

IT GOVERNANCE AND BUSINESS CORPORATE STRATEGY – EMBEDDING THE PROGRAM AND PROJECT MANAGEMENT WITH IT&C VALUE CHAIN

Dr. Mihail Sădeanu
APMG PRINCE2 FO&PR, PMI PMP, IAPPM CPD,
AAPM MPM, IPMC CIPM, Expertrating TQM
www.snt-world.com

Abstract: This second part continues the principles of the IT value chain based on projects and programs together with the organizational value of the last ones, presented in the first part of the paper. It details the IT value chain based on operations, the strategic-factors of success and the services delivery chain, the value chain management and the contribution measurement to the organizational business, with a final presentation of practical applicability for the mobile value chain to the 3G mobile communication services. Recent IT&C and corporate strategic management field references bring an additional support to the paper value.

1.-The IT value chain based on operations, the success strategic factors and the service delivery chain

1.1.-The IT value chain

The model of the IT value chain based on operations or activities [4, 5] starts from the supposition that every organization structure may be conceived as consisting of a matrix representing an interconnected chain of primary activities and support activities (Fig. 1).

As new services or IT&C products are created, a new value is added throughout the activities chain represented inside the matrix cells.

The strong competition requests the organization to carry out its activities at the most possible lowest cost price, or in such a way that the current resulted service or product values should be enhanced, thus resulting in new or/and innovative ones [5, 8, 9]. Thus, the *business processes* appear through all the value chain cells and may be controlled with the support of the MIS/ERP subsystems and specific applications [2, 3].

IT&C business analysts who are dealing with the strategic planning must analyze each activity with *positive risks* possibilities (*new opportunities*) as well as the *negative risk* ones (*threats, failures, losses*).

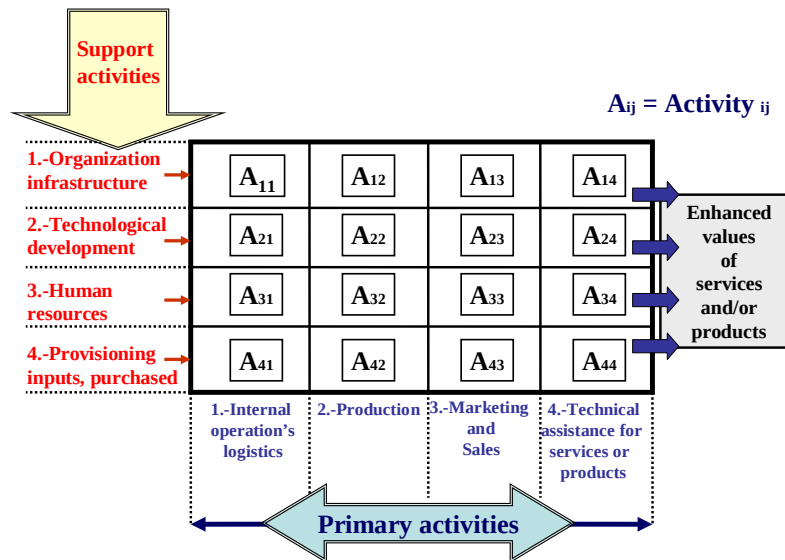


Figure 1: The organizational value chain matrix

1.2.-The success strategic factors

The IT&C business processes value chain includes a comprehensive set of success factors, which may vary as function of the selected business strategy, but in the most part of cases [13, 14, 15] the set includes at least the following six *success strategic-factors (SSF)*:

SSF 1).-Analysis and practical appliance of technological and business opportunities:

- Research and development (R&D) of new HW/SW operational platforms with Client-to-Server (C2S) architecture including networks, for IT&C services as support of new business processes;
- Continuous support of business-critical system lifecycle

SSF 2).-Market definition of classic and potentially new clients, based on:

- Client information and data collecting;
- Services data collecting;
- Marketing analysis of concurrent markets for the same clients;
- Market profiles segmentation for client reorientation and winning.

SSF 3).-Strategic organization of a competitive *e-marketing* and sales system:

- Attracting new potential clients, clients from concurrent companies and keeping the loyal clients;
- Establishing market prices for competitive services and promotion rates;
- Development of distribution strategy;
- Management of distribution channels and sales strategy;
- Coordination of the usual and strategic clients qualification process.

SSF 4).-Development of the value added services (VAS) or of any kind of communication services through value added networks (VAN), based on:

- Defining and designing audio/video and data services;
- Analysis of competitive offered services feasibility
- VAS/VAN services implementation.

