executive briefing

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Performance Measurement Systems

For Product-Service Providers

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- Expand the size and capacity of the active UK research base on management
- Engage with practitioners and other users of research within and beyond the UK as co-producers of knowledge about management

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AIM research themes

Current AIM research projects focus on:

UK productivity and performance for the 21st century.
How can UK policymakers evaluate and address concerns surrounding the UK's performance in relation to other countries?
National productivity has been the concern of economists, government policymakers, and corporate decision-makers for some time. Further research by scholars from a range of disciplines is bringing new voices to the debates about how the productivity gap can be measured, and what the UK can do to improve the effectiveness of UK industry and its supporting public services.

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How can UK managers capture the benefits of innovation while meeting other demands of a competitive and social environment?
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How can UK managers disseminate their experience whilst learning from others?
Improved management practices are identified as important for enhancing productivity and performance. The main focus is on how evidence behind good or promising practices can be systematically assessed, creatively adapted, successfully implemented and knowledge diffused to other organisations that will benefit.

executive summary

An increasing number of firms primarily associated with the manufacture and sale of products now offer services as a part of their business model – in fact a third of large manufacturing firms globally, with that proportion increasing to almost 60% in the United States. In many cases, however, these firms have yet to apply a performance measurement system appropriate for the new products and service business model.

> An increasing number of firms primarily associated with the manufacture and sale of products now offer services as a part of their business model…

While promising practices in performance measurement for products-focused business are well explored, there are still no consistent and integrated foundations for the design and deployment of a complete performance measurement system for product-service providers that draws on all relevant performance perspectives. This executive briefing looks at the design and deployment of a performance measurement system for a product-service provider, as well as why certain performance measures are chosen and what factors underpin them.

In order to understand the nature of service performance in an industrial, product-driven enterprise, the research focused on a three-year study of Servino, a multi-billion dollar global equipment manufacturer active in more than 100 countries and employing over 30,000 people worldwide. In 2007, the service business amounted to around 40% of the consolidated annual revenues. The design of performance measurement systems was studied at corporate headquarters level, and the use of those systems assessed through the study of sales and service subsidiaries.

1 The three dimensions of performance measurement

Our research with Servino suggested that three important components were required to measure service business performance effectively.

- Service coverage addresses the question, "How many – or what proportion – of our (product) customers are also buying services?" It captures the extent to which an organisation has a service contract with its installed base of products, and reveals how well the service business competes against other service providers targeting the manufacturer's installed base of products. These could be specialised equipment servicers, facility maintenance companies, competing product-service providers, or even distributors. Service Coverage may cover service opportunities for other product manufacturers where appropriate. For products it also represents a measure of the relational strength with the customer base and a safeguard against product competition.

- Service realisation addresses the questions, "How well are we covering the service needs of those customers?" or "How well are we covering the service potential of an average customer?" Factors affecting service realisation include the type of service contract and the price level of the service offering. Service realisation can be presented as a ratio between actual service sales and potential sales of the most complete service offering. We suggest calculating potential service sales as the number of serviced products multiplied by the price of the most elaborate service plan (total responsibility plan with the entire auxiliary service offering).

- Complementarity index examines how overall performance is impacted by the effectiveness of the product-service relationship. The relationship between products and services is a complex one, due to the presence of both complementary and conflicting forces at work, and depends on the type of the service offering and its position in the lifecycle. Given that a good relationship implies co-development and a bad relationship implies mutual exclusion, we captured the nature and extent of interdependencies using a correlation factor between product and service sales – the complementarity index. A high positive index score indicates good integration of the product and service areas and the nurturing of good relationships between the two, improving performance and promoting sales. On the other hand, a high negative index means there are conflicts between the two businesses.

The relationship between products and services is a complex one, due to the presence of both complementary and conflicting forces at work…

2 An integrated view of performance – the servitisation matrix

The three service-oriented performance measures – service coverage, service realisation, and the complementarity index – must be added to product-oriented performance measures, such as market share, in order to cover the whole scope of market performance for a product-service provider.

The servitisation matrix

The servitisation matrix allows organisations to visualise the state of the service business and its relation with the product business (see Figure 1 on page 18).

Bottom left hand quadrant: Subsidiaries or business units in this quadrant need to grow, initially through attaining service coverage based on the basic service offering.

Bottom right hand quadrant: Where there is high service coverage but low levels of service realisation, customer intimacy can be attained by offering more sophisticated services to their customer base.

Top left hand quadrant: There is a high service realisation through offering sophisticated services but only to a subset of clients. Units should try to forge service relationships with more customers.

Upper right quadrant: Here units have attained service business targets; creating new growth opportunities will mean changing the existing business model.

