

G-Cloud 15

Service

Definition

***Luscii: System-wide Remote Patient
Monitoring and Condition Management
Platform***

**Luscii Healthtech B.V.
Lot 2b Software as a Service (SaaS)**

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1. Introduction

Company Overview

Luscii Healthtech B.V. (Luscii) is a remote patient monitoring and virtual ward platform enabling safe, proactive care at home across more than 100 condition-specific pathways. Founded in the Netherlands, Luscii is deployed in around 80% of Dutch hospitals and is now widely adopted across the UK, supporting multiple ICSs and virtual wards. In April 2024, Luscii joined the Omron Healthcare family, strengthening our device ecosystem and R&D while maintaining a UK-focused, DTAC-compliant Class IIa software platform. Independent evaluations have evidenced significant reductions in unplanned admissions and secondary care costs, aligning to the NHS shift from hospital to community and “analogue to digital” set out in the 10-Year Health Plan and the 2025/26 planning guidance.

Luscii only provides Remote Patient Monitoring and Condition Management, so the company and product name are used interchangeably within this document.

Value Proposition

Luscii is the system-wide platform that supports healthcare at home and aligns with the NHS vision to expand digital services. It aims to provide a simple tool and solution to enhance patient independence, save time and money by serving more patients with the same healthcare providers, reduce unplanned hospital admissions and appointments, enable early discharge, and improve the care experience and quality of life for patients. Healthcare services in developed countries have been facing ongoing challenges due to population growth, especially among the elderly who often have chronic conditions requiring costly and resource-intensive care. However, healthcare budgets and staffing have not kept up with this demand. The COVID-19 pandemic has further exacerbated these issues, affecting the NHS's ability to cope in the long term.

Luscii Remote Patient Monitoring and Condition Management Platform can provide the solution.

System-wide;

Luscii covers the whole region, the whole patient-journey and all conditions, offering a continuum of care to your patients and easy collaboration and efficiencies within your ICS, including a system-wide licensing approach.

- With a foundation in community care, Luscii prioritises patient care networks. We facilitate collaboration among various healthcare providers to streamline patient monitoring across organisations.
- Our support extends to 150 diverse care pathways, encompassing a comprehensive ICS-wide structure that addresses various conditions, rather than

focusing on individual pathways

- Our smart protocols enable seamless transitions between different care levels, with distinct protocols in place that cater to varying levels of acuity. These protocols range from higher acuity virtual ward settings to intensive monitoring with medication titration, stable monitoring for long-term condition management, and self-management focused on empowering patients through education.

Expert Partners;

Over the last decade, Luscii has implemented more than 450 remote monitoring and virtual wards solutions in 11 countries (including the UK). We know what we are doing. Our learnings are embedded into our product and shared between all our partners

- We specialise in helping clinicians and patients embrace our technology, resulting in high usage and compliance, even in areas with high inequalities
- Luscii teaches clinicians how to build their own pathways (either from scratch or based upon the 150 core care pathways we have in our library) making it easy to build and implement exactly the pathways you need
- As expert partners, we continually learn and share our knowledge through the Luscii Academy and partnership events, to better realise our purpose.

Intuitive and Inclusive;

Luscii is the most easy-to-use and accessible platform there is, giving healthcare providers and all patients the confidence to use it.

- We have collaborated with Apple and our customers to create a user-friendly experience. Luscii is the only remote monitoring platform that works with the accessibility features of both iOS and Android
- In addition, we have built the platform with focus on interoperability to allow easy and seamless integration with your core systems.

Impact;

Luscii has successfully implemented over 350 remote monitoring and virtual wards solutions in 11 countries, including the UK, leading to significant improvements for patients and clinicians. These outcomes are supported by more than 30 scientific studies.

- Within the NHS, our COPD programme in Sunderland reduced emergency admissions by 58% and primary care usage by 34%, while in Airedale Digital Hub, 98% of patients remained in place of residence, 88% of assessments required no further referral
- Additionally, our Heart Failure programme in Imperial resulted in a 65% decrease in A&E visits and an 81% reduction in unplanned admissions, with Net hospital cost saving of £398,653 (73 patients in 90 days)
- Luscii has freed up over 400 years of care through remote monitoring and process efficiencies.

What the Service Provides

The service allows clinical teams to provide more effective support to patients whilst the patient is at home. This can greatly reduce the number of physical appointments and visits required and improve the patients' quality of life. The software allows patients to submit vital sign readings and other relevant information to the cloud where it can be accessed by the clinical team. The system prioritises information presented via flexible alerts and allows the clinician to contact the patient when needed via in-app messages or video calls.

Social Value

Luscii will deliver Social Value in line with the PPN 002 model, focusing on relevant commitments, standard reporting metrics and a clear, time-bound plan (including providing the required roles baseline where fair work/employment outcomes are selected).

