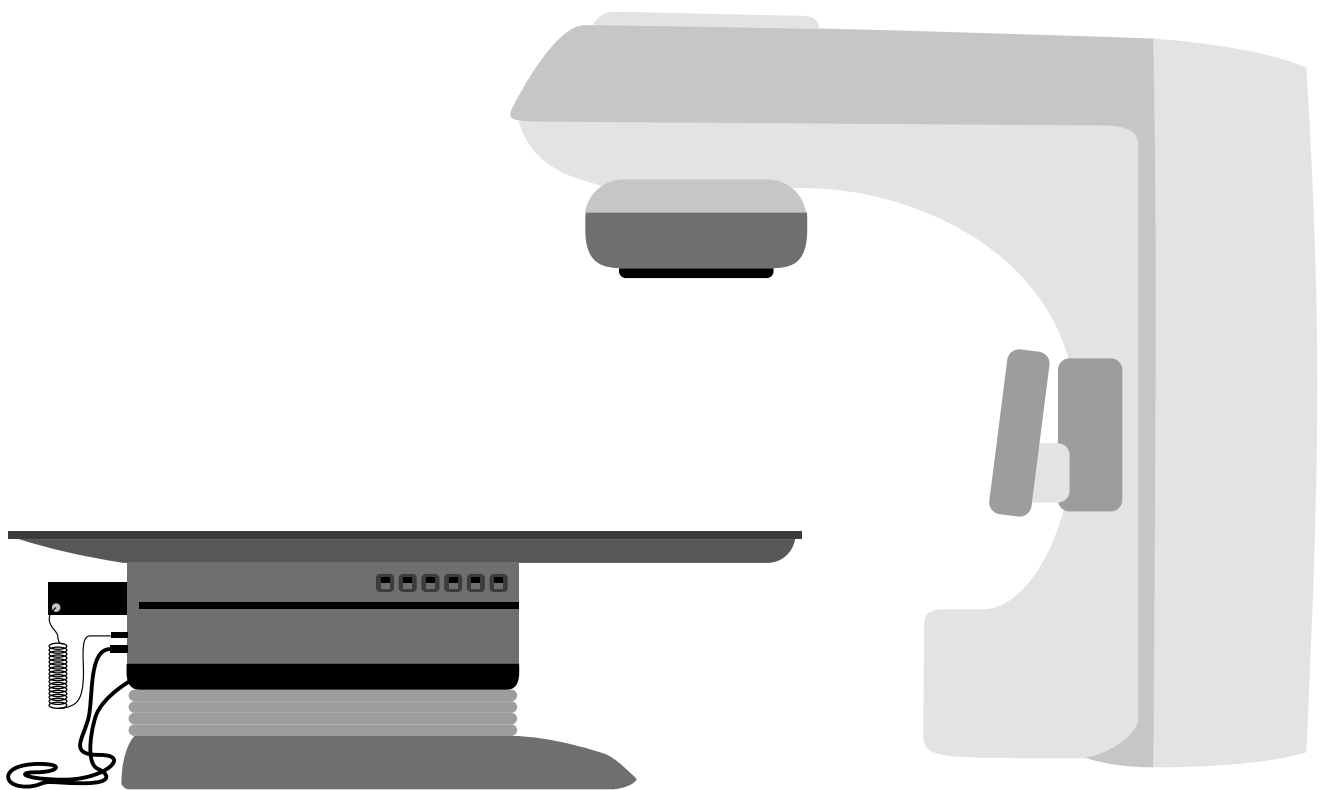


# Case Study: Invest in the right medical equipment and alleviate financial pressures

This case study demonstrates how NHS Supply Chain's Strategic Investment Planning service enabled Rotherham NHS Foundation Trust to establish a long term plan for the replacement of its radiology equipment.



## The challenge

With thousands of assets within the entire medical equipment inventory, the trust must manage and commit, significant investment in order to replace ageing equipment and upgrade to new technologies. This is an on-going focus for the radiology department which is instrumental in several of the key diagnostic pathways, including cancer and stroke.

Over recent years, the strains on the services provided by Radiology have increased due to improved national scanning targets and an increasing number of patients. In addition, the requirement to deliver significant financial savings has resulted in capital investment falling short of the levels required to ensure regular refresh of the equipment estate.

As a result there is a backlog of assets which are either nearing, or in excess of, Royal College Guidelines regarding the useful working life of equipment.

