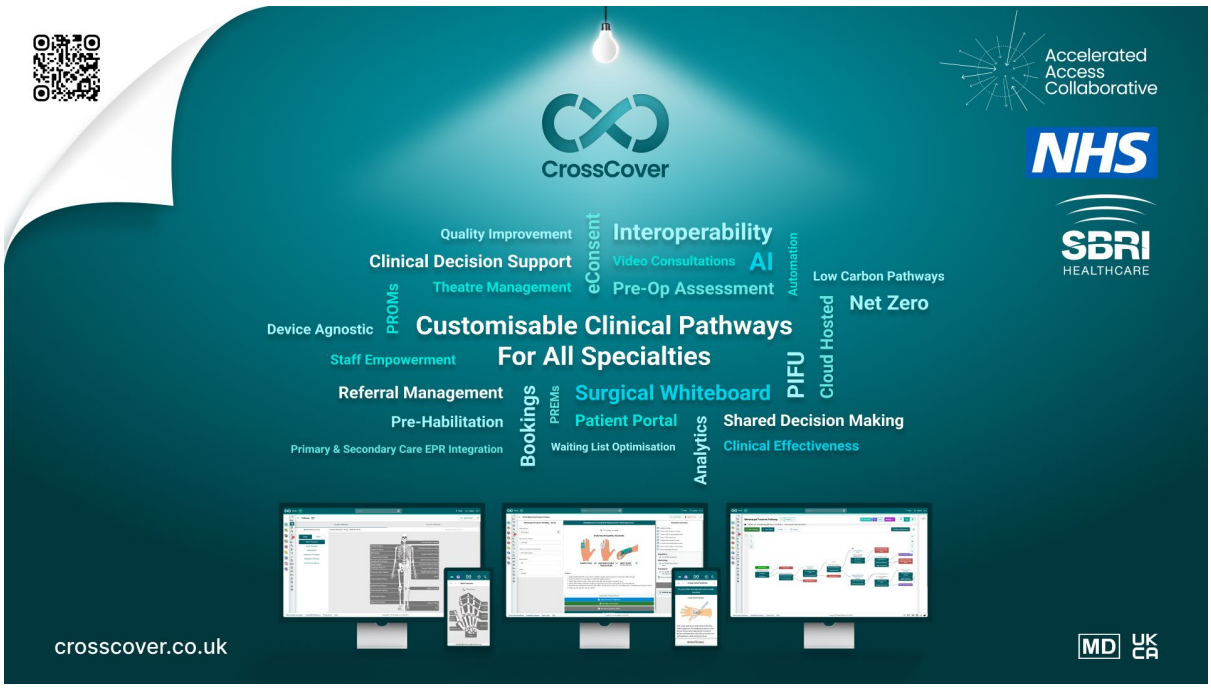
G-Cloud 15

Service Definition

CrossCover™

Primum Digital Limited

Lot 2 Cloud Software



This product, CrossCover™, is supported by SBRI Healthcare, an NHS England and NHS Improvement initiative, supported by the Academic Health Science Networks

Primum Digital Limited, Harscombe House, 1 Darklake View, Estover, Plymouth, PL6 7TL

Introduction

Company Overview

Primum Digital Limited was created by front line NHS Clinicians to help address the challenges faced by NHS staff. The company has grown to include expert cloud software engineers, UX/UI Designers, Medical Illustrators and Quality Assurance and Automation Engineers.

"Our aim is to enable our experts to **collaborate** at scale, **consolidate** optimal clinical decision support processes and **spread** this knowledge into the **core workflow** of all staff ensuring patients receive **the best treatment every time**"

Challenges we address

Bottlenecks in efficiency

Fast and effective decision making is the biggest bottleneck to primary and emergency care delivery

Operationalising Best Practice

Majority of decisions made by non-experts. Primary care, ED, MIU and Surgical Specialty staff have knowledge gaps

Variation in practice

Patients receiving variable treatment/ advice

Referrals to Secondary Care from Primary Care

Large number of potentially avoidable referrals and investigations

Follow-up appointments

Does the patient need follow-up?
If so, when, where and with whom?

The Solution

Cloud hosted

An application for every surgical specialty available on all devices

Force Multiplier

Maximise the influence of our experts on the patient journey through sharing their knowledge

Fully mapped processes

Step-by-step clinical decision support

Fully illustrated

Thousands of medical illustrations

Completely editable pathways

Every pathway is editable to local resources

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Value Proposition

CrossCover's value proposition is two-fold:

Firstly, improvement of the **efficiency of the clinical pathways** in Emergency Departments (EDs), Minor Injury Units (MIUs), Urgent Care Centres and Primary Care allowing patients to receive appropriate and more timely medical intervention leading to savings in time and costs. This is achieved by supporting staff to make the best decisions at every point in the patient journey.

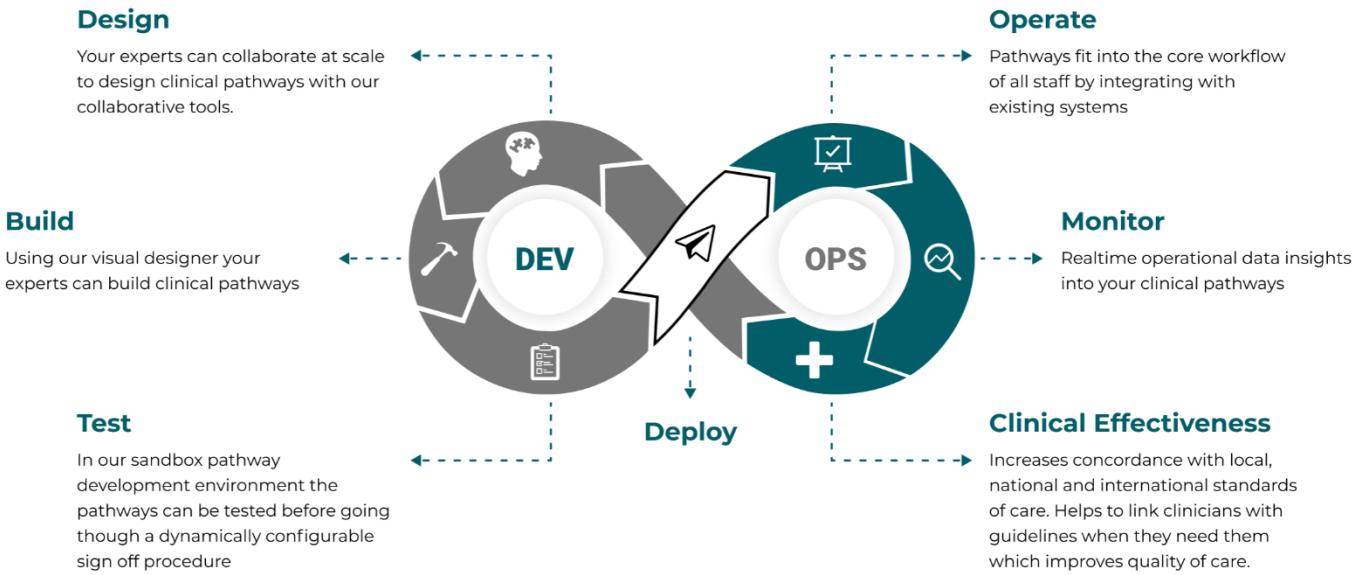
Secondly, the improvement of the delivery of the pathway and associated processes has potential for improved patient outcomes by improving the **quality** of medical management.

A Health Economic Study performed by the University of East Anglia in 2021 showed average cost savings of £100 per patient who went through an optimised pathway of care.

What the Service Provides

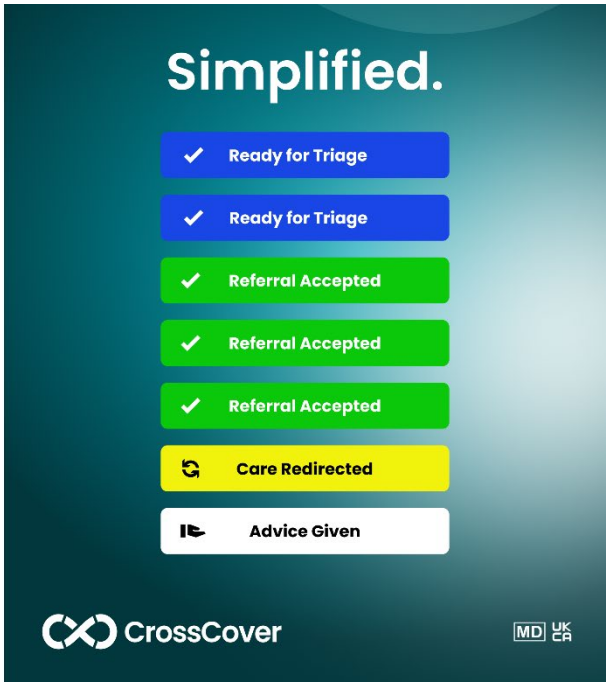
CrossCover enables clinical teams to design, build, test, deploy, operate and monitor **clinical decision support pathways** at scale. Designed by clinicians to operationalise best practice to maximise clinical and cost effectiveness of clinical pathways. Interoperable with primary and secondary care Electronic Patient Records and NHS Digital national APIs.

