Lawrence became the Army CIO/G-6 on March 2, 2011. As the CIO, Lt. Gen. Lawrence reports directly to the Secretary of the Army for setting strategic direction and objectives, and supervises all Army C4 (command, control, communications, and computers) and IT functions. As the G-6, she supports the Chief of Staff of the Army by advising on network, communications, and signal operations. This includes advising on the impact of communications security, force structure, equipping, and employment of network, communications, and signal capabilities on Army operations. She has served in operational assignments in Europe, Korea, Southwest Asia and the United States. She has commanded at every level from platoon to Army Signal Command. Her principal staff assignments have been as Intelligence and Operations Officer, 67th Signal Battalion at Fort Gordon, Georgia; Branch Chief to U.S. Army Information Systems Engineering Command-Europe; Deputy G-6, 2nd	- Strong leadership skills; - Communications security; - Communications; - Human resources; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - Bachelor of Science Degree from Campbell University, North Carolina; - Master's Degree in

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
	Armor Division in South Korea; Executive Officer, 142nd Signal Battalion; Force Development Action Officer, Washington, D.C.; Chief, Signal Career Assignments Branch, Officer Personnel Management Directorate; Chief of Staff and Vice Director, J-6, Joint Chiefs of Staff at the Pentagon; CIO/Assistant Chief of Staff, G-6 for United States Europe and 7th Army (USAREUR); Director, Command and Control, Communications and Computer Systems, J-6, United States Central Command; and Special Assistant to the Vice Chief of Staff of the Army, Pentagon. Lt. Gen. Lawrence has a Bachelor of Science Degree from Campbell University, North Carolina, where she received her commission, and she holds a Master's Degree in Information Systems Management from the University of Georgia.	Information Systems Management from the University of Georgia.
 **Mr. Robert Brese** Chief Information Officer Department of Energy	Mr. Robert Brese is the Chief Information Officer (CIO) for the Department of Energy (DOE). Mr. Brese provides leadership, establishes policy, and maintains oversight for the information technology investments that support the diverse portfolio of programs across more than 30 National Laboratories and Facilities. In this role, He has lead the change of the Department's cybersecurity program to be mission focused and risk-based, strengthened interagency partnerships with agreements for information sharing, initiated the transformation of OCIO IT services, strengthened enterprise project management control, and motivated a culture shift towards innovative thinking within the OCIO. Mr. Brese was the Deputy CIO for Information Technology and the Director of Defense Nuclear Security Program Evaluation within the National Nuclear Security Administration. Mr. Brese served as a submarine officer in the U.S. Navy, retiring after a 22-year career, which culminated in his assignment as a Senior Advisor to the Deputy Administrator for Defense Programs within NNSA. Mr. Brese earned his Bachelor of Engineering at Vanderbilt University, his Master of Science at The Catholic University of America, and was a qualified Naval Nuclear Propulsion Engineer in the U.S. Navy's Nuclear Propulsion Program. Mr. Brese also holds a Federal Chief Information Officer Certificate from The National Defense University.	- Leadership; - Information technology; - Cyber security; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - Served as a submarine officer in the U.S. Navy; - Bachelor of Engineering; - Master of Science at The Catholic University of America; - Naval Nuclear Propulsion Engineer; - Federal Chief Information Officer Certificate.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Ms. Karen L. Britton** Special Assistant to the President and Chief Information Officer	Karen Britton was commissioned Special Assistant to the President and CIO in the Office of Administration (OA) at the Executive Office of the President in December 2012. Ms. Britton manages the unclassified enterprise technology that supports the EOP, including the White House and the President of the United States. She served as OA's Deputy CIO, where she transformed the EOP's Information Technology (IT) workforce, stood up branches devoted to rapid application development and project management, and implemented quarterly governance reviews of the Office of the CIO's performance metrics. She worked for an IT consulting firm supporting the Department of Energy's CIO in the areas of capital planning and enterprise architecture. She previously worked for the Naval Sea Systems Command as the Deputy Command Information Officer, managing the Command's strategic planning, policy, and budget, as well as overseeing the development, implementation, and maintenance of its information systems. She is a graduate of the University of Massachusetts with a B.S. Degree in Industrial Engineering and Operations Research. She holds a M.S Degree in Management from Florida Institute of Technology.	- Information Technology; - Project management; - Capital planning and enterprise architecture; - University of Massachusetts with a B.S. Degree in Industrial Engineering and Operations Research; - M.S Degree in Management
 **Mr. Philip W. Clark** Chief Information Officer Corporation for National and	Philip W. Clark is the CIO for the Corporation for National and Community Service (CNCS). Is responsible for current operations and future planning for information technology support to the CNCS mission. He is also a co-chair of the Federal Small Agency CIO Council. He was the program manager for Grants.gov, the central, government-wide web site for finding and applying for Federal discretionary grants. He played a key role in improving capacity and performance of Grants.gov to support increased grant activity associated with the American Recovery and Reinvestment Act of 2009. Mr. Clark was the Information Technology Capital Planning Officer for the Department of Health and Human Services, with responsibility for supporting capital planning and oversight for HHS' $3 billion annual investment in information technology.	- Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - information technology; - MBA in international business;

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
Community Service	Mr. Clark has also served as the president of two private-sector corporations and as a consultant to the Office of the Secretary of Defense on information technology implementation and acquisition reform. He holds an MBA in international business and is a graduate of the Department of Defense Program Manager Course for managers of major weapons system acquisition programs.	
 **Ms. Casey Coleman** Chief Information Officer General Services Administration	Ms. Casey Coleman is the Chief Information Officer for the U.S. General Services Administration (GSA). As CIO she is responsible for managing the agency's $600 million IT budget and ensuring alignment with agency and administration strategic objectives, information security, and enterprise architecture. Ms. Coleman implemented an agency-wide infrastructure consolidation and standardization program that resulted in significant cost-savings and improvements to security and performance. Ms. Coleman is active in the Federal IT community and currently serves as the 2009-2010 President of AFFIRM (Association for Federal Information Resources Management). Ms. Coleman encourages the use of social media to improve service and operations of the Federal Government and writes a blog titled Around the Corner. Ms. Coleman has served in several other leadership roles at GSA, including CIO for the GSA Federal Acquisition Service (FAS) and Federal Technology Service (FTS). Prior to GSA she served in consulting, sales, and management roles at several technology startups. She began her career at Lockheed Martin Corporation. She has a bachelor's degree in computer science - Texas A&M University and a master's in business administration - University of Texas at Arlington. She is the recipient of the public sector MIT Sloan CIO Symposium 2010 Award for Leadership in Innovation, along with being a two-time Fed 100 award winner.	- Experience in private sector; - Budget management; - IT skills and knowledge; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - Bachelor's degree in computer science from Texas A&M University; - Master in business administration from the University of Texas at Arlington.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Ms. Cheryl L. Cook** Chief Information Officer Department of Agriculture	Cheryl Cook was appointed by Agriculture Secretary Tom Vilsack as Acting CIO on April 30, 2012. Cook provides executive leadership for all USDA Information Technology (IT) investments, operations and management. Ms. Cook advises the Secretary/Deputy Secretary and other USDA senior managers on the strategic use of information technology to support core USDA programs and to achieve mission critical goals. Ms. Cook served as the Deputy Under Secretary for USDA Rural Development from March 30, 2009. She managed policies and programs in Rural Development's three main areas: Business and Cooperatives, Housing and Community Facilities, and Utilities. Cook served from May 1993 until March 2000 as Rural Development's Pennsylvania State Director. She also worked in USDA's Washington, D.C. office as Executive Officer of the National Food and Agriculture Council. Between Federal appointments, Cook served as Deputy Secretary for Marketing and Economic Development at the Pennsylvania Department of Agriculture and as Executive Director for the Keystone Development Center, a non-profit organization in Pennsylvania that helps new and emerging cooperatives. She was a member of the National Farmers Union's public policy staff, focusing on dairy, credit, and environmental issues. She also maintained a private law practice. Cook received her bachelor's degree from Lebanon Valley College in Annville, Pa., and a law degree from The Dickinson School of Law in Carlisle, Pa. (April 2009).	- Executive leadership for all USDA Information Technology (IT) investments; - Management; - Executive position; - Bachelor's degree from Lebanon Valley College in Annville, - Law degree from The Dickinson School of Law in Carlisle,
 **Mr Larry N. Sweet** Chief Information Officer National Aeronautics &	Larry N. Sweet is NASA’s Chief Information Officer. Mr. Sweet joined the NASA Office of the CIO (OCIO) in June 2013. Sweet leads the agency’s information technology efforts and capabilities. He is responsible for ensuring NASA’s information assets are in line with federal policies, procedures and legislation. He manages a number of other major IT efforts, including the Information Technology Infrastructure Integration Program (I3P), which consolidates and integrates NASA’s IT services to enable collaboration and reduce costs to the agency. Mr. Sweet joined the agency in 1987 at the Johnson Space Center	- Leadership; - IT management; - Strategic Planning for the Organization’s Information and Technology (IT) Infrastructure; - IT architecture management;

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
Space Administration	where he served as supervisor and manager for more than 26 years. He began his career with NASA as a Branch Chief in the Center Operations Directorate. He moved on to the Information Resources Directorate, serving as Office Manager, Division Chief and Deputy Director prior to being selected as Director. Mr. Sweet completed a formal detail in 2002 as Deputy Director in the JSC Public Affairs Office and a rotational assignment in 2005 at NASA Headquarters in the Institutions and Management Office. He was Deputy Director for the Information Resources Directorate. He was then named Acting Director and Acting JSC Chief Information Officer. Mr. Sweet was named the JSC Chief Information Officer and Information Resources Director. He was responsible for developing and implementing the Center's strategy for institutional information systems in accordance with Agency and Center policies and standards. Mr. Sweet earned a Bachelor of Arts Degree in Visual Communications in 1978.	- Financial and technical management; - Bachelor of Arts Degree in Visual Communications.
 **Ms. Margie Graves** Acting Chief Information Officer Department of Homeland Security	Margaret H. Graves was selected in September, 2008, to serve as the U. S. Department of Homeland Security's (DHS) Deputy CIO. As the Deputy CIO, she oversees an IT portfolio of $5.4 billion in programs. In addition, Ms. Graves manages the operations of the Office of the Chief Information Officer, which covers the functional areas of Applied Technology, Enterprise Architecture, Data Management, IT Security, Infrastructure Operations, IT Accessibility, Budget and Acquisition. Prior to her selection as Deputy Chief Information Officer, Ms. Graves served as the Executive Director of the Enterprise Business Management Office within the DHS Office of the CIO. She developed and executed IT Portfolio strategies in alignment with the DHS Enterprise Architecture and established business processes for Capital Planning and Investment Control, departmental IT budget reviews and acquisition reviews. She also served as the Deputy Program manager for the Border and Transportation Security IT Integration Program. This program established the business case and the operational foundation for the current Infrastructure Transformation Program which is the DHS roadmap	- Experience in private sector; - Data Management; - IT Security; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - Infrastructure Operations; - IT Accessibility; - Budget and Acquisition; - M.B.A. from the University of Virginia Colgate Darden Graduate School of

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
	for consolidating and securing the IT Infrastructure including networks, data centers, e-mail, wireless services, desktop services, and help desk services. Ms. Graves has 20 years of experience in the management consulting industry where she held executive positions and also performed consulting engagements for clients. She has experience in the areas of systems engineering, business process reengineering, strategic planning, financial management, mergers and acquisitions and venture capital planning. She worked for several firms in the National Capital Region such as Technology Applications, Inc., Advanced Technology, Inc., and Planning and Research Corporation. She dedicated 10 years with A.T. Kearney, Inc. working for clients in the chemical, utility and medical services industries as well as holding positions in financial and administrative management. Ms. Graves holds a M.B.A. from the University of Virginia Colgate Darden Graduate School of Business Administration and a B.S. in Chemistry, also from the University of Virginia.	Business Administration; - B.S. in Chemistry, from the University of Virginia.
 **Mr. Jerry Horton** Chief Information Officer Agency for International Development	Mr. Jerry Horton joined the United States Agency for International Development on February 15, 2009, as the CIO. He has over 15 years of experience with Information Technology Groups from a wide variety of industries. At the U.S. Mint, he held VP and Director roles with several e-Business and manufacturing startups leading Information Technology, Technology Operations, and Business Operations organizations. Prior to those roles, Jerry served as Director of IT for VTEL, Manager of Site Networks and Computing for Motorola in Austin, Texas and IT Manager for two supercomputer manufacturers (nCUBE and CRAY Computer). He earned a Bachelor of Science degree from the University of Colorado.	- Leadership; - Experience with Information Technology Groups; - Experience in private sector; - Management of IT; - Bachelor of Science degree from the University of Colorado.

FEDERAL U.S. CIO COUNCIL MEMBER	BACKGROUND	COMPETENCIES / SKILLS AND EXPERTISE
 **Mr. Al Tarasiuk** Chief Information Officer Office of the Director of National Intelligence	President Barack Obama appointed Al Tarasiuk as Intelligence Community Chief Information Officer on February 17, 2011. Mr. Tarasiuk is widely recognized for leadership in technology and policy strategy and for executing information technology programs. In January 2011, he received the prestigious National Intelligence Reform Medal from the Director of National Intelligence for significant accomplishments leading to the transformation and integration of the U.S. Intelligence Community. Mr. Tarasiuk served as CIO at the CIA, where he was responsible for leading Enterprise Information Technology and Information Management. He supported cyber defense and also served as the CIA's Senior Privacy and Civil Liberties Officer. Mr. Tarasiuk was Director of CIA's Information Services Center, where he was responsible for the execution of Enterprise IT services in support of CIA's global mission. In his early years at CIA, Mr. Tarasiuk served overseas in an operational role with the National Clandestine Service. He has served in other senior executive, technical and program management roles throughout his distinguished career. He began his federal career as a project engineer with Radio Free Europe and Radio Liberty. Mr. Tarasiuk has more than 26 years of federal service. Mr. Tarasiuk holds a B.S.E.E. from New Jersey Institute of Technology and a M.S. from the George Washington University.	- Leadership; - Strategic Planning for the Organization's Information and Technology (IT) Infrastructure; - IT architecture management; - Technology and policy strategy and for executing information technology programs; - Information Management; - leading Enterprise Information Technology; - B.S.E.E. from New Jersey Institute of Technology; - M.S. from the George Washington University.

CONCLUSIONS

In order to illustrate the link between the CIO competencies and federal U.S. CIO Council member's background, we have analyzed the background of some Council's members, considered representative. The data are available in Table no. 2.

As we already said, there are no specific qualifications for CIOs, but many of them have degrees in information technology related fields (technically knowledge) and some of them gained an MBA (management knowledge). If we take a look and analyze the third column of the table no. 2 containing the data referring to federal U.S. CIO Council members background's, the key findings are that all the people have competencies/skills & expertise in various domain, and in or related to IT in special. The general CIOs competencies are presented in an analytical form in the column no. 1 from Table no. 1. Making a comparison between the general CIOs competencies and competencies & skills specific for every presented person, the findings are that all of U.S. CIO Council member's backgrounds prove and reinforce the fact that they are good communicators, higher educated people, with a solid foundation of knowledge, skills and expertise obtained throughout their careers, that allow them to fulfill roles requested by CIO position.

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A THEORETICAL APPROACH TO SOCIAL MEDIA AND MILITARY INFORMATION MANAGEMENT

LTC Dorel DANCIU

CONTENTS

“The medium is the message”

Marshall McLuhan

INTRODUCTION

It is obvious that the social media and so called *new media* have brought a major influence to the civilian and military institutions’ traditional ways of internal and external communication. Even the globalization process is partially influenced by social media.

For years, the professional in the field of communication hesitated to associate social media to traditional media. Social media is a generic term used for the many different forms of electronic communication that are made possible through the use of computer technology.

Social media is not a competitor for traditional media and other communication channels. Social media come to support existing communication flow. In the context of the rapid changes determined by Information Age, the great challenge is the integration of social media in the organizations’ information flow.

Effective use of social media may help to obtain informational supremacy and to fill some communication gaps in the field of military positive public image.

In the first section of my paper I will describe, in short, how Information Age influence common operational picture, using U.S. Military perspective. In my opinion, for military organizations it is crucial to gain information superiority. In this perspective, social media and new communication technology may contribute to this effort of consolidating information environment. I will give a special attention to blogs, one of the most influential social media.

I. CONTEMPORARY FEATURES OF THE MILITARY ORGANIZATION

I.1. Impact of Information Age on the military

It is a fact, the amount of information available today is greater than at any time in the history and for near future it will continue to grow continuously.

As a result, information environment has become part of the battle space. The U.S. Army doctrinal view on information environment is the following: “Aggregate of individuals, organizations, or systems that collect, process, or disseminate the

information; and also includes the information itself. The global community's access and use of data, media, and knowledge systems occurs in the information shaped by the operational environment. Commanders use information activities to shape the operational environment as part of their

operations."[1] In the assumption of military experts the future military operations will be accomplish by Information Age organizations.[2] It is quite possible that the future military conflicts will not have the same development as before. The future missions might be characterized by a great degree of complexity and unfamiliarity, many time limitations and constraints. These factors could require a rapid understanding of the situation, a rapid fusion of available information resources. The requirements for actionable information and the systems that produce and disseminate it will continue to grow. The dependence of information systems generates three main tasks:

- Protection of own information systems.
- Eliminate the opponent systems.
- Full use of information advantages in order to gain information supremacy.

On the U.S. military perspective, Joint Vision 2020 clearly defines the information as a major enabler in combat in the context of Network Centric Warfare (NCW). This concept is based on:

- A networked force that improve information sharing.
- The share of information in a collaborative way may improve it.
- Shared situational awareness enables self synchronization.
- A full access to information inside the organization.
- An improvement of relationship inside the organization.

All these have to increase mission effectiveness. On the other hand, NCW may bring some concerns in the field of information assurance. The adversaries could have access to the same information and information technology. The difference must originate from improved information, and the ability to provide it to the right people, in an adequate for ant at the right time. In fact, this is the core of information management. It also must integrate a great variety of technological system in a

[1] Headquarters, Department of the Army, FM 3.0 Operations, available online on http://www.fas.org/irp/doddir/army/fm3-0.pdf.

[2] D.S. Alberts, *Information Age Transformation*, CCRP Publications series, available online on www.dodccrp.org.

competitive one, the rapid transformation of processes, doctrine and organizational culture to benefits to the superiority that technology brings. An investment in technology and information doesn't mean an immediate change in organization.

Additionally, it is well known the resistance of military personnel against the introduction of new technologies. This opposition has its roots in military organizational culture. Moreover, some individuals and groups may consider that a change could devaluate their capabilities. The transformation strategy must:

- Identify the negative results of implementation and minimize them.
- Take advantage of other unexpected advantages.
- Balance the associated risk.

I.2. Gaining information superiority

One of the key features for achieving supremacy on the modern battlefield is to gain information superiority. J.P. Norton stated that the vision of information superiority emphasizes the ability to collect, process, and disseminate information in effective manner. [3]

In order to achieve information superiority it is necessary for coordination among interconnected activities such as intelligence, surveillance, reconnaissance (ISR), and information management and information operations. The information management has two supporting components:

- Information systems/ technology equipped in order to collect, process, store, and spread out information. This includes hardware and software, communications, policies and procedures of using information.
- Relevant information.

The U.S. doctrinal point of view on information process is based on cognitive hierarchy. It describes a progressive and linear flow of information that ultimately becomes understanding at the level of decision-makers (see figure 1).

[3] T.P. Norton, *Information Management: Is U.S.Army prepared for Information Superiority?*, a monograph for School of Advanced Military Studies United States Army Command and General Staff College, available online on http://www.www.dtic.mil/cgi-getTRDoc.pdf.

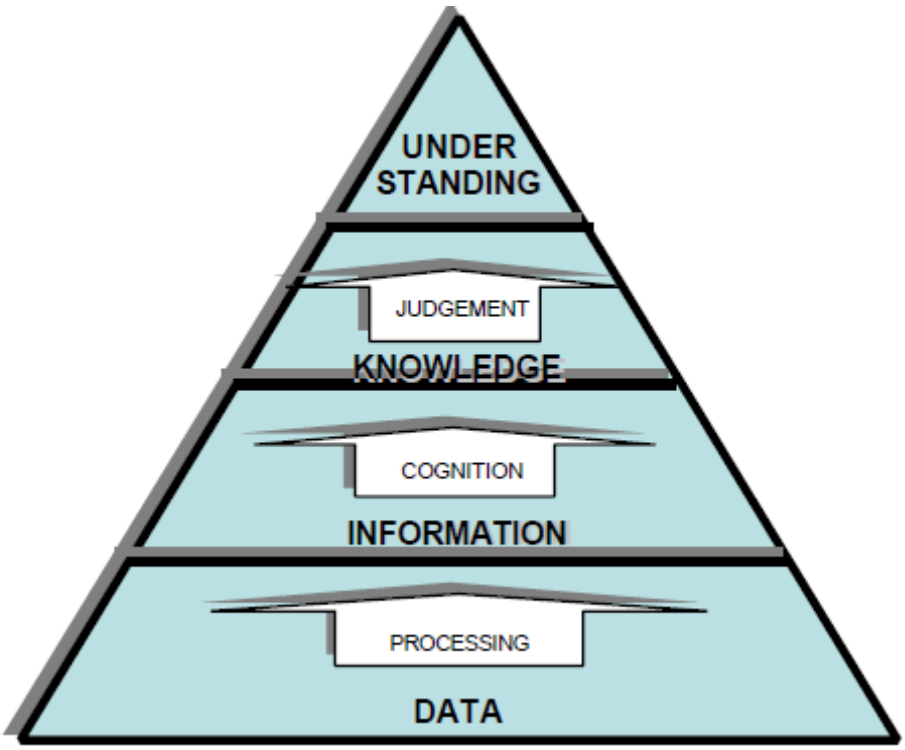

Figure 1 Cognitive Hierarchy

Source: http://www.www.dtic.mil/cgi-getTRDoc.pdf.

The same doctrine states that raw information is not valuable. It has to be analyzed in order to became knowledge and judged and synthesized to reach the final stage – understanding.

In this context there are three approaches on information:

- Information as a messages or the meaning associated to data.
- Information associated to the transmitting and receiving processes. It takes into account the importance of information channels.
- Information as a physical entity.

Regarding the information management oriented to achieve information superiority, M. Meltzer identified 13 principles[4] :

- Recognition of the need to manage information.
- Information is a changing agent.
- Information management requires investments in technology and personnel training.
- Leaders have to fully understand information management.

[4] Cited in T.P. Norton, *Information Management: Is U.S. Army prepared for Information Superiority?*, a monograph for School of Advanced Military Studies United States Army Command and General Staff College, available online on http://www.www.dtic.mil/cgi-getTRDoc.pdf., page no. 36

- Centralization and decentralization of information.
- Utilization of information.
- The access of information must be facilitated and encouraged.
- Protection of sensitive information.
- Anticipate information requirements.
- Provide information in easy to use format.
- Accepting information and information process.
- Supporting information flow.
- Information increases the motivation.

Information as a changing agent is one of the most important principle. It is well known that information generates power, if used in an appropriate way. Obtaining the information doesn't automatically generate its utilization.

Social media provides information in an accessible form and make the information flow more rapid. In the next section of my paper I will describe the main components of social media in a critical approach. I will put in balance the advantages and the risks thet using social media in the military could generate.

II. SOCIAL MEDIA AND THE DEFENSE ESTABLISHMENT

Social media is a generic term used for the many different forms of electronic communication that are made possible through the use of computer technology. Technically, social networks are working on Web 2.0 platform. This platform facilitates interactive information sharing, interoperability, user-centered and collaboration on the Web[5]. This type of site enables its users to interact with each other as contributors to the site's content, in contrast to websites where users are limited to passive viewing of information.

II.1. An overview on contemporary social media

Social media is not a competitor for traditional media and other communication channels. Social media come to support existing communication flow.

Before analyzing the most important social media, it is useful to present an up-to-date situation of social media influence based on Technocrati Media 2013 Digital

[5] *U.S.Army Social Media Handbook*, available online at www.slideshare.net/USArmySocialMedia/socialmedia

Influence Report[6]. This report shows that the most used platforms by influencers are blogs, web-sites, Facebook and Twitter. Regarding the most used social platforms, the results are presented in figure 2.

