

Innovation Strategy

2023-2025

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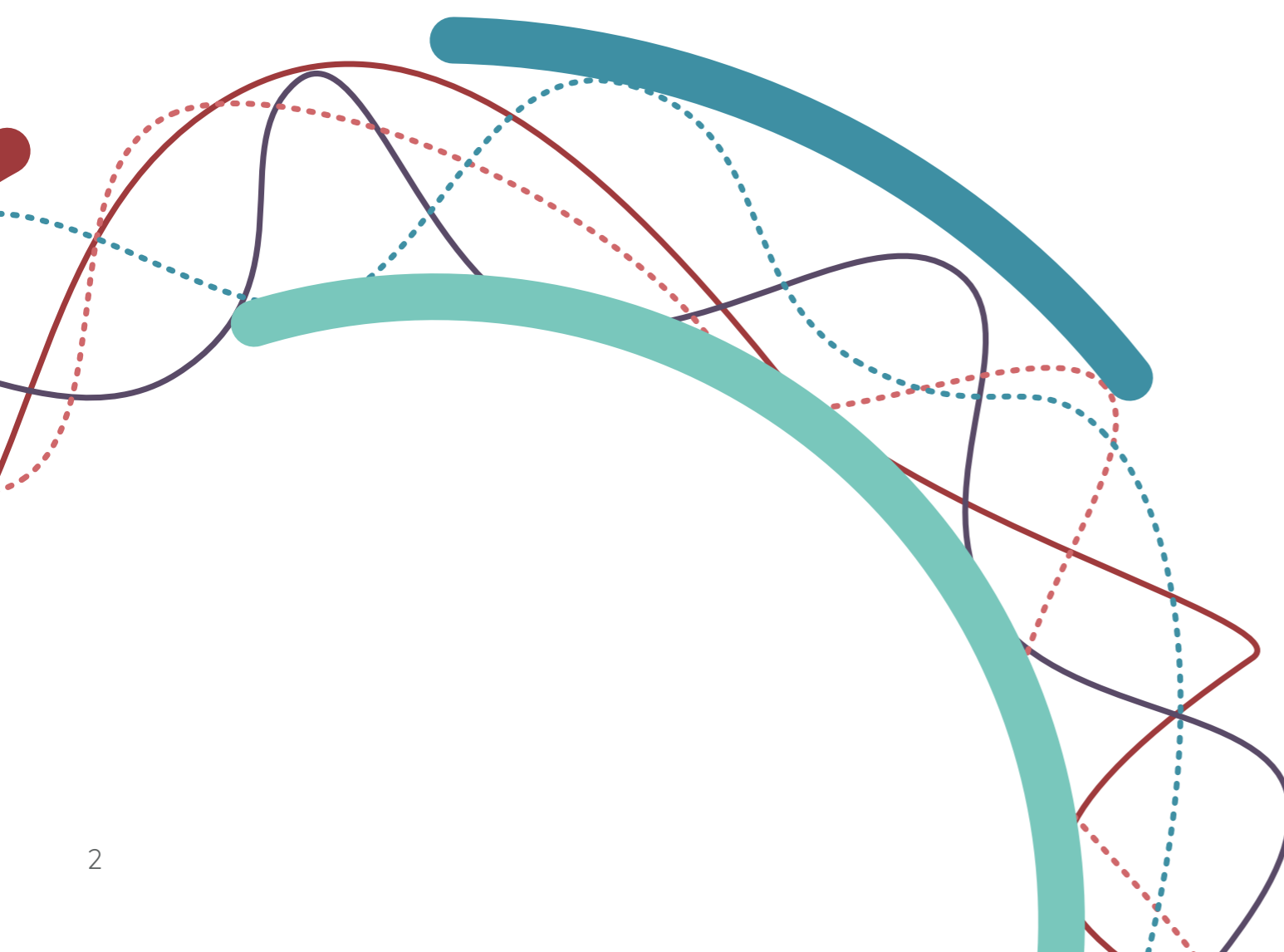
Foreword

The Clatterbridge Cancer Centre NHS Foundation Trust (CCC) has a rich history spanning over 160 years, with a commitment to delivering world-class cancer care through pioneering and early adoption of new techniques and ways of delivering care. The Clatterbridge Cancer Centre – Liverpool opened in 2020 and positioned its flagship ‘state-of-the-art’ hospital at the heart of Knowledge Quarter Liverpool, demonstrating the Trust’s commitment to taking its place at the forefront of healthcare and innovation.

