EXEMPLARY CONTRACTOR PERFORMANCE IN THE UK CONSTRUCTION INDUSTRY

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Within the UK construction industry, achieving compliance with output KPIs no longer represents excellent performance. Rather, such compliance tends to be viewed as the minimum performance requirement on construction programmes. Within that paradigm shift, what needs to be understood is the customer’s perspective of excellent performance. Drawing from semi-structured interviews with some of the largest construction customers in the UK, this paper develops an understanding of the customer’s perspective of excellent first-tier contractor performance on a programme of construction projects. From the customer’s perspective, a number of key behaviours determine excellent contractor performance. These include: being open about their business strengths and weaknesses against their peer group; challenging and improving themselves without the need for prompting; demonstrably adding value; really listening and acting upon the messages being transmitted by the customer; demonstrating desire to learn and share learning as part of a community; delighting the customer’s stakeholders and customers; consistency of message from employees at all levels; keeping business promises; aligning with the customer’s culture; transferring individual knowledge to the collective; and demonstrating a keen understanding of the customer’s business. This behavioural understanding has led to a shift in the way customers are interacting with their first-tier contractors. Many of the performance facets mentioned are input or ‘lead’ factors; or are about attitude and behaviour rather than pure construction competence. By managing at this level as opposed to the output KPI level, customers are to a varying extent influencing the way in which their contractors develop as businesses. The findings have implications for contractors and customers undertaking, or procuring, a large programme of construction projects so that expectations are met.

Keywords: contractors, customer perspective, excellent performance, key performance indicators, procurement.

INTRODUCTION

Understanding what excellent construction contractor performance is from the perspective of the customer is an important area when attempting to improve the industry as a whole. Given that customers fund all works within the industry, it is important to keep abreast of what they expect from their first-tier contractors. Previous works have largely centred around the achievement of quantitative KPIs and on the ‘golden triangle’ of quality, time and cost (Wang 2006). In addition, much of the previous research has concentrated on large projects; whereas it is as important to understand excellent performance on a long running programme of works. Gaining such an understanding at programme level will inform contractors what ought to be their targets for continuous improvement over the life of such a programme.
RESEARCH METHODS

Construction customers with multi-million multi-year capital construction programmes were invited to take part in this research. This approach was taken as such customers are well educated in the construction process and have clear ideas about what, to them, excellent performance means. The participants were all senior enough within the customer organizations to understand what excellent contractor performance meant to them as customers. Given their standing within the overall community of UK construction industry customers, the views of these participants can therefore be treated as being representative of best practice.

The participants were briefed on what the research as a whole was about and what precisely would be their contribution. They were asked to participate in a semi-structured interview, based around the questions described below in this paper. These questions were pre-issued, verbatim, to the participants in order to allow them to gather their thoughts about the subject in advance of the interview.

Interview background (performance criteria) and questions

Below is a list of tier-one performance criteria around which the customer interviews took place. These criteria represent an initial list of factors of excellent performance in UK construction contractors from the point of view of the customer. The factors were developed from various research papers published over the last ten years. It should be noted that the research from which the factors are drawn was not solely UK based.

Participants were provided with the following list in advance of the semi-structured interview in order to help them to prepare for the interview and to stimulate responses in the interview. Participants were requested to keep these factors in mind during the interview, but were told that they could depart from them, or set them aside completely if they so wished. They therefore possessed the freedom to completely set aside the text and speak from the heart if they so wished (following Yin, 2003). The factors and questions are as follows, with author name and year of publication of the relevant research paper also listed.

