

AI-Powered Navigation of Northern Ireland's Skills Ecosystem

The Employer Compass

Developing and Testing a Conversational AI Assistant for
Employers, Using Apprenticeships as the Initial Use Case

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Table of Contents

- Executive Summary** 1
- 1. Introduction and Project Background** 6
 - 1.1 Problem which the project addresses.....6
 - 1.2 Project aims and objectives 7
 - 1.3 Project scope and focus 8
 - 1.4 Stakeholders.....8
 - 1.5 Target outputs 9
- 2. Methodology**..... 10
 - 2.1 Stage 1: Discovery phase and stakeholder consultation 11
 - 2.2 Stage 2: Knowledge curation and system architecture 11
 - 2.3 Stage 3: AI development and user experience design 12
 - 2.4 Stage 4: Stakeholder showcase, user testing, and scalability planning 13
- 3. The NI Employer Compass: Our Solution** 14
 - 3.1 The three solution pillars..... 14
 - 3.2 Data sources..... 15
 - 3.3 Screen by screen walkthrough 16
 - 3.3.1 Guided pathways 17
 - 3.3.2 Tell us about your company 17
 - 3.3.3 Chat response and saved insights..... 19
 - 3.3.4 Conversation history 21
 - 3.3.5 Explorer view..... 22
 - 3.3.6 Usage intelligence and policy insights..... 23
- 4. Pilot Findings and Evaluation** 24
 - 4.1 Evaluation Methodology 24
 - 4.1.1 Recruitment and employer profiles..... 24
 - 4.1.2 Session structure 26
 - 4.2 Quantitative findings 27
 - 4.2.1 Aggregate observations..... 28
 - 4.3 Qualitative themes 29
 - 4.4 Stakeholder showcase and feedback sessions..... 31
 - 4.5 What the evaluation tells us about impact..... 32
- 5. Policy Insights and Recommendations** 33
 - 5.1 Recommendations for policy and practice 33
- 6. Future Development and Scaling Opportunities** 35
- 7. Project Limitations**..... 36
- 8. Further Information and Future Collaboration**..... 36
- 9. Appendices**..... 38

List of Tables

Table 1: Stakeholders Engaged During Tool Development 9

Table 2: Data Sources Used 15

Table 3: Employer Profiles 25

Table 4 Usability and clarity scores.....27

Table 5: Content and usefulness scores 28

Table 6: Confidence and next steps scores..... 28

List of Figures

Figure 1: Landing screen 16

Figure 2: Guided Pathways 17

Figure 3: Tell Us About Your Company Guided Pathway 18

Figure 4: Tell Us About Your Company Conversational 18

Figure 5: Example Chat Response for a Software Apprenticeship 19

Figure 6: Saved Insights from Searches 20

Figure 7: Example Description of a Key Term..... 21

Figure 8: Conversation History 22

Figure 9: Explorer View 23

Executive Summary

The Problem

Northern Ireland's skills and labour market information landscape is highly fragmented. Employers seeking to develop their workforce or address skills shortages must navigate information spread across multiple government departments, agencies, further education colleges, universities, training providers, sector bodies and business support organisations. Information on wider workforce development programmes, funding opportunities and business support is dispersed across multiple government departments, Further Education colleges, universities, training providers and business support organisations. Employers are therefore required to navigate numerous websites and sources of information, with no single, trusted gateway to identify the support most relevant to their business.

For many employers, particularly the small and micro businesses that make up the vast majority of Northern Ireland's business base, this fragmentation represents more than an inconvenience. Unlike larger organisations, these firms rarely have dedicated HR, learning and development, or workforce planning functions. Time spent searching for information competes directly with running the business, meaning that potentially valuable skills interventions are often overlooked simply because they are difficult to locate, understand or compare.

The result is a navigation problem. Employers frequently know they need support but do not know where to begin. This was acknowledged in the Public Accounts Committee report on developing the skills for Northern Ireland's Future (Northern Ireland Assembly, 2025). Instead of a simple user journey, they encounter multiple websites, inconsistent terminology, differing eligibility criteria and duplicated or overlapping information. Determining which schemes exist, whether funding is available, which providers deliver them and how to access support often requires significant time and effort.

This navigation challenge creates unnecessary friction within Northern Ireland's skills ecosystem. Businesses may delay or abandon engagement with workforce development opportunities, not because there is a lack of demand, but because the pathway into the system is overly complex. This is particularly significant for SMEs, which consistently report limited management capacity and time to engage with training and workforce development, despite continuing recruitment difficulties and skills shortages identified through employer surveys.

This is particularly evident for apprenticeships, which represent one of Northern Ireland's flagship workforce development programmes, enabling businesses to recruit and develop skilled employees while providing individuals with the opportunity to earn while gaining nationally recognised qualifications. More than 13,000 individuals currently participate in ApprenticeshipsNI programmes across Northern Ireland, supported by over 1,000

employers spanning businesses of all sizes. However, despite the strategic importance of apprenticeships, the employer journey remains a challenge, with information distributed across multiple government websites, training provider pages, college websites and funding guidance.

An employer considering recruiting an apprentice may need to answer numerous practical questions before taking the first step:

- Which apprenticeship level is most appropriate?
- Which frameworks are available?
- Am I eligible for financial support?
- Which training providers deliver the programme?
- What are the employer responsibilities?
- How much off-the-job training is required?
- What does the recruitment process involve?

While each organisation provides valuable information, employers are often required to search across multiple sources that use different language, formats and navigation structures. For busy businesses, particularly SMEs, this creates unnecessary complexity and increases the likelihood that apprenticeship opportunities are overlooked.

Our Response

The aim of this project was to develop and test a pilot AI platform to explore whether conversational artificial intelligence (AI) could reduce the complexity of accessing workforce development information by providing employers with an intelligent navigation layer across Northern Ireland's fragmented skills ecosystem.

The NI Employer Compass is an AI-powered Skills Navigation Platform designed to simplify how employers access workforce development support in Northern Ireland. Rather than creating another static website or replacing existing information sources, it acts as an intelligent navigation layer that brings together information from across the skills ecosystem. By asking employers simple questions about their business and workforce needs, the Compass translates complex guidance and policy information into practical, personalised guidance and clear next steps.

Developed by Intrinsic AI and Pivotal Policy in collaboration with the EPIC Futures NI Policy Innovation Partnership, and funded through the EPIC Futures NI Phase 2 Policy Commissioning Call, the pilot uses apprenticeships as the first proof of concept for a wider AI-powered Skills Navigation Platform. Apprenticeships were deliberately selected because they are one of Northern Ireland's flagship workforce development programmes, yet employers continue to experience significant challenges identifying relevant opportunities, understanding eligibility requirements and navigating the information needed to engage with them.

The pilot focused on apprenticeship provision available to employers within the Belfast City Council and Derry City and Strabane District Council areas, drawing together information

from Further Education colleges and private training providers operating across both council areas. Rather than requiring employers to search across numerous websites and guidance documents, the Compass gathers enough context through conversation to provide tailored recommendations, relevant provider options, funding information and practical next steps.

While the pilot focuses on apprenticeships, the underlying architecture has been designed to demonstrate a much broader opportunity. The same AI-powered navigation approach could be extended to support employers in accessing the wider skills and business support ecosystem, including Skills Focus, Higher Level Apprenticeships, innovation support, employability initiatives, management and leadership development, and future workforce development programmes. The long-term vision is not to replace existing services, but to provide a single intelligent navigation layer that helps employers discover, understand and access the support already available across Northern Ireland's skills ecosystem.

The platform was developed through an iterative, user-centred process involving sixteen stakeholder interviews, workshops, demonstrations and user testing sessions with employers, policy makers and skills providers, ensuring that both the technical solution and user experience were informed by the needs of end users throughout the development process. This report describes the platform, the findings from the pilot evaluation and provides a roadmap for future development.

Headline Findings

- Every employer who took part in user testing described the current apprenticeship information landscape as fragmented, time-consuming and reliant on personal contacts or chance discovery. The Compass's ability to aggregate information from multiple sources into a single conversation was the most consistently praised feature across all user testing sessions.
- Confidence and intent scores were strong. Participants rated both their likelihood of using the tool again and their confidence in navigating it independently at 4.7 out of 5, including users who also identified areas for usability improvement.
- Financial clarity is the first information SMEs need. Before engaging with programme details, small business owners wanted an immediate, plain-language explanation of what a scheme would cost, what funding was available and what financial commitment would be required. This information should be surfaced at the earliest stage of the user journey.
- The language of the apprenticeship system is a barrier in its own right. Terms such as *frameworks*, *levels* and *funding models* were unfamiliar to employers without prior experience of the skills system. The interface therefore needs to translate policy and education terminology into clear, business-focused language.
- The tool will only create value if employers know it exists. Stakeholders and users alike identified distribution and proactive outreach as critical to adoption. Integration with trusted employer-facing channels, such as Invest NI's Business Info NI portal, local councils and university employer engagement services, was identified as the most effective route to reach SMEs at the point they need guidance.

Overall, the findings and pilot suggests that AI can significantly reduce the complexity of navigating Northern Ireland's skills ecosystem. By bringing together fragmented information into a single conversational interface, the pilot demonstrated how AI can simplify employer journeys, reduce search time and translate complex policy information into personalised, business-focused guidance. The findings suggest that AI has the potential to become a scalable front door to Northern Ireland's wider skills and workforce support system.

Policy Recommendations

1. Develop a Common Skills Data Standard

The Northern Ireland Government should establish and maintain a common, open data standard for skills and workforce development programmes, requiring publicly funded organisations to publish programme information in a consistent, machine-readable format. This would provide the digital foundation on which AI-powered navigation tools and future digital services can operate effectively, while improving interoperability across the wider skills ecosystem.

2. Progress the Compass Beyond Proof of Concept

An appropriate public sector partner should explore funding the transition of the Compass from proof of concept to a public beta service by commissioning the proposed Stage 1 development programme, estimated at approximately 69 person-days, to deliver a production-ready platform.

3. Adopt AI Powered Navigation Across Public Services

Opportunities should be explored to integrate the underlying AI-powered navigation capability and supporting technical infrastructure, as demonstrated through the Compass pilot, within existing employer-facing digital services, including Business Info NI, local authority business support services, government digital services and other online platforms supporting skills, workforce development and business growth. This would complement existing digital services by providing an AI-powered navigation layer that helps employers discover, understand and access relevant programmes and support more efficiently.

4. Improve the Quality and Currency of Published Skills Information

Further Education colleges, universities, training providers and other delivery organisations should ensure that information on programmes, eligibility, funding and application processes is accurate, comprehensive and regularly updated. Publishing high-quality digital content in structured formats will improve consistency for employers while enabling AI-powered navigation tools and other digital services to provide reliable, up-to-date guidance.