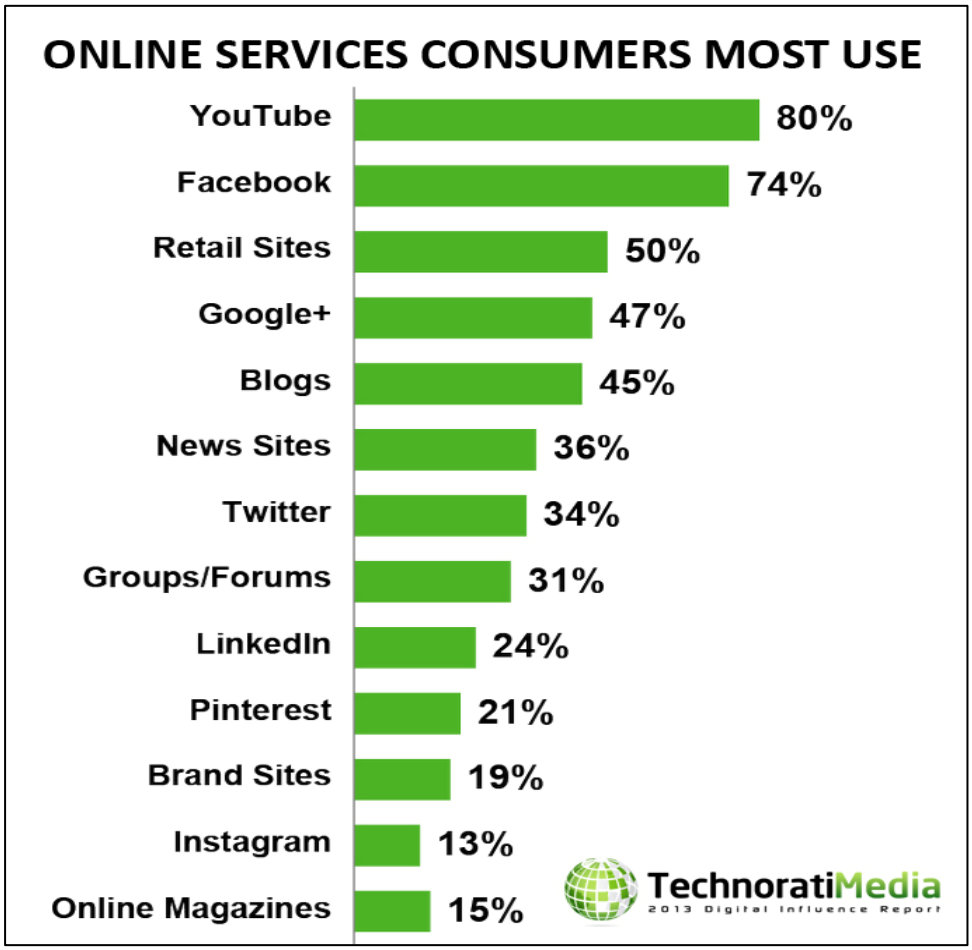

Figure 2 Poll findings on the most used online services

(Source: Technocraty.com)

Social media refers to interaction among people in which they create, share, and/or exchange information and ideas in virtual communities and networks[7]. Michael Heinlein defines **social media** as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content"[8]. Furthermore, social media depends on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. It introduces substantial and pervasive changes to communication between organizations, communities, and individuals. A special attention requires blogs.

[6] *Technocrati Media 2013 Digital Influence Report*, available online www.technocrati.com.
[7] http://en.wikipedia.org/wiki/Virtual_network

Blog is the short form of *weblog* and has its roots in late 1990s. According to the last media surveys, blogs become one of the most influential digital resources. The blog started as a simple form of online diary and evolved over time to a pretty influential form of communication. The Oxford Dictionary defines blog as a personal website or web page on which an individual records opinions, links to other sites, etc. on a regular basis.

The researchers have identified five major motivations for blogging[9]:

- Documenting the author's life and experiences.
- Expressing opinions and commentary.
- Venting strong emotions.
- Working out ideas through writing.
- Forming and/or maintaining virtual communities.

The blogs to which other Web pages link seem to be the most influential. Technocrati Media 2013 Digital Influence Report indicates that blogs and blogosphere were found to be the fifth trustworthy source of information on the internet. This classification is quite reliable due to de fact that accessing blogs is an individual users' choice based on social considerations, such as trust, reputation, social pressure, as well as on personal preferences.

The digital media survey mentioned above primary tool for bloggers is text, followed by pictures and microblogging. Video and audio files are less used. There are some ways to measure blogs influence. Based on number of visitors:

- Number of visitor in a specific period of time.
- Number of pages viewed over of given period of time.
- The way of offering feed-back.

The second method of measuring blogs influence is related on links and citations:

- The number of other blogs interacts to a specific blog.
- The blog popularity measured of information provided by its members.
- The number of references provided by traditional media.

It is important to analyze some factors that affect user's assessment of a blog:

- The blogs general appearance and functionality.
- The measure in witch content is of interest to a target group.

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[8] http://en.wikipedia.org/wiki/Virtual_network

[9] J.Kinniburgh and D.Denning , "Blogs and military information strategy", chap. 9 in J. Arquilla and D.A. Borer (eds), *Information Strategy and Warfare,* New York, Routledge, 2007.

- The measure in which the information provided is correct or consistent.
- The frequency with which the content is updated.

You Tube is a video sharing website, created by three former Pay Pal employees in February 2005 and owned by Google since late 2006, on which users can upload, view and share videos. The company uses Adobe FlashVideo and HTML5 technology to display a wide variety of user-generated video content, including movie clips, TV clips, and music videos, as well as amateur content such as video blogging, short original videos, and educational videos. Most of the content on YouTube has been uploaded by individuals, although media corporations including CBS, the BBC, Vevo, Hulu, and other organizations offer some of their material via the site, as part of the YouTube partnership program. Unregistered users can watch videos, while registered users can upload an unlimited number of videos. Videos considered to contain potentially offensive content are available only to registered users at least 18 years old. YouTube, LLC was bought by Google for US$1.65 billion in November 2006 and now operates as a Google subsidiary.

II.2. Constraints and risks of using social media

At the same principles of operational security remain important and they have been challenged by multiple outlets of information within the military as well as individual perception of soldiers about acceptable behaviour in public virtual environment.

The increasing number of military bloggers from deployed area such as Afghanistan has raised many concerns for military officials that information posted on a blog could compromise information security and missions.

Contrary to highly hierarchical nature of the military system, social networks are dominated by horizontal or network type communication. In this respect, military leaders in social networks have to dominate information flow using their qualities – precision of commentary, attractiveness of profile and ability to feel the audience. Some armies encourage the use of social media as communication tool on de chain of command but, in the same time, there are a set of imposed limitations and rules to be obeyed.

It is also recommended to keep an eye on the users of social media with a false identity. As a military person you may be of interest for different persons that are eager to obtain information about your activities.

U.S. Army Social Media Handbook provides a list of security measures to take in consideration while using social media:

- Avoid posting sensitive information about yourself such as time and location of different events. It is recommended to use general terms.
- Before reveal specific information you have to ask yourself “What could the wrong person do with this information?”
- Avoid providing details on your locations using the geotagging feature. Turn off the GPS.
- Check attentively the imagery before posting.
- Make aware your family on the importance of operational security.

Using social media in case of crises communication requires some supplementary measures:

- Don’t offer details on M.I.A or K.I.A. soldiers when on operations.
- It is good to have a prepared strategy of communication before emergency occurs.
- During civilian emergencies is recommended to communicate with stakeholders about military presence out there.
- Post stories and interesting imagery after the crises in order to keep the public interest.
- Analyze the reactions and comments on the forums.

Overall, due to the fact that is quite difficult to control the use of social media in the military, the most important security measure is to educate de military personnel about the limitation and caveats of using this type of communication.

It is important to incorporate social media into military information strategy, firstly as a tool for influence internal and external audiences but also for gathering intelligence. The US strategy of incorporating social media in information strategy can be used as a model.

II.3. Challenges and opportunities for the military

Effective use of social media may help to obtain informational supremacy and to fill some communication gaps in the field of military positive public image. It

depends on the military capacity to use the features of social media and to integrate in the new information environment.

Nowadays the use of social media in military became an opportunity for direct dialog between military and society and within the military organization. At the same time it also created various challenges for military leadership, significant increase of interaction among soldiers, thus stepping beyond traditional walls of secrecy. Moreover, internet and social networks have facilitated creation of numerous active social groups, among which soldiers should be distinguished as one of the very influential due to their special position in society and hierarchical organization.

Military can't admit to stay apart of the information flow, because they are looking for superiority and domination of information space. In this respect, military must not only participate in social communication, but be as active as possible [7].

Due to social media the flow of information becomes faster with every new cycle of technology and it creates fundamental challenges for staff and commanders of different ranks.

The main advantage of social media is that imagery and messages are rapidly disseminated. To access social media is at the hand of more and more people. At the beginning of this paper, I intentionally used a quotation of Marshall McLuhan that refers to manner in which the channel of communication influences how the message is perceived [4]. He said that a medium affects the society in which it plays a role not only by the content delivered over the medium, but also by the characteristics of the medium itself.

Social media is a powerful channel of communication, but not strong enough to be the determinant factor in communication because some concerns in the credibility of information disseminated.

Internal communication in the military communication became more effective. In the case of blogs reputation and credibility are the most powerful tools when considering them as a vehicle of information. Information accuracy is something took for granted by consumers, in opposition to traditional media that uses so called *cross-check* information. On the other hand, traditional media obtain consumers' points of view related to news using social media.

U.S. Army Social Media Handbook provides some guidance to the military personnel and units that use social media:

- Develop e social media presence in accordance with missions, messages and themes.

- Develop a detailed social media communication strategy.
- Provide updated contact information in order to keep consumers coming back to the pages.
- Provide terms of use statement.
- Encourage posting policy and monitor comments.
- Engage the audience.
- Listen to the audience and ask for feedback and suggestions.
- Answer the questions.
- Measure audience and content.

Unfortunately, in Romanian military this field of using social media is not covered by law. The Romanian MND official website holds a social media section starting with 2012. It contains Facebook, Twitter, and Youtube links. Taking in considerations the big number of users, I can assess that social media could have an important contribution to Romanian military public image improvement.

CONCLUSIONS

The amount of information available today is greater than at any time in the history and for near future it will continue to grow continuously.

Social media is not a competitor for traditional media and other communication channels. Social media come to support existing communication flow.

Military can't afford to stay apart of the information flow, because they are looking for superiority and domination of information space. In this respect, military must not only participate in social communication, but be as active as possible. The major challenge is the need to put in balance the openness and transparency of social communication using social media with information and operational security requirements.

Due to the fact that is quite difficult to control the use of social media in the military, the most important security measure is to educate de military personnel about the limitation and caveats of using this type of communication. Additionally, for soldiers the problem of information confidentiality has to be raised anytime.

As I mentioned before, it is a critical requirement to legislate this innovative realm of using social media in the military and to designate a specific structure or person in charge.

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THE IMPACT OF INFORMATION RESOURCES MANAGEMENT UPON ORGANIZATION PERFORMANCE

LTC Valentin CHEPTANARIU

CONTENTS

INTRODUCTION

"Information is power"

It was more than a quarter of a century ago when the use of computers and telecommunications became interlocked and helped to form the information industry. I remember that when I was lieutenant, in 1986, there are only some words about **Information Technology (IT),** and now we can see watches which are controlling blood pressure, refrigerator which help you to manage the food, we can receive a message on mobile phone in the next second after we bring the money from ATM, and not only. The importance of information to individuals and organizations is growing rapidly. Now more than ever, we need to understand the critical role information plays in so many aspects of business and life. It drives our communication, our decision making, and our reactions to the entire environment. Information is vital to communication and a critical resource for performing work in organizations. For example, a manager spend most of their day in meetings, reading, writing, and communicating with other managers, subordinates, customers, vendors, and other constituents via telephone, in person, or by e-mail. This activities involves gathering, processing, and disseminating information ***(see figure no. 1)***.

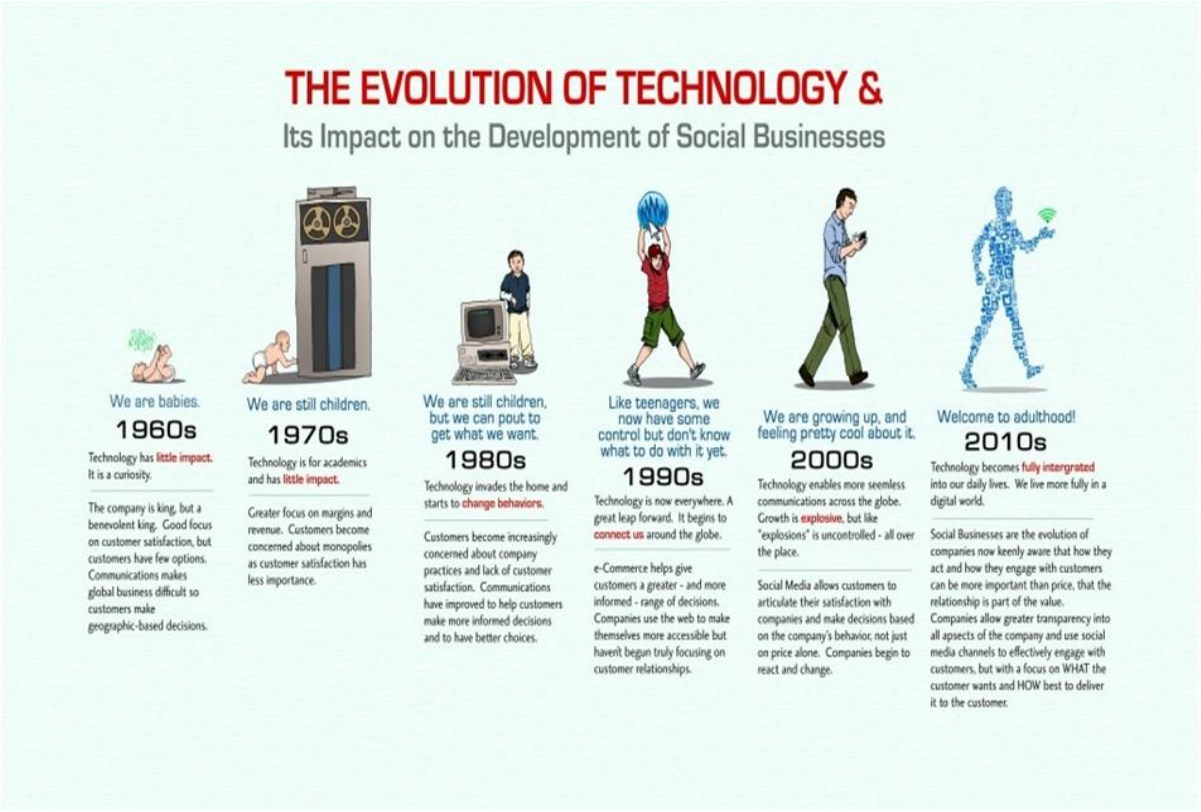

Figure no.1-The evolution of technology & its impact on the development of social businesses

Following this evolution, the world has become a ***global village***. The rate at which information flows from one region of the world to the other at the speed of light or ***at the click of the mouse,*** has eroded the barriers of time, geographical location and the bureaucracy of hierarchical organization in all domains. We can hear everywhere that Information is power. The importance of information to individuals and organizations, and therefore the need to manage it well, is growing rapidly. Now more than ever, we need to understand the critical role information plays in so many aspects of business and life. It drives our communication, our decision making, and our reactions to the entire environment.

I. EXPLORING INFORMATION RESOURCES MANAGEMENT

1. THE ORIGINS OF INFORMATION RESOURCES MANAGEMENT

If we're looking for the origins of IR and IRM we can see that it achieved a high visibility in the USA, in the middle of 1970s, as a result of the work of the National Commission on Federal Paperwork, the aim of which was to seek a reduction in the costs incurred by organizations in satisfying the demands for paperwork by the Federal bureaucracies (in other words, stop kill the trees, stop producing heaps on unnecessary papers).

However, the Commission quickly moved from the position of concern over the physical volume of paperwork to the real problem of information requirements planning, controlling, accounting and budgeting. At this time Mark PORAT[1] addressed these essentially economic issues in a report for the US Office of Telecommunications Policy. He noted that, in 1967, the total cost of informational inputs - for the Federal government- was **$50.5 billion**. In this way Commission itself required more than **100 information workers** and produced a seven-volume report of almost **3,000 pages**[2].

[1] Marc PORAT (USA), is an antrepreneur in IT. He was Chairman of Serious Materials, a manufacturer of sustainable building materials. He is best known for his doctoral work at STANFORD UNIVERSITY in which he created measures of the information economy.

[2] http://ocio.os.doc.gov/ITPolicyandPrograms/Information_Collection/dev01_003742

In spite of the strong impetus provided by the Commission, however, the idea of information management was taken into considerations, but ten years later did not appear to have penetrated very far into the governmental structure. In spite of the emphasis in the Paperwork Reduction Act[3] on treating information as a resource, only 12 of the 16 departments. IRM managers surveyed conceded that IRM is primarily seen as automation or information technology, including telecommunications.

One of the main planks of the guidelines was the recognition that responsibility for information resources was diffused over different sections in most departments and that there was a need to ensure effective collaboration among the resource holders and, possibly, the integration of these services (particularly data management, records management and library and information services) under a single director. Today, IR planning and implementation are receiving immense attention in both civilian and military organizations alike, because they touch almost everyone's lives. IT projects are managed for business, financial, academia, government, military and even non-profit organizations. It is vital that these entities have accurate computerized information so they are able to make timely and effective decisions.

The ***right information***, in the ***right form***, at the ***right time*** is very important in all civilian or military organizations to make correct decisions. During this course (MRI), I personally discovered the decisive role of information inside of any organization, and in order to have a common understanding about the paper subject, I would like to underline the definitions of the key words which will be used in next pages.

Information (I) – means data that is accurate and timely, specific and organized for a purpose, presented within a context that gives it meaning and relevance, and can lead to an increase in understanding and decrease in uncertainty. Information is valuable because it can affect behavior, a decision, or an outcome[4].

Information Technology (IT) - means the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise. The term is commonly used as a

[3] Paperwork Reduction Act (USA), this document was effective on December 11, 1980.
[4] http://www.businessdictionary.com/definition/information.html#ixzz2kQFDG6yl

synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones[5].

Information Resources (IR) - the available data, technology, people and processes within an organization to be used by the manager to perform business processes and tasks[6].

Information Resources Management (IRM) - techniques of managing information as a shared organizational resource. IRM includes identification of information sources, type and value of information they provide, and ways of classification, valuation, processing, and storage of that information[7].

In ROMANIA, on the fall of 1993 appeared the first dial-up lines operator ROMTELECOM, and connection speeds were depending on line quality and modem[8]. Outside Bucharest internet has developed well in Cluj and Timisoara. In 1993 there were only a thousand people with e-mail in the country. The year marked the launch of the first growth quality and services for Internet access was 1997 when we could already talk on dial-up connections for tens of thousands of customers and also permanent leased line connections for companies. Now, with more than 10 million internet users, we're leaders in internet speed and the services are much cheaper than in other countries.

2. INFORMATION RESOURCES CATEGORIES

We can identify in the broad range of IR, at least nine types, in printed materials or electronic form, as follow[9]:

a) **Almanacs** - are publications containing useful facts and statistical information, usually published annually.

b) **Bibliographies** - are lists of books, articles, and other materials about a particular subject or by a particular author.

c) **Biographical resources** - include encyclopedic entries, articles, books, and videos about a person, group, or organization.

[5] http://en.wikipedia.org/wiki/Information_technology
[6] Pearlson, K. E. & Saunders, C. S. (2006) Managing & Using Information Systems
[7] http://www.businessdictionary.com/definition/information-resources-management
[8] http://ro.stiri.yahoo.com/boom-ul-internetului-romania-la-un-inceput-timid
[9] http://library.sunderland.ac.uk/resources/

d) **Dictionaries**- can be both lists of words and definition and also alphabetical lists of entries on a topic. Similar to encyclopedias, these subject-specific dictionaries provide overview articles in a field, though not necessarily in as much depth, or with a bibliographic list of references.

e) **Directories** - are lists of persons or organizations that are systematically arranged. They typically provide addresses and affiliations for individuals and addresses, officers, functions, and similar data for organizations.

f) **Encyclopedias** - provide short entries or essays on topics and typically include a short bibliography of references for further research.

g) **Handbooks** - provide short entries or chapters on a topic, offering practical guidance or instructions for how to make or do something.

h) **Statistical sources** - can be used to verify your position or support an assertion in your research. Almanacs may offer some statistical information, but statistical sources will provide more in-depth coverage.

i) **Thesauruses** - provide lists of terms and synonyms. Many databases provide thesaurus lookup capabilities for searching their subject or descriptor index-searches.

3. CHARACTERISTICS OF INFORMATION RESOURCES

We as users, are also not able to own information like we are able to own resources such as land and capital. Information is, however, more accessible that these resources, and has become now the key resource. The quality, relevance, and usefulness of information do depend on who uses it, how astutely, and for what purposes. Our entrance into the information age has had many impacts on our way of life. The jobs and functions performed by the workers are becoming increasingly information oriented.

We are now working in an information economy, with information as the key resource. But similar to other resources, information must be produced, consciously used, and effectively deployed. It is important to be aware of the characteristics of our newest resource, so that we are able to use it efficiently, and benefit from it, as well as not abuse it.

There are at least five characteristics[10] of information as a resource. In this way information have to be:

a) **Expandable** - it is recognized that for specific purposes information may deplete, but in general, the more we have, the more we use, and the more useful it becomes. Information is certainly not scarce, and is available in profusion.

b) **Compressible** - more important for all of us, if it's possible to concentrate, integrate, and summarize information for easier handling.

c) **Transportable** - information can be tapped into just about anywhere, this has led to the idea of being remote as much more difficult to achieve since people and information can be taken to the remotest of places.

d) **Diffusive** - means the ability for information to leak. This leakage allows us to have more, and more of us to have it.

e) **Shareable** - transaction of information can take place, only sharing transactions, and this leads to an entire sharing environment.

4. EVALUATION OF INFORMATION RESOURCES

Evaluating IR is an important part of the research process. Not all information is reliable or true, nor will all information be suitable for your paper or project. Print and Internet resources vary widely in their authority, accuracy, objectivity, currency, and coverage.

More people use, for the IR evaluation reason, the acronym AAOCC[11] (Authority, Accuracy, Objectivity, Currency, and Coverage). The same basic criteria should be used for all information sources: books, journal articles, web pages, blogs, videos, sound recordings, e-books, etc. There are at list five criteria, as follow:

a) **Authority** -Who is the author or creator (who is responsible for the intellectual content) and what are his or her credentials?

[10] http://www.jhigh.co.uk/Intermediate2/Using%20Information/12_charact_of_info.html
[11] http://library.uaf.edu/databases-by-title

b) **Accuracy/Quality** - Is the information provided specific? For research on any topic dealing with things and events in the real world, accuracy is, obviously, of highest importance.

c) **Objectivity** - When we use any information resource, we have to decide whether the information is sufficiently objective for the topic and purpose at hand or whether it is biased.

d) **Currency** - Currency is especially important in the sciences where new developments occur frequently. In the arts and humanities, currency needs to be judged as appropriate.

e) Coverage- Decide whether the information source adequately covers the topic. It is too easy to go with one or two documents that seem otherwise to be of value but which really cover the topic only partly or marginally. We can verify this quality with five W and H (Who, What, When, Where, Why and How).

II. INFORMATION RESOURCES MANAGEMENT IMPACT UPON ORGANIZATION PERFORMANCE

The power to collect, assess, and disseminate information is a valuable strategic resource that any organization, civilian or military, can use to improve its competitive advantage. At the same time, technological advances are changing rapidly, thus requiring frequent updates in hardware and software as well as new competencies for IR professionals.

As strategic managers face the challenges of optimizing the use of IR, they are called to address a number of issues so they can make informed and effective decisions. A failure to understand the nature of the changing environment and the associated consequences is certain to cause decision-making that is slow to meet the challenges of the global IR evolution, thus creating a strategic disadvantage for the late mover. Managers must not only understand the role of IR in organization management and organization strategy formulation, but how the accepted norms of this role are changing over time. This focus of this work is not on areas where IT have been extensively applied, such as accounting or finance, but in relation to areas

where it has seen increasing applicability such as legal, marketing, HR and organization governance. This summary touches on key issues related to these changing roles for senior practitioners involved in organizations governance and senior-level strategic planning.

1. ORGANIZATION'S BENEFITS OF INFORMATION RESOURCES

IR is an integral part of most modern business operations. I will describe in the next part main benefits of using IR inside the organization[12].

a) **Communication** - rapid communications can help increase productivity, allow for better business decision-making and ease a company's expansion into new territories or countries. Email servers, routers, internal company billboards and chat services can serve as the backbone of a company's communications. These electronically based communication systems are used to disseminate routine and critical business information in a quick and
most efficient manner (***see Figure no.2***).

Figure no. 2 - IT can help businesses minimize geographic communication barriers

b) **Efficiency** - streamlined work flow systems, shared storage and collaborative work spaces can increase efficiency in a business and allow employees to process a

[12] http://smallbusiness.chron.com/business-benefits-information-technology-4021.html

greater level of work in a shorter period of time. Information technology systems can be used to automate routine tasks, to make data analysis easier and to store data in a manner that can easily be retrieved for future use. Technology can also be used to answer customer questions through email, in a real-time chat session or through a telephone routing system that connects a customer to an available customer service agent.

c) **Competitive Advantage** - adoption of IR allows companies to maintain a competitive advantage over their rivals. Companies using a first-movers strategy can use IT to create new products, distance their products from the existing market or enhance their customer services. Companies that follow a low-cost product strategy can look to information technology solutions to reduce their costs through increased productivity and reduced need for employee overhead.

d) **Economic Efficiencies** - organizations can harness IR to lower their costs. Using IT infrastructure, redundant tasks can be centralized at one location.

e) **Inventory Management** - ***when*** it comes to managing inventory, organizations need to maintain enough stock to meet demand without investing in more than they require. Inventory management systems track the quantity of each item a ***organization*** maintains, triggering an order of additional stock when the quantities fall below a pre-determined amount. These systems are best used when the inventory management system is connected to the point-of-sale (POS) system. The POS system ensures that each time an item is sold, one of that item is removed from the inventory count, creating a closed information loop between all departments.

f) **Data Management** - The days of large file rooms, rows of filing cabinets and the mailing of documents is fading fast (***see Figure no. 3).***

Figure no.3

Today, most companies store digital versions of documents on servers and storage devices. These documents become instantly available to everyone in the company, regardless of their geographical location. Companies are able to store and maintain a tremendous amount of historical data economically, and employees benefit from immediate access to the documents they need. For example, in my unit we use "cards" for each operation like ISAF, KFOR, ALTHEA. Inside this documents we keep update all information starting with legal basis, ROU contribution , evolution, etc. In this way when someone need information regarding ROU forces deployed outside the country we open this document and we can send an answer in a short time.

g) **Management Information Systems** - storing data is only a benefit if that data can be used effectively. Progressive companies use that data as part of their strategic planning process as well as the tactical execution of that strategy. Management Information Systems (MIS) enable companies to track sales data, expenses and productivity levels. The information can be used to track profitability over time, maximize return on investment and identify areas of improvement. Managers can track sales on a daily basis, allowing them to immediately react to lower-than-expected numbers by boosting employee productivity or reducing the cost of an item. As I mentioned in the previous point, in my unit we already keep in common folders information all information that we currently need.

h) **Customer Relationship Management (CRM)** - companies are using IT to improve the way they design and manage customer relationships. CRM systems capture every interaction a company has with a customer, so that a more enriching experience is possible. If a customer calls a call centre with an issue, the customer support representative will be able to see what the customer has purchased, view shipping information, call up the training manual for that item and effectively respond to the issue. The entire interaction is stored in the CRM system, ready to be recalled if the customer calls again. The customer has a better, more focused experience and the company benefits from improved productivity.