Excellent performance factors

Time performance (Yeung, 2008)
Time overall (Bassioni, 2004); Time predictability (Bassioni, 2004); Of design (Martin, 2004); Of construction (Martin, 2004)

Cost performance (Yeung, 2008)
Cost overall (Bassioni, 2004); Cost predictability (Bassioni, 2004); Of design (Martin, 2004); Of construction (Martin, 2004)

Quality performance (Yeung, 2008)
Conformance to specification (Yeung, 2008); Functionality (Lam, 2007); Defects (Martin, 2004); Aesthetics (Lam, 2007)

Relationship (Chan, 2006)
Top management commitment (Yeung, 2008); Trust and respect (Yeung, 2008); Effective communications (Yeung, 2008); Claims & disputes (Lam, 2007); Professional image (Lam, 2007); Drug/alcohol test results (Crane, 1999); Team satisfaction (Lam, 2007); Cultural alignment (Chan, 2006)
Flexibility (Bassioni, 2004)
Impact upon customer business (Chan, 2004); Ability to manage ‘chaos’ from other sources (Lim, 1999)
Innovation (Yeung, 2008)
Learning demonstrated (Lam, 2007); Value management (Crane, 1999)
Health, Safety & Environment (Martin, 2004)
Health (Lam, 2007); Accident rate (Lam, 2007); Waste (Lam, 2007); Environmental complaints (Chan, 2006)

Interview questions
- How would you rank and weight the above performance factors when you are assessing the performance of your current (or selecting new) first-tier construction contractors?
- How have you arrived at these factors?
- What do you understand the semantic interpretations of these factors, which are most important to you, to actually be?
- How would you assess performance against these factors for new and current contractors?
- What would you consider excellent performance against these measures to look like?

Interview procedure
Each of the participants was interviewed once, with each interview lasting approximately fifty minutes. The interviews were all carried out at the business premises of the client, which enabled some clients to display pieces of confidential information which could not otherwise have been viewed. The questions were posed largely as set out above, but given the freedom the author had given to the participants, many of the interviews quickly departed from the text. The issues that arose are noted in the results and analysis. Furthermore, a catch all question requesting any further points, opinions or questions surrounding excellent contractor performance was posed at the logical conclusion of each interview. This occasionally yielded some further opinion and insight into customer views of their suppliers, which is also captured herein.

RESULTS AND ANALYSIS
From the interviews with the customer organizations, several interesting elements have come to the fore in terms of what excellent performance from their first tier contractors looks like. The interviews revealed that many of the traditional performance measures, such as time, quality, cost, and health & safety are treated as required performance in the current environment rather than indicators of excellence. These factors are still generally seen on Key Performance Indicator (KPI) scorecards. Such KPI scorecards are commonly used to measure all aspects of output performance on programmes of construction works. The analysis of the interviews suggests that excellent scores against these factors are now seen as the minimum requirement to continue to work for large customers. These KPI suites of output factors appear to be used in today’s market as factors for contractors to ensure against the dissatisfaction of their customer. In other words, those who do not perform well against their KPIs are those who tend to find themselves not working for the customer for very long.
They are not used in order to identify organizations for immediate dismissal from their programme, but rectification has to come quickly.

Excellent performance factors are more along the lines of input factors, such as high performing teams, learning, cultural issues and team integration. The customers who have these KPIs in place appear to understand that improving input elements will also drive the output measures. What has been uncovered is the extension beyond output KPIs to rating first tier contractors by the more ‘leading’ or ‘input’ factors. These factors may not necessarily be measured in the statistical sense but they appear to be what sets excellent performing contractors apart from their peer group.

With such a two-tiered approach, customers tend to place the statistical output (prevent dissatisfaction) measures at a project level and the qualitative/input (create satisfaction) measures at the programme level. The programme level indicators tend to be the ones which are dealt with at a very senior management level by all parties concerned. The fact that the input issues are dealt with at this level suggests a further understanding that those first tier contractors who nurture the input drivers are the excellent performers at this and output level.

Minimum requirements of contractor performance

Time performance  
Yeung (2008) postulates that ‘variation of actual completion time expressed as a percentage of finally agreed completion time’ is they key element. This was confirmed as a minimum performance output (of varying importance) by all participants interviewed. Some participants also suggested that whether a programme focuses greatly upon this output depends upon changing internal drivers. What comes from this research is that customers who stated that time was the key output actually welcomed time variation, in terms of achieving completion before agreed time.

