



Governance, value and technology

Information technology has moved from the organisational backroom of headbands, beards and sandals to occupying a position of prominence in supporting and often directing business strategy. As such it is subject to the public glare and scrutiny of an increasingly knowledgeable and assertive group of stakeholders.

Stakeholders form the organisation's conscience and cohabit the internal and external spaces of nearly all organisations. Stakeholders internal to the organisation are those who directly or indirectly utilise any of the organisation's systems, in particular information and related services provided by IT/IS systems, while those external to the organisation include customers, suppliers, shareholders, tax and regulatory bodies. These two groups of stakeholders expect different returns from the organisation and therefore require it to operate profitably, successfully and make every effort to minimise any threat that may jeopardise its current or future operations.

In order to ensure that all stakeholders' interests are acknowledged and serviced effectively, organisations must ensure that visible, articulated guidance and controls are in place. Governance provides the framework for this to be formalised and introduced within the organisation. This paper introduces a wider remit to the organisational conscience and presents governance in a more flexible form that extends the widely publicised concept and practice of corporate governance a broader range of day-to-day business operations. It places greater responsibility on the part of the organisation to respond to the stakeholder by examining such things as the governance of technology, contracts, schedules, architectures and other relevant content linked to the operations, responsibility and profitability of organisations. The approach outlined here is a principles-based, framework that is flexible and spans the organisational spectrum.

Governance has been shown to add a premium on shareholder value by a number of studies (see *References*). This paper shows that governance can and must be extended into many areas of the organisations that would normally not be included under its remit.

Broadly speaking, the tenets upon which governance is based are two-fold – *value creation* - ensuring that the organisation sustains and extends its strategies and objectives through optimising all resource usage and *risk management* - by ensuring that a clear understanding of the organisations' appetite and capacity for risk absorption and transparency (through size, economic capacity and attitude) and that contingencies are life-cycle managed. The organisational environment must accommodate an articulated view of these such that all activities can be measured, audited and fed back into ongoing operations.

This paper suggests that introducing the notion of technology governance is consistent with the premises of governance outlined above - particularly as it is a contributor to the success of enterprise governance [see sidebar *Governance Umbrella*] by assuring efficient and effective measurable improvements in all processes that support business operations in an environment that that is undergoing accelerated change. Technology is defined here to be any process, action, machine, automation, information technology, combination of resources or otherwise that can be employed by an organisation to assist it in meeting its business, operational or financial objectives.

Governance Umbrella?

*Enterprise governance =
corporate governance +
technology governance*

The spread of technology to nearly every part of the organisation is usually a challenge for those responsible for doing and using it. Taking this and expressing technology as an opportunity allows us to align it with organisational strategy as a primary mechanism for leveraging value. Great words, but what does this mean? Basically this – information is increasingly being recognised as a corporate asset, i.e. something that the organisation owns or has access to that has a monetary value or can be used to create value for the organisation. On this subject we would not sleep easy were we to omit mentioning the economics of intangibles (the subject of another paper in this series) predicated on (i) information and (ii) the allied supporting technology that makes this branch of asset management possible. Short of discussing imperfect markets, high fixed costs and increasing returns with regard to information and information value, we can however point to the requirements for a well governed technology environment within the organisation to ensure that value is created and risks mitigated.

What is technology governance, and what does it govern?

Firstly, technology governance refers to the information and processes that are used to guide the procurement, development, deployment and usage of an organisation's technology resources, information resources and processes in support of its strategic objectives. While it is necessary that these are controlled and managed, the position outlined in this paper promotes emergent thinking in the industry that suggests that technology governance plays a guiding and facilitating role rather than a controlling and restrictive one.

This paper introduces technology governance in its widest context that includes:

- A set of integrated organisational processes (see below – *compliance, dispensation, policy management* etc.) that ensure that the basic principles of governance are adhered to and used to the organisation's advantage
- Identifiable user communities within and external to the organisation that influence and are empowered to make decisions
- All stakeholders involved in and affected by the governance of technology
- Underlying technology support for all governance processes and their availability, access, distribution and consumption within the organisation.

