3 IT Performance Management – Managing IT Holistically

If IT is to fulfill its role as a value-enhancer for the company, then the services that it provides must be measurable and controllable. For this purpose, it is important to develop suitable IT systems that contribute to optimizing business process costs, enhancing or supplementing sales or possibly even adding value as a product component. The IT 'back office' also has to adapt to these changing roles: i.e. IT management, particularly the CIO, needs management/control methods and instruments that enable them to competently control IT efficiency and also the effectiveness of IT.

At the moment, however, the reality in companies is very different. In line with the old role of IT, it is purely the cost perspective that dominates the picture in most companies. IT is measured exclusively in terms of its efficiency: For example, total cost of ownership approaches, in which the overall IT costs are allocated to the terminals and their 'owners', or return-on-investment procedures, in which the anticipated inputs and payouts of IT investments are used as an instrument for judging their profitability. Comparing ratios, e.g. IT costs to sales ratios, is also a purely financially-oriented method for judging IT productivity.

Due to the lack of suitable ways for quantifying IT benefit and under pressure to manage the 'IT overhead' in a performance-oriented way, companies today use a selection of the following approaches as management and control instruments:

- The historical approach: The actual IT costs of the past have given way to new IT targets that take into account changes in quantity structures (number of users etc.) and external factors such as inflation. The advantage of this approach is that it is more realistic, which makes it more acceptable to IT employees and motivates them to achieve the targets set. The disadvantage, however, is that targets are based solely on past monetary values and do not take into account the whole picture. Thus, external factors such as competitor performances, market conditions, shareholder value or links to the core business or company strategy are not taken into account.
- The top down approach: Based on targets set by top management, for example, increasing shareholder value or value-oriented control variables, as many of the quantitative goals as possible are broken down and allocated to the IT department. The advantage lies in making IT goals consistent with corporate goals. However, it is doubtful whether corporate goals can be faithfully reproduced in their entirety in the guise of IT goals, as the variables under consideration are mostly purely financial. In addition, it is unlikely that IT staff will accept such targets, because they are completely detached from the content angle.

The benchmarking approach: In internal and external comparisons, best practice values from industry or other business units are ascertained and compared with the company's own targets. Benchmarking thus also offers a starting point for identifying best practice procedures. On important advantage of this method is the orientation towards competitors and the market. However, benchmarking values are often simply highly standardized financial IT targets and therefore not particularly meaningful. A detailed survey based on a questionnaire could reduce or even eliminate this disadvantage. Yet such an approach would involve a great deal of time and effort.

None of these approaches are suitable for controlling and managing IT effectively in its role as an instrument for value enhancement. A.T. Kearney's 'IT performance management' approach (IT-PM) starts out from the disadvantages of the approaches above and used the balanced scorecard method in order to prevent IT from being controlled simply on the basis of cost considerations. The assessment also includes the scope and quality of the services provided: Variables such as 'service level performance' or 'improving business processes' are included as integral elements of a holistic management and control system. These non-financial indicators are early warning signs for financial misdevelopments – developments that are often discovered when it is too late. Furthermore, the balanced scorecard allows us to take into account conflicting contexts in a 'balanced' way - conflicting, for instance, in the sense that improving service quality can negatively impact costs – and therefore serves as a good basis for simulating business decisions. Particularly in the companies with differing business models and value chains, whose strategic orientation of IT therefore also varies, IT performance management provides a framework for integrating all the business units, but is flexible enough to take into account the differences.

For the first time, IT performance management allows companies to implement and control IT strategies systematically and to realize improvements and value enhancements, be they of a financial and non-financial nature. The company and any IT service providers involved gain transparency and come to a mutual understanding of the services and value contributions that are provided by IT. This makes communication and the joint controlling of IT services between the business units and IT a lot easier. IT performance management also creates the methodological base for continuous benchmarking and the systematic exchange of best practices within and outside the company.

And last but not least, IT performance management lies to rest the perennial conflict between the business units, which are more content-oriented, and IT, which is more technically-oriented, and forges a mutual basis for communication on planning and developing IT.