Therefore, it can be suggested that the key measure of performance is a combination of time predictability and reduction in delivery time. Participants interviewed for this research want the certainty that the handover date will be achieved, but are also interested in projects being delivered ahead of time. In addition, they need to be kept informed of an early delivery date well in advance in order to be able to take advantage of it. Given this perspective, it can be argued that although the compliance with an end date is required performance, consistently beating it, whilst keeping the customer informed, is viewed as excellent performance.

This placed time as being the key output delivery factor ahead of cost and quality as customers are realizing the opportunity cost and potential gain of time saved in the construction process. This perspective moves away from the most recent research (Yeung, 2008) which appears to focus upon the construction as the end in itself to a more commercially informed position which focuses upon the wider implications on the customer’s business as the end in sight.

Cost performance  
Yeung’s (2008) research suggests that the key deliverable of cost performance is performance against original budget, as was concluded with time performance. Again, capital cost has been raised as an output deliverable by the participants interviewed.
Participants interviewed for this research did make the point that predictability of cost was a requirement for their measurement against how their projects had performed within their KPI suite. However, when actually selecting contractors, lowest cost was the key driver, due to the construction department being ‘managed by the accounting department’. This does demonstrate a slight duality in the performance driver. Predictability of cost was stated as important at project level to ensure funding was managed well within the customer organization. The key driver at programme level was often cost reduction to ensure that a predictable saving could be tracked and returned to the business at points in the programme.

**Quality of product**
Number of defects at handover point was perhaps the most consistent ‘output’ measure mentioned by the participants interviewed. It appeared that this was because all aspire to the position of having zero defects at this point. However, from the interviews it appeared as if none of the customers was achieving this goal on their programme. Such under achievement was likely to be due to the fact that projects are not constructed under anything like controlled conditions.

The aspiration of zero defects was indeed a useful goal for driving behaviours and was clearly at the forefront of construction customers’ minds during the interviews. What would set an excellent performer out from other first tier contractors would be an organization that does not have defects caused by making the same mistake more than once. Interestingly, none of the participants interviewed currently measures their defects by the business impact of those defects. Although participants did confess that this would be perhaps the most important perspective on defects from their business’s position, it was not done this way because of the difficulty of acquiring data in this way. Defects were generally measured by number and time to rectify by all of the participants. Whilst such measurement criteria may be relatively easy to achieve, it was unlikely to give the business visibility of how they were affected by the defects.

It may be argued that an excellent performer would make deliberate attempts to avoid one defect that would impact negatively upon their customer’s business. If this was done at the expense of two very minor defects, an ironic result would be the contractor incurring a worse KPI score for an intelligent action designed to protect the customer’s business. Exploring such disconnects between popular KPIs and what genuinely matters to the customer’s business is beyond the scope of this paper, but needs to be borne in mind when establishing the true nature of excellent performance.

**Health, safety & environmental considerations through employee health and site accident rate, reduction of waste and reduction of environmental complaints**
Again, those participants interviewed for this research viewed these listed elements as minimum requirements. Many of them are now legal requirements for compliance, although customers may put more stringent compliance requirements on their contractors than are required by law due to their own internal policies. This tends to be the case in the environmental element than in the health and safety element, possibly due to the health and safety regulations (CDM Regulations) already in force.
The elements of environmental complaints and waste reduction were discussed during the interviews, although not to the extent anticipated. Environmental complaints were generally considered from the perspective of the customer organizations’ own customers rather than the general public; albeit that in some cases these two groups were broadly the same. The key issue to the customers was again generally tied up in their contractors' understanding of their business, discussed later herein, rather than any quantitative measure.

An absence of claims & disputes
Claims and disputes were stated as not recognized by the participants in this research. It is not that disputes were dismissed out of hand; rather it would appear from the interviews that good communication may have replaced the need for dispute and litigation in these customers’ large programmes of works. First tier contractors who preferred a litigious route to deal with contractual and project problems were not welcome members of their supply chains. Other participants did not mention claims or disputes at all. While this finding suggests an absence of disputes and claims, it does not really touch upon the level and effectiveness of communication.