Secondly, technology governance is concerned with the effective and efficient guidance of the areas outlined in *Figure 1*. These areas must be underpinned by an active repository-based environment if the benefits described below are to be realised in full. The repository promotes and supports the decision-making, audit, and management capabilities by reducing the time and geographic limitations of the organisation.

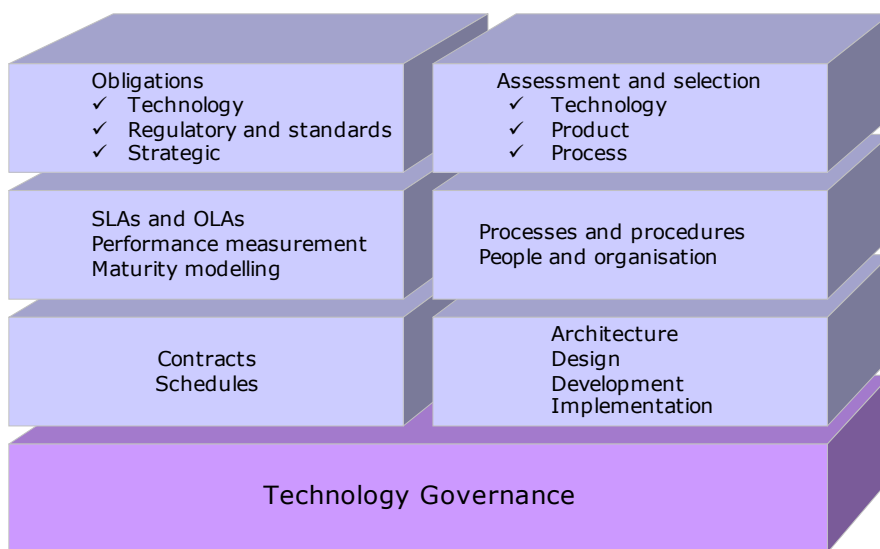


Figure 1. Technology Governance Components

These major areas are driven by requirements from *within* the organisation, e.g. standards, designs, objectives and strategy and also from *outside* the organisation e.g. regulatory, legislative, legal and standards bodies. Effective technology governance will ensure that each of these is managed to meet organisational objectives but also in such a manner that they can be used to direct much of the effort expended in the organisation to create value.

Good [technology] governance *is* best practice. As such it is also responsible for promoting and integrating technology best practice with the organisation's information and other systems to support its business objectives.

Why now?

Why then is technology governance becoming important, visible and popular? We suggest that it always *has* been, given that it embodies best practice. The recent realignment in business such as the legislating of FRS17, tightening up on GAAP and ASB directives, recognition of King II, speedy legislation of Sarbanes-Oxley and introduction of Basle II - not to mention Enron, Tyco, LeisureNet, Worldcom and others, have led to the widespread recognition (and in some quarters fear!) that disclosure must be unbiased, accurate and available. This is where the acceptance and implementation of technology governance is a winner – all assets, changes, policy management and performance measurement in the technology space must become articulated, visible and managed to support the competitive advantage and regulatory imperatives.

The governance of technology is becoming more important as business becomes more reliant on information technology. This is a key capability, requirement and resource for most organisations because of the pervasiveness of technology across the organisational spectrum. Studies have shown that many organisations have a balance in favour of intangibles rather than tangibles that require management. Given that most of these are informational and digital assets it is evident that information technology is becoming more important. This also highlights dependencies on not only the information itself but also the processes, systems and structures that create, deliver and consume them. As the shift to increasing value through intangibles increases in many industry sectors, so we must consider risk management as key to understanding and to moderating new challenges, threats and opportunities.

