

Outcome-based contracting

Changing the boundaries of B2B customer relationships



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The Advanced Institute of Management Research (AIM) develops UK-based world-class management research. AIM seeks to identify ways to enhance the competitiveness of the UK economy and its infrastructure through research into management and organisational performance in both the private and public sectors.

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- Working in cooperation with leading international academics and specialists as well as UK policymakers and business leaders...
- Undertaking a wide range of collaborative research projects on management...
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- Conduct research that will identify actions to enhance the UK's international competitiveness
- Raise the quality and international standing of UK research on management
- 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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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.

Sustaining innovation to achieve competitive advantage and high quality public services.

How can UK managers capture the benefits of innovation while meeting other demands of a competitive and social environment?

Innovation is a key source of competitive advantage and public value through new strategies, products, services and organisational processes. The UK has outstanding exemplars of innovative private and public sector organisations and is investing significantly in its science and skills base to underpin future innovative capacity.



Adapting promising practices to enhance performance across varied organisational contexts.

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.

Outcome-based contracts (OBC) – that allow customers to pay only when specified outcomes are delivered rather than merely activities and tasks – are becoming increasingly popular because of the advantages they have over conventional service contracts. In doing so, these types of contract are changing the way service providers and customers interact and create value. OBC redefines the way that organisations deliver goods and services, bringing about significant internal change within organisations.

Our research shows that OBC offers a number of potential benefits for both service providers and customers, in particular:

For the customer:

- **Efficiency and predictability gains from paying for outcomes:** By only paying for a measurable specified outcome which is predictable, customers are able to make more accurate cost projections.
- **Lower servicing costs:** OBC lowers total contract costs as both customer and service provider contribute complementary resources towards a joint outcome.
- **Lower transaction and monitoring costs:** Better alignment between the interests of the customer and service provider and guaranteed outcomes, means that less scrutiny of service providers is required and internal customer costs related to ensuring the outcome may be cut.
- **Increased motivation of service providers to provide high quality outcomes:** If payment of service providers is dependent on delivering measurable outcomes, there is greater motivation for service providers to perform high quality work.

For the service provider:

- **Effectiveness which breeds efficiency and security:** OBC leads to greater internal effectiveness, which in turn leads to greater staff satisfaction and loyalty, and also greater customer satisfaction and loyalty.
- **Opportunities for greater control and efficiency:** OBC involves a closer relationship between the service provider and customers. As a result the service provider is more able to optimise and control outcome delivery, maximising opportunities to reduce the cost of performance while still achieving acceptable outcomes by, for example, capacity sharing across multiple contracts.
- **Opportunities for innovation:** Service providers can use their first-hand experience of working alongside the customer to drive innovation that meets the customer's changing requirements. New processes required to deliver OBC may also prompt internal innovations such as the empowerment of cross functional service teams spanning multiple organisations.
- **Sustainable competitive advantage:** Managing customers to optimise co-creation and co-production effectively is an integral part of successful OBC. Service providers that become adept at customer management can develop a unique competitive advantage providing more opportunities for the service provider to win contracts.

If payment of service providers is dependent on delivering measurable outcomes, there is greater motivation for service providers to perform high quality work.



Our research also shows that OBC presents a number of challenges for both service providers and customers, for example:

The OBC performance triangle: Producing a successful outcome requires a difficult balance of a number of elements, notably the customer, the service provider and the external conditions that impact on delivery of the outcome. The customer and the service provider must agree on what a successful outcome is and what measures are required to provide that definition. The service provider must have the capacity to provide the outcome under various external conditions that could influence the joint delivery of outcomes.

Understanding value-in-use: Implementation of OBC requires an understanding by all parties of the processes, competencies and assets required for the customer's 'usage' of the service to achieve outcomes under different conditions.

Towards a service system value architecture: Delivering value within OBC requires a service system value architecture that includes resource integrators, people in service provider and customer organisations, integrating resources, such as equipment, materials, knowledge and skills; co-creating value and innovating in service offerings that affect both the customer and the service provider's systems.

Changing business models: Although contracting on outcome is intuitively appealing to the customer, it poses a huge challenge for the service provider as it changes the service provider's business model.

Recent studies have identified several challenges related to the new business model, including: increased complexity and unpredictability in costs; tackling the cultural change required to make the transition from traditional contracting; a perceived loss of control; uncertainty arising from a lack of traditional boundaries between organisations; challenges associated with achieving coordination of all the suppliers involved in delivering the specified outcome.

Despite the many challenges associated with the transition from conventional to outcome-based contracting, it is highly likely that OBC is the future of B2B service contracting – and may even make inroads into B2C contracting. As a result, it is imperative that organisations, both service providers and customers, and indeed all parties involved in the service value constellation, understand what is entailed in the effective delivery of outcomes under contract. At the same time, that organisations prepared to deal with the transformation involved in acquiring true service value delivery capabilities.


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introduction

One significant organisational phenomenon of the late 20th and early 21st century is the radical reshaping of the innovation and R&D landscape. New models of innovation are reshaping traditional industry boundaries, in some cases bringing organisations that are usually competitors together in cooperative partnerships, in others breaking down boundaries between the organisation and the customer as both strive to create greater value by working more closely together.

Now this shift in organisational boundaries and relationships is beginning to permeate other aspects of organisational life. A good example is the transformation of the service contract landscape, as service providers and customers begin to abandon traditional forms of service contract for outcome-based contracting.

Outcome-based contracting, or its narrower equivalent of performance-based contracting, is a contracting mechanism that allows the customer to pay only when the firm has delivered outcomes, rather than for merely activities and tasks.¹ While this might still be a little far-fetched for consumer goods, the idea of contracting for outcomes in B2B service contracts is becoming increasingly popular especially in the service of maintaining equipment.



Traditional service support or maintenance, repair and overhaul (MRO) contracts often benefit the service provider at the expense of the customer, since the service provider earns revenue only when a particular equipment is faulty. This does not align the needs of the customer with the service provider, indeed the service provider, for example, has no incentive to ensure the equipment continues to function well. At its extreme, it may result in the perverse behaviour of a service provider providing low quality equipment just to earn higher revenues from providing services later on.

OBC is designed to put an end to such behaviours. If the service provider is only paid on the basis of outcomes, the service provider has an incentive to ensure that the equipment is of high quality and delivers the performance promised. Indeed, contracting on outcomes has the added benefit that the service provider is incentivised to think of innovative ways (such as better quality spares or parts) to ensure the equipment does not break down, and the outcomes are consistently provided. Such contracts are now starting to be of interest to key players in service support and MRO services, particularly in the logistics domain for the defence and the aerospace industries.