CrossCover works as a standalone progressive web application accessed via the web browser. It can also be opened from within Primary and Secondary care electronic patient records



What is CrossCover?

- CrossCover is a cloud hosted decision support tool designed to provide educational reference information through user-generated decision support pathways to enable health care professionals use their own knowledge and judgement to make a clinical decision
- Each Pathway has decision points, options are explained but the health care professional decides which path to take
- It reproduces paper documents in digital format - it is down to the health care professional to make decisions based on the advice displayed
- Expert decision support via a platform for creating and sharing bespoke editable interactive flowcharts
- A progressive web application that works on all devices with an internet connection
- Using the concept of recursion every problem is broken down to its fundamental components
- Users are given illustrated information to answer simple, consecutive questions that build an expert, evidence-based care pathway



Background

Front-line NHS staff are faced with complex decisions and have limited access to supportive tools. CrossCover contains a range of clinical specialty web applications designed to assist clinicians in making the best decisions for every patient encounter. This enables patients to be given the right care in the right place at the right time.

NHS consultants are our most experienced decision makers, but there are not enough of

them to see every patient presenting to our Emergency Departments (EDs) and every patient presenting to Primary Care. The reality is more junior NHS staff make a large proportion of the decisions relating to patient care. Greater variation in practice can lead to suboptimal care decisions, poor patient outcomes, longer length of stay in EDs, repeat presentations to Eds and GPs and unnecessary follow up.

CrossCover enables patient-facing clinical staff to follow best practice national guidelines adapted by their local expert NHS consultants. The platform facilitates these consultant experts to edit existing or build new easy to follow, fully illustrated interactive patient care flowcharts. This ensures standardised information is given to front-line clinicians working throughout the integrated community and hospital care network, enabling rapid and optimal decisions that are essential for patient care. Designed to provide Trust-wide or Integrated Care System wide optimised clinical decision support pathways.

How CrossCover fits in to the NHS Long Term Plan:

Supporting References:

"redesigned hospital support will be able to avoid up to a third of outpatient appointments" Page 6, line 29-30

"Use decision support and artificial intelligence (AI) to help clinicians in applying best practice, eliminate unwarranted variation across the whole pathway of care, and support patients in managing their health and condition." Page 92 lines 21-24

"5.24. Technology will enable the NHS to redesign clinical pathways. Easy access to referral decision trees, referral templates and direct access to investigations that reflect evidence-based best practice and universal access to 'one click away' specialist advice and guidance for GPs, will avoid many patients from requiring referral for an appointment. Triaging (and potentially completing) some specialist referrals such as in dermatology with photos and questionnaires will allow some patients to be managed entirely digitally." Page 97 lines 1-6

Social Value

Fighting Climate Change

CrossCover won the NHS England/ NHS Improvement SBRI Healthcare Competition 18 "Delivering a Net Zero NHS" Development Award. CrossCover helps to reduce emissions from care miles, reduce emissions from surgical pathways and supports low-carbon decision making.

We will help the NHS to realise net-zero emissions by reducing clinic appointments by 50-75%. It is estimated that 5% of the traffic on the roads is NHS traffic and 9% of the NHS carbon footprint is related to patient and visitor transport. The average patient travels 15 miles in urban areas and 27 miles in rural areas for an outpatient appointment.

The quantitative evidence provided by an independent Health Economic Study suggests optimised decision support pathways can reduce outpatient appointments by 50- 75%. This will have a huge impact on CO2 emissions by reducing the number of miles traveled by patients who currently go to unnecessary outpatient appointments. The platform supports GPs to run low-carbon community diagnostic hubs and reduce unnecessary imaging requests.

The pathways enable the promotion of sustainable mobility aids and support decisions to use the last splint as the first splint in trauma to minimise waste without compromising on quality of care.

As a company, Primum Digital Limited operates a fully remote workforce working from home. This helps us as a company minimise our carbon footprint as none of are staff are commuting to a central office every day.

Covid-19 Recovery

The NHS Long term plan is to "*avoid up to a third of outpatient appointments*" (Page 6, line 29-30). This is largely going to be achieved by reducing face-to-face appointments with consultants. One way to reduce face-to-face appointments is to make sure every appointment with a health care professional is done with the right person at the right time.

The COVID-19 pandemic has reinforced the need to reduce face-to-face consultations. A by-product of the COVID-19 pandemic was a high presence of consultant decision making at the front door. This was possible as all elective services were cancelled and Specialty consultants were redeployed to the ED.

During this process NHS organisations recognised that they were saving many unnecessary appointments by making the best decisions at first contact with the patient. As elective services restart, CrossCover will allows NHS organisations to maintain this consultant led service as a force multiplier when we can no longer be as involved in the front line with boots on the ground.

To achieve this goal, the best decisions regarding directing patient flow need to be made. CrossCover enables the uniformity of treatment, onward referral, and discharge of patients. National Guidelines are very generic and hard to implement locally. With CrossCover an NHS organisations own consultant experts can summarise all the relevant national guidelines and convey this information in an informative, innovative way directly into every Healthcare Professionals workflow. Standardising not only management, but uniformity of documentation which is so important from a medicolegal perspective and for continuity of care.

Reducing unnecessary appointments will free up staff to deal with he elective backlog.

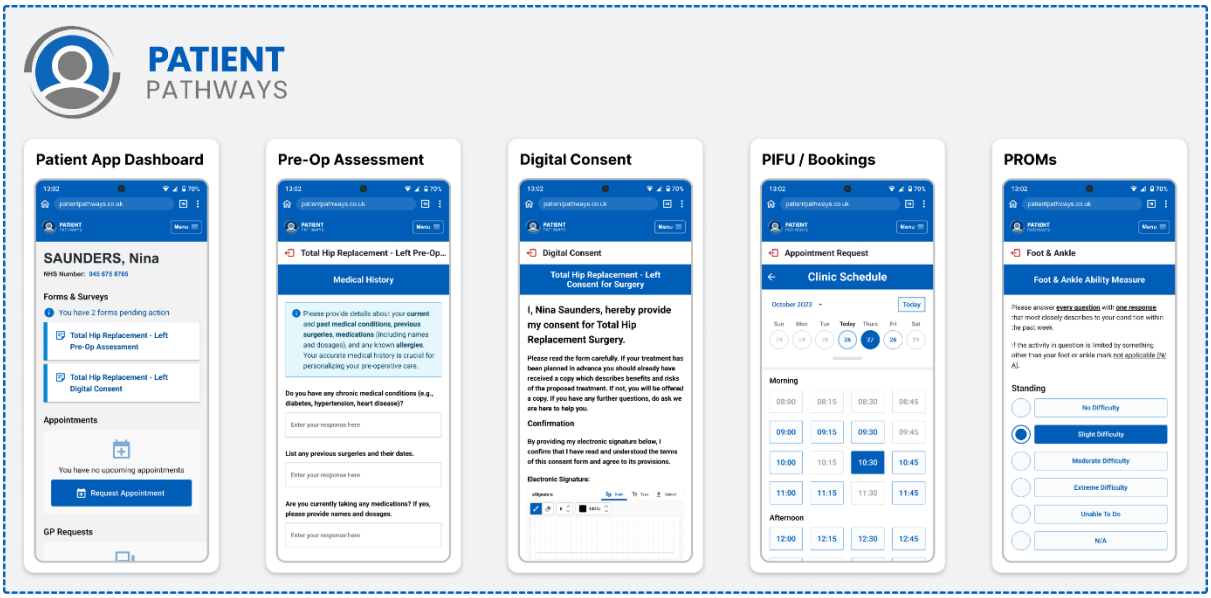
The Service

Service Features

- Clinical Pathway Development and Operations Content Management System
- Referral Management System
- FHIR interoperability with Primary Care and Secondary Care EPRs
- SNOMED CT coding
- Medical AI AVT Audio Scribe- Voxtor
- UKCA marked Medical Device with ISO13485, DCB0129 and DCB0160 compliance
- Electronic Patient Record compliant with NHSx DTAC and ISO27001 compliance
- Completely customisable clinical pathways through the web application interface
- Patient Pathways PEP with Digital PROMs and PREMs
- Realtime Budget and Carbon Impact Analysis
- Realtime advanced Data Analytics Audit and Research features

