



Digital Transformation in 2015

Many CIO's identify their top priorities for this year and frequently list: security, cloud computing and business intelligence/big data projects. These areas cover cybersecurity, risk assessment, mobility, consolidating data centers, applications, resources, governance, compliance, etc. However when we focus little more the real trend is the continuing digitization of the organization – the transformation of physical processes and business models into “Digital Governance System”.

In the last two decades, the CIO had the responsibilities to seek, deploy and support digital transformation in purpose to achieve business demands, where head of line of business had the responsibilities to express business demand, requirements and expectations. Nonetheless, customers perception of digital reality emerge as a third actor, and accelerate this transformation, that imply digital is diffused and must be shared by all executive leadership in your organization “CEO's, CFO's, CHRO, CMO's, etc...” and customers. Your organization will be enforced to focus on customers reactions to digital products, they play key role on digital ecosystems. Customers perception are based on their expectations, not fact neither figures. The bottom line is to pursue and to understand customers. To achieve success, you must meet or even exceed customer expectations, by transforming your organization to become **customer-driven**. Tiffani Bova from **Gartner Research**, said “Partners, must focus on what technology can do for their customers, not just what they can do with technology”. That includes devising new strategies to meet the expectations of customers, because consumers (**clients/users**) behaviors are changing, and influencing the processes of digitization.

Business demand manifests itself in two ways: strategic and operational demand. The IT transformation efforts are blending around words like specialization, maturity and sophistication in purpose to maximize the value to the business, and to procure enterprise computing which can define as: “Ability to pool and share IT resources in a global environment in a manner which achieves seamless, secure, transparent, simple access to a vast collection of many different types of h/w and s/w resources through non-dedicated wide area networks, to deliver customised resources to specific applications.”

NSF Cyberinfrastructure

To satisfy strategic and operational demand, to support the corporate strategy business goals and investments, to ensure IT provides high quality services that meet business expectations, to achieve operational effectiveness and more efficiently to reduce costs. CIO's need to understand the organization's business objectives and strategy and set a corresponding IT strategy to support those business goals, by aligning enterprise computing to business and IT investments to balance risk, cost and performance. Also CIO's can analyze the IT portfolio to select and prioritize investments and define new services, or modify existing or stop investing in services. However, this traditional information technology approach focus on implementing fundamental technology, service delivery and improvement projects, don't meet customers expectations.

21st Century Information Technology must focus on information, business value, and customers expectations. The realignment of technology and business models to more effectively involve consumers experiences lifecycle in decision making, that means a process of IT Transformation with holistic vision which unify and simplify digital governance systems. Study from Adobe “*Digital Roadblock: Marketers Struggle to Reinvent Themselves*”, showed that organization must build digital brand awareness through the personal experiences in purpose to outperform their competitors. Business models is changing and investing in technology must integrate digital customers perceptions

in way to ensure agility and adaptation. New model must integrated technology provider and embracing a **consumer-focused** rather than a technology-driven, by collaborating towards the creation of synergies and dynamic relationship, building a framework for data-driven business, contextualizing strategic information within organizations, implementing integrated processes designed to put the customer at the top of mind and achieving business value from technology. This more about vision and leadership, and involve transversal approach, because each area operated as a functional silo; with specific expectations, specific requirements and specific methodologies to solving its top problems. Digital governance systems ensure such synchrony, and improve the way of utilization available data and technology, and more important make IT transformation more promising. Transformational approaches like Agile can achieve better results by breaking down and improve outcomes, and responding to change more efficiently by including customers, business stakeholders, product operations, and IT team which enable to make fact-based decisions and process improved. In other words, you need to adopt a digital strategy which interact with technologic reality, business reality and customers reality, that means appropriate investment in a innovate technology platform, combined with an expertise team to manage the process, and designed around consumers experienced to achieve success. In many ways, digital transformation is bottomless, nonetheless a digital governance systems must focus on digital experience toward long-term strategic goals, empower your digital strategy to become understood and accepted in your organization, more important technologies investments must follow digital awareness, and help to learn about consumers behaviors and experiences across all digital channels.