Under Rolls Royce's 'Power by the Hour[®]', for example, the continuous maintenance and servicing of the engine is not paid according to the spares, repairs or activities rendered to the customer, but by how many hours the customer obtains power from the engine.

Similarly, if the customer wants a reliable and consistent performance from a piece of equipment such as a photocopier, a fastjet or an MRI scanner, an OBC contract would charge the customer a flat price that either guarantees the beneficial outcome from the use of the equipment (e.g. 10,000 clear copies on a photocopier or some other Key Performance Indicator) or allows the customer to pay only when the outcome has been achieved (e.g. a fixed amount for each clear copy).

This business model extends across a variety of sectors, for example, leasing agreements where customers buy the right to use someone else's physical equipment through leases. It even extends into the public sector – for example – in private finance initiatives where long-term outcome-based contracts are agreed for hospitals, jails and even schools. Other variants of outcome-based contracting include all those with 'no win no fee' offerings, e.g. legal agreements in which the customer only pays if the legal firm provides the required outcome, and revenue sharing models in consultancy where the fees paid to the consultancy are a function of the savings delivered.

Outcome-based contracts have been shown to provide huge cost efficiencies to customers as both the firm and the customer's objectives become much more aligned.² In essence, outcome-based contracts drive home the concept of value-in-use, where value is defined as the benefit the customer obtains through use.³ They compel the firm to bring customer usage in as part of its responsibility to deliver the outcome.

OBC may offer many benefits, although in order to obtain these benefits the parties involved must deal with a number of challenges including: defining outcomes satisfactorily; understanding and measuring value-in-use; aligning incentives; creating a service system value architecture; understanding the economics of OBC; dealing with new business models.

This AIM briefing examines the increased use of outcome-based contracting, explains how OBC works and the benefits it offers as well as outlining the challenges that practitioners face in implementing such contracts, as well as providing some insight into how they might meet these challenges.

outcome-based contracting explained

Outcome-based contracting is not entirely new; the literature traces it back as far as the 1960s, the U.S. Government having been using the technique to optimise public spending. Defence contracting has used OBC to address issues such as ‘incentives to produce good performance’ and ‘incentives apart from profits to induce innovation’.⁴

OBC has by no means been limited to defence but has been widely adopted in other public services such as health⁵ and transport.⁶ The U.S. Institute of Medicine has been using OBC as a cost efficient way to manage and ensure the effectiveness of some of its services. OBCs have been initiated with local health centres to monitor and evaluate their performance and reward the centres that prove themselves as efficient. In the transport sector some researchers have shown that OBC is a mechanism capable of stimulating economic effectiveness and efficiency throughout the contract lifecycle.⁷

The idea behind OBC is quite simple: a customer buys the outcome of the product or service that is delivered, rather than merely the parts or repair services required to restore or maintain a product. In official U.S. Department of Defense guidelines, the government gives this definition of performance-based logistics: “The essence of Performance Based Logistics is buying performance outcomes, not the individual parts and repair actions... instead of buying set levels of spares, repairs, tools, and data, the new focus is on buying a predetermined level of availability to meet the [customer’s] objectives” (§5.3 in Defense Acquisition University 2005a).

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Contracting for availability

In the UK, OBC has been implemented in the military sector, with its strong emphasis on availability contracting. Contracting for Availability (CfA) is a commercial process which seeks to sustain a system or capability at an agreed level of readiness, over an extended period of time, by building a partnering arrangement between the Ministry of Defence and industry.

The result of this process will be a type of outcome-based contract called an *Availability Contract* where the outcome is a clear operational availability of the equipment, which should include incentives for both parties to improve efficiency and effectiveness over the life of the agreement. This is similar to a comprehensive Contractor Logistics Support (CLS) arrangement, which uses availability as its principal metric. CfA can be applied to new capabilities and legacy systems in any environment, at various levels. Fundamentally it must address the availability of what, when and where. Availability contracting can be applied to various assets but is particularly useful for equipment, where availability is relatively simple to define.

The challenge for OBC is to define the appropriate outcome i.e. 'what is success', and to determine if such successful outcomes can be measured and delivered.

Without doubt, this new contracting strategy is fast becoming an important component of the management of after-sales service supply chains, with implications that reach beyond defence and aerospace contracting, into certain retail sectors. Customers and suppliers of mission-critical products, such as semi-conductor manufacturing equipment, commercial aircraft and military weapon systems, recognise that the acquisition of world-class products is not enough, but rather it is necessary to find innovative and cost efficient ways to achieve the same outcomes through reduced production of materials (sustainability), and better service and maintenance throughout the useful life of the equipment.⁸

While it seems that OBC is limited to logistics and MRO services, there are several parallels to OBC in other service industries. The concept of OBC is to contract on outcomes, and that outcome could be the availability of equipment (95% availability of a photocopier), or it could be the outcome from the use of the equipment (10,000 clear copies).

Indeed, outcomes could range from a simple outcome of an activity to more complex outcomes of use by the customer. This is not so different from utilities and telecommunications, where customers pay for availability (such as a contract or subscription fee per month for the availability of phone lines), or for use (such as a pay-as-you-go mobile phone service or based on meter readings of electricity). The challenge for OBC is to define the appropriate outcome i.e. 'what is success', and to determine if such successful outcomes can be measured and delivered.

Indeed, within the service domain, OBC can be extended still further. If a customer chooses to buy a radar, the customer is in effect buying the radar's outcome of sensing. It isn't surprising therefore that in an outcome-based contractual environment; the customer does not need to own the radar, but purchase the availability of sensing. Such a business model has huge implications on the service provider's internal structure and organisation.

The technology that enables outcomes

Interestingly, technological developments, especially in terms of information and communications technologies, are extending the scope for outcome-based contracts. Take, for example, John Deere, an apparently traditional manufacturing business offering large scale and complex agricultural equipment such as combine harvesters.

