

# In search of High Value Construction: adding value THROUGH SERVICE-led projects

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THE UK CONSTRUCTION INDUSTRY IS INCREASINGLY EXHORTED to operate on the basis of adding value externally rather than focus on cost efficiency. Industry champions and policy setters advocate the need for construction companies to refocus firm orientation and add services to their traditional core product business. Major clients look to procure built facilities on the basis of added value, rather than capital cost. These trends towards ‘high value construction’ embrace design, production and facilities management and emphasise the need for the sector to shift its attention away from product delivery towards the satisfaction of clients’ needs. In consequence growing emphasis is given to whole-life considerations and to the service dimension of projects. Of particular interest in this emerging commercial landscape is the concept of service-led projects. These projects are seen to provide a radically different context where the whole rationale for the project is driven by the client’s business strategy and objectives for a new or enhanced service to its own customers. As such they are characterised by a localised ‘vision’ driven by downstream service delivery. Arguably this introduces a new realm of project complexity given the way in which the number of stakeholders increases. The paper examines the persuasive appeal of this vision and the difficulties that individual firms face in making such a transition. The case is made that the ideas of adding value and service-led construction projects have emerged in parallel with broader trends within manufacturing at large. Particular focus is given to how this new context challenges deeply-ingrained working practices in construction and why it presents a major challenge for the sector.

## Keywords

service-led projects, high value construction, integrated solutions

## INTRODUCTION

In the UK, major construction clients are increasingly looking to procure built facilities on the basis of added value, rather than capital cost. In the public sector domain growing em-

phasis is given to whole-life considerations and to the service dimensions of projects (HM Treasury, 2007) - a shift that is accelerated by the current environmental, financial and security challenges (HM Treasury, 2008). Industry champions and policy setters advocate

the need for construction companies to refocus firm orientation and add services to their traditional core product business. Supporting arguments embrace design, production and facilities management and emphasise the need for the construction sector to shift its attention away from product delivery towards the satisfaction of clients' needs. Of particular interest in this emerging commercial landscape is that projects increasingly are becoming service-driven. These 'service-led' projects arguably provide a radically different context where the whole rationale for the project is driven by the client's business strategy and objectives for a new or enhanced service to its customers.

This paper contextualises and examines the concepts of high value construction and service-led projects through positioning them against broader trends in construction and manufacturing. It is argued that ideas of adding value through service-led projects in construction have emerged in parallel with long term developments within manufacturing at large. For quite some time now academics, industry champions and policy setters have been advocating the need for manufacturing companies to refocus firm orientation and add services to their traditional core product business (e.g. Vandermerwe and Rada, 1988; Gerstner, 2002; Livesey, 2006). The paper takes as its point of departure the unprecedented change that has taken place in the manufacturing sector over the last three decades. Initially the case is made that the term manufacturing no longer is clear cut and manufacturing firms come in many shapes and sizes. Particular attention is given to that manufacturing firms increasingly present themselves as through-life service providers; i.e. providing prolonged services around a manufactured product. The terms high value manufacturing and service-

led producers are then introduced. Focus is given to how manufacturing and service no longer are considered to be separate endeavours and firms' revenue streams are increasingly dependant on both initial sales revenue and operations generated income. The argument is then turned to how these ideas are translated in the UK construction context and how construction firms have adapted to changes in their commercial environment. The discussion highlights the challenges that firms face when trying to compete on the basis of added-value and service delivery. The paper concludes with reflections on the types of empirical and theoretical inquiries necessary to further our understanding of firm behaviour in this emerging context.

## The changing manufacturing landscape

That manufacturing firms add services to their traditional core product business is commonly explained on the grounds of commercial necessity. Some commentators suggest that globalisation has led to a more rapid customisation of products which in turn has forced down the prizes. Geographic boundaries no longer matter as clients can source their products from a larger area (Cova and Salle, 2007). The ability of manufacturing firms' to differentiate their products is therefore arguably declining and adding on services is a way of making the products more attractive. Hence, moving towards services is a means of escaping a profit squeeze in a firm's core 'production' business (Wise and Baumgartner, 1999).

