

# Procurement in PPFM

Improving efficiency and ensuring value for money

June 2012



# Series introduction

This series of papers will examine how the UK can secure much needed investment in its social and economic infrastructure in the coming years.

Achieving this is important. Infrastructure has been highlighted as a primary driver for economic growth, as well as a means to deliver the UK's goal of a hi-tech, low carbon and globally competitive economy. However, the UK is acknowledged to have both a shortfall in quantity (estimated by some at £434 billion<sup>1</sup>) and quality (the UK was recently ranked 28 for the overall standard of its infrastructure by the World Economic Forum<sup>2</sup>), hampering efforts to achieve these goals.

The timing of this series is also important in relation to proposed solutions to the UK's infrastructure challenges. At the UK level, the National Infrastructure Plan is moving from its formative stage to delivery. Infrastructure solutions in the Devolved Nations are also taking shape, with examples, such as the formative Welsh Infrastructure Investment Plan being developed.

Developing sustainable models and sources of funding and financing for these proposed solutions, -especially in tough economic times with a restricted public purse- will require new thinking. Helping to identify these new models and sources of funding and financing and removing the blocks and challenges to them is the aim of this ACE investment into infrastructure series.

This series of papers will explore a range of options available to government as it looks to secure investment and raise the UK's standing for infrastructure standards. These include the development of the Green Investment Bank, the potential for pension fund investment, new public-private finance models and alternative methods.

## Abstract

This paper is the third in ACE's infrastructure investment series and explores in more detail improvement that could be made to the procurement within Public and Private Finance Models (PPFM).

Issues explored in this paper include the concept of flexibility, transparency and the use of a centralised resource to improve procurement efficiency and reactivity, resulting in better overall value for money for the taxpayer

# Contents

Series introduction.....	2
Abstract .....	2
Key findings.....	4
Improving procurement processes in Private Public Finance Models.....	9
Procurement - the stage explored .....	11
Procurement – improving the process .....	11
Procurement Efficiency Mechanism (PEM) – illustrative diagram.....	15
Design and exploratory work - the stage explored .....	17
Design and exploratory work – improving the process .....	20
Construction - the stage explored .....	21
Construction – improving the process .....	22
Operational performance – the stage explored .....	22
Maintenance – the stage explored .....	23
Maintenance – improving the process .....	23
Termination – the stage explored .....	24
Moving forward.....	26
End notes.....	27
ACE economic and policy papers.....	28
Further information .....	29
About ACE .....	31
Disclaimer.....	31

# Key findings

The previous Private Finance Initiative (PFI) model provided a number of advances in terms of procurement and the consideration of whole life costing. However the PFI model also exposed the extent to which they rely on demand/usage meeting forecast expectations. There can be a disparity between expectations and actual earnings and performance. Part of this is due to the way in which forecasts generally consider a medium scenario as the most appropriate, but this may lead to an inefficient scenario for both parties. It is for this reason that flexibility needs to be introduced into the system.

## There needs to be clear guidance on model suitability

- Government needs to ensure that unlike PFI, any new model is not viewed as the only available options, providing clear guidance on the application of various alternative models.

## Centralised efficiency and skills retention are important

- This paper outlines how a centralised taskforce could enable government to retain and build on its knowledge base and skills. This would ensure value for money and encourage efficient and quicker reactions when dealing with any issues that arise. Importantly this body should concentrate on attracting and retaining talent and expertise, minimising loss where possible, to the private sector. It could do this by, for example by offering improved salary, pension, holiday allowances, and insisting on aspects such as six month handover periods, to transfer knowledge when staff changes occur.
- The centralised team should consult with industry, local authorities, government departments and finance sources to extract the maximum utility from each group in the identification and specification of projects to ensure local, sectorial and regional efficiency. For example, the Scottish Futures Trust (SFT) is involved in projects with regards to ensuring value for money. It helps to improve information sharing and efficiency within project pipelines, so as to achieve this goal. In addition any savings derived are reinvested back into projects, thus improving growth and the long term competitiveness of the economy.

## The two broad procurement phases, provide limited information or confidence to the market

Traditionally procurement has been undertaken on the basis of construction and operational phases. This process could be improved by providing better information to all participants. This paper considers the following:

- Procurement
- Design and exploratory work
- Construction
- Fixed operational performance
- Dynamic operational performance
- Maintenance
- Termination

### Implementing a Procurement Efficiency Mechanism (PEM)

- It is hard to imagine that efficiencies cannot be found within the procurement process. For example, ACE's review of the performance of PFI between 1996-2010 found that the performance of the capital to utility payment ratio had improved over time. This suggested that efficiencies were made by both the market and government within the procurement process. As such procurement and its efficiency should be considered as a much greater and integral part of any PPFM model in ensuring an efficient and value for money outcome.
- Using the proposed Procurement Efficiency Mechanism (PEM) a small but expert and well-resourced centralised team (Risk and Procurement Management Team - RPMT) would, once an issue is identified trigger a step change in resources and expertise access for local departments through this body to quickly, efficiently and effectively deal with issues at hand. Such issues may include procurement undergoing significant delays, or funding costs spiralling.
- As government works to improve the speed and efficiency of the PEM process, it will provide greater certainty to investors and private companies as to their costs and commitments within the procurement process.

### There needs to be improved accountability

- The political importance of infrastructure as a means of growth and the potential influence of the centralised team requires accountability. It may be necessary, depending on the final structure of the body dealing with centralised procurement, to assign a ministerial position to the department to ensure that accountability.
- Alternatively, we have looked at the possibility of utilising the current structure of the Efficiency Reform Group ERG because as a number of the areas discussed in this paper currently sit within this unit. This would also therefore already sit under the remit of a cabinet minister enforcing accountability.
- ERG would be an ideal place to build such a centre of expertise in tandem with HM Treasury existing knowledge of procuring private finance to ensure the success of future PPFM projects.

### Procurement issues expand beyond that of Public Private Finance Models

- A report by The National Audit Office on the performance of PFI construction<sup>3</sup> finds that there is no reason why some of the procurement practices in PFI cannot be applied to traditional procurement methods. Even though data is not directly comparable, there is still sufficient evidence to suggest that there is little difference between the performance of PFI and traditional procurement methods. This suggests there could be wider applications for such a procurement mechanism outside that of Public Private Finance Models (PPFM).

### Continuing procurement challenges

- There needs to be a clearer outline with regards to the tender period and deadlines. More importantly the public sector needs to adhere to these guidelines and avoid last minute changes which place extra strain on industry. e.g. pre-qualification, submission, announcement of winning bid etc.

- Improve procurement skills within the public sector with regards to procurement. It is important to ensure that the client operates as effectively as possible, engaging with industry to create an efficient outcome.

#### Design and exploratory work can save time and money

- Flexibility should be discussed before the construction phase. This is because most of the planning for such flexibility is required within the design and exploratory work area of the process. Maintaining investor confidence and reducing risks is important and flexibility can help to achieve this goal. For example, the Royal Armouries and Balmoral High School in Belfast both suffered from demand deficiency, resulting in their failure. This risk could have been reduced by having flexible building in the first instance to accommodate a lower demand scenario with flexible scale up options in the longer term.
- The design and exploratory stage of the procurement process is important as it can lead to significant efficiencies if designs account for changing conditions such as use, carbon, maintenance etc.
- In Canadian Public Private Partnership (PPP) projects, designs are advanced further before reaching the bidding stage. As such, a larger number of the criteria are specified. This shortens the procurement process, reduces cost and improves value for money.