Build an NHS fit for the future

Aligned to the NHS direction to reduce demand and make full use of digital tools, our virtual wards and remote monitoring cut avoidable travel and face-to-face appointments, supporting productivity and improved access while reducing environmental impact. A Luscii digital COPD hub in Airedale saw 98% of its patients remain in their place of residence, reducing the number of patients making the journey to hospitals or other care settings. We are also supporting evaluations run by our customers which are explicitly looking at health inequalities and net zero and tracking that for an acute virtual ward.

Make Britain a clean energy superpower

We are committed to Net Zero for scopes 1–2 by 2040 and will minimise cloud and logistics impacts through efficient use and device reuse/recycling. We will report annual reductions arising from the contract in carbon (tCO₂e), water (litres) and waste to landfill (tonnes) using the model's standard metrics, and we will influence our staff, suppliers and communities to support climate and nature protection through engagement, training and collaboration. We also have multiple staff policies to reduce our carbon emissions as well as dedicated roles that focus on our environmental impact. Part of this will include tracking air vs rail travel of our employees.

Breakdown barriers to opportunity

We promote fair work and wellbeing by paying at least the National Living Wage on contract roles, maximising permanent contracts, and offering flexible, remote-first working. We will track and report the number of people on permanent contracts and those paid above the National Living Wage, and the hours spent setting up and delivering staff wellbeing initiatives (standard metrics).

Our app facilitates remote monitoring of patients who otherwise may not normally engage with their healthcare and represents a forward thinking, digitally enabled way of managing patients. Upon contract award, we are happy to discuss what social value initiatives we can offer.

Kickstart Economic Growth

To kickstart economic growth to strengthen local economies and inclusion, we will open subcontracting to diverse suppliers and report direct spend with start-ups/SMEs/VCSEs; we will co-design and deliver with NHS anchor institutions and community partners, reporting engagement activities; and we will create employment and training opportunities for under-represented groups (e.g., apprenticeships), reporting standard metrics for roles and apprenticeships created under the contract.

More information can be found at Luscii's Social Value page: <https://luscii.co.uk/social-value>

Overview of the G-Cloud Service

Luscii Remote Patient Monitoring and Condition Management allows you to keep a virtual eye on your patients. It gives patients improved confidence and expertise in understanding and managing their own condition and allows you to provide ongoing care and better outcomes in a cost-effective manner that has not been previously possible.

With Luscii, patients will be able to measure vital signs at home simply and easily and submit symptom questionnaires and other information specified by you, the healthcare professional. Locally specified educational content can also be provided to encourage and support self-management. Automatic alerts will provide a warning if the patient's condition deteriorates and direct contact can then be made if required via messaging or video calling.

Patients access Luscii via an app on a phone or tablet (iOS or Android). The app has been designed to be simple, intuitive and easy to use. It can leverage the accessibility features built into the phone or tablet so is ideally suited to supporting even the most elderly patients. In fact, our oldest user was almost 100.

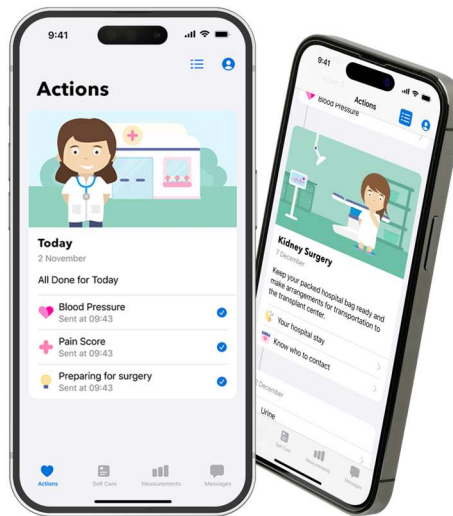


Figure 1: Screenshots of the Luscii patient app on mobile device showing simple action steps and preparation for kidney surgery.



Figure 2: Screenshot of a woman using the Luscii patient app showing actions steps for the day

Clinical teams have access to the Luscii clinical portal through which they can complete any necessary actions including; adding new patients, setting or adjusting measurement frequencies and thresholds, viewing and processing measurement alerts and trends and when necessary, communicating with the patient. The clinical portal is available via a web browser or integration with the local EHR system, video calling can be done through an iOS app.

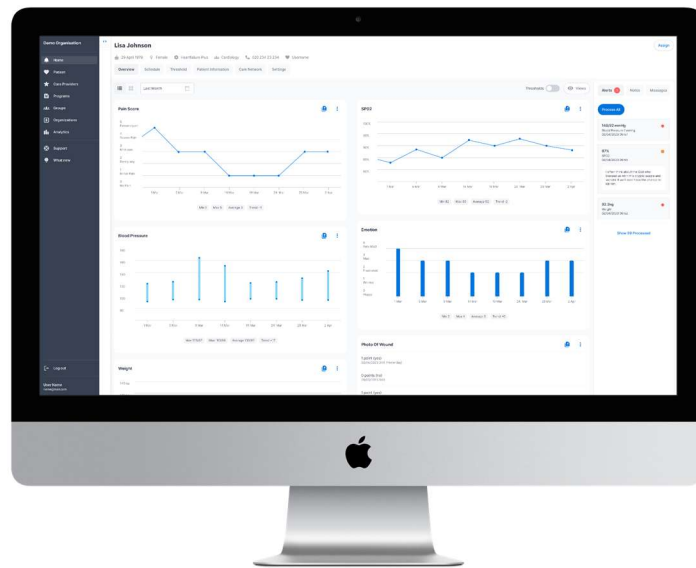


Figure 3: A picture of the Luscii clinical portal patient overview on a Dashboard

