



White Paper

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Maturing to Centers of Excellence: *The Next Step in IT Organization Evolution*

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Executive Summary

The change currently facing IT organizations (ITOs) is how to improve their delivery of value to the business and their alignment with overall business goals as well as offer business units more value and technology options. All of this, while not killing profit margins. ITOs are adopting several new approaches and embracing change to achieve these goals. One of these new approaches is creation of centers of excellence (COEs). The COE concept is not a new one — it is used widely in many industries — but it is a new approach for many ITOs.

ITOs leverage COEs to bring together similar processes (e.g., application quality, application performance, availability management). This ensures that the processes are consistent across the organization, everyone is well versed in the best practices, and knowledge is shared across the company. Fragmentation and wasted effort within ITOs can often be attributed to an excessive number of people doing the same thing, just doing it in different ways. This is caused by siloed decision making. COEs provide a way to physically reorganize or virtually realign the organizational structure, the organizational processes, and even the technology used, under a single cohesive structure.

For COEs to be successful, they must be defined and executed in a consistent manner. This starts with management support as the shift to a COE is executed. Also, each COE must be outlined in the same way — with each COE having a clear definition as well as clearly established goals, key performance indicators, processes and process linkages, skills, and, especially, common tools and technology.

COEs will impact the organization through either full reorganization of staff or creation of “virtual” organizations (i.e., a matrix structure). Technology will also be affected by a COE structure. META Group recommends that some COEs share the same tools to accomplish their goals.

The benefits of COE efforts will include gains in efficiencies and flexibility, facilitation of vendor and process consolidation, increased knowledge sharing and collaboration across the organization, facilitation of stronger business alignment, and reduction in overall costs.

Leading companies will drive toward some leverage of COE structures during the next two to three years. Examples of centers of excellence include an application performance COE, an asset management COE, a business availability/command center COE, a customer advocacy COE, a governance COE, a security COE, and a quality/testing COE.

Introduction

Change is always difficult. A company's success will be determined by how it handles change, how change is embraced, and what new opportunities are recognized and exploited during change¹. Successful companies embrace change and leverage it to create competitive advantage.

Currently, there are several changes underway within businesses. In particular, the business is changing what it expects from and how it leverages its information technology. Although the fundamentals remain the same, business itself is not only more dependent on technology, it also requires technology to remain competitive, retain clients, and even to achieve competitive advantage. For their part, IT organizations are being asked to contribute to the company, and like any other business unit, the ITO is being measured based on the value² it contributes to the organization. One side of the IT value equation includes the capability the ITO can provide, how it can apply technology to a business problem, and the utility. The other side of the equation is the cost of delivery.

As ITOs face the current change of improving delivery of value to the business and alignment with overall business goals, they are working to improve the overall IT product delivered and reduce the cost and complexity of delivery. This means offering business units more technology options, while not killing the margins. By evolving the organization to be adaptive through leveraging new organizational constructs such as a centers or excellence, successful ITOs are leveraging change to take the next step in maturity

Evolving to the Adaptive Organization

ITO internal analysis is uncovering the unfortunate reality that most IT organizations exist in a non-optimized state, which can translate to extra cost and inefficiency. Although the business itself tends to adapt to the ever-changing demands of the markets, the ITO is typically slower to change and cannot easily shift to meet new demands. Projects are long, expensive, and complex, with a high risk of failure, or are coming in over budget for large projects. The goal of any ITO must be to become an adaptive organization, which provides the following benefits:

- Increased efficiency
- Optimized utilization
- More efficient use of all IT resources (human capital, financial, and physical)
- Reduced waste
- Increased flexibility

¹ Disruptive Change Gilbert, Clark And Bower, Joseph; Harvard Business Review May 2002

² Value = Worth in usefulness or importance to the possessor. Source: www.dictionary.com