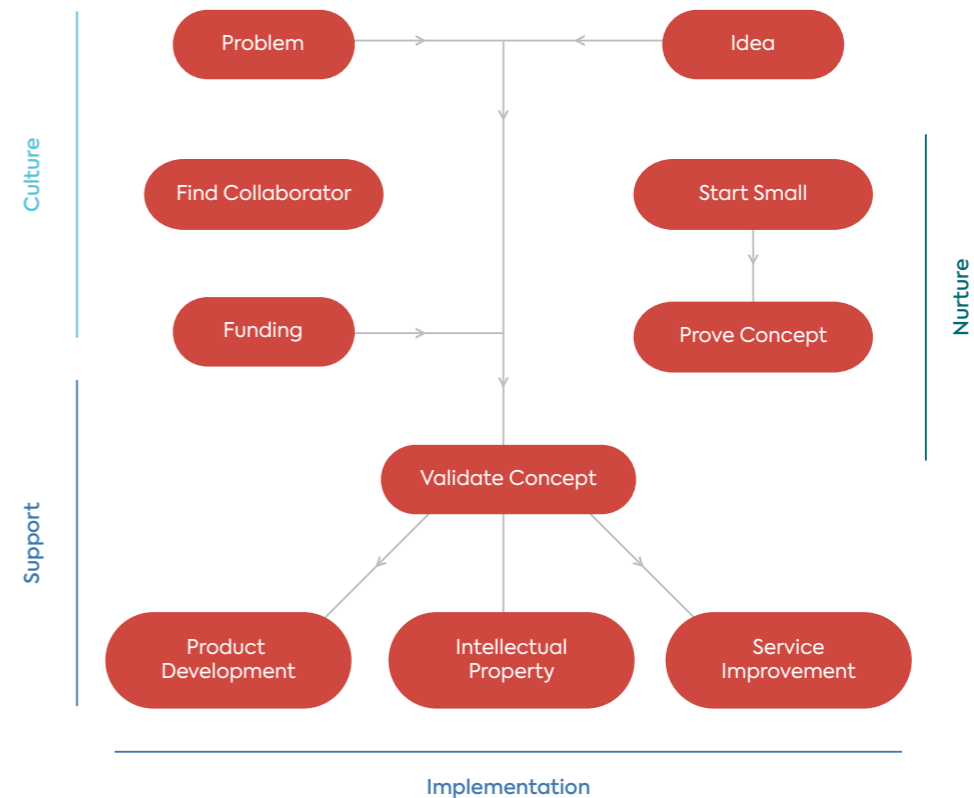
By focusing on innovation we can seek opportunities within the organisation and in collaboration with patients and partners to improve patient experiences and outcomes.

CCC Innovation definition

Innovation is the successful exploitation of new ideas to overcome a problem by creating, developing and implementing a new product, process or service, with the goal of improving the choices, experience and outcomes for patients.

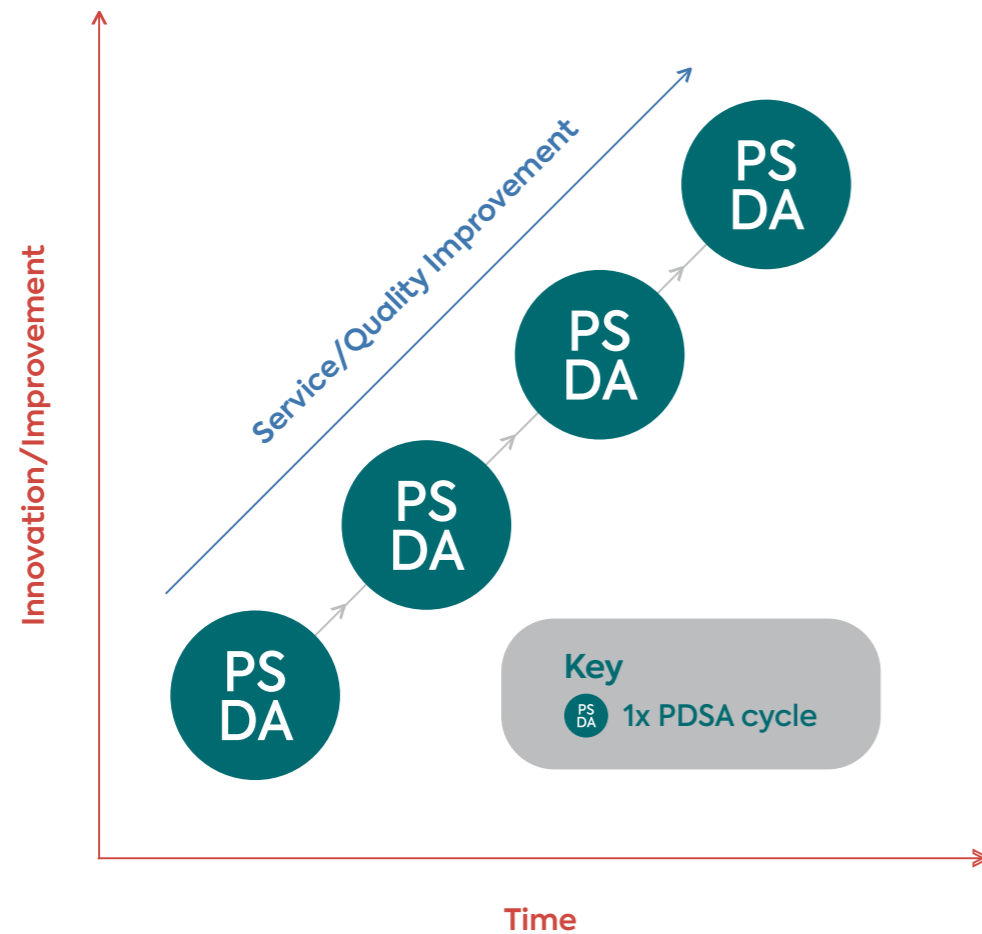


Roadmap for Innovation



Innovation and Quality Improvement

“All innovation is quality improvement, not all quality improvement is innovation”



Improvement is iterative and usually incremental, each PDSA (Plan, Do, Study, Act) cycle builds on the next, optimising a system and eliminating defects.

Innovation by definition, creates something fundamentally new from a previous system, resulting in a different process or end result.