Multiple diverse patient pathways can be supported in a comprehensive ICS-wide structure that addresses various conditions, rather than focusing on individual pathways.

The solution initially started by supporting patients with Chronic obstructive pulmonary disease (COPD) and Heart Failure but since then multiple additional pathways have been added as described below. Luscii is modular and highly flexible. This means it can be configured to support specific local pathways and workflows including patient groups with different severity levels or comorbidities.

Luscii currently supports over 150 diverse pathways, a full list of which can be found in our library (<https://luscii.co.uk/library>) which are being added to regularly as different hospital teams and Luscii design new pathways.

Some Luscii Specialties:

- Respiratory (COPD, ARI, Asthma)
- Cardiology (Chronic Heart failure, Atrial Fibrillation)
- Gastroenterology (IBD: Crohn's, UC)
- Paediatrics (GOSH frail babies, respiratory in RWT)
- Frailty
- Gynaecology: (Gestational Hypertension, Menopause, Preeclampsia, HELPP Syndrome)
- Internal medicine: Diabetes, Gestational diabetes, Hypertension, BP@Home
- Neurology: Polyneuropathy, Headache Syndrome
- Oncology: Chemotherapy, Lung Cancer
- Ophthalmology: Macular degeneration
- Orthopaedics: Back, Hip, Knee, Pre & Post Rehabilitation

Primary Care

- Multi-morbidities
- COPD
- Hypertension

Luscii not only supports a diverse range of conditions but supports the whole patient journey and offers a system-wide approach for the ICS.

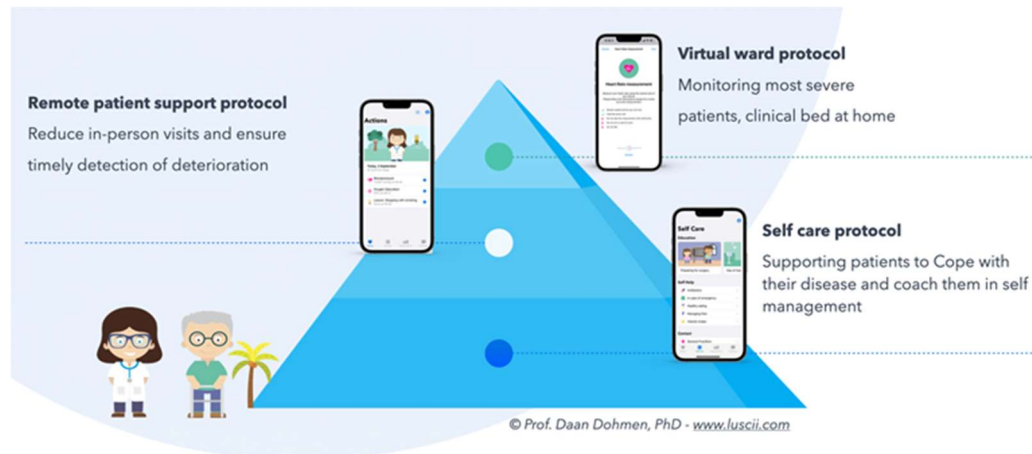


Figure 4: Luscii pyramid showing that different protocols can be supported ranging from virtual ward to remote patient support to self-care.

The vital signs data and other information required to understand the patient's evolving condition and provide the required levels of care, can be captured in a variety of ways:

- Luscii has built direct Bluetooth integrations with blood pressure monitors, scales and spirometers where data can be captured automatically from the device into the Luscii platform.
- Manual entry options exist for all measurements, so non-Bluetooth connected devices can be used when required enabling BYOD.
- Luscii also integrates into Apple's HealthKit and Google Fit as aggregators. So, if the patient grants permission, Luscii can gather relevant data from devices that can write to these portals.
- Clinically validated symptom questionnaires can be used.

Luscii currently supports over 1700 different measurements which are used in one of our existing 150 care pathways. A measurement is basically any type of information that you would like to retrieve from a patient, this can be a vital sign parameter (using a connected device), a (validated) questionnaire or another (simple) question, such as what is your temperature and/or pain score. Please contact us for an up-to-date overview of measurements supported, but please find some examples below:

- Examples of vital sign measurements: blood pressure, respiration rate, oxygen

saturation, heart rate, ECG, AF detection, weight, spirometry, blood sugar, temperature, steps, NEWS2

- Examples of clinical questionnaires: CAT, CCQ, MRC, GAD-7, PHQ-9, PAM-13
- Examples of symptoms and other measurements: daily activity, pain scores, medication adherence, shortness of breath, muscle ache

With our no-code environment these measurements can be used to amend one of our existing care pathways, for the need of the organisation and/or to create a new pathway. New measurements are added on a weekly basis, so whenever a certain measurement is missing this will be added in a matter of weeks in the no-code environment to create new pathways.