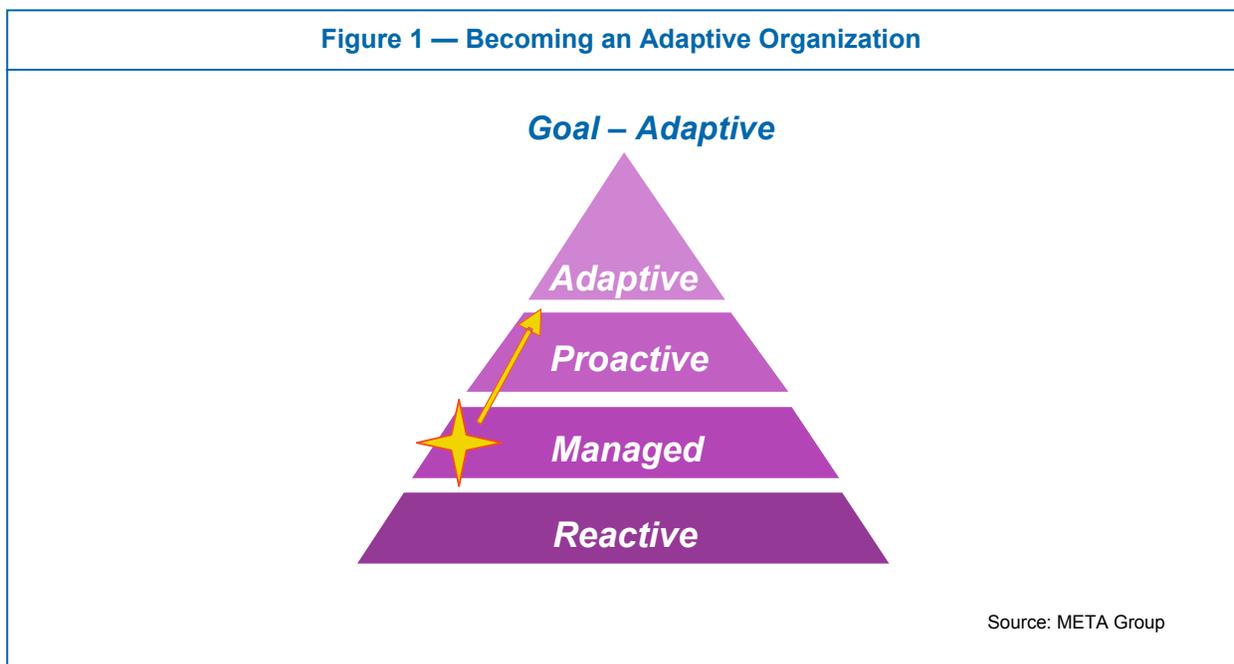
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- Timeliness
- Faster delivery
- Enhanced value

Achieving this goal will require maturity of the organization through several organizational states (see Figure 1):

- **Reactive state:** Companies that take action based on stimulus. There is a desire to plan, but execution is disorganized, with an overall lack of planning and poor internal coordination.
- **Managed state:** Companies that are reactive, but have a set of processes and procedures that are used to react. The planning is focused on how to react better and on optimizing that process.
- **Proactive state:** Companies that anticipate needs and spend extensive effort in planning, with processes that are triggered having a degree of automation (though occasionally the organization still has to react). These companies are rarely caught off guard and able to cite long-term plans, well-documented processes, and extensive organizational coordination.
- **Adaptive state:** Companies that are not only proactive, but also have ITOs that are able to trigger change automatically based on automated metric analysis. For example, an organization's analytics might identify that business demand has increased for a certain product and automatically divert resources to the systems supporting that specific business process.

Figure 1 — Becoming an Adaptive Organization



No IT organization can become fully business aligned without at a minimum becoming proactive and striving to become adaptive. A key element of attaining a proactive and adaptive state is the leveraging of well-designed processes, complete with automation.

The past several years have brought investment in technology and development of processes, but now organizational and governance issues must be attacked. Technology and process investments have resulted in highly fragmented and disconnected organizations that are cumbersome to deal with. These organizations have no chance of becoming adaptive and will not deliver optimal value to the business.

Building centers of excellence is a best practice for realigning the IT organization more closely with business goals and enabling it to mature toward becoming an adaptive organization.

What Is a Center of Excellence?

Defining a COE

The COE concept is not a new one. Academia and public-sector organizations make extensive use of COEs, as do several commercial industries, especially pharmaceuticals. The COE concept is credited with technological breakthroughs³ and kick-starting new efforts⁴. Organizations as diverse as the US Department of Health and Human Services⁵, Microsoft, numerous hospitals worldwide, and even the European Union⁶ have all leveraged or funded use of the COE structure to their advantage.