Deriving IT goals and Key Performance Indicators (KPI) from corporate strategy

Even when seeing IT from the value-oriented perspective, it is clear that IT is not an end in itself: All IT activities and IT projects should support the core business and corporate strategy. For this reason, IT performance management derives its objectives strictly from corporate strategy via IT strategy and quantifies them with the aid of clear, actionoriented variables – namely, the Key Performance Indicators (KPI). This approach is characterized by several guiding principles:

• A consistent framework: All business units try to develop a unified concept, whilst setting great store by taking into account the differences. If one business units pursue an entirely different line of business to the others in the group, this can be reflected in the IT performance management system. Yet, one must never lose sight of the search for a 'common denominator'. Therefore, a binding, consistent framework should be used for all business units prescribing the perspectives for the balanced scorecard, definitions of standard KPIs and standard forms of documentation.



Figure 2.5: Aligning IT performance management to corporate strategy; Source: A.T. Kearney

- The top down approach: Within this framework, CIOs and IT management develop IT goals and top KPIs based on IT strategy. The second step is then to cascade these down into the business units.
- The bottom up approach: The balanced scorecards and KPIs from the business units are integrated into a joint reference model.

The instrument-related approach: IT-PM is established and structured – in particular the balanced scorecard and the KPI definitions – on the basis of standards developed by software manufacturers on balanced scorecard standardization committees.

On the basis of these principles, the concept starts with the strategy of the company and the IT strategy that is evolved from it (figure 2.5). The corporate strategy is included in the concept as a given. Areas of corporate strategy are then identified which have a direct, value-enhancing influence on IT. For example, implementing an external growth strategy via fusions and acquisitions requires the support of IT in terms of its high flexibility and technical integratability.

Value chains, value driver models or business unit strategies are all suitable for structuring the cornerstones of an IT strategy. And it is important to take into account the varying levels of vertical IT scope (insourcing vs. outsourcing), organizational concepts (central vs. decentral) and standardization strategies (ERP standards vs. in-company developments) in the existing IT landscape. How far IT organization is evolved is also a factor that strongly impacts IT strategy: from having a systems-oriented data processing center as a partner through development partnerships with business units to integrated business partners for optimizing business processes.

To derive concrete IT goals, the IT strategy is summarized in one comprehensive top objective and broken down into smaller units (decomposition). A generic top objective of achieving a 'high level of IT efficiency and effectiveness' is then broken down into the components of 'efficiency' and 'effectiveness', in order to link these with real areas of action. The perspectives of the IT scorecard provide a balanced and complete basis for

decomposing the top objective into individual goals. In practice, six perspectives for the IT scorecard have proven to be very useful: namely, personnel, projects, customers and market, infrastructure, operations, finance and costs (figure 2.6). The selection and designation of the perspectives is based on the balance between monetary/non-monetary and early/ late indicators, stakeholders and budget structures. When selecting the perspectives, it is important to find effective terms for describing them which all IT stakeholders can identify with and which can be used to represent IT performance to the outside world.

Tips for formulating single IT goals:

- Formulate goals clearly and distinctly: It is crucial that you avoid any ambiguities and ensure that the content of the goals does not overlap.
- Address the entire IT organization: When initially amassing possible goals you should fully take into account the duties and areas of responsibility throughout the IT organization, before the most important goals are selected.



Figure 2.6: Perspectives of the IT scorecard (example)

A system of goals, consisting of one top objective, a number of target areas that do not overlap and are defined in line with the IT scorecard perspectives, plus the resulting detailed individual goals – all these things form a structured basis for recording all of the relevant parameters for measuring performance (figure 2.7). In practice, a high degree of flexibility, detailed IT knowledge and business expertise, and an good overview of the overall process are required for developing a system of goals that is consistent with IT strategy and corporate strategy and can be controlled using KPIs.

Based on the defined goal system, Key Performance Indicators (KPIs) are developed for measuring goal achievement. KPIs must be distinct from pure reporting variables, such as monthly data processing center costs, and must fulfill a number of requirements:

- Measurability and comprehensibility: KPIs must be easy to measure and to understand. As there are no universally valid KPIs, these should always be developed and specifically tailored to the concrete goals of the company, before establishing them on a company-wide basis.
- Clarity: Each IT goal can be allocated only one KPI, which measures goal achievement. For the point of view of transparency and effective control, a KPI should not be allocated to several IT goals at once.
- Broad scope: KPIs should represent a balanced mixture of financial and non-financial variables, and also early and late indicators. For example, employee satisfaction is a non-financial variable and also an early indicator and falling sales is a financial variable at the end of the cause-and-effect chain and also a late indicator.