Other commentators point towards how pressures from clients force a change in behaviour among suppliers (Oliva and Kallenberg, 2003). Customers, we are constantly led to believe, are becoming increasingly demanding due to changes in their own commer-

cial environments thereby forcing a change in the business relationship. In particular, clients are portrayed as refocusing on their core activities and hence resorting to more and more integrated offers of products and services (cf. Cova and Salle, 2007). Deregulation of markets is also seen to have had an accelerating effect on the demand for integrated product and service offerings. Long-established trends of privatisation and outsourcing within client organisations is argued to have driven the appeal of a service-delivery focus provision and integrated product and service solutions (*ibid.*). Of further importance for this line of argument is that sector consolidation frequently acts to re-shape power differentials in ways that may be detrimental to the future profits of manufacturing organisations. Diversification into services is therefore recommended as providing a degree of recession proofing. There are also those who argue that companies will be forced into service provision on the basis of the sustainability agenda (e.g. Manzini and Vezzoli, 2002; Mont, 2002). Such arguments reflect more than short-term economic imperatives. It is believed that a change in emphasis towards services provides firms with means to stay competitive as patterns of production and consumption are transformed by public pressure on environmental issues (Tukker and van Halen, 2003).

In summary, manufacturing principles have changed radically. Some industries have completely or partially ceased to exist. Other more specialised 'high-value' processes or completely new industries have come to replace them. As a result, integrating products and services is almost universally considered essential for commercial survival.

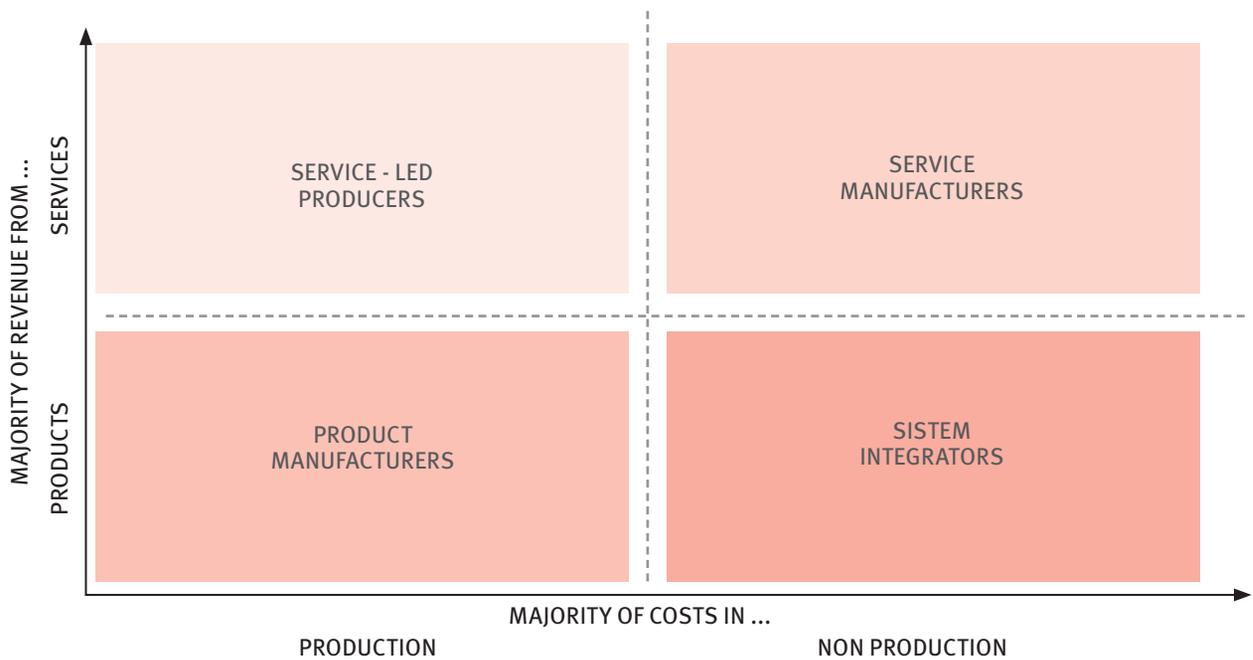


Figure 1: High Value Manufacturing (adapted from TSB (2008))

## High-Value Manufacturing

In recognition of the wider changes in the competitive environment the UK government is encouraging the introduction of ‘High Value Manufacturing’ (EPSRC, 2008; TSB, 2008). This comes on the back of the recognition that historically the industry response to commercial pressures has mainly focused on improving production processes and enhancing efficiency. High value manufacturing is seen as a viable alternative for manufacturing firms to maintain a long-term and sustainable competitive advantage.