Key project objectives	Trust's equipment overview
Establish a multi-year equipment replacement plan for the trust's Radiology equipment to a pre-agreed budget	The trust's Radiology equipment has a replacement value in excess of £10 million and comprises over 70 individual items.
Provide analysis to help the trust assess the condition of its Radiology equipment and strengthen the business case for investment.	Equipment in the project scope included: MRI Scanners, CT Scanners, Ultrasound and X-Ray Machines.
Identify different options to finance equipment replacement and opportunities to maximise savings.	Radiology equipment is vital to the delivery of several key diagnostic pathways including cancer and stroke. The services are very expensive to fund and rely heavily upon the availability of the capital budget.

“ Working with NHS Supply Chain on our asset management strategy has been hugely influential in drawing together all areas of the service, and combining trust perspectives with a number of alternative perspectives. Our approach to the huge capital replacement challenges in Radiology and Medical Physics is now supported with credible risk modelling and an options appraisal based on a more scientific methodology. ”

**Mark Buckley**, Service Manager, Rotherham NHS Foundation Trust

## About this trust

Rotherham NHS Foundation Trust is one of the first 35 trusts in England and Wales to achieve NHS Foundation Trust status. It provides a wide range of health services to the people of Rotherham and to an increasing number of patients from further afield. Per year, the trust sees around 75,000 A&E patients, approximately 55,000 inpatients and 250,000 outpatients.

## How did we support the trust?

The trust and NHS Supply Chain agreed to adopt a partnership approach to enable the creation of a multi-year replacement plan for Radiology equipment. This aimed to underpin future replacement and financial decision making and establish new ways of working to improve forward planning and prioritisation. It was agreed that NHS Supply Chain's Strategic Investment Planning service would meet these overall objectives and a dedicated Solutions Development Manager was appointed to lead the project.

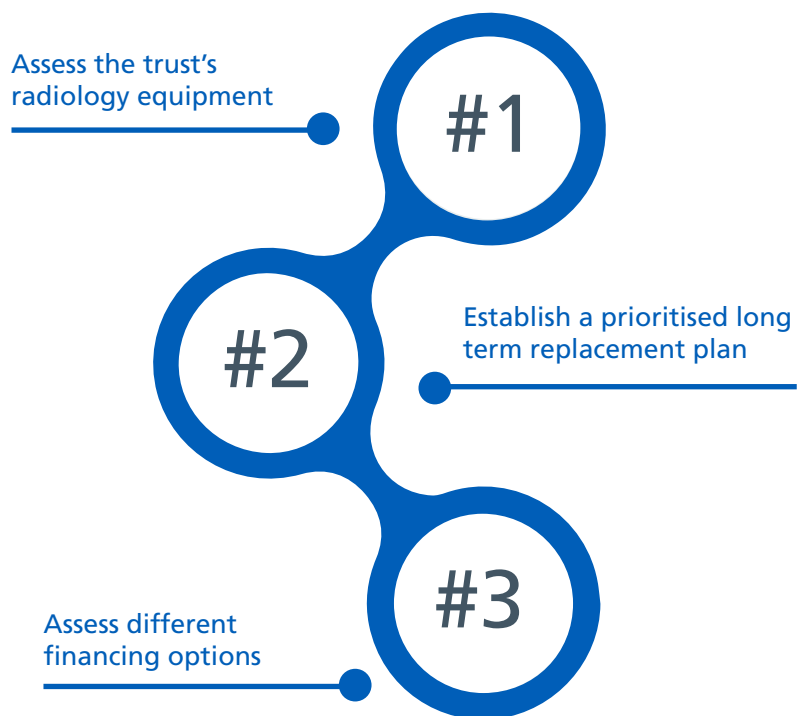


A project team was established which included key stakeholders from the trust who have an in-depth knowledge of the medical equipment, understand the needs of the Radiology department and have influence in the wider capital prioritisation approach.

## Strategic Investment Planning

NHS Supply Chain's Strategic Investment Planning service is designed to help the NHS plan and finance the replacement of medical equipment. It is a data driven systematic approach that enables NHS Trust's to establish credible, long term medical equipment replacement plans and financing strategies. The aim is to improve financial planning, support the delivery of savings and align equipment replacement with clinical needs.

