

# Velindre University NHS Trust

## Integrated Radiotherapy Solution (IRS)

### Embedding benefits into Procurement

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# I Plan to Cover

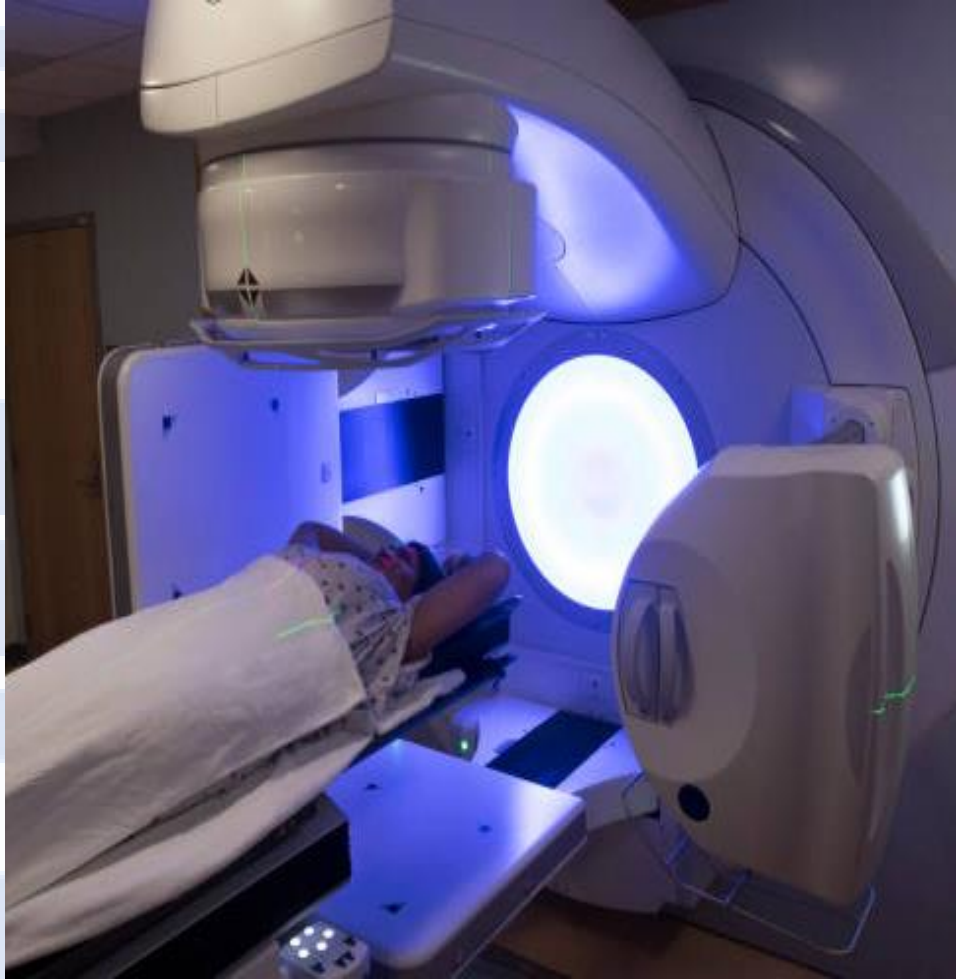
- Context & Case for Change
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# Context & Case for Change

- IRS project principle aim is to procure an Integrated Radiotherapy Solution which will drive significant benefits for patients, carers & staff – it is not about buying individual treatment machines and software
- Competitive dialogue procurement approach enables the maximum benefits to be achieved through iterative development of the optimum solution

# Issue: Procurement doesn't deliver benefits promised by Supplier – how do we maximise benefits realisation?



- Procurement process required Suppliers to identify and agree benefits together with Service leads
- Benefits jointly agreed included in contract with a performance review mechanism that retains capital payments for Solution where non-Delivery of benefits
- Motivation was to ensure the NHS maximises benefits realisation from major system procurements to add value to services
- Cancer Patients receive better Radiotherapy treatment improving both patient outcomes and experience – added value
- Procurement is on-going so concept yet to be proven, but the quantified benefits included in the draft contract are c£30m over 14 years