In 2007 John Deere introduced iGuide technology. By installing a GPS system on its combine harvesters John Deere was able to introduce a new service to its customers. Using GPS technology the firms now tracks the position of ploughing implements in fields. In the past farmers used to create a 10 per cent overlap between furrows to ensure that they ploughed the entire field. Now, with the GPS tracking system, they can increase the productivity of the ploughing process by 10 per cent because there is no longer a need to leave the overlap. What outcome does the farmer want? Quite simply, farmers want ploughed fields. By integrating technologies – GPS tracking and combine harvesters. By doing so, John Deere could also contract on an outcome basis, thus increasing efficiency for farmers.

the benefits of outcome-based contracting

Outcome-based contracts are becoming popular because of the advantages they have over conventional service contracts. Indeed OBC offers a number of potential benefits for both service providers and customers, and these are outlined over the following two sections:

1 For the customer

a Efficiency and predictability gains from paying for outcomes

A major benefit of outcome-based contracts is that you only pay for an outcome which is predictable, and this allows firms to make more accurate cost projections.

A good example is a type of OBC called 'Power by the Hour[®]', a term coined by Rolls-Royce over 20 years ago to describe their outcome-based contracts for engines and other avionics products that were sold to commercial airlines. With these contracts the customer pays for the servicing of the engines according to the number of hours the engines were in the air, thus aligning the cost of engine servicing to the customer's operational and revenue generating activities.



As Rolls-Royce puts it: "These programmes provide the operator with a fixed engine maintenance cost over an extended period of time. Operators are assured of an accurate cost projection and avoid the costs associated with unscheduled maintenance actions".⁹

b Lower servicing costs

Another benefit of OBC is that it lowers total contract costs. For example, when Rolls-Royce was awarded an availability-based contract for the maintenance and upgrade of Tornado engines at RAF Marham, the pilot project revealed that there was a 35 per cent reduction in the number of repairs needed.¹⁰

Managing OBCs usually leads to greater internal effectiveness as a result of the improved understanding of, and alignment with, customer end requirements.

c Lower transaction and monitoring costs

Outcome-based contracts should provide better alignment between the interests of the customer and service provider, and as result mean that less scrutiny of service providers is required.

In the case of the ATTAC contract (Availability Transformation: Tornado Aircraft Contract), for example, BAE Systems contracted for the maintenance of the Tornado fleet inclusive of spares support, technical support and training on the basis of the outcome of a set number of flying hours. Thus the ATTAC contract provides the RAF with a guarantee that Tornado aircraft availability, capability and effectiveness will be maintained throughout its service life.

In turn, the guaranteed outcome of an outcome-based contract, may enable the customer, in this case the UK Ministry of Defence (MoD), to reduce staff numbers and the facilities required to perform tasks related to the purchase and requisition of spares and equipment. In addition, the customer could substantially lower transaction and monitoring costs. The ATTAC contract, for example, is reported to be able to save the customer up to £510m over a ten year period.*

d Increased motivation of service providers to provide high quality outcomes

If, as is the case with OBC, service providers are paid in accordance with measurable outcome targets they are therefore motivated to perform high quality work in order to achieve the targets that trigger payment. This is because at the heart of OBC lies the notion that risks and incentives should be more equitably aligned between suppliers and customers than has been possible under traditional 'fixed-price' or 'cost-plus' contracts.

2 For the Service Provider

a Effectiveness which breeds efficiency and security

Managing OBCs usually leads to greater internal effectiveness as a result of the improved understanding of, and alignment with, customer end requirements. This, in turn, improves internal effectiveness with higher staff satisfaction and loyalty and reduces costs (e.g. staff turnover) and improves the effectiveness of service delivery with the customer.¹¹

Effective service delivery also enables value co-creation and the development of sustainable relationships which then results in efficiencies – satisfied customers remain loyal customers and a loyal customer base is far more efficient than constantly seeking new customers.

*BAE Systems Case Study: www.baesystems.com/WorldwideLocations/UnitedKingdom/UKDefenceIndustrialStrategy/CaseStudies/autoGen_10721411422.html

b Opportunity for greater control and efficiency

If organisations find that OBC allows for greater efficiency in delivering outcomes, then they are likely to give the service provider greater control over the delivery of the service.

When systems and processes are set up to deliver to the point of handing over to the customer in the conventional manner, then the customer is left to realise the value proposition. With OBC, however, the customer is brought into the organisation's sphere, allowing the service provider to optimise its delivery systems together with the customer.

Greater control over service delivery provides flexibility in reducing the cost of performance while still achieving acceptable outcomes; it allows capacity sharing across multiple contracts providing improved resource utilisation and therefore cost efficiencies.

c Opportunity for innovation

Another advantage for service providers is that they are more able to anticipate the customer's needs because of the close customer relationship that they have via an OBC. So, as the customer environment changes, a service provider that contracts on outcomes could use their first-hand experience of working alongside the customer to drive innovation that met the customer's changing usage requirements.

Equally the development of new delivery structures and mechanisms through OBC also provides a source of innovation. The adoption of OBC, for example, may stimulate a move away from traditional functional organisational structures, towards the empowerment of cross functional service teams spanning multiple organisations.

Plus the knowledge derived from innovations such as these can be transferred to other contracts, providing a source of sustainable organisational performance improvement.

d Sustainable competitive advantage

In order to deliver the appropriate outcomes the service provider needs to be able to manage the process that involves co-creation and co-production with the customer.

As a result, managing customers to enable better co-creation and co-production effectively becomes a service capability in its own right. Service providers that become adept at customer management in this way can develop a unique competitive advantage providing more opportunities for the service provider to win contracts.

While it is clear that there are many benefits to be obtained by using OBC, shifting to an outcome-based model requires service providers and customers to adopt new skills sets, change attitudes towards the service provider-customer relationship, and acquire a better understanding of how to maximise the advantages of outcome-based contracts. Indeed there are many challenges that need to be overcome by both the service provider and the customer, as outlined in the next section.

1 The OBC performance triangle

In OBC, performance is dependent on three main elements. First, there is the service provider, tasked to deliver against the outcome. Then the customer, which must acknowledge that the outcome delivered is truly beneficial, and also play its part in co-creating value with the service provider in order to achieve the desired outcome. Finally, there is the state of the world, the conditions under which the outcome is delivered, which could change the nature of the benefits attained, regardless of the intention or efforts of the service provider or customer.

For an outcome to be beneficial, all three elements (customer, service provider and state) have a role in determining how the outcome is achieved.