#### Flexibility is required for government to gain better efficiency and value for money

- This paper explores the three scenarios to show how uncertainty and demand volatility can be reduced

Constant demand - e.g. assuming a shortage of supply a newly built prison operating at near full capacity over its lifetime),

Increasing demand on a fixed project with no flexibility - e.g. a road bridge which initially operates below capacity but becomes congested within its expected lifetime.

Increasing demand with project flexibility - e.g. a hospital with land set aside to expand ward space

- Under the constant demand scenario the investor is sure of his demand level over the entire period, with fluctuations occurring randomly around this level. This creates an attractive and predictable return.
- Under an increasing demand scenario with no flexibility the project is built for a specified level of demand. This means that up until this point, the asset is being under-utilised and so is running inefficiently. Past this point, the asset is beyond operation capacity and so is also inefficient. This leaves a very small window of optimum efficiency and, therefore, also can be considered to provide a short period of best value for money for the taxpayer. This makes the case for flexibility.
- For example, flexibility that could be built into projects include multiple use space to allow for changes in demand, land set aside for future development, designing buildings to accommodate new technologies easily etc.
- When you build flexibility into the model it allows you to adjust at intervals to

demand as it occurs. This means there are more periods in which the asset is operating efficiently and reduced downside and upside risks as you are not forecasting for the entire 25-30 year period.

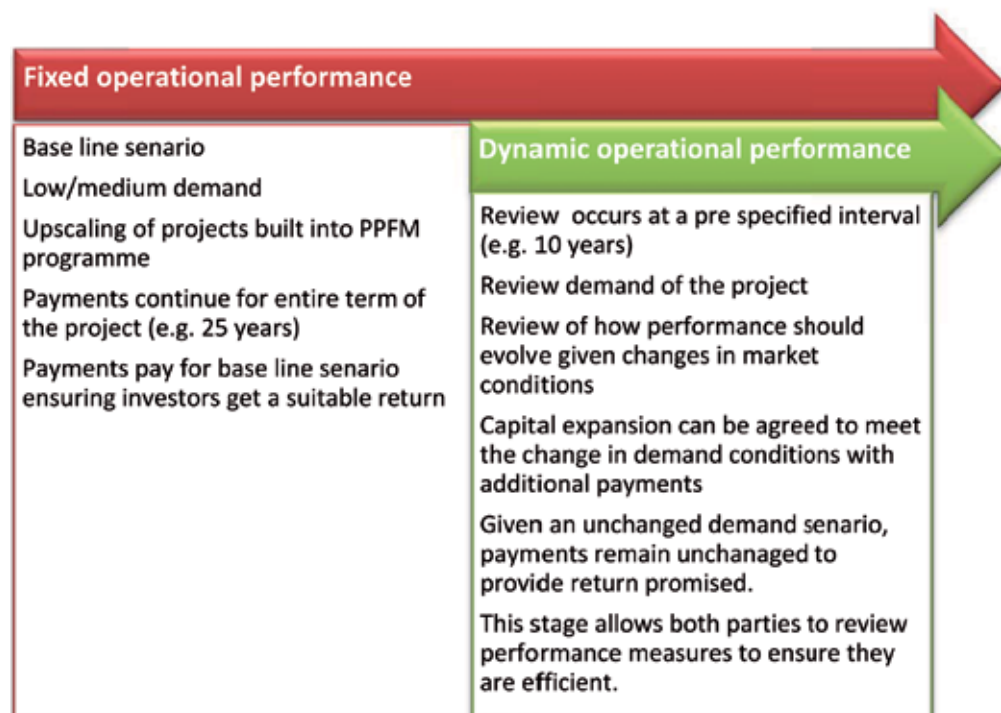
#### Provide a baseline, creating a fixed operational performance will provide certainty

- This stage provides the baseline for the Public Private Finance Models (PPFM) project. This baseline is designed to be conservative, providing certainty to the investor as the probability of demand exceeding the capacity of the asset within the contracted time is significant.
- This reduces the risk of there being insufficient demand to justify the capital outlay. This makes the operational aspect of the PFI project more attractive, and so could theoretically increase competition between investors, lowering cost.

#### Dynamic operational performance, providing capacity and efficiency beyond the baseline

- The dynamic stage of operational performance is important as it provides the public sector with the flexibility it requires to ensure the efficient use and delivery of services over the whole contract period. This is done by reviewing the asset at pre-defined intervals with a view to investing further, if demand conditions are sufficient (e.g. every 5-10 years depending on the likelihood of demand variability).
- This separation allows staged delivery and is based on actual demand over the asset's lifetime. As such, this should significantly reduce demand side risks which should make attracting investors both easier and cheaper.

#### The fixed/dynamic operational performance profile



Maintenance needs to be more transparent and is not a static process; technology and needs both change

- Maintenance has traditionally been viewed as being part of the operational aspect of models such as PFI. However, given a number of examples in the media in relation to the cost of maintenance (e.g. £333 cost of changing light bulb<sup>4</sup>) it is important that any future PPFM improves significantly the level of transparency. For example, aggregated maintenance accounts could be made publically available to ensure efficiency is being maintained.
- Transparency should be implemented in a way where data can be compared and utilised by procurement teams to improve their ability to negotiate better value for money. E.g. publish harmonised data on a central platform, similar to that of the Business Link Contracts Finder but for performance and cost related data.
- Reviewing and adjusting targets and performance expectations to suit both parties can relieve pressure on the private party, and even possibly provide better returns for investors as their product is better aligned to the change in demand conditions.

Never forget your exit strategy

- Government needs clear exit strategies, in terms of who will operate the asset post PPFM. Given the private sector's management of the asset for a significant period it may be most efficient to continue to have such an arrangement in place. If such arrangements were made in advance, the public sector should be able to secure a better deal. For example, the 2012 Olympics has had a significant focus on ensuring a legacy and the use of venues in an efficient way post the games period. The process of planning the legacy or continuing use of an asset post PPFM deals should become a standard practice moving forward.
- The public sector needs to outline clear criteria for the assessment of the asset on transfer (e.g. for office space it may be that all electrical systems are in working order and comply with current building standards). This reflects the incentive for the private sector to sweat the asset (assuming they can maintain performance and not incur charges) prior to hand over.



# Improving procurement processes in Private Public Finance Models

In this section, the report will discuss a number of measures that would help to improve the procurement process. As part of this we will refer back to the procurement mechanism used as part of the PFI model.

One of the issues that surrounded the PFI model was a loss in public confidence as a result of uncertainty and mistrust. This in part was due to a lack of transparency on the scale of investment, standard of service and eventual cost to the taxpayer.

For PPFM to be effective it will need to gain the support of the public, government and investors.

In addition, the recent announcement of the review into PFI creates further questions as to what form a future model will take in terms of the risks and returns available to investors. Whilst the review is important, the timing of the review also unfortunately coincides with continuing uncertainty given the financial crisis and recession. Government could help to improve this situation by providing a clear direction of travel over the coming months to provide certainty to the market that developments are taking place. It is important that government provide full and continuing support to any new PPFMs.