Differentiators and demonstrators of excellent performance
Excellent relationships; through top management commitment, high levels of trust and respect, effective communications, contractor team satisfaction and excellent cultural alignment between customer and contractor.
The elements above were almost all mentioned as clear indicators of excellent performing contractors by most of the participants interviewed in this research. Some of the perspectives, however, differ from those published in recent research. Top management commitment was discussed during interviews as an intangible quality provided by the better contractors which was not measured in any clear way.

Yeung’s (2008) perspective was that the key performance was shown by the percentage of top management attendance in partnering meetings. From the interviews carried out for the research here reported, it was difficult to see how Yeung’s (2008) measure demonstrates excellent performance. While it is an easily measurable metric, having people in a room does not demonstrate commitment in the way it was described in the interviews. Attendees at meetings may not be committed, they may be disruptive or disinterested in terms of not demonstrating an emotional attachment. Therefore having the wrong type of people at top management level may actually remove performance from a contractor's delivery offering.

This research uncovered the need to purchase first tier contractor management capability as part of the overall package provided. Such capability was seen as adding value through the management of practical delivery and planning. In such a delivery model the responsibility for the delivery of the programme rests with the first tier contractors rather than the customer. Such an approach will require a greater deal of first tier contractor management commitment than if they were simply delivering projects which were allocated to them by the customer.

Emotional intelligence was raised as a major differentiator between first tier contractors in terms of management commitment. Customers can identify those contractors who treat the programme of works given to them as merely an income
stream and those who have emotional engagement. Participants suggested that such engagement was one of the roots of first tier contractors understanding what they want as customers. This was a key factor in creating excellent performance as the contractor could align themselves to deliver what the customer requires from their service delivery. A less than excellent contractor was seen as tending towards providing standard service based upon what they were used to doing for other customers.

Stating an emotional attachment as a differentiator between contractors was seen to be an interesting perspective as it suggested a mental commitment being made by the contractor’s management. This was a difficult element to measure but was seen to emerge from the experience the customer had in dealing with the contractor. Given the emphasis that participants put upon this point during interview, it was clear that such a commitment was clearly something they were looking for in their first tier contractors.

Yeung’s (2008) understanding of trust and respect measure used a Likert scale of satisfaction scores. Discussions of trust and respect in the research here reported centred more around customers not needing to examine and/or interfere in the delivery provided by their contractors. The view was that trust and respect were what excellent performing contractors shared with the customer when the customer knew that their programme of works would be delivered without the need to worry. Participants were noting an increasing ability to trust their first tier contractors with the delivery of the programme. In addition, they were trusted to comply with key outputs without the need for customer intervention. Participants stated that they are starting to impart trust to first tier suppliers to deal directly with their own stakeholders on their behalf. Improvement in the trust area had thereby removed a potentially wasteful communication step, thereby adding value to all parties.

Yeung (2008) takes the perspective that excellent communication is a requirement of excellent performance. His position, again, is that it should be a Likert scale measure of key stakeholders' opinions of the effectiveness to differentiate contractor performance. Some participants within the research here reported discussed performance improvements being a function of good dialogue between customer and contractor. Others spoke of the detailed engagement required to establish long term development plans with their first tier contractors in order to achieve the goals of both organizations. Another had formed a formal alliance with their first tier contractors which involved communication at many levels.

Effective and consistent communication was taken for granted within these construction relationships. In fact, many comments made about poor performers also appeared to centre on the issue of communication. To some customers, the ability of the contractor to listen was a big differentiator between excellent performers and the rest. This was an interesting perspective and seemingly not discussed in depth in previous literature. It also strongly alluded to two way communications being a real differentiator, whereas the previous research had tended to focus more upon how the contractor transmits messages to the customer. Through excellent communication, excellent performing contractors will show an aptitude for quickly understanding and aligning themselves behind the message coming from their customer. The output
priorities may change (often from between quality, time and cost) through the life of a programme of construction works depending upon the needs of the customer.