5. Establish Cross-Government Governance and Evaluation

A cross-departmental steering group involving the Department for the Economy, the Department for Communities and relevant delivery partners should be established to oversee the platform's future development, governance and expansion. The group should ensure that insights from employer interactions inform regional skills policy, future service design and the emerging Labour Market Observatory being developed through EPIC Futures NI. It should also oversee a programme of ongoing monitoring and independent evaluation to assess user engagement, system performance, employer outcomes and wider policy impacts. This evidence should be used to inform continuous improvement of the platform and to build the evidence base and business case for the wider adoption of AI-powered navigation capabilities across public services in Northern Ireland.

1 Introduction and Project Background

Northern Ireland's ability to increase productivity, create good jobs and respond to changing economic and workforce needs depends on employers being able to access the right skills and training support. The *Northern Ireland Skills Barometer 2023 to 2033* forecasts an average annual undersupply of approximately 5,440 appropriately qualified people, with the most significant shortages expected at RQF Levels 3 to 5 (Ulster University Economic Policy Centre, 2025¹). Improving how employers engage with skills and workforce development opportunities is therefore an important economic and policy priority.

Northern Ireland has an extensive range of skills programmes, funding opportunities and business support. However, information about this support is spread across government departments, public agencies, Further Education colleges, universities, training providers, councils, sector bodies and business support organisations. Employers encounter the system through multiple websites, guidance documents and organisational entry points, with no single trusted gateway through which they can identify and compare the support most relevant to their business.

This fragmentation is particularly challenging for small and micro businesses, which often lack dedicated human resources, learning and development or workforce planning functions. Time spent searching for information competes directly with running the business, and potentially valuable opportunities may be overlooked because they are difficult to locate, understand or compare. The Northern Ireland Assembly Public Accounts Committee acknowledged this problem, concluding that businesses find the skills landscape confusing to navigate and that small and micro businesses experience particular difficulty engaging with it (Northern Ireland Assembly Public Accounts Committee, 2025²).

This project responded to that navigation challenge by developing and testing the NI Employer Compass, a conversational AI tool designed to help employers discover, understand and access existing skills and workforce development support. Apprenticeships were selected as the first use case because of their importance to workforce development and the practical challenges employers face when identifying suitable frameworks, understanding eligibility and funding, finding providers and taking the next step. The pilot also tested a wider model that could, in future, support employer access to a broader range of skills programmes, funding opportunities and business support.

¹ Ulster University Economic Policy Centre (2025) *Northern Ireland Skills Barometer 2023 to 2033*, available at: <https://www.economy-ni.gov.uk/publications/skills-barometer-2023-2033> (accessed 20 July 2026).

² Northern Ireland Assembly Public Accounts Committee (2025) *Report on Developing the Skills for Northern Ireland's Future*, Report NIA 91/22-27, Northern Ireland Assembly, available at: <https://www.niassembly.gov.uk/assembly-business/committees/2022-2027/public-accounts/reports/report-on-developing-the-skills-for-northern-irelands-future/> (accessed 20 July 2026).

1.1 Problem which the project addresses

Northern Ireland's apprenticeship landscape presents a genuine and underappreciated access problem. Scheme information, eligibility criteria, and application pathways are distributed across a wide range of provider websites, government portals, and third sector platforms, with no single, reliable entry point for an employer who simply wants to know what is available to them. NIDirect, NI Business Info, the Department for the Economy website, Further Education college catalogues, and private provider listings each hold part of the picture, but none holds all of it.

For larger organisations with dedicated HR or training functions, this fragmentation is an inconvenience. For small and micro businesses, it is a meaningful barrier. An SME owner looking to take on their first apprentice must navigate questions of scheme level, funding eligibility, off-the-job training requirements, provider choice, and wage obligations, across multiple sources that use inconsistent terminology and are updated at different rates. The administrative burden is clear, and the consequence is that many employers who would benefit from apprenticeship programmes simply do not pursue them. The demand exists but the pathway to it has hurdles.

This difficulty is compounded by the structural complexity of the Northern Ireland apprenticeship system itself. Provision is split between the ApprenticeshipsNI programme and the Apprenticeship Levy framework, with Level 2 and Level 3 frameworks representing the highest volume of SME relevant entry points. Funding arrangements, eligibility conditions, and provider coverage vary across frameworks and across council areas. A business in Derry operating in the hospitality sector faces a materially different landscape than a business in Belfast operating in digital services, yet both are expected to navigate the same fragmented web of information.

1.2 Project aim and objectives

The project set out to develop and pilot a novel conversational AI assistant that simplifies and centralises access to apprenticeship information for employers in Northern Ireland. Rather than adding another portal to an already crowded information landscape, the NI Employer Compass acts as a guided navigator, meeting employers where they are and helping them move from uncertainty to informed action.

The pilot focuses on apprenticeships as the first use case. This decision was deliberate: apprenticeships represent a concrete, high demand entry point for SMEs and provide a tractable scope within a six month pilot. The data architecture, conversational design, and shortlist features are, however, intentionally generalisable, and are designed to extend to wider skills programmes, funding and grants, and other forms of employer support in subsequent phases of work.

The project pursued five strategic objectives in service of this aim.

- The first was to empower SME discovery by simplifying complex eligibility and scheme details through a natural language interface, removing the requirement for employers to understand the system before they can navigate it.
- The second was to establish a Gold Standard data schema: a technical standard for apprenticeship information covering titles, levels, eligibility, funding, duration, and provider, applied consistently across all ingested sources.
- The third was to generate policy intelligence by surfacing demand gaps and search themes from user interactions, providing policymakers with a live signal of what employers are looking for and where provision is absent or hard to find.
- The fourth was to build a flexible integration-easy architecture designed for future alignment with other portals or services.

1.3 Project scope and focus

The pilot scope is apprenticeships. More specifically, it covers the discovery, comparison, and actioning of apprenticeship frameworks available to employers in the Belfast City Council and Derry City and Strabane District Council areas, drawing on provision from Further Education colleges and private training providers operating in those geographies.

The focus on apprenticeship access and actioning was a considered choice. The practical goal for an employer using the tool is not simply to learn that apprenticeships exist, but to arrive at a clear picture of which framework is relevant to their business, what it requires of them, who delivers it nearby, and how to take the next step. The tool is therefore designed around the full journey from initial awareness through to a concrete call to action.

The architecture is intentionally built beyond this scope. The same data schema, ingestion pipeline, conversational engine, and shortlist features will support wider employer support categories in future phases. The near term expansion path includes skills programmes beyond apprenticeships, employer facing funding and grant schemes, and incentives for inclusive hiring and workforce development. The tool's Explore Topics structure already surfaces these categories to users, signalling the direction of travel while keeping the current scope focused and testable.

1.3 Stakeholders

The project engages a focused set of stakeholders, each with a defined role in shaping or benefiting from the tool.

Table 1: Stakeholders Engaged During Tool Development

Commissioning and oversight	The project was commissioned under the EPIC Futures NI Phase 2 Policy Commissioning Call, Route 1, Theme 8, which concerns AI and digital capability in inclusive workplaces. Ulster University acts as the lead academic partner.
Local government sponsors	Belfast City Council and Derry City and Strabane District Council are the primary local partners. Both councils provided strategic input during the discovery phase, helping shape the tool's scope and focus. The pilot's geographic focus on these two council areas reflects their commitment to improving employer engagement with apprenticeship programmes within their development strategies.
Policy and research	Pivotal, Northern Ireland's independent public policy think tank, is the embedded research and policy partner. Pivotal's role spans the full project lifecycle, from guiding data discovery and persona development to co-authoring the policy briefing and translating the tool's evidence base into recommendations for government.
Beneficiaries and downstream users	The primary user group is local businesses across who are considering taking on an apprentice or who want to understand what support is available to them. Secondary users include apprenticeship providers, who benefit from improved employer awareness of their offer, and policymakers within the Department for the Economy and the Department for Communities, who benefit from the demand intelligence generated by the tool. An emergent user was identified through engagement with Invest Northern Ireland, who saw an opportunity to apply the solution to their Business Info NI website

1.5 Target Outputs

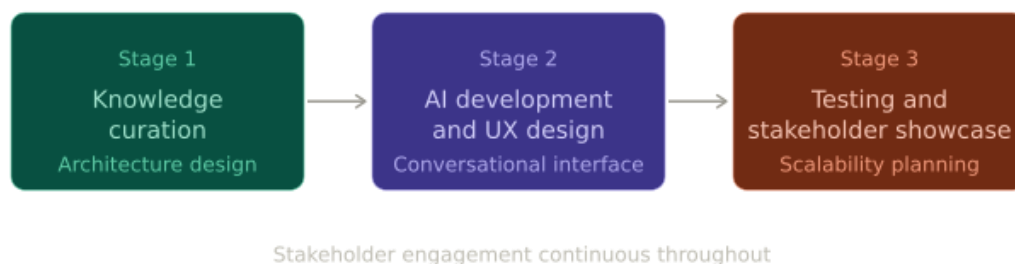
The project committed to deliver five interlocking outputs, each designed to be useful in its own right and mutually reinforcing when taken together.

- The first output is a functional proof of concept conversational AI assistant, the NI Employer Compass, demonstrating the core capabilities of guided apprenticeship discovery, free text search and other features.

- The second output is an example of a centralised Knowledge Base containing structured, apprenticeship information drawn from authoritative public sources across the pilot area.
- The third output is a policy briefing, co-produced with Pivotal, summarising the project's findings and providing clear, actionable recommendations for the Department for the Economy, the Department for Communities, and relevant local government partners.
- The fourth output is a scalability roadmap setting out the technical and strategic steps required to develop the proof of concept into a full scale public service, including the expansion path to wider skills and employer support.
- This report functions as the fifth, which is the spine that connects all the other outputs.

2. Methodology

The project followed a three-stage, agile approach informed by action research principles. This combined iterative software development with continuous stakeholder engagement, recognising that a proof of concept in a rapidly evolving domain such as conversational AI could not be fully specified at the outset. The rationale for adopting this approach was straightforward: a proof of concept in a domain as fast-moving as conversational AI requires the ability to learn and adapt throughout delivery. Rather than following a linear waterfall process, the project progressed through iterative cycles of discovery, development, stakeholder engagement, testing, reflection and refinement. Decisions made during the discovery phase directly shaped the demonstrator build, while feedback from employers and other stakeholders informed successive iterations before the final evaluation and reporting stage. This approach enabled both the development of a user-centred solution and the generation of practical insights into employer needs.



2.1 Discovery phase and stakeholder consultation

Two workshops were held with key stakeholders (n=10) to discuss the scope and potential of the platform. This involved engaging with:

- The EPIC Futures NI team who had a vision on how AI can be helped to democratise labour market and skills knowledge. They shared early consultations and ideas which informed the boundaries of this pilot.
- Belfast City Council who were also pursuing the development of an employer navigator tool. Belfast City Council had received Ufi VocTech Trust³ funding and to avoid duplication of efforts, they shared some of their initial scoping documentation and direction of travel for their ideas. These interactions also discussed how this funded pilot platform could help them with their scoping phase and inform their strategy for the future technical solution they will develop.
- Derry and Strabane City Council who discussed the usefulness of such a tool and signposted information.