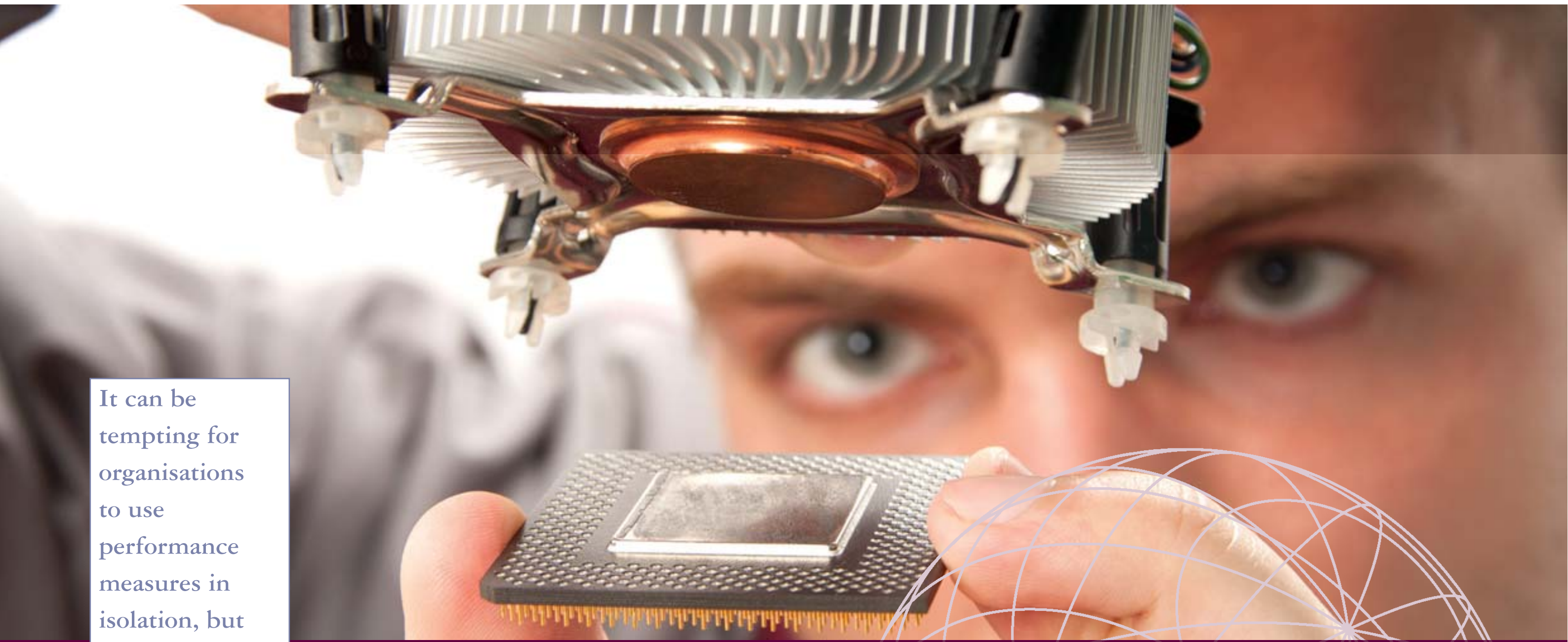
Colour: It is important to track the nature of the relationship with the product business, depicted by the colour and mark of the subsidiary. A positive relationship reinforces market success on both the product and service side. Negative interdependency, however, can be an early sign of a conflict between the two businesses.

Isolated use of performance indicators

It can be tempting for organisations to use performance measures in isolation, but this creates problems. As each measure sheds light on a separate aspect of performance, actions are taken as a result which may then have negative impact on another performance area. The indicators are intended to be used together to capture the complex interactive dynamics of the product-service provision relationships.

Competitive advantage

Many firms are still grappling with the challenge of implementing robust performance measurement systems for servitised businesses. As a result the performance measurement systems that have emerged from our research and that are outlined in this executive briefing present an opportunity both to measure performance more effectively and to make better strategic decisions accordingly. They are also a potential source of competitive advantage over other servitised firms.



It can be tempting for organisations to use performance measures in isolation, but this creates problems.

introduction: performance measurement and servitisation

The importance of performance measurement systems in various functional areas is well established.

An increasing number of firms primarily associated with the manufacture and sale of products are offering services as part of their business model. Recent data suggests, for example, that over a third of large manufacturing firms now offer services, with that proportion increasing to almost 60% in the United States.

This strong shift towards what is termed the servitisation of manufacturing means that existing performance measurement systems may no longer be effective. Instead of using the appropriate measures to track the performance of the product-service business, firms are often using inappropriate measurement systems leading management to take the wrong decisions and actions as a result?

It is an important issue as the interplay between complementarity and substitution that exists between product and service sales makes performance measurement more complex than when there is just a products business. Will managers, for example, who are focused on product based metrics, be tempted to give away services to secure product sales, knowing that in doing so they will not adversely affect their performance measures?

Performance measurement systems in manufacturing

The importance of performance measurement systems in various functional areas is well established. The management literature suggests that these systems may serve different purposes in an organisation. So for example a performance measurement system may be used to: formulate and communicate strategy throughout the organisation; control and influence behaviour in the organisation; guide the strategic planning process; perform a more diagnostic control function through goal setting and measurement of actual results; and incite management learning.

In general, performance measurement systems are used by higher-level managers to steer the behaviour of the middle management and subsequent layers of the organisation. In terms of what to measure in order to assess performance in service firms, initial studies focused on service productivity, but then extended to include service quality, customer satisfaction, and provider-customer relations in general. More recently, attention has shifted to measuring performance in service development and innovation.

One issue often discussed is the apparent reluctance of manufacturers to adopt service values and treat them as a business. This reluctance leads to a lack of defined business goals and, therefore, a lack of measureable targets.