On the table (*see figure no.4*), I'll try to explain, for a better understanding the IR benefits impact upon organization, civilian or military, performance.

ACTIVITIES	**ORGANIZATION**		**OBS.**
	CIVILIAN	**MILITARY**	
Communication	**X**	**X**	

ACTIVITIES	ORGANIZATION		OBS.
	CIVILIAN	MILITARY	
Efficiency	**X**	**X**	
Data Management	**X**	**X**	
Economic Efficiencies	**X**	**X**	
Inventory Management	**X**	**X**	
Management Information Systems	**X**	**X**	
Customer Relationship Management	**X**	**X**	
Competitive Advantage	**X**	**X**	

Figure no.4 - The benefits of IR applicability in civilian and military organizations

2. IRM INFLUENCE UPON MILITARY ORGANIZATION

In the past decade we have witnessed phenomenal growth in the capabilities of information resources management systems. Military implications of these capabilities are only now beginning to be understood by national leadership. The absence of critical information ***can decide*** the difference between success or failure in the modern military arena. Therefore, the capability to provide or deny critical information may be considered the pinnacle of military or strategic power.

Following IR evolution in the military way was born - ***Information warfare***[13] ***(IW)-*** which is defined , as an orchestrated effort to achieve victory by subverting or neutralizing an enemy Command and Control (C2) system, while protecting use of C2 systems to coordinate the actions of friendly forces. A successful IW campaign seizes initiative from an enemy commander; the IW campaign allows allied forces to operate at a much higher tempo than an enemy can react to.

Most modern military C2 systems, I'll not discuss about C4ISR or another modern concept because for the military C2 is decisive, are based on high speed communications between the commander and troops. It follows that this information

[13] *US Army Regulation 25–1/June 25, 2013*-Army Information Technology -establishes policies and assigns responsibilities for IM and IT. This regulation applies to IT contained in mission command systems, intelligence systems, weapon systems, national security systems (NSSs) developed or purchased by the Department of Army (DA).

infrastructure, also known as an "***infosphere***", will be the arena in which information warfare is waged. Any system or person who participates in the C2 process will be a potential target in an IW campaign.

A good example of an early IW campaign can be seen in the conduct of ***OPERATION "DESERT STORM"*** (January 17, 1991- February 18, 1991), ***see figure no. 5***.

Figure no. 5- US FA 18 during Operation DESERT STORM

In order to gain air supremacy, a US Joint Special Operations Aviation Force (USJSOAF) opened a breach in radar coverage surrounding Iraq. The Iraqi command was unaware the breach existed until a blow had been struck from which Iraq would never recover. Simultaneously, a coordinated attack by stealth aircraft against Iraq's air defense headquarters bunker and three regional air defense centers effectively turned Iraq's integrated air defense network into a hodgepodge of uncoordinated air defense fiefdoms, each of which could be neutralized independently at the coalition forces' leisure. No longer did a surface-to-air missile site have a regional C2 system to prioritize and provide early warning of approaching targets.

Even more damaging, ***information warriors*** could alter data in a network, causing the adversary to use false information in his decision making process and follow a game plan of the friendly commander's design.

A significant portion of emerging IW theory attempts to grasp the impact of employing computer technology as a weapon system. Computer programs could take on the roles of etherial spies and warriors as they seek to impede an enemy's access to reliable information, while allowing friendly forces to form a reliable picture of enemy intentions and actions. While operational security and electronic warfare protect the integrity of our C2 systems, "software strikes" could be conducted against critical C2

nodes and data. Computer hardware could complement other weapon systems to deliver strikes against the enemy command and control system.

IW can affect political, economic or military targets. A televised news conference with an important dignitary could be altered to change its content. In this way we have a good example the Russian Cyber attack to Georgia, in August 2008, and not only, in 2012, inside the NATO network, it was at least 2,500 significants cyber attacks[14]. IW could sabotage an economy by reducing international confidence in a nation's currency, or causing an adversary to default on payments. Access to critical research and development facilities could be interfered with. Satellite communications could be terminated. Strategic information warfare waged independently could cause an adversary to lose faith in his own data management systems, greatly increasing confusion and difficulty of controlling assets. On an operational level, interference with enemy data management systems could create damaging time delays in the enemy's ability to make and implement decisions. On the tactical level, IW would be able to compliment the use of other systems to reduce danger to friendly forces and increase chances for success. IW opens new avenues for the conduct of military operations. On the low level of the conflict spectrum, covert intrusion into an opponent's C2 system may provide unique insight into their political intentions and decision making process.

IW is not limited to electronic systems. A laser-guided bomb dropped onto a cable junction box can have a very direct and significant effect on the enemy infosphere. Downing power or telephone lines can disable a command post. Simply put, non-computer assets can compliment use of computer hardware and software assets, or can act unilaterally. Their goal is to achieve the desired effect upon the enemy C2 network in pursuit of strategic, operational or tactical objectives. In the hands of a skilled team of information warriors, these technical assets can operate independently, or compliment other assets in pursuit of national goals. Successful employment of IW assets could theoretically end a war before the first shot is fired. A successful IW campaign requires intimate coordination between command, communications, operations, logistics and intelligence disciplines. In an IW campaign, the lines of distinction between the traditional military functions would blur, and the disciplines eventually merge.

Military organization structure will certainly evolve in order to take advantage of new capabilities and implement new doctrine. The traditional disciplines may

[14] http://ndu/csis.org/files/public.html

indeed meld into a cohesive organization or task force directed at critical nodes of an enemy's ability to make and implement decisions.

CONCLUSIONS

The importance of information as a resource and competitive factor in today's society and economy is constantly rising. As a consequence, it becomes necessary for organizations to manage the risks that arise from poor information quality in the same way other operational and strategic risks are managed. Information is, however, a unique and intangible resource that requires special methods and techniques for managing its related risks.

In the family point of view, more and more families enjoy television, computers and electronic games in their homes. Father may be watching television mother may be teleshopping over the Internet while the children are in their bedrooms playing arcade games. Research has shown that families are spending less and less time together. In addition to, with the growth of IT, fewer people are meeting with colleagues to discuss business matters during the day.

The changing threats to the world since 2001 are evident. When 9/11 occurred, there were just over 513 million Internet users (just over 8% of the world's population). That attack led on to operations in Afghanistan, which continue to this day. But today's world has over 2.7 billion users of the Internet (or nearly 39% of the global population), but over 90% of the world would have nothing to worry about. That's no longer true. And just as the attackers of 9/11 used innovative methods, today's innovative terrorists are finding cyber a rich vein to exploit. Cyber warfare is war without any noise, tanks or aircraft. Currently, it is a profitable, relatively risk-free and anonymous crime. It is often difficult to identify the origin or perpetrators of the attack - and this is the main problem. In order to be more effective, all the parties involved must work together: military, the private sector, and international organizations.

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STUDYING ONLINE SOCIAL NETWORKS

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CONTENTS

INTRODUCTION

Internet-based social networking sites have created a revolution in social connectivity, enabling around a billion people worldwide to communicate and became for many users a way of life.

Social networks definitions from Oxford dictionary are:

1. a network of social interactions and personal relationships.
2. a dedicated website or other application which enables users to communicate with each other by posting information, comments, messages, images, etc..

In consequences, social networking is the grouping of individuals into specific groups. Although social networking is possible in person, especially in the workplace, universities, and high schools, it is most popular online.

The use of internet-based social networks helps people to make connections with friends, family, classmates, customers and clients. Also, social networking can be done for social purposes, business purposes or both.

Generally, websites focused on building online communities of people having shared interests. Social networks have common themes of information sharing, person-to-person interaction and creation of shared and collaborative content. As important statistics, two-thirds of the world's Internet population visit a social network or blogging site and the sector now accounts for almost 20% of all internet time.

Beginnings and current state of social networks

The first social networks that have managed to raise more than one million users have been MySpace and LinkedIn, both launched in 2002. However, the globalization phenomenon started only with Facebook, launched in 2004 by Mark Zuckerberg, and Twitter, social network launched two years later to launch the principle of "live feed" which means that the message written by a user can instantly be viewed by all users of the list.

Although in America, Europe and Australia, Facebook holds first place as spreading, in China, the first two places are owned by Sina Weibo , with 500 million registered users, and Tencent Weibo - almost 550 million. Of these, however, about 90 % are inactive.

The same thing happens with all the social networks , meaning that there are many more registered users (IU) than active users (UA).

Studies done in the first quarter of 2013 show that Facebook has more than one billion AU, nearly 500 million Google+ , Twitter has 500 million UI, but only about UA 250 million , LinkedIn - 200 million IU, MySpace - 65 million and Pintrest - 50 million.

Although has a billion AU, social network YouTube , is cited but not always in the top networks as one area of activity is different, and the profile page of YouTube user has the same functionality "real time" as that on other social networks.

As growth in the same period, it seems that Twitter holds first place with an increase of 40 %, followed by Facebook and Google Plus, 30 % and 25 % increase. Meanwhile, Sina Weibo and Tencent Weibo showed a decrease in the number of users by 35% and 57%. LinkedIn has grown by about 25 % and 10% Pintrest. Increasing the number of Twitter users come mainly from the U.S., Hong Kong and Russia.

Twitter has always focused supremacy; so much wanted it that ran for years in the shadow of Facebook. Twitter re-becoming in 2013 what was supposed to be, a micro-blogging platform with the information, theoretically spreading very fast.

Facebook probably realized that if he continues to be a kind of digital nomad in the market such as Apple software & hardware, will have only to lose. So, in 2013, the Facebook social network tends to become again as it was originally conceived, one dedicated exclusively to online socializing!

Google Plus was the first network that from the beginning had its own niche, completely separated from the rest! Google Plus has been designed as a social network but as a flow of information that user feedback and interaction with content distribution network to provide value or not that content.

Pinterest, was at a moment fastest growing network. Unfortunately for them, the mere fact that besides design did not bring anything new on the market, put them in an area where Flickr users continues to be a favorite!

Probably easy to spot, all the major social networks have started to work together, either by associating accounts or by automatism distribution business users, but except Google Plus which is just a stream of information, nothing more (of course, provides and small social functions, but not this be their strength), all the other social networks have segmented the market and each took their territory, but with open borders at each other.

Synthesizing, socialization is applied differently largest networks and those likewise apply to become clearly competing and often battling each other lose users.

As a short review of the purpose for the most active social networks, at this moment, we can say:

- Twitter is the micro-blogging;
- Facebook has the intensive socialization and communication between friends / acquaintances;
- Google Plus is purely informational area is a continuous flow of information
- Pinterest and Flickr photo are sharing the visuals;
- YouTube, all flow of information, but only video;
- Yahoo Messenger probably had it not according to Yahoo Mail would have died since last year, it remained small because while the rest increased so that YM represent only a small function on Facebook, Google Plus or Twitter;

Actual state of social networks in Romania

In Romania, Facebook began to grow in the years 2009 - 2010 when there was a massive increase in new accounts records. In 2010, while in Romania HI5 network, local network considered was at its peak, approximately 5 million registered customers came exclusively from our country. In less than a year, however, the number has halved, because clearly the network remodeling in online games aggregator.

For now, it seems that the trend in social networks is: Facebook remains the number one social network in terms of socialization and self-promotion, Twitter is used increasingly more, but that expression network in real-time views on certain events, LinkedIn gaining ground in professional socialization and Pintrest is becoming more and more followers, being used as a distribution platform for interesting photos.

The new trends in the field of social networks revolve around education, created by college campuses, universities and education centers and that connects students and students in general grouped by field of study , Enterprise social

networks, ie networks that integrates a CRM (Customer Relations Manager) and in general link to corporate clients and their employees, and medical social networks that are created in the same way as the Enterprise, but strictly in the medical field evolves, their CRM integrating a module that addresses the issue of insurance.

1. THEORETICAL ANALYSIS OF SOCIAL NETWORKS

1.1. Social Networks

A social network is a map of the relationships between individuals indicating the ways in which they are connected through various social familiarities from casual acquaintance to strong family ties.

Network theory and social network analysis is a technique used in sociology, anthropology and organizational studies and focuses on how to solve problems and to drive organizations to achieve objectives.

Social media refers to a category of online applications that help connect friends, business partners and interest groups.

Social relations are described in the theory of social networks in terms of nodes and links. Nodes are the individual actors in the network, and ties are the relationships between these actors. The network is therefore a map of relevant links between nodes of a study subject. A network can be used to determine the capital available to individual actors.

A form social network is a key factor for network utility included individuals. Dense networks are less useful for members than networks with many gaps and many poor connections with individuals outside the main network. Open networks with weak ties and social spaces blank introduce new ideas and opportunities for their members to a greater extent than closed networks, which have many redundant links.

In other words, a network of close friends who share the same beliefs, interests and values enriches its members not to the extent that they do groups of individuals who have connections to other social worlds and access to a wider variety of information. It is better for individual success to have connections to a variety of networks than many connections within a single network.

The power of social network theory approach is different from traditional sociological studies. They assume that only the attributes of individual actors matter. Social network theory has brought an alternative view: the attributes of individuals are less important than their relationships and ties with other actors within the network.

1.2. Applications of the theory of social networks

Applications in the social sciences

Social network theory in the social sciences began with the sociometry, which attempted to quantify social relationships.

Sociometry is a way to measure the degree of kinship, relationship and similarity between people. Similarity measurement is useful not only for assessing behavior within groups and change management.

Sociometry can be a powerful tool for reducing conflicts and improving communication because they allow groups to observe in an objective and to examine their own dynamics.

First sociometric study was conducted in 1932-1938 in New York, by Jacob Levy Moreno.

A useful definition of sociometry is referring to it as a methodology for detection of energy carriers in interpersonal relations within a group. It shows models on which individuals associate with each other in a group together to achieve a goal.

Sociometry is based on the fact that people make choices in their interpersonal relationships[1]. Whenever you gather more people, they make choices as to where it sits next to who are, who receives as a friend and who as foe, who is the central figure of the group, who is dismissed and who must be isolated. These are facts of life, even if the choice is motivated or not articulated or just expressive, rational or irrational. These choices need not be justified so long as the self spontaneous and consistent with the choice.

Mark Granovetter expanded use of social networks to explain social phenomena in real life. The power of an individual within an organization would come as the degree to which that individual relationships are at the heart of the organization, not the job title they hold. Social networks play an important role in the career people in business success and job performance[2].

Popular Applications

Rule of 150 says that effective social network size is limited to 150 members. The rule stems from intercultural studies of sociology and anthropology about the size of a village. Limit has psychological explanations derived from statistical average human limits recognition of other members and tracking emotional life facts about all members of a group.

Online social networks have become popular in 2003, with the launch of websites as "Youtube", “Pinterest”, “Flickr” and "LinkedIn". Currently there are over 200 major online social sites. Search engine "Google" launched in January 2002 online network " Google Plus ", and " Twitter " recently launched Social network .

In these online communities, an initial set of founders send messages inviting members of their personal networks of contacts to join the network. New members repeat the same process and help increase membership and ensure global ties. Websites offering online business card specifies the type containing the email addresses of their friends, viewing members profile, create new contacts by providing services.

2. ANALYSIS OF SOCIAL NETWORKS

Social network analysis aims to measure the relationships and information flows between people, groups, organizations, computers, and other entities that process information and knowledge.

Are people or groups nodes and links are represented by relationships or information flows or flows that are established between them.

Social network analysis provides a mathematical analysis and visual (graphic) human relations. Management consultants use this method to analyze the organizational network.

One way to understand the networks is to evaluate the location of each actor in the network. Measurement location is about finding the degree of centrality of a node (the importance and prominence to). This positioning may be different than the

[1] Hoffman, C. (2001). Introduction to sociometry. Retrieved from: http://www.hoopandtree.org/sociometry.htm

[2] Social_network_analysis retrieved from: http://en.wikipedia.org/wiki/Social_network_analysis

organizational hierarchy or organization. Two nodes are connected if the disc regularly with each other or interact in some way.

There are three common methods of measuring centrality in a network: grades, connectivity and proximity.

Grades - Number of connections (links) direct that a particular node has with other nodes in the network generate the degree of that node. The node has multiple direct connections; the more active it is a node that connects network. The most important are the connections to actors who would otherwise remain isolated network. In general, most are connected with those in their immediate vicinity, with their group of friends.

Connectivity - Those who play the role of broker between the two major groups within a network have a strong role within the network, but is also the points of vulnerability that can prevent or block network traffic flow information.

Proximity - Nodes that finds the shortest paths to others and are thus closer to any other node in the network have a privileged position that can monitor the flow of information and an overview of what is really happening within the network.

From the location of nodes we can analyze:

Those that cross borders:

Nodes that connect different groups are located at the boundary between them can be good innovators have access to ideas and information flowing in both clusters. They are in a position to combine different ideas and knowledge found in various places to create new products and services.

Players peripheral:

Those at the periphery networks are not considered important. They can be found in the center of their personal networks but they do not have in mind the time of the study and provide a connection with them actually being a fresh information resource, which lies within that network.

Network centralization

The relationship between nodes centrality components can be said about the overall structure of a network. A highly centralized network is dominated by very few nodes centrally positioned. If these nodes are removed or damaged, the network will quickly fragment into several groups unconnected to each other. Nodes located downtown can be points of weakness. Weak centralized networks are more resistant outside attacks or accidents and do not collapse quickly.

Matrices of networks

1. Structural equivalence: the nodes play similar roles within the network.
2. Cluster Analysis: nodes densely connected cliques.
3. Structural goals: interior areas where nodes are not connected to the network.
4. Small worlds: small clusters with short distances between them frequently effective networks.

2.1. Methods of social network analysis

Network data analysis focuses on actors (nodes) and their relationships (links). The sample chosen is generally an organization that acts as a network under study is the relationships established between all actors that are part of that network (family, class, school, business, community, organization, club, neighborhood).

Analysts private network included people as embedded in multiple networks and links that are themselves embedded in other networks on multi-modal model structures. Social actors have the resources, energy, time and limited cognitive

capabilities, which limits the number of relationships and strong ties that they can cultivate and maintain.

The analysis may start with a focal actor is asked to name all its links with other actors in the network, and then nominated actors are asked to do the same (snowball method). In general, social network analysis requires a complete census of all actors and all ties between them in a networking.

Ego-centric networks focus only on links (neighborhoods) of an individual, his personal network (local) contacts. This information is useful to understand the effect they have on an individual networks, but not to understand the network.

Relationships among measurement systems we can mention:

a) binary system: a link between two actors (1) or absence of a link between them (0).
b) Multiple system with a gradual scale based on the emotional intensity of the link: Best Friend (2) a good friend (1).
c) system grouped according to test feelings towards people that have connections: people who do not like (-1), neutral person (0), people I like (1).
d) depending on the frequency of contacts between people (daily, weekly, monthly, occasionally).

Formal methods mathematical representation of analyzed data (matrices, graphs, sociograms) allow their computerized processing.

In general, members of a network are not all possible links, a phenomenon known as holes (goals) structure. Better connected individuals are more informed, more influential, but more subject to influence from others.

There are homogeneous networks in terms of the degree of connection of nodes, and others where there is a small elite individuals centrally located and securely connected, with a large mass of relatively isolated players. Differences in the degree of connection are relevant to the order and hierarchy within the group.

Within a network are distinct groups and sub-groups that communicate with each other more intensely than the rest of the network. Dyads, triads and small groups are sub-groups most studied. Individuals who can provide bridges between different groups within the network are more important for network communication than individuals with multiple connections, but only within a single group.

There are a number of key INDICATORS for analyzing networks:

1. network size (large organizations appear subgroups that provide direct communication between each of their members);
2. networks densities;
3. the degree of connectivity;
4. accessibility to each of the actors;
5. the distance between the actors (the time required for the transmission of information);
6. Share reciprocal links to the transition.

Many actors most of the time allocated to the local context represented by their immediate neighborhood relations (dyads, triads) that play different roles isolated information sources, receivers of information or balanced / rock (which receive information and pass on information received) .

The concept of centrality of the network is essential to understanding power, hierarchy, and social stratification and inequality structures.

Power within a network of ties: actors who have positions gives them more opportunities and alternatives for access to information and subjecting them to fewer constraints are stronger than others. Those who are located close to as many individuals and are considered benchmarks and models for others can also exercise

the power. Located in central network actors are stronger than those in the periphery because it is at the heart of the action. Power is and those who act as intermediaries between the bridge and other actors who would otherwise not be in direct contact with each other.

The analysis takes into account the structure of a network of groups, clans, cliques and factions that coexist within it. Individuals cosmopolitan part of several subgroups, can act as bridges to avoid conflicts between subgroups competing for resources and for communication.

Another aspect to consider is the position or social role played by an actor and the degree of structural similarity or equivalence of different positions within a network.

Graph Theory

Informally, a graph (chart) is a finite set of points (dots), peaks or nodes connected by links (links) called edges or arcs. It is a visual diagram that shows the relationships between variables (points). More formally, a simple graph consists of a set of vertices of a triangle and sets of pairs linking together the tips of the triangle, also called edges or lines.

Two nodes are adjacent if they are connected by one line. A circuit is a path that ends at the same point where it starts, and a loop is a two-way circuit on the one side between the two points. A loop is a curve connecting a vertex with itself. A path is a sequence of consecutive steps connecting two nodes to be covered to traverse a graph.

The degree of a vertex is given by the number of links that tip ends. A node is isolated (it has degree zero) if not connected by any connection to other nodes.

A complete graph is one in which each point is connected by a link to the other points. A graph is connected if there is a possible link between each pair of nodes. Incompletely connected graphs consisting of fully connected sub-graphs.

2.2. The Social Network Approach

When a computer network connects people or organizations, it is a social network. Just as a computer network is a set of machines connected by a set of cables, a social network is a set of people (or organizations or other social entities) connected by a set of social relationships, such as friendship, co-working or information exchange. Much research into how people use computer-mediated communication (CMC) has concentrated on how individual users interface with their computers, how two persons interact online, or how small groups function online.

As widespread communication via computer networks develops, analysts need to go beyond studying single users, two-person ties, and small groups to examining the computer-supported social networks (CSSNs) that flourish in areas as diverse as the workplace and virtual communities.

The specialized research studies describes the use of the social network approach for understanding the interplay between computer networks, computer-mediated communication (CMC), and social processes. Social network analysis focuses on patterns of relations among people, organizations, states, etc.

This research approach has rapidly developed in the past twenty years, principally in sociology and communication science.

Social network analysts seek to describe networks of relations as fully as possible, tease out the prominent patterns in such networks, trace the flow of

information (and other resources) through them, and discover what effects these relations and networks have on people and organizations. They treat the description of relational patterns as interesting in its own right – e.g., is there a core and periphery?– and examine how involvement in such social networks helps to explain the behavior and attitudes of network members– e.g., do peripheral people send more email and do they feel more involved? They use a variety of techniques to discover a network's densely-knit clusters and to look for similar role relations. When social network analysts study two-person ties, they interpret their functioning in the light of the two persons' relations with other network members.

This is a quite different approach than the standard computer-mediated communication (CMC) assumption that relations can be studied as totally separate units of analysis. “To discover how A, who is in touch with B and C, is affected by the relation between B and C … demands the use of the [social] network concept”
There are times when the social network itself is the focus of attention.

If we term network members *egos* and *alters*, then each *tie* not only gives egos direct access to their alters but also indirect access to all those network members to whom their alters are connected. Indirect ties link in compound relations (e.g., friend of a friend) that fit network members into larger social systems. The social network approach facilitates the study of how information flows through direct and indirect network ties, how people acquire resources, and how coalitions and cleavages operate.

Although a good deal of computer-mediated communication (CMC) research has investigated group interaction online, a group is only one kind of social network, one that is tightly-bound and densely-knit. Not all relations fit neatly into tightly-bounded solidarities. Indeed, limiting descriptions to groups and hierarchies oversimplifies the complex social networks that computer networks support. If Novell had not trademarked it already, we would more properly speak of “Netware” and not “groupware” to describe the software, hardware, and people ware combination that supports computer-mediated communication.

Units of Analysis

Social network analysis reflects a shift from the individualism common in the social sciences towards a structural analysis. This method suggests a redefinition of the fundamental units of analysis and the development of new analytic methods.

The unit is the relation, e.g., kinship relations among persons, communication links among officers of an organization, friendship structure within a small group.