2.2 Stage 2: Knowledge curation and system architecture

The next stage built the foundation for everything that followed. The primary output was a structured knowledge base of apprenticeship information drawn from a subset of authoritative public sources, together with the solution architecture design underpinning the NI Employer Compass.

Sources used: The Knowledge Hub draws on the following primary sources seen in section 3.2.

From Gold Schema to graph structure. During the discovery phase it became clear that a traditional relational or document-based approach to the Knowledge Hub would not adequately capture the interconnected nature of apprenticeship data. A scheme is not simply a flat record: it has relationships to providers, to funding routes, to eligibility conditions, and to related frameworks that matter to an employer making a decision. To reflect this, the dataset was implemented as a graph data model using Neo4j. Each scheme, provider, level, and funding route becomes a node in the graph, and the relationships between them are modelled as typed edges. This architecture, known as a GraphRAG (Graph Retrieval Augmented Generation) approach, allows the conversational AI

³ UFI VocTech Trust provides grant funding for vocational technology ranging from £10K to £250K. See their website for more details: <https://ufi.co.uk/grant-funding/>

to traverse these relationships at query time, returning richer and more contextually relevant answers than a flat keyword search would allow.

Data ingestion framework. The ingestion pipeline combines automated web extraction with curated grounding documents. Source pages are fetched and parsed to extract unstructured text, which is then processed through a normalisation layer before being mapped into the Neo4j graph. We have provided a number of methods of data ingestion including Website Scraping, Manual Data Curation via a set of Forms and File Upload. We investigated live search as one of our data ingestion approaches however didn't implement it as part of the current scope of work.

2.3 Stage 3: AI Development and user experience

The second stage built the conversational assistant and the surrounding web interface. The governing design principle throughout was to hide the complexity of the underlying graph data behind a simple, accessible conversation. An employer should not need to understand how the knowledge base is structured in order to benefit from it.

Conversational design. The assistant operates in two modes. Guided Mode is a structured warm start questionnaire for employers with little or no prior knowledge of apprenticeships. It gathers context progressively, including business size, sector, hiring timeline, and familiarity with apprenticeship funding, and uses these inputs to generate tailored recommendations. 'Ask Anything' is a free text mode for employers who have a specific question or who prefer to navigate on their own terms. In both modes, the assistant can ask refinement questions back to the user where a query is too broad to answer usefully without further context.

User experience principles. Three principles guided interface design. First, a chat first landing experience with clear and equal entry points to both modes, so that neither experienced nor inexperienced users are disadvantaged by the default view. Second, target alignment with WCAG 2.2 web accessibility guidelines, ensuring the tool is usable by SME representatives across the range of technical backgrounds and accessibility needs.

Technology. The application is built on a FastAPI (Python) backend and React/TypeScript frontend, deployed on Microsoft Azure using App Service for compute, PostgreSQL Flexible Server for relational data, and Neo4j for the knowledge graph - all provisioned via Infrastructure-as-Code (Bicep). The architecture follows a vertical-slice pattern, organising each domain area (frameworks, RAG, graph queries, user management, scraping, etc.) as a self-contained feature module, keeping the codebase modular and independently testable.

The conversational layer is powered by an OpenAI-compatible LLM (currently configured against a gpt-5.4-mini model via the OpenAI API) using a hybrid retrieval approach. When a

user submits a message in the Navigator chat, the backend performs two simultaneous lookups before calling the LLM: a vector similarity search over RAG chunks stored in PostgreSQL (pgvector, using OpenAI text-embedding-3-small 1536-dimensional embeddings) to surface relevant policy and programme content; and a graph traversal query against Neo4j using the neo4j-graphrag library, which follows entity relationships (frameworks → providers → skills) to enrich the response with structured, relationship-aware context. The combined context is injected into the LLM system prompt alongside the user's message. Multi-turn conversation is maintained by persisting the full message history to PostgreSQL and replaying it as the conversation thread on each call, enabling coherent follow-up questions across a session. Responses are streamed back to the frontend in real time via Server-Sent Events (SSE), with the UI automatically detecting framework references in the reply and rendering interactive shortlist cards. A separate guided-discovery mode collects structured employer profile data through a questionnaire flow before invoking a tailored prompt, giving the LLM richer context for sector and size-specific recommendations.

2.4 Stage 4: Stakeholder showcase, user testing and scalability planning

The third stage moved from building to evidence gathering. The working tool was demonstrated to 21 stakeholders in a workshop comprised of individuals from across councils (Belfast City Council and Derry and Strabane District Council), policy makers (Department of the Economy, Department for Communities, Invest NI), business representatives (Federation of Small Business and Northern Ireland Chamber of Commerce) and the EPIC Futures team. Their feedback led to further refinement and iterations which were then tested with real employers (n=10) which in turn led to further iterations of the tool and platform. These interactions also informed the policy briefing and scalability roadmap. The outputs in this report represent the finalised, fully refined tool.

The detailed methodology for user testing, including the session structure, survey instrument, and analytical approach, is set out in Section 4. The scalability roadmap is addressed in Section 6.

3. The NI Employer Compass: Our Solution

The NI Employer Compass is a web based conversational AI assistant that acts as a single, guided front door to apprenticeship information for employers in Northern Ireland. While developed within the apprenticeship domain, the underlying approach is transferable to other contexts characterised by fragmented knowledge and information landscapes. It is designed to support employers regardless of their existing knowledge or familiarity with the apprenticeship system. Rather than assuming users know which schemes, providers or qualifications to search for, it enables them to explore options through natural language conversation. Consequently, it is equally valuable for a business owner considering hiring an apprentice for the first time, with little understanding of the available pathways, as it is for an experienced employer wishing to compare specific apprenticeship frameworks, funding arrangements or training providers. By reducing the need for prior system knowledge, the NI Employer Compass lowers informational barriers and provides a more accessible, user-centred route to navigating complex information..

The core design principle is to replace fragmented, search-led information retrieval with a guided conversational experience. Rather than directing employers to a static webpage listing apprenticeship schemes and expecting them to navigate complex eligibility criteria, provider information and funding arrangements independently, the Compass engages users in natural language dialogue to understand their circumstances and information needs. Based on this interaction, it presents tailored guidance and a clear pathway to relevant opportunities. Instead of leaving with multiple browser tabs and unanswered questions, employers complete the interaction with a focused shortlist of options and practical next steps.

The pilot was intentionally scoped to apprenticeships, through consultation with stakeholders. This reflects both an identified employer need which has knowledge boundaries and the practical constraints of delivering a demonstrator within a six-month proof-of-concept project. However, the underlying architecture was designed to be domain-agnostic. The data pipeline, knowledge graph, conversational AI engine and recommendation functionality can be extended to support additional employer-facing services, enabling the platform to evolve into a broader entry point for business support, skills, funding and workforce development information.

3.1 The three solution pillar

The tool rests on three interlocking components. Each pillar was designed to be independently solid but to compound in value when combined.

Pillar 1: AI interface and smart navigation. The conversational layer presents two modes: a structured guided experience for employers approaching apprenticeships for the first time,

and a free text mode for those with a specific question in mind. Both modes draw on the same underlying knowledge base and can ask refinement questions back to the user when a query needs more context to be answered well.

Pillar 2: The Knowledge Hub. The knowledge base is built from authoritative public sources, such as from Further Education colleges, private providers, and government guidance pages. These are then ingested, normalised, and mapped into a graph structure using Neo4j, allowing the AI to traverse relationships between schemes, providers, funding routes, and eligibility conditions rather than searching a flat list. A Golden Record system ensures that when source information changes, the tool's answer changes with it.

Pillar 3: User interaction and the Shortlist. The Shortlist is the tool's call to action layer. Employers can save schemes of interest as they browse, compare saved items side by side using the Gold Schema fields, and receive similar scheme suggestions based on the contents of their list. The Shortlist persists across a session and carries a direct link to the relevant provider application for each saved item.

3.2 Data sources

Table 2: Data Sources Used

Data Source	How we Used The Dataset
Local	This is data curated directly inside the platform itself, for example in the Proof of Concept we manually defined data for Training Providers
Scraped	This is a set of endpoints that can be defined via the platform that will scrape and ingest data from various online sources including content from the Department for the Economy (economy-ni.gov.uk)
File Upload	Data can also be ingested via file uploads including Microsoft Word, PDF and other text formats.
Dynamic Web Search	Implemented initial Web Search into the AI agent flow to allow supplementing core knowledge with live search.

3.3 Screen by screen walk through

The following section details the employer journey through the NI Employer Compass, presented in the chronological order of interaction. Each stage is described according to its functional objective, the specific user segment it serves, and the underlying design intent that informs the interface⁴.

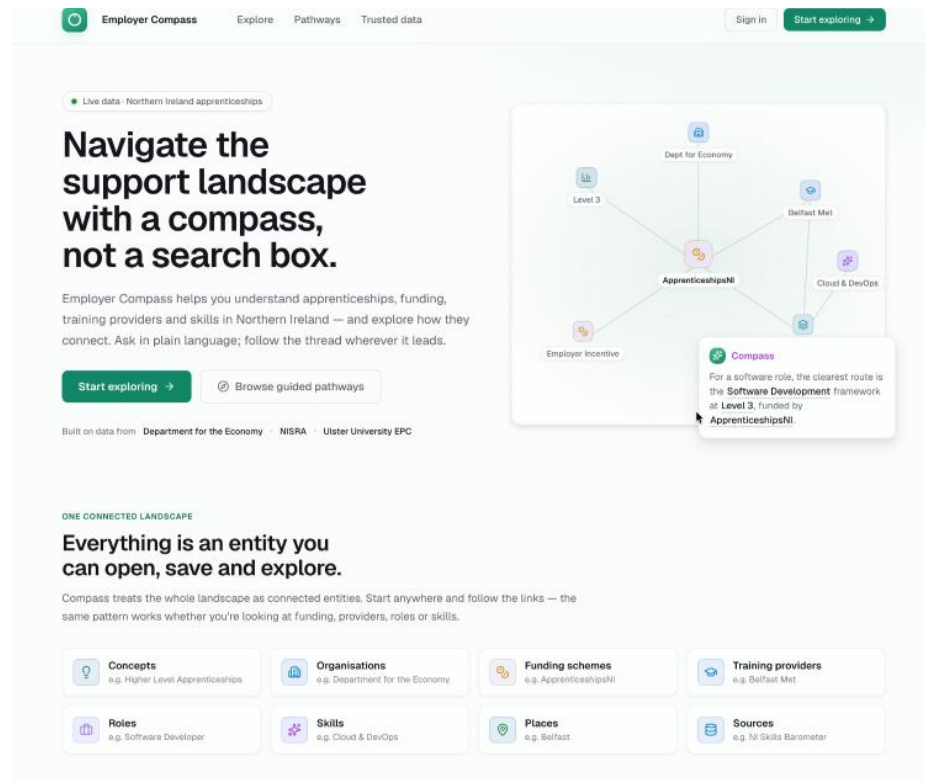


Figure 1: Landing screen

The landing screen functions as the primary entry point for employer engagement. To accommodate varying levels of user intent, the landing page shows users the different ways they can navigate and interact with the platform, including guided discovery pathways, smart chat capabilities and pathways to build a company profile that can be used as context for conversations.