If organisations are increasingly dependent on information technology for their operations and profitability, then correspondingly their reputation, brand and ultimately their value are also dependent on that same information and the supporting technology. Hence risk management must be pivotal to the effective governance of technology – see sidebar on risk. Furthermore, risk management must be taken seriously because many areas of influence fall outside the control of the organisation. For example, in the emerging business landscape of interconnectedness we rely on our ability to share, send and assimilate information from

***Risk** is probabilistic, symmetrical and involves change. Risk may involve a favourable outcome, but either way risk is dependent on an uncertain future which may or may not be under our control. One thing we can be sure of however, is that it will involve some change and it is destructive change in the technology space that must be mitigated against and managed if we are to manage our organisation's future*

more varied sources than ever before and have to ensure that we can communicate effectively or lose out! In this 'wired/wireless' environment it is necessary to collect, build and maintain the digital and information assets required to sustain and enhance our business. Amidst all of this we need to recognise the potential for technology to change our organisations as well as the business environment, leading to an evolutionary approach to developing business practices, creating new opportunities and reducing costs through the consumption of commodity services. All this because of a swing from the neo-classical view of critical resource endowments of land, labour and capital to a constantly changing business landscape that is predicated on technology, brands, global financial markets and information value and velocity. The resulting environment is one in which time and geographic boundaries are becoming increasingly porous and one that is becoming ever more amenable to the global diffusion of standards, regulatory and other controls.

Principles

From this brief excursion into the technology governance space, can we discern or expect to find any guiding principles? And what do we expect to see in a governed environment?

Firstly the *principles* – these should be simple yet effective and capable of directing the effort required to govern technology. At a minimum these best practice principles will include *guidance* – governing technology should be proactive and facilitative, not overt and controlling. While currently the 'big audit' and governance might be uttered in the same breath, this paper promotes the governance of technology as one that is innovative and forward-looking.

All authority structures and decision-making functions should be devolved as far as possible to provide an *empowered* approach with local autonomy but facilitated by central

ownership. This allows decisions to be made where they are most effective without requiring hierarchical clutter or bureaucratised time-wasting. Implementation of the model defined in this paper will provide a reusable model of governance processes that is equally effective in single projects through to multidivisional organisations. Alongside this is the principle of *people-centred authority* – committees are out, identifiable, responsible people with the power to act, decide and do are in. Supporting this principle is another in which *auditable activities with clear responsibility* are introduced for rigour, accountability and to keep all forms of auditor and regulator appeased.

The final three principles target the automated environment necessary to support the governance activities. An *active* environment in which all policies, regulations, standards, contracts, process and organisational information is managed in real-time, is sensitive to organisational requirements, its structures, regulatory requirements, processes and staff. For this to be effective the governance environment should be based on an integrated set of reusable governance activities forming a *collaborative* and *communicable*

model that is configurable depending on the content being governed or the area of the organisation in which it is being used. *Accountability* is vital for governance to be visible and apportioned at board level - especially as it is promoted for its ability to protect and add shareholder value and its responsibility in many areas to leverage opportunity, direction and risk management.

Repository

- *A managed environment with controlled access to versionable, configurable models representing the artefacts under governance and the relationships between them*
- *Ensures support for the life cycle stages and communication of all artefacts that are relevant to business and regulatory change*
- *An integrative function that manages multiple toolsets, models and methods in a flexible, extensible manner that is tolerant of change*
- *Aligns with the organisation's structure, culture and semantics*

Framework

Having outlined the principles we now turn to the 'the framework' – what it is, why we need it and how to go about establishing one. To ensure that governance (in all its forms) is implemented and supported correctly we need a framework to describe all the components. *Figure 2* outlines the framework necessary for success.

Governance environment

A managed environment that consists of all the processes required to ensure that policy management, compliance, dispensations and technology and product selection are effective. It also includes the management of the repository environment [see 'Repository' sidebar] and all the training, operational and technical issues required to manage the physical delivery environment that underpins technology governance. As such we include here the issues of integration with organisational and development processes, integration existing systems and toolsets etc.