SSF 5).-Effective supply of ISP/ASP/WASP type for VAS services, implying:

- Individual contracts and SLAs management for service delivery;
- Innovative processes management, bringing additional profit;
- Sales agreements registering in all their possible forms of appearance

- Clients activation or deactivation, and their reconsideration.
SSF 6).-Registering and pricing the personalized traffic of the offered services and communications, through:
- Tracking and collecting at individual level the records for each utilization
- Ranging on a metric scale each type of service or communication, in order to have a correct and feasible price
- Invoicing as function of the subscription type and SLAs
- Credit ordering and control
- Payments registration, translation of unused time durations from subscription, and tracking the clients who do not pay.

All these strategic factors are faced to a whole set of *key-constraints*, which represent the object of each IT&C department specifically implied.

The organizations and/or IT&C departments from a service providing company for communications and data transmissions, should continuously revise their *activity strategic goals* for compliance to the specific functions of each success factor for the *business strategy*.

1.3.-The business strategy and the strategic business units

The business strategy implies a continuous reorientation of the IT&C infrastructure management (IM) along the new directions of the organization global business process, and consequently the channels, the flows, and their information volumes are accordingly growing.

In this way, it is necessary a new and fundamental understanding and definition of the IT&C business processes and of the role played by the IT&C assets and by the information inside the new business processes frame. The IT&C business processes from the global business are reverberating over all geographically dispersed virtual groups, thus representing the *IT&C strategic business units (SBU)*.

*SBU*s may be established in the following cases, for:

- services provided by strategic applications,
- SW application processes representing critical-missions for the organization,
- transaction-oriented services for *e-business/e-commerce*.

1.4.-The service delivery chain

The IT&C business process value chain and the *business strategy* are tightly coupled to the IT&C+MIS infrastructure vision as *service delivery global system*.

This system acts on basis of a *service delivery chain (SDC)* which architecture consists of: different *levels*, different *categories of functions located on levels*, and *connexions between functions* through which different *information flows* are running. The main role is represented by the *infrastructure management (IM)* acting as an inter-functional switch, as represented in Figure 2.

The SDC is aggregated from multiple interconnected segments, describing the IM function delivery relationships, thus the complete chain being supported by the information flows merging. The functions may have, or not, a common interface with IM. Figure 2 represents the two environments and the twelve functions of a SDC.

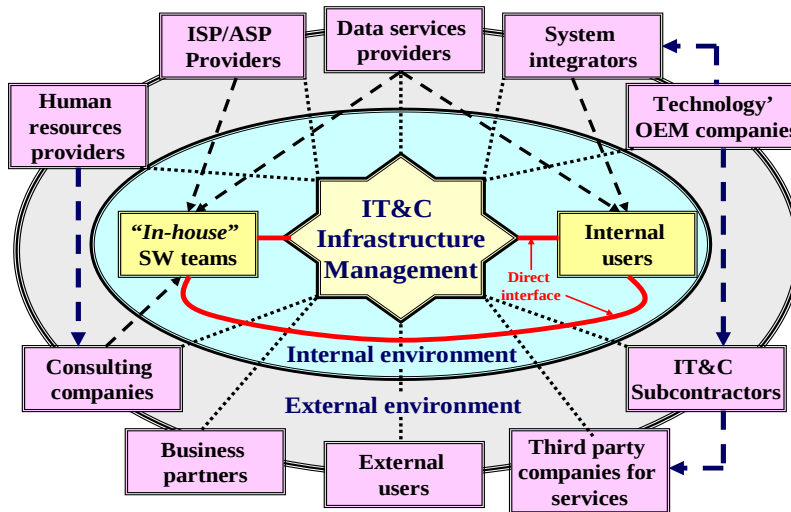


Figure 2: The IT&C service delivery chain architecture

SDC defines also the interdependency relationships to other organizations from the external environment in order to provide the IT&C services to the local users. These relationships may be formally defined through the SLA levels or on basis of signed-off contracts for acquisition or strategic subcontracting of the infrastructure equipment.

The specific elements, which are common for these interdependencies, are given by the: *commitment and responsibility degree of the partnership* in providing a proactive answer as well as by the *reaction time* of this one for supplying the equipment.

2.-The value chain management and the contribution measure to the organizational business

2.1.-The IT&C value chain management

For each of the six success strategic-factors (SSF) previously defined, the *global tasks of the IT&C department* may be defined as follows:

- SSF 1 & 3: Contribution to the market analysis and database development for the information “know-how” about clients and services inside an e-CRM (e-Customer Relationship Management) system.
- SSF 2 & 3: Development of a reactive HW/SW architecture for introducing new services and possible new products.
- SSF 3 & 4: Providing a very comprehensive support for e-business process reengineering or optimization [2, 6].
- SSF 4 & 5: Approaching and evaluating the positive and negative risk management, both from the business class and pure ones, which might have impact over client contracts and over financial operations.
- SSF 6: Ensuring post-implementation quality for e-business channels and the partnerships with all client types.

