

Development of Key Performance Indicators For Housing Market Renewal New Build

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Abstract: This paper presents a case study on the development of Key Performance Indicators by a Housing Market Renewal (HMR) Pathfinder. The pathfinder organisation has formed partnerships with local authorities and private sector housing developers to renew and regenerate housing markets in a sub-region of the North West of England. Within the context of these partnerships, Key Performance Indicators (KPIs) were identified as being crucial to evaluating the performance and success of construction projects and programmes to be delivered by supply chain partners. Concentrating on new build housing, this paper presents the approach of the pathfinder organisation to performance measurement and details the KPIs selected for measurement. A discussion of the approach taken by the pathfinder organisation is included in the paper and a distinction between KPIs that were *adopted*, *adapted* and *generated* is made. The paper concludes with potential areas of future research that includes comparison between the approaches of different HMR Pathfinders to assist learning and diffusion of good practices.

Keywords: Housing Market Renewal, Key Performance Indicators, Public Construction, Public Procurement.

1. The Context of KPIs in Housing Market Renewal Construction

Elevate East Lancashire, the Housing Market Renewal (HMR) pathfinder is intervening in the built environment in several ways, including demolition and clearance of unfit housing, repair and facelift of some existing housing, and building of new housing. These different built environment interventions require the local authorities obtaining HMR funding to agree contracts and form partnerships with several construction companies and housing developers. Elevate identified Key Performance Indicators (KPIs) as being crucial to evaluating the performance and success of the HMR funded construction projects and programmes to be delivered by supply chain partners. Based upon the case study method this paper presents Elevate's approach to KPIs and performance measurement for new build housing procured by several of the Elevate Local Authorities. The case study is presented from the viewpoint of practitioners in the pathfinder organisation.

2. Elevate's Approach to KPIs and Performance Measurement

Elevate desired to introduce a system of KPIs in order to measure performance of a number of issues that were perceived to be critical to the success of the housing market renewal new build programme, including housing design, build quality and impact on the environment. Measurement of such critical issues would allow Elevate to communicate priorities to supply chain partners and share key outcome indicators from funding bodies including Department for Communities and Local Government (DCLG), Housing Corporation and English Partnerships, with supply chain partners.

However, Elevate did not want the KPI system to just measure performance against targets, but also wanted to ensure that the KPI system followed good performance measurement practice by incorporating benchmarking and continuous improvement principles. The KPI system was therefore complemented by what was termed as a performance measurement process that would enable the benchmarking of project performance at different points in time and against data from other projects. Such benchmarking would enable the identification of areas where improvement is required and also demonstrate the achievement of continuous improvement.

A performance measurement group, that comprised representatives from Elevate, Local Authorities and private sector developers, was established in order to carry out the benchmarking and continuous improvement processes. The performance measurement group ensured that key individuals bought into the KPI system and continuous improvement processes. However, guaranteeing buy-in from the Local Authorities and private sector partners was not something that the pathfinder strongly worried about because of another key facet of the KPI system, its incentivisation.

The incentivisation of the KPI system was designed so that performance on the KPIs that were most important for the client would be linked to either a proportion of housing developer return, or overage on the land sold by the Local Authorities to developers. In practice this would mean that for developers to get their full return and complete share of the overage negotiated during the procurement process, they would have to achieve the target set for each individual incentivised KPI. Linking KPIs to return and overage ensured that developers would be focused on achieving the performance levels desired by the client. The incentivisation system also meant that ensuring actual measurement of the KPIs, which can be problematical in some projects, would not be in this case.

Incentivisation of the KPIs also meant that KPIs and measures would have to be carefully selected. Only simple, transparent and reliable measures were considered suitable. Each KPI had to be approved by all relevant partners and only realistic and achievable KPI targets could be set. To ensure that performance measurement did not become too resource consuming, a limit on the number of KPIs was set and partners were only required to provide data on issues that they had major control over.

3. Case Study KPIs

The KPIs at Elevate were divided into five categories A-E. The section that follows presents an overview of each category and the respective KPIs.

Category A (Table 1) included the most important KPIs that were incorporated as a contract term and poor performance would result in a contract breach resulting in defined remedies, failure to comply could result in forfeiture. Only 3 KPIs were considered for this category.

