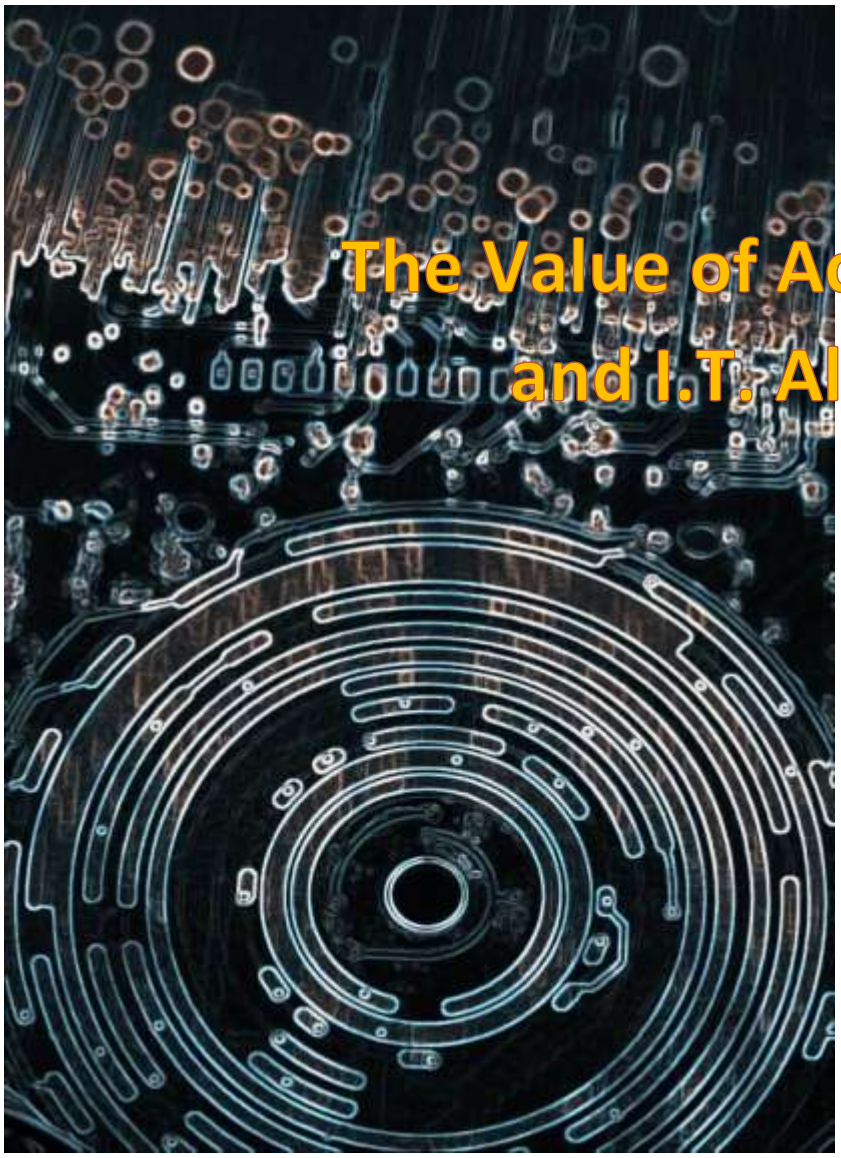


The Value of Active Business and I.T. Alignment

IMPESTRA
Strategy & Performance

Abstract

Business and IT alignment is more than a buzzword. Active alignment generates financial, operational and strategic value. A practical guide for harvesting the returns.

Business and IT alignment within the Enterprise have been a consistent topic for frustration, anger, missed opportunities and bad performance. In other cases, it has been a source of innovation, competitive differentiation and the building of economic value on the long term.

What makes one work and the other stumble is a complex system of correlations and dependencies. Strong alignment starts with a common understanding of what creates value for the overall organization; then "IT" no longer appears as a functional group or a cost center, but rather be multi-faceted. Each role that technology plays within the enterprise is unique and dedicated.

Business and IT alignment is the tag name for a network of technology functions and capabilities, interrelated with a number of distinct business units and processes. Each alignment is chartered with specific operational, business and strategic objectives and constraints.

Actively sharing a common vision gets a natural alignment that corporate initiatives can only dream of achieving. Executing to this vision requires a fresh set of metrics that would track progress and success in dimensions that are meaningful to the entire organization: operational performance and cost efficiency, business and market competitive performances and longer term strategic value.