Figure 2.7: IT goals system (example)

- Responsibility: For each KPI a KPI manager should be appointed within the company who is responsible for influencing its value. For example, the head of the SAP Basis Administration is responsible for the KPIs 'Availability' and 'Performance' of the SAP system.
- Action orientation: KPIs should be action-oriented; a change in its value should be a direct trigger for concrete measures. For example, time and budget problems are reflected in the 'Project' perspective as negative fluctuations of the KPIs 'Time deviation factor' and 'Cost deviation factor', and as such should immediately trigger a meeting of the steering committee.

When amassing potential KPIs for IT goals, it is important to address the duties and areas of responsibility of the IT organization as fully as possible. Only then should the most important goals and their KPIs be selected, namely according to the criteria of how relevant they are for achieving the top objective and how easily they can be implemented or rather how complex it is to measure goal achievement. This selection is important: A group-wide control instrument such as IT-PM should focus on the relevant and hard-to-implement IT goals that require special supervision. In practice, more than 130 strategic KPIs are developed and discussed to cover six perspectives, of which 40 are selected and defined for strategic control at CIO level. The most important KPIs are differentiated in line with the various balanced scorecard perspectives:

- Personnel: In the 'personnel' scorecard perspective, turnover rate, training days, employee satisfaction and qualifications are frequently named indicators. This perspective also takes into account legal frameworks and stipulations made by the personnel department. Important requirements are setting up an IT skills database and carrying out web-based satisfaction surveys, because this kind of information is generally not available in companies or is difficult to get hold of.
- Infrastructure: The 'infrastructure' perspective measures the technical basis for IT performance in terms of the degree of standardization and efficiency of technologies and security used. In this case, there tend to be less KPIs to discuss. On the other hand, the debate tends to be all the more intensive, for example, with the KPI 'Degree of implementation of standards', which frequently has emotions running high between headquarters and the business units. This also tends to be the case with security-related KPIs, which could imply restrictions for users. In cases such as these, conceptional preliminary work such as defining objects for standardization or correct asset management can be helpful.
- IT projects: For IT projects on developing and shaping the user landscape, important KPIs are the degree of goal achievement and cost and time deviance (figure 2.8). In addition, it is frequently clear in the debate over these goals that project selection ('doing the right thing'), and project planning and definition also need considerable management. For example, project activities must be clearly distinct from maintenance and small-scale developments that are assigned to operations as sustaining and not value-enhancing measures. Important conditions for management are setting up a tool-assisted project controlling system and formalizing project definition on the basis of project 'wish lists'.
- IT operation: After the project is completed, a finished application is put into operation. Failures or omissions in the project management will make themselves noticed later during operation in the form of higher maintenance costs and service levels that cannot be maintained. For this reason, important KPIs for the 'Operations' scorecard perspective are 'service level' for measuring availability and performance of the applications in a structured way, 'user support' via all support levels and 'managing the applications portfolio'. Depending on the productivity of the IT organization, process indicators can also be included: e.g. the duration and quality of IT processes and the measurement of automated business process applications. Important conditions for measurement are a structured and fully documented service level agreements from a customer perspective.
- Customer and market: Services in IT operation directly impact customer satisfaction and customer perception of IT. The most important KPIs in this perspective therefore measure customer satisfaction, and the quality and market success of services on the

basis of non-monetary variables. Customer goals should be differentiated according to customer segments, for example, users, management or external customers, so that goal achievement measurement is done using several different KPIs. Important requirements are setting up questionnaires, web-based survey tools and important survey processes.



Figure 2.8: How KPIs are assigned to the goals of the scorecard perspective (example)

Cost and finance: Finally, let us take a look of monetary indicators in the 'cost and finance' scorecard perspective. In cost center organizations, indicators such as 'IT costs to sales' ratios or 'IT costs per employee' are the most important KPIs because these are indicators for the relative efficiency of IT compared to other companies. In practice, global cost indicators are sometimes assessed as being irrelevant for control purposes because they are not action-oriented enough, whilst specific, universally recognized KPIs such as 'PC workstation costs' or 'application user costs for standard applications' are considered more advantageous in this respect. One initial challenge when defining the KPIs in this perspective lies in providing an action-oriented definition of the KPIs. At face value, an unfavorable ratio of IT costs to sales does not imply the need for immediate measures, whereas high 'SAP user costs' indicate a need for action. A second challenge lies in defining the KPIs in such a way as to make them truly measurable. The KPI 'PC workstation costs' is as concrete as it is action-oriented, but to be computed exactly it needs to be very precisely calculated, because not only hard- and software costs have to be assigned, but also those costs that result from implementation and maintenance.