Adoption of innovation is the incorporation of innovations that originated outside of the organisation. This can occur at different stages of the innovation journey. Adoption will range from CCC being part of any validation process, acting as a test bed for newly developed concepts, or accessing fully tested products that are just coming on to the market.

CCC Innovation case studies

“Healthcare innovation is the creation and development of new ideas into real-world applications with the goal of improving patient care”

It is helpful to think of different types of innovation, for example, new, improved ways of doing things or providing a service, improvements building on existing expertise or the introduction of new technology.

At CCC we have introduced innovations with local, national and international impact. Examples of these are included in Appendix I.

Clatterbridge set up commercial companies (PharmaC, PropCare) and a joint venture supporting the work it delivers.

- PropCare was established by the Trust with the main aim of delivering the build programme required to achieve our Transforming Cancer Care programme, including the construction of CCC-Liverpool and the redevelopment of CCC-Wirral.
- Since 2013, PharmaC has supported the Trust in bringing pharmacy procurement and dispensing services in-house and delivering exceptional quality of service to our inpatients and outpatients both at home and at hospital.
- The Clatterbridge Private Clinic has been a joint venture between the Trust and the Mater Private since 2012. The private clinic in the new CCC-Liverpool opened in 2020 and the investment in new capacity in Liverpool attracts additional income into the joint venture through haemato-oncology and new privately medical insured patients from the North Mersey part of the region.

Innovation mission statement

At CCC we will make a difference to improve choices, experiences and outcomes for patients with cancer by accelerating adoption and development of innovations.

The Innovation Strategy outlines how we as an organisation will systematically generate novel solutions to problems and translate those ideas into a business concept for internal development or external collaboration. Having a clearly defined approach and mechanism for innovation facilitates a carefully considered approach and thoughtful use of public resources for the betterment of the patient experience at CCC.

Our focus, in line with the NHS Long Term Plan, continues to pledge its commitment to innovation, aiming to speed up the pipeline for developing innovations in order to bring proven and affordable innovations to patients faster.

Clatterbridge Cancer Charity recognises this priority and supports innovation through the provision of the Innovation Fund. The charity provides seed funding for innovative projects to improve patient outcomes and experience.

The Innovation Strategy is aligned with CCC's Five Year Plan; therefore, this strategy covers the next three years in order to line up with the Trust Plan.

This strategy has been developed in consultation with staff, patients and members of the public through a series of engagement sessions that took place between March and April 2022.

All innovations need to centre on improving patient outcomes and experience. As CCC staff, we each have a duty and responsibility to identify ways to improve daily practice. It is crucial we are inclusive of everyone within the Trust, ensuring those who understand the work and challenges are empowered to share their ideas and have their voices heard.

Embedding innovation within CCC over the next three years will be guided by three strategic themes:

- Culture for innovation
- Nurture new innovations from within CCC
- Support adoption of innovation

By encouraging an innovative mind-set, we will ensure innovation is a core function of the way we work. A Trust strategic priority is 'Be Innovative' therefore, fully supported by the organisation. The strategy will be supported within the Trust through a programme of work dedicated to increasing awareness, education, and developing an innovative mind-set.

Supporting adoption of existing external innovative practices is a priority for CCC. We will deploy a rapid assessment and piloting programme to accelerate improvement of patient outcomes and experience at Clatterbridge.



Strategic Themes

Culture of Innovation

"Innovation is everyone's job"

"If we only focus on what we think or know is possible, then there may be missed opportunities"

For CCC to be truly innovative, we need staff and patients to share their challenges and ideas; it is from these challenges and problems we regularly face that innovation arises. This strategy is not only for everyone to have a say in innovation but to emphasise that the input of all staff and patients is important; without it innovation will not thrive. It is crucial we are inclusive of everyone within the Trust and, that those who know the work and challenges involved are empowered and enabled to have their voices heard.



CCC's culture is embracing the innovative mind-set as a core function of the way we work. 'Be Innovative' is a key Trust strategic priority that is embedded within the Trust's business plans, therefore, our journey has already begun. We will continue to fully integrate innovation into the Trust's business as usual activity, supported by a systematic approach to innovation.

There will be a programme of work dedicated to education, increasing awareness, and support for individuals to act as local innovation champions. This combined approach will accelerate an innovative mind-set. Staff will have 'permission to explore' new ways of doing things, and 'permission to embrace failure whilst learning' if something appears unsuccessful.

The Bright Ideas Scheme was established to give staff from all areas of the Trust an easy-to-use and easy-to-access platform to submit their ideas and suggestions. This has proven successful since its launch in September 2021, with a continuous flow of submissions received.

