BETTER, CHEAPER, FASTER

A new EPR deployment strategy

Digitisation, and the deployment of an EPR, are essential requirements for addressing the 2020 FYFV. Such projects typically start with an outline business case which can be in the region of £50m over 10 years. The question is whether the same or greater benefits can be realised more quickly, for less cost and with less risk.

This paper explains how we believe this is possible.

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PAS First – The traditional "Big Bang" approach to EPR deployment

The traditional approach to EPR deployment is to start with the PAS, and because the PAS underpins all other systems, this usually means replacing many systems – order comms, outpatients, ED, theatre management – at the same time. The hospital cannot close its doors whilst this happens, so this "big bang" approach requires executing multiple work-streams in parallel, which significantly increases short-term resource requirements and requires the Trust to buy-in implementation skills.

Activities include clinical processes analysis, writing SOPs, data migration, data analysis and reporting, training – all of which the Trust could perform in-house if the activities were not all running at the same time. Around 30% of the total project costs could be spent on resourcing these parallel work-streams, leading to a spend in excess of £15m over the first 2-3 years, when almost no benefits are being realised.

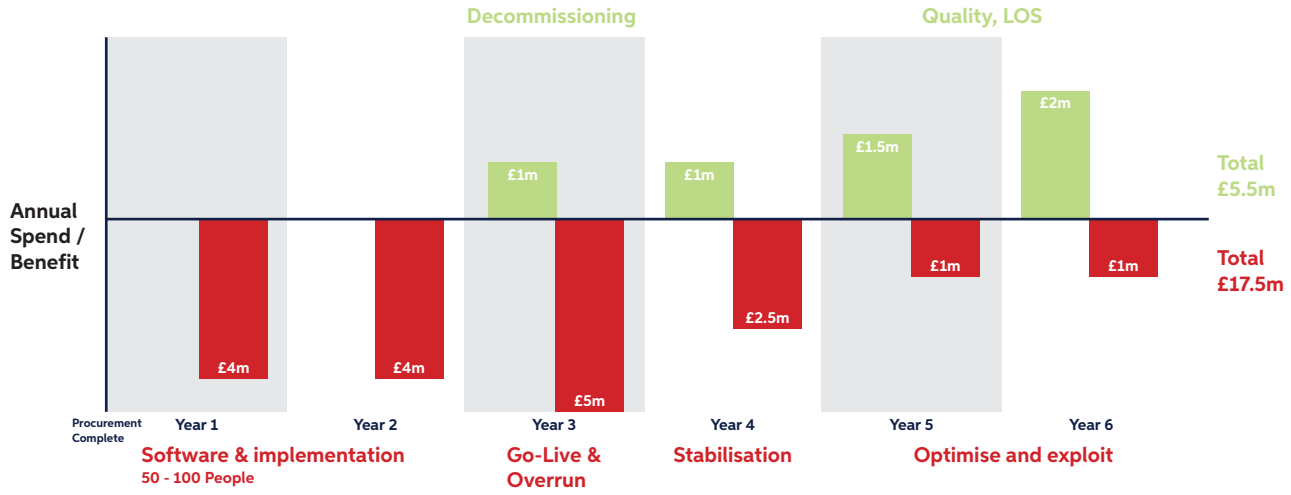


Figure 1 - Illustrative costs and benefits for a PAS-first EPR deployment

Most Trusts also experience slippage and overspend pre-go-live, which can increase costs by 5%-25% of total project costs, and the "big bang" nature of the go-live is also expensive on resourcing costing up to £1m for floor walkers alone.

The need for an unplanned, extended period of stabilisation post-deployment is also very common. Stabilisation hits the business case in three ways: firstly, it can require up to £5m in specialist resources such as management consultancy, secondly it delays all of the quality benefits that the business case relied upon, and thirdly, the instability usually leads to a temporary reduction in quality. If a business case recognises financial benefits for quality improvements, then of course it must recognise financial losses for quality reduction too.

By year 3, decommissioning benefits start to accrue, and the quality benefits that form the majority of the business case start to materialise post-stabilisation in year 4-5.