The US Joint Forces Command defines a center of excellence as follows:

Institutions possessing special knowledge or expertise in a particular area of concern and incorporated into the collaborative environment to facilitate development of the products supporting (key) functions and operations

Why have such diverse groups, many with life or death implications, leveraged COEs? Because the COE concept can bring diverse people and groups together to solve difficult problems. When the knowledge of individuals is combined, the result is a stronger whole. All of these groups are seeking new ways to look at the

³ www.coe.faa.gov – COE meeting proceedings

⁴ www.4women.gov/coe

⁵ <http://www.hhs.gov/news/press/2003pres/20031003.html>

⁶ http://www.hynet.info/ecactiv/docs/Mapping_Centers_of_Excellence.pdf

same problems, new approaches for others to learn from. A faster result is attained through leveraging the best practices each person brings to the situation, thereby producing a more mature set of best practices, tested the world over. A center of excellence is about sharing information, sharing workload, and producing a result that the individuals themselves would not have been able to accomplish within a reasonable time or for a reasonable cost.

Not only does a COE deliver higher-level benefits, but it does so at a reduced cost. By leveraging broad knowledge from numerous organizations, a COE saves everyone from having to learn it the first time on their own. The experiences of the collective are expected to act as a training mechanism for others. Results are achieved faster as well as cheaper.

Applying COEs to IT

It is clear that the COE concept has appeal well beyond IT, but if it can deliver these benefits for world governing bodies and major corporations, then it clearly has benefits for IT (see Figure 2).

Figure 2 — Defining an ITO COE

The ITO center of excellence is a logically related group of processes that yields synergies (e.g., knowledge sharing) and increased efficiencies by grouping the related activities into an actual or virtual organizational structure. May or may not require adjusting reporting structures directly, but does require alignment of processes and potentially technology. Operational improvements are not specific to improvement activities, but attributed to the synergies of the new relationships. The determining factor in the creation of an operational improvement COE should be the volume of similar projects, groups, or functions.

Source: META Group

COEs enable ITOs to bring together like processes (e.g., application quality, application performance, availability management), which helps to ensure consistency across the organization, broad use of best practices, and willingness of various groups to learn from each other across the company. Typically, ITO fragmentation and wasted effort is the result of an excessive number of people doing the same thing in different ways, driven by siloed decision making. COEs enable physical reorganization or virtual realignment of people, the processes they support, and even the technology they use, under a single cohesive structure.

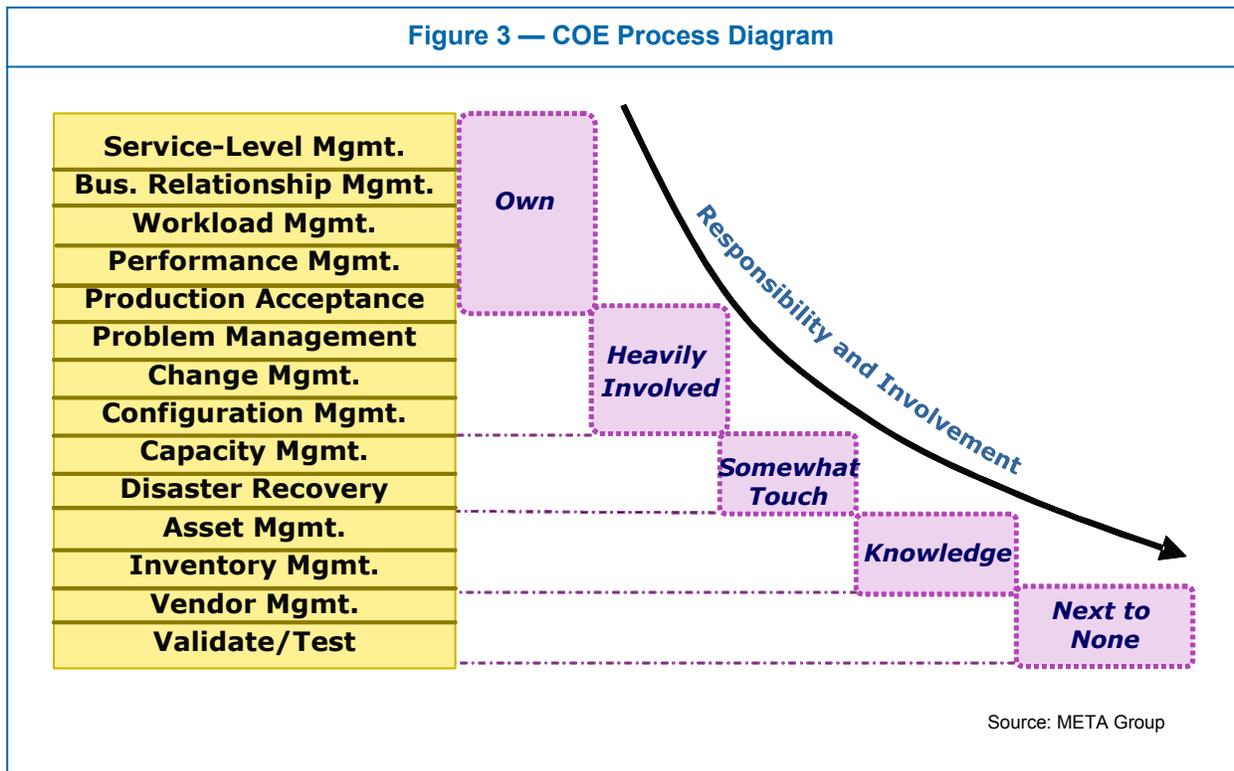
This does not mean that there is a single COE for the entire enterprise — that would never work. However, this does mean that there are single COEs for single functions (see following for specific examples).

