

Using Enterprise Content Management for Providing Electronic Patient Records

A universally accessible electronic patient record is one of the most vital topics when it comes to digitization in the healthcare sector. But how can medical data, documents, images and other information be managed to provide a full health record of individuals? An efficient and effective solution has to handle many different types of input, capture all relevant details and meet highest security requirements. Additionally, the processing of referrals is a major challenge. In 2017/2018 alone, there was an average of 5,300 urgent GP referrals for suspected cancer per day in England (source: NHS).

In order to meet the high-quality standards in the healthcare sector, the NHS is constantly optimizing its processes to become faster and more efficient. When searching for a holistic solution that would incorporate the entire process from image capturing and processing to classification and extraction to validation and delivery of data, the NHS decided to introduce the technology from SynApps Solutions, Alfresco and Ephesoft.

The NHS can now rely on a comprehensive solution based on the technology from the three providers. Document capturing, automated storage and triaging of referrals as well as automated reporting are now provided from a single source.



The Leeds Teaching Hospitals NHS Trust

Customer

NHS

Partner

SynApps Solutions

Sector

Healthcare

End users

Clinicians, admin teams, patients

Results

- Comprehensive digital platform for content and data management and processing
- Successful internal and external collaboration
- Support of universally accessible electronic patient records
- Innovative digital platform with e-referrals solution

