Synopsis: Government CIOs, especially those with cross-jurisdiction responsibilities, have amongst the most demanding challenges of all executives – in both the private and public sectors. They work in complex environments with multiple stakeholders, often with poor role clarity and an uncertain remit. In many instances, governance, especially IT governance, is not designed to achieve the desirable behaviors sought. But effective governance is a key contributor to successful outcomes, such as innovative services, or greater efficiencies. This is especially the case for major electronically-enabled initiatives. Good governance does not just happen and transformation does not happen without good governance. It needs to be purposefully designed and transparent to nurture necessary trust. This session will focus on the key success factors for effective governance for government, and draw on recent global research completed between MIT Sloan School’s Center for Information Systems Research (CISR) and Gartner’s Executive Programs. The implications for government CIOs will be put in the context of Gartner’s new research work on six CIO imperatives.


What is IT governance and why is it critical?

*IT governance should be thoughtfully designed to encourage desirable enterprise behaviors. But too often, business and IT governance just happen.*

Enterprises achieving above average returns from IT investments deal with the increased complexity by clarifying who is able to make critical decisions and who is accountable for them. That is, they have thoughtfully designed their IT governance, rather than focusing only on how IT is managed.
IT governance specifies the decision rights and accountability framework to encourage desirable behavior in the use of IT.

It is not about IT management and the detail of particular IT decisions and their implementation, rather about the arrangements for who makes critical decisions and who is accountable for them. IT governance applies principles similar to financial governance to IT, such as who is authorized to commit the enterprise to a contract or authorize a payment.

But both business and IT governance are poorly understood. IT governance just happens in many enterprises. IT governance is not actively designed to achieve business objectives and desirable behaviors. Defining the desirable behaviors and harmonizing IT governance with business objectives takes time, effort and a clear focus. Instead, enterprises tend to have a number of mechanisms for specific domains, such as investments and service level agreements. But these are not coordinated and clearly connected to business performance outcomes. There are no established ways to assess governance and to identify what combination of IT governance arrangements suits what type of enterprises.

Action item: Business and IT executives need to take a thoughtful and deliberate approach to IT governance, understanding that its purpose is to encourage desirable behaviors in the use of IT.

Much greater clarity is required in the components of IT governance and in understanding how they are effective.

Understanding effective IT governance requires understanding its components, how they can be represented and what makes for effective IT governance.

While there is considerable conjecture about what good governance should look like, most of this is based on anecdotal evidence. To bridge that gap, Gartner EXP (Executive Programs) worked with the MIT Sloan Center for Information Systems Research (CISR) in a major research study.

The research base for this presentation is from an MIT Sloan Center for Information Systems Research (CISR) project led by Dr. Peter Weill, director of CISR, with input from Gartner EXP CIO members, led by Dr. Marianne Broadbent. Gartner organized and facilitated data collection and case study development with Gartner EXP members.

The enterprises were large and complex with demanding business environments and IT investments. On average, they had eight different business units, spent 8% of expenses annually on IT across their enterprise, and employed 800 full time IT professionals, of whom 250 reported to the office of the CIO. Their strategic objectives required both high synergy and high autonomy.

Core team members included Chris Foglia and Susie Lee (MIT Sloan) and Chuck Tucker (Gartner). The research was made possible by the support of CISR sponsors and in particular CISR patron Gartner.

Results will be published in the January 2003 Gartner EXP Premier Report, Creating Effective IT Governance, by Peter Weill and Marianne Broadbent.
What are the components of top level IT governance?

*Effective IT governance arrangements thoughtfully and purposefully combine decision making about major IT domains, by the right group of people, using appropriate mechanisms.*

Governance processes involve decisions about major IT domains, that is, those areas, such as IT Investment, IT principles or maxims. They balance decision rights between multiple constituencies, such as ‘C’ level executives (including the CIO), business unit leaders and IT executives. Their purpose is to encourage desirable behavior so the enterprise achieves its goals. IT governance is formed and enacted by multiple mechanisms - formal mechanisms, such as the Executive committee and the IT council, and informal mechanisms, such as talking with colleagues.

IT governance is going through a time of considerable change. Research from the MIT Sloan/Gartner EXP study shows that governance is dynamic, with enterprises making regular changes.