⁴ The original screens and design prior to stakeholder feedback are provided in Appendix 1. Iterative stakeholder feedback helped to improve the user design and interface.

3.3.1 Guided pathways

The Guided Pathways is the initial entry point for users when they first register and provides a set of curated wizards and forms to help understand an employer's needs, and curate an initial prompt for the Compass Ai. A user can also opt to just go directly to the chat interface but using the link at the very bottom, or navigating to the 'New Question' option in the left navigation.

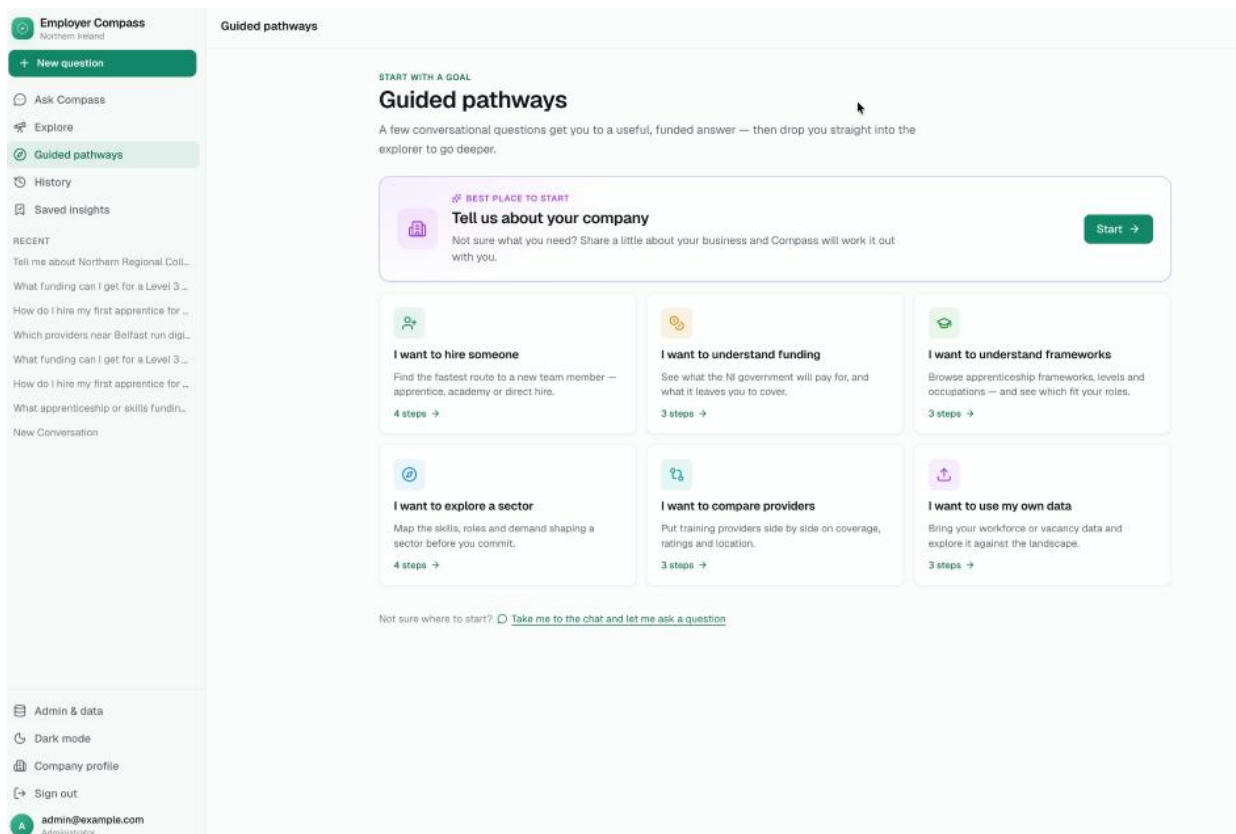


Figure 2: Guided Pathways

3.3.2 Tell us about your company

One of the key highlighted pathways from the initial Guided Pathways screens is the 'Tell us about your company' flow that provides a smart capability to easily understand a business without having to fill out a detailed form. Entering a website and/or a company's house number will help auto populate a profile for the business, allowing them to get started and interact with the platform with a low barrier to entry. Once a profile is populated, it is then used in future interactions and conversations on the platform as context for the underlying A.I.

Employer Compass
 Northern Ireland

+ New question

Ask Compass

Explore

Guided pathways

History

Saved insights

RECENT
 Tell me about Northern Regional Coll...
 What funding can I get for a Level 3 ...
 How do I hire my first apprentice for ...
 Which providers near Belfast run digl...
 What funding can I get for a Level 3 ...
 How do I hire my first apprentice for ...
 What apprenticeship or skills fundin...
 New Conversation

Admin & data

Dark mode

Company profile

Sign out

admin@example.com
 Administrator

← Pathways

Tell us about your company

Tell us about your company

Share as much or as little as you like — even one detail is enough. Compass will build a quick picture of your business and suggest where to start. **Nothing is saved until you say so.**

Company website
 yourcompany.co.uk
 We'll read your services, projects and team.

Companies House number or link
 NI048213 or a link
 Pulls your official sector, age and status.

Describe your business in your own words
 e.g. We're a small joinery firm doing commercial fit-outs across Mid Ulster, growing and struggling to find skilled trades...

 Free text — your goals, challenges, sector, anything.

Fill with a sample company

Analyse my company

Prefer not to share details? [Answer a few questions instead](#)

Figure 3: Tell Us About Your Company Guided Pathway

Chat

Explorer

+ New Chat

History

Shortlist

admin@exampl...

← Back

Tell us about your business
 Describe who you are, what you do, and any challenges or goals you have. We'll suggest what might be relevant — and keep the conversation going from there.

e.g. We're a 10-person marketing agency feeling the pressure from AI tools, and we'd like to understand what our options are as a business...

Press **Enter** to send - Shift + Enter for a new line

Start conversation

EXAMPLE DESCRIPTIONS

"We're a 10-person marketing agency that's been running for 5 years. We're feeling the pressure from AI tools and want to understand our options as a business."

"I run a small construction company with around 30 staff. I want to take on a couple of apprentices but I don't know where to begin."

"We're a family-run food & hospitality business in Belfast. We're growing and need to develop our team but are unsure what support is available."

Figure 4: Tell Us About Your Company Conversational

3.3.3 Chat response and saved insights

The active chat interface represents the core of the conversational experience, where the AI synthesises information from the Knowledge Hub into natural language responses. A critical functional layer is the smart bookmark that leverages AI to generate and save insights from a message, for example the detection of framework references for quick retrieval later from the 'Saved Insights' section. These allow users to 'shortlist' content, including specific frameworks, moving from general inquiry to a concrete set of actionable options.