After the KPIshave been developed, the CIO scorecard is drawn up. For this, all of the top KPIs are assigned to the defined perspectives. Experience shows that overall a man-

ageable number of 10 to 15 KPIs results from prioritization (although the numbers fluctuate depending on the type of company) (figure 2.9).



Figure 2.9: CIO scorecard (example)

In practice, the introduction of an IT scorecard is seldom a linear process. The selected KPIs are often subject to critical reflection from a number of different sides and thus given different priorities accordingly. The process demands a high level of flexibility and a sound understanding of IT from all those involved.

Anchoring IT performance management within the company

IT performance management can only be successful and meet all expectations as a management and control instrument if it is implemented and permanently anchored in the company. Anchoring is carried out via a number of different measures that are largely independent of one another.

- Detailing IT performance management for the IT organization.
- Establishing a continuous IT performance management process.
- Using tools for supporting IT performance management.
- Implementing IT performance management smoothly.

Detailing IT performance management for the IT organization

In medium-sized, homogenous and centrally organized companies, IT performance management in the form described in the previous section is usually sufficient. For larger companies with group-like structures, a more detailed IT performance management that cascades down into the supplying business units is recommended.

From the overall goal system, subsystems are derived for the business units that provide a basis for individually balanced scorecards for each business unit and at the same time are consistent and compatible with the superordinate balanced scorecard at wholecompany level (figure 2.10). This method allows target values to be broken down relatively easily from the superordinate balanced scorecards into the subordinate ones. On the other hand, the degrees of goal achievement measured in the business units can also be aggregated to the level of the whole company without much difficulty.

IT scorecard and KPIs form the framework based on which the systematic improvement of performance can be planned and monitored. However, the benefit occurs only as a result of agreeing on the target values for each KPI and on appropriate measures needed to achieve the target values. Comparable to economic policy goals in the areas of unemployment, economic growth or government expenditure rates, target values are fixed for IT such as the degree of standardization, customer satisfaction or availability. These target values must always refer to a period of time – usually one year or six months – to fore-stall actionism that has no direction.



Figure 2.10: Cascading the CIO scorecard down into the subsidiaries

Along with the target values, the measures, areas of responsibility and time periods must also be decided on jointly, and documented systematically (figure 2.11). This should not be done bureaucratically; however, a minimum level of systematic thought and structure is a basic prerequisite for being able to monitor the success of measures and KPI development and to deduce conclusions for the future from earlier decisions.

IT goal:	High level of customer satisfaction						
KPI:	Customer satisfaction						
Target value:	5.0						
Person responsible for achieving goal:	CIO						
Measures for achieving target value and areas of responsibility							
Proactive measures							
 Carry out customer analyses 	IT performance manager						
 Carry out user tests 	User support						
 Introduce user survey system 	User support						
Reactive measures if discrepancies							
 Carry out ad-hoc surveys and tests in test g 	roups User support						
- Increase communication with users short-te	rm CIO						

Figure 2.11: Template (example)

In practice, it has proven to be a good idea to link KPI compliance to employee objectives systems. However the introduction of employee incentive systems or even linking staff bonuses to KPI developments should be implemented step-by-step and carried out with caution. These way employees can learn to associate their personal methods of working with target variables - without personal risk. This learning process can then also mean accepting a coupling of the two in the long term.

Establishing continuous IT performance management processes

With the introduction of IT performance management, the participating companies and business units enter into the control process. IT performance management is an additional control instrument alongside financial controlling and accountancy, and therefore it should tie in with existing processes such as budgeting, in order to ensure consistency and optimize administration. Starting from the initial concept, the IT performance management process runs through four stages every year:

Stage 1: Aligning IT strategy with business strategy

- Stage 2: Adapting IT goals in line with the new IT strategy
- Stage 3: Deciding on and revising KPIs
- Stage 4: Comparing target values with the KPI value achieved and if need be making adjustments

The correct timing of the stages is crucial for integrating IT-PM processes into existing management and control processes (figure 2.12). Thus, IT strategy adjustments for the following year must be carried out in parallel or immediately after the planning for corporate strategy has taken place – usually at the beginning of the year. Within the IT itself, IT goals can then be fixed at the beginning of the year on the approved IT strategy. KPIs and target values are fixed parallel to the budget in the second half of the year, since target values and measures must be developed on the basis of the budgets that they have been allocated. At the end of the year, the agreed target values can be included in the annual employee performance reviews and staff can agree their personal goals based on achieving fixed KPI target values.

