



IT GOVERNANCE IN THE EXTENDED ENTERPRISE »»

White paper

Opportunities and threats for IT governance within partnerships

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INTRODUCTION

IT IS ALMOST AN UNDERSTATEMENT TO SAY THAT WE LIVE IN AN ERA OF RADICAL CHANGE, CHARACTERIZED BY THE RISE OF ABUNDANT INFORMATION AND WIDESPREAD TECHNOLOGIES. CHANGES CAN BE FOUND IN THE PRODUCTS AND SERVICES WE BUY, IN DISTRIBUTION CHANNELS WE USE, IN PAYMENT SYSTEMS WE EMPLOY, AND SO ON AND SO FORTH. ALSO, THE WAY, IN WHICH COMPANIES DO BUSINESS, THE WAYS IN WHICH THEY ARE ORGANIZED AND MANAGED HAVE ALL CHANGED BEYOND RECOGNITION. ATOS CONSULTING IDENTIFIES THIS AS SIGNIFICANT BUSINESS TRANSFORMATION.

The traditional organization model is characterized by a familiar pyramid structure, a functional set-up, a hierarchical control and has hard organizational boundaries. This model is practically gone. The long-established integrated 'pyramids' have demonstrated to be too cumbersome and rigid to respond quickly and adequately in times of radical and enduring external change.

Organizations are increasingly working together in networked cooperation and in virtual alliances. Many strategic and long term relations, both formal and informal, are thus established. Often, IT has a critical role in making such relations successful. This implies new challenges for IT governance, since the achievement of enduring successful results from cooperating organizations – defined as Extended Enterprises – is not guaranteed on the narrow basis of traditional models and best practices of IT governance. A fresh approach is needed and a paradigm shift seems inevitable.

In short, we will have to find the answer to a fundamental new question:
"What does IT governance look like within an Extended Enterprise?"

A complex and to a large extent unknown domain is waiting to be explored. This paper will have a look into the problem background. It will then present the results from the research conducted by Atos Consulting, give insight into the findings and finally provide you with practical recommendations.

A new board with pieces is set. Let us now explore the rules of the game.

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THE EXTENDED ENTERPRISE

SURVIVING IN A NETWORKED WORLD

Organizations are increasingly unable to succeed on their own in a world that is becoming larger and more complex. It is often undesirable and perhaps even impossible for organizations to deal on their own with the required economies of scope, scale and especially skills, without help from complementors. They therefore enter into partnerships to cope with more sophisticated customer demands, products and services.

As a result, virtual organizations and configurations of networking organizations flourish. The basis of the virtual and networking organization is a structure or even a culture of cooperating centers working together either temporarily or in a more or less permanent framework, according to specified and agreed patterns. Hence the

term 'network'. One of the interesting aspects of this is that both customers and suppliers are seen as part of the network. The term 'virtual' refers to the fact that an organization is no longer formed by one or more physical buildings, workspaces, distribution channels, etc. Rather, a virtual organization is present, callable and accessible anytime, anywhere, often using information technology (IT). The terms 'networking organization' and 'virtual organization' are complementary. But they are also part of the same phenomenon, and are both made possible by modern-day IT. Accessing all kinds of information from any location and using any device; the possibility to communicate about anything and with anyone who is part of the network; these are preconditions for the existence of such organizations. We have coined these structures of virtual, networking organizations The Extended Enterprise.

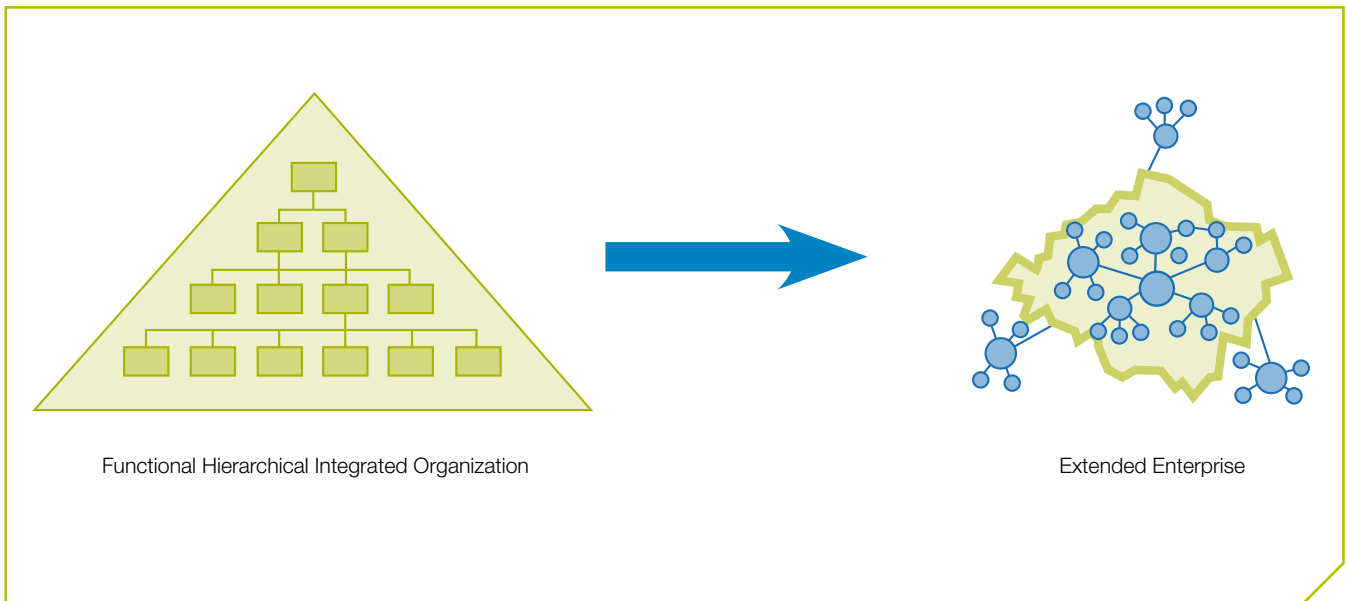


Figure 1. Business transformation towards a networked world

Permeable, blurring organizational boundaries have replaced the conventional hard ones. Enabling IT made other ways of interacting and transacting possible. The hierarchical command and control management style had to make place for a complex series of explicit and implicit arrangements, contracts and agreements between the cooperating centers of the Extended Enterprise. These cooperating centers might be called 'partners' forming all kind of partnerships across the Extended Enterprise. Indeed, the terms 'Partnership' and 'Partnering' are increasingly becoming popular when describing relationships between suppliers and buyers. However some devil's advocates warn not to overrate such relationships. In their opinion, suppliers want to be or become preferred suppliers and establish a lock-in situation by increasing switching costs and by preventing competitors to do business with 'their'

clients. On the other side, as devil's advocates would say; buyers are most interested in establishing partnerships as a way to lower fees for the rendered services. Their main goal is to obtain discounts because of the 'partnership' status.