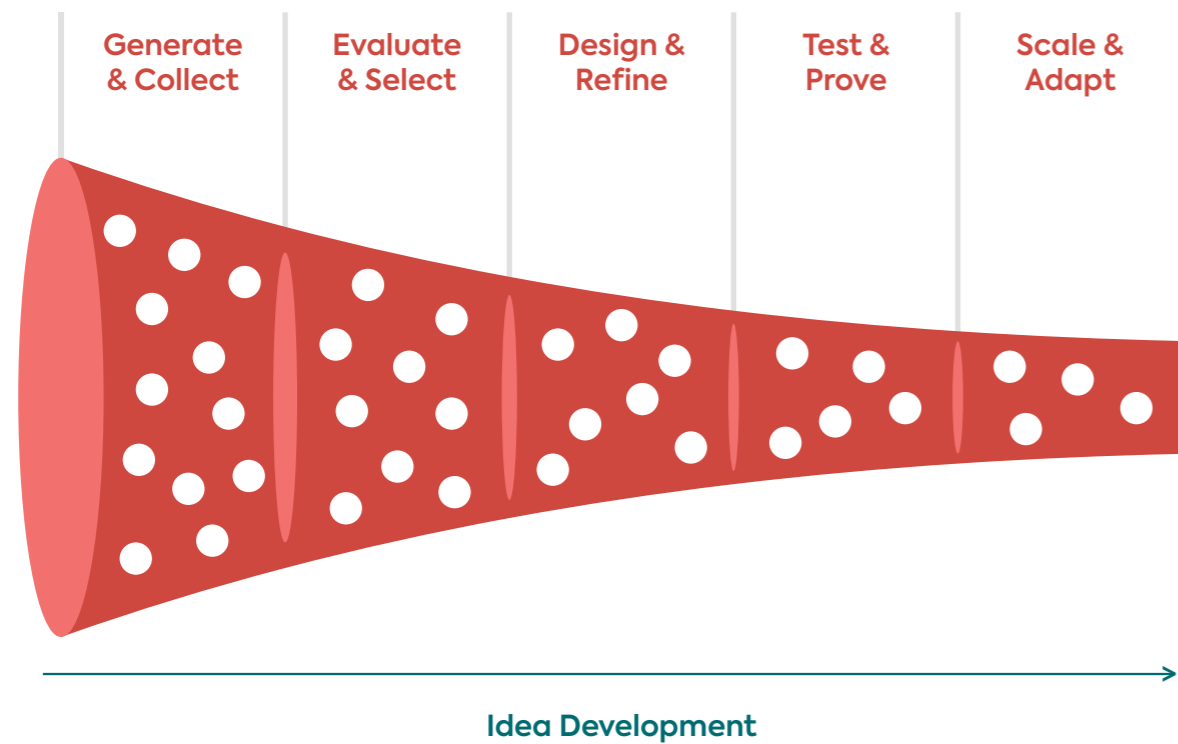
Promoting a culture of innovation within CCC will happen through multiple channels:

- Delivery of education centred on innovative practices
- Active engagement through collaboration events of key staff groups with external partners
- Launch of an Innovation Funding Call for larger scale projects and entirely novel concepts
- Further integrating with Trust practices and incorporation of innovation into the personal learning of all staff via the Performance Appraisal and Development Review (PADR) process
- We will promote the spread of innovation and good practices across organisational boundaries
- Celebration of innovation successes enabling wider gains to be realised through shared learning and best practices.



Nurturing New Innovation

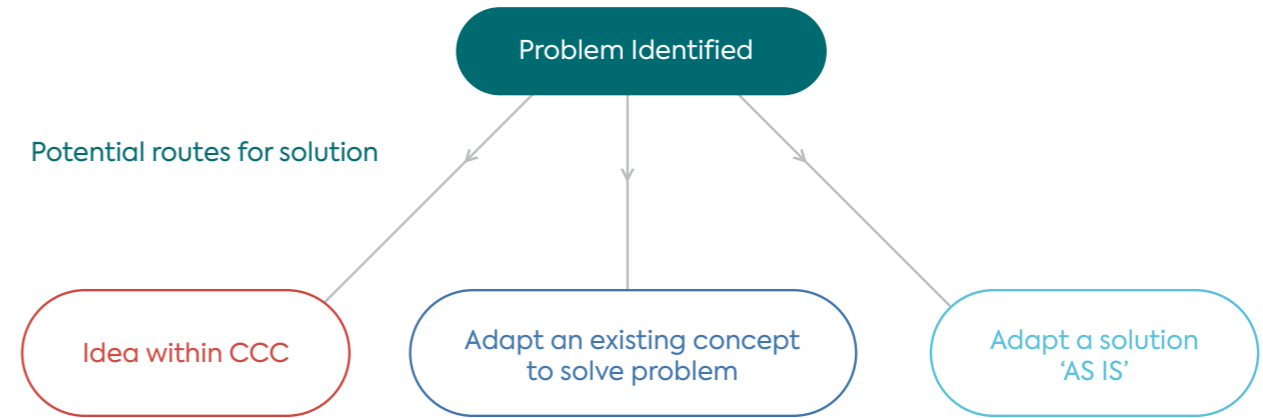
“Everything and everyone can make a difference”



An important priority for this strategy is to establish a system of processes acting as a conduit for innovative ideas to be collated, developed, shared, and translated into practice. These ideas must come from our staff and patients. We will empower staff and source funding streams to nurture ideas with the most potential and processes in place to support them.

The Innovation Team will establish a framework to assess and select projects for further development based on their potential, feasibility and alignment with the Trust’s strategic objectives and priorities.

The Clatterbridge Cancer Centre established an Innovation Fund in 2021 in partnership with Clatterbridge Cancer Charity, providing seed funding for projects with potential to enhance outputs and generate external income. Staff will have access to coaching, to develop the necessary skills to effectively work up and implement an initial concept. In addition to empowering our staff, the Innovation Team will work with them to connect each concept with any specific skills, knowledge, and expertise required to maximise the potential for each stage of development.