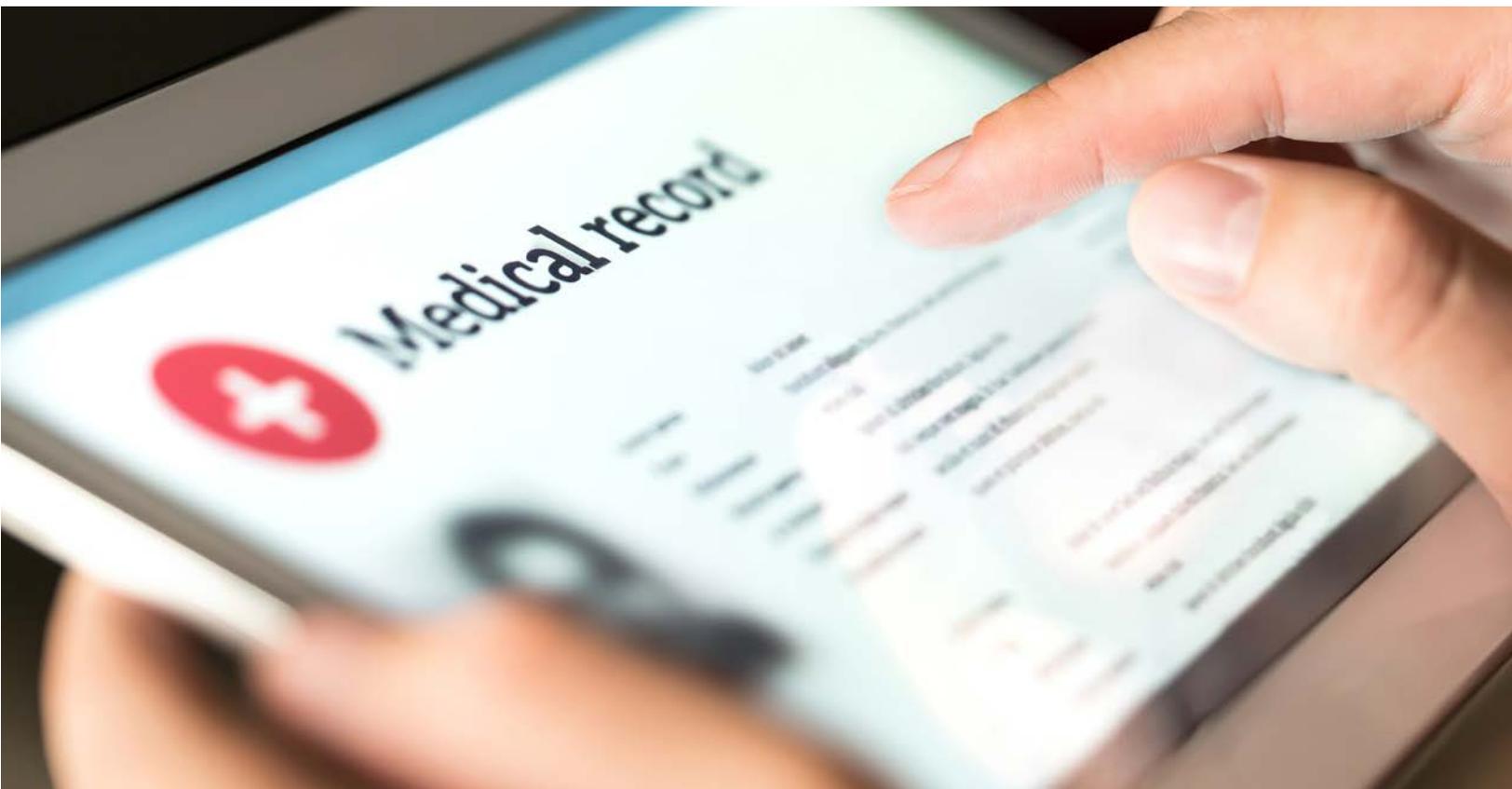
The Challenge

The National Health Service (NHS) is the publicly funded national healthcare system for England and one of the four National Health Services for each constituent country of the United Kingdom. It is the largest single-payer healthcare system in the world. Primarily funded through the general taxation system and overseen by the Department of Health, the NHS provides healthcare services to all legal English residents, most of them free at the point of use. Services such as emergency treatment and treatment of infectious diseases, are free for everyone, including visitors.

As digitization becomes increasingly important in the healthcare sector, the NHS was searching for a solution to realize universally accessible electronic patient records. According to the requirements of the NHS and the healthcare sector, the digital solution had to include all clinical documents such as doctor's notes, discharge summaries, lab results as well as digital images related to the patient. Regionally or nationally this would be Key Object Files. Additionally, patient demographics and medical data feeds had to be included as well in the electronic patient record. All the information needed to be secured within the repositories and made accessible via national

ID schemes, e.g. eCards, DoctorID, etc. The aim was a 360-degree view of the patient's electronic health record with all data and content. This was an enormous special challenge due to the different data sources and types of information as well as the high security and data privacy requirements.

In addition to the electronic patient record, the NHS also needed a technology to process referrals faster and easier. Before the introduction of a digitized solution, most hospitals printed and manually processed the received referrals via fax or email. This was not only complicated, but also error-prone, especially in relation to the 18-weeks target: According to the NHS Operating Framework and the NHS Constitution patients have the right to start consultant-led treatment within a maximum of 18 weeks. This guidance, published by the Department of Health, sets out the benefits of reviewing the pathways of patients who have waited longer than 18 weeks before starting their treatment. It also suggests methods for reviewing and reporting waiting times that exceed 18 weeks in order to understand the causes and drive further improvements in patient care. The NHS was looking for an end-to-end e-referrals solution to tackle this challenge.





The Strategy

SynApps Solutions offered NHS their consultancy and support. The company was founded in 2003 and focuses on Enterprise Content Management solutions. With an ISO27001 certification and broad knowledge about cybersecurity, SynApps Solutions offers solutions definition, configuration, deployment and support. When it comes to document capture management, they work in a close partnership with Ephesoft and use their professional solutions.

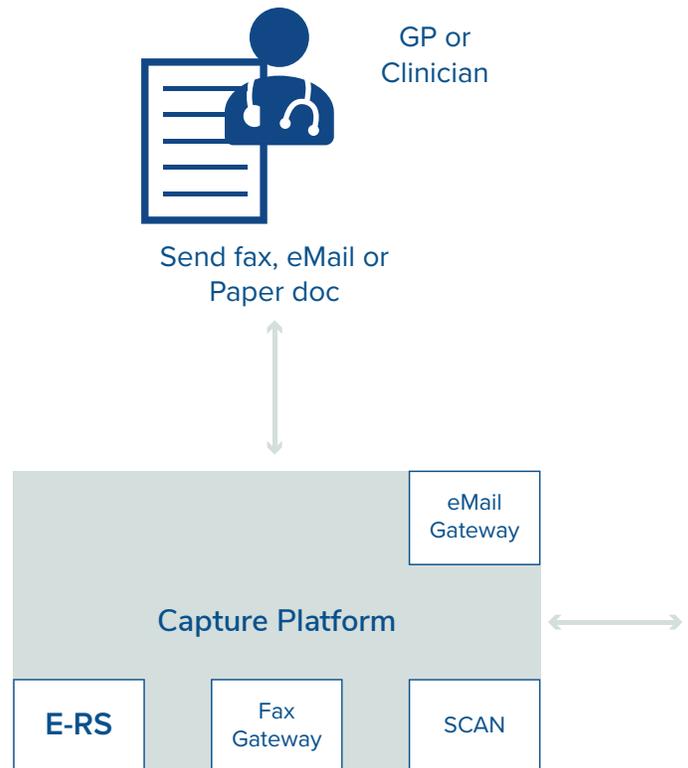
SynApps Solutions provides content capture for Enterprise Content Management, automatic indexing and integration based on the following steps: First, content from various sources like scans, faxes, mobile phone messages, emails, print documents etc. is captured for further processing. Second, after normalization of different input types, image rotation and elimination of blanks, the SynApps Solutions solution classifies the information based on the context. Fuzzy logic and business rules help to extract metadata for further processing, and the information can be validated by NHS employees. Finally, connections to Electronic Patient Records, Enterprise Content Management, Business Process Management and other systems on premise or in the cloud enable extractions and further use of the content.