There is considerable difference between typical manufacturing values and service-oriented values. So, for example, manufacturing favours efficiency and economies of scale while believing that variety and flexibility are costly. Services, however, is focused on innovation, customisation, and believes that flexibility and variety create profits.

Research has also suggested that there are certain important prerequisites for the design of performance measurement systems for services. These include profit-and-loss responsibility, as well as investment in service-oriented information systems to enable continuous monitoring.

The existing management literature offers various examples and suggestions regarding performance measurement systems for product-service providers, whether that relates to the need for specific types of customer-focused metrics, or internally focused metrics. However, there are still no consistent and integrated foundations for the design and deployment of a complete performance measurement system for product-service providers that draws on all relevant performance perspectives. As well as explaining how a product-service provider should design and deploy performance measurement systems, practitioners also need to know why certain performance measures are chosen and what are the factors underpinning them.

Our research, therefore, conducted in close collaboration with a global servitising manufacturer, examined the design and use of performance measurement systems and considered how a servitised manufacturer – or product-service provider – could design business performance measurement systems that reflect the performance of both its product and service business.

Methodology

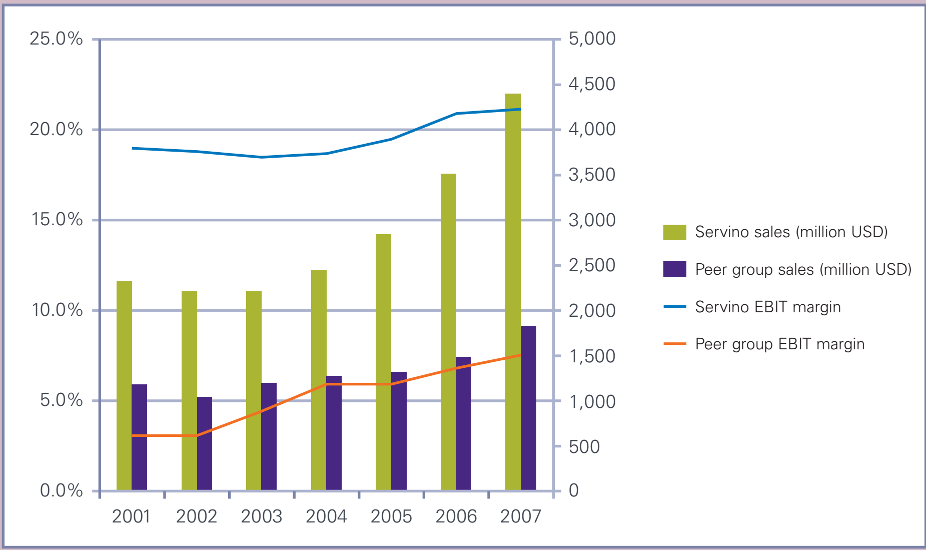
In order to understand the nature of service performance in an industrial, product-driven enterprise, we engaged in a three-year study of equipment manufacturer Servino, collecting quantitative and qualitative data that shows how the firm designs and uses performance measures.

The design of performance measurement systems was studied at corporate headquarters level, and use of those systems assessed through the study of sales and service subsidiaries responsible for the implementation of servitisation and that used the performance measures to steer the activities within their organisation.

Servino has gradually developed its service strategy over the last decade, and while doing so achieved outstanding financial performance, significantly outperforming the industry average (see Table 1). The firm was conscious of the need to track service performance and separated the reporting of service sales and gross profits fairly early on. At the time the study began the company already had information systems that tracked performance of services, and senior management at headquarters was experimenting with the design and use of service performance measures.

A global company, Servino is active in more than 100 countries and employs over 30,000 people worldwide. Consolidated annual revenues exceed 4 billion USD, with the contribution of the service business amounting to around 40% in 2007. The firm's product offering encompasses an assortment of equipment types that complement each other to cover a variety of industrial applications. For the majority of customers – mostly industrial manufacturers themselves – these products represent an investment, which will be part of their production units for a number of years. The whole range of products offers substantial potential for services.

Table 1: Servino financial performance overview



To supply customers with their product and service offering, Servino operates through a network of sales and service subsidiaries. Each subsidiary is headed by a general manager who is responsible for the provision of the entire product and service portfolio in a given country. In addition to geographical diversification, Servino is also divided into different business divisions, each representing a certain market segment, such as small equipment and large equipment.

Similarly, the subsidiaries are subdivided into business lines representing each of the divisions and with their own sales representatives and business line managers at the country level. A business line manager would report to their divisional head at headquarter level as well as the country general manager. Senior divisional management at headquarter level design performance measures for their respective divisions and define targets based on these indicators to the general managers. The general manager's success is then judged according to the performance achieved, using the same measures to steer actions within their organisations.

From product heritage to service evolution

i Heritage-product business performance measures

Before committing to a service business model in the early 2000s, Servino was strongly focused on the market performance of its products. Some parts of the firm, such as R&D and factories, had distinctive performance measures, but business divisions responsible for sales and marketing of different product lines relied predominantly on market share to track business performance.

The focus on market share as a dominant key performance indicator included regular tracking of market share, imposed on business divisions by headquarters, introduced in the incentive schemes of country business line managers, and reflected in the compensation of general managers.

Market share was calculated at a very granular level, for almost every product type. Strategic decisions, such as those with respect to the distribution channel structure, were optimised according to the impact on the market share. Similar practices were used to assign sales territories and decide on the potential recruitment and incentive systems.