To satisfy the rising demands of the customer-centric digital strategy, information technology strategic plan establish a decision-making process following two factors: imperatives or incentives. Imperatives are pressures that force you to act. Incentives are the rewards and opportunities that arise from acting. Both are linear thinking theory, term typically associated with solving single problems, and can be achieved by education and training when the problems are identified, then the issues are well known. Similarly, there is a business requirement for intellectual capital creation and protection, which imply dynamic thinking theory capable to develop conceptual tools to understand customers reality based on dialogue, multiple perspectives, and interacting activity systems in variety of digital networks. In this perceptive of strategic research, the basic model is expanded to include minimally three interacting systems (technology, business, and customers).

“A good decision is based on knowledge and not on numbers.” Plato

The new model focus Knowledge, as creative process, social, ubiquitous, experiential, and proactive with shorter response times and lower costs. This dynamic theory of Knowledge focus on Community of Practice program (CoP) as fundamental component of the digital transformation program of the organization, with tools (collaborative internal social networking platforms, Cloud, BYOD, Tablet, etc.) which share technical missions, business practices, and digital consumers experiences, and which improve structural implementation of the digital governance systems. Communities are fundamentally self-organizing systems raising the knowledge level of the IT Team, and increasing the effectiveness of your process. Communities is adaptive structure in two ways: through the knowledge they develop at their core and through interactions at their boundaries. CoP can provide your organization with a learning system, enhance the expertise of your teams, enable the continuous build and refresh cycles so important in keeping skills and knowledge up to date, and enables your organization to become knowledge rich. Organizations had the mission, to understand that the best information and knowledge comes direct from the source, and to improve their ability to interact with that source of knowledge. Competitive success will be based less on how strategically physical and financial resources are allocated, and more on how strategically intellectual capital is managed, the real business asset how involve human capital, structural, technological, and external/internal (*clients/users*). In knowledge-based economy, modern and high tech organizations

must focus to acquiring new competencies through training and development, and to re-engineering business processes. We must build IT knowledge bases, because IT knowledge is realm with rules how impact productivity and growth, those who are knowledge deprived cannot compete. In view of these trends, and recognizing that knowledge has great potential value, some corporations have embarked on comprehensive knowledge management programs following the growing demand for new technology skills as cloud architect and big data expert but also more traditional skills such as IT architect, networking expert, security, help desk, etc. Seth Robinson from **CompTIA** said, *"It's important for people to have business savvy but also know how to communicate, [explaining] how the technical solution is going to drive the business forward, how to voice concerns about things like security that might typically be seen as something holding the business back. Soft skills are becoming important and a challenge for technical workers to pick up or for businesses to construct a technical function that has both the hard and soft skill"*.