The interesting feature of a relation is its pattern: it has either age, sex, religion, income, nor attitudes; although these may be attributes of the individuals among whom the relation exists…. A structuralism may ask whether and to what degree friendship is transitive.

He may examine the logical consistency of a set of kin rules, the circularity of hierarchy, or the cliquishness of friendship”.

Social network analysts look beyond the specific attributes of individuals to consider relations and exchanges among social actors.

Analysts ask about exchanges that create and sustain work and social relationships. The types of resources can be many and varied; they can be tangibles such as goods and services, or intangibles, such as influence or social support.

In a computer-mediated communication (CMC) context, the resources are those that can be communicated to others via textual, graphical, animated, audio, or video-based media, for example sharing information (news or data), discussing work, giving emotional support, or providing companionship

Relations

Relations (sometimes called *strands*) are characterized by content, direction and strength. The content of a relation refers to the resource that is exchanged. In a computer-mediated communication (CMC) context, pairs exchange different kinds of information, such as communication about administrative, personal, work-related or social matters. Computer-mediated communication (CMC) relations include sending a data file or a computer program as well as providing emotional support or arranging a meeting.

With the rise of electronic commerce (e.g., Web-based order-entry systems, electronic banking), information exchanged via computer-mediated communication (CMC) s may also correspond to exchanges of money, goods or services in the “real” world.

A relation can be directed or undirected. For example, one person may give social support to a second person. There are two relations here: giving support and receiving support.

Alternately, actors may share an undirected friendship relationship, i.e., they both maintain the relationship and there is no specific direction to it. However, while they both share friendship, the relationship may be unbalanced: one actor may claim a close friendship and the other a weaker friendship, or communication may be initiated more frequently by one actor than the other.

Thus, while the relationship is shared, its expression may be asymmetrical.

Relations also differ in strength. Such strength can be operationalized in a number of ways.

With respect to communication, pairs may communicate throughout the work day, once a day, weekly or yearly. They may exchange large or small amounts of social capital: money, goods, or services. They may supply important or trivial information. Such aspects of relationships measure different types of relational strength. The types of relations important in computer-mediated communication (CMC) research have included the exchange of complex or difficult information emotional support; uncertain or equivocal communication; and communication to generate ideas, create consensus, support work, foster sociable relations, or support virtual community.

Multiplexity

The more relations (or strands) in a tie, the more multiplex (or multistranded) is the tie. Social network analysts have found that multiplex ties are more intimate, voluntary, supportive and durable.

Yet some analysts have feared that email, the Internet, and other reduced-cues computer-mediated communication (CMC) s are unable to sustain broadly-based, multiplex relations.

These fears are extended by the boutique approach to online offerings which fosters a specialization of ties within any one of thousands of topic-oriented news groups.

However, this tendency toward specialization is counter-balanced by the ease of forwarding online communication to multiple others. Through personal distribution lists Internet participants can sustain broad, multiplex, supportive relationships.

As yet, there has been little research into the extent to which specialized, online, single relations grow into multiplex ties over time.

Composition

The composition of a relation or a tie is derived from the social attributes of both participants: for example, is the tie between different or same sex dyads, between two peers computer-mediated communication (CMC) tends to underplay the social cues of participants by focusing on the content of messages rather than on the attributes of senders and receivers.

By reducing the impact of social cues, computer-mediated communication (CMC) supports a wider range of participants and participation. Hence, computer-mediated communication (CMC) in organizations may help to transcend hierarchical or other forms of status barriers and to increase involvement of spatially and organizationally peripheral persons in social networks.

Network Characteristics

Range: Social networks can vary in their range: i.e., in their size and heterogeneity. Larger social networks have more heterogeneity in the social characteristics of network members and more complexity in the structure of these networks. Small, homogeneous networks are characteristic of traditional work groups and village communities; they are good for conserving existing resources. These networks are often the norm against which pundits unfavorably compare computer-supported cooperative work networks and virtual communities, or praise computer-supported social networks for unlocking social relations from traditional molds. Yet large, heterogeneous networks (such as those often found online) are good for obtaining new resources.

Centrality: In the computer-mediated communication (CMC) context, it may be important to examine who is central or isolated in networks maintained by different media.

Thus, the manager who does not adopt email becomes an isolate in the email network while retaining a central role in the organizational network. Information exchanged via email will not reach this manager while information exchanged in face-to-face executive meetings will not reach lower-level workers. In a situation such as this, another person may play a broker role, bridging between the email network and the face-to-face executive network and conveying information from one network to the other. Social network analysis has developed measures of centrality which can be used to identify network members who have the most connections to others (*high degree*) or those whose departure would cause the network to fall apart (*cut-points)*

Roles: Similarities in network members' behavior suggest the presence of a network role. Teachers fill the same network role with respect to students: giving instruction, giving advice, giving work, receiving completed work, and assigning grades. Regularities in the patterns of relations (known as structural equivalence) across networks or across behaviors within a network allow the empirical identification of network roles. For example, the “technological gatekeeper” is a role that may be filled by any member of a network according to what resources they bring in to the network. At the same time, the role is not identified by a title and cannot be found on organization charts.

3. TRUST, PRIVACY AND SECURITY RISKS IN SOCIAL NETWORKS

3.1. Trust and privacy

Online social networks have experienced exponential growth in membership in recent years. These networks offer attractive means for interaction and communication, but also raise privacy and security concerns.

Privacy concerned individuals join the network and reveal great amounts of personal information. Some manage their privacy concerns by trusting their ability to control the information they provide and the external access to it.

Trust is defined in as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trust or, irrespective of the ability to monitor or control that other party"[3]. For face to face, trust is a critical determinant of sharing information and developing new relationships. Trust is also important for successful online interactions. Electronic commerce research has found trust to be strongly related to information disclosure. Trust is also a central component of social exchange theory. Social exchange theory presents a cost benefit analysis with respect to social interaction. If the exchange is perceived to be beneficial, then the individual is likely to enter into an exchange relationship. Trust is believed to be used in the calculation of perceived cost. High trust would lead to a perception of low cost, and vice versa. Studies of interpersonal exchange situations confirm that trust is a precondition for self disclosure, because it reduces perceived risks involved in revealing private information (Metzger, 2004). Millions of people have joined social networking sites, adding profiles that reveal personal information. The reputations of social networking sites has been diminished by a number of incidents publicized by the news media. Is it possible to join a network of millions of people and be able to trust all of them? This does not seem realistic. Since people are obviously joining networks and revealing information, what role does trust play in the use of social networking sites?

Privacy within social networking sites is often not expected or is undefined. Social networking sites record all interactions, and retain them for potential use in social data mining. Offline, most social transactions leave behind no trace. This lack of a record is a passive enabler of social privacy. Therefore these sites need explicit policies and data protection mechanisms in order to deliver the same level of social privacy found offline. Since online social privacy is harder to guarantee, does a higher level of concern for internet privacy affect the use of social networking sites?[5]

Preserving privacy in publishing social network data becomes an important concern.[4] As social network data is much more complicated than relational data, privacy preserving in social networks is much more challenging and needs many serious efforts in the future

People of all ages are increasingly exposed to online environments that encourage them to share and connect with others. However, there is a perception that adolescents are particularly susceptible to these cues and share more online than do other age groups.

Adolescents reported disclosing more information on Facebook and using the privacy settings less than adults. Despite these differences, the results indicated that

[3] Dwyer et.al.*"Trust and privacy concern within social networking sites: A comparison of Facebook and MySpace"*, Proceedings of the Thirteenth Americas Conference on Information Systems, Keystone, Colorado August 09 - 12 2007

[4] Bin Zhou, Jian Pei, *Preserving Privacy in Social Networks Against Neighborhood Attacks, School of Computing Science, Simon Fraser University*

adolescents and adults were more similar than different in the factors that predicted information disclosure and control.

From specialized research studies[5], adolescents spent more time on Facebook, which partially mediated the relationship between group (adolescents vs. adults) and disclosure. Self-esteem partially mediated the relationship between group and information control, with adults having higher self-esteem than adolescents.

3.2. Social networking and security risks

Social networking is a global revolution, enabling around a billion people worldwide to stay in touch with their friends, share experiences and photographs and exchange personal content. In many ways it has replaced the telephone and email. For many users, it has become a way of life.

However, as with any new tool or application, it is always important to keep a close watch on its security implications. Each of these tools comes with its own set of security concerns which can put your information systems and/or personal data at risk. This paper will show you at some of these risks and identify possible solutions to help protect you, your personal information and your company data.

Of the three social networking sites mentioned, Facebook is generally considered the most casual; Twitter and LinkedIn are typically used for professional purposes. LinkedIn allows you to add Connections, Twitter creates Followers and Facebook has Friends.

Three of the most popular features of Facebook are the ability to add Friends, update your status and run applications such as games and quizzes. A “Friend” is anyone on the Facebook network whom you allow to see various levels of personal information, such as job, birth date, photos, group membership, comments and list of other Friends. You can even play online games and keep others updated on your daily life.

Friends can also see Friends of Friends, meaning individuals, whom you have officially befriended and may never have met, may have visibility into your personal information and whereabouts

At the top of the user’s Facebook profile is the Update field, which allows the user to post a sentence or paragraph regarding any topic at any time (See Figure 1). LinkedIn has a similar field, but it does not allow as much text, and it’s not possible to connect links, photos or videos with the update.

Here are some examples of updates that my Facebook friends have recently posted. These are very typical:

- “Just received a job offer. Hooray!”
- “I’m tired of all the rain.”
- “Looking forward to the family vacation next week at Disney World.”

Although these might seem relatively harmless, the third bullet point could raise some concern. You have just told all your friends, as well as all their friends, that you will be away from home for a full week. This is comparable to putting a sign on the main road that shouts “Empty House” for passers-by to see.

[5] Emily Christofides, Amy Muise, Serge Desmarais, *Hey Mom, What’s on Your Facebook? Comparing Facebook Disclosure and Privacy in Adolescents and Adults*, Social Psychological and Personality Science published online 17 May 2011

Figure 1: Users must be aware of how the information they post can be used by others. Note: This profile update was exaggerated for effect. The author neither received oxycontin nor set his alarm code to 123456789)

In ordinary conversation with friends and colleagues, questions like: What was the name of my first elementary school? or What was my favorite pet's name? aren't typically afraid to answer. But if we look more closely at these two questions, and think about the way that you may have set up your online bank account, Amazon.com profile or the access to your work's Human Resources system. When setting up online accounts, in addition to creating a User ID and a password, we often provide answers to a set of "secret questions" that we need to answer if we forget our credentials. If we can answer the questions, we will receive the password (or a new one) and have full access to the system which likely contains very personal and sensitive information. Now if consider what "secret questions" are often asked: "What was the name of your first elementary school?" "What was the name of your favorite pet?" By providing the personal information asked in these Facebook questionnaires, we may unwittingly be providing an easy channel for identity theft. Is it worth compromising our online bank account for the bit of amusement that Facebook provides? Probably not. But we have to be very careful about the type of information that we provide and how that information could be used if it fell into the wrong hands.

Applications

Facebook offers thousands of applications that its users can install and run. These applications include calendars that allow Friends to be reminded when it's your birthday, tools to send Friends online greeting cards, quizzes on myriad topics and much more. (See Figure 2.) Many of the applications were designed by Facebook end-users.

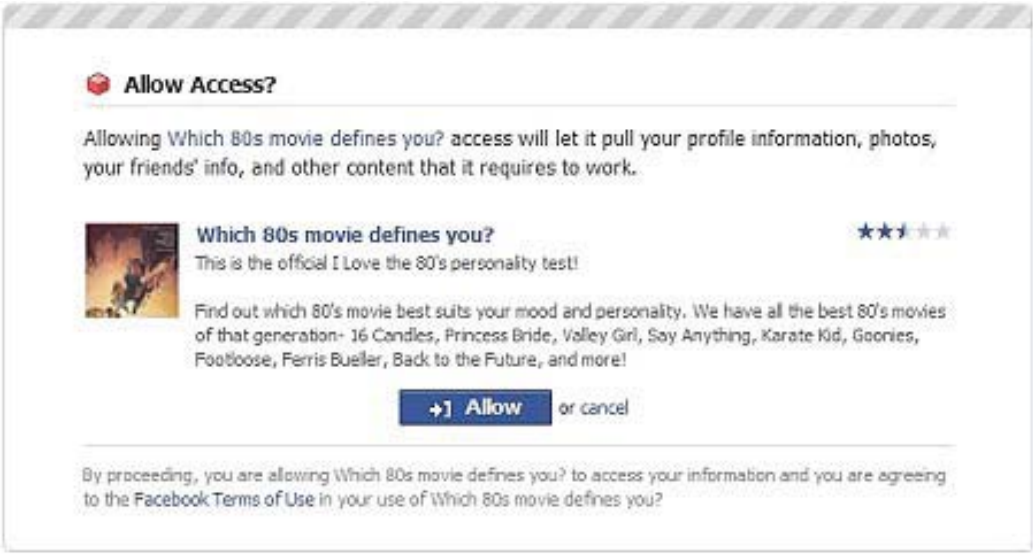


Figure 2: Even though applications provide warning messages, many users still install and run them, unaware of what they may do to your system.

Although the applications on Facebook may look harmless, and in fact most probably are, there are always some that may deliver malicious content to your computer. This holds true not only to Facebook, but also to other social networking sites and to the Internet in general, when downloading from the web or opening attachments in email messages. Therefore, make certain that your computer has a proper and functional firewall, as well as up-to-date antivirus/anti-malware software, and only install or run these applications if they are from a trusted source or approved by your corporate IT department.

Twitter is an online application that allows you to post brief comments (tweets) on any topic. Other users on the Twitter network can become followers of your tweets, such that they receive the updates whenever you send them.

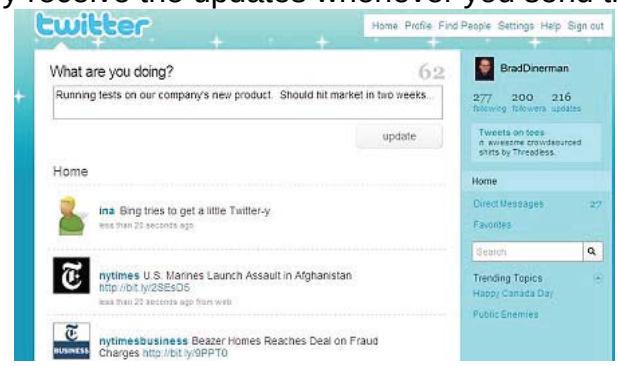


Figure 3: Users can post a “tweet” on any topic, as well as receive the tweets of those they are following.

Both Twitter and Facebook users must be very careful about the personal information that they tweet and how it may be used. Employers must be especially attentive to the information that is posted and how it can affect their company. For example:

- “The boss just laid off 32 employees. I hear there may be more coming on Wednesday.”
- “Rumor has it that the Acme Widgets acquisition fell through.”
- “Working to troubleshoot a major software bug we just found.”

- “I just posted a funny video of myself frying a rodent at the restaurant where I work.”

Each of the four statements can have serious public relations and financial consequences for the company whose employee tweeted or posted the information. The impact can be even more serious if that company is publicly owned. The first two statements will create a public perception that the company is doing poorly or will continue to experience loss, and shareholders may begin to sell off their stocks, reducing the value of the company. The third statement will raise concern amongst the company’s customers who have purchased the software, possibly tempting them to investigate competitors’ solutions. And the fourth statement, which actually occurred to a well-known, nationwide fried chicken company in 2008, will certainly give customers second thoughts about going to visit the restaurant, even if the video wasn’t real.

Acceptable use policies

Unfortunately, there is no simple solution to manage these issues. Certainly a company can implement technical barriers to prevent any use of Twitter, Facebook or similar applications, but then the company may have lost a valuable sales and marketing tool in its effort to protect its security or privacy.

Alternatively, the company could (and should) have an Acceptable Use Policy, a document that details how these applications and the Internet in general can be used. The policy also defines consequences for failure to comply, which might be as simple as a written reprimand or as heavy as termination of employment and legal action.

Beyond Acceptable Use Policies, however, companies will still have a difficult time restricting what employees do at home. Employees will have their own Twitter and Facebook accounts and put all levels of derogatory and inflammatory comments, whether true or not, onto those sites. Although the company may have legal recourse when this occurs, the damage may already have been done and the cleanup can be a very expensive and involved undertaking.

Various social networking sites are also valuable tools used by many companies and individuals to extend their contacts and deliver marketing messages. The nature of social networking – having such a massive base of users who are unknown to you – means that using it carries a degree of risk including becoming a target for cyber-criminals.

The Risks in online social network

- Disclosure of private information by either yourself or friends/contacts.
- Bullying.
- Cyber-stalking.
- Access to age-inappropriate content.
- Online grooming and child abuse.
- Prosecution or recrimination from posting offensive or inappropriate comments.
- Phishing emails allegedly from social networking sites, but actually encouraging you to visit fraudulent or inappropriate websites.
- Friends’, other people’s and companies' posts encouraging you to link to fraudulent or inappropriate websites.
- People hacking into or hijacking your account or page.
- Viruses or spyware contained within message attachments or photographs.

Safe Social Networking

We can avoid these risks and enjoy using social networking sites by following a few sensible guidelines:

- Do not let peer pressure or what other people are doing on these sites convince you to do something you are not comfortable with.
- Be wary of publishing any identifying information about yourself – either in your profile or in your posts – such as phone numbers, pictures of your home, workplace or school, your address or birthday.
- Pick a user name that does not include any personal information.
- What goes online stays online? Do not say anything or publish pictures that might later cause you or someone else embarrassment.
- Never post comments that are abusive or may cause offence to either individuals or groups of society.
- Be aware of what friends post about you, or reply to your posts, particularly about your personal details and activities.
- Remember that many companies routinely view current or prospective employees' social networking pages, so be careful about what you say, what pictures you post and your profile.
- Learn how to use the site properly. Use the privacy features to restrict strangers' access to your profile. Be guarded about who you let join your network.
- Be on your guard against phishing scams, including fake friend requests and posts from individuals or companies inviting you to visit other pages or sites.
- If you do get caught up in a scam, make sure you remove any corresponding likes and app permissions from your account.
- Ensure you have effective and updated antivirus/antispyware software and firewall running before you go online.
- Set up a separate email account to register and receive mail from the site. That way if you want to close down your account/page, you can simply stop using that mail account. Setting up a new email account is very simple and quick to do using such providers as Hotmail, Yahoo! Mail or Gmail.
- Use strong passwords.
- Keep your profile closed and allow only your friends to view your profile.

3.3. Social networks popularity, criticisms and controversies

Network analysis has grown rapidly over the past two decades, but criticisms of the approach have increased as well. Below there are presented few of the most important social networks with actual state of popularity, criticisms and controversies

1. Facebook social network

Facebook is an online social networking service which name comes from the colloquial name for the book given to students at the start of the academic year by some American university administrations to help students get to know one another. Facebook was founded in February 2004 by Mark Zuckerberg with his college roommates and fellow Harvard University students Eduardo Saverin, Andrew McCollum, Dustin Moskovitz and Chris Hughes. Initially, the founders had limited the website's membership to students of the University of Harvard, but later expanded it to colleges in the Boston area, the Ivy League, and Stanford University. It gradually

added support for students at various other universities before it opened to high-school students, and eventually to anyone aged 13 and over. Facebook now allows anyone who claims to be at least 13 years old to become a registered user of the website.

Facebook has over one billion active users, of which 8.7% are fake. According to a May 2011 *Consumer Reports* survey, there are 7.5 million children under 13 with accounts and 5 million under 10, violating the site's terms of service.

Statistics, Facebook (as of 2012) has about 180 petabytes of data per year and grows by over half a petabyte every 24 hours.[8]

Entertainment Weekly included the site on its end-of-the-decade "best-of" list, saying, "How on earth did we stalk our exes, remember our co-workers' birthdays, bug our friends, and play a rousing game of Scrabulous before Facebook?"[6]

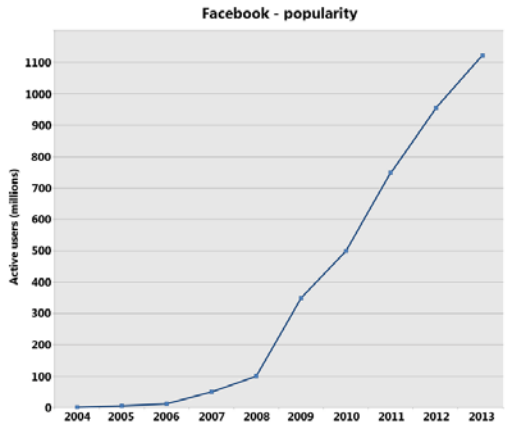
Facebook Inc. began selling stock to the public and trading on the NASDAQ on May 18, 2012. Based on its 2012 income of USD 5.1 Billion, Facebook joined the Fortune 500 list for the first time, being placed at position of 462 on the list published in May 2013.[10]

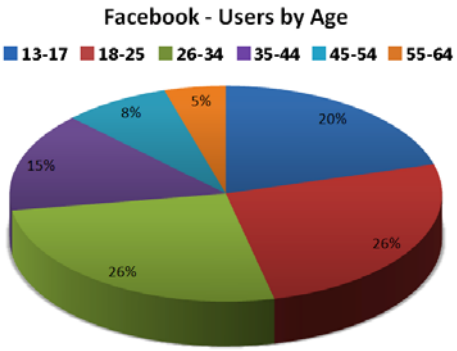
According to specialized statistics records, in January 2013, the countries with the most Facebook users were:

- United States with 168.8 million members
- Brazil with 64.6 million members
- India with 62.6 million members
- Indonesia with 51.4 million members
- Mexico with 40.2 million members

All of the above total 309 million members or about 38.6 percent of Facebook's 1 billion worldwide members. In March 2013, Facebook reported having 1.11 billion monthly active users, globally.

In regards to Facebook's mobile usage, per an analyst report in early 2013, there are 192 million Android users, 147 million iPhone users, 48 million iPad users and 56 million messenger users, and a total of 604 million mobile Facebook users.[7]





Source: http://en.wikipedia.org/wiki/Facebook

Facebook Criticisms and controversies

[6] http://en.wikipedia.org/wiki/Facebook

[7] http://en.wikipedia.org/wiki/Facebook

Acording to "Facebook Statistics". on August 19, 2013, Facebook's guest service treatment was widely decried. That day, it was reported that a Facebook user from Yatta, West Bank Khalil Shreateh had found a bug that allowed him to post material to other users' Facebook Walls. Users aren't supposed to have the ability to post material to the Facebook Walls of other users unless they're approved friends with those users that they have posted material to. To prove that he was telling the truth, Shreateh posted material to Sarah Goodin's wall, a friend of Facebook CEO Mark Zuckerberg. Following this, Shreateh contacted Facebook's security team with the proof that his bug was real, explaining in detail what was going on. Facebook has a bounty program in which it compensates people a 500+ fee for reporting bugs instead of using them to their advantage or selling them on the black market. However, it was reported that instead of fixing the bug and paying Shreateh the fee, Facebook originally told him that "this was not a bug" and dismissed him. Shreateh then tried a second time to inform Facebook, but they dismissed him yet again. On the third try, Shreateh used the bug to post a message to Mark Zuckerberg's Wall, stating "Sorry for breaking your privacy ... but a couple of days ago, I found a serious Facebook exploit" and that Facebook's security team wasn't taking him seriously. Within minutes, a security engineer contacted Shreateh, questioned him on how he performed the move and ultimately acknowledged that it was a bug in the system. Facebook temporarily suspended Shreateh's account and fixed the bug after several days. However, in a move that was met with much public criticism and disapproval, Facebook refused to pay out the 500+ fee to Shreateh; instead, Facebook responded that by posting to Zuck's account, Shreateh had violated one of their terms of service policies and therefore "could not be paid." Included with this, the Facebook team strongly censured Shreateh over his manner of resolving the matter. In closing, they asked that Shreateh continue to help them find bugs.

Facebook has also met with other controversies. It has been blocked intermittently in several countries including the People's Republic of China, Iran, Uzbekistan, Pakistan, on different bases. For example, it was banned in many countries of the world on the basis of allowed content judged as anti-Islamic and containing religious discrimination.

It has also been banned at many workplaces to prevent employees from using it during work hours. The privacy of Facebook users has also been an issue, and the safety of user accounts has been compromised several times. Facebook has settled a lawsuit regarding claims over source code and intellectual property. In May 2011 emails were sent to journalists and bloggers making critical allegations about Google's privacy policies; however it was later discovered that the anti-Google campaign, conducted by PR giant Burson-Marsteller, was paid for by Facebook in what CNN referred to as "a new level skullduggery" and which Daily Beast called a "clumsy smear".

In July 2011, German authorities began to discuss the prohibition of events organized on Facebook. The decision is based on several cases of overcrowding by people not originally invited. In one instance, 1,600 "guests" attended the 16th birthday party for a Hamburg girl who accidentally posted the invitation for the event as public. After reports of overcrowding, more than a hundred police were deployed for crowd control. A policeman was injured and eleven participants were arrested for assault, property damage and resistance to authorities. In another unexpectedly overcrowded event, 41 young people were arrested and at least 16 injured.

In November 2011, several Facebook users in Bangalore, India reported that their accounts had been hacked and their profile pictures were replaced with pornographic images. For more than a week, users' news feeds were spammed with pornographic, violent and sexual contents, and it was reported that more than

200,000 accounts were affected. Facebook described the reports as inaccurate, and Bangalore police speculated that the stories may have been rumors spread by Facebook's competitors.

