



Integrate. Analyse. Discover. Take Action.

Meeting Health Insurance Challenges

by **wild**  **ouse**

Intelligent, learning document processing and search.
Find everything.

Health Insurance: Complex Organisational Challenges

Over recent years health insurance companies have become more and more complex. The addition of hospitals, dental clinics, aged care and other medical businesses under the same roof as the core insurance business allows more control of the supply chain but adds significant complexity to what is otherwise already a complex business. Moreover, purchase or organisations that already exist leads to duplication of systems, data, documents, forms, processes and so on.

Health insurance consists of complex, largely paper-driven, business processes. Whether it be claims processing with the potential for customer fraud or mistakes with claim documentation and receipts, medial paperwork or significant paperwork requirements from aged care facilities such as the admission process.

Then, of course, there are the challenges that come from broad, siloed organisations – bringing together information across intra-organisational boundaries and into web sites and departments. This is particularly important for health insurance businesses, where there is a need for customers to be recognised across the various interaction points that share a brand.

A Tipping Point for Processing

The health industry is inherently paper-based and is difficult to fully digitise because of the very nature of the space. Between government regulations, the need for efficient processes, aging customers and a vast footprint, it is next-to-impossible to remove paper.

Claims have always been fertile ground for low level gaming, being viewed somewhat as an entitlement by some proportion of the community. More worrying is the global rise in serious and organised fraud using advanced technology and techniques to defraud and it is to this arena where insurers will increasingly need to reallocate budget and resources – something which is not currently feasible.

A mix of “human” circumstances inherent in the process of making claims results in an estimated 70 per cent of claims being flagged for review, where insurers even decide to review claims and not just make the decision it is all too hard. A large proportion of those flagged currently require some level of investigation by internal staff or third parties, although the clear majority are found to be mistakes or inaccuracies.

Enter Uneath AI

Thankfully, Uneath AI brings the ability to readily and reliably integrate paper forms and documents into digital workflow processes, including understanding different forms, extracting information and automated decisions. This even provides rapid approval for claims and can effectively address fraud.

Uneath will:

- Improve the cost basis of processing paperwork, including claims, medical documents and administrative forms;
- Improve the accuracy, efficiency and standardisation of claims surveillance and diagnosis;
- Bring information together across siloes; and
- Improve the accuracy of prediction and forecasting.