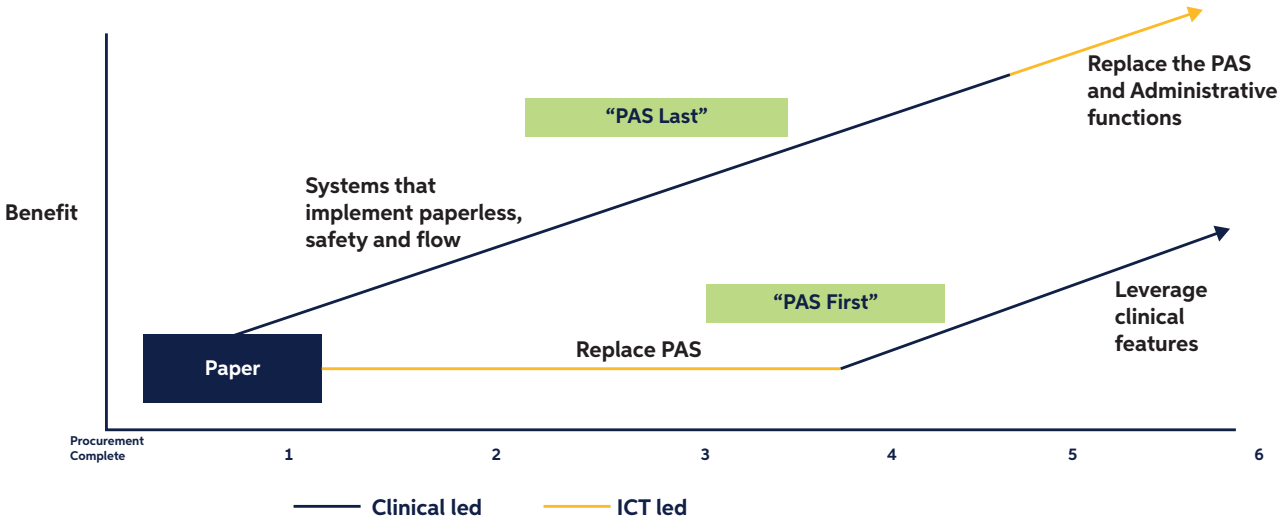
Benefits in years 5-10 introduce a risk to the ROI, as they are more sensitive to unpredictable external factors. For example, predictions of incremental revenue, insurance reductions or quality-based LOS reductions in years 5-10 may vary considerably from predicted values due to changes to legislation, payment models or models of care, and the probability of such changes increases with time.

In fact, two major contributors to the EPR business case are very unreliable over a prolonged time period: insurance reductions and revenue growth. Clinical negligence payments rose from £1.488bn in 2015/16 to £1.707bn in 2016/17, so reductions in insurance payments seem unlikely over a sustained period. Revenue growth may see small shifts between providers, but the revenue pool is ultimately constrained by NHS budget.

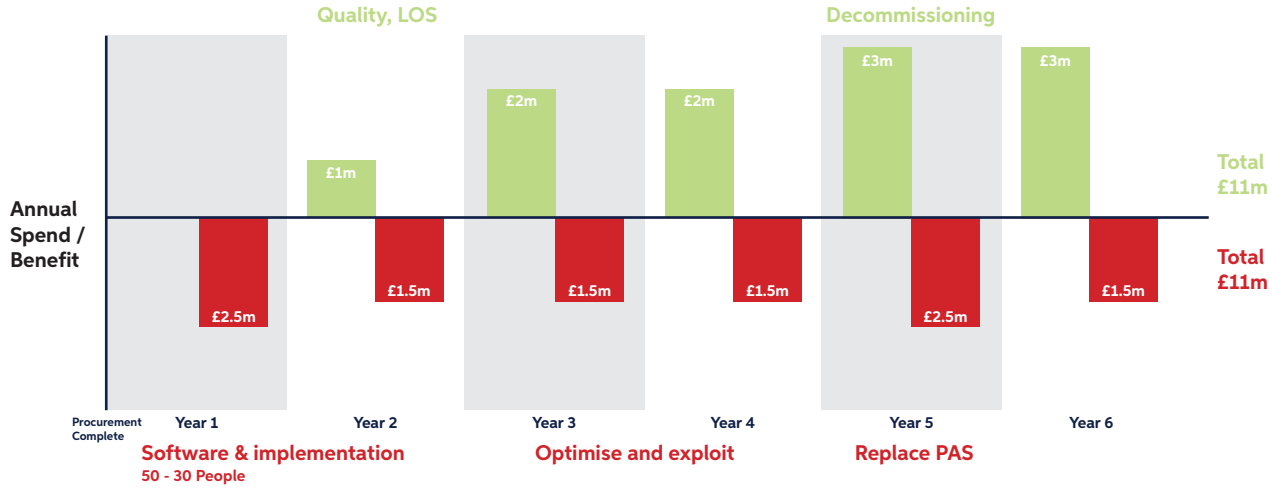
There are of course benefits to committing the organisation to a multi-year, high cost programme of change. It focuses attention and creates momentum to achieve a fixed set of improvement objectives but is there an alternative that does not require large upfront implementation costs.

PAS Last – A Continuous Improvement Approach

Many of the financial benefits of an EPR deployment come from quality and efficiency improvements, that translate into reduced cost or increased revenue. However virtually none of these quality benefits rely on the new PAS, rather they rely upon the clinical modules that will be deployed with or after the PAS go-live. It follows then that the majority of the benefits in the EPR business case are not actually tied to the majority of the cost in any tangible way and may be able to be realised without the cost.