A 2013 study in the journal CyberPsychology, Behavior, and Social Networking, "Who Commits Virtual Identity Suicide? Differences in Privacy Concerns, Internet Addiction, and Personality Between Facebook Users and Quitters" points to the fact that there is a rising number of Facebook users who are discontent with Facebook and finally decide to quit Facebook. The number one reason for users to quit Facebook was privacy concerns (48%), being followed by a general dissatisfaction with Facebook (14%), negative aspects regarding Facebook friends (13%) and the feeling of getting addicted to Facebook (6%). Facebook quitters were found to be more concerned about privacy, more addicted to the Internet and more conscientious[8].

2. Myspace social network

Myspace is a social networking service with a strong music emphasis owned by Specific Media LLC and pop music singer and actor Tom.[10]. Myspace was launched in August 2003 and is headquartered in Beverly Hills, California and in June 2012, according to statistics, Myspace had 25 million unique U.S. visitors.

Myspace was founded in 2003 and was acquired by News Corporation in July 2005 for $580 million.[8] From 2005 until early 2008, Myspace was the most visited social networking site in the world, and in June 2006 surpassed Google as the most visited website in the United States. In April 2008, Myspace was overtaken by Facebook in the number of unique worldwide visitors, and was surpassed in the number of unique U.S. visitors in May 2009, though Myspace generated $800 million in revenue during the 2008 fiscal year. Since then, the number of Myspace users has declined steadily in spite of several redesigns. As of June 2013, Myspace was ranked 303 by total web traffic, and 223 in the United States.[9]

Myspace had a significant influence on pop culture and music and created a gaming platform. The site also started the trend of creating unique URLs for companies and artists.

Criticism of Myspace

1. Accessibility and reliability

Because most Myspace pages are designed by individuals with little HTML experience, a very large proportion of pages do not satisfy the criteria for valid HTML. Also, poorly formatted code can cause accessibility problems for those using software such as screen readers.

Furthermore, Myspace is set up so that anyone can customize the layout and colors of their profile page with virtually no restrictions. As Myspace users are usually not skilled web developers, this can cause further problems. In addition to this, the customization of user pages currently allows the injection of certain HTML which can be crafted to form a phishing user profile, thus keeping the myspace.com domain as the address. More recently, there has been spam on bulletins that has been the result of phishing. Users find their Myspace homepage with bulletins they did not post, realizing later they had been phished. The bulletin consists of an advertisement that provides a link to a fake login screen, tricking people into typing in their Myspace e-mail and password.

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[8] "Facebook Statistics". Facebook.com. Retrieved December 21, 2011.

[9] "Myspace.com Site Info". Alexa Internet. Retrieved 2013-11-01

2. Security

Other security fears regarding profile content itself are also present. For example, the embedding of videos inherently allows all of the format's abilities and functions to be used on a page. A prime example of this surfaced in December 2006, when embedded QuickTime videos were shown to contain hyperlinks to JavaScript files, which would be run simply by a user visiting a 'phished' profile page, or even in some cases by simply viewing a user's 'about me' elsewhere on the site. Users who entered their login information into a fake login bar that appeared would also become 'phished', and their account would be used to spam other members, thus spreading this security problem.[7]

In January 2008 the state attorneys general of 49 states of the USA wrote guidelines for online safety for Myspace and other services. They included restrictions for behavior on social networking services.[10]

On January 26, 2008, over 567,000 private Myspace user pictures were downloaded from the site by using a bug published on YouTube and put on thePiratebay torrent site for download.[12]

In 2010, the company was criticzied, along with other social networks, for passing user personally identifiable profile information to advertisers when members clicked on ads[12]

3. Myspace party problems

Myspace is often used as a venue for publicizing parties, sometimes with the host's knowledge and sometimes without. There have been some well-publicized incidents where Myspace parties have caused thousands of dollars damage to property, and even (in at least one case) loss of life.

- A party hosted by Corey Worthington, a sixteen-year-old boy from Narre Warren in Melbourne, Australia, and advertised on MySpace, attracted 500 people. Police cars were attacked, and the dog squad and a helicopter were called in. The incident received international coverage.
- In April 2007, a seventeen-year-old British girl hosted a party after distributing information about it on Myspace that was reportedly subtitled "Let's trash the average family-sized house disco party." Her parents were left with an approximately £24,000 ($48,000) bill from police.[12]
- Allen Joplin, a seventeen-year-old American high school student from Seattle, was shot dead at a party that had been publicized through Myspace.[12]

4 Musicians' rights and Myspace terms of use agreement

By June 27, 2006, Myspace had amended the user agreement with, "MySpace.com does not claim any ownership rights in the text, files, images, photos, video, sounds, musical works, works of authorship, or any other materials (collectively, 'Content') that you post to the Myspace Services. After posting your Content to the Myspace Services, you continue to retain all ownership rights in such Content, and you continue to have the right to use your Content in any way you choose."

4. CONCLUSION

[10] "Myspace.com Site Info". Alexa Internet. Retrieved 2013-11-01

Online social networks are becoming a true growth point of the Internet. As individuals constantly desire to interact with each other both in business and in personal contacts, the ability for the Internet to deliver this networking capability grows stronger and stronger. There are a number of excellent resources available to anyone interested in becoming part of the online social networking community of the Internet.

Social networking sites can be valuable sales and marketing tools, as well as fun diversions. Inherent in these applications are security risks that can put the individual or a company in a compromising position or at serious risk. Aside from not using these sites at all, end-user education, alongside documented policies and procedures, is the most fundamental protection that exists. A well-informed user will not only help to maintain security, but will also educate others on these issues and establish best practices which can be standardized and updated as applications mature or as new applications come along.

Social networking sites are quite popular, and are beginning to attract the attention of academic researchers. Most of the studies conducted to date have focused on a single social networking site. Few studies have compared attitudes and behavior between two sites. The results of this comparison study were able to show interesting similarities and differences between the two sites.

Subjects from Facebook and MySpace expressed similar levels of concern regarding internet privacy. Facebook members were more trusting of the site and its members, and more willing to include identifying information in their profile. Yet MySpace members were more active in the development of new relationships.

These results show that the interaction of trust and privacy concern in social networking sites is not yet understood to a sufficient degree to allow accurate modeling of behavior and activity. The results of the study encourage further research in the effort to understand the development of relationships in the online social environment and the reasons for differences in behavior on different sites.

Actually, there is an effort to understand the development of relationships in the online social environment and the reasons for differences in behavior on different sites. Personally I consider this difference in behavior of the users depending on trust and privacy.

In my opinion, we can minimize these risks through a rigorous education of users, because the users are the ones who determine how they use these online social networks. They decide what to do with the information that they have access; they use it in order to build term relationships or not.

As a final conclusion, recalling that to manage an organization's need for power. Power means information and resources. Informations of any kind. More informations and resources, means knowledge that turns into more power for our organization.

However, information and resources can be found easily in online social networks. You just have to find them and use them in our organization.

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IT PROJECTS PROCUREMENT AND CONTRACTS MANAGEMENT

LTC Petru BREABĂN

CONTENTS

INTRODUCTION

Many information technology projects involve the use of goods and services from outside the organization. The success of these projects is often due to good project procurement management.

Project Procurement Management refers to all procedures used to buy from an external source, the goods and services necessary for the development of the project. Punctual, refers to the sellers and suppliers, and not to other internal organizations within the organization.

Project management in a military unit has a number of limitations and restrictions compared to a classical organization, in particular in relation to the management of procurement. A military unit, regardless of the level of its hierarchy is a public institution, financed from the State budget, so the tax payers money. Purchases of public money, is one of the most sensitive activities which will be carried out at the level of public institutions. Procurement management is conducted in a well-defined legal framework imposed by the European Union Parliament directives transposed into national legislation.

The Ministry of National Defence acquisitions can be made centralized, in the case of strategic acquisitions or major projects, or decentralized in case of projects of a smaller scale or value, based by acquisition competencies laid down by the Minister of Defence Order No.M31 / 2008 (as amended by orders No.M21/2009 and No.M69/2011).

Regardless of the hierarchical level where they are actually made, the procurement management from a military unit strictly follows the same rules imposed by the existing legal national and European framework at some time.

Project managers must have knowledge in this area, which will help with entries. However, in many and perhaps most companies included military units, project managers do not coordinate purchases. Normally, the project manager does not have the authority to negotiate contracts on behalf of the company and is not required to administer them after they come into effect. Usually, these processes are coordinated by the procurement departments.

PMBOK (Project Management Body of Knowledge), PMBOK® Guide, Fourth Edition - one of the most popular models of project management describes four processes within Procurement Management in projects:

- Plan Procurements;

● Conduct Procurements;

● Administer Procurements;

● Close Procurements.

The present paper aims to describe all the activities that procurement department from military units, in cooperation with the project team, must go through in order to obtain goods and services needed in an information technology project, from planning procurements to closing contracts, in the four major processes mentioned above.

I. THE LEGAL FRAMEWORK, PRINCIPLES AND PUBLIC PROCUREMENT SYSTEM

I.1 The Legal Framework

Public procurement is governed by:

- EU regulations:
    - Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts;
    - Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security;
- Romanian regulations:
    - Government Emergency Ordinance no. 34/2006 on the award of public procurement contracts, public works and services concession contracts (GEO no. 34/2006);
    - Government Emergency Ordinance no. 114/2011 on the awarding of public procurement contracts in defence and security fields (GEO no. 114/2011);
    - Government Decision no. 925/2006 approving the application norms of the provisions regarding the award of public procurement contracts of Government Emergency Ordinance no. 34/2006;

- Government Decision no. 1660/2006 for approving the implementing rules of the provisions regarding the award of public procurement contracts by electronic means from GEO no.34/2006.

Romanian legislation is largely based on the EU Directive 2004/18/EC concerning public procurement. The EU Public Procurement Directive represents an important component of the work to complete the Internal Market by promoting the free movement of goods and services within the EU and getting the market to function effectively.

I. 2 Fundamental Principles for All Public Procurement

The principles on which public procurement contracts are based are:

- **Transparency** means an obligation for the contracting authority to create transparency by providing information about the procurement procedure and how it will be conducted. In order for tenderers to be afforded the same opportunities for the submission of tenders, contract documents must be plain and clear and contain all of the requirements regarding the subject matter of the contract. Consequently, suppliers will be able to see what is of greatest importance when choosing a supplier.
- **Equal treatment** means that all suppliers should be treated equally and be placed on an equal footing. All suppliers must, for instance, have access to the same information at the same time.
- **Mutual recognition** means that diplomas and certificates issued by authorities authorized by an EU/EEA Member State shall also apply in other EU/EEA countries.
- **Proportionality** means that requirements for the supplier and requirements in the specification must have an obvious link with and be proportionate in relation to the subject matter of the contract. The requirements imposed must be both appropriate and necessary to achieve the aim of the public procurement. If there are several alternatives, the alternative chosen should be the one which is the least intrusive or onerous for the suppliers.
- **Non-discrimination** means that it is prohibited to discriminate suppliers, directly or indirectly, on grounds of nationality. Even if the contracting authority does not expect any foreign tenders, it may not include requirements that only Romanian companies are aware of or can perform in the contract documents.

The contracting authority may not, for example, give preference to a local company;

- **Efficiency of public funds use** means to choose or to apply those procedures and criteria which are used to reflect the economic advantages of the offers in order to obtain the optimum ratio between quality and price.
- **Taking responsibility** means the determination of the tasks and responsibilities of the people involved in the process of getting published, thus ensuring professionalism, impartiality and independence of the decisions taken during this process.

I.3 Public procurement system

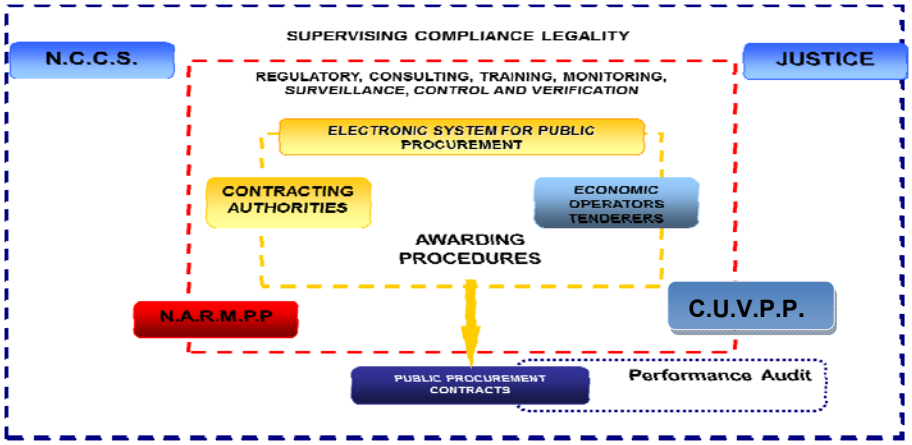
Public procurement system is a part of the reality of economic-technical-juridical of Romanian society, whose general purpose is dedicated to serving the public interest, namely the development and improvement of the living environment of the community.

The components of the system of public procurement are:

- **Regulatory authority:**
  - National Authority for the Regulation and Monitoring Of Public Procurement (NARMPP)
- **Contracting authorities:**
  - Public authorities and other legal persons governed by private law who are engaged in activities in the field of utilities, playing the role of buyers of the products, services or works, using public money (those who purchase products, services or works)
- **Economic operators:**
  - Those who deliver products, services or works (sellers, service providers, contractors).
- **Supervisors system:**
  - National Authority for the Regulation and Monitoring of Public Procurement (NARMPP)
  - National Council for Resolving Complaints
  - Ministry of Public Finance
  - Romanian Court of Accounts

The operator of Electronic System for Public Procurement (ESPP) is the National Center for IT Management Society.

Figure1: Romanian Public Procurement System[1]



II. PLAN PROCUREMENTS

Procurement planning is the process of identifying which project needs can be best met by procuring products or services outside the project organization. It involves consideration of whether to procure, how to procure, what to procure, how much to procure, and when to procure it.

The public procurement process starts with the identification of a need, based on the necessities and priorities communicated by the project team, and an analysis of how this need can be satisfied. May be used „make-or-buy analysis". This is a general management technique which can be used to determine whether a particular product can be produced cost-effectively by the performing organization or must be bought outside the project organization.

Often involves financial analysis.

Expert judgment will be required to assess the inputs to this process about compelling contractual clauses (terms and condition) or selecting procurement procedure.

The data used are contained in documents prepared in other stages of the project development, such as: *scope baseline* (product scope description, service description and result description, list of deliverables and acceptance criteria, technical issues or concerns which can impact cost e.g.: delivery dates, available skilled resources, organizational policies), *requirements documents* (project requirements, requirements with contractual and legal implications including health, safety, security, performance, environmental, insurance, intellectual property rights

[1] www.anrmap.ro

equal employment opportunity), *project schedule, activity cost estimates*, *cost performance baseline* (detailed planned budget over time).

After that, the procurement is planned and a calculation of the total value of the contract must be made. The calculation of the value aims to establish how the total value of the contract relates to the 'thresholds', which determines which rules are to be applied. The value of the contract is calculated excluding value added tax (VAT) and for the entire term of the contract. Any possible options and renewal clauses are also included as if they were to be exercised. The procurement may not be subdivided, and the calculation may not be structured, with a view to falling within the provisions on procurement below the threshold. Repeated procurements for the same category of products and services during a budget year must be counted together.

If procurement refers to a combination of products and services, the contracting authority shall comply with the rules that apply to the dominant type in terms of value.

The document containing all the information described above and which shall be drawn up in the planning phase of the acquisition is **note on the determination of the estimated value.**

Depending on the type of products and services subject to procurement, contract value compared to the thresholds[2], it sets the type of procedure to be applied.

The awarding procedures of the public contract are:

- For values of contacts between 30.000 - 130.000 Euros, for products and services, between 100.000 – 5.000.000 Euros for works:
  - the call for tenders, respectively the simplified procedure through which the contracting authority requests tenders from more economic operators;
- For values of contacts above the threshold of 130.000 Euros, for products and services and 5.000.000 Euros for works:
  - the open procedure, respectively the procedure in which any interested economic operator has the right to submit the tender;
  - the restricted procedure, respectively the procedure in which any economic operator has the right to submit its application, following that only the selected candidates have the right to submit the tenders;

  Thresholds

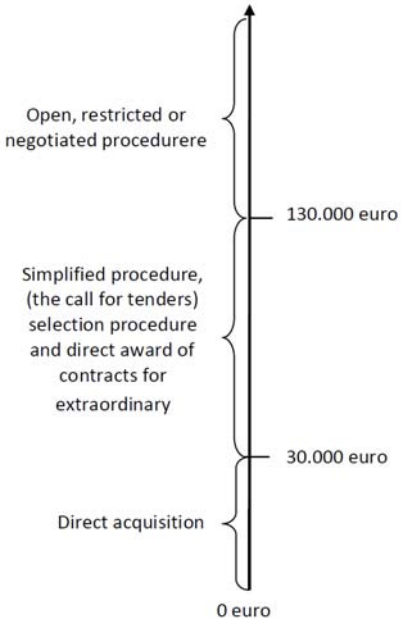


Figure 2: *thresholds for goods and services*

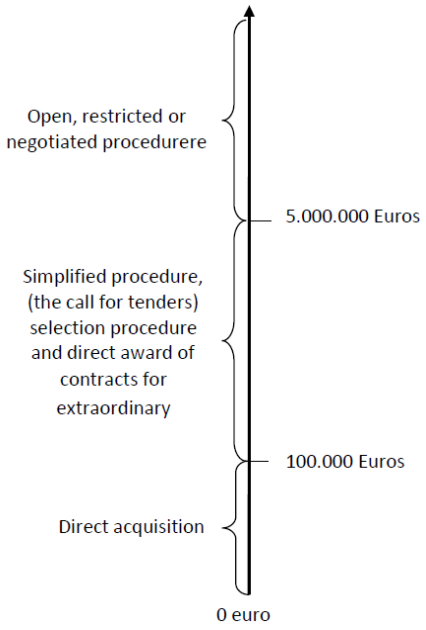


Figure 3: *thresholds for works*

In special cases provided by law, regardless of the thresholds, we can apply the following procedures:

- the competitive dialogue, respectively the procedure in which any economic operator has the right to submit the application and through which the contracting authority leads a dialogue with the admitted candidates, with the aim of developing one or more suitable alternatives capable of meeting its requirements, and on the basis of the alternative/alternative, the candidates chosen elaborate the final tender;
- the negotiated procedure, respectively the procedure through which the contracting authority consult the candidates chosen and negotiate the contractual clauses, inclusively the price, with one or more of them. The negotiated procedure can be:
  - Negotiated procedure with prior publication of a contract notice;
  - Negotiated procedure without prior publication of a contract notice.
- the design contest, respectively a special procedure through which it acquires, mainly in the fields of city and country planning, architecture, or data processing a plan or design, by selecting it by a jury after being put out to competition, with or without the award of prizes.

[2] *Figure 2* and *figure 3*

The Document which is drawn up following this analysis is **Annual Public Procurement Program** (APPP). Accordance with the regulations in force, it must contain must contain, at least, the following information:

a) Object of the contract/framework agreement;

b) CPV code;

c) Estimated value, without VAT, expressed in RON and EUR;

d) Procedure that will be applied;

e) Estimated date for the beginning of the procedure;

f) Estimated date for completion of the procedure;

g) Person responsible for awarding the contract.

The Annual Public Procurement Program is approved by the head of the contracting authority, with approval of the financial-accounting department. APPP can be amended and completed whenever the situation requires. These amendments have to be approved by the same persons who had originally approved.

After the buy decision was made, the internal specialized compartment for awarding public procurement contracts[3] needs to develop the tender documentation where has obligation to specify any request, criteria and other information needed to insure the tenderer/candidate a complete, correct and explicit information regarding the manner of appliance of the awarding procedure.

Tender documentation includes:

a) The procurement data sheet;
b) The specifications or descriptive documentation (technical specification);
c) Compelling contractual clauses (contract model).

Procurement data sheet must contain at least:

- General information regarding the contracting authority, especially regarding the address including telephone, fax, e-mail, contact persons;
- Means of communication;
- Instructions which must be complied with in relation to the participation in the awarding procedure;
- Minimal requirements for qualification, as well as documents to be presented by tenderers/candidates for evidencing the fulfillment of the qualification and selection criteria. The qualification and the selection criteria are intended to demonstrate the technical, financial and organizational potential of each

[3] Art. 3 (1) from Government Decision no. 925/2006, the contracting authority must have the internal specialized compartment for awarding public procurement contracts.

economic operator participant to the procedure, potential that must reflect the economic operator's concrete possibility to fulfill the contract and to solve eventual difficulties related to the fulfillment of the contract, in case the economic operator's tender shall be deemed successful.

- Instructions regarding the manner of elaboration and presentation of the technical proposal and the financial proposal;
- Detailed and complete information regarding the criteria of awarding applied for the establishment of the winning tender. A contracting authority shall state which evaluation principle it is going to use. It may make a selection by stating that it will either accept:
  - the tender that has the lowest price; or
  - the tender that is the most economically advantageous for the authority. In this case the contracting authority shall state which evaluation criteria it will take into account during the evaluation. Determining the wining tender is performed by applying a system of evaluation factors for which relative percentages or a specific calculation algorithm will be established. The calculation algorithm as well as the evaluation factors of the tenders that will be taken are clearly and in detail specified within the tender documentation and will reflect the strict methodology of scoring the advantages that result from the technical and financial propositions presented by the tenderers.
  - instructions regarding the manner of use of the ways of appeal.

The specifications contain, compellingly, technical specifications. The technical specifications represent technical requests, requisitions, characteristics which allow to each product, service or work to be described, objectively, in such manner that it corresponds to the needs of the IT project.

The technical specifications define, upon the case and without being limited to the following: characteristics regarding the quantitative, technical and performance level, safety in exploitation, dimensions, terminology, symbols, tests and testing methods, packaging, labelling, marking and instructions for use of the products, technologies and methods of production, as well as systems of insurance of the quality and conditions for the certification of the conformity with the relevant standards, or such.

According to article 23 of the relevant Procurement Directive 2004/18/EC, technical specifications can also contain environmental criteria. It is allowed to

include life cycle costing aspects into the specification. The procurement units can e.g. demand that the product has a specific minimum life span, or that the material can be recycled after use.

IT products purchased by central government authorities must meet the latest minimum energy efficiency requirements prescribed by the EU Energy Star Regulation (Regulation No 106/2008 on a Community energy-efficiency labeling program for office equipment).

A description of the subject matter of the contract can be formulated with reference to various standards. When they are not formulated as performance or functional requirements, the technical specifications should be formulated as accurately and precisely as possible. This often makes the procurement process easier and provides greater clarity and an increased understanding of the technical requirements.

The technical specifications may not normally refer to a particular trademark or origin. However, this may be done if the subject matter of the contract cannot be described with sufficient precision and unambiguously without such a reference, provided that this is supplemented by adding the words ‘or equivalent’.

In order to be compatible with the principle of proportionality, the requirements must have an obvious link with the subject matter of the contract and also be proportionate in relation to the procurement.

Compelling contractual clauses (contract model)

The public procurement contract is a contract which also includes the category of sectorial contracts, for pecuniary interests, concluded in writing between one or more contracting authorities, on one side, and one or more economic operators, on the other side, having as object the execution of works, the supply of products or the provision of services.

The price of the public procurement contract shall be firm, or can be adjusted only if circumstances arise that prove injurious to the parties’ commercial interests and that, objectively, cannot be foreseen at the date the contract is signed. The exact manner in which the public procurement contract price is adjusted shall be established, if possible, before the initiation of the public procurement contract awarding procedure. The contracting authority shall specify the special information/clauses in the tender documentation, as well as in the contract.

One way of increasing the efficiency of tendering can be to award framework agreements. A framework agreement may be established with one or multiple

operators and allows for multiple contracts to be awarded without repeating the whole procurement process.

Frameworks can contribute to GPP by allowing greater flexibility in the award of contracts, and in some cases by pooling demand between a number of authorities or over time.

The procurement department has the obligation to elaborate an **explanatory note**, in all the situations when the proposed awarding procedure is other than the open procedure or the restricted procedure.

When it imposes minimum requirements regarding the economic and financial standing or technical and/or professional ability, the contracting authority must be able to explain these requirements, by elaborating in this respect, an **explanatory note** that will be attached to the public procurement file.

The procurement department will charge in ESPP with the tender documentation, a **legal representative's sworn statement** that will contain the identification of persons holding positions in the contracting authority's decision.

All the above documents signed with electronic signature issued by an authorized supplier will charge in ESPP and will be sent NARMPP who must evaluate, before the submission of the announcement/invitation notice, the conformity with the public procurement legislation.

Within 10 maximum days from attaching of the tender documentation to ESPP, NARMPP has the obligation to issue permission for the contracting authority to start the awarding procedure, if the provisions from the tender documentation comply with the legal provision within the public procurement laws or to inform the contracting authority of any inconsistency identified inside the tender documentation. Tender documentation returned by the contracting authority as a result of rejection will be assessed by the NARMPP within 3 days.

After acceptance of the tender documentation by the NARMPP, contract authority will post in ESPP **the contract award notice.** This document is an electronic template which will contain the data from the procurement data sheet. In attachment, will be charged ***procurement data sheet***, ***specifications or descriptive documentation***, ***compelling contractual clauses and models of documents*** to be available to all interested economic operators.

If estimated value of the future contract exceeds the threshold of EUR 130.000, ESPP has the obligation to send the contract award notice for publication in the Official Journal of the European.

III CONDUCT PROCUREMENTS

The contracting authority has the obligation to establish, for every public procurement contract, the persons in charge with assessing the tenders, which will form an evaluation commission.