Current thinking on ‘high-value manufacturing’ seeks to classify firms according to two dimensions: (i) whether the majority of their revenues is derived from products or services, (ii) whether the majority of their costs are within production or outside production (see Figure 1). In short, product manufacturers are relatively traditional original equipment manufacturers with the majority of costs in production and the majority of revenues from selling products. Service-led producers are strongly based around production, but have

begun to derive significant revenues from services. Service manufacturers have moved into providing services and have detached from their production base. System integrators sell products, but the majority of their costs are not associated with production. They control the channel to customers and manage an external production network. The classification provided is rather crude but serves to illustrate how services are becoming ever more significant in the offerings of manufacturing firms. ‘High value’ can of course be achieved in any of the four quadrants in Figure 1 and it is clear that products and production processes are still considered to be key. However, significant emphasis is given to services and how firms could and should add these to their traditional offerings.

## The changing procurement landscape in construction

The insight that manufacturing has to cover the process from market assessment and product design through to manufacture, support and service delivery - High Value Manufactur-

ing – is as described above high on the UK government’s agenda (BERR, 2008; EPSRC, 2008) and is identified as a priority theme for the Technology Strategy Board (TSB, 2008). These notions of ‘high value’ are also evident in the UK construction policy agenda. Policy makers and industry bodies are increasingly advocating that the sector should operate on the basis of adding value externally rather than focus on cost efficiency (e.g. Saxon, 2005). Such ideas are reflected in the vision and objectives of some of the large public sector clients, e.g. Highways Agency’s new knowledge programme portfolio ‘Improving Value for Money for the HA’. They also form the basis for the objectives of large private sector clients, e.g. the newly formed ‘Assets & Facilities Management Working Group’ under the auspices of the Construction Clients Group. Similar developments are also taking place elsewhere and are increasingly noticeable in visions for industry development and proposed research agendas; see for example the American Society of Civil Engineers’ vision for the development of the civil engineering sector in the USA (ASCE, 2007).

The effects of these developments are increasingly evident in a number of areas and changes in procurement strategies are clearly discernable amongst large construction clients; in particular in public sector procurement. The Private Finance Initiative (PFI) and associated Public-Private Partnership (PPP) projects is perhaps the most notable example. Comprising 10-15% of UK government's annual capital procurement budget PFI represents a significant part of the UK construction market (HM Treasury, 2006). Since its inception in 1992 whole-life considerations and extended contractual undertakings have been an integral part of the PFI. However, it is only recently that service-delivery and means of benchmarking and market testing the services provided has come to the forefront of PFI procurement (NAO, 2007). Service provision is now central to PFI projects across most sectors and the projects are increasingly becoming service driven. For example, the proportional division of costs between capital works and operations is significantly different in recent PFI infrastructure projects, such as the newly signed M25 motorway-widening scheme, compared to earlier DBFO roads. This reflects the Highways Agency's wish of linking payment to the delivery of a service (Highways Agency, 2009). Further, in the housing sector emphasis in the design of PFI schemes is shifting from improving and maintaining social housing stock towards the creation of sustainable communities and services to the local communities (cf. CLG, 2008). Likewise in the educational sector the 'Building Schools for the Future' programme was put in place not solely as a financing route for new school buildings, but as a vehicle that ensures that schools are provided that allow for educational transformation (4ps, 2007). Indeed, the programme approach is considered to create an opportunity to transform the way secondary schools function (CABE, 2006). In healthcare the insistence on

the forming of limited companies under the 'Local Improvement Finance Trust' initiative is particularly notable. Shareholders include the local NHS Primary Care Trusts and Partnerships for Health together with private sector firms. Such developments represent a significant shift away from previously established PFI models and further blur the boundaries between construction and service.

Outside the PFI context the public sector has in the past been restricted in their ability to issue long-term contracts due to the centrally imposed need for frequent market testing. Nevertheless the trend towards a service-delivery focus in projects is easily discernable in several sectors. For example, the progressive privatisation of highway maintenance capabilities has affected the way in which both the Highways Agency and Local Authorities procure construction work. The Highways Agency has over the last decade introduced a succession of procurement initiatives such as Early Contractor Involvement (ECI), the Managing Agent Contractor (MAC) contract and Extended Managing Agent Contractor (EMAC) in order to facilitate a service-orientated engagement between public and private sectors (Highways Agency, 2005). Other regulated markets where the move towards long-term service oriented contracts is noticeable include the power and water sectors. In power generation and distribution the main bulk of the National Grid's major investment in upgrading and developing the electricity transmission network is procured through long-term collaborative contracts (National Grid, 2009).