Service Benefits

- Operationalise best practice to maximise clinical effectiveness of healthcare staff
- Standardise Pathways across Primary and Secondary Care
- Gain efficiency savings by optimising resource provision across clinical pathways
- Deliver a Net Zero NHS by reducing unnecessary patient journeys
- Reduce Health inequalities by standardising care
- Maximise cost effectiveness of service delivery
- Save up to £100 per patient pathway episode
- Gain operational intelligence from real-time patient pathway data
- Deploy patient facing clinical pathways with embeddable Shared Decision Aids
- Enable collaboration at scale across a Trust or Integrated Care System



Regulatory Standards we are compliant with:

- EN ISO 13485:2016- **ISO13485 certified**
- EN ISO 14971:2019
- EN ISO 15223-1:2016
- EN ISO 62304:2006+A1:2015
- EN ISO 20417:2021
- EN ISO 62366-1:2015+A1:2020
- MEDDEV 2.7/1 revision 4
- NHSx England Technology Assessment Criteria (DTAC)
- DCB 0129
- DCB 0160
- EN ISO/IEC 27001:2022- **ISO27001 certified**
- Cyber Essentials Plus- **CE Plus certified**
- NHS Digital Data Protection and Security Toolkit
- WCAG 2.2 AA

Feature	Specialty Pathway Application(s)	Pathway Application(s) + Referral Management System
Cloud hosted	✓	✓
CrossCover™ Engine	✓	✓
System Setup and maintenance	✓	✓
Unlimited usage subject to fair usage policy	✓	✓
Unlimited Users	✓	✓
24/7 emergency on call engineering support	✓	✓
Fully managed system	✓	✓
Automatic updates	✓	✓
Two-Factor Authentication	✓	✓
User Management System with dynamic customisable roles	✓	✓
Pathway Visual Designer	✓	✓
Deployable Patient Facing Pathways	✓	✓
Deployable Clinician Facing Pathways	✓	✓
Pathway Issue log Service Desk	✓	✓
Dynamic Approval Policy Editor	✓	✓
Controlled Pathway Approval and Deployment	✓	✓
Hundreds of Medical Illustrations	✓	✓
Video upload system with hosting	✓	✓
Cloud storage system for files	✓	✓
Patient Decision Aid Editor	✓	✓
ePROMs and ePREMS dynamic form editor	✓	✓
Hundreds of Template Clinical Pathways	✓	✓
All pathways dynamically customisable in app	✓	✓
Analytics Dashboard with data exports	✓	✓
Version control on all Pathways	✓	✓
Unlimited Pathway Branches	✓	✓
Integration with third party Electronic Patient Records (HL7/FHIR)	✓	✓
Audit Trail	✓	✓
Rollback capability at Pathway level and whole tenancy level	✓	✓
SNOMED-CT coding	✓	✓
Data Imports and Exports	✓	✓
Dynamic Referral Form Editor		✓
Dynamic Referral Dashboard Editor		✓
Virtual Clinic System		✓
External referring users	None	Unlimited
Integration with NHS Digital APIs		✓
Realtime Budget Impact Analysis		✓
Realtime Carbon Impact Analysis		✓

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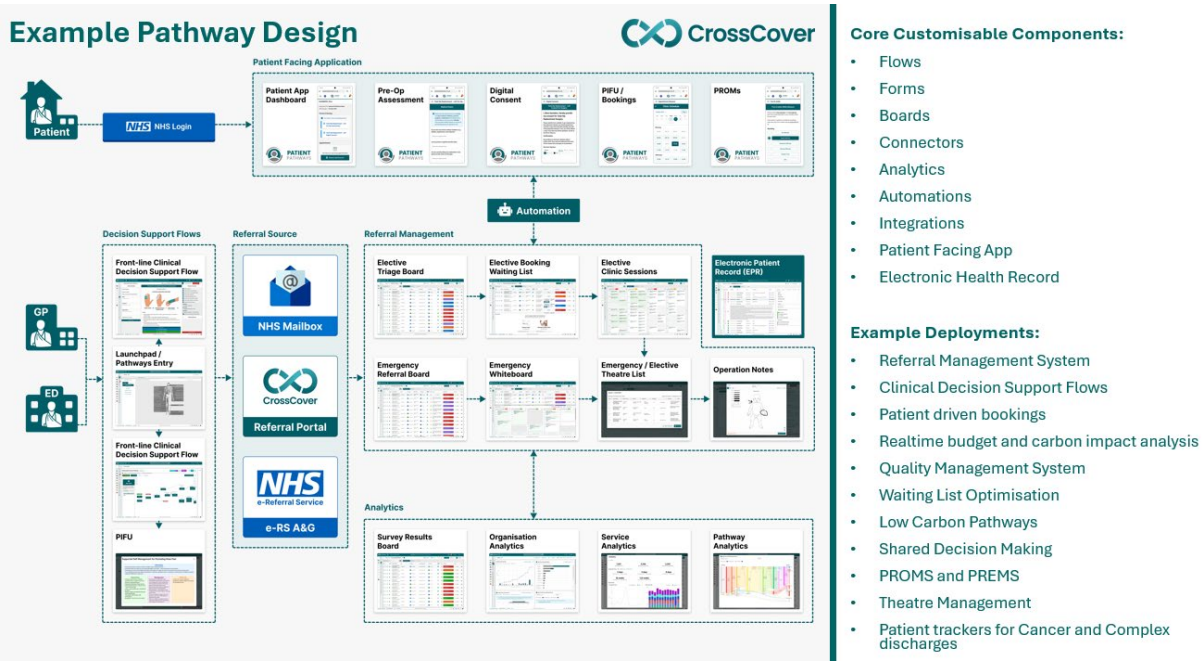
Associated Services

Our Referral Management System connects to NHS Digital national APIs including:

- Care Identity Service 2 OAuth 2.0 API for secure staff login using smartcards
- Patient Demographics Service FHIR API for national patient lookup. Available over the internet or via a HSCN connection
- e-Referral Service FHIR API- for paperless referrals from primary to secondary care
- NHS login API- for patients to access patient portals including PROMs, PREMs, Patient Decision Aids and patient facing clinical pathways
- IM1 Transaction API for read and write to primary care EHRs

To access all connected NHS Digital APIs requires a HSCN connection at present. This may change as more of the NHS Digital APIs become accessible over the internet securely.



As an internet first solution, the application can be fully managed remotely. We can SSH into VMs or bare metal machines in clients networks where we have deployed integration engines. For implementation we provide a train the trainers approach. We can provide onsite training, but this is an additional cost of £1500 per member of staff per day.

CrossCover's CRUD operations to clinical records are fully accessible via APIs. Our APIs are documented with Open API (also known as swagger). The clinical pathways are only accessible via the web application to ensure as a medical device the pathways are displayed in the format clinically risk assessed.

In app customisation

All clinician facing and patient facing clinical pathways are completely customisable through

the web applications content management system. The pathway approval and deployment policies are dynamically customisable so you can have defined processes around the governance of your clinical pathways. There is a dynamically customisable user management system, whereby the client can create custom roles with granular permissions. These custom roles created by the clients Super Admin control which users can customise each component in the system. With these features the client can change the way the app functions easily.

Analytics

Daily usage by staff members. All details around pathway episode data including patient demographic details, staff member details, the pathway decision support content displayed to the staff member, all decisions made and clinical outcome. All this pathway data can be aggregated in patient identifiable and de-identified data sets and queried for any string or concatenation of strings in the data set. We also provide a real-time budget and carbon impact analysis. We provide data on the pathway issue tracker service desk including average time to deal with an issue and issue classifications.

Scaling

Primarily we build the web application to work standalone and to be fully customisable by the client. Every feature including user management, pathway design, pathway deployment, pathway monitoring, pathway issue service desk, analytical tools are all within the web interface of the application. This means the clients can do most of the day-to-day customisation and data queries through the application without having to ask us for the data or engineering support. Components that are hard coded in other products and require email chains back and forth between a buyer and a supplier to resolve, can be resolved by the client in the web application content management system in minutes. The application itself is hosted on Google Cloud Platform servers with automatic horizontal scaling to deal with dynamic increases in demand.