Actual KPIs are measured as a rule every quarter. Only those measurements that require more time and effort, e.g. customer satisfaction surveys, can be successfully carried out at longer intervals – for example once a year. Operational and support service levels as well as project controlling should thus be carried out monthly or weekly, so that if any deviations from the goals occur, measures can be developed to counter them in a timely manner. The actual values measured are compared with the target values – taking into account tolerance intervals depending on the relevant KPI. Any discrepancies between target and actual values are assessed and assigned a traffic light color – green, amber or red. The traffic light enables the KPI manager to analyze problem areas specifically – by drilling down the KPI to its influential factors – and to launch countermeasures.

Jan	Feb	Mar	Apr	Мау	June	July	Aug	Sep	Oct	Nov	Dec	\rangle
Management processes	Strategy review for whole group / business units		Strategy planning for whole group / business units		Finalizing strategic planning		Operative planning for whole group / business units		Budget review		Finalizin operativ planning employe interviev	g e I, ie vs
Integration into IT-PM	 Check implementation status of strategic IT goals Where necessary, adjust strategic IT goals 						Cheo statu Forn oper Align IT bu	ck imple us of open nulate ne ative IT n with udget	mentati erative l ew goals	on T goals	Perform ance evaluatio of IT sta	Sn ff

Figure 2.12: Integrating IT-PM into the management/control process in the company; Source: A.T. Kearney

How this is actually implemented within the company depends on the specific features of the company in question. As a rule, the CIO has ultimate power over the process and is responsible for its implementation. In larger companies, he is supported by an IT performance manager who manages the introduction and implementation of the IT performance management system and is responsible for day-to-day business - from deciding on the targeted values to reporting on actual values. Ideally, he also has fixed contacts in the business units to support him: either 'full-time' decentral IT performance managers, IT controllers or 'general' controllers, who are also responsible for local IT performance management. These contacts are responsible for collecting local values that must then be consolidated on the scorecard at CIO level.

Supporting IT performance management with suitable tools

Measuring and control efficiency can be significantly increased with the right tools. A central database that can be created with a tenable amount of effort collects the required information and is the core of the system. The use of a data warehouse system is ideal as the structures are flexible and there are a variety of possibilities for analyses. The KPI values can either be input via input masks where the data originates or automatically taken from operative systems lower down the line. For example, performance protocols on response times and availability can be read from the SAP system into a performance management tool using batch runs. The data cube concept of data warehouse architecture allows KPIs to be evaluated in other dimensions than the time dimension, using the concept of drilldown, e.g. the KPIS can be assessed by application, process or organizational unit. Turning the KPI analysis into graphics in the form of a dashboard and graphically displaying the balanced scorecard structure and the traffic lights makes it easier for the KPI manager to monitor and control results. A web-based interface supports the integration of the tool into the intranet or a personalized staff portal and thus makes access quicker.

The demands on applications logic and functionality are less complex. Setting up, changing and erasing KPIs should be possible within a very short timeframe due to authorization concepts oriented to the roles in the IT performance management system. It ought to be possible to fully automate the documentation of KPI definitions and in particular the stipulation of target values, measures and areas of responsibility. In addition, simulation components are conceivable that could simulate (based on quantitatively assessed causeand-effect relationships between the KPIs) how values will develop in the future in specific decision-making scenarios for the system as a whole. Supported in this way, IT performance management simplifies control processes and reduces the administrative effort required when designing, collecting data for and assessing KPIs.

Implementing IT performance management smoothly

When anchoring IT performance management in the company, the following sentence applies, which also holds true for IT projects: 'The world is complex, managing the complexity must be simple.' When introducing IT performance management, mathematically precise approaches such as quantitative weightings of goals and KPIs, and the correlations between them, should only be used if absolutely necessary. It is much more important to allow IT management to focus on the key strategic value drivers and thus to place the emphasis on goal achievement.