Assuming that the customer was informed from a construction perspective and was able to articulate the message about what was important to them, the excellent performer would be able to pick up that message and deliver on it. The excellent performing contractor was as much about customers giving the correct message as the contractor themselves interpreting it. Other participants stated annoyance at contractors who join their supply chain and try to dictate what should be important to the customer rather than listen to that message. Again, this finding alludes to the importance of two way communication.

One element of communication from contractor to customer which did come out as being an element of excellent performance was the propensity to challenge the customer organization to improve what they were doing. One particular participant stated that contractors who act as ‘yes men’ when the customer was making an obvious error were not excellent performers. This argument was distinct from dictating what was important to the customer; it was more along the lines of acting as a consultant to help the customer deliver what was important without making a mistake whilst so doing. This assertion can be described as a link between top management relationships and communication.

Another interesting perspective raised was that excellent performing contractors possess a ‘commitment to constant dissatisfaction’. This perspective suggested that satisfaction was viewed by customers today as a journey with perhaps no ultimate destination. Respondents stated that excellent contractors were those who, no matter how well they have performed, are always dissatisfied with it and look to perform better next time. One key observation here was that the perspective of the customer of satisfaction was that of 'programme outputs' as opposed to Lam’s (2007) position of satisfaction being happiness in the job. It was seen to be entirely possible that the two were one and the same, but such a finding is beyond the scope of this paper.

Attitude was seen to be another element which customers were now looking at when considering excellent performance. It was not viewed as customers only wanting to work with contractors who were the same as them in their outlook to business, but clearly it can help. There are several key attributes which were mentioned during the interviews: a strong sense of integrity, the desire to create transparency in terms of their performance and their business, commitment to constant dissatisfaction, a strong desire to learn from other people, and an ingrained culture of relationship building.

The customers who organized their first tier contractors into an alliance delivery route mentioned the desire to learn and to work at relationship building consistently. These customers understood that their first tier contractors were part of a community, or even several communities. How those communities worked as stand alone and interlinked communities was seen to be vital to them successfully delivering the output of their programme. It appeared that the correct attitudes and behaviours were key to making long term programmes and alliances successful.

Chan’s (2006) position was that partnering for construction excellence relies partly upon a shared culture and approach to business without organizational boundaries. It
became clear from the research here reported that customers were looking increasingly for attitude and behaviour as key criteria when hiring individuals for their organizations. There was seen to be a departure from hiring on pure competency as there was an understanding that with the correct attitude and behaviour, competency could be achieved through appropriate learning and development.

This finding was seen to be a clear position set out by the participants and it appeared that rather than looking to develop the correct cultures in workshops, customers were looking actively for contractors who came to them with these qualities already demonstrated. Excellent performance was therefore also defined as an organization staffing its delivery team with key personnel with the correct attitude and behaviour.

Innovation through learning demonstrated and the ability to value manage the project solution

Innovation was viewed as a way that a first tier contractor could add value to the construction process that was beyond the contract or project specification. Some have described this differentiator as the ability of the first tier contractor to think on their feet when encountering issues on site. Alternatively, innovation can manifest itself as being able to give input at the design development stage which assisted in designing out waste at a project level. Innovation in terms of wholesale changes in the way things were done appeared to come from the materials or building technology arenas rather than contractors, according to the participants in the study here reported.

Yeung’s (2008) perspective on innovation was that the cost saving resulting from innovation was the key measurable. This assertion, however, did not concur with the information gleaned from the interviews. Yeung's (2008) perspective assumes that cost was the most important output to the customer. However, given that one of the key points of research here reported was that the main driving output of the construction programme change, such a perspective for innovation requires widening. Yeung's (2008) position appears to be more akin to value management which was not mentioned in any great depth by the interviewees in this research. ‘Designing out waste’ can mean cost, but it could also mean time or elements of design that compromise the function or functional requirements of the finished product.