Figure 1: Players in performance

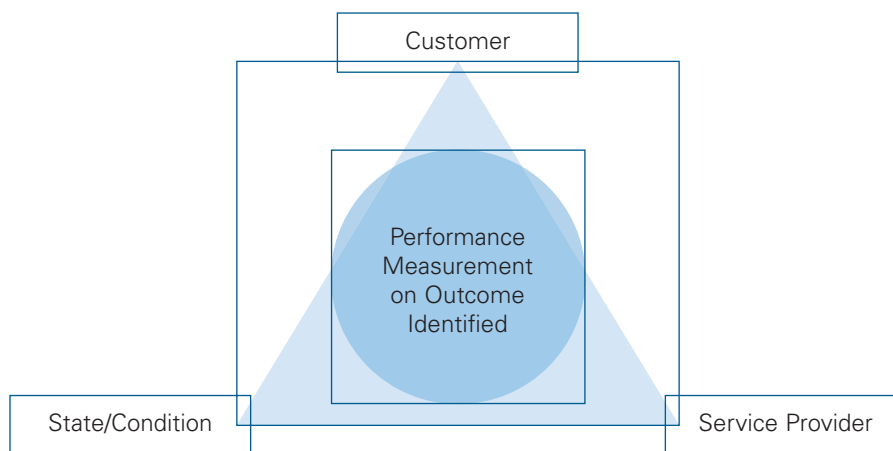


Figure 1 highlights the three main factors that impact on outcome measures. First, it is necessary to determine what a successful outcome is and what measures are required to provide that definition.

Second, the prime service provider responsible for the outcome must have the capability within its internal processes and systems to provide the outcome. Often, service providers are only able to contract on a more traditional basis (i.e. on activities or offering resources) and do not have the necessary tools and skills to engage with the customer for the delivery of a specified outcome.

Finally, an identifiable outcome is dependent on the conditions of usage that impact on that contract. If the customer and the service provider are in a partnered relationship, but are contracted to deliver the same service at different times, this could result in lower benefits to the customer or end-users because the conditions are different.

Within the defence industry, for example, a service delivered in a barracks for training, may not yield the same benefits as the same service delivered in the battle field. Hence, the state or condition under which the outcome is being delivered is an important factor in the determination of outcomes.

OBC compels the service provider to co-create value with the customer.

2 Understanding value-in-use

OBC compels the service provider to co-create value with the customer. Consequently, in terms of value creation, alignment of service provider and customer is paramount, particularly in a B2B context.

Service-dominant logic suggests that in achieving the highest benefits for the customer, the service provider is able to derive potentially higher revenues through a combination of goods and services resourced and delivered collaboratively by both customer and service provider.¹²



Co-production is a measure of customer involvement in the delivery of the firm's value proposition, not the outcome.

As the service provider's capability to deliver value is partly contingent on its relationship with the customer, then the service provider should be empowered to think about its own capability as including the customer's processes, systems and skills.

For example, if a customer's employees persistently use virus-ridden disks in their computers, it will mean providing greater resources for maintenance and support if the service provider has contracted on availability of the equipment.

Thus, implementation of OBC requires an understanding by all parties of the processes, competencies and assets required in value co-creation under different conditions.

It should also be noted that the different nature of the relationships involved in value co-creation can be complicated. For example, customers could be partial employees, contributing to their own satisfaction and quality of the service.¹³ Alternatively, if customers choose to produce the service by themselves, they can become competitors to service providers.¹⁴

Indeed, service providers can be viewed as not really providing value but merely value propositions. So a service provider's product offering is unrealised value until the customer realises the inherent value by co-creating it with the service provider and thereby gains some benefit.

It is true that the possibility of usage changes and dependency on other conditions makes understanding value-in-use challenging. But an understanding of value-in-use is necessary. Recent research from AIM and EPSRC has shown that usage has a significant impact on customer satisfaction, costs and delivery of the service.¹⁵

It is also worth stressing that there is a distinction between value co-creation and co-production, as Figure 2 illustrates.¹⁶

Co-production is a measure of customer involvement in the delivery of the firm's value proposition, not the outcome. Customer involvement varies dramatically across services: there is very little co-production in having your car serviced – the garage does the work with minimal instruction from the customer; however high levels of customer involvement are required when buying and tailoring a suit.

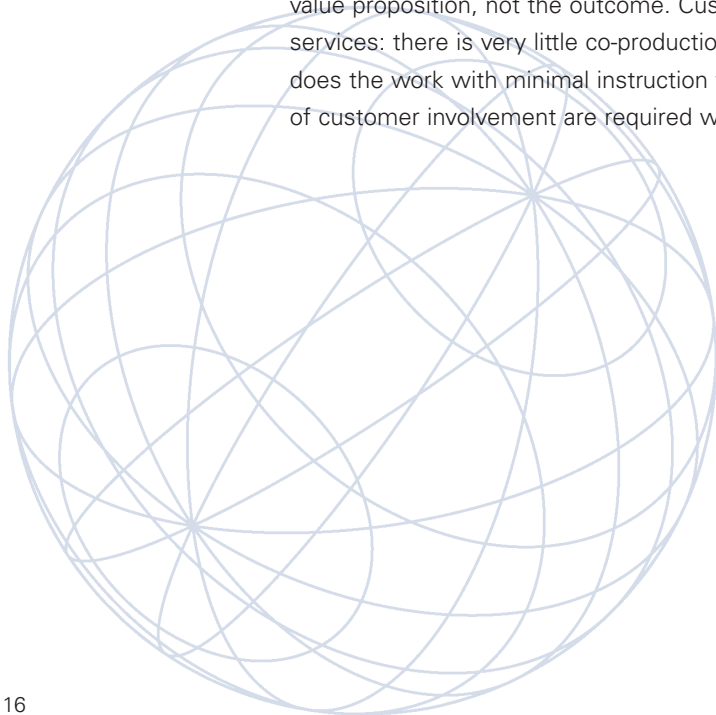
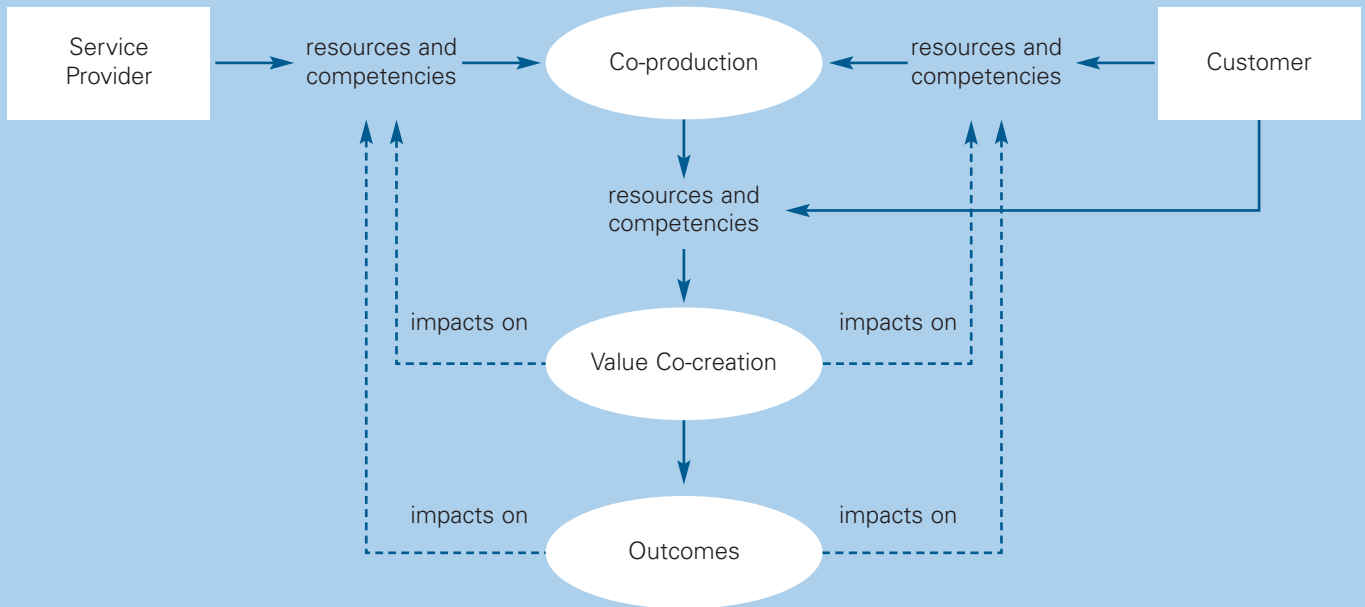