**IT governance is about clarifying the decision and input rights for five major IT domains.**

IT governance involves decisions about five major IT domains:

1) **IT principles (or maxims)** are high level statements about how IT will be used to create business value. They should be informed by the enterprise business maxims. For example J&J’s business maxim of ‘Develop partnerships with customers on a worldwide basis’ leads to several IT principles or maxims, including ‘Customer service reps must have ready access to a complete file of each customer’s relationship with the firm’ and ‘Data must be accessible through common systems to facilitate aggregation.’

2) **IT infrastructure strategies** describes the approach to building shared and standard IT services across the enterprise. For example, implementing the customer profiling approach requires the development and management of some shared and standard applications across the enterprise.

3) **IT architecture** is about the set of technical choices that guide the enterprise in satisfying business needs. In case of J&J, this means development of some agreed components of data architecture so that customer information can be meaningfully shared, together with selected standards to support the agreed architectural approach.

4) **Business Applications Needs** refers to applications that need to be acquired or built.

5) **IT investment and prioritization** covers the whole process of IT investment, including where they should be focused and the procedures for progressing initiatives, their justification, approval and accountability.

*Action item: Articulate and clarify the five major IT domains which provide the foundation and guidance for IT-enablement across the enterprise.*
Corporate governance and the language of information politics are useful lenses for depicting the major players and approaches in enterprise IT governance.

IT governance defines who has input and who makes the decisions. There are six styles of corporate governance and information politics:

1) **Business monarchy** where the executive leadership has decision rights. These are often exercised through an executive committee or IT Council comprising a combination of business and IT executives.

2) **IT monarchy** where IT executives have the decision rights. These are often exercised through an IT Leadership Council or CIO office.

3) **Feudal** where business unit leaders or their delegates have the decision rights and authority is localized. This style is found in enterprises with relatively autonomous business units and can be useful in delivering local responsiveness.

4) **Federal** where governance rights are shared by a combination of executives, business leaders and possibly process owners. This style is often used for inputs to decisions rather than the group which actually takes the decisions.

5) **Duopoly** where rights are shared by IT executives and other business or process leaders.

6) **Anarchy** where individual process owners or end users have decision rights and there are usually no formal mechanisms for exercising rights. Decisions are made ad-hoc and locally.

Different styles can be used for each of the four IT domains.

**Action item:** Use the lens of corporate governance and information politics to depict key governance styles and the locus of decision rights.

**Enterprises use multiple mechanisms to help implement their IT governance arrangements.**

Governance mechanisms are the vehicles used to implement different governance styles. They might be specific to one IT domain or can span multiple domains.

The **Executive Committee** itself often constitutes a mechanism in that major decisions about IT-enabling the enterprise are taken at that or Board level. This encourages a holistic view, but unless there is top level IT input, there is the risk that the decisions might not be well informed.

**IT Councils** often report in to the executive committee and contain overlapping memberships. Such councils can provide a focused environment to consider several levels of policies and investments. The very large items can then go to the executive committee with informed recommendations.

**IT Leadership Councils** are particularly important for large multi-business enterprises where there is a mix of responsibilities for infrastructure services, some enterprise-wide and others at business-unit level. **Architecture Committees** can involve both business and IT management in defining the architectural guidelines. Decisions about specific technologies recommended are then the province of the IT organization.
Business/IT Relationship Managers are prevalent in many enterprises but with a variety of names (e.g., account managers, business technology managers, business information managers). They play a critical role on a daily basis in understanding how the business operates and in interacting with their business peers. SLAs and Chargeback bring a level of professionalism and discipline into supply and demand.

*Action item: Understand the different mechanisms that can be used to implement effective IT governance.*

*Evidence to date shows that there are typical patterns to IT governance input and decision rights. The federal style dominates, with IT making infrastructure and architecture decisions.*

Enterprises have different governance styles for different IT domains, but federal dominates. The red colored cells show the typical patterns in enterprises studied and the pink two variations of that. The typical enterprise has federal inputs and decision rights except for the more traditionally “technical” decisions of infrastructure and architecture.

1) **IT principles** *(or maxims)* decision rights were held by federal groupings with business monarchy holding decision rights for one quarter of enterprises.

2) **IT infrastructure strategies** decision rights were strongly held by IT monarchies with strong input from other parts of the enterprise.

3) **IT architecture** decision rights were strongly held by IT monarchies with strong input from other parts of the enterprise.

4) **Business Application Needs** decision rights were held by federal groupings.