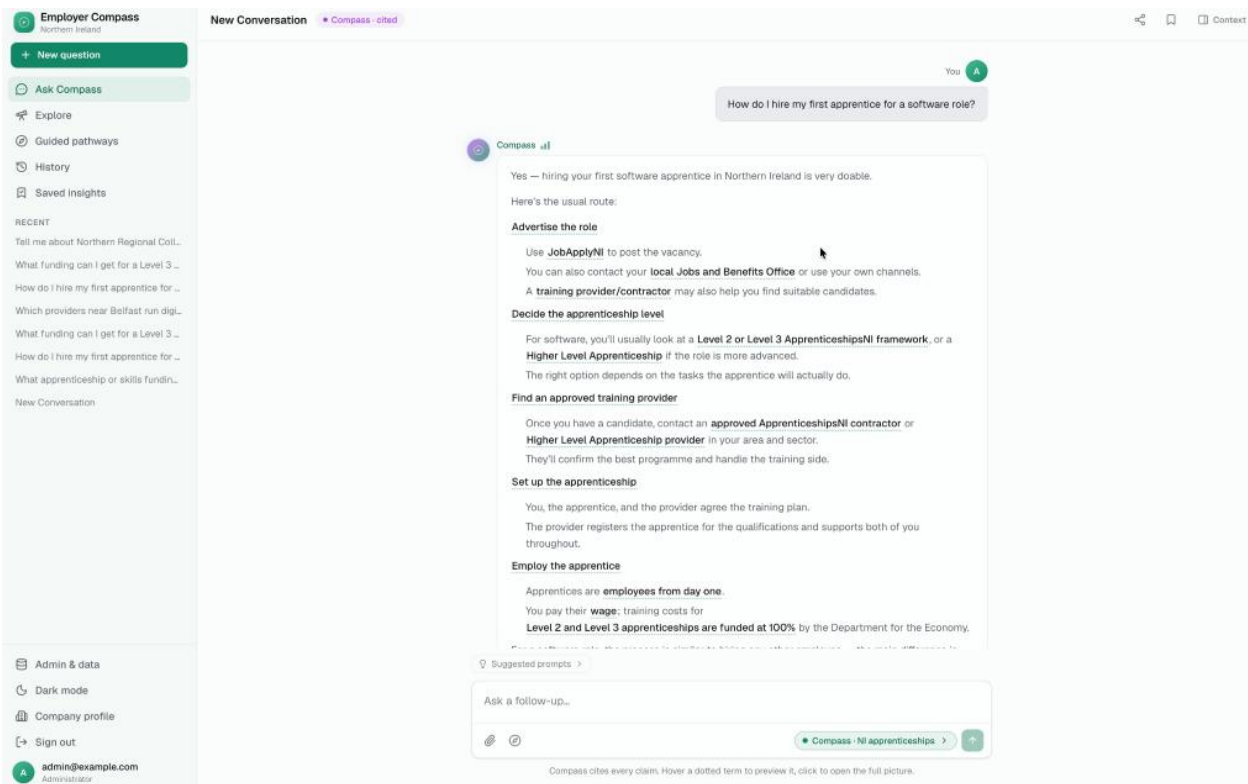


Figure 5: Example Chat Response for a Software Apprenticeship

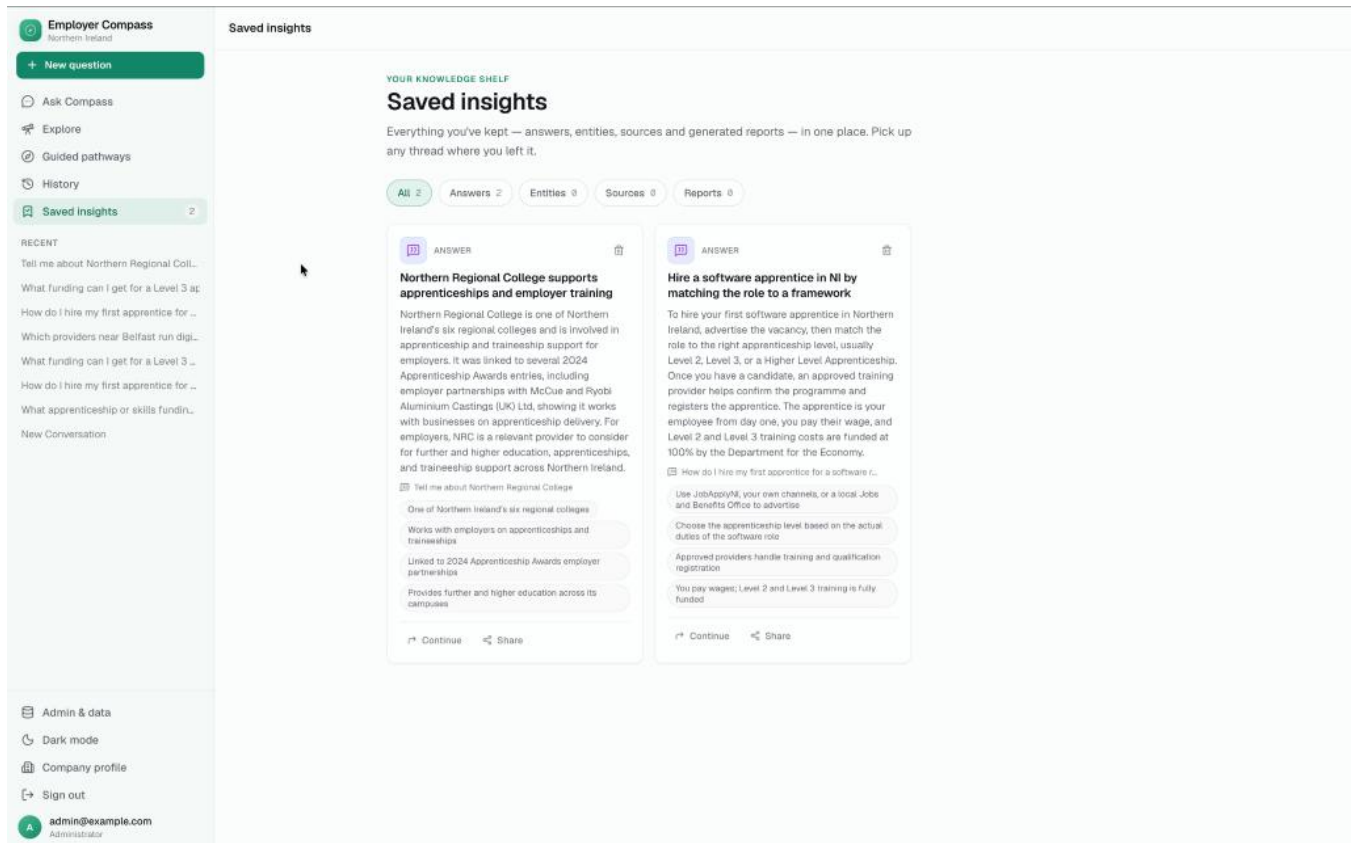


Figure 6: Saved Insights from Searches

The chat also surfaces context via highlighted key words and phrases, allowing the user to click to get a supporting narrative around a key concept, this can be entities, terms or vocabulary related to apprenticeships and the narrative is grounded in apprenticeships within the Northern Ireland context. When a term is selected a drawer appears from the right with information, along with the ability to drill in further by asking the Compass AI more about the term (see figure 7).

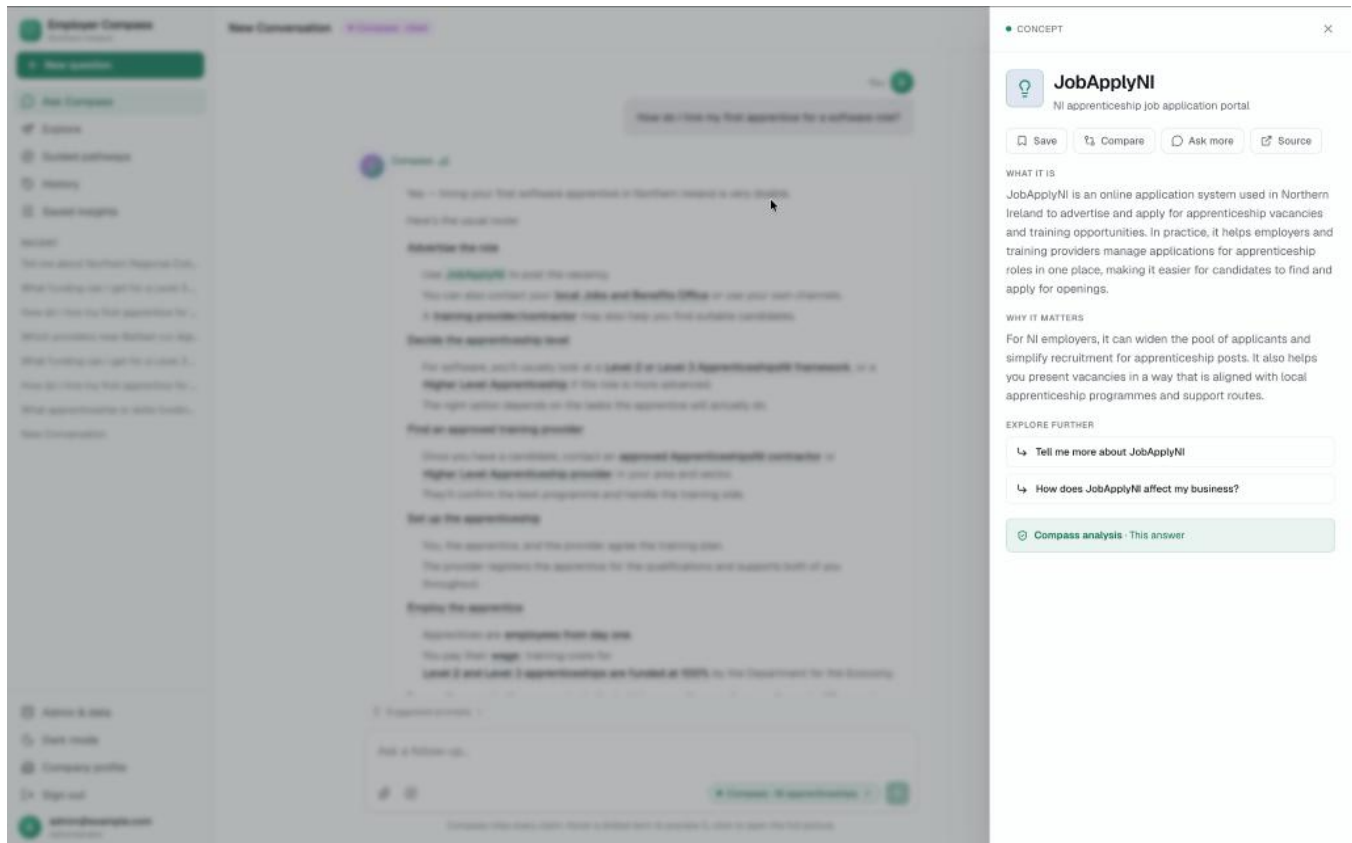


Figure 7: Example Description of a Key Term

3.3.4 Conversation history

The History module ensures longitudinal value by persisting all employer interactions. Users can retrieve, review, and resume previous conversations, allowing for multi-stage decision-making processes. This persistence is critical for SME owners who may need to consult with colleagues or revisit information over several days before committing to an apprenticeship pathway. Overtime key threads throughout conversations will be surfaced, allowing future interactions with the Compass AI to understand long running themes across employer conversation history.

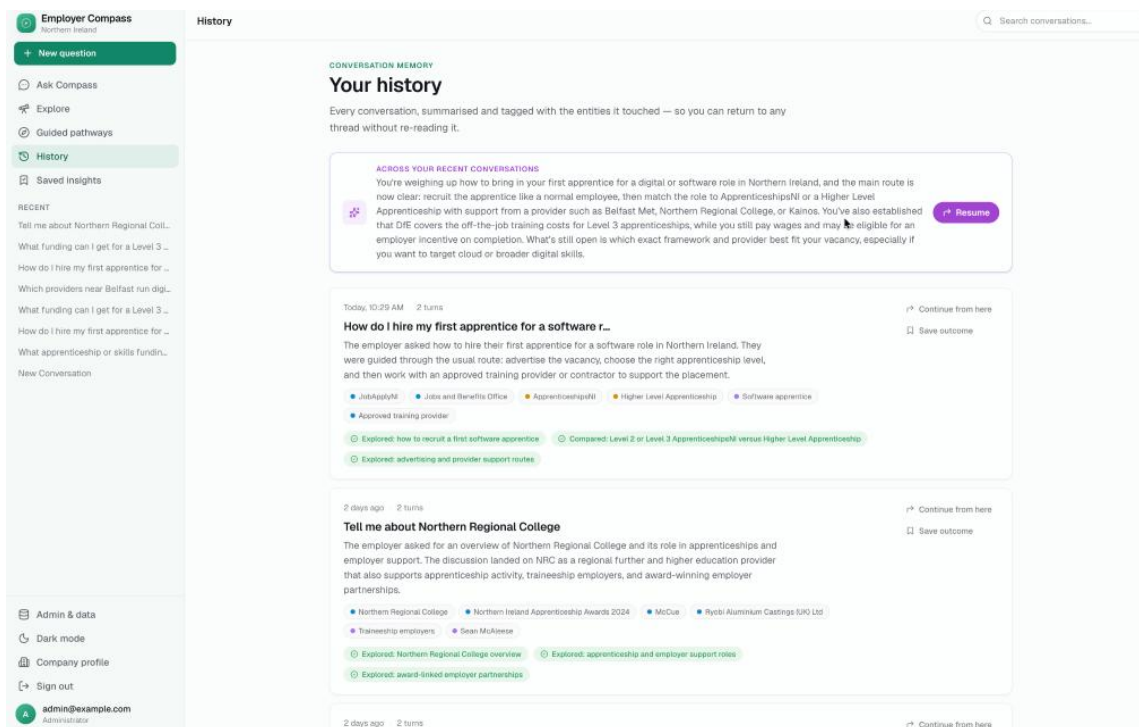


Figure 8: Conversation History

3.3.5 Explorer view

The Explorer view provides a non-conversational, visual alternative for interacting with the graph data model. By categorising the Knowledge Hub into thematic areas such as 'Funding and Incentives' or 'Training Providers,' the interface allows for rapid drilling into specific datasets. This module functions as a discovery bridge, where specific data points can trigger a transition back into the chat interface for deeper, context-aware exploration. Figure 9 shows the explorer view searching for programme in Digital Marketing.