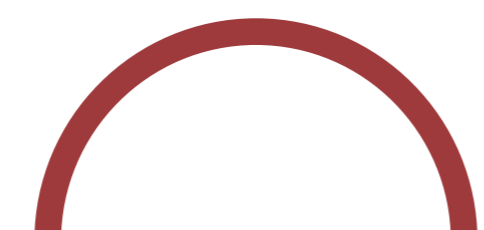
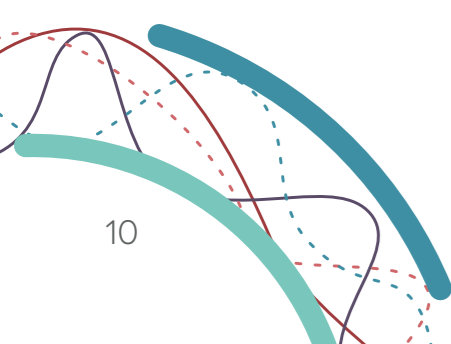
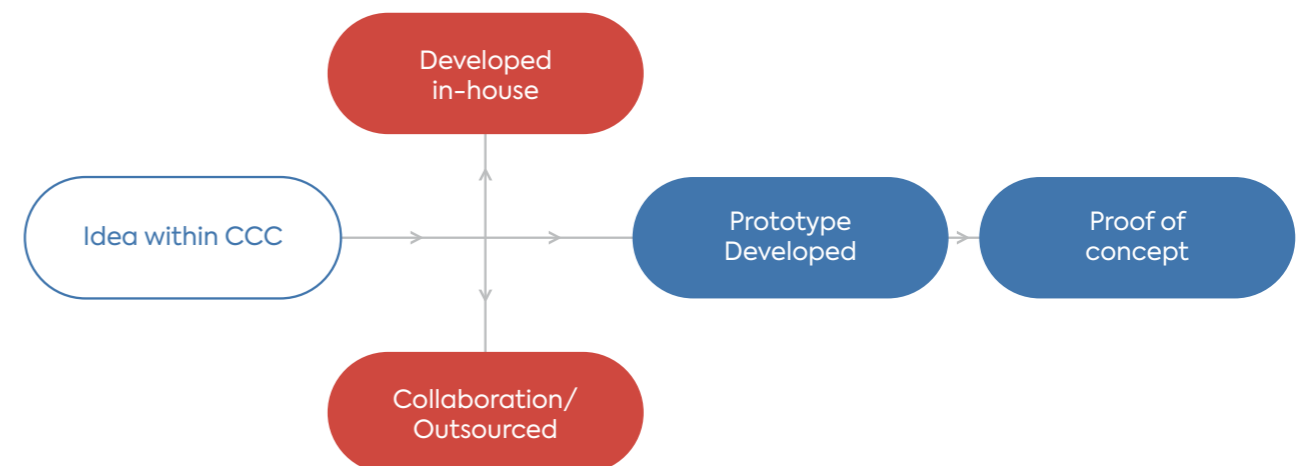


Our approach to innovation focuses on problem-solving, creating new concepts, or re-purposing existing ones to overcome challenges and address an existing need within the Trust. Collaboration is vital to the success of any project, and we will cultivate partnerships with academic, commercial, and other NHS organisations both regionally and nationally.

If innovation is a global first, there is an opportunity to develop this into a marketable product or service. This will generate income for the organisation and over time be used to grow the Innovation Service and to support the development of new innovations.

Innovation can take many forms and depending on the nature of the concept or product created, may include intellectual property. These may be eligible for protection through various methods, e.g. patents, copyrights, know-how, and trademarking. The nature of the innovation will determine which protections are applicable. The process of protecting intellectual property, the hiring of external legal expertise, and gathering resources to develop a prototype are all examples of steps in the process that require funding before reaching a point where any financial gains can be realised.

The aim is to become a self-sustainable service generating its own income to further progress innovative work by the staff at CCC. Whilst financial goals are important, the focus will always remain centred on what will make a difference to improve the choices, experience and outcomes for patients.



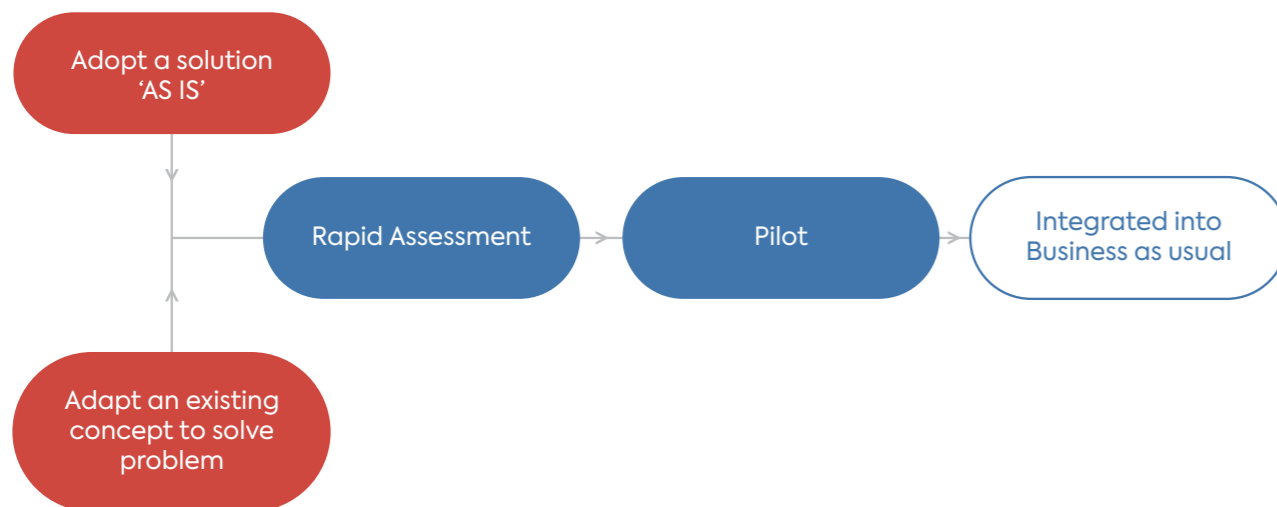
Supporting Adoption of Innovation

“What are the latest developments in technology and practice that we can leverage to improve things here?”