5) **IT investment and prioritization** decision rights were held by federal groupings with business monarchy holding decision rights for over one quarter of enterprises.

The governance pattern for typical enterprises reflects the evolution of IT in many organizations.

*Action item: Assess how you compare to the typical enterprise and identify reasons for differences.*

**How can enterprise IT governance patterns be represented?**

The “Governance Arrangement Matrix” can be used to depict how governance styles, IT domains and governance mechanisms.

The goal of this government enforcement agency (GEA) is operational excellence, with a strong focus on streamlining and improving processes. In their IT governance, GEA differs from the typical pattern in two ways: It has only IT monarchy input to IT architecture and takes a business monarchy approach to IT investment decisions.
Four levels of planning are based on the principle that “people must have the information to do their job wherever they are.” These levels include: tactical (3-18 months), strategic (18-24 months) and speculative (to deal with new technologies such as face scanning). Strategic statements are also embodied in a new structured and transparent process for IT investment decisions.

IMSG is one of more than 10 strategic committees and reports to the Management Board or the top-level Performance Review or Resource Allocation committee, depending on the issue. The IMSG decides what funded projects will go on the list to be approved, as well as how to start or stop projects, how to fund new work and how to fund future projects. Each proposal must be linked to specific strategies and have a business sponsor, usually the business process owner.

**When and where are different types of IT governance arrangements effective?**

*Enterprises with the most common pattern have higher governance performance than those with the second most common pattern.*

IT governance performance was assessed by measuring its influence on four outcomes: cost effective use of IT; effective use of IT for asset utilization; effective use of IT for growth; effective use of IT for business flexibility. These outcomes were weighted according to their importance to each enterprise. On a scale of 20-100 (minimum to maximum), the average score was 69%. Seventeen percent of enterprises scored above 80%.

Enterprises need differentiation in the distribution of decision rights. The most common pattern (9.3% of respondents), which mixes IT monarchy and federal decision rights, had an average governance performance score of 75%, six points above the 69% average. The second most common pattern (5.1% of respondents) had federal decision rights for all IT domains. This pattern had an average governance performance score of 61%, eight points below the average. There were more “not-for-profit” enterprises with the ‘all Federal’ pattern than there were “for-profit” enterprises.

Governance performance is higher in “for-profit” enterprises when compared to “not-for-profit” enterprises. “For-profit” enterprises have variation in their decision styles: double the IT monarchies for IT Principles, and double the Duopolies for Business Application Needs.

Higher governance performance also correlated with federal input for both IT Principles and Business Application Needs. Lower governance performance correlated with IT Monarchy decision rights for IT Principles, Feudal decision rights for Business Application Needs and Duopoly input for IT Infrastructure Strategies and Business Application Needs.

*High governance performance enterprises have both business strategies and IT investments strategies which were more focused and differentiated.*

Enterprises with higher governance performance have more focused strategies. They clearly differentiated between the three value disciplines - customer intimacy, product/service innovation or operational excellence - and were not trying to optimize on all three of these. On average, these enterprises had greater differentiation between different objectives for their IT
investment. They were not expecting IT investments to excel in delivering on multiple objectives. Rather they had specific focus on a smaller number of objectives for their IT investment - whether it was lowering cost, supporting new ways of doing business, greater flexibility or facilitating customer communication.

Senior business leaders were more heavily involved in IT governance and there was a higher level of impact from the CEO, COO, business unit leaders, business unit CIOs and the CFO. More managers in leadership positions could accurately describe governance arrangements and there were fewer changes in IT governance, year to year.

Exception processes functioned more effectively in enterprises with higher governance performance. They were seen as more transparent and fair and there were fewer non-sanctioned exceptions.

**Enterprises need to carefully monitor the nature and effectiveness of their IT governance mechanisms.**

The governance mechanisms used by high governance performers are ranked as much more effective than those in the lower performing group.

The top three mechanisms in terms of impact were heavily focused on the business-IT relationship. **Executive committees** (including business and technology executives) had the most positive impact followed by **Formal tracking of the business value of IT** and **Business/IT relationship managers**. Mechanisms around the IT organization itself were still effective, but less so generally than real interlocking of business and technology executives and managers, plus the discipline of tracking IT’s business value.

Two mechanisms in particular were seen as not effective by high governance performance respondents: **Chargeback arrangements** and **Architecture committees**. The message here is that it is very difficult to implement these mechanisms effectively. Unless you are convinced you can do them well, it is best not to put too much reliance on them as IT governance mechanisms.