Strategic decisions, such as those with respect to the distribution channel structure, were optimised according to the impact on the market share.

As well as market performance responsibility, general managers and business line managers were also responsible for the overall financial performance of the country subsidiary. This encouraged entrepreneurial behaviour at the subsidiary level and led to the development of local strategies, including the development of service activities at the subsidiary level. Services became a lucrative support activity and then a business. The same thing happened with most of the subsidiaries, with developed European markets leading the way. This service strategy was then picked up, pursued and reinforced by the corporate centre.

ii (Newly adopted) service business performance measures

Once the idea of service as a business had begun to gain traction with headquarters, a service strategy evolved around two goals: to achieve service contact with each of Servino's customers; and to create a more sophisticated service offering for each customer to climb the service ladder.

To promote services and track their development, headquarters introduced a reporting structure tracking sales and gross profits separately for products and services, rather than bundling service and product contributions together. This inspired managers to develop performance measures specific to service businesses.

While service sales and gross profit data ensured a certain level of transparency, it was really just a starting point for the development of market performance indicators. It took a long period of trial and error in approximate performance assessment of subsidiaries before it was eventually possible to distil core business goals for services. This was the first step in shaping service performance measures.

Two overarching goals emerged:

Service coverage: "How many, or what proportion, of our (product) customers are also buying services?"

and;

Service realisation: "How well are we covering the service needs of those customers?" or "How well are we covering the service potential of an average customer?"

It is these two complementary concepts that, together, are able to provide an assessment of the extent to which a firm exploits its service market potential.

a Service coverage

Service coverage indicates what percentage of a firm's (product) customers are also buying services. This ratio captures the extent to which an organisation has a service contact with its installed base of products (all products sold over the years).

The rationale for using this indicator in tracking service business performance is straight-forward. The installed base of products represents the main market for services. Service coverage, therefore, represents a service equivalent of the (product) market share. It reveals how well the service business competes against other service providers, such as specialised equipment servicers, facility maintenance companies, competing product-service providers, or even distributors that are targeting the manufacturer's installed base of products.

When the product lifecycle is lengthy, service encounters are often the only point of contact between the manufacturer and his customer.

If a manufacturer's service strategy extends to service opportunities of other product manufacturers, then service coverage can be extended to encompass all of the competitors' products in the market as well.

Service coverage is also an important indicator from the perspective of the product business strategy. When the product lifecycle is lengthy, service encounters are often the only point of contact between the manufacturer and his customer. For products, service coverage represents a measure of the relational strength with the customer base and a safeguard against product competition.

b Service realisation

Service realisation is concerned with how well the needs of the customers where there is regular service contact – are being met.

Factors that impact upon service realisation include the type of service contract. Subsidiaries routinely selling the most elaborate service contracts such as total responsibility plans or performance-based service plans are likely to be doing a good job of covering customers' needs and optimising the functioning of their machines. High coverage of customer's needs would also imply high capture of market potential and therefore high service revenues.

On the other hand, subsidiaries that confine themselves to the provision of spare parts, leaving it up to customers to service their equipment, cover only a subset of customers' operational needs, capture a lower portion of the service market potential, and generate less service revenues.

The price level of the service offering is another factor, given that the intangibility of services invites varying practices in service pricing. In Servino's case, for example, a couple of subsidiaries occasionally underpriced their service offering to promote products that these services accompanied. Subsidiaries using this practice wouldn't be able to reach high levels of service realisation, even if they sold comprehensive services.

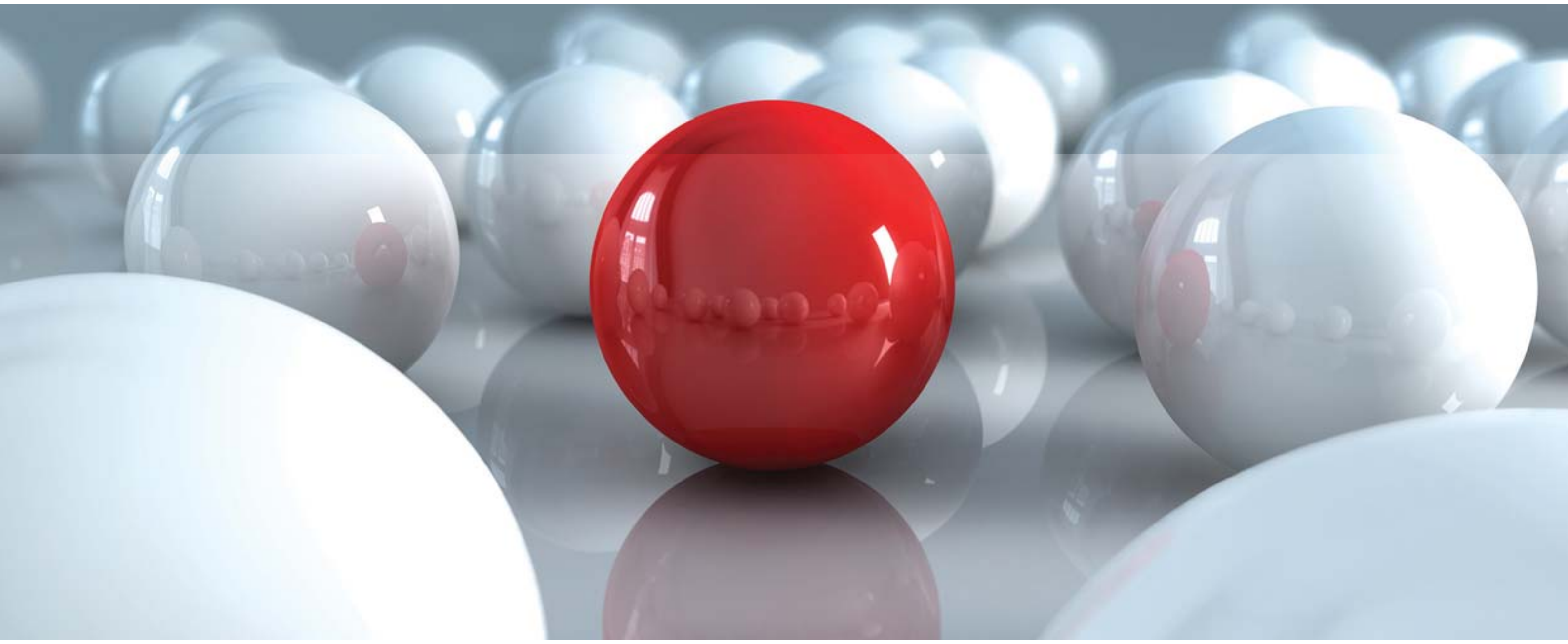
Headquarters could easily monitor product sales pricing through the transfer price mechanism. However, the pricing of services was largely in the hands of the subsidiaries' management, as was the production of services. As a result, these practices often went unnoticed by headquarters.