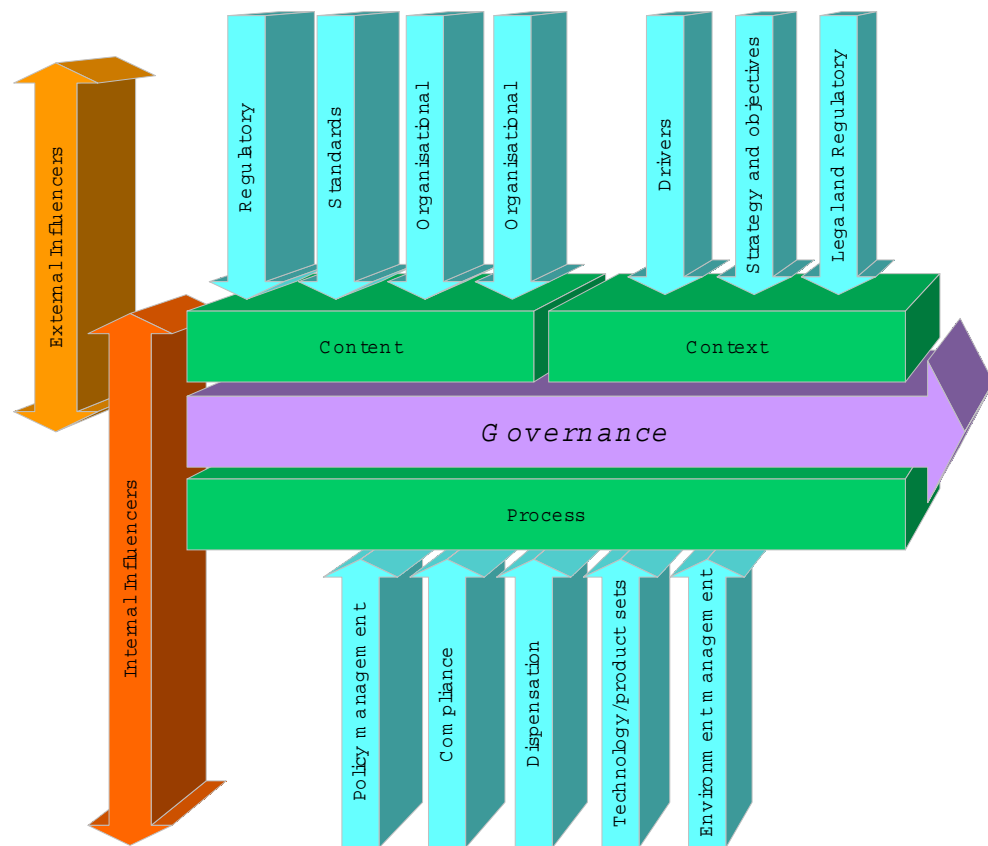


Figure 2. Technology Governance Framework

The key feature of this framework is that it encompasses *content*, *context* and *process*. Experience shows that organisations will have all three, but rarely are all three managed within an integrated, secure, automated and accessible environment. Achieving this requires either superhuman effort with dedicated runners and endless paper chases or, alternatively, a repository-based governance environment that manages all three.

The first major component of the governance framework is *content* - this includes all artefacts that must be governed those against which to govern. Typical content is organisation-specific information: rules, standards, regulations, contracts, schedules, SLAs, OLAs etc. This is a key area of the framework and must be considered carefully within the governance environment especially when meeting the *active* and *collaborative* principle – see sidebar on *content agnosticism* for an insight into our position on models – the next generation. All content is managed through the second component - *processes* - which includes policy management, compliance, dispensation, approved set management (i.e. technology, product and services management, assessment and selection) and finally *environment management* (repository, access, communication,

Content agnostic models are those that are tolerant to the change of subject matter. We believe that content agnostic models leverage reuse, allow the organisation to respond quickly to change in the business and regulatory environments, and promote articulated and separate understanding of the knowledge and content required to populate each model

training and accreditation etc.). Lastly, the *context* is established by the external and internal climates of the organisation including the relevant industry sector, political, legislative, legal and regulatory obligations. Additionally we must also consider (a) the organisation's strategy and objectives, constraints and controls and (b) how these are institutionalised, adopted and implemented, (c) the organisation's dominant culture and value sets etc. in terms of each providing valuable input to how governance will be accepted and utilised for not only regulatory but competitive advantage.