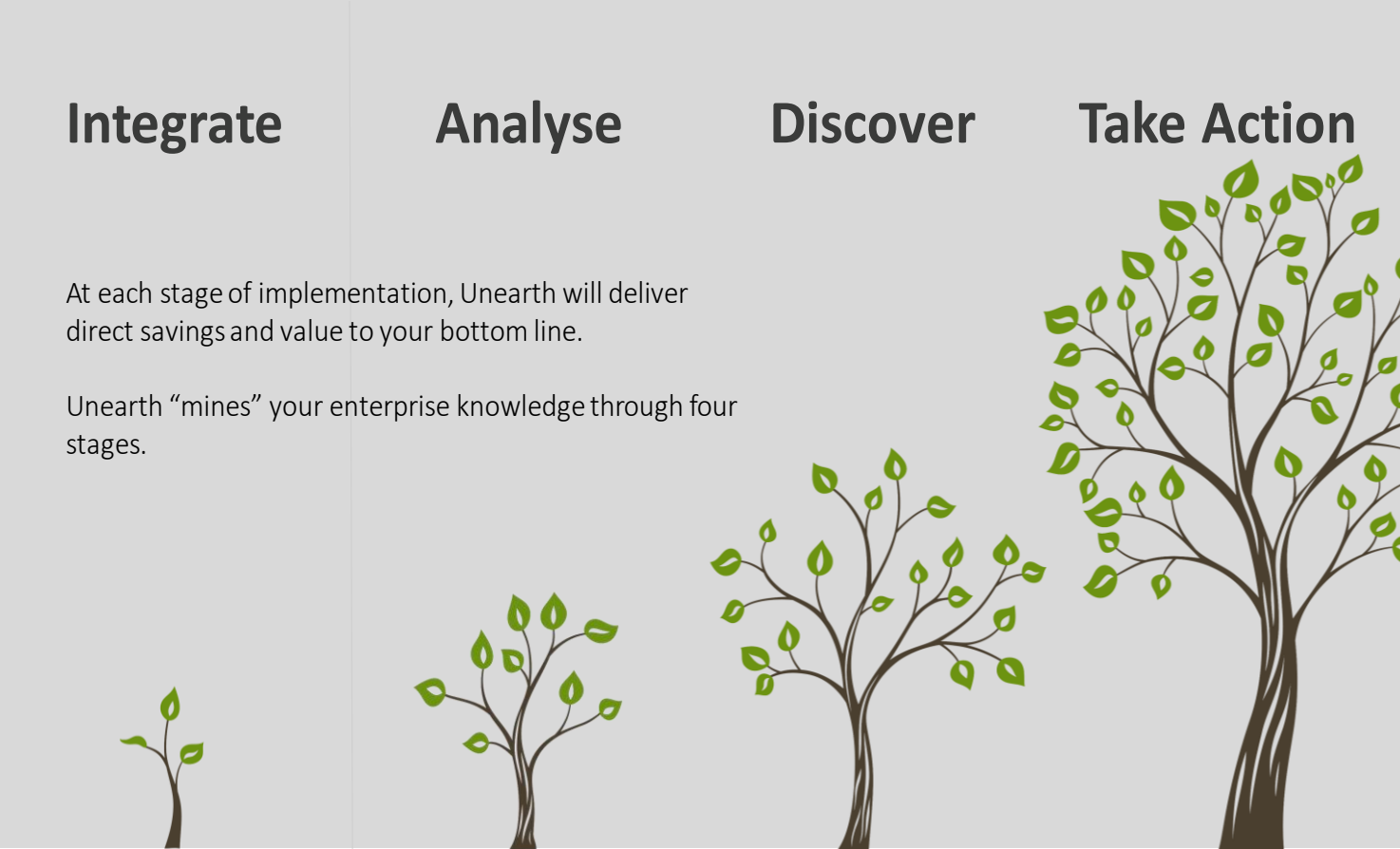
Uneath AI is the most powerful enterprise search engine we know of. Uneath AI makes finding data and documents dramatically easier, improving productivity and agility. More than this though, Uneath AI is powered by Artificial Intelligence (AI), bringing real intelligence and automated decision-making to the processing of content and data. This improves the flow of knowledge through an organisation. In designing and building Uneath, Wild Mouse has worked with leading businesses and government agencies, with input from Microsoft Research’s AI team.



AI is just like trained graduates doing tasks ...
Thousands of trained graduates ...

The essence of Artificial Intelligence is the ability to train intelligent tools to recognize types of objects, to identify patterns and over time and chains of cause and effect. AI is used at multiple points in the Uearth AI process to ingest, understand, store and search for information. These AIs are trained initially to understand the context of the organisation and its data and learn over time, continuing to improve search results

In years to come, AI will dramatically alter almost every aspect of the insurance industry. Uearth AI will provide your organisation with the ideal platform to make the most of these existing changes.



Integrate

Uearth can bring together information from over 200 sources, including repositories on-premises and in the cloud, data from various business systems like CRM, HRIS and finance systems, documents that have been scanned, and information from the web and from social media.

Uearth can consume data from and virtually any kind of file:

- It can turn old, physical or scanned documents into searchable and valuable data through a unique process
- It can extract spoken words from video or audio files
- It can deal with documents in virtually any format
- It can extract data from CAD files and diagrams

Uearth integrates content regardless of source location, allowing topic-based libraries of information to be created that span organisational and system boundaries.



Analyse

The Uneath AI Knowledge Store is organised into subjects, allowing content to be categorised into one or more areas, with the methods used to categorise and find content able to be tuned from one subject to another.

Uneath AI analyses ingested information using an extensible, trained AI model and decides how to process it based on various configurable factors such as source, document type and so on.

For documents, Uneath AI performs a set of complex AI-powered analysis tasks to extract the *meaning* from documents. Information contained in images, diagrams, maps, video and audio is extracted and analysed. The meaning of sentences, paragraphs and documents is understood. Documents are categorised by type, such contracts, agreements, findings and so on.

The location and timeframe that each piece of content relates to is extracted. Technical terms and acronyms are all brought to a common understanding. Importantly, the security context of all information is extracted and stored with the metadata.