The introduction of an IT performance management system however presents a challenge to both IT management and the business units involved: IT strategy and IT goals must be addressed, prioritized and structured with those involved for all the business units. Further, meaningful KPIs for measuring goal achievement must be developed and prioritized. Both of these tasks are difficult to manage alongside day-to-day business. Therefore it is a good idea to set up a working group on IT performance management, which involves all of the areas working on the concept - for example, the relevant IT performance manager and other competent representatives from the business units and IT management. The working party functions as a 'standardization point' for defining new KPIs and developing the concept further. It also serves as a platform for exchanging experiences between the business units and presenting any measures taken and their impact on values to the other units, providing an opportunity for learning from each other's work.

The working group can also ensure that the input of all those involved in the process is heard and forms the basis for discussion. Furthermore, it also functions as a communications interface for company- or unit-wide IT performance management concepts. If the company already has a ratios-oriented perspective, for example as a result of data collection in the form of extensive monitoring and data processing center analyses, then it is difficult to get it to accept a broader indicator concept, for example, in terms of customers or employees. This can only be achieved by a superordinate committee.

Challenges to IT performance management

An international conglomerate with sub-groups in such widely differing sectors as chemicals, metals and real estate decided to introduce IT performance management to control and measure IT at group and sub-group level. The group CIO was responsible for group-wide IT strategy. Each sub-group had its own sub-group CIO and its own service providers. It also had varying levels of IT value creation scope, ranging from fully outsourced IT to IT services developed completely in-house.

The CIOs in all of the sub-groups were faced with the following challenges:

- It was difficult to control and monitor the implementation of IT strategies.
- There was no common ground for group-wide benchmarking or systematically exchanging best practices.
- The CIOs were under pressure to justify their budgets, since they were not able to present and communicate IT performance with sufficient transparency.

As a consequence, an IT performance management concept was developed for the largest sub-groups, the IT service providers, the holding company and the combined group. The aim was to create a common control instrument for increasing efficiency and effectiveness and allowing best practices to be exchanged among the sub-groups. Furthermore, the IT services were to be communicated better to the business units and stakeholders.

An IT performance management team from the sub-groups, consisting of representatives from IT management and IT controllers or IT performance managers, developed the concept with the close involvement of the CIOs. At first, the corporate strategy and IT strategy for each sub-group was recorded and the IT goals and KPIs for each sub-group were then developed and prioritized on this basis (taking care to create standard KPI definitions for each sub-group). Based on this, the CIO balanced scorecard was set up and cascaded down into the business units or IT units. The common IT scorecard covered some 40 detailed, well-defined strategic KPIs, taken from a base of some 140 IT-related KPIs. The IT performance management was then integrated into the control process and group reporting. Furthermore, the roles required for control were then anchored in the IT organization. Goal achievement for the performance indicators was then measured at the sub-group level in the group portal using a data warehouse solution. Based on benchmarking values, target values were then agreed on for selective KPIs, such as workstation costs or ERP user costs.

With IT performance management, the group was able to measure and control IT performance better. Furthermore, it was able to identify potential for improving efficiency and effectiveness more easily, and to develop suitable measures for achieving this. In addition, each CIO from the subsidiaries had a sub-group-specific IT scorecard for implementing specific IT strategy. All the CIOs were able to rely on a common basis for continuous benchmarking and exchanging best practice initiatives: The scorecard perspectives, KPI definitions and the overall methodology of their IT performance management system were all the same, and made communication and sharing experiences a lot easier.

Directly after it was implemented, the IT performance management system ran without a hitch and was already beginning to support the company in increasing IT efficiency and effectiveness. Thanks to this positive experience and the openness

and flexibility inherent in the system, they have since been able to integrate new, foreign subsidiaries into the system.

Checklist: Does the IT performance management system of your company enhance value through IT? Yes Is the implementation of the IT strategy given quantifiable support? Is there a systematic and structured basis for internal and external communi-cation between business units and users? Are the measures for goal achievement stipulated and measured in terms of goals and KPIs? Do the business units swap experiences on best practices? Can services be easily compared with internal and external benchmarking to recognize areas where performance could be improved? In the IT projects, is there a clear distinction between the areas of responsibil-ity for costs and services between project managers and those responsible for operations? Is there enough communication between those responsible for IT performance management, those responsible for operations and project managers?