Key Components of a COE

Successful COEs have several key elements defined when they are established:

- **Definition:** A clear identification of why the group exists, its key functions, what their boundaries are (e.g., single business unit, enterprisewide), and what the business should expect as a result of this groups existence.
- **Goals:** What goals should this group strive to accomplish? Improved availability? Better customer service? This element encompasses identification of what the group should set its sights on and the mission they are aiming toward, and provides direction to the COE leaders on how to optimize the group's direction.
- **Measurements:** This is identification of how the goals will be measured. These measurements are often referred to as key performance indicators (KPIs). Some items may be in place already (e.g., availability, application quality), while others may still need to emerge (e.g., securability). It is critical that these measures closely align with the business goals laid out in the COE definition. KPIs will exist at multiple levels (e.g., business, IT, business partners), but they must be coordinated and be agreed upon with each interested party.
- **Process linkages:** Identification of how to link to processes that are owned by another COE or other groups. Some linked processes are tightly integrated. For others, a COE must simply be aware of the process's existence, but not be involved. COEs need clear lines of distinction between them. As companies mature toward being proactive and adaptive, definition of process linkages is the critical component. Without COEs working in concert, the results of COE efforts are just new silos. Total optimization of an organization will be realized when COEs are not only working well, but also are working well together.
- **Incentives:** Defines for group members how they will be rewarded for success.
- **Key processes:** An outline of the key processes the COE is responsible for executing. This is critical, since the scope of the COE is contained in the processes it owns. It is also important to outline who owns a process. Process ownership is the key to a successful process.
- **Process definitions:** Detailed definitions of processes (see Figure 5), including the steps, flows, and ties to other processes.
- **Skills:** What are the necessary skills the COE requires, and what people in the organization map to those skills?
- **Tools/technology:** What are the preferred or selected tools that a COE uses?

Clear identification of the key processes, their definitions, and their linkages can be diagramed. Figure 3 provides an example of a process diagram that can be created for a COE. It includes a listing of the processes (in order of importance to that COE) and the level of involvement expected in all of them (owned and non-owned processes).



Organizational Impact

The changes a COE brings to organizational structure must be carefully considered. Many organizations will choose to fully reorganize staff around a COE structure. Others will instead create “virtual” organizations, using a matrix organizational structure. For a critical COE (e.g., availability/command center COE), META Group recommends that it must exist as a true organizational group. However, COEs that may not require full-time attention or do not provide daily critical functions (e.g., asset COE) may be virtual as long as the roles and responsibilities are clearly defined.

Regardless of which option is selected (full reorganization or virtual structure), every COE must share process definitions and, in most cases, technology.

Technology Impact

Although much attention is given to organizational issues within a COE, the technology impact cannot be overlooked. Sharing technology within a COE not only fosters communication, as discussed earlier, but it also assists in saving money (by tying to the earlier business goals).

Currently, individuals working on the same tasks but using different technologies to communicate can easily come to different conclusions. Tools work differently and different terms are used, which foster differences in processes. There have been many instances of two individuals looking at the same situation, but from different data-based perspectives, and coming to different conclusions. This is unlikely to occur in a COE structure.

There is education involved in using tools. From understanding the scripting mechanisms through detailed configuration, this knowledge becomes a key part of shared intellectual property expected within a center of excellence. Increasing individual productivity through COE structures relies on sharing technology.