In order to satisfy these business requirements, the *IT&C value chain* needs an adequate management.

The *IT&C value chain management (VCM)* [4, 6, 13, 14, 15] has as a primary scope the analysis and management of the IT&C operations resulted value, based on tracking, measuring [1, 17], optimizing, and managing the business impact of the IT&C in two major modes:

1. Along the organizational business evolution, starting from the micro-economic analysis at a project level till the macro-economic analysis at the corporate financial level [7, 18].
2. For all stockholders and persons having positions with financial responsibility in the IT&C area (IT&C project and program managers, project stakeholders, SBU managers, executive directors at corporate level, IT employees, investors, clients, and the supply-delivery chain).

Also, the *IT&C VCM* supposes the management of the following five major components deployment [15, 16], which subprocesses must be completely controllable and measurable:

1).- IT&C program and project portfolio management [7, 18], including:

- Establishing the program and management methodology [7];
- Establishing the program and project portfolio, as well as the priority order of the projects approved as feasible;
- Establishing the SW system (MIS/ERP) life cycle model, developed through projects and/or programs [7];
- Establishing the leasing or renting strategy, subcontracting or acquisition strategy, and IT&C infrastructure platform maintenance;
- Establishing the strategy of the IT&C/MIS/ERP system projects and programs life cycle continuous management;
- Estimating the project or program profitability based on the analysis of costs, revenues, earned value along project or program deployment, and the obtained gross profit and margin.

2).-Management Information System (MIS) and associated database architecture management [7], including:

- Data structures and common architectures management (“DM-data mining” and “data marts” in “DW-Data Warehouse”);
- OLTP/DW/DM projects and associated databases management;
- Integration of client specific components in the IT&C infrastructure;
- Management of changes needed in the IT&C infrastructure and those for SW applications, as a consequence of business process reengineering.

3).- e-business strategic or critical application management [6, 7], including:

- Management of critical application portfolio and/or strategic missions;
- Management of client assets through the frame provided by the IT&C/MIS/ERP project life cycle continuous management.

4).-Management of IT&C operational resources [6], including:

- Planning and controlling the IT&C infrastructure operational capacity;
- Human resources, financial and logistic-material resource allocation;
- Management of IT&C infrastructure and information security;
- Risk and disaster management;

- Operations management in data processing centers running business-critical applications (e.g. e-billing);
- Internal (LAN) and external (WAN) network administration;
- Management of HW/SW platform security, and that of systems and applications from the IT&C infrastructure;
- Contracts and SLAs management for final user services.

5).-Customer relationship management ("CRM") including management [6] of:

- Individual client contracts or those of corporate user groups;
- SLAs in case of communication integrated services delivery;
- Client personal information;
- Monitoring the activity flow processes, coming from a subscriber call center;
- Complains, proposals, and forecasting the possible client requirements;
- Permanent communication and careful analysis of change requests coming from internal and external clients for the components and functions of the supplied services.

2.2.-The contribution measure to the organizational business

The accomplishment of the IT&C VCM objectives implies tight relations both on the horizontal and the vertical directions of departmental and organizational management [6], as represented in Figure 3.

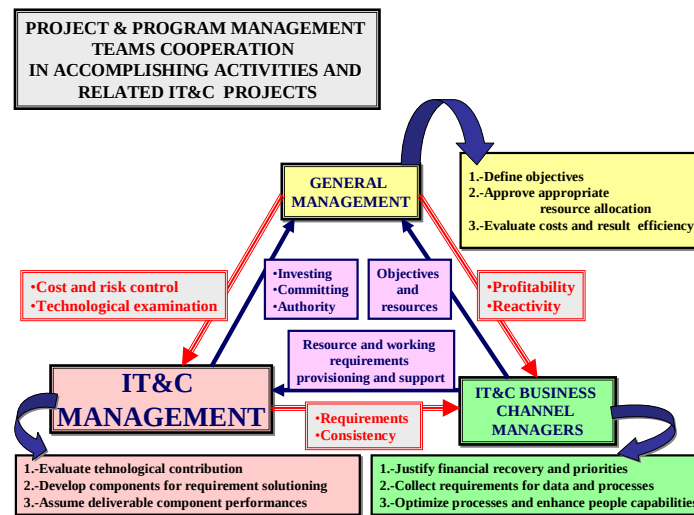


Figure 3: IT&C organization and management inter-relationships

The CIO or the IT director, as well as the IT&C global managers from the VAS providing organizations for general communications should consider that the measure of the IT&C department contribution to the specific business functions accomplishment, may be evaluated by [1, 6, 7, 17]:

- The values of: costs, tangible and intangible benefits, ROI/EVA/NPV/FIRR indicators, payback period duration, risks, earned money, all being computed for the profitability of the IT&C investments, directly or indirectly made, or on approved projects basis;
- *Earned value analysis (EVA)* indicator values, computed during project or program deployment;
- *Balance Scorecard (BSC)* analysis, measurement and reporting methodology [1, 6, 17];
- Qualitative and quantitative measurements of the offered services, as a supplying system, and of the client satisfaction degree;

- Proactive planning of the IT&C infrastructure operational capacity and revenue growth by rebalancing the workload on the HW/SW platforms;
- Operational productivity enlargement through distributed networks;
- Detailed financial management of platforms and subcontracted or leased services
- Conceiving innovative programs for research and development (R&D) of prototype HW systems, new SW subsystems (MIS/ERP/e-CRM), or of pilot services for testing customer premises equipment (CPE), compliant to client requests.

According to the above mentioned statements, it must be taken into account that the most important cohesiveness factor consists in the *continuous management dialogue on vertical and horizontal directions* during lifecycle, which ensures: *the coherence, revenues, and proactive commitment of all managers.*

3.-The mobile value chain for 3G mobile communications

3.1.-The mobile value chain

One of the most truthful examples of the current years is represented by the *mobile value chain (MVC)* of an organization providing IT&C services as support for WCDMA and GSM mobile communications, including integrated services for voice/data/video/multimedia [10], as presented in Figure 4.

The MVC functional principle consists of three fundamental processes:

1. Expanding the current (legacy) MVC
2. Expanding the range of activities and services
3. Splitting them on three main levels or groups: *corporate, subscribing-clients at the permanent group level, individual persons.*

The request for new capacities of services and the concurrency of the ILEC-CLEC (incumbent-concurrent) operators leads to the MVC modularization and to the proliferation of the new concurrent operators (CLEC), who support well focused roles on service delivery at the three mentioned group levels.

Service delivery and customer relationship management (*CRM, e-CRM*), which represent a key-element of the mobile communications industry, become more independent of the network operations so, other CLEC or in partnership ("*Greenfield*") operators may extend their relationships to the customers for providing data, voice, and image transfer mobile services.

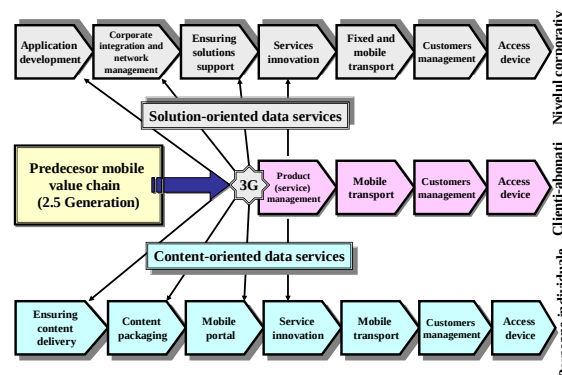


Figure 4: The mobile value chain of the 3G mobile communication services

3.1.-Content-oriented and solution-oriented mobile data services

The most representative change in the 3G MVC consists of the requirement for developing, in a continuous mode, different solutions and content of the Web-centered data mobile services. The MVC separation might be , at least initially, represented by a fork to:

1. *Content-oriented* or *content-centered* data services having the primary destination directed to the individual users or subscribers;
2. *Solution-oriented* or *solution-centered* data services having the primary destination directed to the vertical segments and to the corporate level

The mobile voice transmission is integrated inside the frame of each these values, as an element from a very large service portfolio.

In the MVC frame the content-centered data services delivery, the content development and packaging in applications for services, and the mobile portals extension will direct the mobile information provisioning.

In this way, new opportunities are offered for a very large range of CLEC operators, representing a serious support for client management and delivery capacities of *private-oriented* services.

These are possible to be accomplished by using large *e-CRM systems*, and being conceived for each localized customer ("*l-commerce*") to enter in the field of mobile data services distribution by globally taking over massive voice and data capacities from the network operators.

Concerning the development process of mandatory solutions for mobile data to corporate level clients, the ISP/ASP/WASP providers and system integrators are merging their forces with mobile operators for providing complete solutions which may be accessed without limits over a whole range of fixed and mobile operating platforms.

For keeping the MVC value in their networks, the mobile operators will have to maintenance the penetration solution development with a significant value, this being sufficient for billing the final users for the transferred data volumes. In other words, the mobility priority must be established and protected for both mobile voice and data.

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