Table 1: Category A KPIs

KPI	Overview
EcoHomes	The environmental rating for new homes, covering energy, transport, pollution, materials, water, land use and ecology, health and wellbeing, and development management. All new units produced should be to a minimum 'very good' standard.
Design	Recognising that good design is fundamental to the delivery of safe and attractive places to live. Secured by Design and Building for Life standards were adopted to measure the quality of design against national standards.
Implementation of Phase Milestones	To ensure that the business plans agreed for each development phase are implemented by developers to the satisfaction of the client, key milestones have to be achieved on time. These milestones include supporting Local Authorities in the relocation of displaced residents and delivering the agreed number of units to be built and agreed tenure mixes.

Category B (Table 2) comprises factors that are very important to the Pathfinder/Local Authority client and accordingly positive performance on KPIs included here is rewarded. KPIs in Category A (above) will be combined with the KPIs in Category B, and together they will be linked to the incentivised proportion of developer's return. There are 5 KPIs in Category B so therefore, with the addition of the 3 Category A KPIs there are 8 KPIs that would impact on a developer's return.

Table 2: Category B KPIs

KPI	Overview
Local Labour	Participation of local labour in the project is vital to support the wider participation goals of the programme. Developers must make realistic attempts to use local labour and Elevate is funds a 'Constructing the Future' programme which includes a construction agency, in order to ensure labour supply and support the targeting of hard to reach groups.
Local Suppliers	Participation of local suppliers in the programme is vital to support the wider economic regeneration goals of market renewal in East Lancashire. Elevate has undertaken an audit of construction suppliers in East Lancashire to help developers identify capacity in the sub-region.
Quality	Good quality homes must be built. A defect free dwelling is important for the reputations of Burnley, Elevate and the developers. Developers are measured on defects at handover and quality and speed of correction using standard Constructing Excellence measures.
Good Constructor Practices	Developers will be working in local communities during the programme and as such good management of construction activities is expected in order to retain the support of residents. Considerate Constructors is the best practice standard that performance is measured against.

In Category C (Table 3) the KPIs are of a slightly lower priority to those in A and B, but nevertheless important to the client and incentivised accordingly by being linked to 50% of the developer's overage. There are 4 KPIs that measure developer performance in this category. There is also one KPI that measures the performance of the client.

Table 3: Category C KPIs

KPI	Overview
Predictability of Construction	This measures actual construction costs and delivery times against pre-construction budgets and programme timescales. Based on standard Constructing Excellence Predictability KPIs these measures are used to focus developers on agreed budgets and deadlines, and over the long term demonstrate continuous improvement of the business plan.
Training	Training opportunities and vocational qualifications improve the career prospects of construction operatives from the local area. Targets are set for the number of apprenticeships created and construction skills qualifications attained. A breakdown of the percentage of opportunities taken up by hard to reach groups, including BME communities and women, is also measured.
Health and Safety	This measures the health and safety training of site operatives and the number of site accidents and warnings. The targets set for developers include subcontractor employees.
Good Developer Practices	Two distinct measures are used here. Firstly a community engagement measure that considers proactive community activities undertaken by developers against a best practice checklist. Secondly, an end user satisfaction measure that considers the satisfaction of end users with the overall customer service and change management process offered by developers.
Developer Satisfaction	Here certain measures that developers wanted to measure client performance against are included. These include Compulsory Purchase Order progress and client decision making speed.

In Category D (Table 4) the KPIs were not incentivised. Although termed KPIs, the issues included here are measured by short survey as opposed to a series of distinct indicators. These KPIs relate to factors that were the collective responsibility of the partnership between client and developer partner, and not just the responsibility of the private sector partner.

Table 4: Category D KPIs

KPI	Overview
Community Satisfaction	This measures the local community's attitude towards the HMR intervention and covers issues such as safety and security and community wellbeing.
Partnering Relationships	This measures the satisfaction of all partners with each other vis-à-vis support, preservation of partnership principles and quick and effective dispute resolution.
Supply Chain Satisfaction	Measures supply chain issues relevant to wider public sector procurement policies including supplier and subcontractor satisfaction, and participation of voluntary and social enterprises.
Sustainable Development	Measures performance on a number of key sustainable indicators like sustainable use of water and energy resources. The indicators consider the construction process and the performance of the final end product.