Does this mean throwing everything out and starting over? It does not; rather, organizations should seek to select a lead vendor from the current toolsets they use, identifying key “areas” or “groupings” of tools (e.g., server monitoring, load testing, change workflow) and then selecting the vendor to be lead for that grouping. This may result in several vendors being involved within a single COE. That is not a problem, as long as clear integration points among those vendors’ tools are identified in advance. This opportunity should be leveraged to determine what is best in current use and then to turn increased use into a better price from a vendor. Savings are also gained by having fewer vendors to engage and integrate.

The Value of a Center of Excellence

ITOs should seek various values through use of a COE structure, including the following.

Gains in Efficiencies and Flexibility

Currently, ITOs are inflexible, often due to cumbersome internal politics, a major complaint of business leadership. One goal of a COE is to break down some of these barriers by having a wide range of people involved in working toward a singular goal and communicating with each other in the process. This communication occurs on multiple levels, including shared nomenclature for a process through the sharing of information from tools and technology (since frequently various people involved will be using the same tools). This enables individuals to be more efficient in doing their jobs — they do not have to figure out

everything on their own and they can leverage the experience of others. In addition, the enhanced communication will make it easier for organizations to make changes.

Since a COE has well-documented processes (discussed below), there is a single place to go to impact a broad process organizationwide. This is the polar opposite of the current structure of seeking out pockets of teams, learning how they operate, and then attempting to influence change. Now when a business change is demanded, there is one spot to go to and begin to see its impact.

Consolidation

A critical efficiency gain is in consolidation of technology and processes. A COE will be more efficient if all the members are using the same underlying technology. This will promote data sharing, streamlining of processes, and shared decision making. This blends well with efforts META Group sees in vendor consolidation. Many organizations have targeted vendor consolidation as a key cost-cutting effort. A logical manner for identifying key vendors is aligning product use along the lines of a COE. It is also possible to consolidate staff. If efficiencies are increased, fewer people may be required for a single area and some individuals can be reassigned.

Increased Knowledge Sharing and Collaboration

The information sharing previously discussed results in better collaboration. Currently, we see organizations that desire collaboration, but they are lost because the various groups do not understand one another. Each group has its own way of operating, its own data, its own interpretation, etc. It takes considerable time just to establish a baseline for a discussion, and this occurs each time a discussion is necessary.

In a COE structure, with well-documented processes, flows, and technology sharing, collaboration becomes easier. People no longer look at the same IT environment and make different decisions. There are also institutionalized manners of sharing information, instead of the random sharing that currently occurs. Collaboration and knowledge sharing within a COE result in a smarter staff, faster responses, and cost savings on the necessary technology (not just via volume deals, but because the groups communicating can identify overlap and waste).

Business Alignment

COEs should be driven based on business goals. The mission, definition criteria, and even COE-level goals should all tie directly to the goals of the business consumers of these services. Through use of the COE construct, it is easier to achieve these goals. Instead of having to drive numerous disconnected groups

toward a singular user goals (e.g., the goals of a specific business unit), those needs are better centralized and easier to manage.

Businesses want ITOs to respond faster, a COE aligned with a specific goal will produce a more responsive organization. As previously discussed, with increased collaboration, technical silos being broken down, and fewer political barriers, an ITO can respond to requests and change faster when leveraging the COE structure.

Reduction of Costs

Saving money is always a key driver for the business. Therefore, any plan that contains savings usually gets fast business backing. Cost savings come from more efficient use of IT capital, human and technology. The staff will experience an increase in productivity, operate at a more efficient state, have fewer overlapping tasks, and encounter less political barriers to overcome. Using well-established, coordinated processes enables people to be more productive today (e.g., more servers per admin, more tests per analyst). In addition, as processes become well understood, they are then candidates for automation, which further drives up productivity and drives down costs. Once COEs are established, seeking processes that are candidates for automation is the next step.

Technology-wise, cost is reduced through leveraging fewer vendors and having less integration to build and maintain. Vendors often give price breaks to larger customers through volume agreements. The hidden costs of maintaining knowledge of multiple overlapping tools as well as maintaining multiple relationships will be further reduced.

COE Examples

META Group has outlined a number of possible COEs an organization may create (see Figure 4). The list is not exhaustive. While there is almost no limit to the number of COEs an organization can leverage, no organization will be successful in attacking all COEs at once, or even doing each one enterprisewide. It is critical to take steps and learn, as opposed to doing it all in one fell swoop.