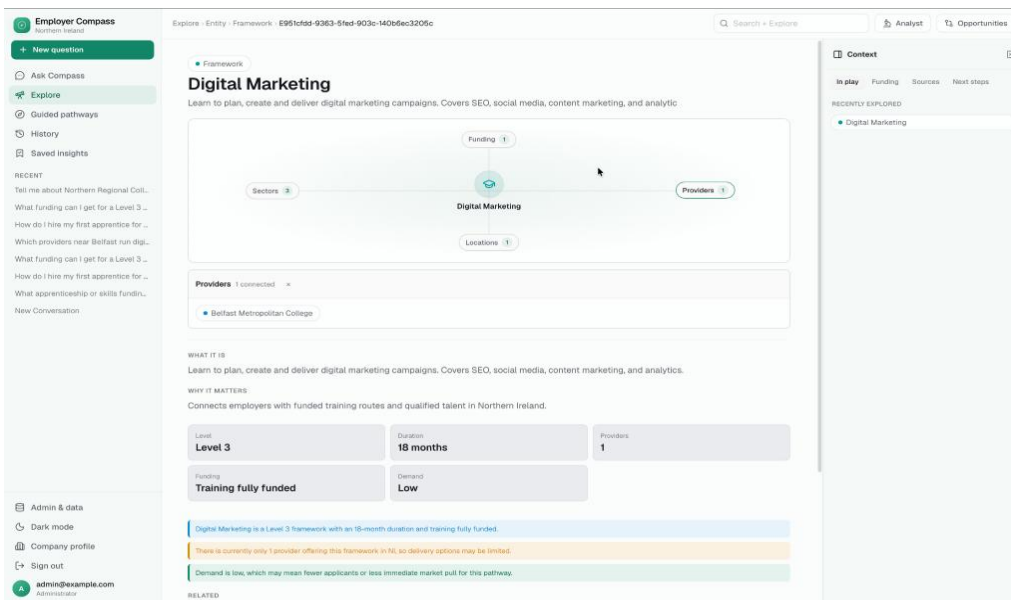
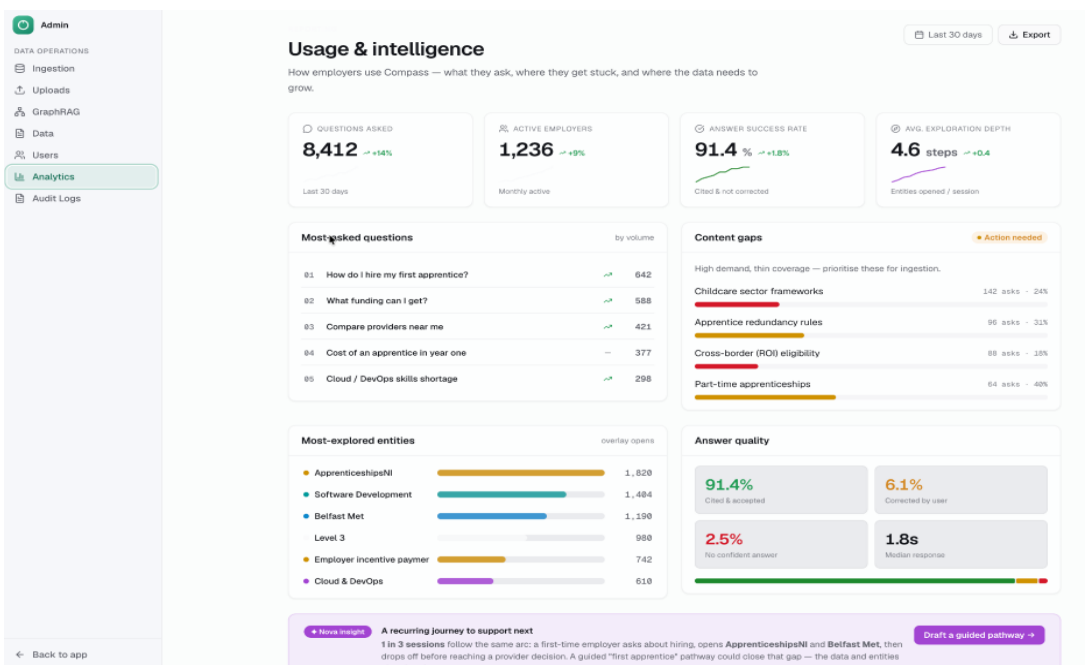


Figure 9: Explorer View

3.3.6 Usage intelligence and policy insights

The platform can also generate curated analytics around platform adoption including most asked questions, answer quality, metrics and policy insights defined from internal knowledge and external signals and reports. This can be used to provide business cases for the need for more resources and funding related to certain jobs and sectors.



4. Pilot Findings and Evaluation

4.1 Evaluation methodology

Evaluation combined structured user acceptance testing with employer participants and a stakeholder showcase and feedback session.

Consistent with the project's agile delivery model and its underpinning action research methodology, the evaluation was designed not simply to assess the demonstrator, but to provide formative feedback and generate practical insights that informed the platform's ongoing refinement. Stakeholders acted as active participants in the development process, providing feedback on usability, content, functionality and user experience, with findings feeding directly into subsequent iterations of the tool. This cyclical process of planning, implementation, reflection and refinement reflects the principles of action research, where knowledge is generated through collaborative engagement with those who will ultimately use or benefit from the intervention.

The testing was intended to identify usability issues, content gaps, user perceptions and opportunities for improvement rather than to produce statistically representative findings. Each testing session was treated as an individual case, with observations analysed collectively to identify recurring themes and inform iterative enhancements to the demonstrator.

4.1.1 Recruitment and employer profiles

Recruitment Method

Recruitment for the evaluation phase prioritised engaging a diverse range of organisations, ensuring representation across various sectors and levels of experience with the apprenticeship system. A combination of professional networks and partner organisation outreach was utilised to identify potential participants. Securing voluntary participation from SMEs for this type of feedback remains a notable challenge, as competing operational priorities often limit availability for research engagements. Consequently, the recruitment strategy focused on leveraging established channels to facilitate timely and constructive input from relevant SME employers. See table 3 for the employer profiles.

Table 3: Employer Profiles

Employer ID	Sector	Organisation description	Number of employees	Apprenticeship experience
E01	Advertising	Creates brand and advertising strategies for businesses operating in the construction and commercial sectors.	8	No previous experience.
E02	Travel	Provides luxury travel experiences for high-net-worth individuals.	Approximately 50	No previous experience.
E03	Manufacturing	Creates paper-based packaging solutions for the medical sector.	Approximately 200	Recruits approximately one apprentice each year.
E04	Advertising	Creates paper-based packaging solutions for the medical sector.	4	Previously attempted to recruit an apprentice but found the process overwhelming.
E05	Education	Provides an educational platform offering courses across a range of subjects.	Approximately 20	No previous experience.
E06	Software	Develops software solutions for clients across a range of sectors.	Approximately 10	No previous experience.
E07	Education	Supports schools across Northern Ireland to improve educational standards.	Approximately 5	No previous experience.
E08	Software	Develops software solutions for financial institutions in the United States.	Approximately 100	Significant experience, with approximately five active apprentices in the business.
E09	IT	Develops cybersecurity solutions for organisations in the private and public sectors.	Approximately 20	No previous experience.
E10	Recruitment	Provides recruitment services across several industries in Northern Ireland and the United States.	2	No previous experience.

4.1.2 Session structure

Session Preparation

Consistency across sessions was ensured through a standardised pre-session protocol. Before each session, a dedicated folder was created in the project's shared Google Drive, the video call link was sent with joining instructions confirming the expected 30-minute duration, Otter AI was scheduled to join and transcribe automatically from the moment the call started, and the application walkthrough video was queued and ready for screen sharing. This setup ensured that no session was impaired by technical preparation issues and that the evidence trail for each participant was captured in a uniform format from the outset.

Core Breakdown

Each session followed a fixed three part flow lasting approximately 30 minutes. The timings were indicative rather than strict; facilitators were instructed to allow natural conversation rather than cut exchanges short to meet a clock.

Part A: running for approximately five minutes, covered introductions, an explanation of the purpose of the session, and explicit recording consent. The framing of the session as a test of the tool rather than a test of the participant was deliberate. It was designed to reduce the social desirability effect that tends to inflate satisfaction scores in usability testing.

Part B: running for approximately 15 minutes, combined a facilitated walkthrough of the application using a pre-prepared video with a period of free exploration. The walkthrough was narrated by the facilitator, who paused at key moments to invite reactions. Facilitator prompts were standardised to avoid leading the participant. Examples in use included whether the purpose of the tool felt clear, whether it was obvious how to get started, and whether anything felt surprising or unexpected.

Part C: running for approximately 10 minutes, administered the structured survey verbally. The facilitator read each question and recorded both the numerical score and any verbal elaboration the participant offered. Asking the questions verbally rather than via a follow-up form was a deliberate choice. This kept the session conversational, reduced drop-off risk, and allowed the facilitator to capture the qualitative context and reasons behind a score, that a self-completion form would not have surfaced.

Survey

The survey comprised six questions across three themes, each scored on a one to five scale with anchored endpoints. The questions were as follows.

- Usability and Clarity: how easy was it to understand what the tool is for (1 = very unclear, 5 = immediately obvious); and whether it was clear how to get started, for example that the user would begin with the chat box (1 = not at all clear, 5 = very clear).
- Content and Usefulness: how useful the information provided by the tool was (1 = not useful at all, 5 = very useful); and whether the tool gave the participant a better understanding of apprenticeship options available to their business (1 = no, not really, 5 = yes, significantly).
- Confidence and Next Steps: whether the tool would help the participant navigate apprenticeships more effectively (1 = not at all, 5 = definitely yes); and whether they would use a tool like this again when making decisions about apprenticeships (1 = very unlikely, 5 = very likely).

Capture and consolidation

Sessions were transcribed using Otter AI, with the transcript and Otter's auto-generated summary both downloaded and saved to the participant's dedicated folder within 24 hours of each session. Survey scores were logged to a central score log spreadsheet as each session's follow-up survey was returned. Once all sessions were complete, the transcripts and facilitator notes were reviewed and thematically coded.

4.2 Quantitative findings

Tables 4-6 present the aggregated scores across all participants. Scores are reported as averages with the range of scores also reported. Scores were grouped by the three survey themes.

Note: We have included all the "raw" scores from the employers in Appendix 2.

Table 4 Usability and clarity scores

Question (summary)	Average (out of 5)	Notable pattern
Q1: Ease of navigation and finding information	3.9	Consistent mid-range scores. Six of ten participants rated 4 or above; four rated a score of 3, reflecting usability concerns documented in the qualitative sessions.
Q2: Clarity of the interface and on-screen language	4.2	Wider spread than Q1. One participant scored 2, reflecting specific frustration with terminology and layout. Higher scorers tended to have prior experience with digital tools.