Confidence is a precursor to investment, not a result from it. This applies to both the capital and opex stages of the model. For example, Canada's PFI projects are considered more stable due to government support during the capex phase and therefore attract investment. At the operational stage, investment funds (such as those operated by Macquarie) invest on the basis of rates of returns, risk, and importantly, their confidence in government delivering this return.

Understanding the relationship within private public finance models between the public and private sector is key to their success. The alignment of outcomes responsibilities and project scale are important as these all have an impact on the eventual value for money for the taxpayer, and return for the investor.

Demand risk is important in relation to flexibility. This is because whilst the private sector can take on this risk it would factor in a cost for doing so. In addition it is important that the public sector procures an asset that is fit for purpose and efficient over the full period of the contract. For example, hospitals will need to be able to accommodate changes in technology over time. This therefore implies that a degree of flexibility would be useful. The cost of this flexibility will depend on where the risk of undertaking flexibility lies.

This is an important concept. The efficiency gained from flexibility, is attained by reducing the number of projects that are procured that operate inefficiently. This inefficiency comes from spare capacity having been constructed and then government having to pay to operate this capacity at an additional cost than would otherwise be the case if the asset matched demand and market conditions more closely. For example, under PFI Balmoral High School in Belfast, anticipated a capacity of 500 pupils but only attracted 150.

Within this there are differing priorities for each of the parties. The private sector will aim to provide the asset with a balance of the lowest upfront cost and lowest

operating cost, thus maximising profit. Whereas, the public sector has to ensure any assets meets its requirements over time for service provision at a reasonable cost.

The private sector can build an asset to meet the requirements specified by the client. As such, it is important that government act as a well informed client ensuring that it specifies a practical outcome that it actually needs to achieve. Transparency and information sharing forms a key part of this understanding, with government forming realistic expectations of costs within project delivery.

It is important to note that not all projects will benefit from flexibility. As we discussed in ACE's last PPFM paper a one size fits all approach does not always equate to the most efficient outcome. There will be projects where there is a high certainty of demand or stable demand expectations where flexibility will not be required. As such, exploring or building in such flexibility would only lead to a rise in both procurement and construction costs. For example, the downsizing of projects is likely to be a much harder to achieve, possibly creating an inefficient outcome given the scale of the initial capital outlay.

The interaction between the private and public sector is a balancing act, between that of the risk each party is willing to take, the flexibility required, the specification and service provision and the return that is required. For example, which party undertakes construction risk, financing risk, inflation risks etc. As such it is likely that the structure of the previous PFI model does not fully allow for both the public and private parties to operate efficiently given its lack of flexibility.

Within the current PFI model, it is generally felt that there are two stages which are broadly categorised as the construction and then the operation/maintenance phases. However, this is over simplistic when considering both market participants, government requirements, market conditions, financiers and attitudes to risk.

For this reason the following phases should be considered as important

- Procurement
- Design and exploratory work
- Construction
- Fixed operational performance
- Dynamic operational performance
- Maintenance
- Termination

Expanding the classification of stages within Private Public Finance Models will allow government to outline in more detail the risks and processes associated with each stage.

If government is looking to access funds from traditionally more risk averse investors it is important that the current structure provides confidence to

investors. The broad categorisation makes risk assessment difficult and does not provide the flexibility required to the public sector.

### Procurement - the stage explored

This stage of the PFI process is significantly more expensive and intensive (in terms of time) for both government and industry than traditional government forms of spending.

However, this is not without reason. Under Public Private Finance Models both parties are required to clearly define their roles and responsibilities.

For example, the private sector's responsibility to raise finance, negotiate to determine a suitable return, ascertain the cost of financing and the requirement for multiple parties to operate in the special purpose vehicle all take time to arrange.

Until approved, this lengthy process causes uncertainty for investors because of changing market conditions. For example a project that started procurement in 2007 may not have been operational until 2009, with a significant difference in economic conditions over the period. In addition, this procurement process constitutes a significant amount of time and effort from industry.

Looking at all the aspects above, it is hard to imagine that efficiencies cannot be found. For example, ACE's review of the performance of PFI between 1996 and 2010 report found that the performance of the capital to utility payment ratio had improved over time suggesting that efficiencies were made by both the market and government within the procurement process. As such procurement and its efficiency should be considered as a much greater and integral part of any PPFM model in ensuring an efficient and value for money outcome.

### Procurement – improving the process

To improve this process it is important to look at the needs of the government and the private sector.

#### **Government**

Importantly, government needs to ensure that unlike PFI, a new model is not viewed as the only available option, instead providing clear guidance on the application of various alternative models.

This reduces the incentive for projects to skew assessments in favour of a project occurring (shifting the assessment to suit the outcome required) to attain investment. This places the emphasis on using the most appropriate and efficient model to drive value for money.

This also raises the issue of how PFI was traditionally assessed with much of the emphasis being placed on a Public Sector Comparator (PSC). Whilst the PSC is important to ensure that PFI is not used inefficiently, placing a large degree of emphasis on this measure means that the overall benefits of the project appear to take on a smaller role.

Utilising cost benefit analysis, and outlining the wider benefits is important because it engages individuals and emphasises the importance of a project. In

the near term, government spending is likely to remain constrained, and so it may be decided that an 'above average' price is worth paying once such benefits are accounted for.

This is because although the PSC may exist in terms of testing the project's overall cost as a comparison. This does not necessarily mean that this route of finance for the investment is truly available.

For example, if market conditions such as the continuing uncertainty over the Eurozone result in a loss of confidence, investors may have the funds but may not be willing to finance projects. This means that whilst in theory you could build a PSC against a market rate of borrowing, in actual fact, investors are unwilling (given their aversion to risk) to lend to the project. So whilst it appears there is a public sector comparison, in actual fact there is no private investor, and so no alternative route. This also means that there is no value for money measure.

Under the current PFI model, the viability of a project is explored by a number of different government departments. This would be conducted in line with Treasury guidance and model/analysis specifications.

This provides some consistency at the macro and project analysis levels whilst maintaining a degree expertise in the sector/area under which the project may operate.

However, as ACE's previous paper analysing the performance of PFI revealed, there is variation in the performance of government departments. This in conjunction with the procurement issues mentioned suggests that further efficiencies can be found by having a stronger central framework and resources, whilst also implementing flexibility through the use of a variety of PPFMs.

The PFI model does not fully benefit from the efficiencies that could be gained by having a centralised resource. For this resource to be most effective it would need to retain expertise, ensuring procurement teams have longevity in terms of project and sector knowledge.

Looking at efficiencies within different sectors, industry has the expertise in these specialist areas and could therefore be utilised more effectively in assessing the viability of projects. It is important that government works to improve the public sector's capabilities with regards to:

- The composition and construction of business cases. For example using due diligence and expert advice.
- The structuring of contracts and ensuring they reflect the needs and distribution of risk that parties are willing and able to manage. Examples here would include construction risk and aspects relating to weather, natural disasters, ground/survey risk and political risk.
- The overall management of procurement and the drive of the private sector to achieve the best balance of risk, cost and quality.

Government should also continue to learn the lessons of PFI procurement that has occurred to date. For example, looking at the period in ACE first PFI

performance paper of 1996-2010, early schools involved in PFI were rebuilt, whereas later on in the programme refurbishment was undertaken more often. The shift demonstrates that project assessments may not have fully reflected the best outcome in terms of value for money. It is important that asset efficiency and the ultimate long term goal of an investment programme are well understood by both government and industry.