### The project followed three key steps:



	<b>Simon Sheppard</b>	-	Director of Finance
	<b>Mark Bloy</b>	-	Assistant Director of Finance
	<b>Paul Ralston</b>	-	Head of Procurement
	<b>Susan Grundy</b>	-	Deputy Head of Procurement
	<b>Mark Buckley</b>	-	Professional Lead - Clinical Radiology, Medical Physics and Medical Photography/Illustration
	<b>Mike Smith</b>	-	Consultant Physicist

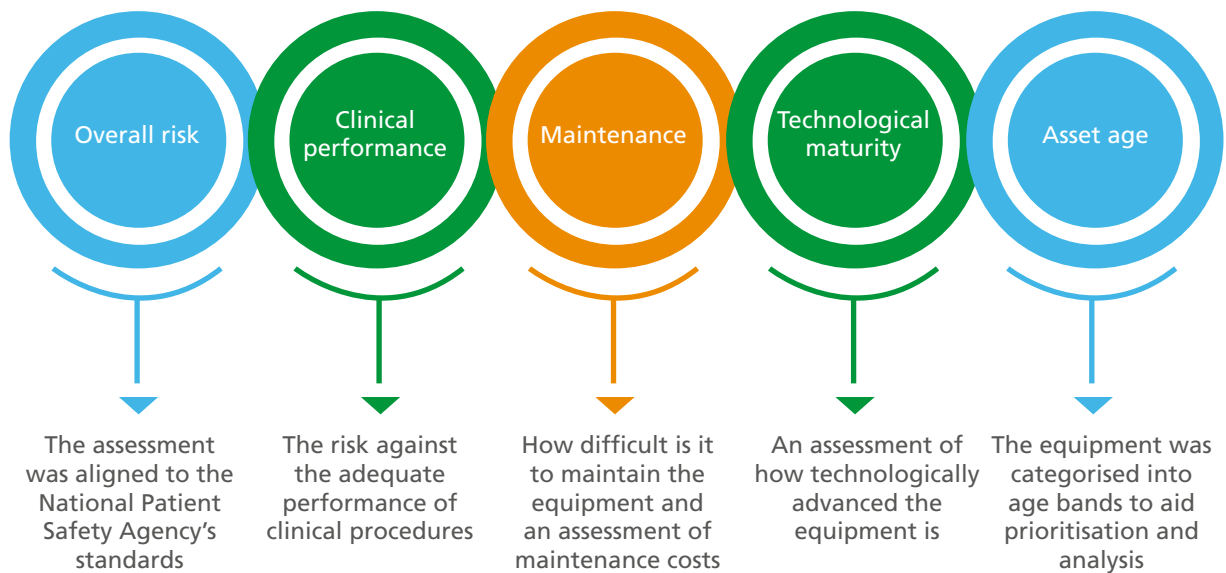
# Step #1

## Assess the trust's radiology equipment

The first step in the process involved collating the trust's asset data and populating it into a risk-based planning model. Through a series of workshops, a structured assessment of the condition of the trust's medical equipment was then carried out using risk and other key criteria.

Assessment of the condition of the trust's medical equipment

Each item of radiology equipment was assessed against a range of different criteria:

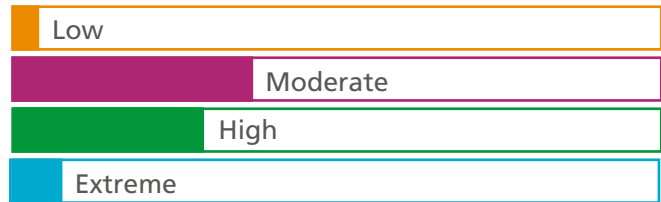


## Key findings

The assessment findings were analysed to form a clear and comprehensive understanding of the condition of the trust's radiology equipment.

### Risk profile of equipment

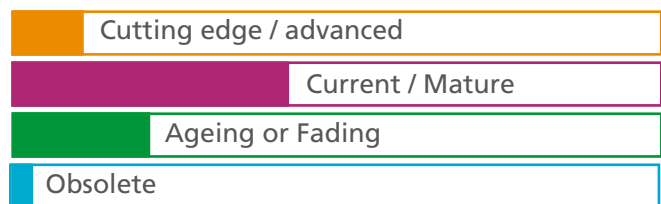
Due to the backlog of aged assets, the risk assessment identified over £6 million of assets which were categorised as being in a major risk category or higher.