1touch™

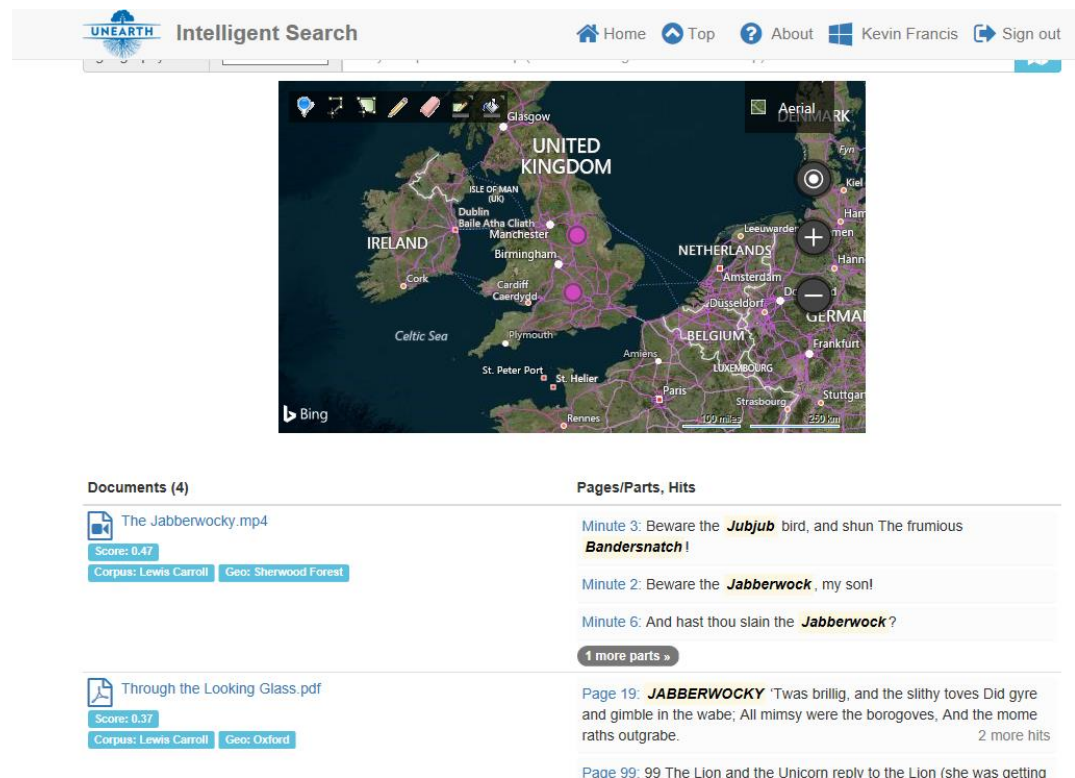
Uneath can include the patented 1touch software, also developed by Wild Mouse. 1touch uses AI to extract data from transactional documents such as receipts in a highly accurate manner despite changing formats of ingested documents. It can deal with missing information and is able to cross-check to rate the accuracy of its processing itself. By using this, the processing of many types of paper documents such as claims, and associated receipts can be automated and accelerated, providing an effective check and reducing fraud.

Discover

Uneath AI provides the optimal experience to empower people within organisations to make informed decisions by providing access to a range of correct and up-to-date information.

The Uneath AI Knowledge Store can be searched with natural language or special search syntaxes developed especially for organisational scenarios. The search UI is configurable, and an API allows searching from other systems. Feedback is gathered from the search experience explicitly and implicitly, helping Uneath AI to provide more accurate results over time.

Results are ordered by document importance based on configuration. Results can be mapped, and selected by location, as well as by time from a timeline. Filtering and facets allow documents to be identified easily within results. Each positive search result is shown as an extract from the source document, file or data. Files are opened from their



The screenshot displays the Uneath Intelligent Search web interface. At the top, there is a navigation bar with the Uneath logo, the text 'Intelligent Search', and links for Home, Top, About, and a user profile for Kevin Francis with a Sign out option. Below the navigation bar is a map of Europe with various cities and regions labeled, including Glasgow, Dublin, Manchester, Birmingham, Cardiff, Caerdydd, Plymouth, St. Peter Port, St. Helier, Amiens, Paris, Rennes, Leeuwarden, Amsterdam, Dusseldorf, Frankfurt, and Stuttgart. The map is overlaid with a network of purple lines. Below the map, there are two search result sections. The first section is titled 'Documents (4)' and shows a result for 'The Jabberwocky.mp4' with a score of 0.47, Corpus: Lewis Carroll, and Geo: Sherwood Forest. The second section is titled 'Pages/Parts, Hits' and shows three results: 'Minute 3: Beware the **Jubjub** bird, and shun The frumious **Bandersnatch**!', 'Minute 2: Beware the **Jabberwock**, my son!', and 'Minute 6: And hast thou slain the **Jabberwock**?'. There is a '1 more parts >' button below these results. The bottom result shows 'Page 19: **JABBERWOCKY** 'Twas brillig, and the slithy toves Did gyre and gimble in the wabe; All mimsy were the borogoves, And the mome raths outrgabe. 2 more hits' and 'Page 99: 99 The Lion and the Unicorn reply to the Lion (she was getting



original location. Documents can be opened to the page where the result was found, the minute in the video where the words were spoken and so on.