Figure 2: Service co-production and value co-creation to achieve functional outcomes. Co-production and Co-creation may be same if customers are achieving emotional outcomes¹⁷



In OBC, both the organisation and the customer have to invest in resources to ensure a systematic approach towards the co-production of value as well as its co-creation for use. Systems modelling and other analytic and process tools may need to be deployed to ensure that outcomes are achievable, measurable, systematic and most importantly, that both parties maintain the incentive compatibility to achieve the outcomes so that the contract remains viable and the service is sustainable over time.

Some outcomes, however, are emotional outcomes. For example, helping iphone develop a better phone could provide an emotional satisfaction for the customer. Thus emotional value is obtained even while the customer is co-producing the value proposition for the firm. In such cases, co-production is essentially co-creation of value as well, and firms have to understand the nature of the value that is to be co-created.

3 Outcome ownership and incentive compatibility in the contract

Successful implementation of OBC often requires the service provider to be fully responsible for ownership of the outcome, including the role of the customer in achieving the outcome. (It is no surprise that the process of customer management in this regard, and the risks involved remains one of the most challenging aspects of OBC, and research into how to deal with this in the most effective way is ongoing).

The outcome tends to be a mesh of processes within a service system that is fully responsible for the delivery of all attributes and activities leading to that stipulated outcome. For example, a system of processes and structures designed to keep a library's fiction collection up to date would develop measures to assess how up to date the collection was and stipulate them as key performance measures.

Delivering on the measures is the responsibility of the service provider. This means that the customer does not need to stipulate any sub-level performance levels, such as warehousing, delivering timings and so on. Instead it is the service provider's responsibility to design, structure the service system and organise it so that it delivers the level of outcome required. This often results in substantial risks for the service provider, and risk mitigation strategies are required to help ensure that the contract succeeds.



Successful implementation of OBC often requires the service provider to be fully responsible for ownership of the outcome...

One challenge of OBC is aligning the incentives of the contracting service provider with the incentives of the customer. In the case of an MRO (Maintenance, Repair and Overhaul) service, for example, the service provider has no incentive to reduce repairs, since repairs provide a steady stream of revenue. However, if the outcome is 'equipment percentage availability for use', the service provider would be motivated to ensure equipment availability, thus resulting in better parts and repairs, since equipment availability is a directly measurable outcome.

Thus, OBC encourages behaviours within the service provider to ensure that the customer achieves its outcomes of consistent equipment availability, incentivising more effective repairs and investment of better quality component parts. Such incentive compatibility results in better long term relationship between service provider and customer.

The prime service provider in an OBC often would need to contract with several other vendors and suppliers in achieving outcomes, and this would require a re-orientation in the way supplier contracts are constructed and delivered. If the prime provider contracted on an outcome with a customer, should the role of suppliers be delivering to lower level outcomes for the firm, or should they maintain their traditional input, tasks and activity-type of contracting? Thus, the role of suppliers needs to be factored into the implementation at pilot level.

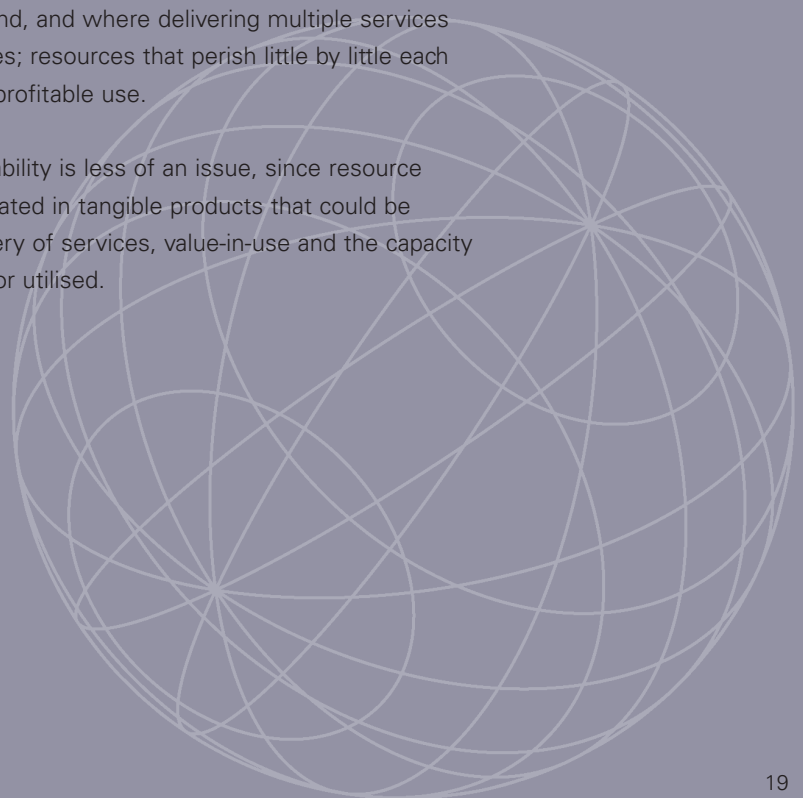
4 Towards a service system value architecture

Outcome-based contracts change the configuration of conventional production and manufacturing architecture and push service providers to be much more innovative in service value co-creation. The interactive role of the customer within the service provider's system requires new ways of thinking about the delivery of value in services. The legacy of linear, one-direction and mono-dimensional thinking drawn from manufacturing-based environments must be replaced with interactive, multi-dimensional thinking.