Number of items of radiology equipment

### Technological Maturity

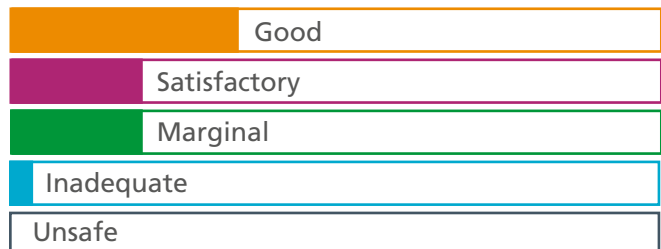
Around 54% of assets were current / mature technologies and 14% were cutting edge / advanced. However, over 25% of assets were ageing / fading or obsolete.



Number of items of radiology equipment

### Fitness for purpose

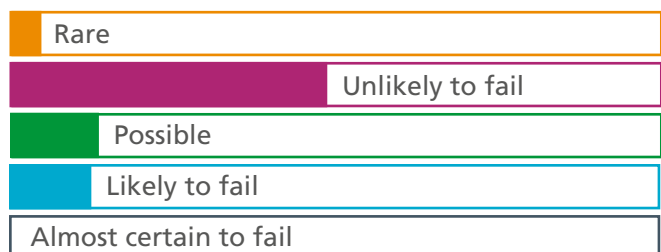
Despite the ageing profile of equipment, around 70% of assets were considered to be satisfactory / good in respect of their ability to deliver an effective clinical performance. However, around 25% of assets were on the cusp of being inadequate and 3 items were already at this stage



Number of items of radiology equipment

### Risk of Equipment Failure

Despite the large number of ageing assets, the vast majority of items were categorised as being unlikely to fail. This is in part due to the rigorous maintenance regime in place at the trust; a project was delivered to ensure that maintenance contracts were expansive enough to cover the trust's requirements in terms of equipment uptime.



Number of items of radiology equipment

# Step #2

## Establish a prioritised long term replacement plan

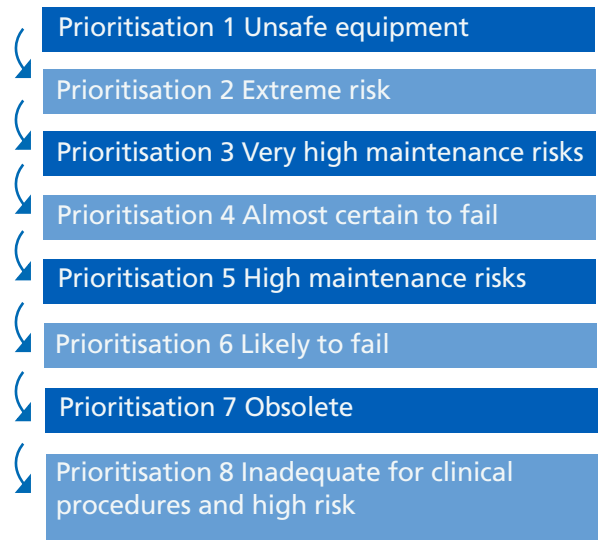
The equipment replacement priorities were ranked in order of criticality and an overall capital budget limit was set. This provided the basis to establish the long term equipment replacement plan.

### Identifying equipment priorities

Rather than focus on one area of risk as being the most critical, the trust created a 'prioritisation tree' with the aim of addressing the critical level risks in each of the following 5 identified key areas;

- Overall Risk (NPSA)
- Maintainability
- Technological Maturity
- Fitness for Purpose
- Probability of Failure

Where a number of pieces of equipment fell within the same category, the assets were prioritised by either a further area of risk (e.g. High Probability of Failure + High Fitness for Purpose) or by the risk reduction per £ invested.



## Replacement Plan

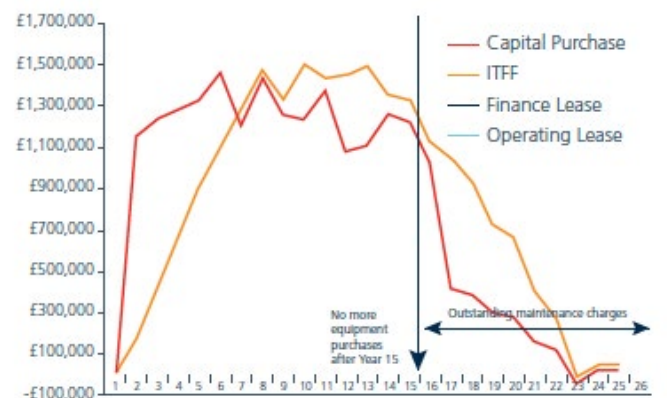
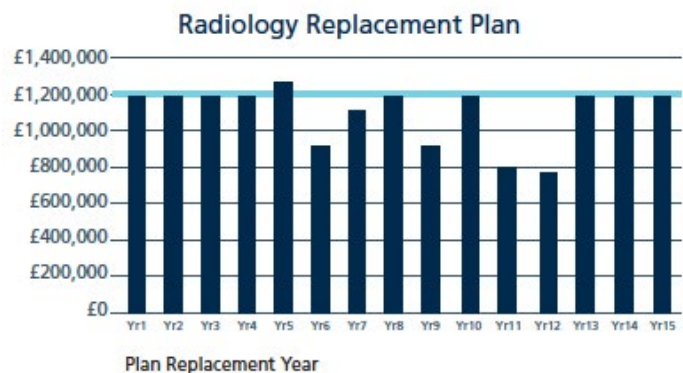
It was determined that, in order to maintain a 'steady state' in Radiology and replace at more regular intervals going forward, a budget of £1.2 million p/a was required.