Patient readings and feedback are then used to generate alerts for clinicians as described in more detail below. Patients can add an additional comment to any reading or questionnaire response and any such comment will be flagged to the clinical team even if the associated reading is in range and does not generate an alert.

This patient information then flows into the clinical dashboard to allow the healthcare professionals to analyse and act when necessary. Alarms are automatically generated for readings that are out of range. The alarm triggers can be set at a condition specific level and can also be set at cohort or individual level if required. Calculations can also be created (e.g. generate an amber alert if temperature > 37.5 AND oxygen saturation < 95% - follow up with educational material).

The dashboard also provides many other valuable tools, including; graphs of patients' vital sign trends over time, a full audit trail of all alerts, who processed them and the actions taken, and the ability for a clinician to forward an alert system-wide. Some aspects of workflow and alert processing can also be automated or semi-automated if required. For example, patients can automatically be moved from one group to another based on previous readings (Step up/Step down).

The Luscii product also includes embedded patient communication tools. Clinicians can send in app messages to patients which can be automated, individually written or based on templates to speed up message creation. In app video calling is also possible. All of these communication channels provide two-way messaging. We can also include a 'please call me back' button for patients to request a non-urgent call back from the clinical team.

Associated Services

We provide a support function accessible to both patients and healthcare professionals during office hours which is included in our licence. For new customers, we offer a proven implementation process to ensure successful integration, augmenting the clinical pathways with digital technology.

Implementation is charged as a one-off up-front flat fee per department and includes all activities necessary to go live with the service, including; care pathway re-design and optimisation, creation of the specific customer requirements within the Luscii platform, full training, including on-site training when required and full user guide documentation. The implementation charges are included in Luscii's Pricing Summary document.

While the technological aspects of remote patient monitoring are reliable and straightforward, we believe it is crucial to collaborate closely with frontline staff who will be delivering digitally enabled care pathways, giving them the opportunity to understand and fully utilise the potential of the new tools.

Luscii works in partnership to co-design and enhance local capabilities through intelligent deployment of Remote Patient Monitoring.

Luscii also teaches clinicians how to build their own pathways (either from scratch or based upon the 150 core care pathways we have in our library) making it easy to build and implement exactly the pathways you need.

Our implementation journey has been refined and optimised through numerous deployments in various countries, providing clinical and operational teams with proformas and best practice documents for reference.

2. Data Protection

Information Assurance

Luscii is ISO 27001 certified and passed the Cyber Essentials assessment in May 2025.

Luscii is also fully compliant with the NHS' Data Security and Protection Toolkit (DSPT). An audit is performed twice a year by an external consultant to ensure policies and processes are well implemented and followed.

Luscii has passed DTAC.

Data Back-Up and Restoration

Data is stored on Amazon AWS databases located in the UK and Germany. Storage on these servers is encrypted to protect data at rest. The databases make use of redundancy to ensure availability and are automatically backed up. Each day a full snapshot is backed up and each 5 minutes a transaction log, meaning at most 5 minutes of data is lost after a catastrophic event.

Business continuity statement/plan

Luscii maintains a full and regularly reviewed and tested business continuity plan. The

plan is defined from a statement of our core task - the provision of software that allows patients to communicate health related data to healthcare professionals and within this core task certain business processes are identified as 'vital'. The business continuity plan is restricted in scope to just these vital processes. The plan, if required, is enacted by a core team including the CEO, CTO and heads of operations, marketing and compliance. At a high level the core business areas covered are; failure of the IT infrastructure, failure of the product, unavailability of a significant number of employees, failure of a critical external supplier (of which there is only one, our cloud hosting partner, AWS) and damage to reputation. The continuity plan includes methods to maintain operations including identifying alternative delivery methods or relocation of some activities. The critical down time for any vital process is defined as one hour. A more detailed plan can be provided to the buyer.

Privacy by Design

Luscii is fully GDPR compliant and adopts privacy by design principles in all aspects of service development and evolution. The nature of the services delivered requires that Luscii store and process highly sensitive 'patient identifiable data' (PID) and all processes have been designed and built with appropriate safeguards for those activities. Informed consent is obtained from each patient prior to onboarding.

Data is kept by Luscii for as long as is necessary to provide the service. If that is no longer applicable, data will be kept for a maximum of two further years. Data deletion is done during annual clean-up runs and can always be deleted on demand at a user's request. Backups are untouched during the data deletion procedure and are automatically deleted after the backup retention period of 30 days. This means that data deletion is impossible to reverse after 30 days.