A common vision translates into a common enterprise architecture that includes customer, process, security, infrastructure, application and data layers. The layered architecture model is often reduced to technical architecture and possibly process maps, leaving other layers and integration with a deficit of definition and attention. Hence, the composite value of the full architecture is rarely checked or pursued. The most recent standard of enterprise architecture (TOGAF 9.1) published by the Open Group in 2011 states their aim of "Boundaryless Information Flow™ achieved through global interoperability in a secure, reliable, and timely manner". Recent advances in technology have made the global interoperability a mandate for most industries and their customer base.

More than anything else, the alignment of business and IT organizations to these metrics through an integrated governance structure is a key tool for making changes happen. Such governance model should focus on measuring metrics related to the four key dimensions (costs, strategy, architecture and governance), leaving execution and operational monitoring to individual departments and units, where it belongs.

The cross-functional collaboration within an organization, in particular between its business, corporate and technology domains, is only the visible part of the inter-relationships. An enterprise is a whole system, and each component has a symbiotic co-dependency with the others. Discounting the business and customer imperatives, bashing the spending spree of IT infrastructure or ignoring the analytics needs of products and market specialists hurts everybody, including those who denied the needs.

Creating a common core understanding of what makes a business succeed, grow and improve initiates a cultural change which is necessary to break the inter-departmental barriers. Michael Hammer's words in the Reengineering Revolution: "We do what we believe". Sharing responsibilities for the outcomes, performances and improvements reduces redundancies and makes the entire enterprise more efficient.

The Multiple Facets of Information Technology

Information Technology is quoted daily, but the generic concept covers in fact a large number of roles that technology plays in an enterprise or corporation.

The primary and maybe oldest function is the management of the flow of information enabling the back-office operations to be executed fast and efficiently. Financial transactions, billing and invoicing, human resources management, supply chain and logistics and customer data have been the primary use of technology capabilities. A great benefit of IT was already the capacity to process large volumes of repeatable processes and transactions, at a fraction of the costs.

As automation and embedded technology permeated into the production and manufacturing of goods and services, new functions of technology were added, which included the integration of machines and robots into the production, in turn pushing for faster process cycles upstream and downstream.

Information has evolved into a true business asset and as market dynamics require faster responses from businesses, the power of technology helped marketing, sales and customer management department get more effective. This also created a whole new set of systems and solutions, since technology could also provide new capabilities such as automated responses or alerts to market trends or detailed and complex analytics.

Finally, the spread of technology widgets in every day's life made mobility and interoperability the new standards, created an entire new layer of interface and protocols, enabling continuous healthcare, mobile payments and Cloud based architectures.

Still, most companies maintain a single, monolithic IT department or function. Unless the CIO or CTO decided to structure the Technology Department in business aligned domains, the typical structure of IT remains based on the technology asset classes and their management, loosely based on technology architecture models. Expanding the model used in manufacturing, where production automation is managed separately from the rest of IT, each technology function should be a candidate for a stand-alone organization and its associated charter. This might require to establish a "Meta-Enterprise Architecture", but at least each key function would have a clear mandate and a crisp definition of the value it brings to the organization.

The development of innovation for a back-office IT primarily aims at optimizing its main activities, which include internal costs and processes, internal user experience, reducing errors and lowering the administrative costs. The technology function supporting marketers and product managers is providing research and analysis support including Big Data, programmatic capabilities and real time feedback mechanisms on launches and campaigns. Innovation in this space means new tools and capabilities to either better analyze the market or monitor launches; the performance improvements are measured in market share, time-to-market and product P&L performance.

Other technology "islands" could be listed, but these two already demonstrate the growing disparity of functions, mandates and value delivered to the organization. A consistent source of frustration between business and technology has been the difficult dialog between "Corporate IT" chartered to save cost and

enforce standards and security on one hand, and sales, marketing or business development units which see Technology as an enabler (or in this case, hinderer) of their business development functions.

Naming business leaders as CIOs or created overlapping mandates for corporate technology departments do not achieve great or lasting success in most cases. The fundamental flaw is a "one size fits all" mandate that does not allow for the multi-layered IT structure required by modern business.