**Action item: Ensure that IT governance mechanisms focus on the interlinking of business and IT and the discipline of tracking IT’s business value, projects and resources.**

**How can you harmonize your IT governance arrangements with your enterprise goals?**

**Enterprises need to map their IT governance to identify how that governance is encouraging desirable behaviors and how it links to performance metrics.**

Effective governance requires the two types of congruence: harmonizing the ‘what’ of governance (red arrows) and harmonizing the ‘how’ (green arrows).

The ‘**what**’ of governance includes **enterprise goals, IT governance style and performance measures**. **Enterprise goals** can be expressed as **financial drivers and business maxims** (Broadbent and Weill, 1997).
IT governance style is about which of the six governance styles – Business Monarchy, IT Monarchy, Feudal, Federal, Duopoly, Anarchy - are in place for the decision rights of each of the five IT domains - IT Principles, IT Infrastructure Strategies, IT Architecture, Business Application Needs, and IT Investment Prioritization.

Performance goals are the targets and time frames for delivery of the enterprise goals.

The ‘how’ of governance includes desirable IT behaviors flowing from enterprise goals, the IT governance mechanisms in place, and IT metrics and accountabilities.

Action item: Map enterprise IT governance so that the ‘trail of evidence’ between enterprise goals, desirable behaviors, IT governance arrangements, and performance measures is transparent.

The “Harmony ‘What-How’ Framework” depicts how enterprise goals, governance styles and performance measures are synchronized, and how goals are linked to behaviors, styles are matched with mechanisms and performance measures are linked with IT metrics.

GEA has worked at getting harmony among both governance “whats” — enterprise goals, IT governance and enterprise performance measures — and the “hows” — linking desirable behaviors to enterprise goals, IT governance mechanisms to IT governance style, and IT metrics and accountabilities to enterprise performance measures.

In terms of mechanisms, there are three levels of business-IT relationship managers. First, business development officers are focused on short- to mid-term projects. They are organized geographically and work alongside the operational force. Any issues they can’t resolve are passed on to the second level — business contract managers. Second, business contract managers head each of five major outsource providers and the five teams that deal with these. Third, business liaison officers focus on mid- to long-term planning. They work with the senior management team on strategic requirements and future needs for specific business processes. To date, the new governance at GEA has taken several million pounds out of the cost base. There will be more savings as people need fewer machines. However, over time, costs and usage will increase as the GEA moves to spread the use of technologies to all the areas where it can deliver value.

There are six leading indicators for effective IT governance.

Enterprises can do an initial assessment of the performance of their IT governance using a simple six item test. Score 0,1,2 or 3 for how true each of the following is in your enterprise:

1) There is thoughtful variation amongst decision styles used for different IT domains
2) ‘C’ level executives are involved in IT governance
3) Executives can accurately describe IT governance
4) Formal executive committees and communications underpin IT governance arrangements
5) Transparent, formal exception processes are in place
6) Serious tracking of IT’s business value, projects and resources consumed is undertaken
Scoring of the indicators is as follows:

- 0-4 No effective IT governance
- 5-9 Low level IT governance
- 10-14 Maturing IT governance
- 15-18 Top performer, watch for complacency

*Action item: Score your enterprise IT governance indicators. Identify and work on areas where you are currently weak.*

*Don’t Just Lead, Govern! . . . Governance leverages the ingenuity of all the enterprise’s people, not just the leaders, while ensuring compliance with the overall vision and principles.*

Six Critical Success Factors are necessary for effective governance.

1. IT governance must be thoughtfully and actively designed. Executive management must be involved for it to be effective.
2. Without transparency there is not trust. Transparency must be built in to IT governance, so there is confidence in the processes.
3. Acknowledge that changing governance can take months. Make changes only when desirable behaviors change markedly.
4. Educating executives and managers about why governance is important is a constant challenge and requirement. Good behaviors must be reinforced and inappropriate behaviors redirected.
5. A sharp focus on a limited number of goals, behaviors and metrics is necessary. Good governance requires choices. You can optimize on multiple options.
6. There must be clear exception handling processes, with transparent and rapid escalation processes. Exceptions are how enterprises learn.