We are not talking about pure and plain customer – supplier relationships here. Parties that engage in Extended Enterprises develop 'real' partnerships. Of course a distinction can be drawn among the different types of relationships between organizations. For research purposes, we used a relatively straightforward typology of relationships. Three different types have been defined (figure 2).

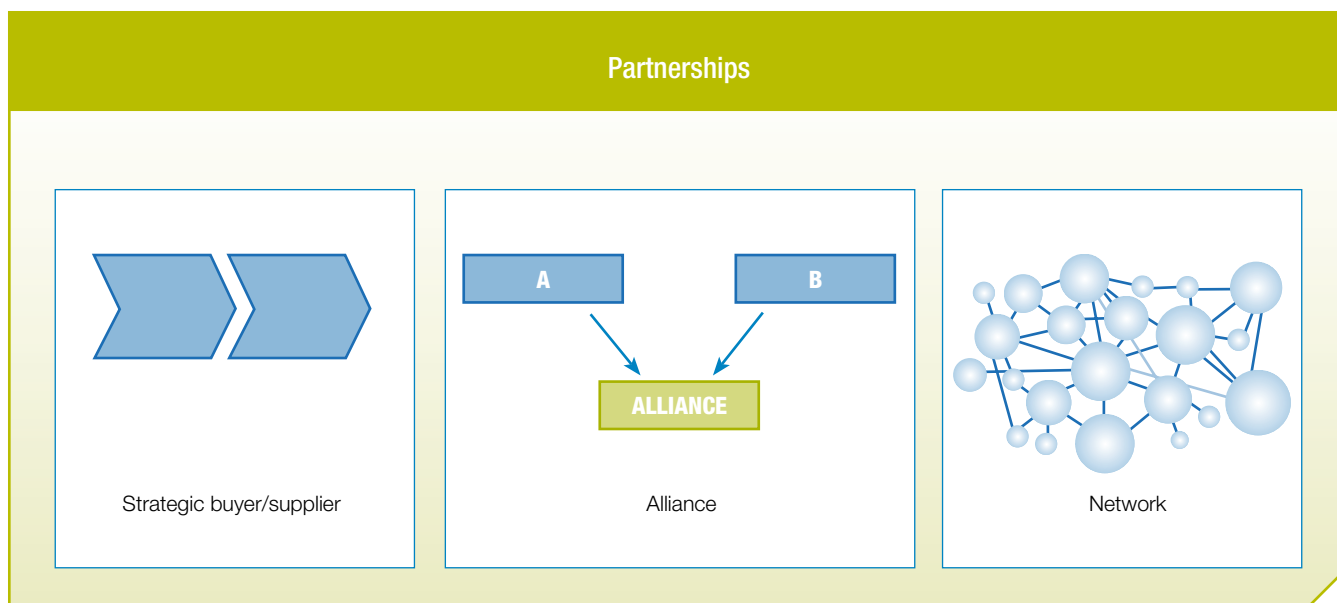


Figure 2. Extended Enterprises are based on three types of partnerships

- > **Strategic buyer - supplier** – A long-term, contractual relationship involving two organizations in which one partner delivers a specified product or service to another party for payment. In these partnerships, risk and uncertainty are limited with regard to the transaction. The goal of the relationship is to obtain cost savings. Coordination of these relationships typically takes place on either an operational or a tactical level.
- > **Alliance** – A relationship between a limited number of organizations in which each organization runs a risk with regard to its investment and/or the expected revenues of the cooperation. The typical goal of this relationship is to develop a new product, market or process. The legal form may be a joint venture. Alliances are typically coordinated at a strategic level.
- > **Network** – A relationship among three or more organizations, characterized by interdependence among the organizations involved (the relationship between A and B can affect the relationship with C). Typically, the goal here is to combine knowledge to deliver complex solutions to clients. Other goals may include achieving knowledge exchange or standardization.

Of course, the types we define here are stereotypes and stereotypes seldom exist in pure form. In practice, many relationships are hybrids of more than one category. For example, there are many forms of strategic supplier relationships. Alliances are often embedded in networks. Nonetheless, these three types adequately provide a basic reference point for looking at partnerships in practice.

Why do organizations partner with one another? A number of traditional reasons for partnering exist while some of the fundamental aspects moving business towards the network economy boost the need for partnering (in particular globalization and technological innovation).

For our research, we explicitly exclude organizations resulting from merging or acquisition and Shared Service Centers. All of these types of cooperation imply an integration of corporate structures and activities (for example by creating a new organization blending the goals of two original organizations) according to the traditional pyramid mechanism. This differs fundamentally from the Extended Enterprise, where only virtual cooperation and integration is implied.

Obviously, a combination of drivers can be observed in practice as well; they include:

- > Access to new and foreign markets
- > Increased efficiency
- > Lower R&D risks
- > Access to specialized competencies
- > Serving individual, complex consumer needs
- > Hedging against missing out on a technology
- > Setting the standard

Strategic buyer - supplier relationships are typically driven by the need to bundle complementary, specialized competencies. They combine high levels of efficiency on top of securing access to specific competencies and specializations in a global business landscape. Alliances also profit from bundled complementary skills and competencies and from benefits arising from operating in a global market. Alliances can successfully serve complex customer needs and provide end-to-end solutions for, say, e commerce and e business demands. Networks tend to focus on a single driver, for example the competence driver. In this case, network partners are supposed to bring in different but complementary competencies. Through the initiation and development of mutual projects, network partners benefit from shared R&D results. Another example is the focus on setting common (technology) standards. In so doing, the network provides a way for all participants to hedge against missing out on a technology.