For historical and fiduciary reasons, Technology functions have been routinely placed under the CFO or CAO umbrella. The reasoning includes a historical function of IT supporting Finance and Administration, and the chain of accountability for acquiring and managing assets which bear heavily on the capital expenditures and operating costs of a company. Projects and programs can also trigger the fiduciary flags when the risks attached to a single effort can exceed certain thresholds; since large company-wide technology projects can have a tremendous impact on operations or growth, and can carry a large investment of funds to be executed, even when IT is not under the CFO oversight, there is a direct and solid link to the financial authority.

Financial managers and leaders rarely have the knowledge or experience to structure a technology function based on its key internal stakeholders. They promote a technology model based on financial and risk drivers. Many CIOs are coming from the ranks, graduating from IT management and leadership positions before taking the overall responsibilities. Their experience, which created their opportunities for promotion all along, is likely based on the same pattern: is an IT organization based on the book value of assets and on fiduciary guidelines.

The main (sometimes the only) option for business leaders trying to succeed in their own domain is to consider outsourcing, purchasing solutions which include a full support package, or create a "shadow IT" in their own department.

What would happen if Technology and Business were indeed naturally and pro-actively aligned to help their company move to what Jim Collins called from "Good to Great"?

What is Business – IT Alignment?

Business and IT alignment starts with the congruence on strategic impulse and vision, looking in the same direction to achieve same or similar goals. This remains a stepping stone, as it can be difficult to team up with someone when they do not share the same mandate.

With a shared horizon, business and technology can establish common value drivers, especially around operations and the cost of doing business. Practically, the achievement of the vision should translate into the same definition of value for all involved functions of the enterprise.

Measuring progress along the way, achievement of milestones and the passing of the finish line are common as they derive from the same definition of goals and value. Still, embedding such metrics into the overall governance is key to ensure that they will be met.

Finally, the organization of the resources and capabilities (or enterprise architecture) can be built from these early blocks, aligning the means to the declared goals. The architecture includes multiple layers integrated, including security and resiliency, which enable the business to endure at least ordinary threats and obstacles.

The definition of IT being as multiple, overlapping functions, each of the above layers can be a series of correlated structures, where a business unit might be creating alignment with one or more "key IT functions". Preserving this clear separation between the key functions of technology prevents using the mandate from a function to define another one, which would dilute or distort the actual value to the enterprise.

The full picture of Business and Technology alignment is in fact a story of a complex weaving of co-dependent organizations, both inbound and outbound. A business function suffers without an IT function adequately chartered, while an IT function or department cannot succeed if they are obstacles to the success of the business activity.

Business and IT alignment is more than those functions communicating and understanding each other. Effective alignment means that both functions are aiming at consistent goals, an ultimate higher value to the organization as a whole. The congruence of efforts make the alignment, not declarations or sharing the same language (although it can help getting started).

A Common Vision of Value

Value is a term often used to describe the "worth" of something. It is often associated with a monetary equivalent, which helps quantify the worthiness of the object or intangible.

Costs illustrate the total financial amount expensed to acquire or create something, making the cost an instrument to measure the past. Value is the perceived financial amount that someone would set to acquire an existing asset, practically or virtually. Value is therefore an expression of potential, future financial realization.

In the same manner, a vision and a strategy are the horizon goal being set and the plan or roadmap to execute to this vision; the prize and the effort. Strategic execution implies a cost of doing, building or acquiring things, when the achievement of the vision aims to create a higher value, be it of equity or other metrics.

The measurement of costs and value are fundamentally the declaration of the expenses incurred for a given activity, and the perceived financial worthiness of the activity once completed. This is an important distinction, as one metric is factual and highly tangible, when the other is a potential that might or might not realize immediately. This drives separate mechanisms to report and substantiate the progress or success of business endeavors, such as operations, product or service launch, marketing plans and strategic execution for instance.

The overall governance of IT takes a new meaning now, with both quantitative and qualitative metrics reflecting the costs and value dimensions of technology. Improving technology value implies much more than the usual cost reduction at the same service level.