The functions of the evaluation commission are the following:

- opening the tenders and, by case, of the documents that accompany the tender;
- verifying if the qualification requirements are met by the tenderers/candidates, when those documents have been requested through the tender documentation;
- performing the selection/ pre-selection of the candidates, if the case;
- carrying out the dialogue with the economic operators when the competitive dialogue procedure is applied;
- carrying out the negotiations with the economic operators when the negotiated procedure is applied;
- verifying the technical proposals presented by the tenderers, from the point of view of the way in which they correspond to the minimum requirements from the tender book or from the tender documentation;
- verifying the financial proposals presented by the tenderers from the point of view of limiting the funds that can be made available for fulfilling the public procurement contract;
- establishing the unacceptable or irregular tenders, as well as the reasons that render these tenders unacceptable or irregular;
- establishing the admissible tenders;
- applying the awarding criteria in conformity with the conditions stipulated in the tender documentation and establishing the successful tenders;
- elaboration of cancelling proposal of the awarding procedure (if is necessary);
- elaborating the awarding procedure report.

In the period between the date of publishing the contract notice and the deadline for submitting the tenders, the contracting authority must ensure for each economic operator the possibility to obtain the tender documentation.

Opening tenders

The contracting authority has the obligation to open the tenders at the date, hour and location stipulated in the contract notice. Any tenderer has the right to attend the opening tender procedure. During the opening of the tenders, no tender can be rejected, except those that fall amongst one of the following situations: they were submitted after the deadline or at another address than the ones stipulated in the contract notice or they are not accompanied by the participation guarantee as it was requested in the tender documentation.

The opening session is completed by drawing up a minute, signed by the evaluation commission members, the co-opted experts (if are) and the representatives of the economic operators, that records the way in which the session was carried out, the formal aspects observed when opening the tenders, main features of every tender.

Verification of a supplier's suitability

Any decision on qualification/selection of tenderers/candidates or, if applicable, regarding the evaluation of tenders must be adopted by the evaluation commission during subsequent meetings to the opening session.

The suitability of a tenderer is examined on the basis of the requirements imposed in the contract documents or the notice/qualification documentation relating to the supplier's economic standing and technical and professional ability. Qualifying a supplier means that the contracting authority considers which tenderers satisfy the qualification requirements imposed for the procurement.

The contracting authority may not accept a tender that does not satisfy the requirements of the contract documents. Nor is it permitted to consider criteria other than those specified. An offer that has not been requested in the contract documents may not be considered when choosing a supplier.

Electronic auctions

Before establishing the successful tender, the contracting authority has the right to organize a final stage of electronic auction but only in the case it took this decision before the initiation of the awarding procedure and only if it has announced this decision in the contract notice, and the tender documentation contains all the provisions provided by article 164 of the GEO no. 34/2006.

Electronic auctions are held by ESPP in the conditions regulated by methodological norms. The contracting authority has the obligation to invite at the electronic auction stage only the tenderers that submitted admissible tenders.

When setting up the final stage of electronic auction, the final classification is established on the basis of the result obtained in the successive tender process in that stage.

Award of contracts

After the completion of the evaluation of the tenders, the evaluation commission has the obligation to issue a report on the awarding procedure that is approved by the head of the contracting authority.

The evaluation commission awards the contract according to the principle for evaluation stated in the contract notice and the contract documents. This may be either to accept the most economically advantageous tender based on the evaluation criteria specified by the authority or the tender that has the lowest price.

A contracting authority shall notify the candidates and tenderers in writing as soon as possible regarding the decisions made to award a contract and the reasons for this decision.

This also applies when concluding a framework agreement.

The aim of this obligation is to make sure that suppliers will be better able to claim their right to apply for review. It is therefore important that contracting authorities clearly formulate information on award decisions to show the circumstances on which the decision to accept a certain tender is based. It is not sufficient for the contracting authority to simply state as reasons that the winning supplier’s tender was the one that was the most economically advantageous. If the tender is accepted on these grounds, the authority should also inform about the circumstances that has been considered in the award decision.

The contracting authority has the obligation to complete the awarding procedure by concluding the public procurement contract or the framework-agreement.

A supplier may bring proceedings for a review at National Council for Solving Complaints, and also an administrative section of Court of Appeal.

The contract award notice

The contracting authority is obliged to submit for publication a contract award notice within maximum 48 days after it completes the awarding procedure - open procedure, restricted procedure, competitive dialogue, negotiation with / without prior publication of a contract notice, call of tenders - by awarding the public contract or concluding the framework agreement.

A contracting authority shall document the reasons for its decisions and other significant events during the award procedure. Documents that ought to be kept include contract notices, contract documents, distribution lists, records of opening, requests to participate, tenders, official notes relating to contacts with suppliers (e.g. records of negotiations), evaluation records and documents showing the reasons for the choice of tenderer and supplier and the reasons for rejecting requests to participate and tenders. The documents shall be stored for at least five years from the date when the contract was awarded.

IV ADMINISTER PROCUREMENTS

Administer Procurements is the process of managing procurement relationships, monitoring contract performance, and making changes and corrections as needed. Both the buyer and the seller will administer the procurement contract for similar purposes. Each must ensure that both parties meet their contractual obligations and that their own legal rights are protected. The Administer Procurements process ensures that the seller's performance meets procurement requirements and that the buyer performs according to the terms of the legal contract. The legal nature of the contractual relationship makes it imperative that the project management team is aware of the legal implications of actions taken when administering any procurement. On larger projects with multiple providers, a key aspect of contract administration is managing interfaces among the various providers.

Contract administration concentrates on the relationship between the procurement department and the supplier from contract award to contract closeout ensuring the supplier delivers the product and/or service in conformance with the purchase document requirements.

Public contract administration involves conducting technical, economic and financial activities by specialists within the project team and procurement department at the time contract tendering until its completion. By establishing internal procedures for administering the contract, the contracting authority ensures the conditions for timely fulfillment of the contract, without exceeding the parameters set.

Contract administration requires teamwork and implicit a combination of interdisciplinary knowledge and are in fact the result of a pro-active approach of the elements listed below:

- Planning activities;
- Understanding and knowledge of the public procurement process;
- Project personnel skills to work in team;
- Contracting authority staff capacity to analyze, predict and anticipate risks arising from the carrying out of the contract, possible changes during the period and which are likely to generate influence over the budget allocated to the contract.

Through the implementation of procedures related to contract administration are obtained the following benefits:

- Establish a systematic surveillance of the contract, which allows an adequate mechanism for the coordination and dissemination of information relating to the contract;
- Carry out the contract to the standards set by award documentation;
- Conducting contract in accordance with contractual clauses;
- Creating a mechanism that allows a timeline highlighting and in a logical sequence of documents related to the contract.

The administration of the contract implies first of all studying the content of the contract, with an emphasis on clauses which refer to:

- Price and how to update (for long-term contracts, where the contracting authority has laid down in procurement documentation the contract price update), clarifying the application of the formula for indexing, the index takes into account the update as well as knowledge of official sources for obtaining information are important elements in the administration of the contract;
- Time limits for delivery of products, execution, service delivery;
- Commercial terms in supply contracts, in order to assess the magnitude of risk in carrying out the contract. It should consider that not always the risk belongs to the contractor until the receipt of the goods or payment. (Example - use of Incoterms 2000 rules);
- Tests, examinations performed on the reception / acceptance by the contracting authority of products / services performed by the contractor;
- The way to resolve possible disputes that may occur during the contract;
- Conditions of subcontracting;
- Terms of payment and supporting documents required for payment.

The level of contracting authority, responsibilities in administering the contract involves responsibilities such as:

- Operational, according to the monitoring of performance indicators;
- Technical, which take into account both technical assistance and evaluation of the performance of contracts under the technical aspect of activities/work carried out by contractor or goods supplied by this;
- Administrative, who have taken to ensure an adequate framework (logistics and resources) of the contract execution.

Technical and operational responsibilities differ according to the nature and complexity of the contract and are regulated through legislation or standards with direct reference to the field of activity, while administrative responsibilities regarding the implementation of the contract are regulated unit, regardless of the nature and complexity of the contract.

Below are presented succinctly, administrative to be considered during execution of the contract:

- The appointment of a responsible that would ensure the relationship with the contractor and supervising mode of administration of the contract;
- Drawing up a list of the contract documents, in chronological order, with systematic updates;
- Transmission performance guarantees economic department for recording it in the contracting authority accounting (registration extra side);
- Estimation of the required funds during the period of the contract on the delivery schedule of the works Gantt chart or graph of achievement / performance of the service, as they are attached to the contract and basis of contractual clauses for payment. The cash-flow estimate for performing each contract must permeate the credit openings on each chapter (personal, material and capital);
- Establishing, where appropriate, of a graph of the meetings of the contracting authority - the contractor function of the nature, complexity and duration of the contract;
- Prepare minutes of meetings to analyze the contract and monitoring compliance with commitments made at these meetings;
- Obtaining of all documents for payment, as these documents are set out in the contract and subject to legislation;

- Monitored progress of the contract (planned-powered) and tracking of compliance with contractual clauses;
- Monitoring the execution of the contract (planned - done) and following up the fulfillment of contractual clauses;
- Monitoring product behavior / work during the warranty period as defined in the contract;
- Transmission of documents relating to contract performance other legitimate institutions (e.g., minutes of the completion of work/final reception or monitoring reports);
- Where appropriate, verify compliance with the instructions given by the supplier to/prestator maintenance operations by the contracting authority or the beneficiary.

V CLOSE PROCUREMENTS

Conclusion of the contract occurs if the contractual relationship has only existed for the duration of the project.

“Close Procurement is the process of completing each project procurement. It supports the Close Project or Phase Process.” If you notice this definition, you will see that the definition itself is trying to clarify that the Close procurement is different than the Close Project, and in fact Close Procurements supports the Close Project. In the process of finalizing the project, contracts must also be completed.

Close Procurement is also known as Contract Closure. Procurement is said to be closed when the contract reaches its deadline and it ends. A project can have multiple procurement contracts, or a single contract. If the project has multiple contracts, then the Close Procurement Process will be performed multiple times with each procurement contract.

In the case of contracts concluded with the project, usually Procurement Department oversees the final payouts and concludes, formally, the contract. The project team will be involved to ensure that contracted work was completed in full and to collect feedback on the relationship with the supplier.

Ideally when the supply of goods or services necessary required for IT projects, are made as according to the delivery / supply graphs, in quantity and quality specified in the procurement contracts after payment agreement shall be deemed concluded.

In this situation, the project team and responsible for contract (called early planning phase of acquisition) must perform the following tasks:

- Perform quantitative and qualitative reception of goods and services purchased by comparing products / services delivered with the specifications, which in turn they have been prepared based on project requirements. From the reception committee should be part the team of project specialists who requested those goods or services. This activity is completed by issuing a document of acceptance of products / services (minutes reception, note the reception, etc.);
- Verifying accuracy of invoices and approving invoices for payment;
- Obtaining the necessary documents to complete the contract as they are laid down in the contract;
- Registration in the contracting authority's patrimony equivalent in value to the outcome of the contract;
- Obtaining visas internal preventive financial control and delegated preventive financial control on "authorizing payment", including identification of legal commitment stage;
- Making payments products and services delivered / rendered in accordance with contractually agreed payment schedule;
- Analysis of settlement of claims, complaints and claims in connection with contract, disputes relating to and replacement of products with hidden defects which were inside of the warranty period;
- Objective analysis of the level of satisfaction of needs following the completion of each public contract;
- Preparation ascertaining document which contains information regarding the fulfillment of the contractual obligations to be sent to ANRMAP and to the contractor. After the expiration of warranty products / services will be made by person responsible for the contract (from procurement department) a new document examiner containing references about the behavior of product within the warranty period.
- Issuance of contract performance guarantee within 14 days after completion of each contract.
- Procurement audit - a structured review of the procurement process from procurement planning through contract administration. The objective of a procurement audit is to identify successes and failures that warrant transfer to

other procurement items on this project or to other projects within the performing organization.

- Preparation, filing and keeping for 5 years in procurement department the public procurement file which must contain the following elements:
  - note on the determination of the estimated value;
  - prior information notice and proof of sending it for publication, if applicable;
  - contract notice and proof of sending it for publication and/or, where appropriate, the invitation;
  - the tender documentation;
  - the explanatory note on the election of the awarding procedure, if the applied procedure was other than the open procedure or restricted procedure;
  - the explanatory note on the acceleration of the procedure, if any;
  - minutes of the meeting of opening of tenders;
  - tender forms submitted in the awarding procedure;
  - requests for clarification, as well as the clarification sent/received by the contracting authority;
  - the minute of the awarding procedure;
  - evidence of the communication of the outcome of the procedure;
  - the public contract/framework agreement, signed;
  - the contract award notice and proof of sending it for publication;
  - if applicable, appeals filed under the awarding procedure, accompanied by motivated decisions issued by the National Council for Solving Complaints;
  - documents relating to the verification function of the procedural aspects related to the award of public procurement contracts, if applicable;
  - ascertaining document which contains information regarding the fulfillment of the contractual obligations by the contractor.

In case the project is completed before the expiry of warranty products and project team apart, monitoring the product behavior returns to beneficiary project which will have a link to the person responsible for the contract, which in turn resolve disputes arising during the warranty period and will draw up the final ascertaining document which contains information regarding the fulfilment of the contractual obligations by the contractor.

Early termination of a contract is a special case of procurement closure that can result from a mutual agreement of both parties, from the default of one party, or

for convenience of the buyer if provided for in the contract. The rights and responsibilities of the parties in the event of an early termination are contained in a terminations clause of the contract. Based upon those procurement terms and conditions, the contract authority may have the right to terminate the whole contract or a portion of the contract, at any time for cause or convenience. However, based upon those contract terms and conditions, the contract authority may have to compensate the seller for seller's preparations and for any completed and accepted work related to the terminated part of the contract.

Conclusions

Project Procurement Management in a military unit differs from the classical approach, especially in a Plan Procurements stage and Conduct Procurements stage.

These differences occur due to the legal framework imposed by EU directives and national legislation concerning public procurement.

At the same time, public procurement processes are coordinated and executed by specialized compartment established by law (procurement department). A member of a project team can be part of a purchasing department, just as the other members of the project team can be part of the tender evaluation committee or committees for receiving the goods or services needed for the project.

Teamwork and the ongoing collaboration between project team with procurement department and financial department inevitably lead to good management.

The success of a project is often due to good project procurement management.

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DEFENSE CHANGE MANAGEMENT
– PROBLEMS AND SOLUTIONS –

LTC Dorin BUCUR

CONTENTS

INTRODUCTION

An organization can not function in the same way for too long, as they have to adapt to changing external environment.

Defense change management is the process of developing a planned approach to change in an military organization. Typically the objective is to maximize the collective efforts of all people involved in the change.

Change management can be either reactive, in which case management is responding to changes in the macro environment (that is, the source of the change is external), or proactive, in which case management is initiating the change in order to achieve a desired goal (that is, the source of the change is internal). Change management can be conducted on a continuous basis, on a regular schedule (such as an annual review), or when deemed necessary on a program-by-program basis.

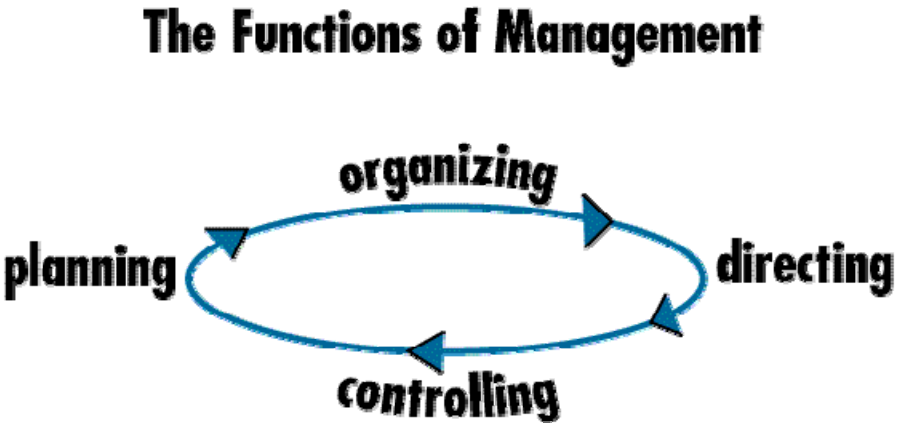
Change management can be approached from a number of angles and applied to numerous organizational processes. It is most common uses are in organizational development, information technology management, strategic management, and process management. To be effective, change management should be multi-disciplinary, touching all aspects of the organization.

1. DEFENSE RESOURCES MANAGEMENT

Modern managers use many of the practices, principles, and techniques developed from earlier concepts and experiences. The Industrial Revolution brought about the emergence of large-scale business and its need for professional managers. Early military and church organizations provided the leadership models.

Managers create and maintain an internal environment, commonly called the organization, so that others can work efficiently in it. A manager's job consists of planning, organizing, directing, and controlling the resources of the organization. These resources include people, jobs or positions, technology, facilities and equipment, materials and supplies, information, and money. Managers work in a dynamic environment and must anticipate and adapt to challenges.

The job of every manager involves what is known as the functions of management: planning, organizing, directing, and controlling. These functions are goal-directed, interrelated and interdependent.



Planning involves devising a systematic process for attaining the goals of the organization. It prepares the organization for the future.

Planning is concerned with the future impact of today's decisions. It is the fundamental function of management from which the other three stem. The need for planning is often apparent after the fact. However, planning is easy to postpone in the short-run. Postponement of planning especially plagues labor oriented, hands on managers.

The organizing, directing and controlling functions stem from the planning function. The manager is ready to organize and directing only after goals and plans to reach the goals are in place. Likewise, the leading function, influencing the behavior of people in the organization, depends on the goals to be achieved.

Finally, in the controlling function, the determination of whether or not goals are being accomplished and standards met is based on the planning function. The planning function provides the goals and standards that drive the controlling function.

Planning is important at all levels of management. However, its characteristics vary by level of management.

The order from general to specific is: vision-mission-objectives-goals The key terms are defined as follows:

Vision - Nonspecific directional and motivational guidance for the entire organization. Top managers normally provide a vision for the business. It is the most emotional of the four levels in the hierarchy of purposes.

Mission - An organization's reason for being. It is concerned with scope of the business and what distinguishes this business from similar businesses. Mission reflects the culture and values of top management.

Objectives refine the mission and address key issues within the organization such as market standing, innovation, productivity, physical and financial resources, profitability, management and worker performance and efficiency. They are expected to be general, observable, challenging, and untimed.

Goals are specific statements of anticipated results that further define the organization's objectives. They are expected to be SMART: *S*pecific, *M*easurable, *A*ttainable, *R*ewarding, and *T*imed.

Development of tactics is a fifth level of planning. Tactics, the most specific and narrow plans, describe who, what, when, where and how activities will take place to accomplish a goal.

Management comprises directing and controlling a group of one or more people or entities for the purpose of coordinating and harmonizing them towards accomplishing a goal. Management often encompasses the deployment and manipulation of *information resources, human resources*, *financial resources*, and *technological resources.*

Management can also refer to the person or people who perform the act(s) of management.

The application of management principles to the acquisition, organization, control, dissemination and use of information relevant to the effective operation of organizations of all kinds. „Information” here refers to all types of information of value, whether having their origin inside or outside the organization, including data resources, such as production data; records and files related, for example, to the personnel function; market research data; and competitive intelligence from a wide range of sources. Information management deals with the value, quality, ownership, use and security of information in the context of organizational performance.

Human resources is a term in which many organizations describe the combination of traditionally administrative personnel functions with performance management, employee relations and resource planning.

The objective of human resources is to maximize the return on investment from the organization's human capital and minimize financial risk. It is the responsibility of

human resource managers to conduct these activities in an effective, legal, fair, and consistent manner.

New leaders and managers have to develop at least basic skills in financial management. Basic skills in financial management start in the critical areas of cash management and bookkeeping, which should be done according to certain financial controls to ensure integrity in the bookkeeping process. New leaders and managers should soon go on to learn how to generate financial statements (from bookkeeping journals) and analyze those statements to really understand the financial condition of the business.

Technology is a broad concept that deals with a species' usage and knowledge of tools and crafts, and how it affects a species' ability to control and adapt to its environment. In human society, it is a consequence of science and engineering, although several technological advances predate the two concepts.

However, a strict definition is elusive; "technology" can refer to material objects of use to humanity, such as machines, hardware or utensils, but can also encompass broader themes, including systems, methods of organization, and techniques. The term can either be applied generally or to specific areas: examples include "construction technology", "medical technology", or "state-of-the-art technology".

Technology has affected society and its surroundings in a number of ways. In many societies, technology has helped develop more advanced economies (including today's global economy) and has allowed the rise of a leisure class.

2. PERFORMANCE MANAGEMENT IN THE MILITARY ORGANIZATION

The strict hierarchy structure of the military, the overpresent regulations, the particular place of unconditioned obedience and discipline in all circumstances, the more rigorous coordination of the actions carried out by the fight units, requires a specific application of the general principles of leadership.

I consider that a complete equivalation between of a military unit and an economical one is an error, because of the numerous singularities with structural, motivational, psycho-moral nature, because there is another punt in a military action than in a productive one, there is another psycho-moral environment inside the military groups or relations between leaders and subordinates. A special aspect consists in the difference between the consequences of the decisions taken by the economic manager and the orders given by the military leader, the last ones being able to lead, in combat situations, to the physical harm of the personnel or to the lost of lives. If the civilian can refuse the accomplishment of some requirements – by resignation - the soldier has not this possibility. He may draws back only after order execution, which may be the last one. Because the military is preparing to carry out the war, is necessary, in peacetime, to exist and to train in a fashion that everything it does should be an appropriate training for the requirements of the tactical field. Therefore the authoritative climate, and the limitation of the military's possibilities of choice, the imperative character of the orders and the increased responsibilities of those who give orders and of those who execute them – the assignation, but also assumption of roles.

Therefore, I consider that in the military field the performance management of has to be considered and to act according with the requirements of the adopted strategy – strategically management, namely based on some well studied strategic

objectives, with precise established resources and able to be provided practically, with well determinate terms, with the full autonomy of the actions to be taken. It is obvious that the reach of some high performances requires harmonization and integration into an approach that will consider the restrictions, threats or opportunities present outside the military organism. This approach is materialized in the form of a military strategy, which is nothing but a part of the military art that studies the matters of war leading as a whole and of military actions with strategically extent, as well as the way of use of forces and means in order to achieve the political goals of war. The military strategy draws up the basic principles of organization and carry military actions, their rules, procedures and norms, the essential element in substantiation of the strategy being the performing of a diagnostic-analysis.

Because, from a structural and functional point of view, the military organization represents a systems hierarchy, each one of these representing the object of management, the correspondence between the subject and the object of management generates the efficiency of the systemic approach, based on idea that the whole represents more than a components parts sum.

The professionalizing, as a formation process of the new military organization flexible and efficient, it is supposing social, economic and cultural phenomena knowledge, that determines, interacts and conditions the becoming of the professionals army. The context where takes place the overall professionalizing of the military institution is the one of evolution of military art and contemporaneous technology. I believe that the military system must be, basically, a concentration of individuals well trained, experts in carrying and leading the combat and which, in order to achieve their objectives, they use high performance weapons and technologies, with considerable costs, but with lowest lost of human lives.

Because the managerial practice and thinking evolution must determine, also in the military organization, the reorientation of attention from material factor – that had a central position at the beginnings of the scientific management, towards human resource, reaching to the conclusion that the military is more than “gun meat”, the use of this resource must consider the principles of modern management.

In the context of the reform process, that is supposing periodical reconstructions and restructurings of the military organization, determinate by the necessity of insuring to a high level of professionalization of the military personnel, the reach of this objective implies the institutionalization of careers with different terms and implicitly – army resignation by some soldiers at an age that will allow them to build a new civilian career, professionalized military personnel reconversion is an objective necessity of the army restructuring. At the reconversion system projection in the military was considered the fact that the military personnel have the necessary training and experience to fulfill any requirements of the civil life, being able to adapt in any situation. The overall reconversion system of the professionalized military personnel is respecting an unilateral causative principle: financial resources and the civil society interests reflected in army’s missions determine the quality and quantity of the human resources. To these adds the continuous preoccupation for the flexibility of the personnel system for adjustment to different situations that are involving the military intervention, and considering the motivational optimum – remains valid the old principle according to which “If you want peace – get ready to go to war!”

Once with accession of Romania as member of NATO, national defense policy acquires a more accentuated pro- active character. Romania’s responsibilities do not limit to policies that assure the national territory defense, or to preventive diplomacy but also to policies that promote in an offensive manner Romania’s interests and which supports the global stability in any region where NATO has missions.

The objectives of Romania's defense policy are:

- Consolidation of Romania's status as NATO member state and development of an adequate strategic profile within this organization;
- Continuation of the reform of this military body in order to develop a credible, modern and efficient defense capacity;
- Strengthening the civil and democratic control on the army and improvement of the mechanisms of achieving it, in accordance with the principles and values of constitutional democracy;
- Consolidation of Romania's status as contributor to regional and global security[1].

The equipping of the Army, the development of Romanian scientific research and acquisition of fabrication licenses for modern armament will be priorities within Romanian defense policy over the next years in accordance with the necessity to improve the security and defense capacity.