A NEED FOR NEW RULES

A PARADIGM SHIFT FOR IT GOVERNANCE IN THE EXTENDED ENTERPRISE

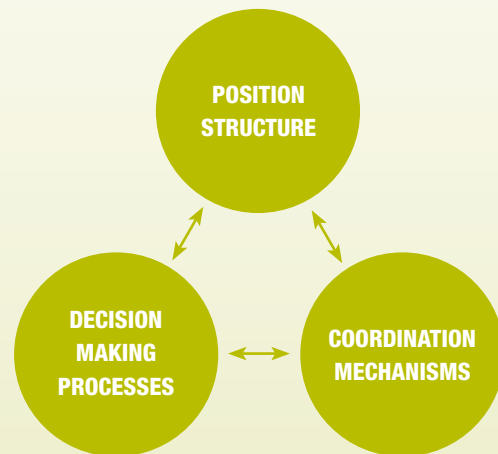
With respect to the management of Extended Enterprises, finding the correct balance between structural and relational management instruments is imperative. Both hard and soft aspects must be integrated in Extended Enterprises where appropriate. This, of course, not only applies to general management and enterprise governance, but also to the management of IT and hence, to IT governance in the Extended Enterprise.

What is the difference between IT governance in an integrated enterprise and IT governance in an Extended Enterprise? Does IT governance in an Extended Enterprise differ as much from IT governance in an integrated enterprise as an Extended Enterprise differs from an integrated enterprise? Atos Consulting believes it does. A fundamentally new paradigm for IT governance is needed, as the characteristics of an Extended Enterprise cause existing certainties to fall away and causes existing models to fail.

What is IT governance?

IT governance means specifying the framework for management rights and accountabilities regarding IT related decisions.

Promoting mutual coordination between units and geographies and uniformity of IT processes, products and services, IT governance thus includes the entirety of positions, coordination mechanisms and decision making processes which encourage desired behavior in the use of IT:



IT governance covers all strategic IT domains – principles, architecture, investments, applications and infrastructure – and can be modelled in various styles (from ‘monarchy’ to ‘feudal’ to ‘federal’) according to the needs of the enterprise.

Whilst establishing IT governance within an integrated enterprise, the board or management traditionally can hold on to certainties implicit in the organization model, making up the current governance paradigm:

- > The structure – characterized by the familiar pyramid structure, a functional set-up, hierarchical control and hard organizational boundaries – makes it possible to arrange not only the formal decision rights with regards to IT, but also the escalation mechanisms to enforce the decision making processes;
- > The carefully implemented IT service management or IT development processes (i.e. ITIL, CMM, ASL and BiSL frameworks) describe which decisions can be taken by whom, in what sequence and based on which defined inputs;
- > A variety of both formal and informal consultative bodies (e.g. project board or change advisory board) exist to facilitate management decisions on IT.

These ‘certainties’ define the way in which management decisions regarding IT are usually made. They do not have to be invented or designed each time and provide a firm framework to rely upon. Apparently a particular culture (a set of rules of behavior) exists to which everyone knowingly or unknowingly conforms; decision making regarding IT is based on widely supported paradigm “this is how we do things here”.

When an Extended Enterprise arises, a new configuration with a new field of influence is originated and suddenly this governance paradigm is no longer valid: it turns out to be too cumbersome and rigid to respond quickly and adequately; a number of aspects have to be revisited:

- > Management and organizational structures are no longer in place by default; there is no hierarchy to fall back upon for formal decision making;
- > Formal and informal processes / procedures are not agreed upon upfront and no longer work as expected;
- > Facilities, and particularly IT resources, are no longer in place and are not connected as one would expect. Information and systems to base decisions upon are no longer available when needed;
- > The user community (consisting of users from all constituent communities in the partnership) has to be redefined and its information requirements need to be assessed.

One might think that that these shortcomings can be mitigated by the lessons learned in mergers & acquisitions. However, the goal of both mergers as well as acquisitions is to create a new integrated enterprise. This new enterprise can emerge in two different ways:

1. The new enterprise takes on the IT management characteristics of one of the constituent organizations in this acquisition. Even when it is called a ‘merger’, apparently one ‘partner’ turns out to be to most powerful or influential;
2. A completely new set of IT management characteristics is developed for the new enterprise.

In both cases however a flat, two-dimensional model is used. The result is yet again a traditional integrated enterprise with little ‘extended’ characteristics.

So what is different in an Extended Enterprise? Or, in other words, why is a third dimension needed and what could be the characteristics of that new dimension?

- > There is no simple relation or dependency between the individual 'motivations' of the participating enterprises and the explicitly formulated goals of the Extended Enterprise itself. This is no surprise since the individual participating organizations do not disappear but simply participate in an Extended Enterprise when a real advantage is to be gained. E.g., the publicly voiced goal of developing new services together can perfectly fit an individual target of simply cutting development costs!
- > There is no single hierarchy where all accountabilities and responsibilities 'naturally' come together. The lack of a hierarchical structure prevents vertical escalation in cases where relative priorities are unclear or a 'chain of command' is normally presumed. The power to simply enforce decisions must be replaced by other ways of exhorting decisive influence;
- > IT decision making processes are often 'optimized' based on internal criteria of an individual enterprise and were not developed to be flexible enough to be linked to the processes of other organizations or agencies. Internal processes or procedures are often based on cultural assumptions (consensus vs. 'executive power') and coordination mechanisms like committees being in place. When processes do not only cross departmental boundaries but also cultural boundaries, additional organizational interfaces have to be put in place.

Different from a situation of a merger or acquisition, in case of an Extended Enterprise, there is no 'two dimensional overlap'. In figure 3, three enterprises are drawn as geometrical forms in three different colors, which seem to overlap in the middle. But, in reality, these organizations only work together towards a common objective, while having no physical or organizational integration. Overlap would only occur when organizations would integrate their activities into a Shared Service Center or merge otherwise.