### **Moving towards service-led construction projects**

The above described strategic changes in the procurement of projects go beyond merely adding additional servic-

es to construction asset procurement. Instead the projects are increasingly becoming service-led. They are driven by a localised vision of downstream service delivery based on the client's strategy and objectives for a new or enhanced service to its own customers. This increases the number of stakeholders and adds a new realm of project complexity (cf. Ivory *et al.*, 2006). Furthermore, the long-term nature of the service delivery requirements combined with the added risks associated with the extended timeframes and future business environments place new demands on clients and contractors alike. Clearly this move towards more service-orientated business models puts existing contractual arrangements to test. Equally clear is that most firms, regardless of size and specialisation, will have to acquire new capabilities or at the very least develop their present skill sets. However, these changes take place within the involved organisations larger portfolio of activities. The envisioned organisational and structural changes necessary for participation in service-led projects are likely to have an impact on other activities and at times challenge deeply-ingrained working practices. As service-led projects become more and more common they become ever more difficult for construction firms to ignore. Thus, from a commercial perspective competing for work on the growing service-led project market is becoming increasingly important. Yet, construction firms need to manage and protect the expertise and working relationships that support their excellence in specialised niches and secure their positions in more traditional markets, while realising their remit in service-led projects (cf. Leiringer *et al.*, 2009). Furthermore, organisational and structural changes in the supply side have to be met by equivalent changes within client organisations – adding value through long-term collaborative working has in the past been curtailed by

a lack of trust between public and private sectors (*ibid.*).

It follows from the above that it is necessary to root any exploration or explanation of how construction firms adapt to service-led projects and high value construction in the broader commercial environment in which they operate. Of course, in a sector as diverse and complex as construction there are few generalisations which will be true in all cases. What is clear is that the construction sector is characterised by continuous and complex processes of change which are highly nuanced and heavily contextualised. Explanations for organisational strategies and behaviour derived from the manufacturing sector cannot therefore be transferred unquestionably across contexts. Notions of high value and service provision may be rendered fashionable by debates in the manufacturing sector and extensive government and industry lobbying for virtues of PFI. But such discourses take on new meanings when assimilated with ongoing structural changes within the construction sector; as is briefly explored below.

### **Privatisation and outsourcing**

In terms of understanding the broader context it is especially important to position the persuasive appeal of high value and service driven projects against long-established trends of privatisation and outsourcing. Over the last three decades newly privatised companies have frequently embarked upon extensive downsizing programmes in order to make themselves competitive in the marketplace (cf. Bishop *et al.*, 1994). Many such downsizing programmes have often been accompanied by the outsourcing of clients' in-house asset-management capabilities. What should be remembered is that such developments by no

means have been uniform, or even consistent. Not within the same sector and certainly not between sectors. A prime example of this trend is the water utility sector (Davidson, 1990; Ogden, 1995; Cooke, 2003). Here outsourcing strategies have consistently been driven by a range of factors, including regulatory pressures and the introduction of yardstick competition (Cowan, 1994; Ogden, 1995). In no small way, this has created the space for the private sector to offer integrated solutions in response to specified business needs. But the adopted strategies have by no means been uniform, or even consistent. While some water utility companies have outsourced asset management capabilities, others have retained them in-house. Some have chosen to outsource selected capabilities, but to retain others they consider to be strategically important. Such localised decisions have been influenced by the regulatory standards set by OFWAT (The Water Services Regulation Authority) at five-yearly intervals leading many water utility companies to oscillate between outsourcing and bringing capabilities back in-house again. Thus, the overall picture is one of vicissitude; the end result is that contractors endeavour to offer service-led solutions to some clients, whilst offering traditional 'build-and-run' to others.

### **The Property Services Agency and the importance of partnerships**

Additional insights into the complexities of privatisation and how the notions of value and service have developed in construction emerges from the privatisation of the Property Services Agency (PSA). During the period 1992-1993 the PSA was progressively split up into separate operating companies which were then sold to private sector construction firms. Prior to privatisa-

tion, the PSA played a mediating role between government departments and private sector suppliers (Burnes and Coram, 1999). Its demise therefore represented a significant change in the established mode of engagement between public sector clients and the construction sector; this was especially so when considered in conjunction with the advent of the government's PFI initiative. The break-up and privatisation of the PSA potentially provided the opportunity for much closer, and more innovative, procurement relationships between government departments and the construction sector. But the downside was that the public sector lost much of its accumulated expertise in property procurement, including the PSA's much heralded database on construction and maintenance costs. The acquisition of the privatised regions of the PSA by private sector firms often comprised the means of developing a significant additional business stream based on facilities management (FM) services. It was in this context that the privatised operating companies began to emphasise the importance of 'partnerships' between themselves and public sector clients, with a particular emphasis on the benefits of long-term relationships. However, central government directives on competitive tendering and market testing acted against the possibility of long-term service contracts with the private sector (Erridge, 1998). While the rhetoric of 'partnership' prevailed on both sides, the reality was that any shift towards a long-term service ethos was heavily mediated by a continued insistence on short-term contracts.