In this direction, the Romanian Government will pursue:

- Permanent synchronization of the equipping policy with defense planning;
- Development of the system of managing the resources for the evaluation and settlement of the jointly financed funds (equipment expenditure as well as expenditure for the use of military and civil troops necessary to achieve any mission within NATO).
- Planning the investments within the equipping field in accordance with the missions that Romanian Army should achieve within NATO and with internal security needs, according with the force engaged for NATO and UE. The planning will be done according to the system of planning, programming, budgeting and evaluation (PPBES). There will be pursued an increase of capital equipping expenditure within the structure of the defense budget in relation with the operations, personnel, and infrastructure expenditure;
- Improvement of the equipping planning system (Integrated System of Defense Acquisitions Management) in accordance with the missions established for Romania within NATO, as well as with the security and internal defense needs. In this respect, on the basis of a preliminary evaluation on costs, there will be pursued the equipping of those branches that contribute to assuring national, regional security and to the specialization of our Army (capabilities) within NATO, as well to the equipping of the forces that are fulfilling missions abroad;
- Acquisition of licenses for the internal production of military equipment necessary to improve and standardize the fight and communication equipments;
- Participation in NATO programs and cooperation with member states of this Alliance in order to develop the national defense industry, joint production of military equipment in order to modernize fight equipments and communication;
- Testing new and modernized weapons within fight conditions, and technological improvement of the existing weapons within real fight conditions;
- Harmonization of the acquisition plans within the defense field in conformity with the orientations established through Conventional Armaments Planning System;

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[1] Defence White Book, June 25, 2013, pag 6.

- Development of the IT and communication systems (command, control, communications, computers, information and informatics);
- Continuation of the programs of modernizing the armored machines, at the same time with evaluating the possibility of sustaining the research in the field and licenses acquisition for improvement of the armored machines' performances;
- Development of the systems of simulation for preparing the military within the terrestrial and air forces;
- Equipping the air forces with new struggle airships for the period 2008 – 2015, by total replacement of airships MIG 21 Lancer;
- Evaluation, planning, programming and establishing the budget for the fabrication of new types of fight helicopters;
- Introduction of new systems of anti- aircraft defense/ fight;
- Finalization of the programs of equipping the naval forces with war ships of the frigate type and smaller ships;
- Establishing the financial planning and of the objectives for scientific research programs;
- Assuring the ammunition and materials stocks in order to assure military drill;
- Modernization of the facilities for HNS – Host National Support;

Also by its policy of equipping and developing the logistics, The Government will take into account the increase of the action performance of the structures, assuring the interoperability within NATO, revitalizing some older fight equipment, preservation and development of the military potential of research, expertise, technical and technological consultancy.

3. DEFENSE CHANGE MANAGEMENT

3.1 THE PSYCHOLOGY OF CHANGE

Attitudes towards change result from a complex interplay of emotions and cognitive processes. Because of this complexity everyone reacts to change differently. On the positive side, change is seen as akin to opportunity, rejuvenation, progress, innovation, and growth. But just as legitimately, change can also be seen as akin to instability, upheaval, unpredictability, threat, and disorientation. Whether employees perceive change with fear anxiety and demoralization, or with excitement and confidence, or somewhere in between, depend partially on the individuals' psychological makeup, partially on management's actions, and partially on the specific nature of the change.

An early model of change developed by Kurt Lewin (1951) described change as a three stage process. The first stage he called "unfreezing". It involved overcoming inertia and dismantling the existing "mind set". Defense mechanisms have to be bypassed. In the second stage the change occurs. This is typically a period of confusion. We are aware that the old ways are being challenged but we do not have a clear picture to replace them with yet. The third and final stage he called "refreezing". The new mind set is crystallizing and one's comfort level is returning back to previous levels.

An individual's attitude toward a change tends to evolve as they become more familiar with it. The stages a person goes through can consist of: apprehension, denial, anger, resentment, depression, cognitive dissonance, compliance,

acceptance, and internalization. It is management's job to create an environment in which people can go through these stages as quickly as possible and even skip some of them. Effective change management programs are frequently sequential, with early measures directed at overcoming the initial apprehension, denial, anger, and resentment, but gradually evolving into a program that supports compliance, acceptance, and internalization.

3.2 MANAGEMENT'S ROLE

Management's first responsibility is to detect trends in the macro environment so as to be able to identify changes and initiate programs. It is also important to estimate what impact a change will likely have on employee behavior patterns, work processes, technological requirements, and motivation. Management must assess what employee reactions will be and craft a change program that will provide support as workers go through the process of accepting change. The program must then be implemented, disseminated throughout the organization, monitored for effectiveness, and adjusted where necessary.

In general terms, a change program should:

- Describe the change process to all people involved and explain the reasons why the changes are occurring. The information should be complete, unbiased, reliable, transparent, and timely.
- Be designed to effectively implement the change while being aligned with organizational objectives, macro environmental trends, and employee perceptions and feelings.
- Provide support to employees as they deal with the change, and wherever possible involve the employees directly in the change process itself.

3.3. PROBLEMS APPEARED DURING CHANGING MANAGEMENT

When asked why so many major changes in organizations failed, executives gave *resistance* as the primary reason. Not much has changed over the years, and my guess is that many readers would give the same answer.

If we are serious about creating shifts from skepticism to support for change – or if we want to minimize opposition before it occurs — we must first understand the nature of resistance.

3.3.1. What is Resistance?

Resistance is any force that slows or stops movement. It is not a negative force nor are there "resisters" out there just waiting to ruin our otherwise perfect idea. We all resist things that go against our interests. Life would be impossible without this protective mechanism. People resist in response to something. They do not see it as resistance; to them it is survival.

There are three levels of resistance.

3.3.2. Level 1 – Based on Information

This resistance is based on information: facts, figures, ideas. It is the world of thinking and rational action. Level 1 is the world of presentations, diagrams, and

logical arguments. (PowerPoint was invented for Level 1.) Level 1 may come from lack of information, disagreement with the idea itself, lack of exposure, or confusion.

Many make the mistake of treating all resistance as if it were Level 1. In other words, they give people more information—better arguments, detailed facts—when something completely different is called for.

3.3.3. Level 2 – Physiological and Emotional Reaction to This Change

Level 2 is a physiological reaction to the change. Blood pressure rises, adrenaline flows, pulse increases. It is based on fear: people fear they will lose face, friends, even their jobs. In The Emotional Brain (Touchstone Books, 1998), author Joseph LeDoux refers to this, quite fittingly, as “the fear response.” It is uncontrollable. Level 2 can be triggered without conscious awareness.

LeDoux states that the emotions, not the intellect, are the basic survival mechanism of all living organisms. They are what warns us of danger and allow us to take action instantly, before our conscious mind even knows what is going on.

Imagine talking to your team about a proposed restructuring. People ask you Level 1 questions: “How much will it cost? When will it begin? What is the timeline?” Then you mention that there is slight possibility that this could result in downsizing. Suddenly, two-thirds of your team drops to Level 2. You may as well quit going over slides that speak to the rational mind, these folks are responding from a different part of the brain. When they are working from Level 2, they perceive the situation as dangerous and they are preparing for fight or flight—even if they are not aware of it.

3.3.4. Level 3 – Bigger Than the Current Change

This is deeply entrenched stuff, bigger than the ideas at hand. People are not resisting the idea - in fact, they may love the idea itself - they are resisting you.

They may resist because of their history with you or they may oppose who you represent. Some traditional management-labor relationships are Level 3. In these divisive relationships, no idea can be judged on its own merits. The Level 3 relationship almost guarantees that people will oppose any idea.

3.3.5. Working with Resistance

Level 1 lends itself to presentations and question and answer sessions. Level 2, however, requires conversation in addition to presentation. Listening and meaningful dialogue are essential. Level 3 demands that you begin to rebuild relationship.

3.4. LESSONS OF CHANGE

Change is the name of the game. Those in the non-profit sector meet it daily, often in unexpected and unwelcome ways. Volunteers are hard to come by; the demographics of availability have changed. Competition for competent staff and adequate financial resources is intense and the results are often discouraging. Issues of institutional survival are often very real.

At the same time, new opportunities present themselves-governments are privatizing, people are looking for new services and products, alternate services with funding support now seem possible, the internet and e-mail create new modes of work. The social sector's star is rising.

Yet each of these elements-positive, negative or mixed-represents change; and change must be managed, or it will manage us, to our detriment! It seems as though one has a tiger by the tail-you can it let go and you're almost scared to hang on. Just when you think you have it under control, it makes a move that defies understanding. Managing change is everybody's big job these days.

Next part draws upon the Edward A. Powers's experience as a consultant and graduate school teacher in the field of organizational development and change.

3.4.1. Tip on how to change management

Here are ten lessons drawn from the field of change management. They become ways to tame the tiger and achieve more of the positive promise of change.

1. IDENTIFY THE FORCES DRIVING THE CHANGE

The territory of change is dynamic, with forces swirling every which way: external demands, internal needs, changing environment, financial uncertainty, new possibilities not yet accessed, conflicting priorities, the dynamics of power and competition. Mapping and then attacking those forces (both pro and con) can create the route to take to make change work.

2. SHAPE THE VISION TOWARD WHICH CHANGE IS DIRECTED

Change management happens in the trenches, but its success depends upon a coherent, driving vision that unites the board, the staff and the constituency to press on for the gifts change can eventually offer.

3. PLAN CAREFULLY, BUT BUILD IN CONTINGENCY PLANS

By definition, change will change things. A clear, rational plan is essential, but it will not work unattended. You must work the plan to allow for anticipated changes and the totally unpredictable. Are we on plan? Only if its direction is clear, its steps and stages are being played out and it can change daily.

4. CREATE A POWERFUL CHANGE TEAM

"Who is in charge?" is the frequent, desperate question asked in the midst of change. The answer matters-a strong, representative team is required to make the strategy credible and build participation.

5. ENGAGE ALL THE STAKEHOLDERS

Who is affected by the change? - Not just the board and the senior team, but employees at every level and location, constituents and customers, founders, those in the media and the general public. Engagement = participation!

6. COMMUNICATE…COMMUNICATE…COMMUNICATE!

Of course we do. Those leading change efforts say (and they are serious): "We have done everything we know how to tell our story and keep people with us." Others throughout the organization are likely to say, "No one tells us anything!" or "All we know is what we read in the paper." They're both right. Answer: overdo it; use the grapevine; touch the informal leaders; communicate!

7. EXPECT AND MANAGE RESISTANCE

Resistance comes with the territory. It is related to fear, uncertainty, loss of the familiar, an inability to see the value in the next chapter. Some resistance will be prevented by the rules of thumb listed above. What can also help is to involve people in the process. Remind them of how the effort links to the organization's mission. If

they need new skills to be effective, provide training. A strong dose of empathy is essential.

8. GET EARLY WINS

You want to make it happen, so focus your efforts on success. Any official report of actions taken to implement the change has to be honest and the wins can it be trivial. Ideally, the early wins will happen in the day-to-day life of the front line service providers. These wins capture the organization's spirit.

9. SHARE STORIES

A story is worth more than the 1,000 words that pictures convey. It captures the gist of what the change is about and how to make it work for the organization. Tell the stories that capture the promise on the other side of change.

10. DRIVE THE IMPLEMENTATION TRAIN

The team, communication, the plan, the wins have to keep going. Initial enthusiasm dries up quickly. The romance is off. The change is at risk. Keep the initiative going; follow through; declare victory!

3.4.2. Myth making and myth debunking

An essential part of change management involves debunking the myths that often surround the environment of change. When believed, any of these myths can trip us up. Non-profit leaders who are good at debunking will have more success at the change process. Here is a list of the common myths, and ideas for debunking them.

1. CHANGE CAN BE AVOIDED

Actually, change is inevitable. Getting new board members, building skills, finding the next fundraising prospect, dealing with new accounting rules, interpreting one's program to the press-even these have dimensions of change. So much of change is uninvited, forcing us to pay attention. The ideal is to be ahead of the curve, expect change and channel it in the right direction.

2. IT IS NO BIG DEAL!

Even if it is small potatoes, change is a big deal. Something will be different-tasks, relationships, procedures, the landscape, the power situation. Effective leadership is conveyed through compassion toward the victims and recipients of change. To each affected person, it is a big deal!

3. "EVERYBODY'S INTERESTS WILL BE PROTECTED!"

Bad promise. Hard to keep. It can get in the way of making changes that are required for successful implementation. Each individual stakeholder defines his or her interest in unique ways. It is impossible to protect them when the tiger is loose.

4. "WE'LL ALL BE BETTER OFF!"

Not likely to be true. This sounds like a bad selling job. Some of us will feel that we are not as well off, and even if we support the change, we may not feel that the organization itself will necessarily be better off. Many will be worse off.

5. "TRY IT! YOU'LL LIKE IT!"

Unlikely to prove true, this sound like a sales job that is blind to the risks people will face. Even those driving the change get tired of it quickly and those whose lot is changed by others' actions are not in the cheering section.

6. THE PATHS OF CHANGE ARE PREDICTABLE

Never! Unless you say that the predictability is that change will be full of surprises, progress will be slower than desired, and resistance will be heavy.

7. RESISTANCE WILL EVENTUALLY DIE DOWN

Resistance comes with the territory. Unattended, it will only increase and lead to sabotage, limited cooperation and a decline in productivity and trust.

8. IF THE VISION IS STRONG, THE PEOPLE WILL COME

True, but vision will not carry the effort. People will stop coming and following unless they are participants in the change effort in ways that work for them. The vision must have legs of its own and foot soldiers as reinforcement.

9. "WE'RE TELLING YOU EVERYTHING WE KNOW…"

Probably true, but people would not believe it. There is too much suspicion from those not immediately involved. The statement will be experienced as self-serving and paternalistic. The critical need is for a trustworthy source who tells all, even the "bad stuff" and "what we do not know," and who is then believable. We can trust a person. By contrast, memos, e-mails, briefings, videotapes and the like seem artificial and are thus not credible.

10. IF THE ORGANIZATION'S LEADERSHIP IS ON BOARD, THINGS WILL WORK OUT

Engaging leadership is essential, but action in the depths of the organization will either make the change effort successful or cause it to peter out.

Effective change is a "full court press," with every position a player. Most non-profit organizations are built around a dynamic sense of mission that creates energy and builds loyalty. It is easy in the non-profit world to take loyalty for granted and assume that "people will go along for the sake of the mission."

But change in organizations must be managed, a literal tiger by the tail. It can be tamed, but only by learning the lessons others have already mastered.

Change is the name of the game! Ready to play!

4. CONCLUSION

Defense change management is the process of design a preparation plan to change in an military organization. Generally the goal is to increase the all members efforts of all people involved in the change.

There are a multitude of concepts on Change Management and it is very difficult to distil a common denominator from all the sources that are applying the phrase to their mental maps of organizational development. But obviously there is a tight connection with the concept of learning organizations. Only if organizations and individuals within organizations learn, they will able to master a positive change. In other words, change is the result from an organizational learning process that centers around the questions: 'In order to sustain and grow as an organization and as individuals within; what are the procedures, what is the know-how we need to maintain and where do we need to change?', and, 'How can we manage a change, that is in harmony with the values we hold as individuals and as organizations?'

To summarize, there are at least three basic definitions of change management:

- The *task of managing change* (from a reactive or a proactive posture)
- An *area of professional practice* (with considerable variation in competency and skill levels among practitioners)
- A *body of knowledge* (consisting of models, methods, techniques, and other tools)

Remember, the task of change management is to bring order to a messy situation, not pretend that it is already well organized and disciplined.

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THE STRATEGIC USAGE OF INFORMATION RESOURCES

LTC Doru CIUGUDEAN

CONTENTS

INTRODUCTION

This paper addresses the issue of information use in strategic decision making and it can help us to understand the link between business strategy and information strategy.

It provides with an insight into management information conduct when taking strategic decisions, by addressing questions such as: Why is information used? What kind of information does management use? How do they obtain it? And finally, where do they obtain it?

I'll try to rich my goal looking at:

- How the strategic use of information resources has evolved.
- Highlights the difference between simply using IS and using IS strategically.
- Looks at how information resources can be used to support the strategic goals of an organization.

I. EVOLUTION OF INFORMATION RESOURCES

The development of economy depends a lot on how much information its citizenry are exposed to. Information is so crucial that it has been recognized as the fifth factor of production. Information has no substitute when it comes to the development because it has been identified as the driver of economic growth and productivity. During the time we can indentify 5 eras since the 1960s:

- ✓ Era I (1960s-70s) focused on using IT to increase efficiency;
- ✓ Era II (1980s) focused on using IT to increase worker productivity through the use of PCs;
- ✓ Era III (1990s) used client-server technologies to improve the competitive position of the organization;
- ✓ Era IV is about using IT to create value for the corporation;
- ✓ Era V (now) – IT becomes a commodity.

These eras of information resources evolution could be defined according the dates from the table below:

Primary role of IT	1960s	1970s	1980s	2000s	2010s
	Efficiency	Effectiveness	Strategic	Value creation	Commodity
Justify IT expenditure	ROI	Increasing productivity and decision making	Competitive position	Adding Value	Maintaining market position
Target of systems	Organization	Individual manager/ Group	Business processes	Customer, supplier, ecosystem	Collaborative environments
Information model	Application specific	Data-driven	Business-Driven	Knowledge-driven	Knowledge-driven
Dominant technology	Mainframe-based	Minicomputer-based	Client-Server "distribution intelligence"	Internet "ubiquitous intelligence"	Mobile intelligence

II. INFORMATION AS A STRATEGIC RESOURCE

Considerable attention has recently been given to strategic applications of information resources. Numerous frameworks to identify and categorize such applications have been proposed, but a systematic theory has been glaringly missing. This paper builds upon existing frameworks in an attempt to move towards a theory of strategic use of information resources.

It systematically utilizes the wealth of information available in real world examples of strategic applications of information resources and takes a first step towards such a theory.

Several useful propositions discovered from success stories using an inductive approach for theory building, are provided for strategic use of information resources.

These propositions should serve as a base for testable models and hypotheses and should contribute significantly towards future empirical research. Information resources can be used strategically, to eliminate the threat of new entrants, minimizing the threat of substitutes, and allowing a company to effectively compete in its industry. It is impossible to neglect the impact of information and information technologies on the strategy of companies nowadays because of its important role in competition. Since competitiveness is getting stronger and stronger in most of the industries, new competitors are emerging, the environment is also changing and the

expectations of clients are continuously altering, managers are those who should not allow themselves to stay indifferent in such situations.

Today, information can no longer be treated as a source of competitive advantage, but a competitive necessity. It penetrates in all aspects of an organization, crosses data processing and information systems department. The information potential can be realized by the means of appropriate management and knowledge of the organizational and cultural aspects. No automatic profits come from investments in information technologies since management has the responsibility for exploitation of the information technology potential. During the time, companies have learned how to manage financial, human and material resources.

The changes of the management of these resources depend on the access, processing and means of information. A receipt of information resource management is impossible to be given, neither is desirable because the approach should be structured and flexible and managers are those who should possess it.

The managers of an organization should be well informed of the profits of the appropriate information and information technology.

The most important questions for them are: What information is needed so that the company can fulfil the set strategic aims? Which skills or products will be an advantage over competitors? What is the current strategy in order to beat competitors? And what information is needed to form it? Successful organizations are those who are learning and adapting and have a flat simple structure and information is inseparable part of their activity. That is why managers should be trained how to use it effectively. Information Resource Management (IRM) defines the way in which the organization will accomplish its business when using different information resources in order to make its short term strategies.

Information Resource Management includes the management of all kinds of data, numbers, texts, images and sounds available in making the proper strategy at a certain moment.

This is why managers are responsible for the provisions of the appropriate information concerning the business and decision making.

Information impacts on all aspects of the organization like marketing, distribution, production, operations management, management economics, finance, public policy, industry dynamics, office automation, human resource management.

All of them spinning round and in their centre is Information Resource Management.

Information and communication technologies provide continuous information flow, which the organization should use in forming its corporate strategy and accomplishing its management activities in decision making. Of great importance for organizations is their flexible management style.

That is why a great quantity of information and its optimal use is needed especially by decision makers in the processes of decision making. The more information is used the better for the company. The better the instrument of using this information the better the decision will be. The better the decision will be the less the risks for the company are.

For this reason information is an important resource which should be managed appropriately and thus it increases the company's chances of success. The effective management is day to day even every minute because the environment is changing very fast and it should respond to its quick changes. Consequently short run strategies are needed because of this and long run plans are no longer made.

In this sense the planning of information resources is of great value and should satisfy the needs of the organization.

Most of the strategies aim is to increase production, to increase sales or to increase profit and these can be achieved by current use of information. For example, a number of the applications of information technologies lead to a great decrease in costs since mediators are eliminated. So distribution costs no longer exist, personnel costs are diminished exclusively and also the deadlines of delivery are lessened to a great extent. As a consequence of this, the prices of the products/services are decreased substantially which means that people are encouraged to buy more. This eventually increases sales and profit of the company and of course the quantity of production needed should be greater. When production is higher the costs per product or service is less and the profit is higher. The assimilation of information is a challenge for every manager because the participation of information in company management leads to a higher effectiveness and better results in forming the competitive strategy. Managers should pay attention to six basic problems concerning information and its use in organization:

1. Information impacts different companies in different ways. This is the reason why management approaches and instruments and their use should be chosen appropriately.
2. Coordination and control of information should be established

3. Education of the organization in using information in forming short run strategies
4. Decisions about building or buying of appropriate information technologies should be precisely made and information about them should be collected
5. Different approaches in using information in different moments according to the needs of the company
6. Effectiveness of the company and balance between management and information technology management.

III. INFORMATION RESOURCES AS STRATEGIC TOOLS

Strategic advantage must be crafted by combining all of the firm's resources including production resources, human resources and information resources. Information resources include not only data, but also technology, people and processes. In a structure are available information resources like: information resources infrastructure, information and knowledge, technology owned, skills, relationship between general managers and information resources managers, business processes, etc.

A manager might consider the following to understand the type of advantage the information resource might create:

What makes the information resource valuable?

Who appropriates the value created by the information resource?

Is the information resource equally distributed across organization?

Is the information resource highly mobile?

How quickly does the information resource depreciate?

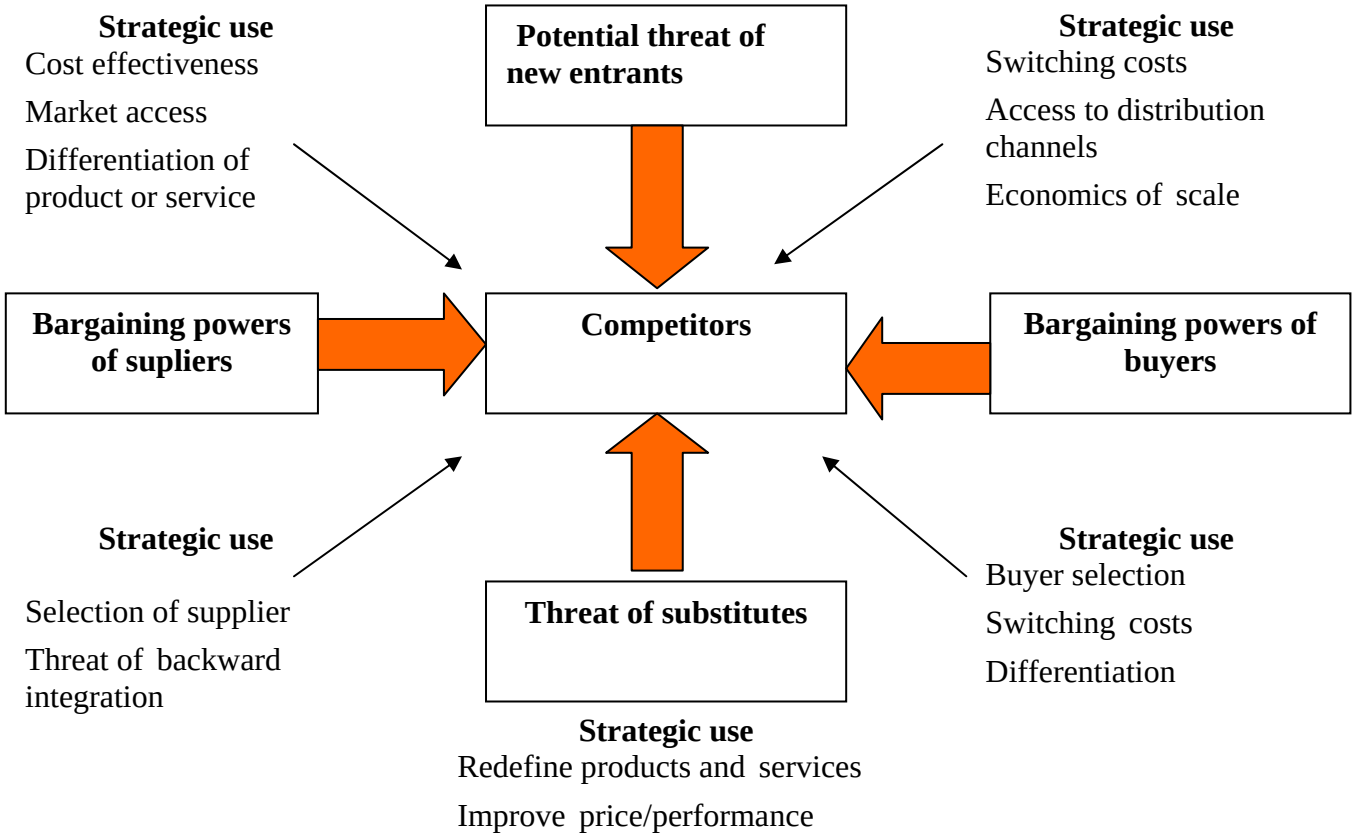
Information resources can be used strategically aligning them strategy with business strategy.