*Action item: Communicate and act on the six IT governance critical success factors.*

**Questions**

**Nachman Oron, Israel:** Thank you for a very comprehensive lecture. I wonder if you have some weighting system or balance system to compare between large countries and small countries. They wouldn’t be the same.

**Marianne Broadbent:** The short answer, to be honest, is no. But we’ve found that certainly the level of complexity is greater in larger countries and that’s the same in commercial organisations.

It comes back down to focus, I think, and your ability to focus. We’ve done a lot of analysis of the data and the only things that come out to do with size, industry and so on to date relate to the idea of the ability to focus. Now, the only way in which that might help a smaller country is that you have a greater ability to focus; so if you have that, because you’re smaller, then it’s clearly an advantage. But that’s the only hard data that I can share with you on that score.

**Tomas Orozco-Laroche, Mexico:** When we differentiate agency-level CIOs from the national government CIOs and when we realise our purchasing power, it seems to me that compared
with other CIOs from big buyers we are playing a rather reactive and passive role in the
definition of the future of technology. We adopt standards only once they are required and it is
very difficult for us to provide the assurance about the future of technology to our agency-level
CIOs.

My question is, for national government CIOs, do you see a special need for technological
intelligence and for alignment to other objectives and goals different from the traditional
corporate ones?

Marianne Broadbent: Yes, I do, in one sense. I mentioned three kinds of CIOs, but there are
actually four that we have written about. There’s the demand side, the supply side, and those
that combine both. There’s another name that we use, although I don’t know people with that
name but you’ll get the idea when I say it: it’s basically a technologically enabling opportunist.
We do see those now in the commercial sector to a considerable degree but we are only just
starting to see them in the government sector where there is perhaps a group or an agency
whose responsibility it is for the technical intelligence role, and to start to identify what are the
technologies that will enable us to do things quite differently so that where technology leads
the strategic imperative is.

Again that can be a kind of dangerous role in some ways because you need the underlying
ethos about why you are doing this. But the technology-enabling opportunist is a role where
organisations want to either leap-frog or be ahead of the curve. These days, because of the
intense linkage between government services and technology, the ability to know what’s
coming up and, when there are six imperatives, anticipate, I think is one that is incumbent upon
CIOs to do very carefully. But certainly having that technology intelligence role I think is quite
critical now.

Benyamin Raab, Israel: You don’t appear to have covered the point that in government we
have to take into account our politicians. You are talking about boards, who don’t change every
day, and politicians that in two years or four years have to be elected. Did you do a study of
that relation and how it affects the IT CIOs?

Marianne Broadbent: I’ve done a lot of work in that area, I’ve done a lot of work with
government apart from collecting data, if I can put it that way. I’m not sure how I can put this
carefully, in the most politically correct way, but some of the most effective government
administrators and bureaucrats I’ve seen have taken the view that, yes, the politicians are going
to keep changing, so how can we, not exactly insulate ourselves against that, but do things in a
consistent way so that when the politicians keep shifting the pieces of the jigsaw of our
organisations, we can minimise the pain for ourselves. I can think of a number of countries and
states where they’ve taken the view that obviously, if we’ve got as much commonality as
possible within our infrastructures and our architectures and so on, that causes us less pain each
time.

I completely take your point, and it plays to what I was saying, that when the objectives
change, then the behaviours need to change and you often have to change very quickly. In
some countries the CIOs become part of the political infrastructure that changes also and that
brings with it whole other things. But I think my message there is, as much as you can, make
your life as easy as possible by agreeing on as much as possible at the government executive
level so that when there are those changes your ability to move quickly and then make your
masters successful, which is I guess is what life is about in some ways, will enable you to do that. That is why I think the whole area of government is so much more challenging than the private sector.

**Frank McDonough, USA:** Very interesting work. I wanted to ask you, is there a way that we can stay in touch as you move along and learn more, and have some access to the data and conclusions as they are coming?

**Marianne Broadbent:** Yes, I am happy to discuss the best way to do that, through Gartner, through MIT. As I said, there are a number of people here who are part of our executive program. We are very keen to get more and better data in the government area. I’m interviewing next week, for example, to add some government research staff to my own research staff as well, specialists in that area. So we can talk about it and I am very happy to co-operate in any way that helps things to be more effective.

**Martha Dorris:** Thank you, Dr Broadbent. As Nachman said, it was a very comprehensive discussion on how we can assess the governance effectiveness in our organisations for a rosy future.