2. Data Protection

Information Assurance

- Primum Digital Limited operates an Information Security Management System Certified to ISO27001 standards by the UKAS accredited British Assessment Bureau
- Primum Digital Limited is compliant with the NHS Digital Data Protection and Security Toolkit
- Primum Digital Limited is Cyber Essentials Plus certified
- Primum Digital Limited is registered with the ICO
- We have 6 monthly in house penetration tests
- We have 12 monthly external whitebox penetration tests by a CREST and CHECK certified 3rd Party cybersecurity company looking for vulnerabilities including the OWASP top 10
- All staff are trained in GDPR, Cyber Security, Data Protection and Phishing annually. The engineering team have specific OWASP vulnerability training
- We have a named board level person responsible for Information Governance and a Data Protection Officer
- We have regular internal and external audits to ensure compliance with our systems
- We have automated systems that scan our dependencies and alert us to any vulnerable or out of date packages
- Two Factor Authentication is default

Identity and Authentication

We have multiple routes to authenticate users. Our standard authentication requires two factor authentication to access any clinical data. We do offer the option for authentication via the NHS Digital Care Identity Service 2 OAuth 2.0 for NHS staff login. We also offer the option for patients to authenticate via the NHS Digital NHS Login API.

How Access is restricted in management interfaces

We provide the tenant with a completely customisable user management system. Every function in the application has a permission coded for it. In the User Management system, the tenants Super Admin can create dynamic customisable roles with any combination of these permissions. We provide suggested role configurations with templates that can be customised. The permissions assigned to a role determine what interfaces in the application users with that role will have access to.

Incident Management Process

We have a Security Incident Management Procedure which details how we achieve our aims in our Information Security Policy. For every security incident the immediate action is to

limit its impact and obtain and preserve evidence to enable an accurate investigation to be completed, root causes identified and a corrective action taken to prevent recurrence. Details of any security incidents will be recorded in our Security Incident Log. If the incident is related to Personal Information the company must inform the Information Commissioners Office within 72 hours and the data Controller without undue delay along with a full report.

Data-in-transit protection

All data is encrypted in transit with TLS 1.2 or above and where possible data is transferred across the HSCN. We have annual code assisted whitebox penetration tests by a third-party security company looking for vulnerabilities including the OWASP top 10 vulnerabilities.

Data-at-rest protection

All data is encrypted at rest with AES-256 on a distributed block storage device in Google Cloud Platform in data centres within the host country. (For example, in the UK the data is stored in Google data centres in London). All client access to patient records is logged in an audit trail accessible by users with audit trail retrieval permissions. Structured log data is created by the web applications backend infrastructure. Logs are stored in Cloud Logging and stored for 30 days.

Data Back-Up and Restoration

We provide a zero-downtime deployment of new application code. We release new versions of the software frequently (at least once a month). We operate development, testing, and production environments with an automated CI/CD pipeline. When a new version is deployed it automatically updates on all client's devices so clients are always using the most up to date version of the application.

We backup all data daily with scheduled cloud functions. We keep 30 days of backups within Google Cloud Platform. Each month a copy of the database is sent to Microsoft Azure servers in the UK. This enables us to have a multi-cloud data resilience structure. We enable whole tenancy rollback functionality via a request to us from the clients Information Asset Administrator. A manual check of all automated backup systems is performed monthly. We review, update and test our processes regularly and document them in our information security management system.

We also provide a pathway version history feature in the application which documents every deployment of each pathway, a snapshot copy of the pathway, who signed it off with date and time. Within the application users with the right permissions can manually rollback to a previous version of a particular pathway without having to contact us. If the client has any specific needs in terms of back-up frequency this can be discussed and documented in the Order Form as agreed between both parties.

Business continuity statement/plan

We maintain a documented comprehensive Business Continuity Plan in our Information Security Management System. The scope of the plan applies to all processes, work activities and work areas under the control of the organisation. A more detailed plan can be provided to a buyer on request.

For all Business Continuity Events occurring, the following processes and activities are prioritised:

Priority 1: Ensure the safety and welfare of the organisation's employees, customers, contractors, visitors and the public
Priority 2: Maintain customer access to CrossCover's deployed pathways
Priority 3: Maintain customer access to CrossCover's patient data
Priority 4: Maintain customer access to the editability of the pathways
Priority 5: Maintain customer access to the issue log
Priority 6: Restore access to employee email services
Priority 7: Restore access to customer service software tools and supporting files
Priority 8: Restore access to accounting software tools and supporting files
Priority 9: Restore access to customer order processing tools and supporting files
Priority 10: Restore access to all other business software tools and files
Priority 11: Restore access to, and operation of, affected sites at employees' homes

Privacy by Design

Privacy by design is a legal requirement in the EU General Data Protection Regulation (GDPR), effective May 2018. The protection of citizens' data must be included from the start of the design process of a technology/service.

Information Privacy is central to our software design process. All staff complete GDPR training courses annually. We follow the NHS Digital Data Security and Protection Toolkit with particular care to follow the National Data Guardian's 10 data security standards.

We have GDPR compliant Privacy Policies available to buyers on request.

3. Using the service

Ordering and Invoicing

To start the process for ordering our services email **sales@primumdigital.com**.
We will organise a scoping call via video conferencing. It's important to have an idea of the patient population served by the client, the number of specialties you wish covered and whether you want to use our referral management system. We can meet key stakeholders to demo the product. We can aid with completing the Order Form.

Pricing Overview

Our pricing is detailed in the CrossCover Pricing document on G-Cloud. As an overview our pricing scales with the patient population served by the client's organisation, the number of clinical specialty pathway applications the client wishes to have, whether they mean for Primary Care, Secondary Care or Primary and Secondary care deployment and if they want to use the Pathway applications alone or in combination with our Referral Management System.

The pricing matrix provides volumetric discounts as the scope of the offering widens. There are additional costs for onsite training, additional medical illustrations, and engineering support to provide system customisations beyond our usual scope.

Availability of Trial Service

We don't provide any free trials of the software or service.

We recognise that there is a period that varies from two weeks to 6 weeks for clients to edit and sign off their pathways and for the DCB0160 Implementation Clinical Safety Case Report to be signed off internally. To this end the first three months, or the time up until the system is Live, whichever is sooner, is a free period. We don't believe we should be charging the customer for a period they are not seeing a return on investment.

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

Onboarding

There are several workstreams that need to happen in parallel in the onboarding period for a successful deployment. We will assign a dedicated Customer Success Manager to manage the onboarding process.

1. **IT integration**
   We would need to have a scoping call with your IT leads. Depending on the level of integration required and your current systems a series of steps need to be achieved. If we are deploying across an ICS that uses multiple primary care EPRs it can take more time than a single Hospital with one EPR. We need to decide which authentication flows you want to use to access the application. Do you want to use

CIS2 OAuth 2.0 and use smartcards over a HSCN connection? Do you want to use our Referral Management System with or without NHS Digital eRS integration? We can accommodate any combination of answers to the above but scoping initially is important. Some NHS entities use FHIR APIs making interoperability easier. Others require us to install our integration engine on a Virtual Machine on their internal network for interoperability.

2. **Information Governance sign off**

We need to go through the Data Protection Impact Assessment with you IG leads, depending on what data flows have been decided upon by you IT team.

3. **Pathway development, deployment and operations**

We work with your clinical leads of each clinical specialty to design and build clinical pathways in our system. We have hundreds of templates that can be imported and edited to meet local requirements in the application. We also have hundred of medical illustrations that can be imported into the pathways. We advise initially deploying emergency pathways, so you get an early ROI, followed by the elective/ primary care pathways.

For ICS deployments we strongly advise a CCG/ICS management team to co-ordinate stakeholders from across the ICS including consultants, physiotherapists, FCPs, radiologists, AHPs, Nurses, GPs to form Pathway Development teams to develop and sign off the pathways in a collaborative fashion. Getting all key stakeholder groups to agree on pathways and support their sign off and deployment is critical for successful implementation.

4. **Clinical Risk Management DCB0160 Clinical Safety Case Report generation**

We supply your Clinical Safety Officer (CSO) with our DCB0129 Clinical Safety Case Report for the system. We organise hazard workshops with an MDT including our dev team, our CSO and the clients' clinical leads, IT leads and CSO. We help to identify and control any client specific hazards to implementing our solution. We are unable to complete the DCB0160 Clinical Safety Case report- as this needs to be done by your own CSO as per NHS Digital's requirements. We will assist your CSO in achieving this in a timely fashion.