# Improvement Requirements & Associated Benefits

## Better Patient Outcomes & Safety

- Digital patient verification - biometrics digitally match correct patient to treatment to reduce radiotherapeutic risk events
- Machine integrated patient and clinical Quality Assurance

## Improved Patient & Carer Experience

- Tattoo-less Surface Guided – no / reduced marking of patient
- Patient Apps - better comms & support patient triage
- Improved PROMS & PREMS – oncology specific e.g. treatment toxicity to inform future treatment planning
- Improved patient environment

## Clinical Improvements

- New & enhanced treatment techniques - SGRT & Motion Management for increased treatment accuracy with improved patient safety
- Peer Review - Reduced plan variation & increased accuracy
- Improved service pathways
- Use of AI for treatment Planning:-
  - improved speed of simple plans allowing clinicians more time to focus on complex plans
  - Reduced no. of plans per patient
- Improved RD&I opportunities

## Increased Productivity & Efficiency from Automation & Integration of Systems

- Additional capacity to meet future demand for services
- AI clinical decision support - libraries of treatment history & outcomes, in complex treatment decision making and patient co-production of treatments
- Online Adaptive Planning - personalized patient care with increased accuracy - decrease volume of irradiated healthy tissues and no. of verification imaging
- Fully paperless design & digital workflow
- Access to services remotely and via mobiles or handhelds
- Introduction of voice and speech recognition features

## Improved Reliability of Clinical Systems

- Enhanced Service, Maintenance & Support – full parts replacement & software upgrade improving systems uptime
- Cloud services - Provision of the system infrastructure and Vendor TPS/OIS/QA systems - improved reliability system uptime, latest software update, improved resilience

# Impact of not delivering benefits



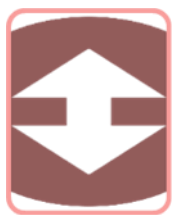
Lower treatment success rates and higher side effects

67% of respondents identified this as a risk associated with the use of older LINAC equipment



Lack of access to new techniques

100% of respondents identified that older LINAC equipment does not enable the latest most effective forms of radiotherapy treatment



Increased downtime and reduced throughput

# Impact of delivering Benefits



## Higher treatment success rates

56% of respondents highlighted this as a benefit associated with the latest LINAC equipment



## Improved patient radiation safety

56% of respondents highlighted this as a benefit associated with the latest LINAC equipment



## Reduced patient side effects and recovery time

67% of respondents highlighted this as a benefit associated with the latest LINAC equipment



## Ability to carry out a wider range of treatment

78% of respondents highlighted this as a benefit associated with the latest LINAC equipment



## Improved patient experience

100% of respondents highlighted this as a benefit associated with the latest LINAC equipment



## Reduced downtime and higher throughput

Over 76% of respondents highlighted this as a benefit associated with the latest LINAC equipment

# Process of IRS Benefits Development

## 1. Benefits Discovery – Clinical & Technical Dialogue

- Trust requirements set out clinical & patient improvements
- Bidders asked to describe the benefits & improvements integrated solution would deliver not just the features of individual elements
- Template for Bidders to identify how benefits of their solution add value - cash savings, efficiency & productivity, outcome improvements etc.