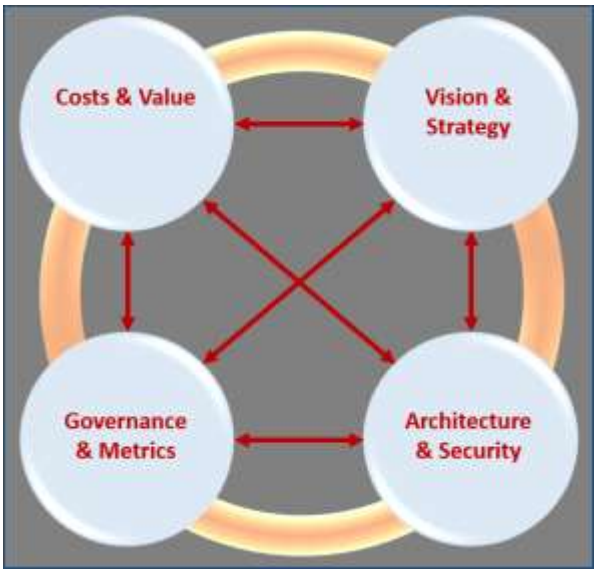
Effective technology value improvement can only be measured in business worthiness terms.

While IT as a core function within the enterprise remains chartered with delivering comparable services at an optimal cost, the business side of IT can deliver a much greater business worth through innovative solutions, competitive differentiation and cycle time improvement for instance.

Achieving the full business value of technology requires both business, corporate and technology leaders to rethink the role and charter of IT within the organization, as well as what they actually plan to do about it.

A model of interactions can help frame the analysis of the cross-dependencies between some of the core functions at play, in particular:

- Costs and Value recognition
- Vision and Strategy, including Long Range Planning
- Architecture(s) and Security, including Enterprise, Business, Process and technology architectures
- Governance and metrics, or how the relationships and guidance are provided to each constituent of the Enterprise to ensure the achievement of the strategic goals.



The interaction model is based on overlapping layers, which we are exploring below.

Two key statements to frame the discovery process are:

- The imperfect alignment between Business and IT is fundamentally linked to separate, sometimes antagonistic charters
- A governance structure needs to establish co-dependencies and shared goals, along with a common definition of costs and value at the enterprise level.

Shared Vision & Strategy

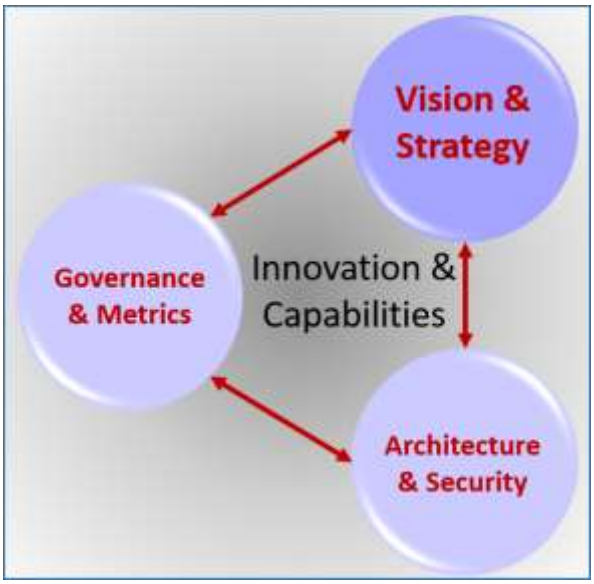
A business vision is like the description of an impressionist painting: details emerge from many small spots, and the image can be different when looking at a detail or at the overall painting. Most of the tactical and operational details of a vision are defined by those who are close to the action, within the outline sketched out by visionaries.

Most visionaries would have a hard time describing to their fullest extent how the grand idea translates into tactical decisions. The back and forth narrative refines and strengthen the vision, possibly alters it

slightly when details are not feasible or practical. Throw in technology components and the narrative includes a new dimension, which can support, alter or expand the strategic impulse.

A company doing business in the collection and processing of goods can set up a strategic vision of gaining market share while breaking into contiguous markets. One of these new segments is a geographic area where the company has no established presence. One idea would be to acquire a local bridgehead business to set foot into the segment and build from there. Field managers would provide substantiated comments on how to make it happen based on their knowledge and experience.

The IT department now sees a potential for more growth in the longer term future, where the same questions and issue will be raised. Moving the entire field operations solutions to a mobile, virtual architecture, using the corporate infrastructure as an anchor and backup, can bring the flexibility and agility required, while setting up the stage for future expansions at a lower cost and with faster setup time.



In return, the Vision evolves to a more aggressive expansion plan, now that the feasibility has been accelerated, involving a number of additional segments into the plan.