It also respects security so that users can't see search results from documents or data that they wouldn't otherwise be able to open.

The result is the ability to find things easily, without the need to match words exactly or directly search multiple locations.

Take Action

Unearth AI provides even more value though: It can decide to take action on information as it appears in systems and repositories that it has a view of. Some examples of this process include:

- Emails received can be assessed, routed appropriately, replied to and archived automatically
- Documents can be checked for appropriate format, content and metadata and saved to a repository when correct
- Business processes can be monitored for compliance
- Documents that include maps or images might receive special, advanced AI-powered visual processing
- Documents identified as receipts, purchase orders and so on might be verified and processed and checked to correctness and against potential for fraud

For more advanced scarious Unearth can integrate Veriluma IP. Veriluma is a human reasoning AI platform that can make complex decisions using a lot of data points that simulate human approaches to reasoning.



Meeting Health Insurance Challenges

Uneath AI is a powerful platform that provides solutions to complex problems. The unique set of technologies and approaches provided by Uneath AI can allow problems that might have been difficult to solve using traditional approaches.

Claims and Document Processing

Uneath AI can process a range of scanned documents using the integrated 1touch product. Through this, Uneath AI extracts key information from documents allowing, effectively, the process of manually entering data from those documents to be automated by Uneath.

For claims processing, additional processing is possible including checking receipts to make sure they are valid and even using Veriluma for detailed fraud detection. Uneath can be integrated into other systems, including into your organisation's iOS or Android app to provide rapid, verified, claims processing and payment.

For other documents such as medical documents, admission forms and other documents, Uneath is able to process long, multi-page forms, is able to save both the original document as a scan and the data extracted automatically, linked together and validate and enter data into relevant systems.

Uneath AI provides the tools to streamline processing without the need to replace paper and reengineer entire processes, saving money while improving customer service.

Web Search

As organisations grow, so does their web presence. This is not a simple process though, with a result often being a difficult mix of web technologies, content management systems and other platforms that may not even be under the organisation's control. Uneath AI can consume and integrate all of this content, regardless of source and type, and provide a single search experience across it all, integrated into the look and feel of your web site. The ability to prioritise results and faceted searching can be used to optimise results. The ability to surface Uneath AI through an API can allow searching and results to be integrated into sites and into apps.

Single Customer View

Customers have an expectation that when they deal with an organisation that organisation will know who they are and act accordingly across all an organisation's touch points. This becomes complex as organisations merge. The traditional approach might be to merge systems together – whether it be line-of-business systems, forms, or processing systems. Uneath AI provides an alternative approach where it can integrate data together across systems and silos. So, a search for a customer through Uneath could readily find customers in all the systems it is able to access, as well as related documents if necessary. This might not be a final solution, but it does provide an effective mechanism for staff to provide effective customer service.