5. **Training of staff to use the system**

Most Users will be read-only users from a pathway development perspective. The system is intuitive to use. We provide a suite of training videos for the whole system. Only a few are required to be watched by most users. It's important they know how to report any issue with the deployed pathways and report any bugs they find to our service desk. The Pathway Editors receive more extensive training from us. We use a train the trainer's approach. We train a core team of you Pathway Editors, and hand

over the User management system so they can invite and train more editors themselves.

6. **Winning hearts and minds of the clinicians**
   We found through multiple deployments its crucial to win the support of key stakeholders from each facet of the ICS or Trust. Our solution is truly system wide. You can't deploy a successful system wide clinical pathway that hasn't had involvement from Primary care, Emergency Department, and Specialist clinicians.

Offboarding

We require a three month notice period of termination of contract or it opts into auto-renewal. We need to formulate a plan for offboarding, and an agreed timeframe. There needs to be a clinical risk assessment on the offboarding process as business continuity plans need to be agreed on how the pathways will be delivered to ensure patient safety is paramount.

We cannot offer access to the live clinical pathways outside of a service level agreement. The live service will automatically be disabled at the end of the contractual term. No writes to the database will be possible. As the platform is a medical device we are not insured to provide a service outside of a service level agreement. All data extracts should be made before the end of the contractual period. We can perform data extracts after the contractual term has ended, but this would be at an additional charge of our daily engineering rate.

If the contract is not renewed at the end of a contractual term, we can offer full patient and pathway data exports made available via CSV, XML or JSON via secure transfer. A data extraction request is made from the clients Information Asset Administrator to us.

No additional cost for data extraction in our default format of CSV, JSON or XML. If the tenant wishes to have the data transformed into a bespoke format, we charge £1500 per day for engineering time.

The clinical data is accessible from dashboards within the application. If the user has the permissions, they can extract patient identifiable and de-identified data sets to CSV or JSON through a dashboard in the application. All these data imports and exports are logged for information governance compliance.

Training

We provide access to a complete user manual for the application and training videos on all functionalities. During the pathway development phase before GO LIVE our implementation team works closely with clinical leaders training them on how to use the system to design, build, test, deploy, operate, and monitor clinical pathways.

We always provide a full suite of training videos accessible through the application by all users. We provide training analytics data to the management team informing them of who has and has not engaged in training, and measure exactly what training resources the users have used.

Implementation Plan

Following the multiple workstreams described above in the onboarding process after the scoping stage our team will map out a detailed implementation plan for you. We will agree milestones and deliverables from both parties to ensure we achieve implementation success as soon as possible so you as the client achieve a Return on Investment. A detailed implementation plan can be provided to the buyer on request.

Service Management, Service Constraints and Service Levels

Primum Digital Service Desk Response times:

- Critical- within 15 mins
- High- within 15 mins
- Medium- within 2 hours
- Low- within 4 hours

We provide support for all services between 9am and 5pm Monday to Friday (excluding Bank Holidays).

We do not routinely provide support for Medium and Low priority issues after 5pm or before 9am weekdays or anytime on weekends.

For incidents classified as High or Critical an on-call engineer is available 24/7 via the on-call phone.

In the event the on-call engineer is not able to accept the call, a backup answering service is provided and actively monitored.

We are able to discuss and agree appropriate service levels and reach agreement prior to an order being placed (which would then be documented in the Order Form as agreed between both parties).

Outage and Maintenance Management

We provide a 99.9% uptime guarantee, dependent on the availability of Google Cloud Platform.

We provide a zero-downtime deployment of new application code. We release new versions of the software frequently (at least once a month). We operate development, testing and production environments with an automated CI/CD pipeline. When a new version is deployed it automatically updates on all client's devices so clients are always using the most up to date version of the application. We backup all data daily with scheduled cloud functions. We keep 30 days of backups within Google Cloud Platform. Each month a copy of the database is sent to Microsoft Azure servers in the UK. This enables us to have a multi-cloud data resilience structure.

Outage Reporting

We use an API to ping all our endpoints every 5 mins. This data feeds into a service availability status page. Any downtime notifications are automatically sent to the engineering team. All tenants are given company operational and technical contacts available 24/7 for use in an emergency. Any downtime notifications are also sent to the named leads via email at each tenancy.

Financial Recompense Model for not Meeting Service Levels

A financial recompense model can be agreed between both parties and documented in the Order Form in the event we fail to meet the service levels agreed.

4. Provision of the service

Customer Responsibilities

CrossCover™:

- Does not substitute clinical judgement
- Does not make decisions for the healthcare professional

CrossCover is a complete Development and Operations Platform for Clinical Pathways to be deployed safely at scale. Primum does not provide medical advice. Primum does not deploy clients' pathways to a live environment. It is up to the client and its clinical team to decide what clinical algorithms/ pathways to deploy. The deployment of these pathways and the post deployment surveillance is performed by the client. CrossCover provides the software infrastructure to manage these pathways compliantly with all regulatory requirements.

The Customer must appoint a clinical lead for each specialty to manage the pathways for that specialty. These clinical leads will be the main gateway to communication between Primum and the client.

The Customer shall:

- provide Primum with:
  - all necessary co-operation in relation to the Contract; and
  - all necessary access to such information as may be required by Primum;
- in order to provide the Services, including but not limited to Customer Data, security access information and configuration of the Services;
- without affecting its other obligations under the Contract, comply with all Applicable Laws with respect to its activities under the Contract;
- carry out all other Customer responsibilities set out in the Contract in a timely and efficient manner. In the event of any delays in the Customer's provision of such assistance as agreed by the parties, Primum may adjust any agreed timetable or delivery schedule as reasonably necessary;
- ensure that the Authorised Users use the Services and the Software in accordance with the terms and conditions of the Contract and shall be responsible for any Authorised User's breach of this Contract;
- ensure that the Super Admin carries out its responsibilities on behalf of the Customer in a timely manner;
- obtain and shall maintain all necessary licences, consents, and permissions necessary for Primum, its contractors and agents to perform their obligations under the Contract, including without limitation the Services;
- make available and maintain an internet connection of no less than 4 megabits per second;
- make available and maintain access to Google Chrome version 72 or higher on its systems for use by the Authorised Users when accessing the Services; ensure that its network and systems allow Authorised Users access to the Services and comply with the relevant specifications provided by Primum from time to time; and

- be, to the extent permitted by law and except as otherwise expressly provided in this Contract, solely responsible for procuring, maintaining and securing its network connections and telecommunications links from its systems to Primum's data centres, and all problems, conditions, delays, delivery failures and all other loss or damage arising from or relating to the Customer's network connections or telecommunications links or caused by the internet.

Technical Requirements and Client-Side Requirements

- Internet Access on a PC, Mac, iOS or android device
- Google Chrome, Microsoft Edge (2019 or newer), Mozilla Firefox or Safari web browser
- The CrossCover web application is accessed via the URL https://www.crosscover.app through a compatible browser on any PC, Mac or mobile device with an internet connection
- The application can be installed on the device from the browser but does not have to be. If the application is installed on the device and the pathways have been previously cached, it can work offline

Outcomes/Deliverables

- Standardisation of clinical Pathways
- Cost savings
- Reduction in outpatient appointments
- Higher concordance with national guidelines and best practice
- Better patient care
- Operational intelligence on the whole pathway of care
- Reduction in the carbon footprint of your clinical pathways
- Collaboration between departments, and collaboration between clinical leaders in Primary and Secondary Care

Development life cycle of the solution

Our solution is built with a WaterGile approach. At its heart we are agile reacting quickly to User needs and making releases on average every two weeks. However, the product is Software-As-A-Medical-Device. This means we must have detailed User needs, Design Inputs, Design Outputs mapped to Verification and Validation steps all signed off by the product team, technical team, clinical safety team and quality assurance teams. We have a defined Software Development Procedure and release procedures.

There is one version of the application in the production environment at any one time. All users devices are automatically updated to the latest version on release.

After-sales Account Management

We see each deployment of our solution as a partnership and learning journey. Our aim is to provide you with a solution to your pain points and challenges. Most of our product team are front line clinicians with insight into what it is like to work as a healthcare professional and care for patients. We understand the importance of maintaining close communication between clinical leaders and our team. From initial planning to deployment to ongoing maintenance we encourage regular communications with out product owners.

We supply easy access to our Service Desk for all queries and have dedicated customer success meetings at 3 months, 6 months, 12 months after deployment. In these meetings we usually listen to feedback. What went well, what could have gone better, what you feel you need next. These conversations normally result in us improving existing features or building entirely new features to meet customer needs.