In contrast to service coverage, service realisation can be more cumbersome to measure, as one of its inputs is the sales potential of each customer or product type.

Service realisation can be presented as a ratio between actual service sales and potential sales of the most complete service offering. We suggest calculating potential service sales as the number of serviced products multiplied by the price of the most elaborate service plan (total responsibility plan with the entire auxiliary service offering).

iii Measure of interdependencies between products and services: Complementarity index

By complementing its existing measure of product performance – market share – with new measures of services performance – service coverage and service realisation – Servino adopted a performance measurement system tracking the standalone performances of both businesses.



Nevertheless, our research shows that, due to the nature of the relationship between product and service offering, these two isolated sets of performance measures are insufficient to measure all aspects of performance.

Servino extended its service offering to cover a wide scope of customers' service needs and improve the efficiency of their operations. Its service offering, however, remained related to its product portfolio. Because of the close connection between product and service offerings the overall performance is very likely to be impacted by the effectiveness of the product-service relationship. Therefore, a metric to measure the relational spillovers between the two activities is required.

The nature of the relationship between products and services is a complex one, due to the presence of both complementary and conflicting forces, and depends on the type of service offering and its position in the lifecycle.

…presales services such as consulting, design, customisation, installation and transport help existing product sales, provided they are of satisfactory quality.

On the complementary side of the equation, presales services such as consulting, design, customisation, installation and transport help existing product sales, provided they are of satisfactory quality. Equally, services that accompany the product sales process, such as financing and leasing, also facilitate the sales of the existing product, as do types of after-sales services focused on optimising customer's operations – rather than the product directly. The latter services cover those directly targeting the energy costs, risks of downtime and other costs associated with product functioning, and include monitoring, energy scans and similar.

Finally, after-sales services targeting the functioning of a product directly usually represent the most dominant category. In the short term these services, such as repairs and maintenance, support product business by helping to promote and sell existing products. In the long run, they support the manufacturer in three ways: customer satisfaction increases the chance that the customer will choose an existing provider for the replacement of his asset; a presence at the customer's facility increases the chance of selling related products; and a presence at the customer's facility also increases the chance of replacing equipment from other manufacturers.

There are also conflicting forces at work. While bundling products with maintenance may increase the likelihood of selling the existing product, the primary objective of the maintenance is to postpone the purchase of the replacement product, thereby directly harming product business in the next period. This substitution effect increases with the complexity and sophistication of service. While replacement parts and consumables are sold directly for the replacement of the various parts of the product, comprehensive overhauls – especially at the end of the lifecycle – postpone the replacement of the product.

A closer look at services and the picture becomes even more complicated. Existing products represent the base for service and a direct source of service potential. Nevertheless, one of the main tasks of a product division is innovation of its product offerings in order to provide higher quality products that require less servicing. As process innovation allows manufacturers to sell products more cheaply, so servicing becomes relatively less attractive compared to the purchase of a replacement product.

While Servino understood the positive relationship between products and services, it was less aware of the complex and potentially conflicting nature of the relationship between the two which needs monitoring at the individual subsidiary level, as it may stimulate short term trade-offs and suboptimisation.

a Measuring interdependencies

Prior to our involvement, Servino didn't have a formal way to measure the interdependencies between products and services, though interviews at multiple subsidiaries showed general managers were aware that the relationship needed monitoring

To design an indicator, and provide the firm with a formal approach to monitor interdependencies between the two businesses, we took a closer look at their sales processes – the critical point where synergies and conflicts usually arise.