# Step #3

## Assess financing options

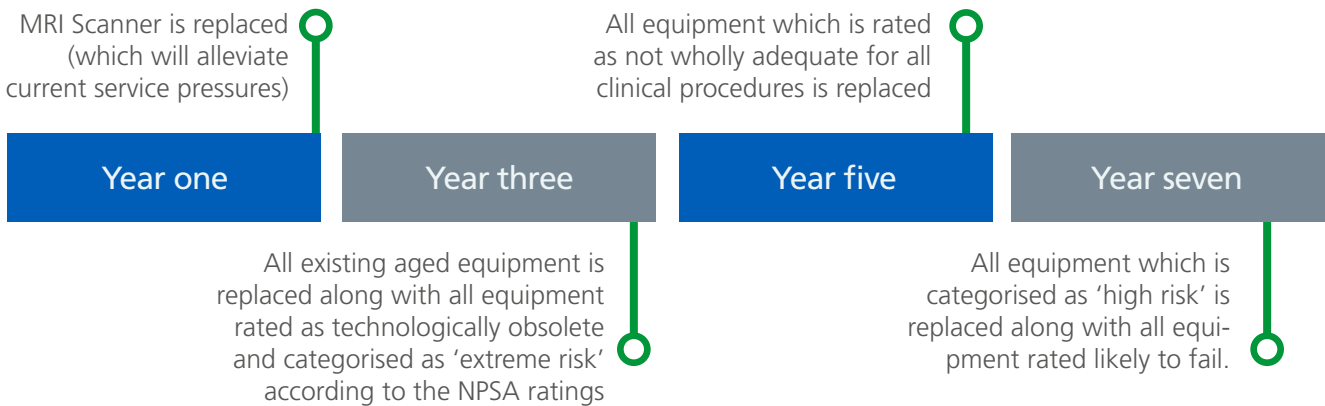
The trust was in a position where demands for capital investment were outstripping the available budget. As a result, they were keen to consider alternative financing options.

NHS Supply Chain modelled these different 'routes to purchase' and provided high level cash-flow forecasts with maintenance estimations and depreciation summaries.



## Conclusion - What impact did the project have?

By carrying out a detailed equipment assessment, and using it to prioritise the most critical equipment, the trust was able to articulate the risk reduction made possible through the equipment replacement plan.



Through the dedicated partnership support offered by the Solutions Development Manager from NHS Supply Chain, a business case is under construction to articulate clearly the work that has been completed and the benefits that enacting the resultant plan will bring to the trust. It is intended that this business case will be presented to NHS Improvement to underpin a request for funding.

## Strategic Investment Planning - trust benefits

As a result of the Strategic Investment Planning project the trust identified a number of benefits:

- The trust now has a robust and credible long term replacement plan for our Radiology equipment and is able to plan our finances / budget more effectively
- We are now able to better understand and manage our equipment related risks
- We have the ability to identify opportunities to aggregate spend and achieve savings
- We are better able to align our equipment procurement activities with our clinical strategy

“ Our presentation and validation, of the actual clinical and financial position provides the trust with the assurance that risk milestones have been correctly assessed and that a structured approach to the financial models has been provided for review. On a personal note the process has been both interesting and educational, and created divisional and departmental confidence that these difficult challenges have been considered in great detail. ”

**Mark Buckley**, Professional Lead / Service Manager, Rotherham NHS Foundation Trust Endoscopy and Churchill Theatres.

### Contact us

If you would like to hear how we could support you, or would like further information on our service offering, please contact:

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## Call us today

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