So a need emerges for a three-dimensional paradigm of 'maximal freedom in a structured connection'. We are looking for a paradigm in which all partners are free to pursue their individual aims whilst cooperating towards their shared goals. In this new paradigm all partners in the Extended Enterprise are bound by common IT governance constraints that are related to their common activities or domains. At the same time, allowances should be made to provide maximum freedom for the activities or domains that are not common. As a result, partners conform to the IT governance structure, processes and coordination mechanisms associated with their common goals. These partners do not cross into each other's space thereby infringing upon each other's freedom.

Since this paradigm is based on the assumption that the traditional hierarchical structure is absent in many or most Extended Enterprises and that decision making processes will not suffice, this new paradigm will rely heavily on the use of proper 'coordination mechanisms'.



Figure 3. Apparent overlap of organizations

ATOS CONSULTING RESEARCH RESULTS

DISCOVERING NEW GROUND RULES

Triggered by currents in the management of Extended Enterprises (and the problems arising with it!), Atos Consulting decided to investigate the consequences of Extended Enterprise cooperation for IT governance. In order to gather information a specifically developed questionnaire was sent out to more than 400 CIO's and IT decision makers in different market sectors. Also, interviews were conducted to deepen even further our understanding as well as uncover issues and motives that are impossible to capture with on-line questionnaires.

The hypotheses we built our research on were:

- > The IT governance structure depends strongly on the business motives for establishing the Extended Enterprise;
- > The more complex the Extended Enterprise, the more informal the underlying IT governance model;
- > In a strategic buyer - supplier partnership, formal IT governance is most effective;
- > An alliance partnership benefits most from a hierarchical control function (IT board);
- > In a network, an informal IT governance model is most effective.

First of all, many IT managers responding to our questionnaire showed to be familiar with Extended Enterprises. All of them could mention a specific cooperation as we described earlier as Extended Enterprises, and could therefore respond adequately, providing valuable information on how IT governance is settled when organizations cooperate in the three ways described.

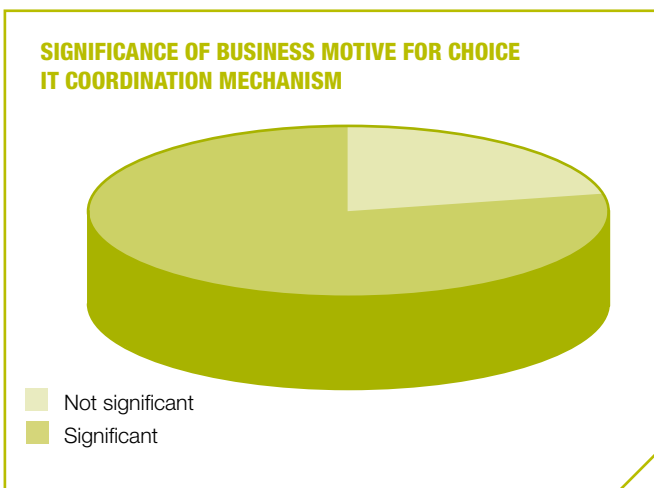


Figure 4

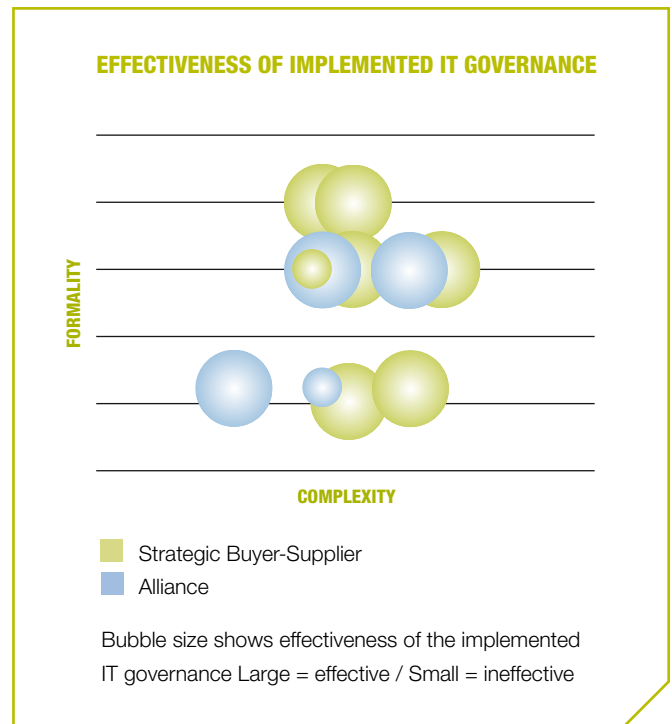


Figure 5

RESULTS

Extended Enterprises are mostly established between partners in the same business sectors; with various motives like market expansion, knowledge expansion, differentiation, cost reduction and flexibility. In most Extended Enterprises the business motive is significant for the IT governance that is implemented in the Extended Enterprise, as shown in figure 4.

Based on the results of the questionnaire and the interviews, we concluded that even if the primary motivation for a partnership lies in the IT domain, the business motive for the Extended Enterprise defines the way IT governance is shaped and formed. IT governance and the governance of the Extended Enterprise are always aligned, either by first implementing IT governance thereby influencing the business governance or vice versa. There is no straightforward sequence in the activities of the implementation process.

We presupposed a linear relation between the complexity of an Extended Enterprise and the formality of the IT governance. However, the results of the question-

Formal coordination mechanisms are:

- > Tasks, rules and procedures: mutual contracts and partnership agreements
- > Performance levels as goals: Service Level Agreements (SLA's)
- > Hierarchy: vertically oriented management

Informal coordination mechanisms are, amongst others:

- > Direct contact
- > Liaison role
- > Taskforce
- > Team (permanent)
- > Coordinator/ integrator
- > Integrator/ manager
- > Matrix cooperation

(See appendix for a description of these mechanisms)

IMPACT ON INTERNAL IT GOVERNANCE

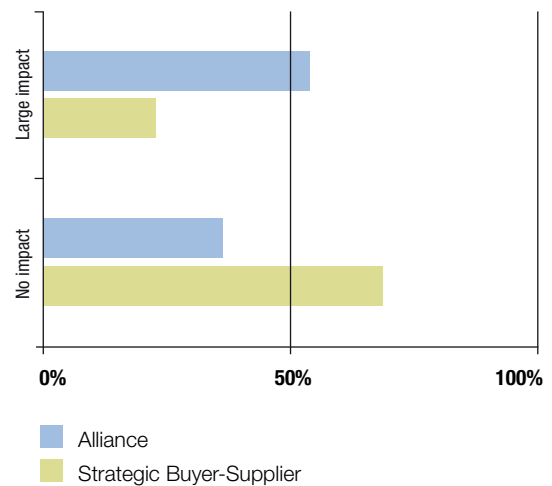


Figure 6

naire and interviews do not confirm this hypothesis. All our respondents consider the Extended Enterprise to be rather complex; regardless of whether the IT coordination mechanisms are formal or informal. We found that most strategic buyer-supplier partnerships have implemented formal coordination mechanisms. The organizations which have implemented formal IT governance are mostly satisfied with the impact.