The end result is a greater business value of the Vision, thanks to the interactive exchanges between the stakeholders. An extra benefit is the congruence achieved through the refinement of the vision; there a few chances that IT will decide on solutions or upgrades which would be hindering the plan and cause frustration all around. The perception of IT value by the field operations would be of a partner in setting up a course for success, which in turn would create a more collegial, collaborative relationship between departments.

One a vision has been established, the next phase is to build the strategy to achieve it. Structured plan or roadmap, strategic execution encompasses all resources and milestones to achieve the vision, which in reality means its value. All long term plans adjust to market conditions, business landscape and other factors hinder an aspect or create a new opportunity. What makes a successful strategy is the capacity to absorb changes without losing sight of the ultimate value to be achieved.

Executing a strategy implies creating or altering an enterprise architecture, in order to generate the new or upgraded capabilities. These new capabilities are where the value will come from. The architecture of a strategy is the structured use of the resources, ensuring information exchange, compatibility, inter-operability, process continuity and a dependable execution framework. In some cases, innovative solutions can be necessary to create tools or structures that did not exist but will be required.

There is no downtime in the collaboration between business and IT while they are building and deploying the new capabilities. Even after they are in place, new ideas or improvements continue to increase the potential value of the solution.

The governance structure necessary to manage and guide what is likely a multi-year initiative is mainly guided by the vision set up initially, and the ultimate value statement attached to it. This independent role comes handy when issues arise between teams involved that need to be solved. It also provides a consistent guidance role, the lighthouse maintaining the fixed point coordinates when everything else is changing.

Reporting on joint efforts to achieve business or strategic value can easily be overwhelmed with data points, especially regarding the management of activities and tasks. While important to those in charge of the actual effort in progress, they represent mostly the cost part of the equation: what is being expensed to achieve the value.

Reporting on enterprise or strategic initiatives should primarily focus on the progress against the goals and the achievement of the value post-delivery. The investment part of the effort is mostly known and unless serious issues occur, would suffer limited variance. The value part of the effort, which is the delivery of artifacts or services that generate financial worthiness, is the main goal. The governance role mainly monitors the balance between the costs and the generation of value, as per the approved plan.

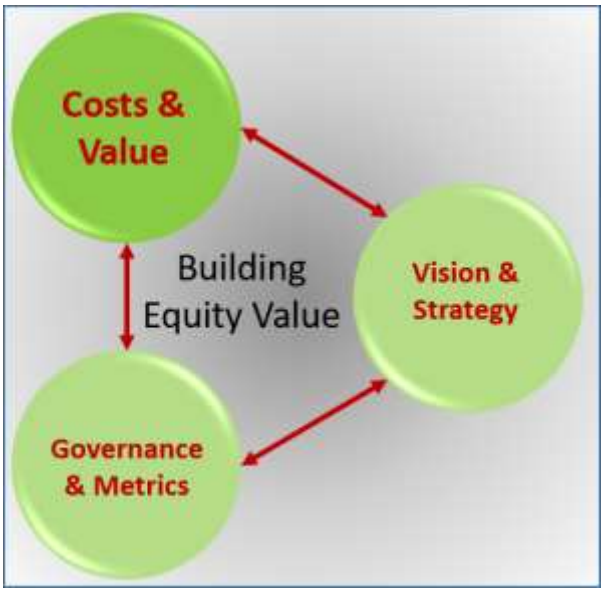
Many conversations between frustrated technology and business leaders stand on the false premise that strategic leaders care about the good management of the costs of the project. Sitting for hours in a meeting room to dissect the hours, days and other expenses incurred without a view of the value generated in return can be in their eyes an exercise in futility. Their goal is the value: the good administration of the costs to achieve it is not a concern, as long as variances are contained and the creation of worthy outcomes is on track.

Costs & Value

Costs are almost always associated with IT, as technology is a notorious big spender. The aggravating factor is that technology expenditures are usually presented as inevitable (required upgrade, no more support, regulatory) or as a meaningless choice (no more storage, freezing expansion, lowering network performances). Even if there is some truth to the statements, it reminds of the gate agents describing a plane being late for technical reasons and offering a choice between being delayed or crashing the aircraft and dying during the flight. No explanation would make such choice anything but a bullying technique to get rid of annoying customers.

The lack of knowledge of technology within the business community has been a continuous source of misunderstanding when discussing with technologists. This situation has often been amplified by the excessive use of jargon and acronyms, making neophytes resent the lack of communication effort.