“Can you see good practice out there that we can bring in?”

We will provide faster access to novel treatments and innovative ways of working, optimising patient outcomes and experience. A solution to a problem may already exist such as a better treatment or a more efficient process in place. We will adopt these solutions and adapt them to improve our services and patient care at Clatterbridge.

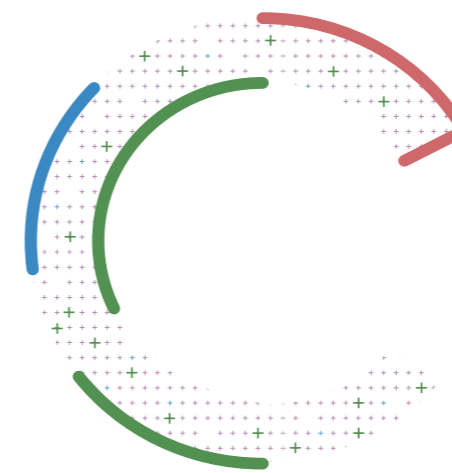
Adoption will occur at different development stages, ranging from CCC being part of the validation process, acting as a test bed for newly developed concepts, or accessing fully-tested products that are just coming onto the market. The importance of partnerships runs through all aspects of successful innovation. Adoption needs collaboration with academic, commercial, and other NHS organisations. Accelerating adoption requires a flexible and agile approach to change, which will result in external innovations enhancing business as usual practice.



The rapid assessment framework will assess newly proven concepts for adoption in the organisation, with a risk-proportionate initial pilot. The pilot will determine the feasibility and safety of the concept. This informs the decision to scale up the adoption and spread it across the organisation. A governance framework and clearly defined process will be established to safely and quickly facilitate transformation.

A commercial evaluation service will be established in order to support the validation and subsequent adoption of newly developed products. This will facilitate collaboration with external partners to increase our access to novel concepts whilst providing our partners with a test bed and opportunity for feedback and product refinement.

Alignment with the trust strategic priorities



Be Outstanding

Ensure that all innovations centre on improving patient outcomes and experience through maximising performance, and supporting Trust priorities such as improving urgent and unplanned care.

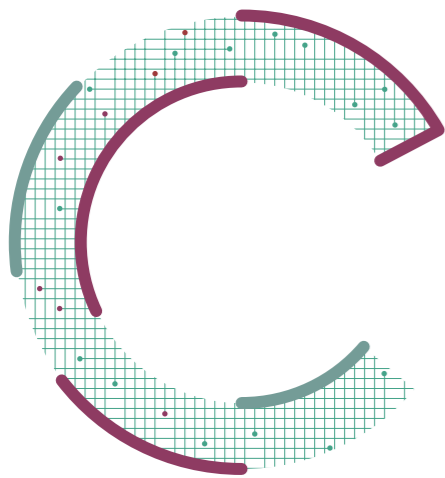
We will ensure innovation is a core function of the way we work. We will educate, coach, encourage and support to create ideas, develop solutions and make improvements a reality.



Be Collaborative

Development of our innovations and adoption of external novel solutions will only succeed through the shared learning, collaboration, and cooperation with our partners across the region commercially, academically and with other NHS organisations.

Our strategy reinforces this priority and outlines collaborations are crucial during the development and implementation of innovative solutions.



Be Digital

Working close with Digital to identify and leverage the latest technologies to create our own digital innovations as well as transforming the organisation through the adoption of new digital technology.



Be Research Leaders

Supporting our researchers in identifying practical real-world applications to their theoretical research; promoting CCC as a key test-bed for novel practices and interventions for patients.

We recognise that there is much conceptual overlap between innovation and research, where research generates the novel data and then leads to innovation by implementation. We propose close communication between the Innovation and Research teams at CCC, which is facilitated by the position of both strands in R&I, and thus enabling us to join up these two strands of improvements in healthcare in an optimal way.



Be a Great Place to Work

Develop and empower our staff to be the driving force of positive change in the organisation, providing a supportive forum for their ideas and engaging closely in any transformative work undertaken.

By empowering staff with an innovative mind-set and encouraging their development we give staff 'permission to explore' new ways of doing things, and 'permission to embrace failure whilst learning' until we can improve.



Be Innovative

Continue to support staff with their Bright Ideas and facilitate idea generation with staff to find ways to continually evolve the services we provide to patients.

This strategy document outlines our approach to systematically developing an innovation culture, nurturing great innovative ideas and supporting the adoption of existing external innovations.