Given the drive for efficiency there should be the formation of a centralised risk and procurement management team (RPMT) to deal with the procurement of PPFM contracts. This could for example sit under the current Efficiency Reform Group (ERG) initiative set up by government.

Below is the current structure of the ERG, and a number of the areas discussed in this paper such as transparency and procurement currently sit within this unit. For this reason, it would be an ideal place to build such a centre of expertise in tandem with HM Treasury's existing knowledge of procuring private finance to ensure the success of future PPFM projects.

#### Structure of the Efficiency and Reform Group



NOTES  
 CEO - Chief Executive Officer  
 CIO - Chief Information Officer  
 SIRO - Senior Information Risk Officer  
 Figure source: Efficiency and Reform Group

Source: House of Commons Committee of Public Accounts<sup>6</sup>

Ultimately government will decide where the proposed centralised team would sit within the overall structure of government. The important aspect to provide to the market is one of a confident well organised efficient body. Therefore providing confidence within the market and unlocking investment funds is a key point here.

The formation of such a team will enable government to retain and build on its knowledge base and skills, ensure value for money, encourage best practice and react quickly and efficiently to issues as they arise. Importantly this body should

concentrate on attracting and retaining talent and expertise, minimising loss to the private sector where possible.

There are a number of ways in which talent can be attracted such as improved salary, pension, holiday allowances etc. However, there is also the need to retain knowledge; as such the government could insist on aspects such as 6 month handover periods to transfer knowledge when staff changes occur.

This team would also consult with industry, local government departments and finance sources to extract the maximum utility from each group in the identification and specification of projects to ensure local, sectorial and regional efficiency.

For example, the Scottish Futures Trust (SFT) is involved in projects with regards to ensuring value for money. It helps to improve information sharing and efficiency within project pipelines, so as to achieve this goal of ensuring value for money. In addition any savings derived are reinvested back into projects, thus improving growth and the long run competitiveness of the economy.

In terms of the how such a body would integrate and operate with other government departments, lessons could be learned from the way government operates when reacting to crisis or underperformance in the health and education sectors.

The small but well-resourced Risk and Procurement Management Team would once an issue is identified trigger a step change in resources and expertise access for local departments through this body to quickly, efficiently and effectively deal with issues at hand. Such issues may include procurement undergoing significant delays, or funding costs spiralling. Although being a dedicated team their intervention would work in a similar way to that of Ofsted special measures process or that of the Scottish Healthcare Associated Infection (HAI) Taskforce which deals with outbreaks such as MRSA.

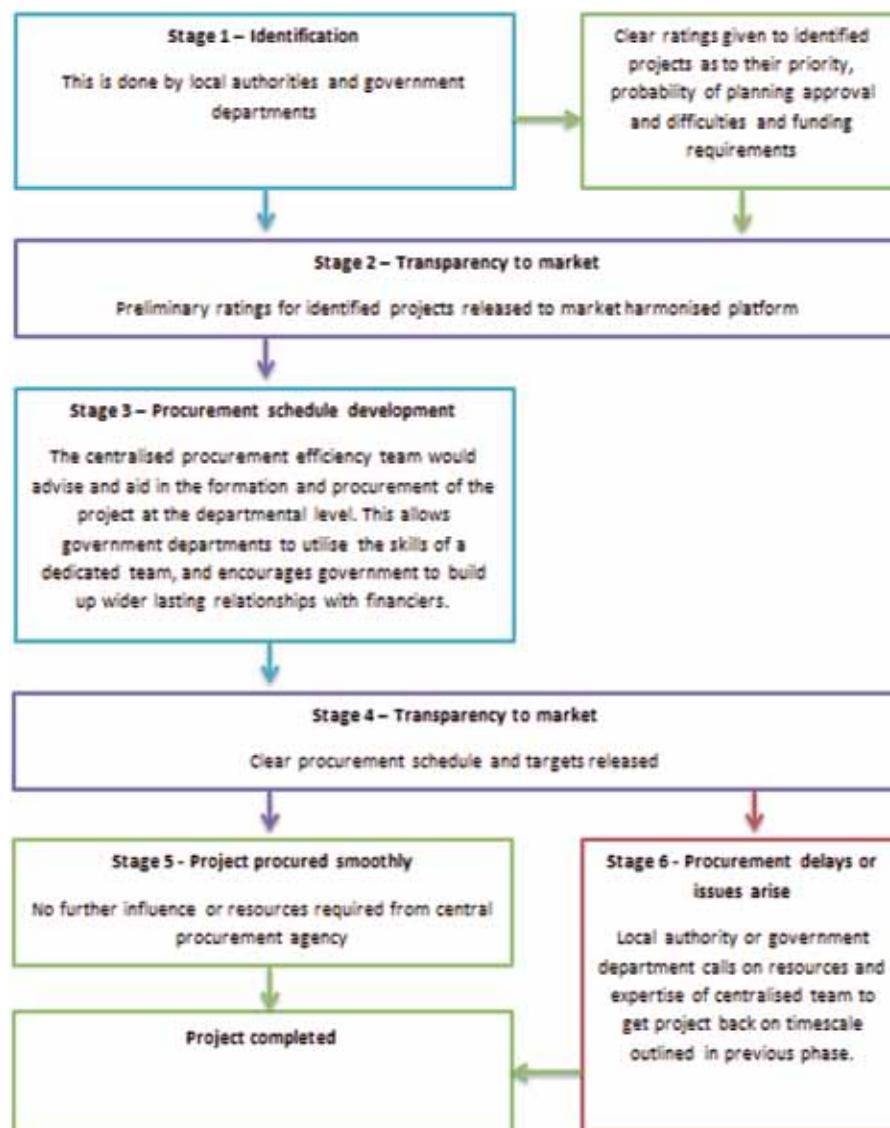
New Public Private Finance Models could operate in a similar manner, helping to provide certainty to investors and speed up the procurement process.

Outlined below is how the Procurement Efficiency Mechanism (PEM) could operate:

- Government departments would identify and outline the requirements of projects.
- Each project submitted would contain a rating as to their urgency in terms of local need, the probability of the project progressing past planning approval and the probability of objections during this process.
- These project ratings would be openly available to market participants allowing them to make a reasonable judgement as to an early indication of the risk involved with the project.
- Within the PEM process the centralised procurement efficiency team would advise and aid in the formation and procurement of the project at the departmental level. This allows government departments to utilise the skills of a dedicated team, and encourages government to build up lasting relationships with financiers. This should aid in the development of models/relationships that encourage financing in a manner that would have otherwise not been possible.

- Set out a clear transparent procurement schedule for local departments
- This target could vary for differing project sizes but should provide certainty to the market. (For example, a target of a full proposition in place and out to tender within six months, and procurement and funding complete within twelve months, with a final decision three months later).
- If the above targets are missed measures would kick in to increase involvement and resources from the centralised body to either significantly hasten or ultimately to reject the proposition of putting the project out under one of the models, pursuing where possible viable alternatives.