In Category E (Table 5) the KPIs represent measures of long term outcomes desirable for the client. These KPIs measure the success of the above performance issues and offer a potential warning bell system that may indicate if a review of strategy is required to achieve better results.

Table 5: Category E KPIs

KPI	Overview
Land Registry Property Prices	As a measure of intervention success in revitalising the housing market this KPI uses data from the Land Registry Agency to track property prices and market turnaround.
Demographic Change	Demographic statistics will help to monitor population changes in the intervention areas over time.
Local Health Statistics	Local health statistics will help to monitor health changes in the intervention areas over time.
Crime Statistics	Crime statistics will help to monitor crime levels in the intervention areas over time.

4. Discussion of the Elevate Approach

Elevate's KPIs were assembled from a mixture of sources, including *adopted*, *adapted* and *bespoke generated* KPIs. Adopted KPIs came from Constructing Excellence (CE) and the DCLG (formerly ODPM). The CE KPIs have become well established within the construction sector since the Egan report (DETR, 1998) recommended the development of standard KPIs to be collected nationally. The original group of national construction KPIs produced by a partnership of the Construction Best Practice Program (CBPP), the

Construction Industry Board (CIB), and the Department Of Trade and Industry (DTI), have been expanded by CE and now comprise six distinct groups: All Construction (economic); Respect for People; Environmental; Consultants; Construction Products; and Mechanical and Engineering (Constructing Excellence, 2006a).

Elevate were most interested in the All Construction KPIs (Constructing Excellence, 2006b), sometimes known as the Headline KPIs. From CE's ten headline KPIs, Elevate opted to use Cost Predictability and Time Predictability, Quality, and Health and Safety Accident rates as formal KPIs. Elsewhere several CE Environmental KPIs (Constructing Excellence, 2006c) were used by Elevate to measure Sustainable Development in Category D of the Elevate framework. Other CE KPIs on the likes of Respect for People and Consultants were not adopted. The majority of the CE KPIs were therefore found to be inappropriate measures of the critical success factors required to measure the performance of new build housing construction in the context of housing market renewal. Elevate were therefore required to go beyond selection of just standard CE KPIs in order to establish a framework of KPIs that would encompass every important issue requiring measurement.

The DCLG presented Elevate with a further source of potential measures that could be adopted as KPIs. The DCLG indicators were particularly focused on determining performance on issues critical to the long-term impacts of market intervention. The KPIs in Category E, relating to property prices, demographic, health and crime statistics were derived from DCLG's holistic priorities for market renewal and sustainable communities. Measurement of such issues would be a first for the housing developers in partnership with the Elevate Local Authorities. But Elevate strongly believed that it was important that long-term indicators of success derived from funding sources like the DCLG were shared with supply chain partners to keep attention focused on the wider issue of market renewal and not just the short-term objective of building new homes. Although being measured on such indicators represented a completely new approach for the housing developers involved, they did readily accept the KPIs in Category E. Elevate were able to encourage the quick acceptance of these KPIs by stressing that they were measuring the long-term success of the client-developer partnership and not just developer performance. From the developers viewpoint the long-term measures were agreeable because they were very aware of the policy context surrounding market renewal following submission of tenders to several different HMR pathfinders, and also because there were no incentives or penalties attached to the actual performance levels of the KPIs.

In the Elevate case there were several KPIs that were adapted measures from best practice schemes, including the EcoHomes, Design, and Good Constructor Practices KPIs. The EcoHomes measurement is a requirement for DCLG, Housing Corporation and English Partnership funding, and was converted into a KPI by using the score out of 100 awarded to schemes after completion. Performance on the EcoHomes KPI was targeted to ensure that developers did not just manage to achieve the required 'Very Good' standard, but achieved the award comfortably. For the Design KPI, CABE's Building for Life measure and the UK Police's Secured by Design initiative, were adapted. To receive a proportion of the incentivised return on these KPIs the developers had to work towards the Building for Life 'Silver' standard and for Secured by Design, accreditation. The Good Constructor Practices KPI, utilised the Considerate Constructors best practice scheme as the measurement of performance. The score awarded by external auditors against the Considerate Constructor code of practice would be converted into a performance level on this KPI.