Figure 4 — Examples of COEs

- | | |
|--|--|
| <ul style="list-style-type: none">• Application COE• Asset management COE• Availability/command center COE• Customer advocacy COE• Database support COE• Governance COE | <ul style="list-style-type: none">• Media management COE• Outsourcing support COE• Security COE• Server support COE• Storage support COE• Quality/testing COE |
|--|--|

Source: META Group

Command Center/Business Availability COE

The command center or business availability COE is focused on real-time monitoring of the end-to-end business process and the real-time business impact. Users consume technologies through executing business processes that touch many different technologies to accomplish tasks. Therefore, a COE is required to manage the breadth of technology used for any business process. This is where organizations will do initial diagnostics of performance bottlenecks other user impacting issues. They then direct (or escalate) the issue to the appropriate group. This may mean passing the problem resolution tasks to an operational team (e.g., network COE) or even passing them back to the development group.

The command center/business availability COE will deliver:

- True end-to-end availability and performance monitoring by application by users
- Real-time, business perspective, interfaces to visualize performance and availability metrics
- The foundation of service-level management (SLM), including quantification of downtime, assessment of the business impact of performance and availability issues, and directing resources to fix the issues that have the biggest impact on the business
- Integrated applications for system availability management, SLM, customer impact, end-user management, and analytics
- Proactive measurement of availability and performance
- Awareness of business impact as a guide to prioritize resolution activities

Performance COE

While the command center/business availability COE focuses on the status of the environment, the performance COE focuses on how to optimize the application and infrastructure. It is a central point of performance analysis, testing, and improvement. It is used not only to prevent issues (e.g., by being proactive), but also to ensure that organizations are getting the most out of the current resource investments. The goal of the performance COE is to attain an end-to-end view of the organization to ensure that an application or business process is optimized and that it achieves full use of all the resources it requires. A key goal is to prevent adding on additional capacity, instead ensuring that what is currently in place is being fully leveraged. This COE is also used to find bottlenecks internal to the applications that slow its processing.

A performance COE will deliver:

- Performance testing (e.g., tests the scalability and performance of the application)
- End-to-end view of business process performance — not just availability
- Diagnostics for inspecting internal components of applications to identify slowdowns
- Capacity planning, including simulation of “what if” scenarios
- Assessment of current environment use and strategies for improvement

Quality COE

A quality COE is responsible for operating and facilitating the application testing process. It is troubling today that various groups deliver technology in different states to production, which can directly impact a company’s bottom line (not to mention the perception of the ITO). As a result, the performance COEs and business availability COEs attain no consistency in the quality of product they are then asked to support. To eliminate those variances, the quality delivery functions within a COE should be consolidated. This will coordinate activities such as requirements management, planning, scheduling, test automation, issue management, and project status analysis.

A quality COE will deliver:

- A consistent, reusable, and proven testing process
- A testing environment
- Centralized reporting (via portals or dashboards) on the status of current projects, upcoming projects, and outcomes of previous activities
- A delivery process for placing technology into production
- Testing automation technology and expertise in leveraging that technology
- Overall acceleration of delivery, improvement in production-level quality, and reduced overall cost of quality assurance

Governance COE

The effective governance of IT has become a significant issue. IT governance includes operating the business of IT, better understanding how IT investments are being used, and being aware of the business value being delivered, and tracking programs and projects to ensure they are on time and on budget. Unfortunately, this is currently taking place primarily via disconnected individuals using spreadsheets and then poorly communicating the data to the business audience. The business needs strategic management of its application portfolio, its projects, and its programs. Therefore, these tasks should be brought together under a governance COE.

A governance COE will deliver:

- Centralized processes for assessing project health and success on an ongoing basis
- Ongoing strategic analysis of the organization's application portfolio mix and assessment of business value and impact
- Improved and consolidated business communication of status and rationale of investments (e.g., via portals or dashboards), enabling more educated and faster decision making
- A central point of contact to identify available resources, status of investments, and trouble points in need of action

Bottom Line

There is no question that companies are seeking to achieve better alignment of the IT organization with the business. This alignment includes bringing additional capability at a reduced cost, which is a tall order. ITOs should explore leveraging COEs as a way of delivering against these requirements. Centers of excellence can produce savings and increased efficiency — simply through taking a business perspective. META Group believes that the COE structure is one that companies must learn to exploit.

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