Over the next three years

Culture of Innovation

- Facilitate a shift in culture to encourage all staff to spot problems and suggest solutions
- Facilitate access for all staff to have the skills, experiences and permissions to innovate and become self-improving
- Facilitate the development of education resources to train staff on the protection of their intellectual property
- Raise awareness of Innovation at CCC across all staff groups and business areas
- Establish an Innovation governance structure across the Trust
- Establish CCC as a centre for Culture of Innovation regionally and nationally

Nurturing Innovation

- Establish a process for the development, evaluation and commercialisation of innovations
- Establish a scheme to facilitate the submission of large-scale innovation projects to the Innovation Service, also supported by the Innovation Fund
- Help to secure funding for innovations with significant commercial potential and/or benefit to patients or staff

Support Adoption of Innovation

- Establish routes to link adoption of innovation and transformation
- Establish routes to link innovation and continuous improvement
- Cultivation of partnerships with academic, commercial and other NHS organisations both regionally and nationally.

Conclusion

All innovation needs to centre on improving patient outcomes and experience. As CCC staff we all have a duty and a responsibility to identify ways to improve the way we do things. It is crucial we are inclusive of everyone in the Trust and that those who know the work and the challenges involved are empowered and their voices heard. The new Innovation Service in the Trust builds upon the existing innovative and pioneering spirit that defines CCC.

The next three years will see a step change in innovation across the Trust and, crucially, a structured approach. By first focussing on a culture and mind-set for innovation, we will encourage the voicing of where challenges are and invite staff and service users to bring their ideas for solutions. Providing a nurturing environment in collaboration with external partners to develop potential solutions is vital to develop a 'proof of concept' and take ideas forward ensuring they become implemented in practice. Support is needed to help staff adopt and adapt existing innovations or innovative practice so that they are applied in practice. By deliberately harnessing the unique knowledge, desire to improve and innovative spirit of the staff within CCC, we can create even more opportunities to make a difference, thereby improving the choices, experience and outcomes for our patients.



Appendix I – Case Studies

Clatterbridge in the Community

Summary

Clatterbridge in the Community (CiC) was one of the first cancer centres in the UK to provide at-home cancer treatments to patients. Today, CiC delivers 20 different types of treatment across Merseyside, Cheshire, Lancashire and North Wales, providing over 500 treatments a month.



The Challenge

Before CiC was introduced, patients would have to travel (in some cases long distances) to the hospital and spend time waiting in clinic for the appointment to receive treatment. This was challenging for patients with mobility issues, patients who also had caring responsibilities of their own or having to take time off work to attend appointments.

Actions Taken

The first treatments delivered were subcutaneous Herceptin injections to breast cancer patients in their homes. The service quickly expanded to deliver immunotherapy at home in 2016, followed by the establishment of a model for SACT delivery in the workplace in 2018, which was the first of its kind in the UK. In response to COVID, the compassionate-use programme to support patients was expanded during 2020. In March 2022, a second hub was opened in Aintree to give equity of service patients in North Merseyside, reaching patients as far as Southport. This second hub provides more efficiency with travel, therefore enabling the treatment of more patients in the North Merseyside region.

Impact

This has resulted in increased capacity within clinics, saving over 420 hours of chair and appointment time from clinical hubs and phlebotomy.

Testimonials

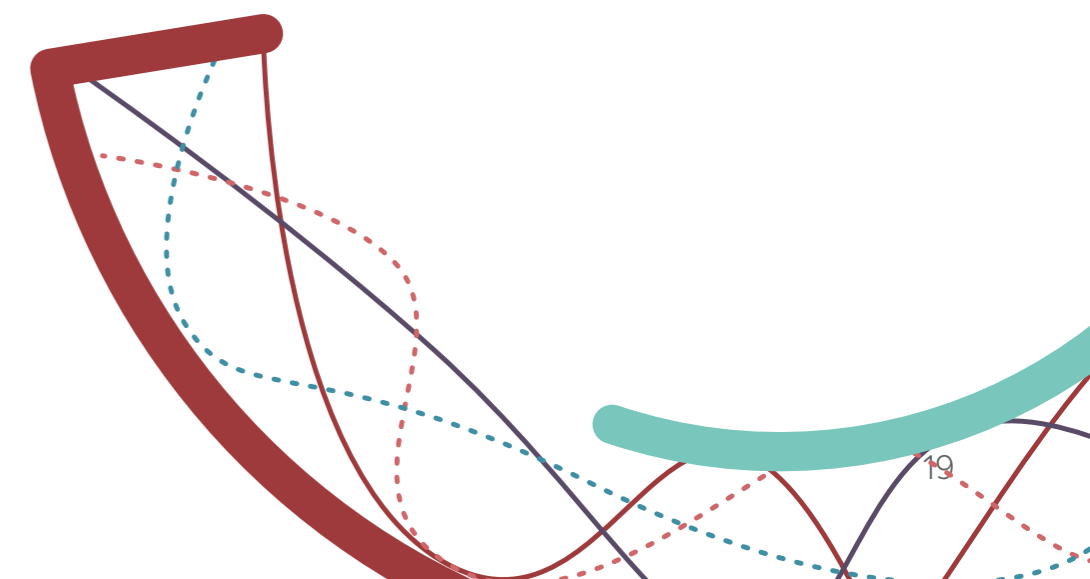
CiC received 100% patient satisfaction in the most recent patient survey.

Next Steps

CiC plans to continue expansion both in treatments offered and areas covered. This includes plans for a third site based in Halton and exploring CiC for the HM Prison Service.