Termination Process

If the contract is not renewed at the end of a contractual period, we can offer full patient and pathway data exports made available via CSV, XML, JSON via secure transfer. A data extraction request is made from the clients Information Asset Administrator to us.

No additional cost for data extraction in our default format of CSV, JSON or XML. If the tenant wishes to have the data transformed into a bespoke format, we charge £1500 per day for engineering time. The customer acknowledges that it has purchased the Services for the Minimum Period and any Renewal Term(s), as defined in the Certificate or Order Summary.

The clinical data is accessible from dashboards within the application. If the user has the permissions, they can extract patient identifiable and de-identified data sets to CSV or JSON through a dashboard in the application. All these data imports and exports are logged for information governance compliance.

5. Our experience

Case Studies

A Health Economic Evaluation across five NHS Trusts in 2021 by the University of East Anglia, funded by NHS England showed both qualitative and quantitative positive results from implementation of CrossCover OrthoPathway. The full report is visible on our marketing site www.crosscover.co.uk.

Table 3: Deterministic and probabilistic findings per pathway

Pathway	Deterministic reduction per patient	Average Probabilistic Outcome	Upper 95% Confidence interval	Lower 95% Confidence interval	Cost–Saving Probability (%)
Ankle Fracture	- £ 95.79	-£ 107.62	-£ 134.54	-£ 84.60	100
Fifth Metatarsal Fracture	-£ 82.49	-£ 82.72	-£ 113.91	-£ 54.09	100
Carpal Tunnel Syndrome	-£ 57.99	-£ 57.84	-102.016	- £ 15.37	99.8
Soft Tissue Knee Injury	-£ 136.41	-£ 136.41	-£ 161.27	-£ 112.62	100.00
Metacarpal Fracture	-£ 106.00	-£ 106.45	-£ 136.91	- 76.96	100

Qualitative Feedback from NHS Staff:

- "Provides clear information"
- "Provides standardised evidence-based treatments"
- "Provides prompts for specific and important risk assessments, e.g. DVT"
- "Gives confidence to staff to make informed decisions, especially for those with little orthopaedic training"
- "Reduces the need to contact specialists"
- "Reduces referral to other clinics"
- "Provides best care pathway at the point of contact"
- "Provides the rationale for the chosen treatment pathway"
- "Ratifies clinical decisions"
- "Considered safe"
- "Intuitive to use"
- "Ability to report problems in the treatment pathways to the developers"
- "Quicker to use than the written protocols used at present"

Cornwall Partnership NHS Foundation Trust

Cornwall Partnership NHS Trust was shortlisted for the BMJ awards 2021 Digital Innovation Team of the year for implementing CrossCover OrthoPathway across Cornwall. They managed to save £1.8 million in efficiency savings by standardising over 90 MSK trauma pathways.

Clients

NHS The Royal Orthopaedic Hospital NHS Foundation Trust

NHS Cornwall Partnership NHS Foundation Trust

NHS Royal Cornwall Hospitals NHS Trust

NHS University Hospitals Plymouth NHS Foundation Trust

NHS Birmingham and Solihull Clinical Commissioning Group

NHS Northern Devon Healthcare NHS Trust

NHS Torbay and South Devon NHS Foundation Trust

Our Awards

We won SBRI Healthcare/ NHS England/ NHS Improvement Competition 17 Urgent and Emergency Care Phase 1 + 2

This competition was looking for solutions that:
1. Reduce demand
a. Recognising differences for adults vs children and young people
b. Recognising that respiratory conditions in all ages account for a rapidly growing proportion of attendances

2. Reduce the length of stay in the Emergency Department
a. By more efficient triage, streaming and treatment
b. By more efficient discharge or admission to the hospital

We won SBRI Healthcare/ NHS England/ NHS Improvement Competition 18 Delivering a Net Zero NHS Phase 1

This competition was looking for solutions that:
1. Reduce emissions from care miles
2. Reduce emissions from surgical pathways
3. Reduce nitrous oxide emissions
4. Tools that support low-carbon decision making

Contact Details

Please contact our sales team by email to:

sales@primumdigital.com

CrossCover

www.crosscover.co.uk

PRIMUM DIGITAL

Voxtor

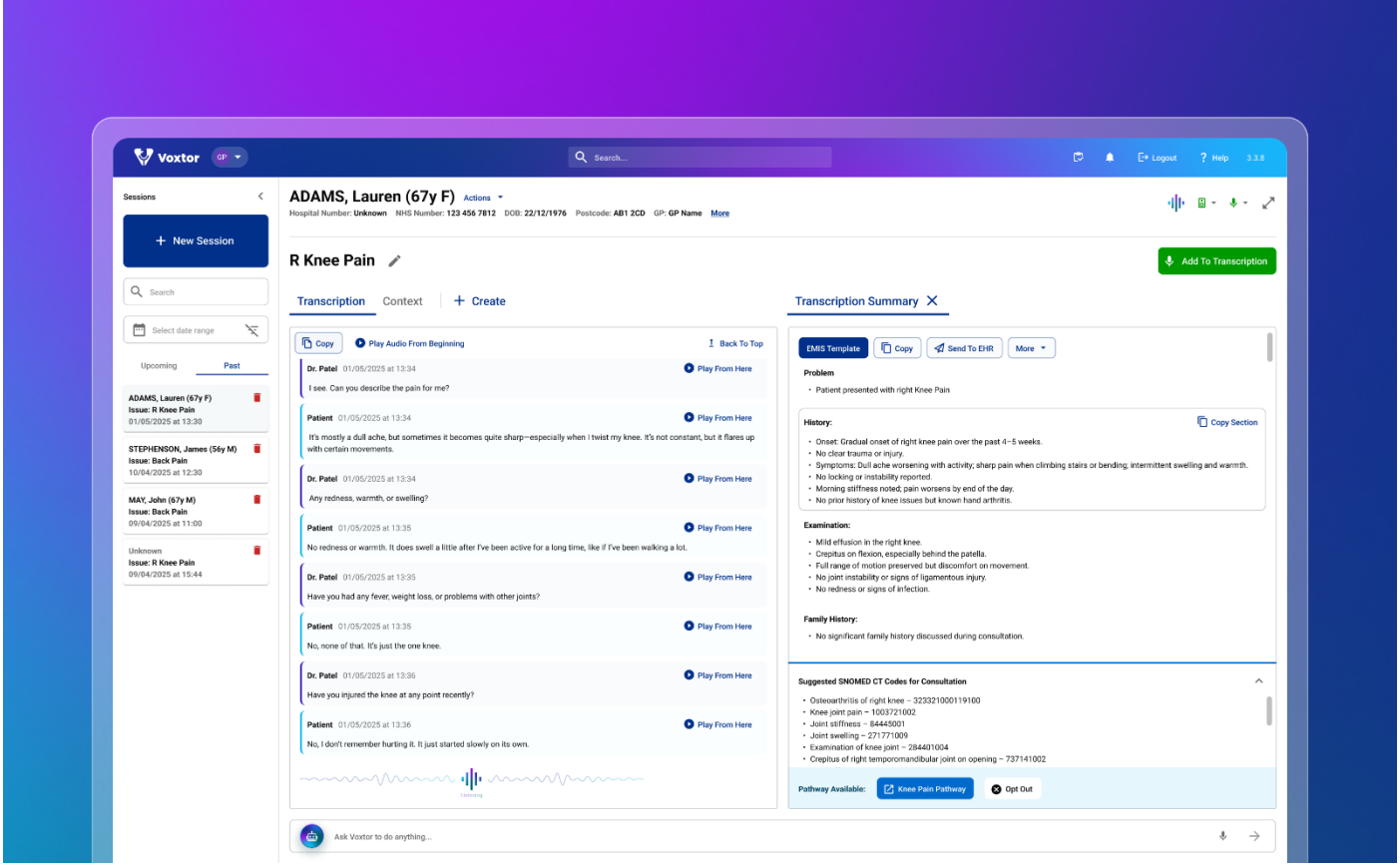
Powered by CrossCover

Medical AI-Powered Audio Scribe

G-CLOUD 15

Service Definition Document

Ambient voice transcription and dictation with AI generation of notes and documents for clinicians