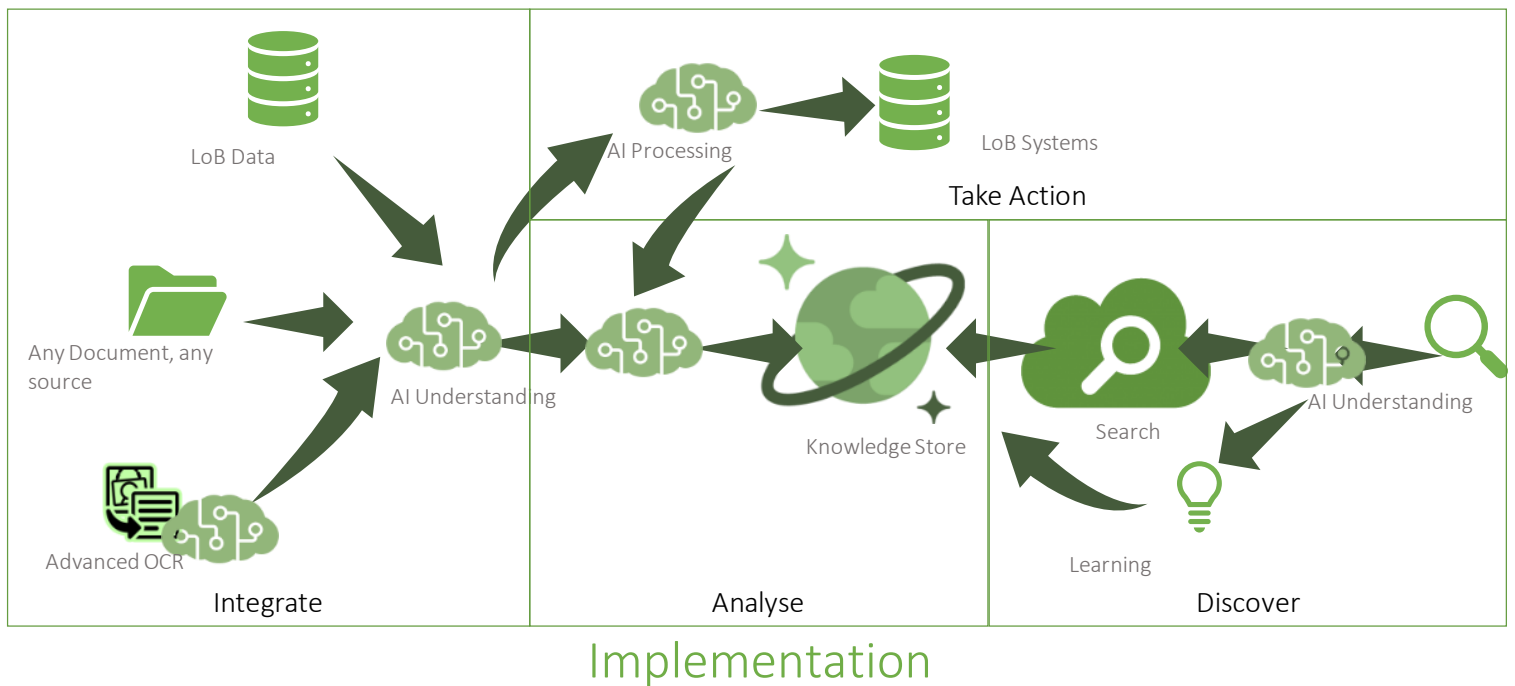
The Technology

Uneath is hosted on the Microsoft Azure platform and uses numerous cognitive services tools provided by Microsoft. This provides scalability, reliability, security and hosting in your preferred location. On premises hosting is possible. It can be hosted in your Azure own instance or Data Centre or provided as a SaaS solution. The use of AI building blocks developed by Microsoft allows the product to make use of the continual improvement of the Azure platform.

Uneath AI integrates with Azure AD to provide single sign-on.

Detailed technical information can be provided on request for your IT team and architecture workshops are welcomed.





As a platform, Uneath AI can be as light touch or as integrated as required. As a cloud platform it effectively runs as a stand-alone SaaS platform and uses integration tools that are common, cheap and easy to implement to pass information in and out of the platform. It stores a minimum of metadata in its own cloud-based data store and does not move documents or data from the source locations.

Uneath is implemented in phases, guided by Wild Mouse, with each phase adding further capabilities.

After an initial design of the knowledge structure, connection of Uneath to the organisation's security infrastructure and setup of admin users, the data sources are connected to Uneath AI and an initial ingestion occurs. An ingestion for searching, even across repositories, systems and organisational boundaries generally takes only a modest amount of effort to produce valuable outcomes.

The real value comes from a design process though that will configure the Corpora for the organisation and its industry, allowing Uneath to complete its full contextual understanding and provide maximum value. This process can be carried out over time, while the system is running, through a combination of efforts by business subject matter experts, IT and some assistance from Wild Mouse if needed.

Later, point additional, specialised AI tools may be implemented, such as specialised image recognition, 1touch or Veriluma. It is this step that, while being more intensive, provides outcomes that offer significant business benefits.

Next Steps

For a demonstration of the product and to discuss the technology and how it might work for your organisation contact Kevin Francis on 0438 307 080 or at letschat@wildmouse.com.



Wild Mouse is the inventor and developer of Uneath. It is home to top Australian data scientists and information specialists to ensure an effective implementation and integration. Grounded in the complexity of architecture and engineering, Wild Mouse has experience with large project delivery (\$30m+), experience in government (\$10m+). A truly innovative local business, Wild Mouse are local leaders in Artificial Intelligence and have an excellent relationship with Microsoft.





Unearth AI

for Insurance

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wild  **ouse**
we scare elephants

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