Luscii uses role-based access to ensure access is restricted to those with appropriate authorisation and account access is protected by multi-factor authentication.

3. Using the service

Ordering and Invoicing

Buyers can contact Luscii to discuss their specific requirements around the local care pathways to be digitally enabled with Luscii and any specific features required, such as frequency of measurements or alert thresholds. Luscii can then confirm prices based on our G-Cloud 15 Pricing Summary document. Once the service delivery schedule has been agreed this will form the basis of the Call-off Contract which Luscii can help to draft.

Invoicing is annually in advance, payable on 30-day terms.

Availability of Trial Service

Luscii Remote Patient Monitoring can only be meaningfully and effectively deployed after completion of an Implementation Project. This takes time and effort from both Luscii and

the customer and so it is not possible to offer a trial service. However, prospective users can access our Luscii library (<https://luscii.co.uk/library>) to discover what condition programmes are currently available, who created them and request a demo to get the process started.

On-Boarding, Off-Boarding, Service Migration, Scope etc.

Luscii works with each customer to scope and design the fine details of the service and this includes working jointly to design the most effective on-boarding, off-boarding and related processes for the customer's specific local requirements. These are documented and delivered in the Implementation plan which is co-authored with the customer during the Implementation journey. The finer details of this journey are outlined below, but the process is handled by a range of roles within the Luscii team, including a dedicated Account Director and Impact Specialist. In most cases the team will also organise a face to face visit to the customer to support with set up. We also fully support customers through any required off-boarding processes to facilitate clinically safe removal of patients and access to any requested data.

Training

Luscii's service has been designed to be intuitive and easy to use and so training requirements are modest. Full training is provided as part of the Implementation Journey. This is normally provided on site but can be provided virtually if preferred. A user guide, digital training programme, multiple videos and proformas will be provided for the customer too. The support team is available to answer any queries that emerge during operation.

Implementation Plan

Luscii will work with each customer to design and deliver a bespoke implementation plan by working together through an 'Implementation Journey.' A Luscii Implementation Specialist will be allocated to lead this process. He or she will work closely with the customer to understand the unique local requirements and expectations. Using their knowledge of Luscii's internal capabilities and flexibility they will then design a detailed implementation plan, which will be agreed with the customer and then delivered.

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OUR IMPLEMENTATION TEAM IS AT YOUR SERVICE

Luscii live within 8 weeks

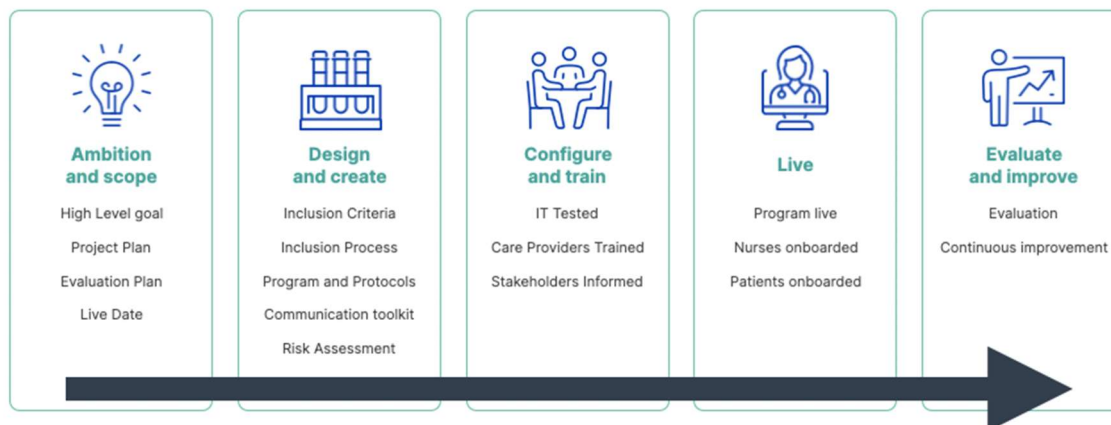


Figure 5: Luscii implementation journey

This plan will include all necessary training and fully equip and support the customer to use the service. This will include setting up and onboarding new patients, managing the patients via the service and, where necessary changing the patients' configuration and off-boarding patients.

All implementation journeys are unique but commonly include two or three service development workshop sessions followed by a final deployment and training session. These are normally delivered face to face but can be delivered virtually if required. A typical implementation journey takes 4 to 8 weeks from start to finish. This timescale is normally driven by the availability of the customer team and Luscii can complete implementations more quickly if required. Recently, to support an urgent customer request, Luscii completed a deployment for a newly developed pathway around Monkeypox in just over a week.

Service Management

The system is in active daily use by many thousands of people, and a full suite of appropriate processes is deployed and utilised to ensure continued availability and security. Luscii is ISO 27001 accredited, cyber essentials certified and NHS DSPT compliant. Pen testing is undertaken on a regular basis using external security specialists. The most recent such audit was conducted in January 2025 . Load testing is conducted regularly and our AWS contract gives access to effectively immediate capacity increases across physically redundant systems.