Service value co-creation innovations include implementing new customer-centric processes and products, cutting costs, improving service through IT application, business process re-engineering and making sure that there is the right corporate culture.¹⁸

Some academics argue that service providers need new ways of organising end-to-end solutions, from the service provider's resources and delivery capacity through to buyers' value and demand for the service.¹⁹ This is crucial for services where capacity varies depending upon customer demand, and where delivering multiple services often means investing in more resources; resources that perish little by little each day they are not put to productive and profitable use.

In manufacturing environments, perishability is less of an issue, since resource productivity is transferred and encapsulated in tangible products that could be inventoried and sold later. For the delivery of services, value-in-use and the capacity to deliver both perish if not consumed or utilised.



Being able to visualise the service system means understanding business processes and how they combine in a systems model.

To deliver excellent service and be economically viable, service providers need a good understanding of their capacity or capability to deliver the service, and to be able to visualise the entire service system. Without such visualisation, it would be a challenge to assess productivity across the entire system, or be able to identify non-utilised capacity or those situations where innovation would be most crucial.

Being able to visualise the service system means understanding business processes and how they combine in a systems model. The focal point of the systems model is the resources – people and equipment – that combine through the business processes of the organisation to deliver different elements of the service. This is a central argument of the Resource Based View (RBV). However, it is not merely resources that are the focus, but the way the resources are configured in a complex service system.

Thus, to deliver on OBC, a service system value architecture is needed that would consist of people in customer and service providers who are *resource integrators*, integrating other resources, such as equipment, materials, knowledge and skills, co-creating value and innovating in service offerings that affect both the customer and the service provider's system.²⁰

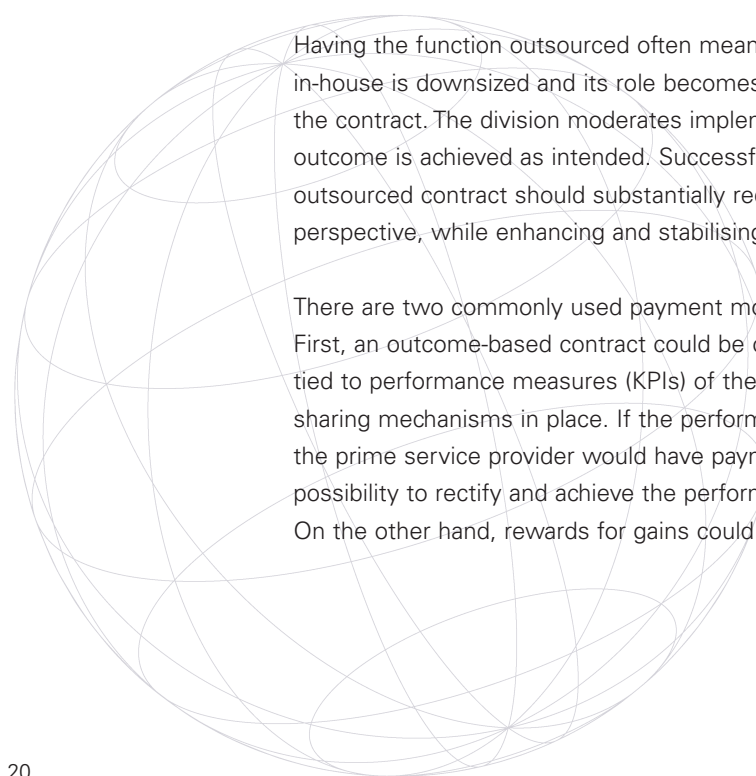
This integrated approach is underpinned by a systems perspective where the customer and the service provider systems are highly interconnected and so need to be analysed as one whole super-ordinate system with dynamic interplay between the two.²¹

5 Understanding the economics of OBC

When outcome-based contracts are used to outsource services that were initially provided in-house then the budget for the outsourced service at first usually reflects the amount allocated in the internal budget for the in-house division that had previously delivered that service.

Having the function outsourced often means that the division providing the service in-house is downsized and its role becomes one of managing the decisions under the contract. The division moderates implementation of the contract to ensure the outcome is achieved as intended. Successful implementation of an outcome-based outsourced contract should substantially reduce the overall costs from the customer's perspective, while enhancing and stabilising the performance.

There are two commonly used payment models for outcome-based contracts. First, an outcome-based contract could be contracted on a fixed payment basis tied to performance measures (KPIs) of the identifiable outcome, with pain and gain sharing mechanisms in place. If the performance in achieving the outcome falls short, the prime service provider would have payments withheld or reduced, but with the possibility to rectify and achieve the performance level within a given time frame. On the other hand, rewards for gains could be shared with the customer.



Secondly, an OBC could be contracted on usage, such as 'Power by the Hour[®]' contracting where the maintenance of an engine is charged based on each hour the engine is in the air, or as with pay-as-you-go telecommunication charges.²² OBC models combining fixed payment and usage are also useful if they strengthen the incentive compatibility of the customer and service provider, and provide the customer with more choice.

All outcome-based contracts must include mechanisms that reward the prime service provider for reducing the cost of delivering to performance (or enhancing performance), as well as imposing penalties for failure to deliver.

Various mechanisms for failures and rewards such as payment retention, and weighting performance payments across KPIs, could be put in place. Most importantly, outcome-based contracts also include stipulations of customer obligations (assets, people etc.), usually termed CFX (customer furnished X) to ensure the service provider is able to deliver on the outcomes.

Once the KPIs and CFXs are agreed upon, and they are usually tested during a pilot period, the measurement of KPIs and CFXs should be automated without any manual interventions to prevent potential opportunistic behaviour from either side.