In alliances, most organizations implement a non-hierarchical direction function to their satisfaction. A small majority of the respondents state that the IT governance model of the Extended Enterprise has no or low impact on the internal IT governance model. The IT governance model of strategic buyer-supplier relationships has a bigger impact on the internal IT governance than it is the case within Alliances.

The level on which the IT governance model is implemented differs per type of relationship. The respondents that were in a strategic buyer-supplier partnership have distributed the IT governance implementation almost evenly over strategic, tactical and operational levels; where it appears that the focus in alliances is mostly on the tactical coordination level and in networks on the strategic level.

IT GOVERNANCE IMPLEMENTATION

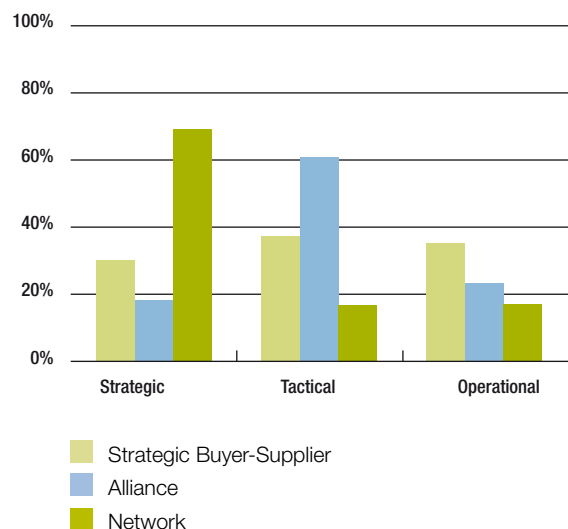


Figure 7

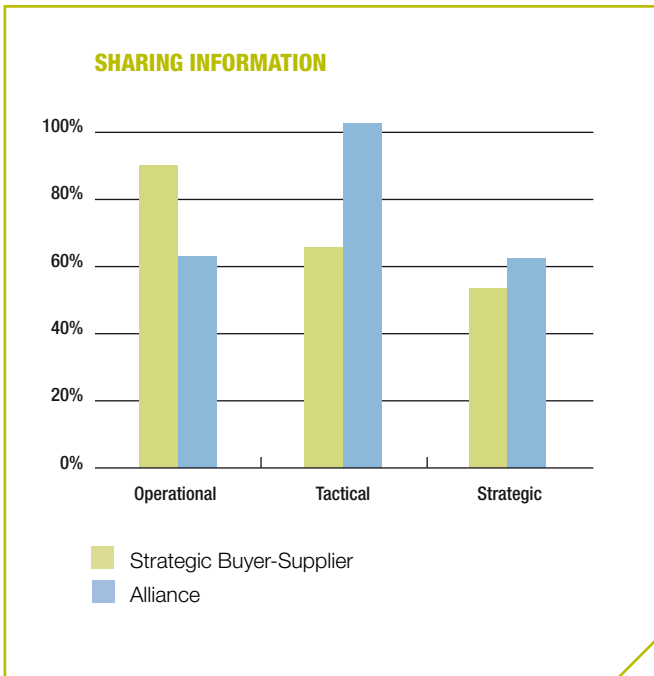


Figure 8

All questionnaire respondents considered their extended enterprise to be information intensive, meaning that lots of information is shared between partners. In strategic buyer-supplier partnerships, the information is shared on operational as well as on tactical and strategic levels. Resources (information, people and systems) are shared between most partners in an Extended Enterprise. Almost half of the Extended Enterprises have joint information services and systems that are in place to support core processes. In alliance partnerships mostly tactical information is shared. For core processes the majority of the respondents state that information is shared. However, only a minority indicates that joint information systems and services are in place.

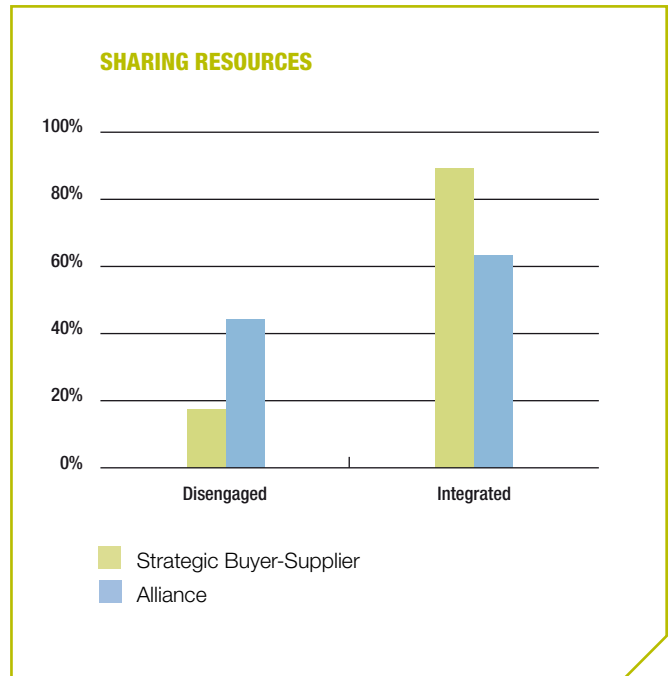


Figure 9

The research showed out which business motives drive the Extended Enterprises. Strategic buyer-supplier partnerships aim in almost 50% of the cases for cost reduction (figure 10). Market growth also drives many Extended Enterprises.