The final source of KPIs comprises bespoke KPIs that were generated by Elevate to measure specific issues critical to success that could not be measured by KPIs either adopted or adapted from elsewhere. In Category A of the KPI framework, the Implementation of Phase Milestones KPI was developed by the client to ensure that constructor partners completed, within set time parameters, the key milestones agreed in the developed programme. However, this measure was subject to lengthy negotiation between client and developers before any agreement could be made because developers argued that a large number of the key milestones originally proposed by the client were not under their complete control. Local Labour, Local Suppliers and Training were all other bespoke KPIs that were developed to measure performance on one of Elevate's key strategic objectives: obtaining social and economic community benefits from construction expenditure in the sub-region. The three distinct KPIs demonstrate the significance of community benefits to Elevate. To help ensure that developers could deliver good performance on these issues the client funded a construction agency to work with local agencies to supply local labour and trainees. Additional bespoke KPIs were, Good Developer Practices, measuring the performance of developers on community engagement and end user/resident customer service, and the Developer Satisfaction KPI. The Developer Satisfaction KPI measured client performance against indicators suggested by the developers themselves but with the approval of the client.

During the period of negotiation between client and developers on the measures to be used for the KPIs, representatives of developers proposed that the KPIs and the targets set should be fixed for the duration of the partnerships. Developers revealed the fact that they desired the KPIs to be fixed was because of the incentivisation that would be linked to the KPI performance. The Pathfinder/Local Authority client however rejected this suggestion from developers, arguing that such an approach would offer no flexibility if new priorities emerged or current measures were found to be inadequate. Removing the incentivisation of the KPIs was also not an option for the client, who believed that if KPIs were not tied to developer return delivering good performance on the issues would be difficult, and even ensuring that the KPIs were measured a potential challenge. In order to assist developer acceptance of the KPIs at the beginning of the partnership, Elevate therefore proposed a system of continuous target adjustment. Recognising that the KPI framework comprised performance issues new to developers, and that desired performance levels could not be guaranteed as soon as development work began, Elevate intended for targets to start off low at the beginning of the partnership and gradually increase overtime. Developers appreciated such realistic expectations from the client regarding performance levels, and subsequently the KPIs and initial target levels were agreed.

5. Summary

This paper has presented a case study on the development of Key Performance Indicators by a Housing Market Renewal (HMR) Pathfinder. The approach of the pathfinder organisation to performance measurement and KPIs was presented. Analysis of the case study KPIs revealed that they were assembled from a mixture of sources, including *adopted*, *adapted* and bespoke *generated* KPIs. Adopted KPIs came from both Constructing Excellence and DCLG. Adapted KPIs were developed from best practice schemes that include EcoHomes, Building for Life and Considerate Constructors. Bespoke generated KPIs included Implementation of Phase Milestones and community benefit measures on Local Labour, Local Suppliers and Training, which could not be measured by existing measures developed elsewhere.

The case study illustrated that Elevate did not believe that KPIs from any single source would sufficiently encompass all of the critical issues that they wished to measure. The complexity of renewing housing markets meant that the KPI system introduced by Elevate would require private sector construction partners to be measured on holistic issues influencing overall market regeneration and not just construction performance. This theme has also emerged following preliminary discussions with other pathfinder organisations engaged in market renewal and other public agencies engaged in large-scale regeneration projects.

A best practice workshop chaired by Elevate, with representation from all of the HMR pathfinders nationally, for instance, revealed that consistent across the different cases was the perception that the national construction KPIs championed by Constructing Excellence were not broad enough to incorporate the wider regeneration activities crucial to contemporary public sector intervention in failing housing markets. This is one potential area for future research. Further comparison between different pathfinders and major regeneration clients could assist mutual learning and diffusion of good practices. Comparing the experiences of different pathfinders could identify similar KPIs collected elsewhere, and provide the basis for the benchmarking of performance between clients that have had to generate their own similar KPIs separately to measure the crucial regeneration activities that are not covered by existing schemes or measures.

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