The Solution

SynApps Solutions provided three solutions to support the work of the NHS and make processes easier, faster and less error-prone.

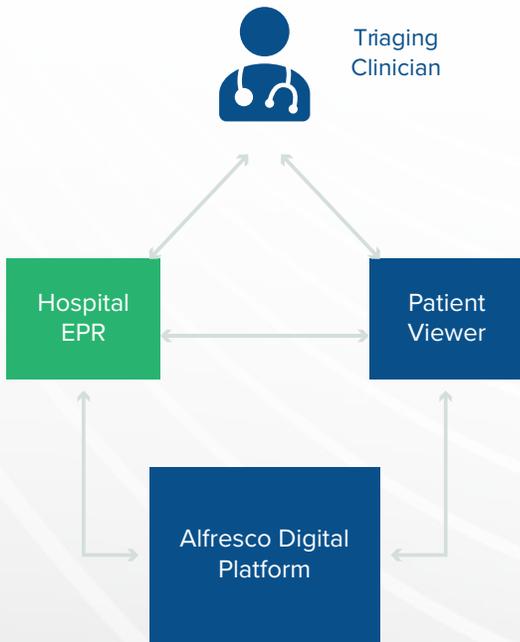
1) Capture Solution:

To capture documents electronically regardless of their source, Ephesoft offers a scanning platform which is able to read papers, emails and OCR as well as to recognize a large variety of formats. After capture, the content can be archived and delivered to the Alfresco Digital Platform (Enterprise Content Management and Business Process Management). Additionally, the Fax Gateway Server can prepare faxes for processing by Ephesoft and Alfresco. To complete the package, the SynApps Solutions eRS Gateway Server manages the electronic retrieval of referrals from the NHS Digital e-RS service. It can also integrate e-RS Accept, Reject and Redirect with the Alfresco Digital platform.



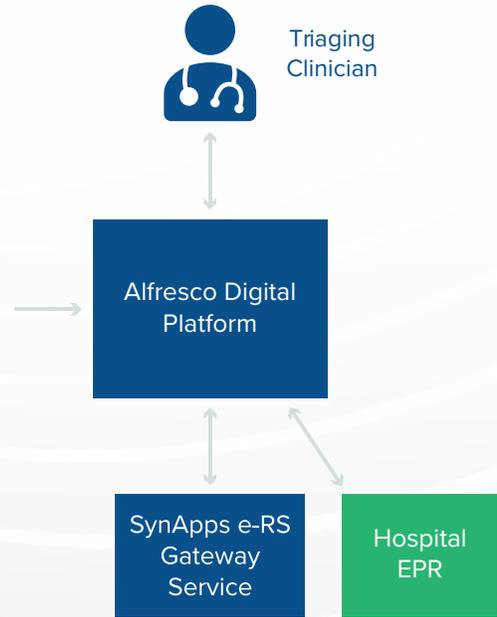
2) Storage and Triage Solution:

Additionally, to the automated storage, the solution can also triage the referral – including accept, reject, redirect internally/externally. The capture solution of Ephesoft and the Enterprise Content Management of Alfresco provide a long-term archive for critical patient content including referrals and any other material. Additionally, the Alfresco Digital Platform offers automated orchestration and triage of referrals as well as the integration of the triage workflow with other existing clinical systems to minimize rekeying and improve access. This solution provides the basis for the automated capture of referral task statistics needed by the referral reporting.



3) Internal Sharing and Reporting Solution:

An external option makes automated reporting and retrieval by clinicians possible and easy to process. Hospitals can integrate an Enterprise Content Management system (ECM) with the Alfresco Digital Platform for retrieval of any captured patient content. Reporting tools reduce the work associated with collating referral statistics against the NHS target, and a special option also provides reporting back to GPs and Social Care providers. The J4care patient viewer offers a timeline view of all archived patient content, to include DICOM, NON-DICOM and all ECM content. As an option, hospitals can also create an external shared care record.



United States HQ

+1 (949) 335-5335
info@ephesoft.com

Ephesoft, Inc.
8707 Research Dr.
Irvine, CA 92618
United States

United Kingdom

+44 (0) 1184665000
info.eu@ephesoft.com

Australia

+61 2 9056 7490
info.au@ephesoft.com

Germany

+49 6126 5503510
info.eu@ephesoft.com

Italy

+39 (02) 8088 6345
info.it@ephesoft.com

France

+33 1 8288 4002
info.eu@ephesoft.com

Singapore

+65 3163 5499
info.asean@ephesoft.com