The core of digital transformation is **Knowledge and Skills framework** (IT governance Framework, business architecture framework, strategic and Operations *Business Framework*, etc.). Design thinking provides a conceptual model to measure the *values*, *skills*, and *knowledge*, also help consumers to discover each areas of digital knowledge. For example, the IT organization probably has experts in technology innovation and acquisition, evaluating best solutions, designing and deploying new software technology. The real problem is bringing all actors together early in the process to help you making the best decisions, achieving your digital transformation goals, and understanding each reality (technology, business, customers). Furthermore, a detour into philosophy is necessary to examine the issue of design thinking, for Thomas Kuhn a paradigm is *"the practices that define a scientific discipline at certain point in time"*, He also postulated *"science progress by a mixture of elements contained within a paradigm"*. In order to be more competitive and making good decision, you need cross-functional teams with a good leadership, also you need strategic choice between the deductive or inductive research paradigms. Deductive approach start with hypotheses based on current knowledge on your business. Your experts decisively confirm or reject each hypothesis about the right product or process for your organization. In larger scale decision, a behavioral paradigm are required to develop problem-solving skills and analytic logic to determine the right decision for your digital transformation, particular methodologies may then be reviewed in the light of business or technological reality. By contrast, inductive approach ensure to explore the interaction strategies between technologies and consumers (**clients/users**), during a software development project for example. The fact, this approach permits to study the context of interactions and the influences on those interactions in the light of consumer's reality. The purpose of this approach is allowing the result to emerge from the heuristics perspective without a set of predetermined questions or hypotheses, which means experience-based techniques for problem solving without applying any structured methodology. Unlike deductive analysis, where the hypothesis is the center of decision, where the focus is to obtain a desired result, and where key topics are typically ignored. Inductive approach describes the actual effect of context on the decision. In other words, bring analogy in order to synthesis the situation and give insight about context rather than supporting the result. The structure of a model depends on specific knowledge about the decision making context. The conceptual model identify complex context surrounding environment in the situation space, before even the brainstorming sessions most associated with innovation or even more creativity, and make some options which can influence decision space. Its helps design thinking-based to understand the situation as a dynamic system of overlapping spaces *"Situation and Option Awareness"*, rather than a set of linear thinking process to move through.

The concept of paradigm may help CIO's to develop a digital framework, based on the cross-functional teams experiences, business demands, and customers expectations. That's means holistic thought, and conceptual model from strategy and planning, through service delivery and security, with new roles attributes for CIO:

- Governance: embracing digital competence → digital literacy → digital transformation, building digital services simpler, clearer and faster to use in digital channels, maximizing business value by realigning an IT portfolio of services with consumers experiences and business demands (values, costs, risks, compliance, etc.)
- Managing input and output: assuming business customers transition from the physical to the digital world also from programs, training, and workshops to knowledge transferred and behaviors changed, meeting business demands by delivering reliable solution, high-quality services through an unified, automated, optimized IT infrastructure, identifying processes and resources to support your migration to the new technology, also focusing on information security by minimizing risk and ensuring data integrity, availability, confidentiality, etc.
- Partner in Information Mgmt: assuming the responsibility for information management and the delivery of efficient, effective and secure information, developing information technology, policies and strategies, protecting assets and manage risks by monitoring and enforcing policy-based controls, managing identities and ensuring appropriate access, etc.
- Strategic Business Partner: understanding the Business demands, changing the dynamics of the business enterprise, transforming IT organizations into a business-focused organization, focusing on consumers experiences, and improving Skills "*hard and soft*" of IT Teams.
- Innovator-Creator of Business Solutions: making a top priority the development and management of organization intellectual capital, thinking between deductive and inductive approach, focusing how the new model can be creative, taking a risk on changing the technology in order to get to the producer box, etc.
- Broker of Technology Service: capitalizing on new technologies, ensuring the alignment of IT and business objectives, understanding of the technology requirements, such as networking, security, service-level agreements, compliance, getting services from anywhere and everywhere, etc.

We are talking about the importance of new model for 21st Century Information Technology, I emphasize the importance of the 3 Rs (Relationship, Resilience, and Reflection) as new learning model and key priorities to become successful as an individual and leader as well. Dr. Dan Siegel emphasis the role of the new 3 R's on the learning process with so many perspectives:

"Relationship: is a prerequisite for learning, which involves relationships between people and help to fully develop our brains"

"Resilience: is a protective mechanisms crucial for career success, a process of developing ability to look at the future with optimism, and to see failure as an opportunity."

"Reflection: is the ability to focus, process information, and exhibit self-control which is an important part to build executive function, and to understand how to perform and improve learning everywhere."

In my opinion, driving your digital transformation in 2015 with new perspectives is key word, whatever you share my vision or not, you must agree that you cannot doing what you did last year, you need to react to change with new paradigm and new knowledge.

"ipsa scientia potestas est" ('knowledge itself is power')
Francis Bacon

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If you have any demands, questions, feedbacks, comments or suggestions, please get in touch...