Those customers who do still carry out the bulk of measurement at an output level appear to understand the power of learning as a performance differentiator. Customers understand that output measures might be fallible due to the uncertain nature of construction works. Participants acknowledged that mistakes would be made during projects and that these may be created by the customer themselves. Kagioglou (2001) suggested that the ability to learn from experience as an organization was a measurable as part of a process/performance measurement scorecard although it must be driven in alignment with overall vision and strategy.

Sharing learning

What also became clear from the research here reported was that contractors working together on large programmes of work need to exchange learning that drives excellence. If one contractor on a large programme was performing excellently and others were falling behind then this added less value to the customer than if all were performing excellently. Therefore, excellent performers were those who learn and share learning with their peer group to advantage their mutual customer. If the 'bar is
raised' by all contractors on a programme, they can take this improvement and spread it to other customer work streams. This way all contractors who take part in learning and sharing gain something, while the customer also gains.

Role of the customer

The above excellent contractor performance aspects should not go without a mention of the role of the customer in the construction programme. The comments that came from the participants were that they have to be giving the correct messages about the above issues. Customers understand that excellent performance will only be delivered following excellent leadership from the customer themselves. If customers do not act in such a way that demonstrates and encourages excellent performance, than they are unlikely to receive it from their supply chain.

CONCLUSIONS AND RECOMMENDATIONS

Performance Management

Following on from the research here reported, there needs to be a paradigm shift in the way in which the industry measures and manages its first tier suppliers. This research suggests that customers should expand their performance management beyond the use of output KPIs. Customers who keep extensive output KPI suites may have to reduce these in order to incorporate the following input measures:

- Emotional commitment and ownership of the programme
- Effective two-way communication
- Contractor developing their business to align with the customer
- Effective and appropriate challenge of customer decisions
- Commitment to constant dissatisfaction, at the business and programme levels
- Transparency of business performance
- Consistency of attitude, behaviour and culture
- Delighting the customer's stakeholders
- Protecting the customer's business from the impact of construction
- Flexibility and responsiveness to programme change
- Focussed innovation and learning with tangible outputs

Customers will have to develop a framework around these in a way that best suits their business requirements. The results element of the research provides an in-depth recommendation of a starting point for a best-practice model. It is accepted that this will require a certain amount of deeper thought and preparation than a simple output KPI suite. The extra effort, however, would be more than repaid in terms of the customer being able to better manage the contractor in driving the required behaviours. There would be no room for 'box ticking' in order to achieve KPI measures at the expense of what may be really important to the customer. Furthermore, it would alleviate the annoyance of contractors who harm their own KPI scores by focussing upon what they know is really important to their customer.

These new best practice performance management factors can, if necessary, be measured quantitatively, but the more important issue is that they are identified and proactively managed. If these are to be measured as an 'input KPI suite', then the customer will need to define exactly what s/he needs to be the behaviours demonstrated under each one. The required behaviours will have to be clear enough to
be adopted and followed and be focussed enough that improving them will add real value to the customer's programme. In this way, areas which delight customers will be managed alongside those which simply keep them satisfied.

It is suggested that these input factor KPIs are updated quarterly as part of a managed performance improvement programme. Performance improvement initiatives can be put in place to support and improve each of the behaviours. This is recommended as a long term approach to performance improvement that will improve the contractor businesses at the same time as driving excellent performance to the customer. The customer and the contractor should work together to establish the finer points of the required performance and when the performance level should be reached. The initiatives can then be crafted to achieve this level of performance and this can be a further measurable item. In addition, output KPIs will be improved through the management of the excellent performance inputs. Driving longer term improvement at the input level is more likely to drive a sustained improvement in outputs than trying to manage the outputs alone.

Contractors themselves need to start examining themselves on the basis of these performance factors. To what extent are they providing them for their customers? What could they do to improve their performance in these areas? This paper serves as an initial guide as to what contractors should be focussing upon proactively. More customers are becoming more educated on the construction delivery process and becoming more savvy about what they want from their supply chain. Therefore contractors who can demonstrate that they are becoming more educated in these areas too are likely to steal a march on their competition.

REFERENCES