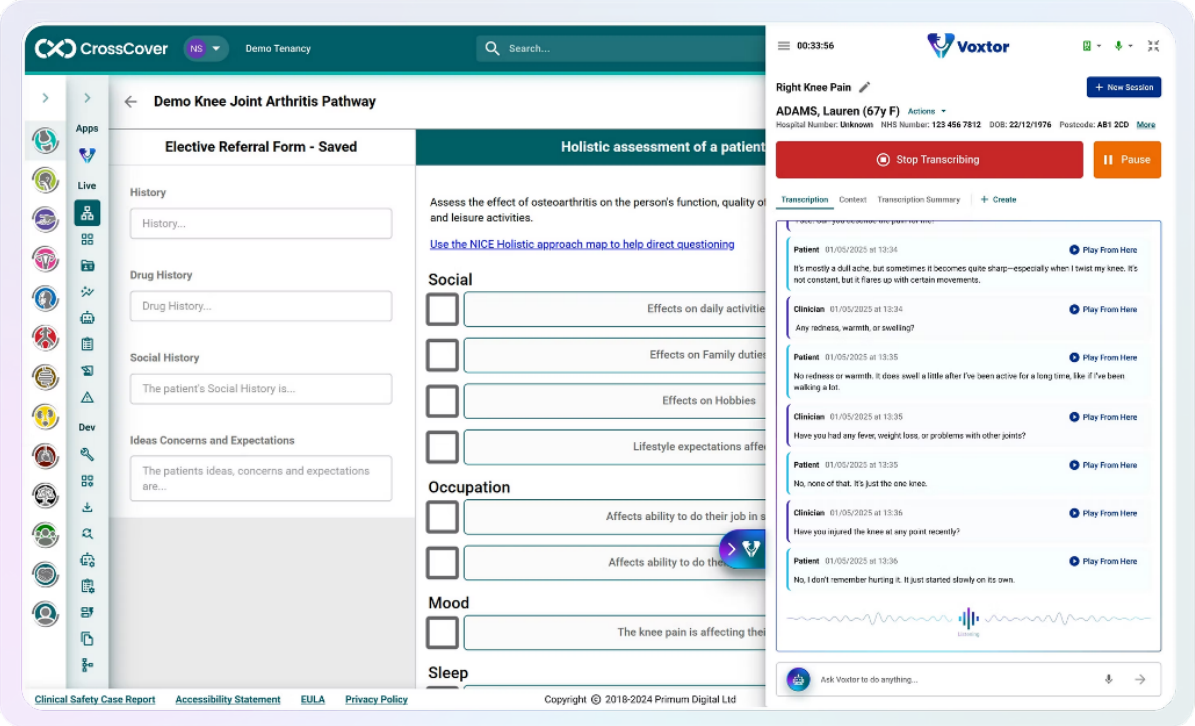


Voxtor Service Definition

Product Overview

Built on the power of **CrossCover**, **Voxtor** doesn't just document — it drives action. As Voxtor captures the note, CrossCover works in the background to manage referrals, follow-ups, and care coordination automatically.

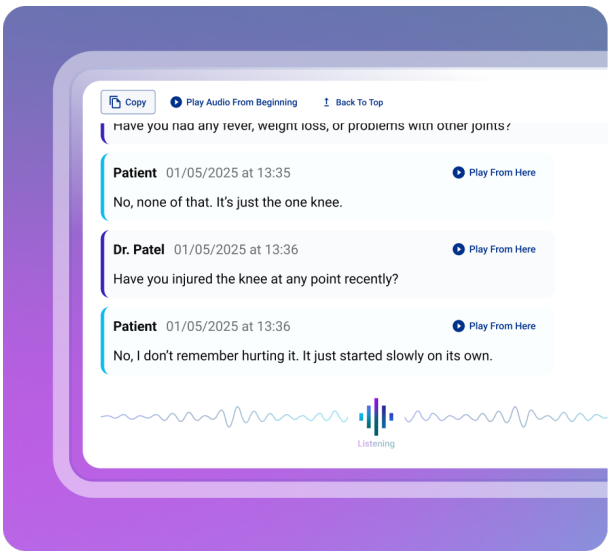
The result: fewer steps, faster handoffs, and more time for patient care.



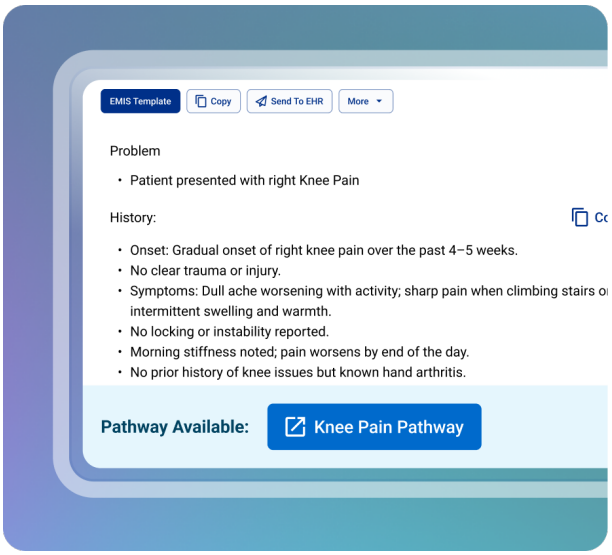
Product Features

Voxtor streamlines clinical documentation by combining **audio transcription** with **AI-driven summarisation**, instantly converting consultation dialogue into structured medical notes (e.g., SOAP, History, Examination) to save clinicians hours of manual typing. Its **direct EHR integration** (compatible with EMIS and SystmOne) allows practitioners to transfer these notes with a single click ensuring data consistency. To further enhance efficiency, Voxtor features **Smart Letters** and **SNOMED coding suggestions**, which automate patient correspondence and improve clinical coding accuracy, reducing administrative backlog and maximising practice revenue.