# Process of IRS Benefits Development

## 2. Benefits Dialogue

- Deep dive benefits workshop with clinical teams for Bidders to gather info on current processes and workflow
- Shared with Bidders independent review of RT Services providing baseline data & areas for improvement
- Bidders submitted proforma setting out their understanding of current processes & workflow, seeking further baseline data, clarifying issues in order to support quantification of the benefits
- Workshops with clinical teams to agree the primary benefit themes required from the IRS
- Benefits Register template issued to Bidders to capture their solution benefits in a consistent way
  - Benefit theme, metrics, baseline & target, realisation date & period, value (£), evidence base & assumptions
- Bidders submitted initial Benefits Registers with up to 60 individual benefits – quantitative and qualitative
- Finance & clinical teams reviewed quantitative benefits identified as being ones to be monetised to assess whether the assumptions and evidence base was robust
- Trust feedback to Bidders challenging assumptions, seeking further clarification & request additional evidence

# Process of IRS Benefits Development

## 3. Benefits Commercial & Contractual

- Benefits dialogue resulted in reduced list of benefits to be monetised and fed into the contractual & commercial dialogue for agreement from Bidders to include as part of the contract
- Contract includes two key elements to facilitate realisation of the benefits:-
  - A mechanism that withholds % of capital payments if agreed benefits delivery milestones not achieved
  - Service credit regime that results in reduced annual service payments if key metrics & benefits not met:
    - Improved utilisation - machine & system % uptime
    - access to latest treatment techniques e.g. software protection plan to ensure access to most advanced features are met

# Commercial & Contractual Monetised Benefits Process

## Step 1: Analyse the Benefits Received from Bidders

- Benefits Received from Bidders
- Financial value based on Bidder quoted baseline / targets & assumptions (if available)
- In absence of sufficient information methodology modelled for discussion
- Profiled over the 14 Years

## Step 2: Outline Potential Issues for Discussion

- Outline points for discussion with clinicians
- Highlight concerns and points requiring clarity
- Allocate to Service Area
- Note bidder evidence referenced for clinical team to review

## Step 3: Discuss and Adjust

- Discussion & explanation on how benefits have been valued
- Clinician assessment of Bidder evidence & assumptions
- Concerns noted in step 2 raised and discussed
- Meeting output used to adjust costings to better reflect potential impact to Velindre
- Feedback adjusted Benefits to clinicians to agree comments

## Step 4: Review

- Clarify outstanding issues or adjustments & ensure consistent costing methodology
- Review with Trust Senior Project Team
- Address any other issues highlighted by Senior Project Team
- Discuss output with Bidders to inform their benefits submission

# Summary of Indicative Contractual & Commercial Benefits Value

Benefit Theme	Annual £'m	14 Years £'m
Improved Reliability of Clinical Systems	0.145	2.030
Increased Capacity from productivity & efficiency	0.300	15.815
Better Patient Outcomes & Safety	0.326	4.624
Increased Automation and Use of Integrated Systems	0.121	4.587
Improved Patient and Carer Experience	0.164	3.070
<b>Total</b>	<b>1.056</b>	<b>30.126</b>

# IRS System Payments

Treatment Machine	% Charge payable on Installation of that Treatment Machine in the proper location at the relevant Site	% Charge payable on successful completion of Equipment Installation Tests pursuant to Clause 10	% Charge payable on successful completion of Ready for Service Tests and issue of Acceptance Certificate for the relevant Phase pursuant to Clause 15	% Charge payable based on a chieivement of Committed Benefits
1.Standard Treatment Machine	95%	5%	0%	0%
2.Advanced (Stereotactic) Treatment Machine	95%	5%	0%	0%
3.Online Adaptive Treatment Machine	95%	5%	0%	0%
4.Brachy Treatment Machine	95%	5%	0%	0%
5.Superficial X-Ray	95%	5%	0%	0%
6.Surface Guidance and Patient ID	0%	40%	30%	<b>30%</b>
7.Motion Management	0%	40%	30%	<b>30%</b>
8.CT-SIM Gating	0%	40%	30%	<b>30%</b>
9.QA - 3D Dosimetry	0%	40%	30%	<b>30%</b>
10.QA - In-vitro Dosimetry	0%	40%	30%	<b>30%</b>
11.Treatment Planning System & Oncology Information System	0%	40%	30%	<b>30%</b>