Table 5: Content and usefulness scores

Question (summary)	Average (out of 5)	Notable pattern
Q3: Relevance of content to your business needs	4.0	Scores clustered in the 3–5 range. Lower scores correlate with employers whose primary interest extended beyond formal apprenticeships.
Q4: Usefulness and completeness of programme information	4.6	Strong scores overall. Seven of ten participants gave a maximum score of 5. The single score of 3 came from the participant who also scored lowest on navigation.

Table 6: Confidence and next steps scores

Question (summary)	Average (out of 5)	Notable pattern
Q5: Confidence in using the tool independently after this session	4.7	Very strong and consistent. Seven of the ten participants gave 5. No participant scored below 4, suggesting the session itself was effective in building familiarity.
Q6: Likelihood of returning to and recommending the tool	4.7	Closely mirrors Q4 in profile. Near-universal intent to return or recommend; the single score of 3 comes from the same participant as the Q4 outlier.

4.2.1 Aggregate observations

The quantitative scores broadly reflect a tool that is well received in purpose, even where participants identified specific usability concerns. Questions in the Confidence and Next Steps group produced the strongest and most consistent scores, with averages of 4.7 out of 5 on both items and no participant scoring below 4 on the confidence question. This is a notable finding on a small sample. It was identified that even those who raised the most substantive feedback in the qualitative discussion still expressed a clear intention to use the tool again. The one-stop-shop value proposition appears to be strong enough to sustain positive intent despite interface friction.

Scores for Usability and Clarity were the most varied. The average on the interface clarity question (Q2) was 4.2, but the range of 2–5 indicates meaningful divergence in experience. This is consistent with the qualitative findings around language, onboarding, and button placement: participants with prior familiarity with AI tools navigated more confidently, while those without found certain elements harder to interpret. The Content

and Usefulness questions showed a similar pattern, with Q4 (usefulness of programme information) scoring strongly at 4.6 on average, but Q3 (relevance to business needs) scoring 4.0, reflecting the appetite some employers expressed for the tool to extend beyond formal apprenticeships.

These results should be interpreted with appropriate caution given the sample size (n=10). The scores are indicative rather than statistically generalisable. Nevertheless, the pattern is coherent and consistent with the qualitative evidence: the tool's value is understood and endorsed, and the areas for improvement are specific and actionable rather than fundamental.

4.3 Qualitative themes

Thematic analysis of the transcripts produced a small number of recurring themes. Each theme below should pair a short summary with two or three anonymised supporting quotes.

Theme 1: The one-stop-shop concept is compelling

The single most consistent and enthusiastic response across every session was to the idea of consolidating fragmented apprenticeship information into a single platform. Employers described the current landscape as scattered, difficult to navigate, and reliant on personal contacts or chance discovery. This theme was universal: even participants who raised significant usability concerns still gave the tool its highest scores, anchored in the aggregation value.

"An employer might currently have to make a call to someone just to figure out how to bring someone in. This tool replaces that fragmented process."

— Construction sector employer

"Information is very scattered across essentially fifteen websites. The tool brings it to you so you are not having to look for it."

— Design and creative agency employer

"This addresses a massive gap. It fills something that should have existed a long time ago."

— Manufacturing sector employer

Theme 2: Onboarding and first impressions need work

While the purpose of the tool was generally understood, several participants noted friction in the first moments of use. The primary call-to-action button attracted specific criticism for its placement, size, and visual weight, with participants describing navigating past it instinctively. A secondary concern was the absence of an orientation layer, even participants comfortable with AI interfaces felt that less experienced employers would benefit from an explainer before engaging with the system.

"Something this important should be front and centre, at the top. The chat box at the bottom is bigger than the primary entry point."

— Technology sector employer

"I think I need an explainer to start. Something that sets up the environment and explains the opportunity before the chatbot begins."

— Construction sector employer

Theme 3: Financial and practical information must be prominent

A strong and recurring signal across sessions was that employers, particularly those running small businesses need immediate clarity on cost, funding, and commitment before they will engage meaningfully with any apprenticeship information. This is not a peripheral concern; for SMEs it functions as a primary decision filter. The Northern Ireland economy is dominated by SMEs with limited administrative capacity and a low tolerance for ambiguity, and these employers are looking for quick, confident answers to a small number of high-stakes questions.

"It is all down to money. Small businesses need to know immediately what funding is available and whether a programme is truly cost-effective."

— Construction sector employer

"Some SMEs are terrified by this process. Before anything else they need to know: is my business ready? What do I need? How much will it cost?"

— Professional services employer

Theme 4: The language of the system needs translating

A number of participants identified specific terminology as a barrier to understanding. Government and further education language, including terms such as frameworks, levels, and funding types was unfamiliar or confusing to employers who do not regularly engage with the training and education sector. Participants suggested tooltips, hover-over definitions, and plain-language rewrites as practical solutions, framing the goal not as simplification but as reducing activation energy for a first-time user.

"What is level two, level three, level four? A new user is literally at that stage and needs immediate, contextual clarification."

— Education technology employer

"The tool should give employers a plain-language version of this landscape, not government language. When we say relevant frameworks, what does framework mean?"

— Professional services employer

"Skills for a role is maybe a bit vague. The language needs to resonate with the daily operations of a real business."

— Travel sector employer

Theme 5: The tool needs to reach employers, not wait for them

Multiple participants raised concerns about the visibility and discoverability of the platform itself. A tool that solves an information problem only works if the people who need it know

it exists. Proactive engagement was consistently requested, including alerts for new programmes, notifications of funding changes, and integration with existing trusted channels such as university websites and employer networks. One participant's account of discovering available funding only through a personal connection, years after it became available illustrated the stakes of this problem directly.

"Once you have signed up, you should get regular prompts to discover new programmes. Alerts would keep employers informed without them having to check manually."

— Manufacturing sector employer

"How will people know it exists? The tool needs to be tagged on to university websites and other hubs where employers are already looking."

— Design and creative agency employer

4.4 Stakeholder showcase and feedback sessions

In addition to employer sessions, stakeholder show and tell sessions were held with representatives from EPIC Futures NI, the council partners, and Pivotal. The purpose was dissemination and alignment rather than usability testing.

Stakeholder(s)	Date	Session summary
Belfast City Council	18 December 2026*	This initial discovery session with Belfast City Council's Employability and Skills Team established a shared understanding of the existing data landscape and identified systemic barriers to employer engagement. Feedback on the prototype emphasised the need to simplify the fragmented apprenticeship-information ecosystem. The discussion also mapped key data sources, including government portals and provider listings. These insights informed the strategic direction of the NI Employer Compass, particularly the development of a "one-stop shop" that reduces the cognitive burden on SME owners.
Belfast City Council	16 January 2026	Building on the initial engagement, this workshop presented a refined and expanded prototype. The session helped validate key data sources and generated further stakeholder feedback. Belfast City Council expressed strong support for the application's evolving strategic direction.
Belfast City Council and Derry City and Strabane District Council	17 February 2026	Stakeholders from both councils received an in-depth demonstration of the application's development. Feedback focused particularly on accessibility and directly informed the subsequent front-end design. Greater emphasis was consequently placed on refining the chat interface to make it intuitive and helpful for non-technical users. Both councils expressed strong support for the progress achieved.
EPIC Futures NI Co-directors	27 March 2026	This session provided the EPIC Futures NI Co-directors with an interim progress update. It outlined the project's objectives and value proposition and included a live

		demonstration of the software developed to date. The group responded positively and offered support in identifying local employers for the forthcoming testing and feedback phase.
Belfast City Council	15 April 2026	The developing application was demonstrated to a wider stakeholder group within Belfast City Council, providing an important opportunity to validate its technical direction. Stakeholders reviewed the new Guided Discovery mode, which uses a structured, multistep process to gather information about users' location, sector and recruitment objectives. They emphasised the value of this approach in enabling personalisation and helping SME owners with limited knowledge of apprenticeship terminology navigate the system.
Invest Northern Ireland	10 June 2026	Invest Northern Ireland identified several potential applications for the tool, particularly as an overlay or complementary service alongside NI Business Info. The engagement validated its potential as a "one-stop shop" for business intelligence and demonstrated how the foundation developed for apprenticeships could be extended to support employers across the wider skills and business-support ecosystem.

4.5 What the evaluation tells us about impact

The evidence gathered through employer sessions provides a credible basis for a number of claims about the tool's potential impact, assessing the demonstrator's potential value, while also highlighting the limits of what can currently be concluded regarding longer-term impact.

The evaluation provides strong evidence that the Employer Compass addresses a genuine and widely felt need. All ten participating employers described a fragmented, confusing, and time-consuming experience of trying to find apprenticeship information through existing channels. The tool's ability to aggregate information from multiple sources into a single, searchable interface was the most consistently identified as being a valuable feature aspect across every session. There were also high scores on intent to return. The near-universal intention to use the tool again (question six, all employers gave a four or greater score) suggests that first-contact value was established effectively. These findings, while drawn from a small and structured sample, are coherent, internally consistent, and supported by both the quantitative scores and qualitative evidence.

However, the evaluation does not provide evidence of impact beyond the testing environment. The study involved ten employer representatives participating in facilitated user acceptance sessions, creating conditions that were more supportive than those likely to be experienced by employers encountering the platform independently. There is no longitudinal evidence to determine whether employers subsequently returned to the platform, progressed further in the apprenticeship process, or translated their initial interest into action. Similarly, the distribution challenge identified in Theme 7 of the qualitative analysis, that employers cannot benefit from a platform they are unaware of, remains unresolved within the current evidence base.

Taken together, the findings support a conclusion of a validated proof of concept rather than demonstrated impact. Consistent with the project's agile and action research approach, the evaluation has confirmed that the underlying problem is real, the proposed solution is valued by intended users, and the priorities for further development are both clear and evidence-based. Demonstrating wider behavioural, organisational and policy impacts will require broader implementation and longer-term evaluation beyond the scope of this demonstrator project.

5. Policy Insights and Recommendations

Note: The full report by Pivotal Policy is provided as a standalone project output. This section contains a summary of those recommendations and further suggestions from IntrinsicAi to build on what we developed on a collaborative basis.

Two evidence streams feed Pivotal Policy's analysis of this section. The first is the qualitative and quantitative feedback from user testing reported in Section 4. The second is the structured user query data captured during pilot use (theoretical benefit from scaled use), which provides an early view of employer demand patterns offering a further layer of evidence. The Policy Intelligence Dashboard aggregates search terms, unanswered queries and engagement patterns in a form that policymakers can interrogate.

5.1 Recommendations for policy and practice

1. Develop a Common Skills Data Standard

A suitable department should lead the establishment of a minimum data standard for the publication of apprenticeship framework information. By requiring publicly funded organisations, including Further Education colleges and private training providers to adopt a common schema covering qualification levels, eligibility, and funding, the data curation burden for AI-enabled navigation can be significantly reduced, improving accuracy across all information channels.