### **The growth of subcontracting and systems integration**

Unfolding processes of change and re-structuring within the construction industry's client base have been matched by extensive change within

the sector. Recent decades have seen extensive restructuring with a significant increase in labour-only sub-contracting supplemented by agency labour (Harvey, 2001). Many of the major contractors that characterised the 1970s have evolved into exemplars of the ‘hollowed-out’ firm. As such they have largely removed themselves from the physical work of construction, preferring to concentrate on management and coordination functions. Indeed, many contractors conceptualised themselves as ‘service companies’ long before service delivery became popular in the policy debate. Such trends have arguably been exacerbated by the promotion of various ‘management’ procurement routes which have legitimised an increased reliance on sub-contracting. This progressive shedding of responsibility for the physical work of construction has rendered the label of ‘systems integrator’ relevant, cf. Figure. 1. But the overall picture is, as always, by no means straightforward. There are many contradictions and paradoxes even within companies. The industry’s major firms have tended to adopt a decentralised structure to enable different divisions to compete in different market sectors. In consequence, divisions within the same company are frequently structured very differently to accord with the demands of their particular operating environment. Business units characterised by the dominant model of structural flexibility frequently co-exist with units that comprise a large direct labour force that has been transferred from the public sector.

Furthermore, the long-established expertise of the construction sector in the management and coordination of sub-contractors notwithstanding, it must be recognised that this is a very low-road version of systems integration. The dominant rationale behind the growth in sub-contracting has been the adoption of a competitive

strategy based on structural flexibility, i.e. the ability to expand and contract in response to fluctuations in demand (Winch, 1998). There is also little doubt that sub-contracting is attractive because it serves to reduce a company’s fixed overheads, not least because it enables firms to abrogate their responsibilities for training and human resource development (Harvey, 2001). Simply put, sub-contracting has largely been driven by cost pressures rather than a need to provide high-value solutions.

## DISCUSSION AND CONCLUDING REMARKS

It is clear that construction companies have become accustomed to changes in their commercial environment and have learnt to adapt to new policies and procurement routes. Most construction firms are very adept at adapting. In truth they have learnt to play multiple games at the same time and are consistently forced to deal with the apparent paradox between recursiveness and adaptation. This is no different in the context of the increased emphasis given to service in the procurement strategies of their major clients. As has been shown this is not a shift from a steady state to another, rather it is a continuation of a long-term trend. Nonetheless, service-led projects pose a considerable challenge to most firms and are likely to put deeply ingrained working practices to the test and at least partially re-shape business strategies. Construction firms might be extremely good at constantly adapting in order to remain competitive, but they still need stabilising routines in order to operate effectively. Therefore, the challenge for academics and practitioners alike lies in unravelling the myriad of practices contained in terms such as ‘adding value’ and ‘service delivery’, as realised in specific projects, situated

in complex, yet specific environments. And to explore the tensions which participation in service-led projects pose for the involved parties and establish the different ways in which these can be managed at intra- and inter-organisational levels.

Combining product and service offerings has received plenty of attention in the manufacturing context. Researchers from different backgrounds and fields have researched this topic drawing on a variety of theoretical lenses. They have come up with numerous concepts at various levels of abstraction such as: customer solutions (Foote *et al.*, 2001); product service systems (Mont, 2002); full service (Stremersch *et al.*, 2001); servitization (Vandernerwe and Rada, 1988). In the studies of capital goods the concept of ‘integrated solutions’ has gained increased recognition and is commonly used to describe tailored combinations of products and services (Brady *et al.*, 2005). However, these models tend to view firms as unitary entities and none of them can be directly applied to explain or predict behaviour on service-led construction projects. Simplistic models of centralised homogeneous firms, working in a single institutional environment, are not suited for the added complexity of service-led construction projects. As previously argued these projects will have a different place in the larger portfolio of activities of various internal stakeholders. Furthermore, they will commonly be undertaken by decentralised firms working in multiple markets on a variety of projects, some of which are service driven. Adding these insights to the line of inquiry will lead to more practical and nuanced studies of intra-organisational dynamics throughout the project life-cycle. It could also, in turn, lead to a greater appreciation of the working relationships between different organisations at different stages of service-led projects.

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