If executing a strategy is the building of future financial worthiness, it can be considered as the generation of future equity value for the company, from either increased operating profits or revenue. Increased operating profits are coming from optimizing operations and reducing their costs. Increased revenue comes from organic or inorganic business growth, generating incremental income. Technology can play a role in both, but mostly contributes to one or the other at a time.



The discussion on new equipment, network upgrades or virtualizing should not be undertaken from the angle of technology assets, but driven by the business case of the investment: cost or value.

As the additional spend translates into additional revenue for the business, the substantiation of the case might both convince the business and gain contribution to the effort. Would the returns be costs savings, the interested parties might be operational and financial managers, who are able to appreciate the case made for improving operating margin.

Even regulatory mandates or risk avoidance can be measured in terms of cost savings (not paying the fine or incurring the impact) or income generation (enabling access to new markets, more dependable solution to customers).

Measuring the returns on technology investments are therefore primarily a definition of their key drivers: costs or value. Metrics to report and monitor on the benefits depend first on this categorization of the investment purpose. From there, the governance of the effort is framed by the expected value in return, enlightening choices and issue resolution.

Governing a portfolio of initiatives or a large strategic program through its intended value is like managing an organization by outcomes: only the end result really matters. The strongly biased approach sets the priority that every decision, choice or design will be assessed through its contribution to the final result, which is the value to be created.

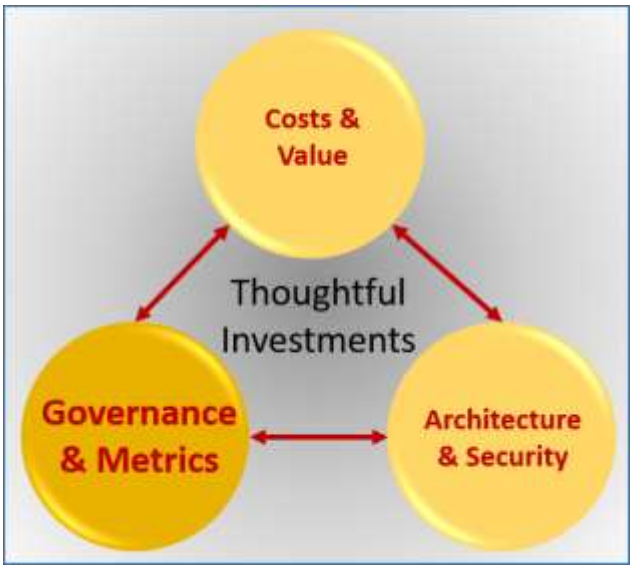
A good practice in tracking down the creation of outcomes out of a program or strategic plan is to record each nugget of return, and then validate the cause-effect linkage with the Goal or Vision. Many events or results might contribute to increase net earnings. But only those which can be tagged to the effort under way can claim their contribution as part of the initiative. Others might just be business as usual, other efforts under way, etc.

This recognition can be complex when multiple forces are at play simultaneously. Think about a multi-media advertising campaign promoting the sale of a consumer product. How to differentiate the impact of the billboard campaign when it happens in the same time as TV Spots and magazines inserts are being released? The response is the models that marketers are building, including the correlation of the compounding effect of the multiple vehicles.

Governance & Metrics

Modeling how the value will be realized, recording the generating events and their associated returns, and validating predictive models with hard feedback data can provide a fairly accurate view of the true benefits from an initiative. It matters because only the modeling will tell the true return and help prepare for the next efforts with a reasonable chance of meeting the goals.

Even if the cost side of the metrics is a well-defined discipline, the value of a technology investment or project in business terms remain mostly justified as an acceptable percentage of a total spend. This places technology improvement on a level comparable to a flu shot: the necessary pain to avoid bigger issues, but not an event to look forward to.



A strong governance can help clarify the actual value of the investment, in terms of pure business benefits. If the goal is to shave off operational costs and improve a cycle time, the net worthiness of the effort will translate into a reduction of costs for a comparable operating throughput, or an improvement of the operating margin. Cycle times can also translate into cost reductions, either directly with less resources required (assuming the net difference is a tangible saving), or as a potential for an increased throughput using the same resources.

The upgrade to a new system therefore is not a strong driver for the expense, unless it can be justified in terms of operating costs or cycle time. Without such justification, the cost of the upgrade would remain the flu-shot model, a painful requirement on the premises of a potential future benefit.