#### Procurement Efficiency Mechanism (PEM) – illustrative diagram





The process outlined as part of this mechanism should have the following benefits:

- It limits the procurement activity controlling the possibility of cost spirals
- It can engage with local people and LEPS via the relevant government department and local authorities
- It utilises the efficiency of centralisation
- It allows market participants to anticipate the timing of procurement possibilities and tendering deadlines
- It provides investors with an indication at the very start of the project as to the risk they may be taking.

As government works to improve the speed and efficiency of this process, it will provide greater certainty to investors and private companies as to their costs and commitments within the procurement process. Alongside an approved/anticipated pipeline (such as those outlined in the National Infrastructure Plan) this can create a very strong pull for both UK and international companies and investors.

The political importance of infrastructure as a means of growth and the potential influence of the centralised team requires accountability. It may be necessary, depending on the final structure of the body dealing with centralised procurement, to assign a ministerial position to the department to ensure that accountability.

Alternatively, we have looked at the possibility of utilising the current structure of the Efficiency Reform Group ERG, because a number of the areas discussed in this paper currently sit within this unit. This would also therefore already sit under the remit of a cabinet minister enforcing accountability.

### **The private sector**

Whilst the process of procurement is important for the public sector in ensuring that it delivers what is required, the low efficiency and high cost of procurement is a significant factor for industry. PFI has been criticised for this in the past with the cost of procurement being significantly higher than that of traditional procurement. For example, the National Audit Office report on the use of PFI in the housing sector found that:

- “There was broad agreement from local authorities, providers and advisers, that PFI procurement can be excessively costly and generally takes too long relative to other routes<sup>7</sup>.”

In addition, another report by The National Audit Office on the performance of PFI construction<sup>8</sup> finds that there is no reason why some of the procurement practices in PFI cannot be applied to traditional procurement methods. Even though data is not directly comparable, there is still sufficient evidence to suggest that there is little difference between the performance of PFI and traditional procurement methods.



When considering procurement costs, Grahame Allen<sup>9</sup> found that:

- “There is little hard evidence for the cost of the tendering process as it is usually considered confidential. The evidence that does exist appears to support the argument. A 1996 report from the Adam Smith Institute<sup>10</sup> found average tender costs expressed as a percentage of expected total costs, across projects of all sizes, to be higher for PFI public services projects than for traditionally procured projects.”

This lack of transparency in the tendering process alongside lengthy and complex negotiations has created issues with regards to the delivery of value for money. For example, with the current PFI procurement method focusing on the transfer of risk, the overall aim of value for money and asset efficiency can be lost. In addition, the procurement process is intensive on bidders and so rules out smaller providers as they are unable to devote the resources to completing such a procurement exercise. For example, a large number of companies put resources into tendering for the Building Schools for the Future programme, which increases their cost of operation. When tendering for future work these costs will need to be accounted for, thus the less efficient the procurement process the lower the degree of value for money in the long term.

Given this lack of transparency, it is important to look carefully at the PPFM process and look for ways it can be improved. There are a number of things that could be done to help address these issues:

- There needs to be a clearer outline with regards to the tender period and deadlines. More importantly the public sector needs to adhere to these guidelines and avoid last minute changes which place extra strain on industry. e.g. pre-qualification, submission, announcement of winning bid etc.
- Improve procurement skills within the public sector with regards to procurement. It is important to ensure that the client operates as effectively as possible, engaging with industry to create an efficient outcome. In this paper it has been suggested that a centralised taskforce could provide support and intervene at the first instances of inefficiency or cost implications to maintain the speed of the process, and ensure value for money for the taxpayer.
- The introduction of flexibility in the procurement process could have the disadvantage of potentially increasing the length of the process and thus increasing the procurement burden. However, as discussed in the next section, if utilised correctly, flexibility can significantly improve efficiency.

#### Design and exploratory work - the stage explored

The design and exploratory stage of the procurement process is important as it can lead to significant efficiencies if designs account for changing conditions, such as use, carbon, maintenance etc. PFI has been credited with encouraging whole life cycle thinking. However, there have been a few issues with PFI in this area. For example, the House of Commons Treasury Committee<sup>11</sup> report on PFI stated that:

- “The Treasury believes that, owing to the benefit of whole life costing, operating costs of PFI projects cannot be bettered by the services tendered as part of a non-PFI procurement or provided in-house.”

- “Many of the PFI contractors, investors and advisers that submitted evidence to the committee highlighted the consideration of ‘whole life cost’ as a major benefit of PFI.”

However, it also noted that under the current PFI procurement method:

- “It is difficult to establish clear cut evidence in the area of whole life costing.”

The first issue is the balance between ascertaining the need for innovation and using standardised design where applicable to ensure optimum efficiency across projects and value for money. In Canadian PPP projects, designs are advanced further before reaching the bidding stage. As such, a larger number of the criteria are specified which shortens the procurement process, reduces cost and improves value for money.

The other issue occurs because PFI projects rely on demand/usage meeting forecast expectations. There can be a disparity between expectations and actual earnings and performance. Part of this is due to the way in which forecasts generally consider a medium scenario as the most appropriate, but this may lead to an inefficient scenario for both parties. It is for this reason that flexibility needs to be introduced into the system.

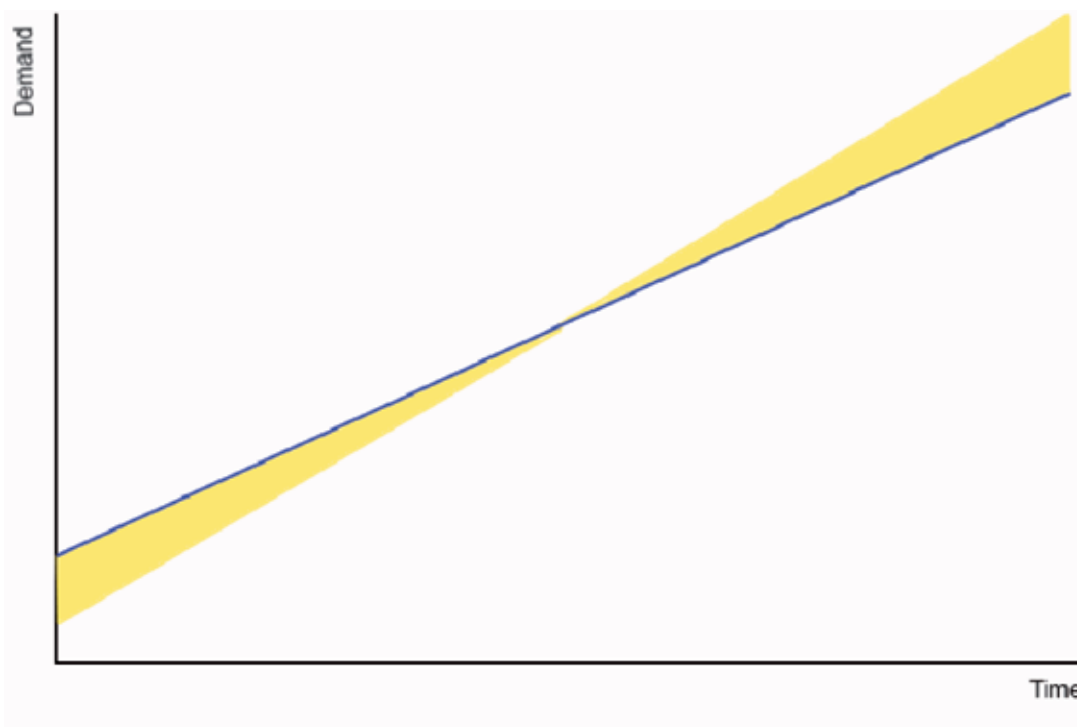
### **Scenario example 1 – Constant demand**

If we look at the following example, the demand for the product/service that is being procured under the PPFM is expected to remain stable over the period of operation. This is represented by the navy blue line as time passes.