But there are also one-partner business motives, often differing from the shared goals. Where individual drivers differ significantly from the common drivers, hidden agenda's of individual partners arise, leading to subtle political strategies to ensure the achievement of own goals in spite of the explicit, shared goals. In alliances, where partners are more or less equal, this phenomenon becomes even stronger.

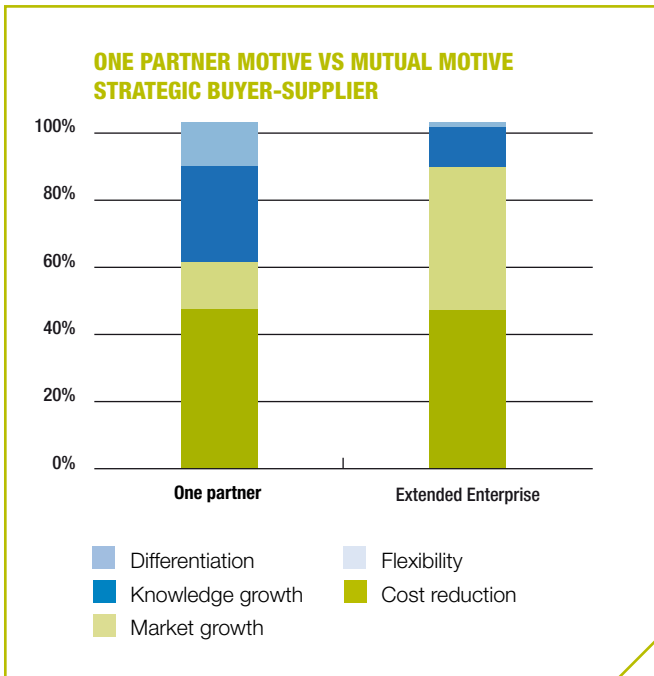


Figure 10

Finally, the effectiveness of coordination mechanisms was measured against the business goals driving the Extended Enterprise. In the next chapter, these findings will return to underpin the definition of effective IT governance in the Extended Enterprise.

In the interviews, we found that the coordination mechanisms are chosen based on various aspects:

- > The business motive for cooperation.
- > The type of Extended Enterprise.
- > Previous experiences with IT governance within the organization itself.

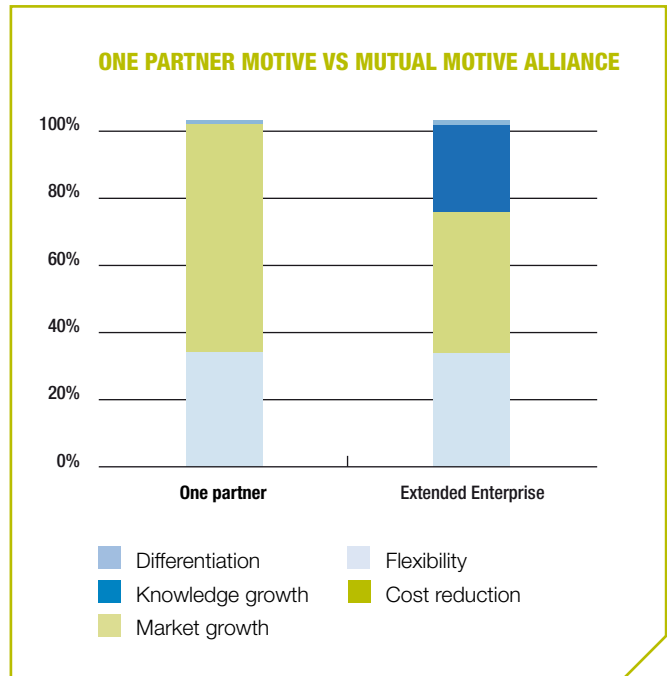


Figure 11

The interview results show that the process of implementing IT governance models in Extended Enterprises is different from implementing them in a single organization: if there is a dominant partner in the Extended Enterprise, the implementation of the IT governance model does not appear very different from the implementation of the internal IT governance of the most powerful party. However, if partners are more or less 'equal' (plain level playing field), the implementation process will have the characteristics of a negotiation process, covering politics and 'power play'. A partner's power in the Extended Enterprise appears to be determined by the amount of invested capital, resources, knowledge and people. Equal partners in an Extended Enterprise organize their IT governance based on the partnership's goal.

GETTING OIL IN THE MACHINE

TOWARDS THE EFFECTIVE USE OF COORDINATION MECHANISMS IN THE EXTENDED ENTERPRISE

The need for a paradigm shift and the Atos Consulting research results lead to a new vision on how organizations can be successfully interlinked. As described, Extended Enterprises are interlinked organizations that need to be coupled but at the same time require freedom of movement to realize their own business goals. This phenomenon can be graphically drawn as interlinked concave shells. Viewed from above, these organizations have virtual overlap, which represent the areas in which cooperation, and subsequent interaction, is expected. These can be in any area, such as finance, marketing, IT or human resources (or any combination of these). An immediate consequence is that in these areas, alignment of behavior is needed in order to achieve the results and reach the objectives of the Extended Enterprise. In other words, in order to succeed 'extended corporate governance' is needed.

The need to make arrangements and have agreements on the common business areas can be depicted by an axis, connecting the concave shells. In the 3D view, the cooperating organizations look like concave shells

spinning around an axis. This implies a certain degree of freedom of movement, which is needed to achieve the organization's own business goals. But also, it shows that the organizations cooperating are interlinked by an axis of governance.

Organizations that will not follow the rules of the 'Extended Governance' will fall off and the harmonious spinning of the various partners will stop.

Extended Enterprise Governance drives the associated IT governance, which can be described as one part in the governance arrangements. Extended Enterprises are information intensive, which implies the need for a substantial IT governance framework. Within such a framework, coordination mechanisms are essential when settling IT governance across organizations' borders. A definite set of positioning structures is hard to establish and decision making processes take a long time to agree upon. Coordination mechanisms can therefore be described as the oil in the machine: they are the oil 'on' and 'around' the axis of governance promoting mutual dynamics and helping organizations to 'spin successfully'.



Figure 12. The Atos Consulting vision on the Extended Enterprise: restricted freedom

THE IT GOVERNANCE IN THE EXTENDED ENTERPRISE FRAMEWORK

What factors influence the effectiveness of IT governance mechanisms in the Extended Enterprise? Which coordination mechanisms are effective in which situation?