# Committed Benefits Assessment & Payment

- the Solution items and % payment retained as agreed in Committed Benefits Payment Schedule (previous slide);
- the Committed Benefits Payment will be paid in proportion to the degree to which the Committed Benefit to which it relates is agreed to have been met. For example, if it is agreed the Committed Benefit is 50% met, then 50% of the Committed Benefit Payment attributable to that Benefit shall become payable;
- the Trust and Supplier shall will meet quarterly in a Committed Benefit Payment Review Meeting to discuss and agree the degree to which Benefits have been achieved and the proportionate amount of Payment due;
- Prior to each review meeting, the Supplier shall provide to the Trust a written report setting out in sufficient detail for the Trust to understand how much Committed Benefit Payment is being claimed by the Supplier and the basis for the calculation of that amount:
  - the degree to which the Supplier claims each of the Committed Benefits has been achieved;
  - the basis of calculation for the Supplier's assessment, including the criteria and methods of measure for each Benefit;

# Committed Benefits Assessment & Payments

- any relevant evidence such as monitoring reports, accounts, etc.; and
  - a full broken-down calculation (showing all steps) of the amount of Committed Benefit Payment which the Supplier claims to be due;
- the Trust may prior to the Review Meeting, provide any comments and/or evidence it wishes the Supplier to consider in relation to the report, but can also raise further comments or issues at the Review Meeting;
  - the Parties shall endeavour to reach agreement on the amount of Committed Benefit Payment due;
  - within 10 Working Days of the Review Meeting, the Supplier will provide to the Trust a revised report taking account of any comments, issues or evidence raised by the Trust and setting out the amount of Committed Benefit Payment that is agreed by both Parties to be due. The Supplier may submit an invoice for the agreed amount of Committed Benefit Payment upon the date when it provides the revised report

# Enablers & Challenges

## Enablers

- Trust Programme Board overseeing the Project approved approach
- Significant number & value of quantifiable benefits
- Principle of service credits already understood for incentivising performance over contract life – benefits realisation incentives consistent with this
- Process helpful for developing the benefits to be included in the Economic case of the FBC

## Challenges

- Lack of evidence base for some benefits required removal / reduction of benefits
- Insufficient detail to quantify benefit in financial terms
- Agreeing contractual mechanism for the capital payment retention and process for monitoring delivery of benefits



# Key insights and learnings

- Ensure dedicated time for Clinical teams to engage with Suppliers to map existing processes / workflow and provide robust baseline data
- Agree a framework / criteria that will be used to evaluate the evidence base supporting the benefits
- Ensure sufficient time to agree mechanism for incentivising supplier to support delivery of benefits
- Ensure process agreed for monitoring achievement
- Set out supplier and NHS responsibilities for delivering benefits and ensure NHS staff have action plans & resources to deliver
- Don't be put off by others suggesting the process won't lead to greater benefits realisation
- Ensure Workforce plans are aligned to benefits related to staff productivity or efficiency savings in time