When two businesses nurture a good relationship, they manage to capitalise on numerous cross-selling opportunities. For example, the product salesman will inform the service salesman about the product sold so that the service salesman can follow up with an offer. At the end of the lifecycle, the service technician and the service sales person will make a joint assessment about when it is optimal for a customer to stop servicing and replace the existing product with a new product. They will inform product sales, who will follow up with an offer. Multiplied by thousands of customers and interventions a year, a good relationship between the two businesses leads to complementarity and sales will co-develop.

On the other hand, the product and service staff can also act in a more self-interested way. If product sales want to optimise the sales offer by arguing that the product doesn't need servicing, they will fail to promote service sales and may even intentionally block them. Similarly, the service technician and salesman can propose endless makeovers of an old machine, even when it is neither beneficial to the customer nor the manufacturer overall. In this case, an increase in product sales will be associated with a decrease in service sales and vice versa.

Given that a good relationship implies co-development and a bad relationship implies mutual exclusion, we captured the nature and extent of interdependencies using a correlation factor between product and service sales – a so-called complementarity index.

Firms that nurture complementarities between products and services should promote rather than hamper each other's sales and therefore achieve a highly positive correlation factor. On the other hand, firms that let substitution supercede complementarity are likely to exhibit a negative sales correlation factor. Once we had calculated correlation indices between product and service sales over the period 2001-2008 we were able to assess the direction and extent of interdependencies between the two activities for each subsidiary.

Subsequent case studies have shown how the complementarity index corresponds with the presence or absence of mechanisms to integrate product and service activities. Subsidiaries with a high positive index achieve integration and nurture good relationships between the product and service area, whereas subsidiaries with a high negative index experience conflicts between the two businesses.

The need for integrated view and dangers of individual use

i An integrated view of performance indicators

The three service-oriented performance measures – service coverage, service realisation, and the complementarity index – must be added to product-oriented performance measures, such as market share, in order to cover the whole scope of market performance for a product-service provider. Service coverage and service realisation reveal the performance specific to the service market, while the complementarity index depicts the nature of the relationship between product and service business.

a The servitisation matrix

Organisations can use a matrix to help visualise the state of the service business and its relation with the product business (Figure 1). The servitisation matrix allowed management at Servino's headquarters level to craft specific development targets for each of the subsidiaries according to its position. Results on the matrix can be interpreted as follows:

> Service coverage and service realisation reveal the performance specific to the service market…

Bottom left hand corner: Subsidiaries that appear in the bottom left corner are charged with a mission to grow. Though the growth trajectory is left to the discretion of a subsidiary, service business development usually starts by attaining service coverage based on the basic service offering, then progresses towards higher echelons of service realisation by upgrading the offering.

Bottom right hand quadrant: The subsidiaries that have achieved higher service coverage, but have low levels of service realisation, can be found in the bottom right quadrant. Their mission is to achieve customer intimacy by offering more sophisticated services to their broad service customer base.

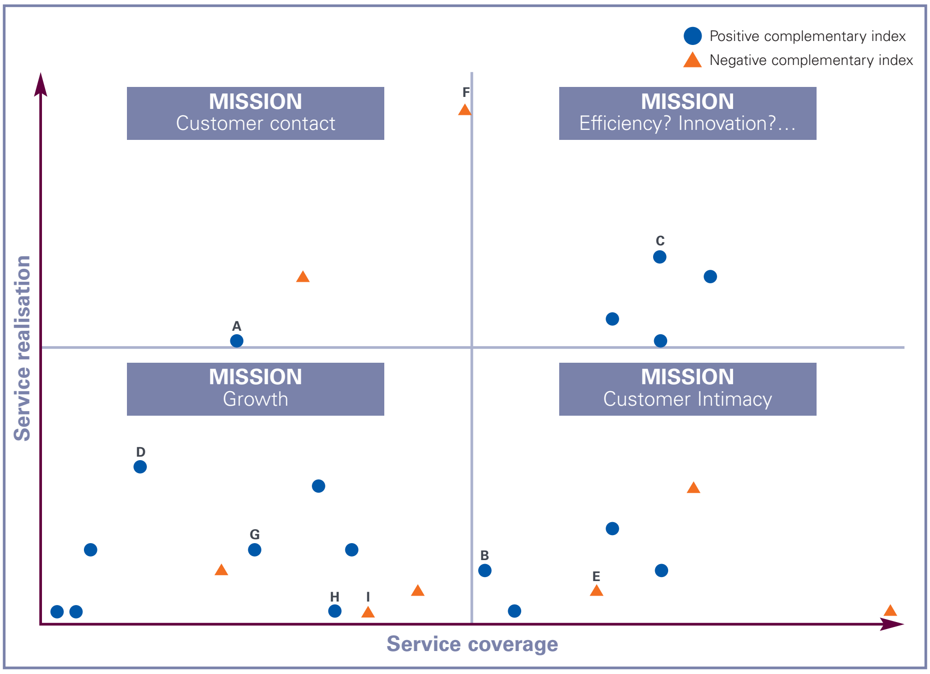
Top left hand quadrant: Subsidiaries in the upper left corner achieve high service realisation by offering sophisticated services but only to a subset of clients. These units should try to forge relationships with more customers, even if that means starting from a more basic service offering.