There is no simple formula. We found in our research that Extended Enterprises are encountering several issues when establishing governance agreements, and specifically, IT governance agreements.

The Atos Consulting research proves that the business drivers for establishing the Extended Enterprise have a big influence on the IT governance settlement. When a business driver is compulsory (e.g. law), it is proven that the cooperation often turns out to be awkward. In this case, IT governance is less effective when compared to strong, common business motives driving the Extended Enterprise. In general, a model (framework) can be established to describe the relation between the main influences. The framework subsequently shows three blocks (figure 13).

The framework clearly states that business drivers determine the Extended Enterprise strategy.

This strategy defines how to manage common business areas, including IT (which can be described in terms of IT principles, architecture, application needs, investments and infrastructure). It also determines the governance of the Extended Enterprise, including IT governance. In other words, IT governance must be aligned with business governance.

The effectiveness of the governance of the extended enterprise and the IT governance arrangements – this means providing the answer to the question “is IT supporting the Extended Enterprise effectively?” – need to be measured periodically. In order to do this, Critical Success Factors need to be defined, which enable the performance monitoring of the Extended Enterprise. IT governance designers need to make explicit how IT governance will contribute to organizational performance goals in order to measure the quality as well as the effectiveness of IT decisions. This immediately clarifies in all layers within the (IT) organization who is responsible for specific results and how performance evaluation takes place. Measurements can be easily incorporated into formal Balanced Score Cards, which need to incorporate the Critical Success Factors set up by the cooperating parties.

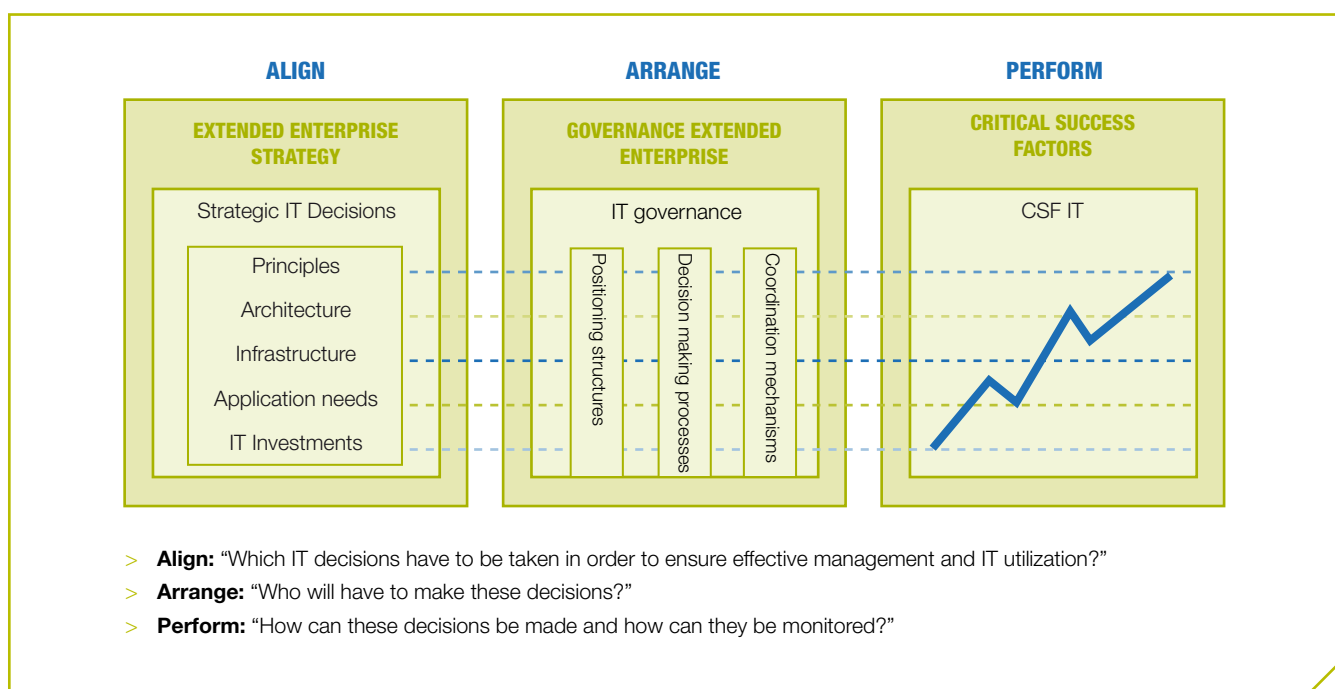


Figure 13. Atos Consulting framework for IT governance in the Extended Enterprise

A CLOSER LOOK AT COORDINATION MECHANISMS

Adequately designed coordination mechanisms enforce desired behavior on IT decisions and will thus lead to good results in terms of added value for the business. In other words, proper use of coordination mechanisms is one of the keys to successful IT decision making. In this paragraph we will describe how and when coordination mechanisms become effective in Extended Enterprises.

Business drivers

We found the effectiveness of coordination mechanisms is different per business motive driving the Extended Enterprise. For example, when cooperation is driven by a need for market expansion, only two out of ten coordination mechanisms are proven to be effective: direct contact and the establishment of a liaison role (both being informal mechanisms). Another example are Service Level Agreements (SLA's); they are very common and rated as well-effective by many respondents of Extended Enterprises which aim at cost reduction or knowledge expansion.

In the following table the effectiveness of coordination mechanisms is summarized:

This leads to the following statements:

- > Extended Enterprises based on knowledge expansion will be able to utilize many coordination mechanisms effectively (only the matrix cooperation will not work).
- > Matrix cooperation was found to have little effectiveness in different settings and within different business drivers.