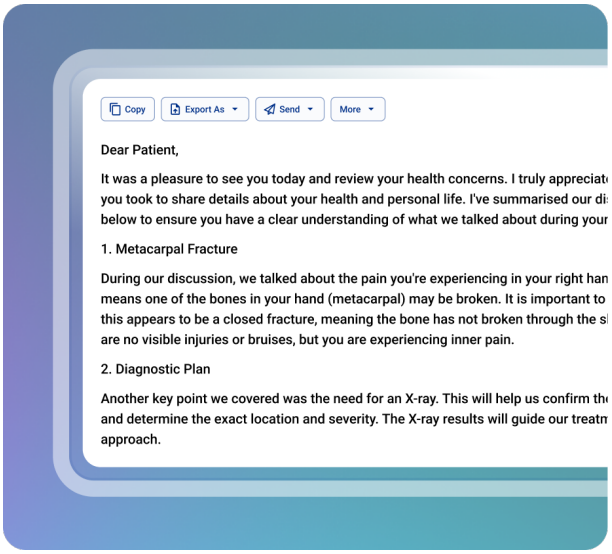
Transcription



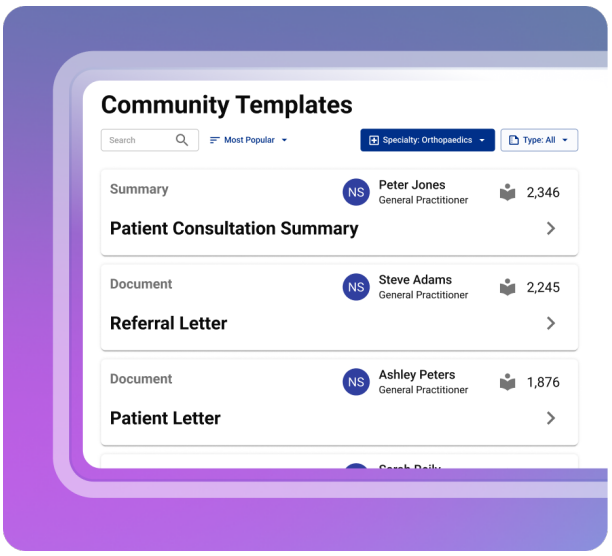
Instant Summaries & Notes



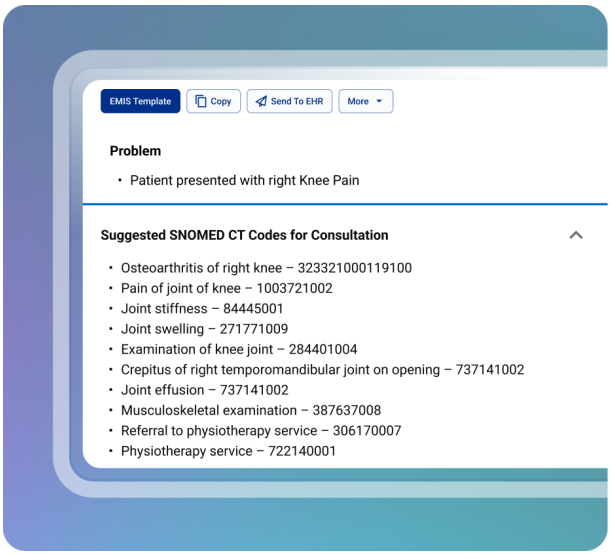
Smart Letters



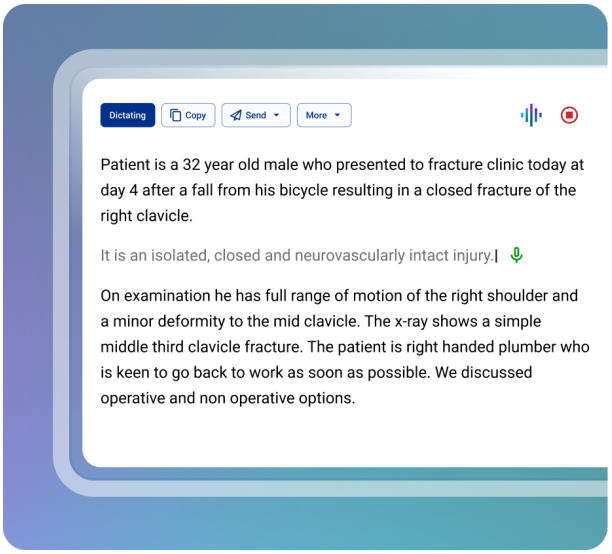
Customisable Templates



SNOMED Coding



Dictation

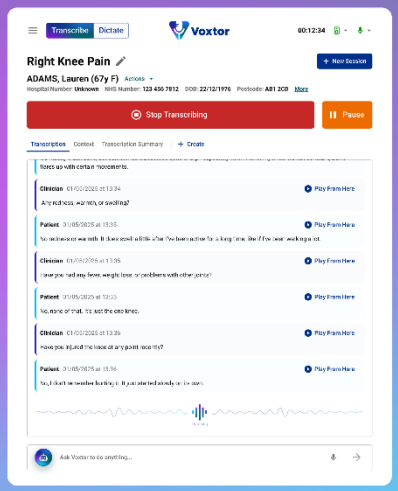


How it works

Voxtor transforms the heavy burden of clinical documentation into a seamless workflow that operates directly alongside your existing systems. Whether accessed through a web browser or our integrated "Hot Bar" inside your EHR, the platform listens to your consultation and instantly converts the dialogue into structured, clinically accurate notes. This approach ensures that you can remain fully focused on your patient while Voxtor handles the administration in the background.

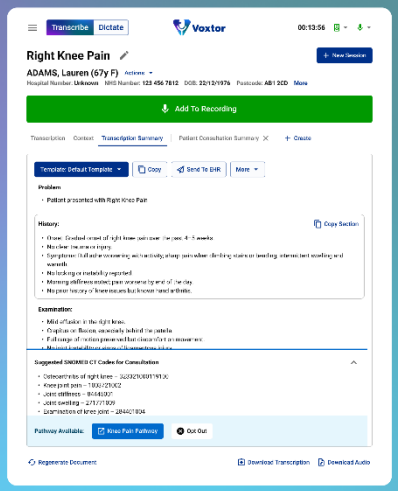
1. Transcribe

Get live transcription as you are recording the consultation.



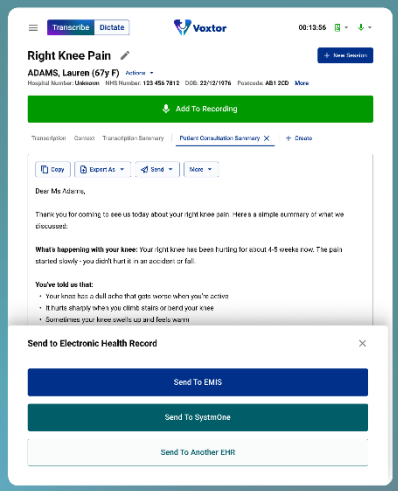
2. Summarise

Auto-summarise the transcription using customisable templates.



3. Generate Documents

Create Patient Letters and Referral Letters from the summary.

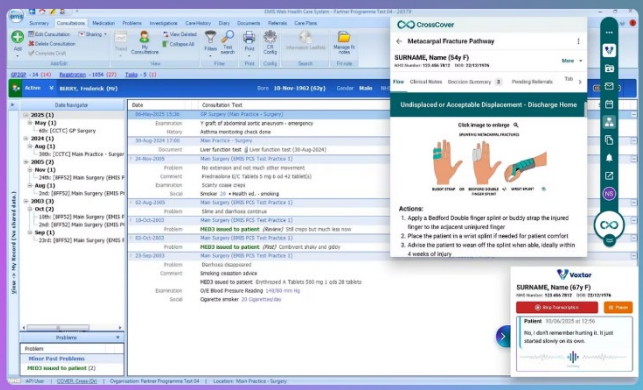


Integration with your systems

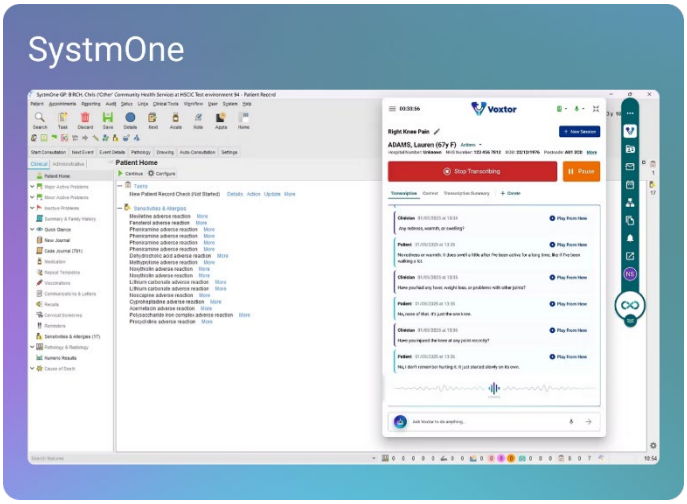
Start Voxtor in the browser or the Hot Bar integrated with your EHR (Electronic Health Record) with a click of a button.

Integration with EMIS

EMIS



Integration with SystmOne



Pricing Model Summary

Please see the full pricing document in a separate attachment.

Voxtor offers four distinct pricing models tailored to specific healthcare environments. Whether you are an individual clinician, a GP Practice, a Hospital Department, or an entire Integrated Care Board (ICB), we have a model designed to match your workflow and budget.

Pricing Model	Target Audience	Pricing	Key Features
1. Primary Care	Individual GPs, Locums, and GP Practices.	**Professional Plan:** £49 / user / month *(Monthly or Annual)* **Practice Plan:** £59 / user / month *(Annual Only)* + £499 One-off Setup Fee	• **Professional:** • Unlimited consultations & summaries • Customisable templates • Standard support • **Practice:** • **Direct EHR Integration (EMIS/SystmOne)** • Centralised billing dashboard • Shared practice-wide templates • Priority support
2. Secondary Care	Hospital Departments, Ward Rounds,	**Per Clinical Session** (4hr block / 40	• **Team-based coverage:** Unlimited users covered within a single active

	Clinical Directors.	patients) **Pre-Paid Packs:** • **Starter:** 50 Clinics (£500) • **Department:** 250 Clinics (£2,250) *[~£9/clinic]* • **Division:** 1000 Clinics (£8,500) *[~£8.50/clinic]*	session. • Full transcription & summarisation for all patients in the 4-hour block. • Predictable "Pack" procurement.
3. Metered & Flexible	Locums, Researchers, Part-Time Clinicians, or Trials.	**Option A: "Flex" Subscription** • £5/month base fee + 1.5p per minute of audio (£0.90/hour) **Option B: Pre-Paid Credits** • 5 Hours: £5.00 • 10 Hours: £9.00 • 25 Hours: £20.00	• **Low Risk:** Ideal for piloting the software or for irregular usage patterns. • **Credit Expiry:** Pre-paid credits expire after 12 months. • **No annual commitment** required.
4. Enterprise	NHS Trusts, ICBs, and Large Hospital Groups.	**Custom Annual Platform License** • Price: On Request (Bespoke Quote) • Basis: Calculated via usage metrics (e.g., Per Bed, Per Year)	• Strategic Partnership: Tailored for **large-scale deployment.** • Includes: Annual Platform Fee, Usage Fees, and Implementation/Training costs. • Metric: Aligned with organisation KPIs (e.g., per 1,000 outpatient appointments).

MD UK CA Primum Digital Limited, Harscombe House, 1 Darklake View, Estover, Plymouth, PL6 7TL