Within this rapidly scalable and redundant environment we always maintain sufficient excess capacity to cope with any spike in demand. During the peak of the coronavirus crisis, we experienced several days in which 10,000 new patients self-onboarded to the service. Even during those exceptional peak events we only ever reached 15% of available

capacity.

Service Constraints

Patients access the service via either an Android or iOS device (phone or tablet). Our policy is to always support the current and previous versions of each operating system. For Android, where users are sometimes slower to upgrade their software to newer versions, we typically support more historical versions. Clinicians access the service via either computer-based web access or through an EHR integration. Web based clinical access is supported on Chrome, Firefox or Internet Explorer 11 browsers. To initiate a video call to a patient the clinician must use an iOS device.

Service Levels

Luscii Remote Patient Monitoring is available on a 24/7 basis but it is not designed to provide urgent or critical care. Luscii therefore offers an appropriate uptime of 99,9%.

The support team is available, by phone or email, during office hours Monday to Friday. Response times are targeted within one hour but in reality are normally immediate.

Outage and Maintenance Management

Unplanned downtime is minimised by design with the system inherently robust. The databases make use of redundancy to ensure availability and are continuously monitored and automatically backed up. Planned downtime is minimal as the system is designed to allow updates and changes without the need for system downtime. Any planned downtime that is required is scheduled outside of working hours.

Financial Recompense Model for not Meeting Service Levels

As stated above Luscii's service is not designed for urgent or critical care and the uptime service level offered is appropriate to that at 99.9%. Reflecting our Dutch heritage and the norms in that market, we do not typically offer pre-agreed service credits as we believe it reflects an unhelpful mindset, specifically an expectation of failure. If required we will be happy to discuss and include a specific service credit model in a Call-off Contract.

4. Provision of the service

Customer Responsibilities

The customer is responsible for provision of network connectivity and appropriate hardware to allow the clinicians to access the service. The customer is also responsible for ensuring that the patient has an appropriate phone or table to access the service and the customer is responsible for providing any devices required by the patient to measure vital signs. The customer is responsible for identifying appropriate patients and is responsible for all clinical decisions.

Technical Requirements and Client-Side Requirements

The clinical portal, which is the access point for healthcare professionals and other customer employees, can be joined from almost any internet accessible environment. For computer or laptop access we support Chrome, Firefox and Internet Explorer 11 browsers.

Patients access the service on Android or iOS phones or tablets. We always support the current and previous versions of each operating system.

Development life cycle of the solution

Luscii uses Agile software development adopting the principle of continuous flow and with the key metric being cycle time. The workflow stages are:

Backlog, Ready for development, In development, Ready for review, In code review, Ready for Test, In test, Ready for release.

After-sales Account Management

All customers are allocated an account manager to lead and co-ordinate the overall long-term relationship between the customer and Luscii. They are supported by the full Luscii team within which key roles are;

- Medical Mind, who brings medical expertise to new deployments and aids in designing the pathway, protocols and instruments.
- The Implementation Specialist, who plans and delivers the initial implementation phase and further implementation projects as the service evolves over time to meet changing customer needs and ambitions.
- The Impact Specialist, who coordinates regular service reviews. The agenda for the service reviews is agreed with the customer on an ongoing basis to reflect the customer's current priorities.

Termination Process

If a customer chooses not to renew their contract, they can easily cancel patient accounts as part of a migration away from digital care or towards another supplier. This process is entirely within their control. This is because removing patients from the service when they either recover, move away from the area or, sadly, pass away is a common occurrence so the customer will be familiar with the process from day 1. The customer has all the data available for download and can move this data if required.

Luscii will always be fully supportive in this process, helping the patients and healthcare professionals alike in the process.

There are no additional costs associated with this process if conducted at a scheduled contract termination date. We respect the G-Cloud no fault termination clause, but we expect customers to honour the contracts signed unless there are genuine extenuating circumstances, in which case we will always be sympathetic and look to agree a mutually acceptable approach on a case-by-case basis.

5. Our experience

Introduction and case studies

Luscii's heritage has given us a perspective and approach which we believe is very valuable in delivering remote patient care. Our focus has always been on the needs of both patients and healthcare professionals, so ease of use and accessibility are embedded in everything we have built and everything we do. Luscii is a people business as much as a technology business, we work closely with our customers to embed technology into redesigned care pathways and workflows in order to maximise the benefits delivered for all stakeholders.

We recognised very early that access to modern technology and the ability to use that technology in full, not just as a means of accessing care, could be key enablers in enhancing inclusion and reducing social isolation. In many cases we provided patients with their first iPads to deliver care but also helped them understand how those devices could be used more broadly. For example, we launched a weekly "virtual bingo" session which became so popular that we were visited by Queen Máxima of The Netherlands:



Figure 6: Image of 'virtual bingo' session in progress which we started right after the launch of iPad over a decade ago to engage patients with digital technology. Her Majesty Queen Máxima of the Netherlands came to our office to learn more about these digital services.