Stable and predictable demand means there is a good degree of certainty for both investors and government. Variations occur randomly to a small extent creating only a small uncertainty band (which is represented by the yellow band in the following diagram)

Whilst examples of this kind of scenario are limited due to consumers and demand conditions adapting over time, there are some projects which could be considered as getting closer than others.

For example, given the lack of current prison capacity it could be argued that from opening, a newly built prison is expected to operate at full capacity over its period. However, it should be noted that as the number of prisons were increased this scenario would no longer hold true.



### Scenario example 2 – Increasing demand, fixed project with no flexibility

The second scenario is one of rising demand over time (again represented by the navy blue line), but with no flexibility built into the project. This means that at a point in its lifetime the building will perform at its optimum. An example of a project that may operate in this manner is that of a new build road, or bridge crossing which is built to a maximum capacity. But, once past the equilibrium where the demand for the asset meets its supply constraint the asset performance becomes inefficient.

Either side of this point, there will be inefficiencies as the project operates below capacity or is no longer able to meet demand, extracting maximum utility. This is shown by the yellow band, with demand and the performance of the asset operating below its optimum initially and then demand surpassing its optimum before its lifecycle is complete.

This creates two significant periods of underperformance, and uncertainty which would suggest that money and outcomes could be managed more efficiently.

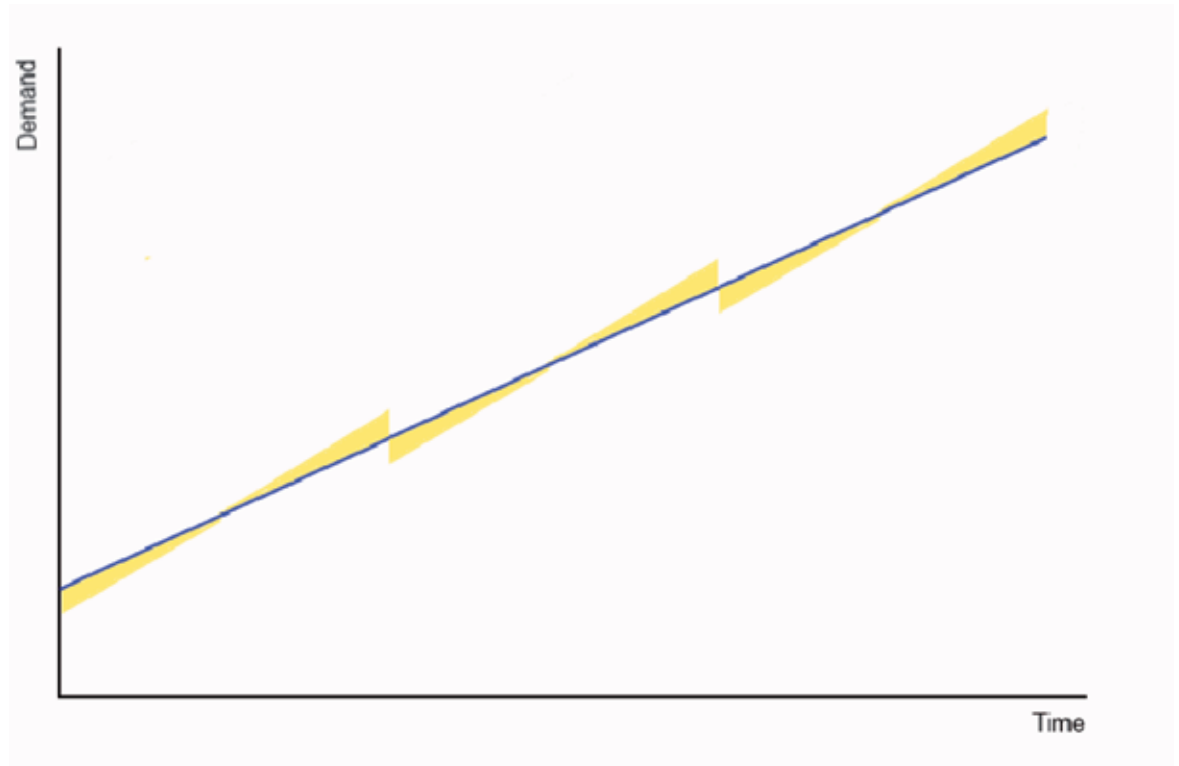
### Scenario example 3 – Increasing demand, project with flexibility

Scenario 3 demonstrates that flexibility can help to reduce and respond to the uncertainties within demand. If done correctly, this flexibility would benefit both the investor and the public sector.

This is done by taking the same demand scenario over the same period (represented by the navy blue line), and then staging capital investment to be flexible and responsive to demand. This has the effect of allowing the asset to more efficiently reflect demand conditions. For example, this flexibility could be

adding a new wing or floor onto a hospital which has been set aside for future expansion. Increasing capacity to match future demand conditions.

This reduces the scale of the uncertainty and underperformance periods, thus actually providing greater certainty to investors.



A paper by Neufville (2007)<sup>12</sup> looks in more detail at the possibility of flexibility within PFI contracts. He finds that PFI has been costs focused and therefore does not deliver the best value for money on projects.

- “PFI is cost focused rather than value focused. It doesn’t deliver best value projects in the light of significant value uncertainty, driven by unpredictable changes in demand, technical or socio-political circumstances over the lifetime of the projects. What is needed is a value focus in PFI.”

He suggests that for the benefits of PFI to be truly recognised the parties need to create a genuine long term relationship, with the private party engaged throughout the life of the asset providing the tools and ability for it to adapt to changing circumstances.

#### Design and exploratory work – improving the process

As can be seen from the previous charts, flexibility should be discussed before the construction phase. This is because most of the planning for such flexibility is required within the design and exploratory work area of the process. The following would help to improve this process and maintain investor confidence:

- Projects should be designed on the basis of a cautious growth scenario with provisions to ‘scale up’ in the event of demand exceeding the most efficient

operational capacity of the asset. This provides the public sector with the certainty of service provision being secured over the long term period, working efficiently according to demand. In addition, this should create investor certainty and confidence as it limits risks of exposure to demand deficiencies reducing risk and the cost of projects in the event of under-performance.

Examples of such occurrences under the previous PFI model include:

- If the Royal Armouries PFI project had been designed with flexibility in mind, it could have adapted better to demand. When opening it had to meet high forecast demand (750,000 visitors), and subsequently needed public support when actual demand did not match expectations (400,000 visitors). If it had been opened under a flexible design and demand scenario its initial build capacity would have been smaller with provision to extend, thus creating the flexibility. This may have subsequently saved the project from having to seek public support.
- Balmoral High School in Belfast, which anticipated a capacity of 500 pupils but only attracted 150. Again this means that an asset is being inefficiently utilised, and flexibility could have played a role in more closely matching demand conditions.