Using multiple approaches to evaluating the strategic landscape is helpful in determining strategic opportunities. For achieving this aim we can look at different approaches and one of them is **"The Five Forces Model".** This model, named "Porter's Five Forces" divides entities in the competitive landscape into five groups as follows:

- **Threat of New Entrants**: new firms that may enter a companies market.

- **Bargaining Power of Buyers**: the ability of buyers to use their market power to decrease a firm's competitive position
- **Bargaining Power of Suppliers**: the ability suppliers of the inputs of a product or service to lower a firm's competitive position
- **Threat of Substitutes**: providers of equivalent or superior alternative products
- **Industry Competitors**: current competitors for the same product.

In this respect we can draw a model of this strategy together with her's tools used for her's application:



As measures against those hazards can use next applications

Threat of New Entrants: can be lowered if there are barriers to entry. Sometimes IS can be used to create barriers to entry.

Bargaining Power of Buyers: can be high if it's easy to switch. Switching costs are increased by giving buyers things they value in exchange such as lower costs or useful information.

Bargaining Power of Suppliers: forces is strongest when there are few firms to choose from, quality is inputs is crucial or the volume of purchases is insignificant to the supplier.

Threat of Substitutes: depends on buyers' willingness to substitute and the level of switching costs buyer's face.

Industry Competitors: Rivalry is high when it is expensive to leave and industry, the industry's growth rate is declining, or products have lost differentiation

The model provides a way to think about how information resources can create competitive advantage. Using Porter's Model, managers can identify key sources of competition they face, identify uses of information resources to enhance their competitive position against competitive threats and consider likely changes in competitive threats over time.

Other ways used to live in a business world are strategic alliances in order to share information resources and create competitive advantage by saving time used for obtaining information and at the end but not the least strategic thrusts helps identify how information resources can be used for a competitive advantage. Talking about this last strategy I should say that we can identify few strategic thrusts:

a) **Differentiation Thrusts**: focus resources on unfilled product or service gaps;
b) **Cost Thrusts**: focus is on reducing costs or increasing competitor's costs;
c) **Innovation Thrusts**: focus on creating new products or new ways to sell, create, produce or deliver products;
d) **Growth Thrusts**: focus on increasing size of the market size or adding more value adding activities in the value chain;
e) **Alliance Thrusts**: combine with other groups to create a more competitive position.

On these respect a structure can use different strategic trusts some of them could be offensive to improve competitive advantage and others could be defensive to reduce the opportunities available to competitors. For example, a firm can innovate

offensively to gain product leadership in a market, while others use innovation defensively to imitate the product leader.

CONCLUSIONS

- ✓ information resources are the key to create time-based competitive advantage;
- ✓ for organization using information must become a basis for gaining advantage in the marketplace (i.e. efficient factories, good products, etc);
- ✓ information is used for the purpose of reducing or removing uncertainty (risk reduction, identification of opportunities and threats etc);
- ✓ when the decision is taken (i.e. strategic choice), intuition or cognitive structures again come into play;
- ✓ information are used for the purpose of reducing or removing uncertainty;
- ✓ information could be rich using external or internal sources;
- ✓ for choosing a right strategy it's necessary to use the right information (i.e. soft information, hard information or both);
- ✓ organization's strategy could be defined like business opportunities, organizational competencies and governance (COG);
- ✓ business environment information is increasingly a core component of the product or service offered;
- ✓ IT strategy is business strategy;
- ✓ business strategy means good information management and high level technology;
- ✓ information resources are necessary for gaining strategic advantages.

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SIMILARITIES AND DIFERENCES BETWEEN MANAGERS AND LEADERS

LTC Romeo FERARU

CONTENTS

SIMILARITIES AND DIFERENCES BETWEEN MANAGERS AND LEADERS

INTRODUCTION

Management is a social science which covers planning, coordinating, directing, supervising and organizing resources (human, material and financial), while leadership is the guidance and encouragement to manage people. Managers manage, but leaders lead. Managerial abilities and leadership skills are needed by managers and leaders in different proportion to direct and lead others.

Leadership and managerial roles are usually determined by the position and not person's specification (Wickramasinghe, 2007). Leadership and managerial roles can be used to manage people based on the tasks ahead. Leadership and managerial positions have been used interchangeably for leaders and managers because the two perform closely the same tasks (management of people) through different means, the two methods of managing people can be learnt and some people have to be managed using skills from leadership and management at the same time.

I. INFORMATION AS A STRATEGIC RESOURCE FOR MANAGEMENT

The managers of an organization should be well informed of the profits of the appropriate information and information technology.

The most important questions for them are: What information is needed so that the company can fulfill the set strategic aims? Which skills or products will be an advantage over competitors? What is the current strategy in order to beat competitors? And what information is needed to form it? Successful organizations are those who are learning and adapting and have a flat simple structure and information is inseparable part of their activity. That is why managers should be trained how to use it effectively. Information Resource Management (IRM) defines the way in which the organization will accomplish its business when using different information resources in order to make its short term strategies.

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In this sense the planning of information resources is of great value and should satisfy the needs of the organization.

II. LEADERSHIP OR MANAGEMENT

Leadership and management are often used interchangeably, but they are two distinctive and complementary processes. Konosuke Matsushita, John Kotter[1] Professor of Leadership at Harvard Business School, argues that leadership is different from management, but if either is missing, success in today’s business environment will be elusive.

[1] J P Kotter, ‘What Leaders Really Do’, *Harvard Business Review* (May/June 1990).

According to Warren Bennis and Bert Nanus, 'leadership is one of the most observed and least understood phenomena on Earth'.[2] There are consequently many definitions of leadership, but the following one is worth quoting because it includes elements of influence, intention, responsibility, change, and creating a shared purpose:

Leadership is an influence relationship among leaders and followers who intend real changes that reflect their shared purpose.[3]

Management, on the other hand, has been described as the: *attainment of organisational goals in an effective and efficient manner through planning, organising, staffing, directing and controlling organisational resource.*[4]

Leadership is thus about people while management is about control and creating predictable results. Unfortunately, management is today regarded by some as being a lesser skill than leadership. Kotter argues however that neither is better than, nor a replacement for, the other and that 'the real challenge is to combine strong leadership and strong management and use each to balance the other'.[5]

"Leadership is thus about people
while management is about control..."

Richard Daft,[6] building principally on the work of Kotter,[7] has produced the following comparison between management and leadership (see overleaf).

	Leadership	Management
Direction	• Creating vision and strategy • Keeping an eye on the horizon	• Planning and budgeting • Keeping an eye on the bottom line
Alignment	• Creating shared culture and values • Helping others grow • Reduce boundaries	• Organising and staffing • Directing and controlling • Creating boundaries
Relationships	• Focusing on people	• Focusing on objects –

[2] Warren Bennis & Bert Nanus, *Leaders: The Strategies for Taking Charge* (Harper and Row, 1985).
[3] Joseph C Rost, *Leadership for the 21st Century* (Praeger, 1993), p 102.
[4] R L Daft, *Leadership Theory and Practice* (Dryden Press, 1999).
[5] Kotter, p 26.
[6] Daft (1999).
[7] Kotter, p 26.

	Leadership	Management
	– inspiring and motivating followers • Based on personal power • Acting as coach, facilitator, servant	producing/selling goods and services • Based on a position of power • Acting as boss
Personal Qualities	• Emotional connections (Heart) • Open Mind (Mindfulness) • Listening (Communication) • Non-conformity (Courage) • Insight into self (Integrity)	• Emotional distance • Expert mind • Talking • Conformity • Insight into organisation
Outcomes	• Creates change, often radical change	• Maintain stability

Management is about the control process, which ensures that lapses in performance are spotted and corrected. Managerial processes therefore must be as close as possible to fail-safe and risk-free.

The leadership contribution is to motivate, inspire and energise people by satisfying basic human needs for achievement, a sense of belonging, recognition, self-esteem, control over one's own life and an ability to live up to one's ideals.

Good leaders motivate people by making the vision relevant to the particular group, supporting the employee with coaching, feedback and role-modelling, and by recognising and rewarding success.

To be successful, an organisation needs both good management and leadership.

III. SIMILARITIES BETWEEN LEADERS AND MANAGERS

The following similarities will show what a leader and a manager are:

Authority: Managers and leaders have authorities over their teams. Both managers and leaders are bosses in their own right.

Motivation: Lee Iacocca, former CEO of Chrysler, said "managing is nothing more than motivating people". T. J. Owston in his "Motivation and Leadership Theory" said that a leader is someone who motivates. Herzberg recognized that tasks had to be accomplished with motivational factors. McGregor in Human Styles of Enterprise (1960) divided human management into two groups. His X Theory people need authorization and coercion management, they were people who hate work, are lazy, incapable of taking responsibility and needed to be forced to do tasks. His Y Theory people need management by participation, who are self motivated and might be more like the majority of people. Their other wants are being satisfied. They are capable of exercising self-direction and self control if committed to an objective, the achievement of which gives them an ego reward. McGregor believed that people would accept and seek responsibility, have high potential and have this potential only partially utilized.

Team head: A manager and a leader are both team heads. They coordinate teams to achieve results.

Communication: Both managers and leaders use effective communication to plan, organize, direct and control people. While managers authorize a group of people to undertake tasks, leaders motivate them to do the same. They all communicate effectively using different approach. A leader may chose to participate or not, but he does not weird his stick and carrot like a manager.

Objective/Goals: A manager and a leader have objectives and goals to achieve through people. They are both expected to achieve results. Manager and leaders make decisions that result in maximum benefit for the organization as a whole.

Resources: Management and leadership require resources (man, time, money and materials) to accomplish their objectives and goals.

Use of Strategy: Both managers and leaders use strategy, action, style or ploy to achieve results.

Negotiation: Both manager and leader negotiate in order to carryout their duties.

Conflict resolution: Disagreements do occur in a manager's and leader's teams and both do settle disagreements and conflicts amicably.

IV. DIFFERENCES BETWEEN LEADERS AND MANAGERS

It is often difficult to understand the difference between managers and leaders. Do managers lead? Do leaders manage? To understand how these two concepts are distinct yet different, here are 7 ways to understand them.

1. Course and Steering. The word "leadership" comes from the Old English word "lad" for a "course". A "lode" is a vein that leads or guides to ore; a lodestone is a magnetic stone that guides; the lode-star is the name for the star that guides sailors, the Pole star. The word "management" comes from the Latin word "manus", the hand, from which we also get "maintenance" and "mainstay". Leadership guides by setting a ship's course. Management keeps a hand on the tiller.

2. Survival and Growth. Organizations are no different from any other living organism: they need both to survive and grow. Survival is necessary in order to meet the basic requirements of life: in individuals, water, food and shelter; in organizations, customers, a profit, premises, and work. Growth is also necessary so that, like the individual person, an organization can make the most of what it is capable of. The maintenance of the organization is essentially a management function: measuring, looking back, taking stock, assessing, taking, careful decisions. Taking the organization into areas of growth, change and development, to make the most of it, is what leadership is all about.

3. Potential and Resources. Management measures what it can count and see. A person in the enterprise is described by their name and title, measured by their output, listed in the database according to their skills and added in the accounts under the heading "manpower resources". Management deals with the past and how people performed to date. Leadership, on the other hand, sees people as capable of things you cannot measure and doing things they never thought possible. It deals with the future and how people could perform if their potential were realized.

4. Right and Left Brains. The left hemisphere of the brain is the seat of our logical and rational thinking. The right brain is the seat of our imaginative, creative and emotional thinking. While these two sides are distinct, they also work best when whole. The left brain is an analogy for management. It deals with what can be counted; detail; control; domination; worldly interests; action; analysis; measurement; and order. The right brain is an analogy for leadership. It deals with what cannot be counted; seeing things as a whole; synthesis; possibilities; vision; belief; artistry; intuition; and imagination.

5. The Seven S's. Richard Pascal says that the processes that take place in organizations fall under seven "S" headings: strategy, structure, shared values, systems, staff, skills and style. The functions of structure, strategy, and systems are the hard S's and the proper concern of managers because they deal with things or technology. The functions of staff, style, skills and shared values are the soft S's and the proper concern of leaders because they deal with people.

6. Science and Art. John Adair in his book "Leadership" compares management and leadership to the old dichotomy of Art and Science. Managers are of the mind, accurate, calculated, routine, statistical, and methodical. Management is a science. Leaders are of the spirit, compounded of personality and vision. Leadership is an art. Managers are necessary; leaders are essential.

7. Long-Term and Short. When an organization thinks about now and the near-future, it thinks of itself as a production unit. It sees the problems it might face as technical problems needing technical answers. When an organization thinks about the distant future, it thinks about building, learning and growing. It seeks to identify and develop its opportunities. It defines itself by what it is, not by what it does. The difference between short-term and long-term thinking is the difference between an organization that holds on tight to what it has and an organization that stays loose and lets things grow. Organizations that need quick fixes rely on managers. Organizations that want to grow rely on leaders.

The difference between management and leadership is like the difference between male and female, sun and moon, night and day, fat and thin, hot and cold, coming and going, and so on. They are two sides to the same coin. In being the one, we see the other. While different and distinct, they are parts of the whole: essential contrasts that in contrasting make clearer the other.

The debate between leadership and management has been raging for a number of years. I feel that the distinction between management and leadership is useful one, in that it helps us gain a better understanding of leadership and causes us to reflect on our own behavior, asking ourselves, "Are we really leading?" So what are the differences between managers and leaders?

"There is a profound difference between management and leadership, and both are important. To manage means to bring about, to accomplish, to have charge of or responsibility for, and to conduct. Leading is influencing, guiding in a direction, course, action, opinion. The distinction is crucial" - Warren Bennis

Warren Bennis, in his book "On Becoming a Leader", describes his view of the differences between leaders and managers as follows:

- The leader **innovates**; the manager **administers**;
- The leader - **original**; the manager - **copy**;
- The leader **develops**; the manager **maintains**;
- The leader focuses on **people**; the manager focuses on **structure and systems**;
- The leader inspires **trust**; the manager relies **control**;
- The leader **investigates** it; the manager accepts **reality**;
- The leader has a **long-range perspective**; the manager has a **short-range view**;
- The leader asks **what and why**; the manager asks **how and when**;
- The leader has his or her **eye on the horizon**; the manager has his or her eye always on **the bottom line**;
- The leader **originates**; the manager **imitates**;
- The leader **challenges** the **status quo**; the manager accepts **it**;
- The leader is his or her **own person**; the manager is the classic **good soldier**;
- The leader does the **right thing** manager does **things right**;

The most profound differentiation between managers and leaders is the general unwillingness of managers to lead. They often are unable or unwilling to make the tough and unpopular decisions necessary and instead follow the path of least resistance. Many times this is the result of the manager's lack of leadership qualities. In other cases, it's the result of a manager being managed by a manager, usually a micromanager, rather than a leader.

The position and authority of the leader must correspond to the profile of the organization that he is a part of, to his position in the hierarchy that impose some limitations to him and must have certain psychological characteristics. The leader must be a powerful personality, act democratically, skilful and bright, he must know to gain profit from different opportunities and must have a range of behaviors he can adopt in various situations. There are three types of behaviors of leaders. The first is the director, a character whose role is strictly to manage, act according to his expectations, so that the task is fulfilled. The efficient leader has only to incite others to act according to his expectations in order to fulfill the tasks. The competent leader persuades others to act according to his expectations but also finds means to satisfy their needs.

Some leaders use coercion, threats, manipulation, fear or persuasion, which lead to good results, but only for a short term and with a great consumption of energy.

Leaders are characterized by penetrating spirit and a relatively developed capacity of analysis. They can think strategically and multidimensionality, they have a good professional intuition; they are popular and usually elected in an informal manner due to the attraction that they exert because of their qualities.

Leaders are ready to learn permanently, they have clear ideas about how to achieve success, and they are energetic and intelligent. They are capable of taking decisions and can handle changes due to their power to adapt; they face reality and try to find adequate answers to the problems they have to solve. T. Zorlean in “The Management of the Organization” states the following qualities that are characteristic to leaders: knowledge of the group and of the sector of activity; a certain reputation and a personal history of successes; attitudes and competences – the capacity to analyse certain reasonings, strategic and multidimensional thinking, the capacity to create good work relationships, sensitivity toward others, understanding of the human nature, professional qualities – integrity, honesty, strong motivation to be a leader.

Leaders are a type of revolutionaries. They permanently try to change the state of things by adequate measures. And, what is most important, they identify what needs to be changed by acting accordingly.

The simple fact that somebody is a leader implies the existence of a group of people for whom he acts as a leading star, a model, the person that represents them, that gets involved, interacts, orients, evaluates, and all that not alone, but in cooperation with the others by way of adaptation according to the feedback received.

When we think of leaders we think of times more or less troubled, of conflicts, innovation and changes. When we think of leadership, we think of stability and constancy. Leaders are those who go in front in order to show the others the way, they are the ones who found new orders, acting as pioneers. They look for ways to get to something new and revolutionary. Regardless of whether they are selected to initiate something or to continue a project, they always look for opportunities to change.

Leadership means to orient the subordinates in a direction deriving from their long-term interest. That means not to waste the forces and resources of the group, not to exploit the negative part of human nature.

Being a process of directing and influencing the activities of the members of the group, leadership implies: other persons (subordinates) who accept to be directed and oriented by the leader; unequal distribution of power between the leader and his subordinates; the ability to use forms of power in order to influence the subordinates' behavior and the content of the activities they undertake. It is a process of choice and action. Starting from the choices made by the leader, the ways to act are chosen and they will feed and cultivate people's motivation and energy in relation to an idea or action. Power is no longer an action that goes from top down and the power of the leader can be exerted outside the borders and responsibilities of hierarchy and envisages types of relationships between collaborators (colleagues).

The term of leadership describes a set of behaviors and not a group of people that occupy certain positions in an organization or in other social systems. Leadership comprises the behaviors assumed by a person with impact upon the others, that is giving them the motivation to act or to believe, on the condition that they are not capable on their own of these behaviors or beliefs, and thus choosing to follow the person that assumes them - the leader.

The motivations of the leader are emotional equilibrium, spirit of mutual assistance, dynamism and will to progress, understanding of human nature; they are preoccupied to raise the level of trust awarded to them

The qualities of the Anglo-Saxon leader are: vision - the capacity to anticipate crises, evolutions, tendencies; passion - the capacity to act passionately to attain a goal and to inspire the others in the same way; the capacity to give examples and to be integrated in the team; to be daring, curious, innovator; to encourage rather than condemn.

Those who have the satisfaction of having such a leader who transforms people at work would tell you: "the shame of not doing something right is much more important than a pay rise", "I am always challenged to wage a competition against myself", with us things are done the best way from the first attempt".

This style of leadership is much more efficient because those who are lead are treated with respect and trust, are advised and incited to act in accordance with man's superior needs, to act in the common rather that personal interest, they are permanently challenged to outperform themselves, their desire to succeed is stimulated.

Leaders do not command excellence but they build excellence. Excellence is under the limits you can to do what is right for your organization. You must do

everything you should do. An organization will not achieve excellence by figuring out where it wants to go, then having leaders do whatever they have to in order to get the job done, and then hope their leaders acted with good character. This type of thinking is backwards. Pursuing excellence should not be confused with accomplishing a job or task. When you do planning, you do it by backwards planning. Excellence starts with leaders of good and strong character who engage in the entire process of leadership. And the first process is being a person of honorable character.

To be an effective leader, your followers must have trust in you and they need to be sold on your vision. One of the ways to build trust is to display a good sense of character composed of courage, values, beliefs, skills and traits.

Beliefs are what we hold dear to us and are rooted deeply within us. They could be assumptions or convictions that you hold true regarding people concept or things; values are attitudes about the worth of people, things or concepts; skills are the knowledge and abilities that a person gains throughout life; traits are distinguishing qualities or characteristics of a person, while character is the sum total of these traits.

Traits of a best leader are: honesty, integrity and candour in all your actions, competent – your actions should be based on resort and moral principles; forward-looking set goals and have a vision of the future; inspiring – display confidence in all that you do, by showing endurance in mental, psychical and spiritual stamina, you will inspire others to reach for new heights; intelligent – read, study and seek challenging assignments; fair-minded – display empathy by being sensitive to the feeling, values, interests and well-being of others; broad-minded – seek out diversity; courageous – have the perseverance to accomplish a goal, regardless of the seemingly insurmountable obstacles; straightforward – use sound judgment to make a good decision at the right time; and imaginative – innovative.

Leadership includes the competencies of emotional self-control, accurate self-assessment and self-confidence, transparency, adaptability, achievement initiative and optimism. Leadership includes the justice, judgment, initiative, dependability, decisiveness, tact, integrity, bearing, enthusiasm, unselfishness, knowledge, courage, endurance and loyalty.

Leadership style is the manner and approach of providing direction, implementing plans and motivating people. There are normally three styles of leadership (U.S. Army Handbook, 1973): authoritarian or autocratic; participative or democratic; delegative or free reign.

Authoritarian (autocratic) – this style is used when the leader tells her employees what she wants done and how she wants it done, without getting the advice of her followers. Some of the appropriate conditions to use it is when you have all the information to solve the problem, you are shot on time, and your employees are well motivated.

Participative (democratic) – this type of style involves the leader including one or more employees in the decision making process (determining what to do and how to do it). However, the leader maintains the final decision making authority. Using this style is not a sign of weakness; rather it is a sign of strength that your employees will respect.

Delegative (free reign) - in this style, the leader allows the employees to make the decision. However, the leader is still responsible for the decisions that are made. This is used when employees are able to analyse the situation and determine what needs to be done and how to do it. You cannot do everything! You must set priorities and delegate certain tasks.

There is a difference in ways leaders approach their employee. Positive leaders use rewards, such as education, independence, etc. to motivate employees. While negative employees emphasize penalties. While the negative approach has a place in a leader's repertoire of tools, it must be used carefully due to its high cost on the human spirit. Negative leaders act domineering and superior with people. They believe the only way to get things done is through penalties, such as loss of job, days off without pay, reprimand employees in front of others, etc. They believe that freighting everyone into a higher level of productivity increases their authority. Yet, what always happens when this approach is used wrongly is that morale falls; which of course leads to lower productivity.

Two other approaches that leaders use are: consideration (employee orientation) -leaders are concerned about the human needs of their employees. They build teamwork, help employees with their problems, and provide psychological support; structure (task orientation) leaders believe that they get results by consistently keeping people busy and urging them to produce. Generally speaking, leaders are assigned attributes that allow them to energize their followers. Managers, on the other hand, are the individuals who take care of the mundane and routine details.

V. WHY THE MILITARY PRODUCES GREAT LEADERS?

First, in all services, military leadership qualities are formed in a progressive and sequential series of carefully planned training, educational, and experiential events—far more time-consuming and expensive than similar training in industry or government.

Secondly, military leaders tend to hold high levels of responsibility and authority at low levels of our organizations.

Finally, and perhaps most importantly, military leadership is based on a concept of duty, service, and self-sacrifice; we take an oath to that effect. We view our obligations to followers as a moral responsibility, defining leadership as placing follower needs before those of the leader, and we teach this value priority to junior leaders. Our leadership extends to caring for the families of our soldiers, sailors, airmen, or marines, especially when service members are deployed. When serving in crisis conditions where leadership influences the physical well being or survival of both the leader and the led—*in extremis* contexts—transactional sources of motivation (e.g. pay, rewards, or threat of punishment) become insufficient.

Why should a person be motivated by rewards when he might not live to enjoy them? Why would a person fear administrative punishment when compliance might lead to injury or death? Soldiers in such circumstances must be led in ways that inspire, rather than require, trust and confidence. When followers have trust and confidence in a charismatic leader, they are transformed into willing, rather than merely compliant, agents. In the lingo of leadership theorists, such influence is termed transformational leadership, and it is the dominant style of military leaders.

The best leadership—whether in peacetime or war—is borne as a conscientious obligation to serve. In many business environs it is difficult to inculcate a value set that makes leaders servants to their followers. In contrast, leaders who have operated in the crucibles common to military and other dangerous public service occupations tend to hold such values. Tie selflessness with the adaptive capacity, innovation, and flexibility demanded by dangerous contexts, and one can see the value of military leadership as a model for leaders in the private sector.

CONCLUSIONS

The leadership and the management are both important, they are ***two distinctive systems of action, both are necessary, and each seeks to do different things***. Organizations need both leaders and managers to succeed.

While there are charismatic, traditional, situational, appointed and functional leaders, there is only one type of manager.

In my opinion the difference between managers and leaders lies in the conceptions they hold, deep in the psyches, of chaos and order. Managers embrace process, seek stability and control, and instinctively try to resolve problems quickly - sometimes before they fully understand a problem's significance. Leaders, in contrast, tolerate chaos and lack of structure and are willing to delay closure in order to understand the issues more fully in this way, business leaders have much more in common with artists, scientists and other creative thinkers than they do with managers.

My opinion is a manager is needed for most middle and junior level jobs to work with junior workers, unskilled laborers and skilled workers; a leader is needed to guide managers and work with skilled workers and professionals. Managers are professionals, all they want to achieve is the organizational goals, while leaders are more than professionals, they are politicians, and all they want to achieve is the development of the whole enterprise.

While a manager talks every time about the importance of the organization to workers development, a leader talks every time about the importance of workers to the organization's development.

Organizations like working with effective managers, but workers love working with leaders.

When managers leave a team the team remains the same, but when leaders leave their team, the team can never be the same, because managers are managers, but no two leaders are the same.

In an increasingly competitive world, successful businesses need leaders, not managers, to handle the heat.

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