Upper right quadrant: Subsidiaries mapped in the upper right quadrant have attained service business targets, but are reaching the point of saturation within the existing integrated service business model. These subsidiaries have covered most of the existing installed base of products with sophisticated services. Creating new growth opportunities means changing the existing business model. For continued growth trajectory within these subsidiaries, the manufacturer may need to evaluate different strategic options, such as service innovation, product diversification, productisation of services or unrelated servitisation. Alternatively the subsidiaries could focus on process efficiency and concentrate on achieving high profit margin.

In Servino's case the servitisation matrix reveals the growth limitations of the integrated service business model for some subsidiaries, but also shows that Servino has a significant growth potential to exploit before the current business model becomes a limiting factor.

Besides the position on the matrix, which reveals the state of the service business, it is important to keep track of the nature of relationship with the product business, depicted by the colour and mark of the subsidiary[1]. A positive relationship reinforces market success on both the product and service side. Negative interdependency, however, can be an early sign of a conflict between the two businesses, which can eventually lead to erosion of both businesses.

Figure 1: Service business performance of subsidiaries in 2008



By offering a perspective on each service-related indicator, the servitisation matrix succeeds in providing the full picture of service-oriented performance. Using a performance measurement system that reflects the natural trade-offs of a service business forced Servino's subsidiaries to look for a business approach that balances breadth of service coverage with depth of service realisation.

In order to achieve this optimum, a handful of subsidiaries decided to devote time and resources to perform customer base segmentation. This in turn allowed them to understand which customer segment offered the potential to increase breadth through economy offerings, characterised by low price and basic services, and which customer segment could provide depth through premium service offerings.

[1] It is also possible to represent the strength of relationships as well as the direction.

As responsibility for service and product business performance resides with the product and service business line managers, respectively, particular attention must be paid to the complementarity index – one of the crucial measures of overall business effectiveness.

ii Isolated use of performance indicators

It can be tempting for organisations to use each performance measure in isolation, but this can create problems. Each measure sheds light on a separate aspect of performance and calls for actions that remedy that specific performance aspect. Focusing on an isolated performance measure can lead to neglecting other performance aspects. Furthermore, the optimisation of one performance area can sometimes turn out to be at the expense of another performance area.

For example, just to optimise service coverage a service business line manager would prefer a basic one-fits-all service offering, such as spare parts or repairs, with very low prices. On the other hand, boosting service realisation on its own would require an entirely different set of strategic choices. Pricing should be relatively high in order to achieve high service revenue potential, and the customer focus on a smaller number of highly lucrative clients; going for a high scale approach is much easier to do with basic service offering.

It can be tempting for organisations to use each performance measure in isolation, but this can create problems.

The product and service business line managers are rewarded mainly on the basis of the performance of their own area of responsibility. As a result it is easy to imagine how they might want to take daily decisions that jeopardise the other activity or sub-optimise returns for the overall firm.

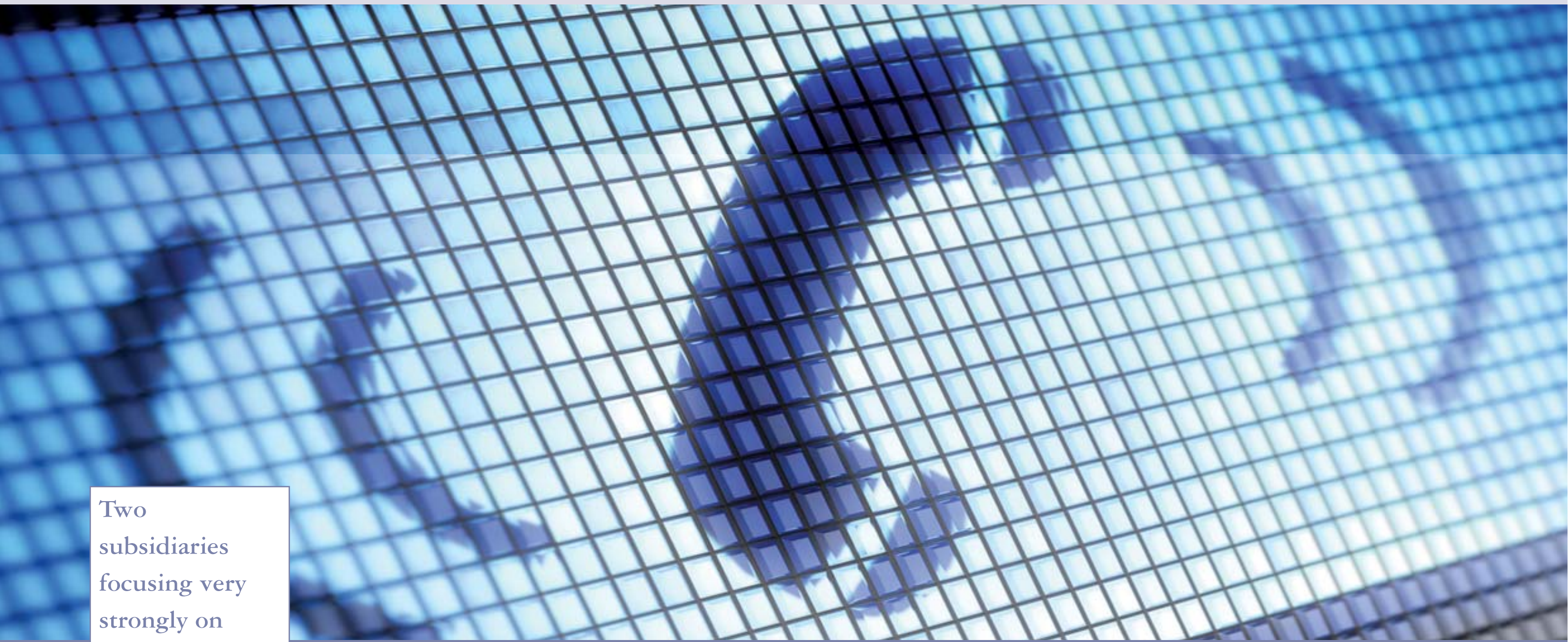
A number of examples from Servino’s subsidiaries illustrate the performance outcomes that can result from neglect or overemphasis of different types of performance measures.