Other examples of flexibility that can be built into projects include multiple use space to allow for changes in demand, land set aside for future development, designing buildings to accommodate new technologies easily etc.

- There has been some flexibility in previous PFI projects. For example, The Royal Victoria Infirmary procured under PFI includes a provision to increase its height to add additional ward space. However, the provision for such flexibility has been limited. The rationale behind this is that investors require certainty. However, when demand is not sufficient, PFI can fail. As such, flexibility would potentially enable the project to run efficiently.
- The public sector as part of this process should accept that there is a cost to exploring such flexibility. This cost of exploring flexible options may at first appear to be above and beyond that of what traditional procurement may have provided but will ultimately ensure that assets and investments are efficient and that the best value for money for the taxpayer is attained. The savings that could be accrued as a result of an efficient demand reactive service with efficient capital and operational costs would outweigh this initial support.

### Construction - the stage explored

The construction phase of the current PFI model is one of the most effective for the public sector. This is because aspects such as risk transfer and performance with regards to construction phase are transferred to the private sector. E.g. project delays and cost overruns.

In terms of the risks within this stage of the process the private sector generally retains risks such as delays due to bad weather conditions, subcontractor financial failure and fire. Whereas the public sector, retains risks such as wrongly specified aspects of the project, problems with the purchase of land and discovery of substances, such as asbestos.

This transfer of risk is something that future PPFM models should continue to benefit from where appropriate.

### Construction – improving the process

The principles behind the construction element of PFI should remain relatively unchanged given its ability to transfer risk away from the public sector.

However, there are a few areas which should be monitored to ensure a continued smooth performance of this area.

- Client management is important, and changes to the project should be kept to a minimum as these add to costs. However, there will be projects where such changes need to occur possibly due to unforeseen circumstances, for example, due to political or public concerns. In this instance the public sector should focus on the speedy resolution of these issues.
- The private sector carries most of the risk with regards to the construction phase. However, where, circumstances do occur that require changes that impact on planning, regulatory issues etc, the public sector should concentrate on the speedy resolution of these issues. This again could be done via the centralised Risk and Procurement Management Team, which was outlined previously. Keeping records on such issues would allow the public sector to identify any trends or common issues (such as poor performance) earlier and then implement the necessary changes to regulations, procurement and planning etc. to resolve issues before they cause delays.

### Operational performance – the stage explored

As part of trying to increase flexibility in new PPFM models, this paper considers the operational stage of the historical PFI model as two separate processes. These are fixed and dynamic operational performance.

#### **Fixed operational performance**

This stage provides the baseline for the PPFM project. This baseline is designed to be conservative, providing certainty to the investor as the probability of demand exceeding the capacity of the asset within the contracted time is significant.

This reduces the risk of there being insufficient demand to justify the capital outlay. This makes the operational aspect of the PFI project more attractive, and so could theoretically increase competition between investors and lower cost.

#### **Dynamic operational performance**

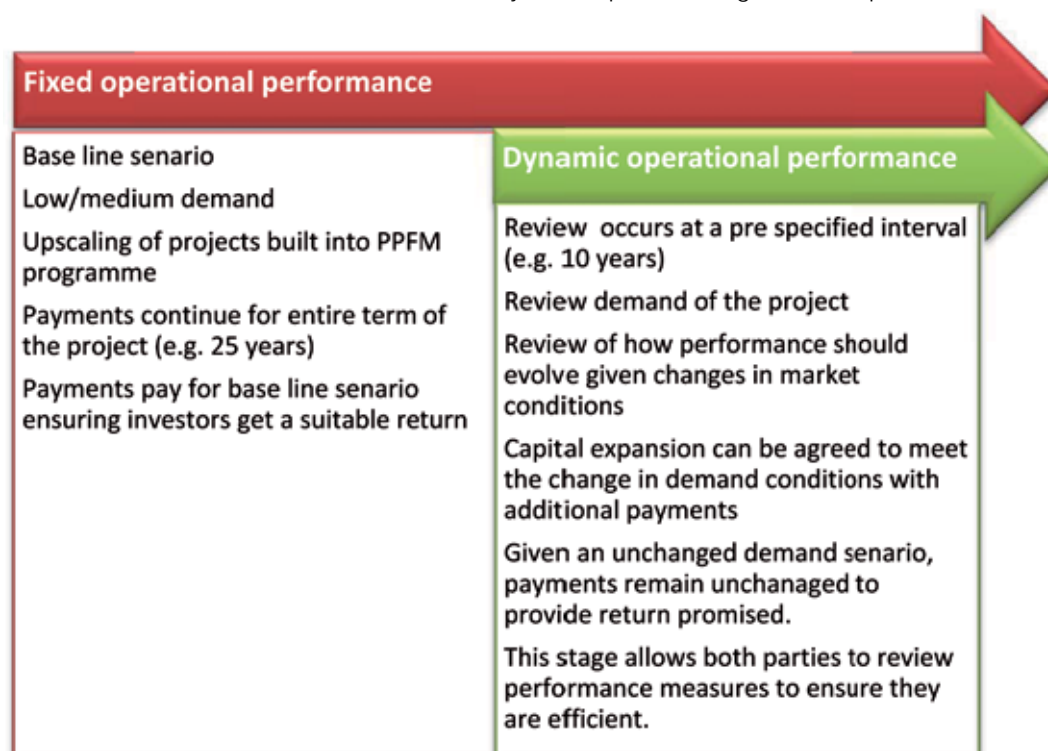
The dynamic stage of operational performance is important as it provides the public sector with the flexibility it requires to ensure the efficient use and delivery of services over the whole contract period. This is done by reviewing the asset at pre-defined intervals with a view to investing further if demand conditions are sufficient (e.g. every 5-10 years depending on the likelihood of demand variability).

If a decision were taken to invest and expand a project then additional payments would be made as part of the unitary charge. As with the original construction phase of the project any additional (dynamic) payments would not take place until after the additional investment has been undertaken and construction completed

and the asset is operational. This continues to encourage efficient, timely and budgetary management of the construction phase. An example could be adding another lane to a road, where provision has been made for future expansion as part of the original agreement.

This separation allows staged delivery and is based on actual demand over the assets' lifetime. As such this should significantly reduce demand side risks which should makes attracting investors both easier and cheaper.

Below is an outline of how both the fixed and dynamic operation stages would operate



#### Maintenance – the stage explored

Maintenance has traditionally been viewed as being part of the operational aspect of a models such as PFI. However, given a number of examples in the media in relation to the cost of maintenance (e.g. £333 cost of changing light bulb<sup>13</sup>) it is important that any future PPFM improves significantly the level of transparency. For example, aggregated maintenance accounts could be made publically available to ensure efficiency is being maintained.

#### Maintenance – improving the process

- The public sector needs to be clear on their requirements, and as such one of the issues is deciding how the pricing and quality of service should be judged over a significant period. E.g. In hospitals, a percentage of private rooms must be provided for patients.
- Transparency should be implemented in a way where data can be compared and utilised by procurement teams to improve their ability to negotiate better value for

money. E.g. Publish harmonised data on a central platform, similar to that of the Business Link Contracts Finder but for performance and cost related data.