Elderly and otherwise isolated people now use Luscii with ease - our oldest patient is almost 100 years old.

The combination of different measurements, questionnaires, alert thresholds and response schedules described earlier in this document allows for the creation and support of an almost limitless number of condition specific and/or locally tailored digitally enabled care pathways. The case studies shown below cover COPD and frailty. A wide variety of other conditions such as oncology, hypertension and heart failure can be supported too and our flexibility enables the easy creation of specific new digital pathways as illustrated in this video: <https://vimeo.com/400383753>. In many cases multiple conditions are deployed within the same healthcare organisation.

Case study 1: Sunderland, UK



Impact Summary:

- 58% reduction respiratory emergency admissions
- 34% reduction in primary care usage
- 635% improved ROI

The All Together Better Alliance (ATBA) in Sunderland is a group of local organisations that have agreed to work together to support the needs of all local citizens. It includes Sunderland City Council, the Clinical Commissioning Group (CCG), South Tyneside and Sunderland NHS Foundation Trust and the Sunderland General Practice Alliance.

Within that broader structure a team called "Recovery at Home" was created to work on a 24/7 basis to respond quickly and provide support to people during times of illness or an unexpected change in condition that could develop into a crisis. A key objective of the team is to reduce hospital stays. This means both enabling earlier discharge and also preventing some admissions. The team was looking for a remote health monitoring and communication solution to further improve the effectiveness of their local care pathways and to allow the team to support more patients without increasing resources and selected Luscii.

Sunderland has a relatively high incidence of COPD and so early conversations rapidly began to focus on how Luscii could support that cohort. Luscii works with COPD patients in many places but in Sunderland there were two specific local requirements that had to be reflected in the solution.

First, clinical capability. As the Recovery at Home team already supported local COPD patients with physical visits and other care, the local pathway resulted in hospitals discharging some patients who are still extremely unwell, patients who in most places in the Netherlands and also elsewhere in the UK would have remained in hospital. The local team needed us to create a protocol that could support that level of severity.

Leveraging Luscii's modular structure meant this was a simple task. A 'traditional' remote monitoring protocol for COPD includes a symptom questionnaire and measurement of blood oxygen saturation. To this, for Sunderland, we simply added measurement of blood pressure and temperature to provide the richer, more detailed clinical insight required to support these patients at home. This, combined with access to Luscii's video calling, gave the Recovery at Home team the remote monitoring service they needed.

Second, social inclusion criteria. Local analysis had shown that hospital costs of COPD care had been growing rapidly and that growth was driven primarily by patients in the lower quartile of the socio-economic spectrum. As Sunderland overall is one of the poorest areas of the UK, this meant the biggest cost saving could be obtained by supporting some of the very poorest people in the country, people who almost certainly do not have access to a smartphone or tablet. The GP who runs the Sunderland General Practice Alliance, encouraged in part by Luscii's Dutch 'virtual bingo' described above, saw an opportunity to improve social inclusion as well as improve COPD outcomes and reduce costs. They created a business case justifying the provision of iPads with 4G connectivity to this cohort. Luscii, as one of the very few 'Apple Mobility Partners' in the UK, was able to work seamlessly within this environment, the business case was supported by the CCG and the first patients went live on the system in February 2020.

The initial plan in Sunderland was to scale to ~ 50 patients by summer 2020 prior to anticipated roll out to more patients and other conditions. The local response to coronavirus accelerated those plans. Luscii responded rapidly to the team's request for additional protocols to support higher numbers of less severely ill COPD patients and also to include relevant metrics for Covid-19 symptoms. These protocols are live and Luscii is being rolled out to several hundred additional patients. The Sunderland deployment is a featured example in NHSx's digital playbook.

Case Study 2: Maidstone and Tunbridge Wells NHS Trust



Impact Summary:

- £121,000+ cost savings (first 14 months)
- 95% patient satisfaction (good or very good)
- Over 380 bed days saved

Maidstone and Tunbridge Wells NHS Trust (MTW) serves a large and increasingly older population across Kent, where frailty represents a growing pressure on emergency and inpatient services. Frailty accounts for around a fifth of all NHS bed days nationally, with high levels of hospital usage that often could be avoided. MTW recognised that many frailty admissions, especially from care homes, could be better supported in the community with the right digital infrastructure.

Having already implemented several remote monitoring pathways with Luscii, MTW extended the partnership into frailty care in 2022. The virtual ward was developed in collaboration with the Home Treatment Service (HTS), combining Luscii's remote monitoring

platform with an acute-level virtual care model. The Luscii digital team worked closely with MTW's clinical and operational leads during implementation, using an established deployment method to support pathway design, clinical governance, IG alignment and training across both acute and community services.