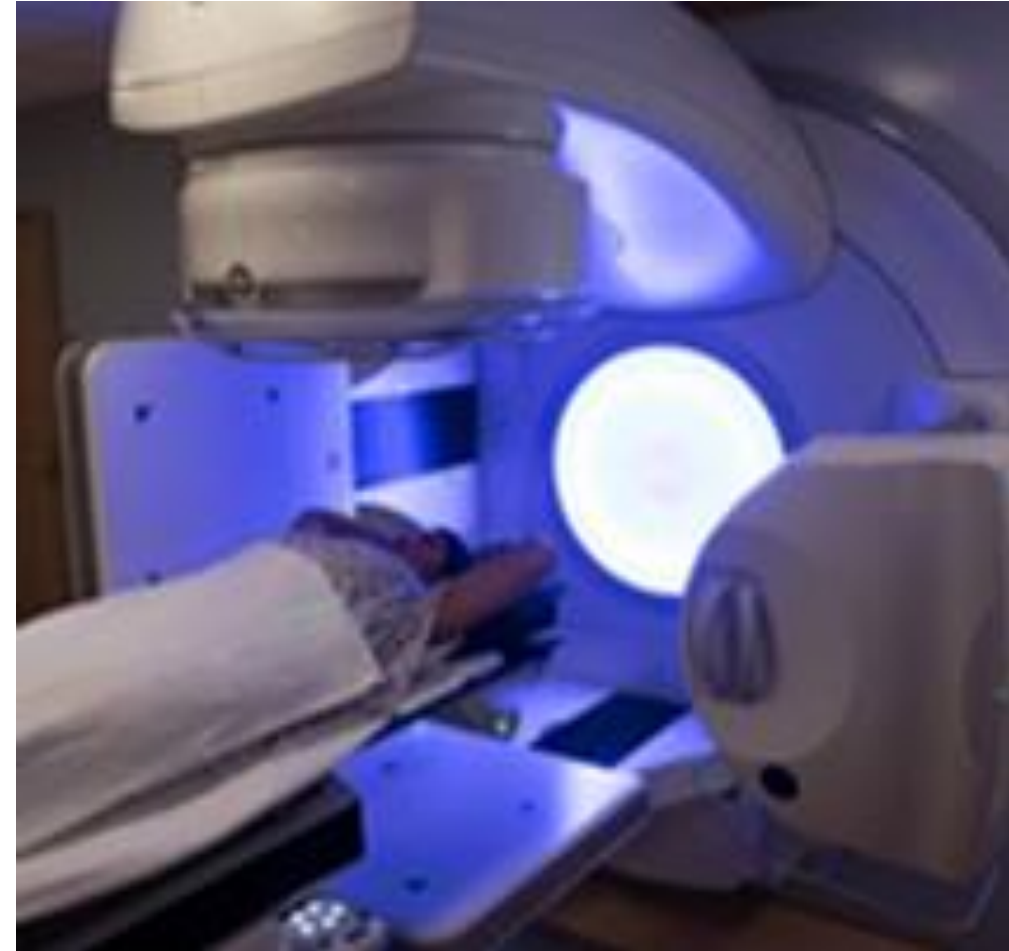
# Sharing of Approach & Learning

Approach not shared more widely as Procurement still in progress – initial findings can be shared after year 1, but full impact will not be known until implementation completed - 3 years

Jointly agreed benefits required supplier access to Service clinical teams to undertake process mapping of current Systems & processes and obtain baseline data

Improvement / Benefits claimed by suppliers had to be supported by evidence

Evidence provided not always high quality as some items of Solution recently moved to a commercial product from development



# Further Thoughts

Some scepticism from Procurement and Service colleagues as to whether the approach will deliver improved benefits realisation – this may turn out be well founded

but, my view is what have we got to lose?

Concern - Suppliers price in additional financial risk of payment retention for benefits not delivered - but its a competitive process so pressure brought to bear through the price evaluation scoring

Planned to include quantified benefits in financial evaluation netting off the supplier revenue Price – risk of suppliers over-stating benefits to reduce price and score better, despite process to jointly agree benefits . Benefits included in the non financial evaluation to avoid this

Others must have considered contractualising benefits and done it, but my research didn't find any examples – has anyone got an example?

My motivation was try to do the right thing rather than the easy thing so patients and staff benefit increased

# Next Steps

Implementation not yet commenced, so can't say if it will deliver the aims of improved benefits realisation

Will be difficult to assess if benefits realised are greater with inclusion of contract mechanism as no comparator benefits realisation value without contract mechanism

Would implement again if:

- helped realise benefits more quickly
- increased % of identified benefits realised compared to previous procurements

If assessment is including benefits realisation in procurement contracts adds value, commence process with NWSSP Procurement to build into future National Procurement

Questions:

- Has benefits realisation been included in any other major UK public Procurement contract?
- If it has what mechanism has been used to hold the supplier to account for joint responsibility to deliver?



Any questions e-mail or Teams  
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