However, not all business motives for cooperation are shared. Cooperating organizations can have their own individual drivers for cooperation, needing other coordination mechanisms than the most effective mechanisms for the shared business motive. This means that organizations individual goals within the Extended Enterprise need to be aligned with the common business drivers in order to design well functioning coordination mechanisms. As well, as stated earlier, individual business goals can lead to political strategies especially when partners are equal in terms of power.

| BUSINESS DRIVER | | | |
|-----------------------------|----------------|------------------|---------------------|
| Coordination mechanism | Cost reduction | Market expansion | Knowledge expansion |
| Tasks, rules and procedures | + | - | + |
| SLA's | + | - | + |
| Hierarchy | - | - | + |
| Direct contact | + | + | + |
| Liaison role | +/- | + | + |
| Taskforce | + | +/- | + |
| Team (permanent) | + | - | + |
| Coordinator/ integrator | - | - | +/- |
| Integrator/ manager | + | - | + |
| Matrix cooperation | - | - | - |

Culture

Coordination mechanisms also need to fit within the culture of participating organizations. Strong hierarchical coordination via IT boards, SLA's and procedures – which are often mentioned by our interviewees as being the expected characteristics of effective IT governance – will only reach its goal when the participating organizations cope with a hierarchical way of working and will accept (external) authority.

Final remarks

In addition to the research's analysis and results, interviews have shown that some other influences also play a role when it comes to cooperation and setting the IT governance. These factors co-determine if and how coordination mechanisms will be effective. They need to be kept in mind when reaching new agreements and settling governance issues.

Dutch government institutions are cooperating to realize the 'Elektronische overheid' ('Electronic Government'), a project that aims to bring public administration services to citizens 'any time and anywhere'. The cooperation can be marked as a network. The national government department needs to work together with local authorities to achieve a new way of delivering services to citizens. Their cooperation is strongly characterized by deliberation and decision making on the basis of consensus. It would be unthinkable and highly ineffective to establish IT governance based on strong hierarchical principles. In this context, the establishment of a common architecture board and cross-organizational project teams is expected to be far more effective.

> Equality

Partners who differ strongly in terms of power, knowledge or budget, will be subject to a field of influence wherein the strongest partner sets the rules of the game. This will affect the cooperation and make it look like the establishment of IT governance within an organization, where hierarchy determines the relations. Only when partners are equal in power do the business drivers influence the IT governance in a rational way. Strategic Buyer-Supplier relationships tend to be less equal than alliances. Networks are also characterized by differing levels of equality.

> Trust

Trusting partners is fundamental to cooperation, specifically when cooperation goes beyond simple agreements on buyer-supplier or on target-based contracts. Trust can be characterized as an emerging force in the increasing number of Extended Enterprises and is inherent to risk-sharing. Trust is different from risk mitigation but can however be complementary to it. Risk can be minimized by the establishment of both formal coordination mechanisms such as SLA's (which are used in most Extended Enterprises) and informal mechanisms.

> Stability

A strategic setting and a long period of cooperation determine the way partners cooperate and set rules. Short term cooperation makes it difficult to establish well-designed, specifically modeled coordination mechanisms, while a stable Extended Enterprise enables evaluation cycles and stimulates the settlement of proper coordination mechanisms.

> Maturity

Experienced partners tend to overrule 'new' partners. A remarkable difference in the cooperation's maturity will have a negative influence on the results of this cooperation.

CONCLUSIONS AND RECOMMENDATIONS

The rise of the Extended Enterprise phenomenon is a symptom of the postmodern network era. The Extended Enterprise differs fundamentally from traditional, pyramid style organizations and requires a fresh approach when it comes to governance of IT decision making. Atos Consulting has identified this as a dramatic business transformation. Our research showed that IT decision makers recognize this trend and that a 'paradigm shift' is needed. Traditional literature and models don't fit onto the new setting. A new approach is needed, to define the arrangements needed to govern IT effectively.

The concave shells model depicts a new approach on IT governance, being the axis interlinking cooperating organizations. We developed the 'IT governance in the Extended Enterprise Framework' which underpins that IT governance must be aligned with the cooperation's strategy, and that critical success factors must be defined to measure results and make evolution of the IT governance arrangements happen. Within this vision, coordination mechanisms form the oil "that keeps the machine turning", rather than formal structures and process descriptions. We discovered Extended Enterprises are sensitive to business drivers both in defining their extended enterprise strategy and in settling effective coordination mechanisms.

Coordination mechanisms differ in style and application and are strongly related to the organizational culture. We separated formal and informal coordination mechanisms. Based on the vision, the framework and specific research results, some practical recommendations can be given when it comes to coordination mechanisms. For example, in order to reach business goals in an alliance which is focused on cost-reduction, a formal, proper and restrained IT governance approach needs to be taken (e.g. through SLA's and hierarchical coordination mechanisms). When common product development or market expansion is sought, more spacious and liberal IT governance principles are needed to reach the aimed business results. SLA's are very common and well-effective in many Extended Enterprises. However, when market expansion is driving the cooperation, SLA's will be little effective.

We believe Extended Enterprises are ready to be approached as full grown entities. In this white-paper, new rules of the game have been explored. Organizations struggling with governance issues in cooperation and virtual environments can now rely on a new paradigm and get grip on IT decision making.

Let the games begin!

APPENDIX

| INFORMAL COORDINATION MECHANISM | FUNCTION DESCRIPTION |
|---------------------------------|--|
| Direct contact | Use of the horizontal relation, where the members of the organizations involved try to solve problems through direct contact. This prevents unnecessary vertical escalation in the hierarchy. |
| Liaison role | For performing subtasks intensive and frequent contact is required, through which - for the mutual communication - a liaison role is created to maintain and improve contact between the involved parties. |
| Taskforce | Temporary team that is composed when a problem can only be solved with joint effort in a team. |
| Team (permanent) | Permanent team. Inter-organizational team that tries to solve often occurring issues within a certain professional domain. |
| Coordinator/integrator | A role to be fulfilled by a separate officer. This role focuses on the stimulation of the integration between the partners, however, without having control or formal power of decision. The coordinator/integrator coordinates decisions that are taken with regard to various areas but nevertheless connected (for example, decisions concerning one product). The coordinator/integrator maintains contacts, gives information and stimulates information sharing. |
| Integrator/manager | A role to be fulfilled by a separate officer. This role is based on limited but binding authority, for coordinating the decisions taken with regard to various areas between cooperative parties. Next to this, the integrator / manager also has budgetary authority. |
| Matrix cooperation | Dual authority and reporting lines, where decisions are taken jointly and on the basis of equivalence between partners. |

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