About Clatterbridge in the Community

It was launched in 2015 as an 18 month pilot on the Wirral, to allow patients to receive a safe and efficient service in their own homes to improve cancer patient experience by offering independence of choice over treatment settings. The service has been widely recognised, winning The Service Delivery Award in 2016 at the Health Collaboration Awards; being a finalist in the RCNi Cancer Nursing Award in 2019 and also winning the Nursing Times Awards in the same year.



Enhanced Supportive Care Service

Summary

The Enhanced Supportive Care (ESC) service pilot demonstrated significantly improved treatment outcomes and quality of life of patients, with reduced attendance or admissions to hospital. The ESC service saw 775 patients during the pilot, saving £2.4m from avoided hospital admissions and reduced length of stay.

About the ESC Service

In 2016, the NHS England Commissioning for Quality and Innovation (CQUIN) scheme focused on providing earlier supportive care for people with treatable but not curable cancer. The service was offered to everyone with a new diagnosis of incurable cancer. The ESC service offers timely holistic assessment, symptom management, psychological support and care for families of patients undergoing cancer treatment.

The Challenge

Prior to the introduction of the ESC service, patients normally received palliative care expertise covering advice and support for nutrition, wellbeing, pain management at a later stage in their treatment. This was possibly due to the perception that palliative care was associated with end of life care.

Actions Taken

ESC was first established in 2016 in response to the national objectives of the CQUIN. Regular measurements of quality of life were instigated using the Integrated Palliative Care Outcome Scale (IPOS). ESC initially started with upper GI, CNS, melanoma, and head and neck patients. Now patients across all tumour groups have access to ESC, with a gradual increase of clinics over the past five years. Positive patient feedback has driven the growth of the service, leading to increased engagement from consultant groups and support from the SRGs. In response to COVID, telephone-based consultations and an ambulatory-based care model was developed in 2020, further supporting reduced hospital admissions.

Impact

Over 2,500 outpatients have received ESC since its launch, with patients reporting improved quality of life and a reduction in pain and symptoms. In 2019/2020 over 450 non-elective hospital admissions were avoided, with a reduction in length of stay by over 1,110 bed days. This led to a total cost saving of £2.2M for the NHS in that one year alone. Chemo care was reduced by 31% for HPB patients receiving ESC, with no negative impact to survival. ESC has expanded to 22 centres in the UK.

A multicentre study in 2021-22 led by CCC demonstrated for over 4,500 patients seen, there was universal improvement of quality of life. This resulted in the prevention of 576 A&E attendances, and a reduction of 4,578 bed days in length of stay, leading to cost savings totalling £8.4M.

Testimonials

“Without Dr Monnery and his team, I’d still be on the sofa, in pain. They’ve also been a huge support to Julie, who has become my full time carer. If she needs to talk or some advice, Dr Monnery, Justine and the rest of the team are always there. The care I’ve receive right through Clatterbridge Cancer Centre has been absolutely amazing and I’m very grateful to them all”.

Brian McKenna – CCC Patient, [read the full story here.](#)

Next Steps

The ESC service plans to continue expansion and improve equity of service across the region, with multi-hub clinics planned – a clinic has already opened on the Wirral and Aintree currently in planning. Our ESC team is also working with the UK Association for Supportive Care in CANCER (UKASCC) to develop a service specification for ESC to enable NHS England to commission these services across England.



The Biology of Dying

Summary

“How long have I got?” is a question oncologists and palliative medicine clinicians are commonly asked. It is often a difficult question to answer. Not only is it difficult to predict if people are in the last months of life, it is difficult to recognise when people are actively dying (in the last days).

Early recognition that a person may be dying underpins all the priorities for improving people’s experience of care in the last days and hours of life. It enables an individual care plan to be developed, appropriate discussions with the patient and families to take place, treatment decisions to be made and the needs of the family to be considered.

No diagnostic test is currently available and we do not know how people die from cancer. Knowing when a person is dying is crucial to provide the best care possible.

The Challenge

There are no objective tests recognising when people are dying and no prognostic tools that predict within the last two weeks of life. The current prognostic standard to predict dying is the best guess by at least two members of the Multi-Disciplinary Team. Doctors’ predictions are often inaccurate and over-optimistic. A recent survey of palliative medicine consultants in the North West reported significant difficulty in recognising the last two weeks (78%) and last days of life (47%). Validated prognostic tools have been developed, such as: PPI, PaP Score and PiPS. However, they are not objective, do not predict closer than 2 weeks and are not used in clinical practice.

Actions Taken

Our previous work in patients with lung cancer has enabled us to identify metabolites (chemicals) that change in the last weeks of a patient’s life. This work has enabled us to identify pathways altered during the dying process. This data has allowed us to develop a model or ‘test’ predicting the last weeks and months of life. A patent application for this was submitted in March 2022. This is the only test predicting dying within the last two weeks of life.

Impact

There is currently no diagnostic test available for prediction of death in terminally ill cancer patients. WHO statistics for 2020 show 9.9 million people died worldwide from cancer, 1.8 million from lung cancer alone (35,100 in the UK in 2018). For a large percentage of these patients in first world health care systems, there would be multiple tests per patient over time to inform patient management. It is anticipated a potential test would be available to all patients regardless of their setting (hospital, hospice, nursing home, home).

Next Steps

The model is now being developed into a commercially viable test that can be readily available to hospital laboratories. Funding is being sourced to enable this product to be brought to market.





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