6 The changing business model of outcome-based contracting for the service provider

While the idea of contracting on outcome is intuitively appealing to the customer, it poses a huge challenge for the service provider as it changes the service provider's business model. To illustrate the impact of a changing business model, consider this analogy.

Imagine contracting to teach English to a student. Traditionally, the contract would include perhaps 30 hours of English tuition, plus textbooks, workbooks and so on. Let's say the entire course would cost £1,000. A teacher contracted to teach this would have a good understanding, not merely of the language, but of the grammar, syntax and all the necessary understanding skills required to teach an English course. That is the traditional model and the teacher's value proposition is in the way the course is taught, the innovative instruction.

There is a balance to be created between delivering an innovative and effective service capable of dealing with changing circumstances...

Now imagine changing the contract to one where the teacher is judged based on outcomes – payment will be made according to every English word that comes out of the student's mouth for the next year after the course (assuming this is measurable).

Contracting on outcomes in this way means that the value co-created with the student includes the student's value proposition – what they bring to the setting.

More importantly, since the teacher is being judged on the outcome of the co-creation, the teacher now has to learn a new skill set – that of motivating the student, building a rapport with the student, and getting the student to co-create value – skills that are not usually part of an English language teacher's traditional skill set.

In addition, if the contract has been signed based on a fixed payment made in advance to achieve a certain level of performance, such as a set number of words per month perhaps, then the teacher now has to deliver the outcome at a lower cost. Finally, just to add to the complexity, imagine the student as one who is difficult and culturally different from the teacher.

Recent studies have identified several organisational challenges related to the new business model.²³

- i Complexity and unpredictability in costs.** There is a balance to be created between delivering an innovative and effective service capable of dealing with changing circumstances, and the need to forecast costs to ensure that service delivery is economical and profitable.
- ii Cultural change from traditional contracting.** Moving away from a traditional business model, perhaps from manufacturing and engineering to a service oriented model, for example, can cause individuals to question their role and value. Significant priority must be given to dealing with the effect on individuals within the change process.

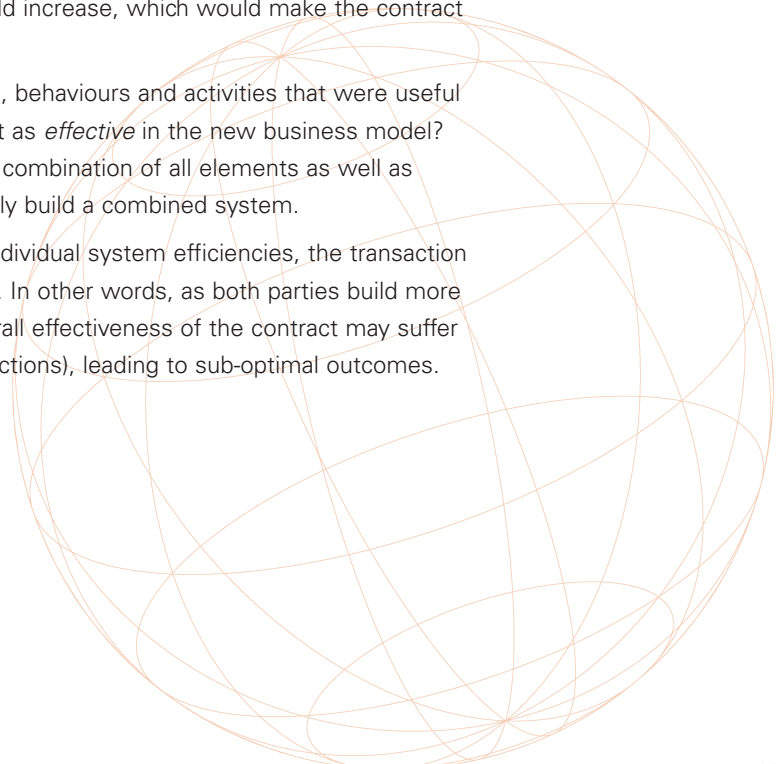
- iii **Loss of perceived control.** The role change required on the part of the customer can cause concerns around a perceived loss of control. With the service provider, complexity and unpredictability amongst staff can cause concern leading to greater monitoring.
- iv **Lack of boundaries.** With service provider and customer working together to co-produce the outcome, boundaries can become blurred. Both fluidity and rigidity can result from the boundary change. Fluidity occurs as out of contract requests are accommodated with the aim of building better relationships. In other cases rigidity arises from a 'this is their problem' attitude as a result of not fully understanding the roles each party must play.
- v **Coordination with suppliers.** Within a complex service system, issues arise in integrating the new model around the existing model and in instigating similar outcome-based changes with suppliers that contribute to the delivery of the outcomes.

Under the traditional business model where services were contracted on the basis of resources, service level or activities, the customer plays the main role in value co-creation in order to realise the benefits from the goods and services rendered by the service provider.

With OBC, the service provider now plays a much larger role and moves towards being responsible for the end-benefit. Fundamentally, this change poses serious questions:

- First, are the processes, systems, behaviours and activities that were useful in the traditional business model just as *efficient* in the new business model? Inefficiencies could arise from optimising two systems (customer and the firm) separately rather than optimising globally for the whole system. By optimising separately, overall system costs could increase, which would make the contract more expensive than it has to be.
- Second, are the processes, systems, behaviours and activities that were useful in the traditional business model just as *effective* in the new business model? Ineffectiveness could arise from the combination of all elements as well as from both parties' inability to explicitly build a combined system.

And as both parties focus on their individual system efficiencies, the transaction cost increases from the interactions. In other words, as both parties build more efficient individual systems, the overall effectiveness of the contract may suffer (due to more altercations and transactions), leading to sub-optimal outcomes.



Piloting for a Successful OBC

In many environments, a well organised pilot is used to help ascertain the performance metrics, data and cost capture mechanisms involved in a particular outcome-based contract. The pilot should determine the cost of achieving success, which is the cost of service co-creation for outcomes, and more than just the cost of performing the tasks.

The pilot also provides an opportunity to trial and finalise the roles and required behaviours of the service provider and customer and how they will interact. A pilot is particularly useful for long term outcome contracts which require very accurate monitoring of cost and performance in environments that are subject to changing circumstances.

At the centre of successful OBC is a clear understanding and stipulation of the appropriate outcomes and development of appropriate measurements for KPIs of those identifiable outcomes.