Value created through the deployment of a technology investment can be measured through the incremental net income, through a combination of direct gross transaction profit and increased volume of sales. The clarity of the model is important to validate incremental profit from growth as revenue generation often ignores the side aspects of managing products and services, creating partial views of the financial net value of the revenue generated. Maintenance, future upgrades, commercial discounts, freebies and other components of sales events can bear on the net worth of each transaction. Increasing the sales volume by 10 units, but at a net price below the break-even price generates market scale, not profits.

The role of a governance structure in establishing and validating the net results of investments and change efforts is fundamentally to be a gatekeeper for the approved business case, to provide guidance to the teams so the effort succeeds and to declare success upon the completion of the effort or deployment.

There is a constant back and forth between governance and metrics, taking new measurements as investments are under way. Some metrics reflect the effort and its potential variance against the Plan; other compare the dynamics of the effort under way to historical records.

If the track record of the organization has been a 30% negative variance against the plan, and the new project shows signs matching the historical execution profile, then the upcoming variance can be estimated at the same level. Unless specific corrective actions can be undertaken, the governing body will have to determine if the rationale for the business case and the ROI are still valid, or if it is necessary to augment the returns on the investment through other means. A cost increase could be triggering a larger deployment to offset the lower performance.

The Technology Leaders need to adjust their mindset and think in business terms of everything the IT department does or expenses. Even if the corporate policies mandate their administration and monitoring of the assets of the company, the ultimate goal for the acquisition and maintenance of those assets is to contribute to a business venture. This is always about the business…

Employees, customers and partners of the eco-system can certainly appreciate the comfort of a new application, and their experience should continue to be considered when designing a new solution. The bulk of a development effort however, should be devoted to maximizing the business value and return of the solution. Innovations fall into the same pattern, where their business value should be the primary scoring criterion. Tight collaboration and exchange between technology and business visionaries could lead to breakthrough ideas, when the same group in isolated think tanks might miss opportunities or take more time to mature them.

Business leaders and managers need also to educate themselves on the constraints and mandates of the technology managers. A change to the core systems could create a ripple effect of desirable and not so desirable impacts across the organization. The IT department cannot spend most of its budget for new projects on a single business units, leaving others stranded until the next budget cycle. The balance of support and investments between the internal constituencies of the enterprise is an imperative mandate for IT Departments.

The delicate art and science of IT Governance is to establish the fragile balance between the business needs and imperative, the mandate of the IT Department as well as many other considerations such as security, inter-operability of the architecture, obsolescence of technology or innovative advances of the industry and the competition. The metrics reflect the balance of these sometimes antagonistic needs, with measurements of performance, progress and achievements which can display multiple facets of the same event.

Product managers are looking at the adoption charts of their new release; operations managers consider the cost of executing and supporting the new business activities; financial managers monitor capital expenditures, budgets and forecasts.

Each function has its own narrative for the same event, which eventually should be reflected in the governance guidance and metrics.

An engaged Enterprise Architecture

Leaving to experts to decide if this is art, science or practice, the practical definition of architecture is to design and build viable structures. Applied to business, information technology or organizations, the structure must be able to work in a way that achieves the objectives of its mandate.

Information Technology has been permeating every aspect of business, management and life in general, mixing technology elements with other “native” architectures. The Yang side of this Ying is that business, with the help of technology and scale, can be found in every aspect of new technologies.

When mobile devices have become a standard for applications and communications, businesses are also pushing new capabilities and functions through the mobile devices. Is Big Data a marketing or a technology component? Is information security a concern for a bank or a differentiator for its customers?

An architecture includes a logical model of assets and flows of activity, along with the operating rules enabling the harmonious operation of the whole structure. The definition of the rules, exchanges and core functions of each component of the structure establishes a playbook that each element needs to follow in order to ensure an effective operation.

Architecture Layer	Definition
Business & Processes	Business model, strategy, governance, organization, key business processes and value creation
Data & Information	Physical and logical organization of data assets, sources and their management
Application	Individual software based solutions that are deployed, their interactions, dependencies and their relationships to the core business processes
Technology and Infrastructure	Software, hardware and virtual capabilities required to support the sustained and dependable operation of business, data and application services.