- Maintenance and operational risk should continue to be managed by the private sector. This is a risk government can transfer and it provides a clear and certain maintenance plan for assets going forward. This helps to ensure the assets are operating efficiently and should help to prevent the deterioration of the asset and services in the long run.
- Maintenance and operations should not be considered a fixed entity. The idea of flexibility is to adjust the definition of these services over time. Whilst PFI was originally constructed in a way that limited flexibility to help gain investor confidence, flexibility can also reduce risks. Such as technology changes, demands shifting etc. More accurately flexibility would allow a proportion of the fee to be reviewed at pre-determined periods over the contract in which both parties can review their commitments. Importantly, it should be recognised that these negotiations could help either party. For example, if the public sector is defining an inappropriate quality standard after a ten year period, it does not benefit the private sector that it has to meet the standard, or the users and public sector that have to deal with a sub optimal outcome. Reviewing and adjusting these can relieve pressure on the private party, and even possibly provide better returns for investors as their product is better aligned to the change in demand conditions.

For example, if the government were to put in place a target in a hospital for the survival rate of cancer patients (perhaps 85%), within five years this target may no longer be appropriate. For example a significant improvement in technology could mean a 90% target becomes feasible (assuming a reasonable or similar cost base). Therefore the original target would be considered inefficient as it is not driving innovation and the use of the best technology.

### Termination – the stage explored

Given the time period over which PPFM contracts operate (such as the typical 25 year period of PFI); it is easy to overlook the termination period of the current PFI model. The reason it is important to separate out this area is because the incentives for all the parties involved change significantly. For government, this stage will generally mean the asset being transferred, with a number of decisions required regarding further investment, maintenance, operation and service delivery. For the private sector their commitment is ending and so priorities will shift away from that of longer to a shorter term position on decision making.

Currently there is little transparent information available on how the management of this process and transfer takes place.

If the government wishes to maximise value for money, it needs to ensure that the process above is well managed. Projects should:

- Have a clear exit strategy in terms of who will operate the asset post PPFM. Given the private sectors' management of the asset for a significant period it may be most efficient to continue to have such an arrangement in place. If such arrangements were made in advance, the public sector should be able to secure a better deal. For example, the 2012 Olympics has had a significant



focus on ensuring a legacy and the use of venues in an efficient way post the games period. The process of planning the legacy or continuing use of an asset post PPFM deals should become a standard practice moving forward.

- The public sector needs to outline clear criteria for the assessment of the asset on transfer (e.g. for office space it may be that all electrical systems are in working order and comply with current building standards). Given the incentive for the private sector to sweat the asset (assuming they can maintain performance and not incur charges) prior to hand over. This is important as it limits the likelihood of the public sector having to spend public money on a previously privately operated asset post transfer.

# Moving forward

This paper has explored in more detail some of the way in which procurement within Private Public Finance Models (PPFM) could be improved to ensure better value for money for the taxpayer. The key aspects of the paper involve flexibility, transparency, the retention of skills and expertise and utilising economies of scale of a centralised procurement body where appropriate.

This in conjunction with the last paper in the series which proposed a range of Private Public Finance Models and improving access to private finance should aid government in the development of a replacement of the historical PFI model.

The aspect which continues to be clear is that market certainty and confidence in whatever model(s) replace PFI is necessary. Until the replacement model is in place there is a danger of a stagnation of project investment and confidence. It is therefore important that a suitable replacement for PFI is found and supported by all parties involved to further stimulate growth, long term competitiveness and confidence in the markets surrounding PFI's replacement.

## End notes

<sup>1</sup>Helm, D, Wardlaw, J & Caldecott B, 2009, Delivering a 21st Century infrastructure for Britain, Policy Exchange

<sup>2</sup>World Economic Forum Comprehensive report 2011-2012 ([click here](#))

<sup>3</sup>National Audit Office – Performance of PFI Construction, October 2009 ([click here](#))

<sup>4</sup>Telegraph – Coalition is sticking to wasteful PFI funding ([click here](#))

<sup>5</sup>HM Treasury, Infrastructure UK – National Infrastructure Plan 2011 ([click here](#))

<sup>6</sup>House of Commons Committee of Public Accounts, The Efficiency and Reform Group's role in improving public sector value for money, September 2011 ([click here](#))

<sup>7</sup>National Audit Office – PFI in housing, June 2010 ([click here](#))

<sup>8</sup>National Audit Office – Performance of PFI Construction, October 2009 ([click here](#))

<sup>9</sup>Grahame Allen, House of Commons, economic policy and statistics section, The Private Finance Initiative (PFI) 2001 ([click here](#))

<sup>10</sup>Dr Eamonn Butler & Allan Stewart MP, Seize the Initiative, Adam Smith Institute, 1996

<sup>11</sup>House of Commons – Treasury Committee, Private Finance initiative, Seventeenth Report of Session 2010-12, 18 July 2011 ([click here](#))

<sup>12</sup>Using Flexibility to Improve Value-for-Money in PFI Projects - Richard de Neufville, Yun Shin Lee, Stefan Scholtes - June 2007 ([click here](#))

<sup>13</sup>Telegraph – Coalition is sticking to wasteful PFI funding ([click here](#))

<sup>14</sup>HM Treasury, Infrastructure UK – National Infrastructure Plan 2011 ([click here](#))

# ACE economic and policy papers

This paper forms part of a growing portfolio of research by ACE into the effects of infrastructure on the wider economy. The papers below outline the case for funding, a variety of funding methods including traditional and new forms of infrastructure spending stimuli, and more detailed sector specific issues such as retrofitting and microgeneration.

## **Public Private Finance Models**

This is the second in ACE's infrastructure series and explores in more detail the rationale, performance and conditions that surround Public Private Finance Models (PPFM)

## **Performance of PFI**

This paper is the first in ACE's latest infrastructure series and reviews the performance of historical PFI data to learn lessons for the development of new financing models

## **The 2012 budget**

ACE's analysis - A comprehensive analysis of the 2012 budget, the economic and fiscal outlook from the Office for Budget Responsibility and the Infrastructure Delivery Update

## **Budget submission 2012**

Budget submission to HM Treasury for 2012

## **ACE reports on detail of Autumn Statement**

A full analysis of the Chancellor of the Exchequer's Autumn Statement, the updated National Infrastructure Plan and the Office of Budgetary Responsibility report on the economy.

## **Barriers to Investment**

Explores a wide variety of aspects that act as barriers, or significantly change the risk profile of an investment project. These processes are important within the investment cycle and should be understood by all parties involved

## **Infrastructure: A case for funding**

This report reviews and analyse a range of material that is openly available to ascertain what effect infrastructure investment has on the economy.

## **The Infrastructure Investment Trust**

ACE proposes a supplementary model to PFI initiatives, to read the executive summary please click here

## **Retrofitting the UK's housing stock**

This paper is intended as a conversation starter on how retrofitting might be taken forward in the residential sector

## **Department for Infrastructure**

ACE makes the case for a new department to support government and infrastructure

## **Spending efficiency**

This paper makes the case for a balanced scorecard approach to achieving efficiency

## **Infrastructure funding**

a range of options in its latest policy paper: Infrastructure Funding

Avoiding the infrastructure crunch  
ACE identifies the problems and suggests policy solutions

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ACE sets out the case for an infrastructure bank

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ACE's proposal to create an infrastructure gilt to drive investment in transport, energy and utilities and

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ACEs proposal for an audit of the UKs existing infrastructure

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