Thus the typical starting point for considering OBC is to identify what success looks like and to determine the basis for the customer benefits, and from that point to identify the outcomes that could be measured and serve as an appropriate proxy for those benefits.

Once the outcome is known, the roles of the customer and service provider can be identified and mapped across the service system. To effectively realise success and the measurable outcomes, both parties must understand the value co-creation system and environment (processes, relationships, roles, inputs and output) and commit to such behaviours.

According to a recent AIM study, an important element of service delivery is service capacity, that is: "where and how value is created within the service contract and the contribution of components and resources to value."²⁴ In understanding the capacity to deliver a service, equal emphasis is required on both equipment capability and embedded human capability. So, in preparing to deliver a service, a service provider should know which component of its costs delivers how much of the value to the customer, and therefore know the degree of importance of all components within that system.

In order to monitor performance against success in delivering agreed outcomes, dynamic and unbiased data capture is required to provide a constant feed of performance data for joint review. Such a performance review is reliant on the availability of the appropriate data and cost capture requirements necessary to monitor the key performance metrics.

A joint risk register should be kept and constantly updated based on the challenges presented, in order to further support the review of performance and ongoing management of the contract. Collaborative risk management can be incentivised through mechanisms that encourage risk sharing between customer, service provider and sub-contractors. Part of the incentive scheme will be mutual gain share and pain share mechanisms which enable the remuneration of all parties inline with performance. By jointly using gain share and pain share metrics, parties are incentivised to work collaboratively to prevent the mutually negative effect of under performance.

conclusion: service transformation of the organisation

Outcome-based contracting is much more than just a new approach to contracting. If implemented correctly, it can lead to the transformation of organisations for the better, whether service provider or customer.

OBC requires the organisation to focus on both activities as well as goods delivered in the contract to achieve benefit, a phenomenon known as service transformation. It challenges the service provider to break down functional barriers within the organisation to ensure more effective co-production with the customer to achieve the outcomes.

This transformation to a service oriented organisation requires real organisational change. As with all change processes, service transformation requires time and strong leadership at all levels to ensure the change is properly adopted and sustainable.

The focus on effective co-production and co-creation with the customer requires a cultural shift in thinking and the development of new competencies by all staff within the organisation. Engineers are now asked to exhibit people management skills, for example, and behaviours that encourage cooperation and performance management skills.



Organisations must be careful not to rely too much on the processes and activities required, while neglecting the importance of people in the delivery of value.

Clearly, these are skill sets required of managers and executives under normal circumstances anyway, but the difference is that while previously they were required to work within the organisation, these same skill sets are now actually creating service value for the customer and achieving effective outcomes at lower costs.

Organisations must be careful not to rely too much on the processes and activities required, while neglecting the importance of people in the delivery of value. A failure to focus on the people element, on the behaviours required to deliver the processes and activities, can result in decreases in quality and increased costs associated with transaction, monitoring, scrutiny and mistakes.

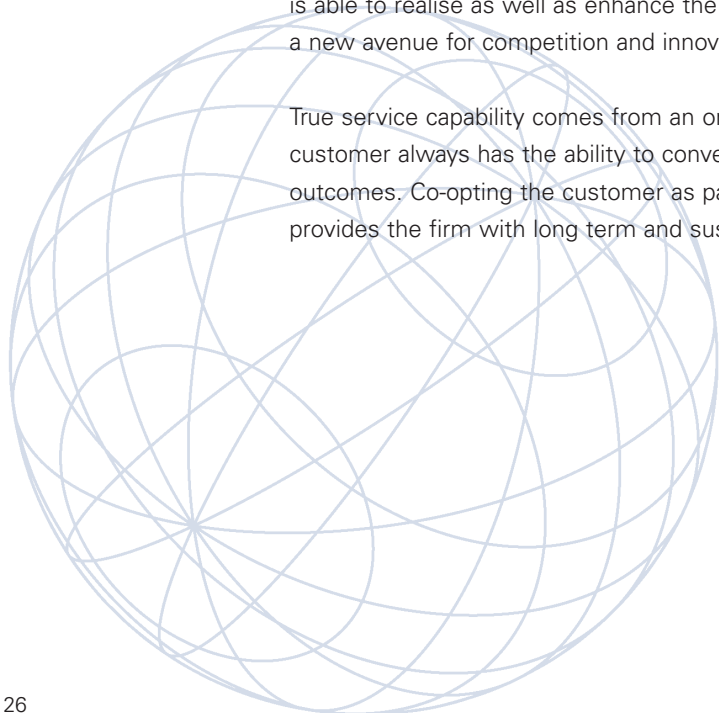
OBC may put incredible pressure on the organisation to align its efforts, rather than being good at functional areas. After all, delivering outcomes means that everyone in the organisation has to work hard at aligning with the customer's needs. However, in doing so the true meaning of customer orientation becomes apparent and the benefits associated with it.

The traditional mode of contracting often results in promises that fail to be delivered in full, adversely impacting on customer satisfaction. Where OBC ensures that the customer pays only if performance is delivered, however, the prospects of ensuring customer satisfaction are much greater.

OBC can also provide a path towards a more sustainable future. If a customer can obtain desired outcomes consistently with a configuration of products and services, and is willing to pay for the outcomes rather than the ownership of materials or equipment, the need to keep manufacturing for profit or wealth generation reduces.

Finally, developing true service capability provides the opportunity for competition and innovation on a number of fronts. Traditionally, organisations compete on providing higher value propositions and innovate by creating new value propositions. A better capability in co-creating the highest value with a customer, so that the customer is able to realise as well as enhance the firm's value proposition, thus providing a new avenue for competition and innovation.

True service capability comes from an organisation's ability to ensure that the customer always has the ability to convert the firm's value proposition into beneficial outcomes. Co-opting the customer as part of the service provider's core competency provides the firm with long term and sustainable competitive advantage.²⁵



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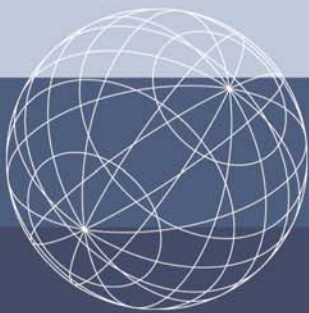
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²¹ Vargo and Lusch (2008)
²² Cohen (2007)
²³ Ng and Yip (2009)
²⁴ Ng, Maull and Yip (2009)
²⁵ Prahalad and Ramaswamy (2005)

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