Based on TOGAF 9.1 by the Open Group

The Enterprise Architecture is the dynamic combination of a business structure, where all functions and correlations are described and categorized. The narrative of the enterprise architecture provides the blueprint for operating the structure. At the level of the enterprise, the information flow, infrastructure, processes, applications, customer interfaces and other layers of the architectural model are not seen as departments or organizations, but as functions and activities.

Restoring or facilitating the dialog between the various constituencies of the Enterprise can reset the internal relationships between departments, as well as foster the engagement of each unit towards making the whole succeed and perform. Enterprise architecture discussions can enhance the dialog between IT and Business, but also help improve the synergies between sales and marketing or R&D and Operations.

The building blocks of the enterprise architecture are the core functions of business units within the organization. Mapping them and defining the rules of engagement also provides a governance charter for the management, helping them sort out issues and priorities with the perspective of the “greater Good”.

The discussion on Enterprise Architecture provides continuous opportunities to debate on how best to execute the business vision and the strategy or respond to competitive innovation and market dynamics. Far from being a boring review of incomprehensible decisions at peer level, they should be an open dialog in layman’s terms of where and how the future equity value of the business is going to originate.

While discussions might be tainted with some jargon and difficulties to share some key concepts, they will rapidly evolve into an active engaged collaboration between the various components that make the business “raison d’etre”.

Governance is Key to Unleash the Value

Enterprise and IT Governance are in many ways undistinguishable, when looking at costs, activities, performances and investments related to technology. Each decision taken bears an impact, positive or negative on business units and departments.

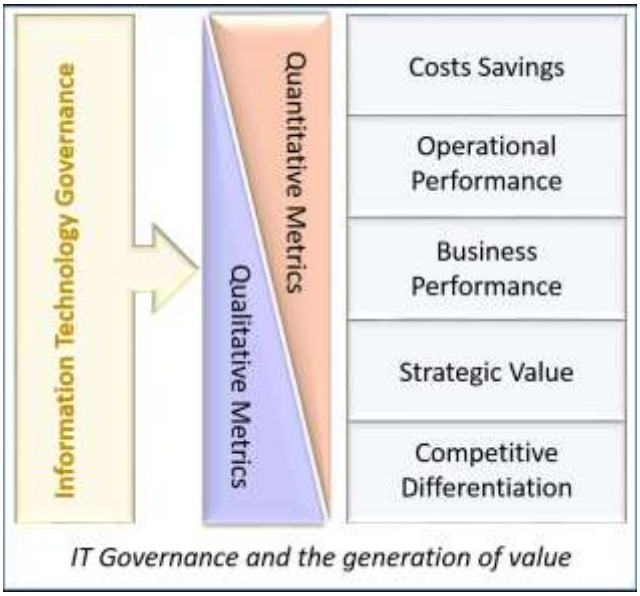
IT Department are often measured with a balance between their spending as a percentage of revenue and the satisfaction of the users, mostly internal. While this might carry some merits when considering

the back-office support by the IT department, this view ignores the most important contribution of technology to the overall performance and success of the entire organization.

A different model is needed to reflect the true value of technology and how to recognize it.

The two dimensions of the value brought by technology are the operational performance and the business performance.

Operational performance is not the operating performance (or fixed-assets turnover) which is a ratio of revenue on fixed assets (Property, Plants & Equipment), but the effective collaboration and alignment of business units in an organization to achieve performance targets such as cycle time, productivity, waste, compliance, quality or sustainability. Most indicators of operational performance are linked to the activity of the organization, and are primarily quantitative-based metrics.



IT Governance and the generation of value

The business performance encompasses many elements that drive the output of the business activity, which ultimately translate into revenue, cash flow, ROI and earnings. The performance indicators for the business are therefore primarily qualitative, as the volumetric dimension is used to create the final measure of performance for the stakeholders, such as EBITDA or Net Earnings. Strategic performance, operational performance and other business considerations are measured against those final metrics; strategic execution or competitive differentiation creating future equity value through increased revenue streams and the optimization of operational ratios.

The value of Business and IT alignment is not better dialog and positive feedback between departments (although a nice side benefit). Business and IT, or more precisely business units and IT business roles can provide higher financial value to the organization by working together to achieve common goals.

Dialog, collaboration, innovation and process improvements are all resulting from the common definition of the long term strategic goals, the shared measure and recognition of costs and value and the joint governance of architecture, investments and returns. A first step is the sharing of a comprehensive vision by all constituencies of the Enterprise, refining the narrative until all adhere to a path forward based on codependency and collaboration.