a Over-focus on market share and service coverage

Two subsidiaries focusing very strongly on market share, and neglecting any aspect of service performance, missed the opportunity to capitalise on the service market potential. More specifically, an over-focus on market share prompted them to sell very basic services and to offer services at a discount, in order to sell products more easily. Organisationally, this strategy was advocated by the product-focused general management of the subsidiaries, and further strengthened through the incentive schemes; salesmen were rewarded on the basis of market share and product performance and had no motivation to promote services.

b Over-focus on service realisation

Two other subsidiaries went in the opposite direction. Guided by the best intentions to develop the service business, they concentrated on the sophistication of their offering by using service realisation. Over-focus on service realisation made the subsidiaries concentrate on top-tier customers, trying to supply them with a state-of-the-art service offering. In comparison to this, the basic service offering seemed less interesting and less lucrative and the subsidiaries wouldn't go the extra mile to design and implement a sales strategy that would suit the economy customers. This practice led to lost opportunities in lower customer segments and lower service coverage.



Two subsidiaries focusing very strongly on market share, and neglecting any aspect of service performance…

c Lack of focus on the complementarity index

While the complementarity index was not formally used as an indicator before our contributions, the case studies revealed that certain subsidiaries were using informal mechanisms to track the nature of the relationship between products and services. For example, subsidiary management teams would hold regular meetings with both product and service representatives to monitor the relationships and review certain cases where conflicts appeared. Other subsidiaries appointed joint supervisors, who were responsible for monitoring the interaction amongst the front line personnel and making sure that the potential synergies were utilised.

On the other hand, some subsidiaries have regarded the relationship between the two businesses as a black box. General managers would independently communicate with product and service business line managers, who would in turn manage their businesses separately. Once the complementarity index was calculated, it revealed differences between the subsidiaries. The ones that nurtured product-service relationship had a highly positive correlation index, while the ones that neglected this relationship and allowed for the conflict to escalate had a highly negative index.

Once the complementarity index was calculated, it revealed differences between the subsidiaries.

The two subsidiaries with an over-focus on market share also had a highly negative complementarity index. In their case, over-focus on market share not only led to the loss of service market potential, but it has also led to conflicts between the two businesses, due to an injustice perceived by the service side.

While neglect of the service potential seemed to be a cause of both low service realisation and a negative complementarity index, it seems that the complementarity index was the more sensitive. In one subsidiary, loss of service market potential was isolated to dealings with distributors and had a negligible effect on service realisation as distributors accounted for less than 10% of the customer base. Nevertheless, perceived injustice distorted the relationships between the two departments and the conflicts were reflected in the lack of sales synchronisation, causing a dip in the complementarity index.

conclusion

With the number of firms adopting a business model that combines a product and service component increasing there is a real need for a rethink on performance measurement systems. Servitisation requires a different approach as performance measurement systems designed for product-only business models are ineffective.

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This executive briefing provides a unique integrated perspective on market performance measurement. Service-related market effectiveness is a critical performance aspect for a servitisation provider for two reasons.

First, for services to be accepted as a business – rather than treated as a support function – and merit subsequent investments, market effectiveness must be demonstrated. Second, as products and services may possibly have conflicting objectives they need a performance measurement system that captures the nature of the interdependencies between the two activities.

Our research shows that two indicators, service coverage – breadth of service presence – and service realisation – depth of service presence – are the best measures to capture service market effectiveness and complement market share as an indicator of product market effectiveness. In addition, the complementarity index assesses the quality of the relationship between the two businesses and the nature of their interdependency.

Crafting a performance measurement system that integrates both product and service perspectives is crucial for the success of the product-service provider. The first priority for senior management that seeks to develop service business is to understand and raise organisational awareness of the relevant performance constructs. Knowing each aspect and all of the important performance aspects that should be measured is of utmost importance.

At the same time, the quality of the indicators is also very important. Measures, and more importantly approximations, need to be representative of the constructs that they are supposed to represent. A biased measure might be an inferior solution to not having a measure at all, taking into account the frustrations and sometimes even hostility that it raises within the organisation.

We concentrated on service business performance and market effectiveness, however there is a need for further research. This might look at how product-service providers should measure their innovative performance, or it might explore the development of new measures of operational efficiency, employee and customer satisfaction according to the specific needs of the service environment.

In the meantime, however, senior managers in servitised businesses would do well to implement an integrated set of performance measurement systems that accurately capture market performance for both the product and service businesses. In particular, they should incorporate two performance measures complementary to traditional product business performance measures, such as market share – service coverage and service realisation – and a complementarity index tracking the impact of the relationship between service and product business performance.

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