By leaving the PAS until later in the deployment, costs are not simply delayed, they are largely eradicated. The work, and therefore the cost, can be spread across a number of years allowing a much higher percentage of the resources to be internal. Interestingly however, although the costs are reduced, the benefits are not. Taking the complexity out of the first step allows benefits to actually accrue much quicker.



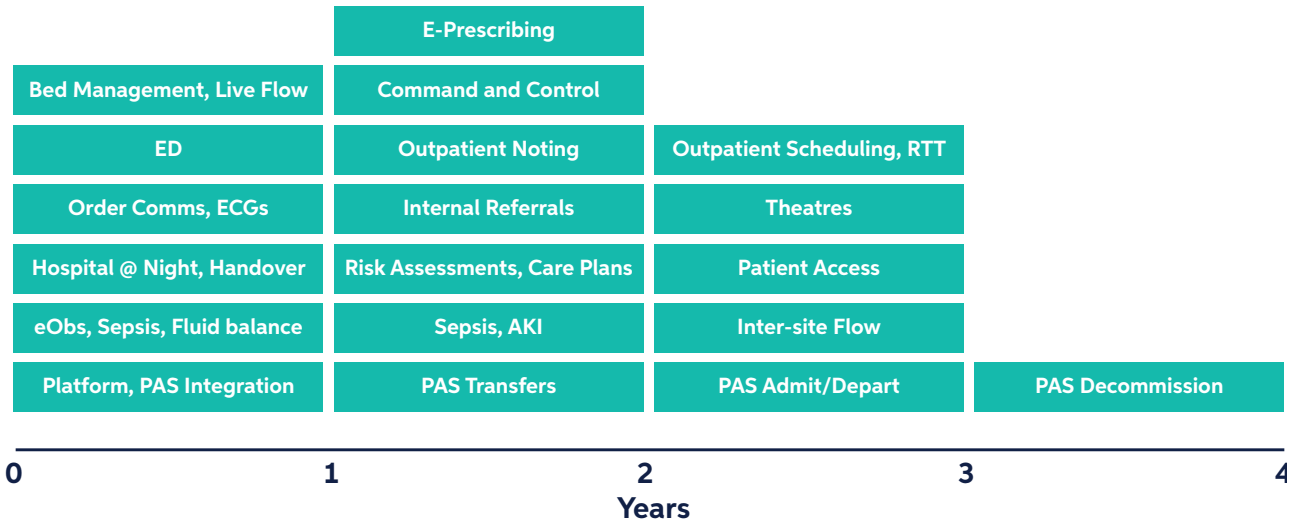
A "PAS-Last" business case not only has significantly lower implementation costs, but has the spend aligned to benefits realisation, reducing financial risk and providing the opportunity to change direction should the financial gains not meet expectations, or the business priorities change due to external factors.

Nervecentre can adopt the role of a "shadow" PAS, providing clinical functions on day one whilst learning the information from the PAS over a period of time, to avoid any large migration activity. This is not a new approach, Trusts have been deploying clinical system on top of the PAS for years, under the banner of "Best of Breed". Our proposal is that the clinical system can grow to become the master, strategic platform over 3-4 years, and the PAS eventually decommissioned.

It is still important however to ensure these changes form a strategic direction in order to sustain momentum. The total change is still significant, and the danger of reducing a single "Big Bang" project to a series of incremental changes is that momentum is lost. Whilst the impact of this is lessened because clear benefits are delivered early in the programme, it does have the potential to delay further quality and financial improvements. This can be avoided by a clear timeline and set of objectives commissioned in one step, with a series of quality gates to ensure the initial business case and projected benefits are still on track.

Example PAS-Last Timeline

The below diagram illustrates a potential timeline for deploying an EPR using a PAS-Last methodology. The approach allows the deployment order and timeline to be fully customised to meet the Trusts highest priorities first. This example shows an aggressive timeline but a less demanding timeline can be chosen as best suits the Trusts requirements and capacity for change.



The deliverables are ordered to gain as much clinical buy-in as possible early in the project. eObs, eHandover, mobile order comms: all of these deliver improvements for the workforce and encourage staff of various disciplines to adopt the system. This helps ensure projects such as Patient Flow are built upon a tool that has clinical acceptance, and makes the process changes necessary to improve flow more amenable.

The eventual decommissioning of the PAS, after it has been reduced from a core component to a minor component, also becomes a project that is largely manageable in-house.

Summary

It is both clear and well understood that a Big Bang approach to any project is more expensive, and that is particularly true in healthcare where services cannot be paused.

All Trusts in the UK have a PAS that is adequate – handles the basic functions and accommodates sufficient HL7 signalling to support the integration of new clinical systems, without replacing the PAS. Therefore, a PAS-Last approach is a valid strategy that should be considered as part of an EPR business case.

Whilst actual costs vary considerably, we believe that a PAS-Last strategy can deliver all of the benefits of the EPR, with benefits arriving much earlier in the process, and with savings of 30%-50% of the total project by eliminating avoidable external implementation costs.