The flexibility of the Luscii platform enabled MTW to build a bespoke frailty pathway accommodating cognitive variation, digital access needs and the dual step-up/step-down nature of acute frailty care. The model included condition-specific observations, symptom questions and tailored educational materials, while offering the clinical team full oversight of deterioration trends, escalation criteria and patient interaction workflows.

A central component of the service was the "Hospital in a Box" package, enabling patients to monitor key measurements from home or care homes using a tablet or their own device. This allowed real-time oversight of a cohort who would traditionally require close in-person monitoring, bringing acute-grade safety into community settings. Continuous virtual oversight, 24/7 alert response and daily remote consultations provided reassurance for patients and carers and enabled rapid intervention without hospital attendance.

The service rapidly transformed patient flow for frailty across the trust. MTW saw a marked reduction in avoidable ED attendances from care homes and a substantial fall in unnecessary admissions, supported by improved communication between the virtual ward, community teams and HTS. Earlier step-down of inpatients also decreased bed occupancy and length of stay, while ensuring continuity of acute-level care at home. Care homes reported greater confidence due to the combination of virtual escalation routes, clear guidance and closer joint working with the trust.

In recognition of the success of the implementation, MTW expanded the virtual hub structure to include a general manager, matron, ward manager and nursing team, creating a fully integrated acute–community frailty model. Alongside strong operational outcomes, patient experience improved significantly, with 95% rating the service positively and many reporting increased independence, enhanced wellbeing and reduced disruption to daily life.

The service delivered substantial efficiency benefits, including over 380 saved bed days and £121k in avoided costs, achieved in the first phase of deployment. MTW has since extended virtual care into additional pathways, such as surgical, respiratory and general practice, and aims to continue expanding its virtual capability across the system. As the Virtual Ward Hub Manager states, the ambition is for the model to act as a blueprint for other trusts seeking to modernise frailty care and deliver acute-level treatment safely at home.

Case Study 3: Airedale Digital Care Hub



Impact Summary:

- 98% of patients remained in place of residence
- 88% of assessments did not require onward referral
- 1.16% of consultations resulted in Ambulance

In June 2021 Airedale engaged Luscii to help them deliver a new digital health service, where people with long-term respiratory conditions across Bradford District and Craven are provided proactive support through Luscii's remote monitoring platform, transforming their care and reducing their need to access services. Led by the Digital Care Hub at Airedale Hospital, it is the largest of its kind across England.

The patients are supported by the MyCare24 remote monitoring service available 24 hours a day, staffed by clinicians. The service had a target of monitoring 6000 people with chronic obstructive pulmonary disease (COPD) within 2 years. This target was met within 1 year.

As part of the service, people receive an introductory call to set up the Luscii app on a smart device, enabling them to enter their oxygen saturations and heart rate from the pulse oximeter readings and to help them use various questionnaires, such as the 'Know Your Normal' tool. If needed, they identify those that may need additional support.

People using the app also benefit from a range of in-app resources such as educational material and an early messaging service, that in this instance can provide early warnings of changes in weather that can affect people with COPD.

70-year-old Bryan Bowman from Horton-in-Ribblesdale was a good athlete in his youth but as he got older suddenly began to realise that he couldn't walk, run or cycle like he used to. The former smoker and quarry worker found that as he reached his 50's, he couldn't manage everyday things, was gasping for breath and puffing and panting. He also had a serious accident, which means he now uses a three wheeled walker and suffers from spondylitis. He also had a cancer diagnosis in his back and so was forced into retirement because of his health problems.

Bryan was referred to the MyCare24 team and given the App which offers videos as well as 'Know Your Normal' – a simple tool helping people recognise the early signs of an

exacerbation and guidance on what to do.

By using the Luscii app, Bryan can self-manage most of his symptoms without needing to contact his GP. The Oximeter helps him control the speed of his walking depending on his readings and he now has an electric scooter and a disability car which has given him his life back.

Bryan says:

“The Luscii app is so helpful and easy to use, it brings my attention to my oxygen levels and it shows me where I am in life. I will go anywhere so long as my readings from the Oximeter are good and I feel good in myself. I can get out on my scooter with pride now to the local shops, I can pick up the shopping and do the cooking because I can get round the kitchen. I wouldn’t hesitate to recommend it to anyone – it’s been really reassuring. I couldn’t be without it.”

Karen Dawber, Senior Responsible Officer for the Act as One Respiratory Programme and Chief Nurse at Bradford Teaching Hospitals NHS Foundation Trust, said: “This is a significant milestone for our two year project and shows how far we have come since our first patient was offered this remote monitoring option last summer. Feedback from people using the app and those who care for them continues to be overwhelmingly positive and this is echoed by our own health and care professionals.

“As a result of the work we’re doing, we have been able to give people like Bryan the confidence to manage their own health. With health and care services experiencing a winter like no other, this undoubtedly helps reduce some of those pressures with people confidently being able to take control of their health, safe in the knowledge help is a phone call away.”

Clients/Partners

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