The above leads us to an approach to governance that requires an implementation environment that must embrace at least *automation* – the supporting processes must be automated to span organisational boundaries, be audited and only allow authorised access where required. It should also be *simple* – complicated processes with convoluted dependencies are out, simplified, easy to understand, easy to use processes are in – these have been found to be more effective and can carry just as much informational value. Furthermore the approach must be *informative* – access to the right information at the right time. Thus *communication* features strongly here – the right information to the right people in the right form which leads us to a view that ensures decision making can be made where the decisions are required and not lost in the woolly mittens of organisational hierarchy. Accordingly, we need an effective *escalation and response capability* to support this. These features highlight a best practice approach that is complemented by the organisation's requirements and organisational structures.

Repository Support

Why do we need a repository-based environment again? To support all the artefacts and processes involved in governing multiple areas of responsibility ... or more prosaically - all governance processes should be

underpinned by a logically centralised repository that is visible to all utilising these processes. We expect that the information management provided by this repository will accurately reflect the information requirements of the governance processes and provide

both *feedback* and *feedforward* capabilities. Feedback is used to ascertain the match between requirements and activities while feedforward is used to identify scenarios, options and impending (legislative, technical, business or otherwise) requirements or changes that must be satisfied in order to maintain viable business, development and legal trajectories.

Repository environment

- *Federation of a logically centralised, collaborating set of repositories and toolsets.*
- *Aligns with the organisation's structure, culture and semantics*

This document suggests that a repository environment be considered to provide these capabilities. This is unlikely to be a single product, but a set of integrated technologies.

Finally

To wrap up then ... the objectives of (technology) governance activities are to understand the issues and the strategic importance of IT and its related governance practices and to ensure that the enterprise can sustain its operations in support of organisational strategy. Thus, technology governance practices establish a solid basis for meeting the expectations for information technology and ensure that the accompanying risks are managed and mitigated.

This paper has argued that the governance of technology is not only a good thing, but that it is both desirable and necessary in today's changing business environment. We have shown that it augments corporate governance and as such supports increased shareholder value. The requirements for good management, regulatory compliance and performance measurement are obvious, but it is the approach outlined above that highlights yet another way for organisations to leverage their information assets.

The approach taken here has been pragmatic – one that accommodates all industry sectors while remaining sensitive to the diversity of organisational structure and culture. This we have attempted to show through positioning technology governance as a guiding and proactive discipline and not one that is overt, controlling and restrictive.

This paper has skimmed the surface of technology governance and has left room for further discussion regarding the relationships within and between organisations, putting a value on technology governance, industry-specifics, ensuring that the governance of technology is effective through a clearly articulated and implementable strategy, the characteristics of governance (discipline, transparency, independence, accountability, responsibility, fairness and more recently social responsibility) and lastly that its operations can be effectively monitored on an ongoing basis to continually improve the organisation's information asset management.

This pragmatic approach to the governance of technology is predicated on a simple dictum – *strategy without implementation is no strategy at all!*

Consider:

- *People - who use or have a responsibility for maintaining, implementing and establishing the local 'face' of governance.*
- *Working practice - architecture of the proposed governance processes, compliance procedures and approved product sets and how these might be integrated with existing and new work processes, development methodologies, reporting requirements etc.*
- *Legal and constitutional requirements.*
- *Financial requirements and obligations.*
- *Organisational structure – structures for the development and delivery of the governance processes, reporting and management structures.*
- *Information - requiring consistent format, content and access within the organisation and also to external standards and auditing bodies.*
- *Repository environment – the supporting systems that are used to manage, maintain and publish the processes, guidelines, metrics, compliance etc.*

- 1 Coombes, P. & Watson, M. (1996), *Three Surveys on Corporate Governance*, [Online], Available: http://www.mckinseyquarterly.com/ar_g.asp?ar=965 [2001, December].
- 2 Felton, R., Hudnut, A. & van Heeckeren, J. (1996), *Putting a Value on Board Governance*, [Online], Available: http://www.mckinseyquarterly.com/ar_g.asp?ar=191 [2001, December].
- 3 Hoschka, T. (2002) *A market for the well governed*, [Online], Available: http://www.mckinseyquarterly.com/ar_g.asp?ar=1215 [2002, September].
- 4 Simmonds, A. (2002), *Information Technology Governance - A Model for Enablement and Advantage*, (Unpublished MBA Dissertation)