2. Progress the Compass Beyond Proof of Concept

An appropriate public sector partner should explore funding the transition of the Compass from its current proof-of-concept state to a production-grade public beta service. This transition should focus on the Stage 1 development programme, ensuring a robust, scalable platform that is ready for wider public service integration.

Given the strategic alignment between the Compass and Belfast City Council's existing employer navigator ambitions and associated funding (see Section 2.2), the council is particularly well placed to act as a potential early adopting partner in commissioning this transition.

3. Adopt AI-Powered Navigation Across Public Services

Opportunities should be explored to integrate the AI-powered navigation capabilities into other existing employer-facing digital services, such as Business Info NI, local authority business support services, and government digital platforms. Although apprenticeships were used as the initial use case, the underlying model has potential application across other public service contexts.

In particular, the Department for Communities may consider how this model can support individuals navigating employability, skills, and return-to-work services, providing a simpler pathway for those seeking training or employment support. Local councils have served as central partners in this pilot, are also well-placed to champion adoption through their existing business support networks and help ensure that the Compass reaches the SMEs that need it most.

4. Improve the Quality and Currency of Published Skills Information

Further Education colleges, universities, private training providers and councils should prioritise publishing programme information in structured, consistent and machine-readable formats. This operational shift is essential to enable AI-enabled navigation tools to function effectively, ensuring that employers, learners, and advisers have access to reliable and up-to-date guidance while simultaneously reducing the administrative effort associated with manual content maintenance.

5. Establish Cross-Government Governance and Evaluation

A cross-government steering group, involving relevant departments, council representatives and appropriate delivery partners, should be established to guide the future direction, governance and potential expansion of the Employer Navigator. The group should consider how insights from employer interactions could inform regional skills policy and service design, while exploring opportunities for future alignment with the emerging Labour Market Observatory and proposed Careers Portal. Any further development or adoption of the Navigator and similar tools should be accompanied by properly resourced, robust and independent evaluation of their performance, user outcomes and wider policy value.

5.3 Relevance to wider UK and cross-border agendas

The challenges of fragmented apprenticeship and skills information are not unique to Northern Ireland. The pilot demonstrates a model that could be adapted for other UK regions facing similar place-based challenges. The NI Employer Compass approach, which aggregates fragmented provision data into a conversational AI interface with a policy intelligence layer, is directly applicable to other devolved contexts where employer-facing information on training and apprenticeships is similarly scattered across multiple public bodies and providers.

The model may also have relevance in Ireland. Given the close economic and labour-market links between Northern Ireland and Ireland, particularly, but not exclusively, in border regions, future work could explore whether the approach could be adapted to help employers navigate apprenticeship and training provision in Ireland. This could also create opportunities to support employers and workers operating across both jurisdictions and strengthen cross-border skills intelligence.

6. Future Development and Scaling Opportunities

A detailed technical, delivery and resourcing roadmap has been developed to guide the potential future scaling of the Employer Compass. This may be shared, where appropriate, with prospective commissioning, funding and delivery partners as part of confidential discussions.

The Employer Compass pilot has demonstrated the potential for conversational AI to provide employers with a simpler and more accessible route through Northern Ireland's fragmented skills and business-support ecosystem. It also provides a strong foundation from which a more comprehensive employer-navigation service could be developed.

Subject to further investment, partnership and evaluation, future development opportunities could include:

- Extending coverage from Belfast and Derry City and Strabane to all eleven Northern Ireland council areas;
- Expanding beyond apprenticeships to include wider training and upskilling opportunities, grants and funding, recruitment incentives and inclusive-employment support;
- Embedding or integrating AI-powered navigation within trusted employer-facing public services and digital platforms;
- Adapting the model for use in other regions or jurisdictions experiencing similar challenges in navigating fragmented skills and business-support systems; and
- Using aggregated and appropriately governed insights from employer enquiries to identify information gaps and inform future skills and employment policy.

The precise scope and sequencing of any future development would be shaped by the needs of adopting organisations and the availability of suitable data, funding and delivery partnerships. Through developing and testing the pilot and preparing the detailed roadmap, the project partners have established a clear understanding of the technical, governance, data, resourcing and evaluation requirements involved and can provide the expertise and delivery support needed to take the Employer Compass into its next phase.

7. Project Limitations

Certain limitations of the pilot methodology are worth noting for transparency and to frame the claims made in the report.

The pilot is geographically bounded to two council areas. While this was a deliberate scoping decision, the findings reflect the apprenticeship landscape in Belfast and Derry City and Strabane and should not be read as directly representative of the full Northern Ireland picture.

The user testing sample is modest in size, which limits the statistical weight that can be placed on the quantitative scores. The findings are better read as directional evidence of usability and usefulness than as population estimates.

The Knowledge Hub covers apprenticeship provision only. It does not yet reflect wider employer support categories, funding schemes, or skills programmes beyond apprenticeships, which means the tool's current scope is narrower than the problem it is designed to address in the longer term.

8. Further Information and Future Collaboration

Organisations interested in learning more about the funded pilot, exploring its potential application in other service contexts, or discussing opportunities for future development and collaboration are invited to contact EPIC Futures NI, through Professor Kristel Miller, or the Intrinsic AI team.

EPIC Futures NI: Professor Kristel Miller, Ulster University, k.miller@ulster.ac.uk
Intrinsic AI: Jordan McDonald, jordan@intrinsicai.co.uk

About EPIC Futures NI

EPIC Futures NI is a £4.8 million UKRI-funded Local Policy Innovation Partnership led by Ulster University. It brings together partners from government, business, academia, and the community and voluntary sector to co-design evidence, policy and programmes that contribute to a fairer and more inclusive labour market in Northern Ireland. Its work addresses complex, place-based challenges relating to skills, employability and economic participation. Alongside generating evidence, EPIC Futures NI develops and tests pilot projects, innovative tools and practical interventions that can inform policy and practice.

About Intrinsic Ai

Based in Belfast, IntrinsicAi is a software company specialising in the development of AI-powered solutions. Our team is composed of deep specialists with decades of experience engineering AI systems across both the public and private sectors.

Author Biographies

Jordan McDonald (IntrinsicAi): Jordan McDonald is the CEO of IntrinsicAi and an award-winning AI leader with extensive experience driving innovation across public and private sectors. Since 2013, Jordan has led high-performing teams to transform cutting-edge AI research, from deep learning to generative AI into scalable, impactful solutions.

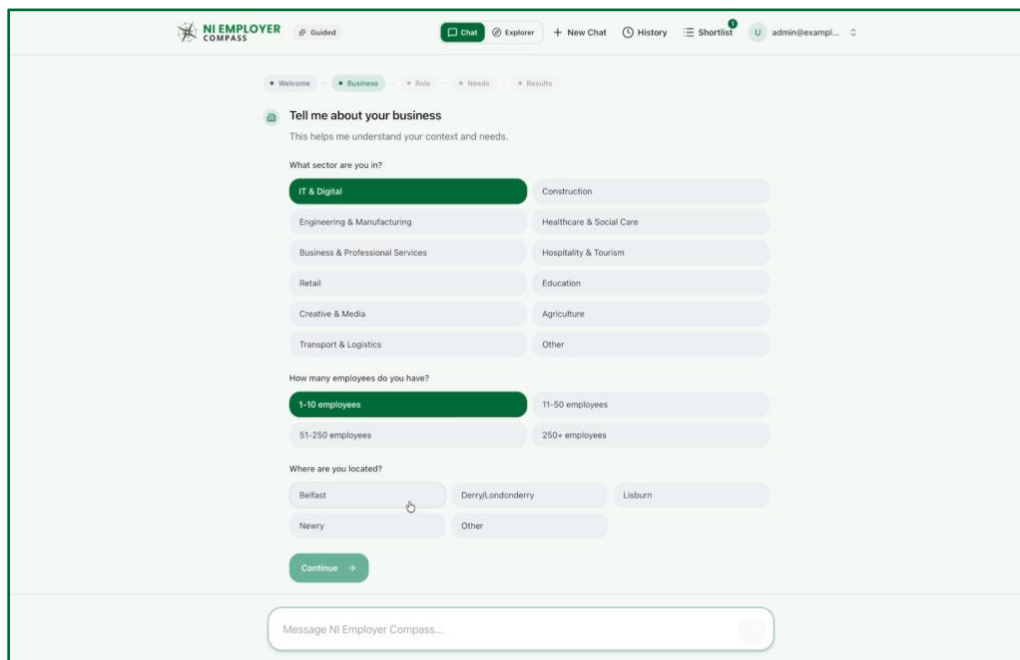
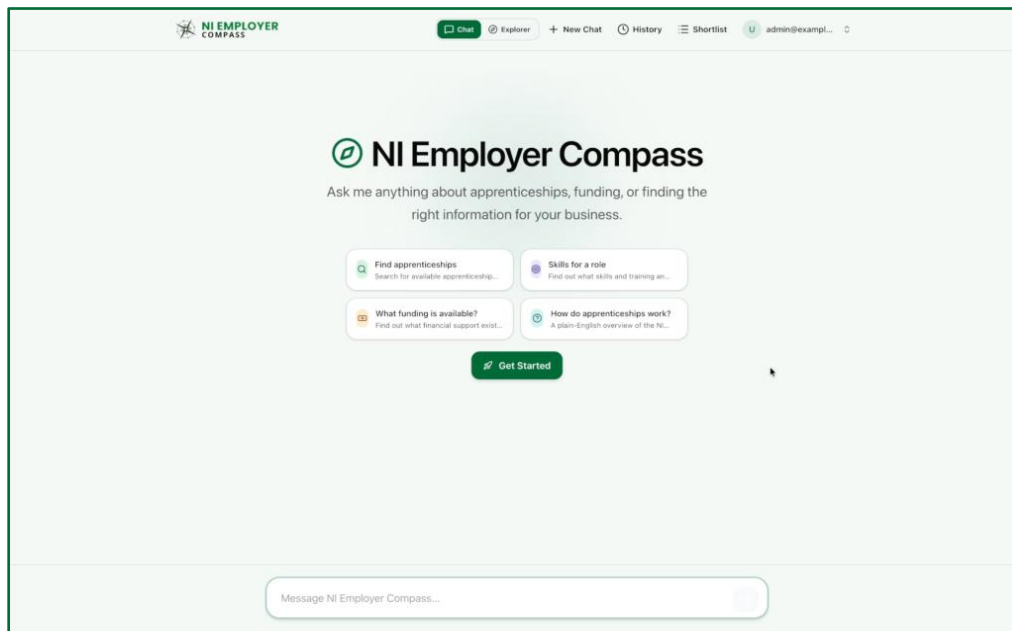
Steven Knox (IntrinsicAi): Steven Knox is a Chief Technology Officer with over 25 years of experience delivering scalable digital platforms across the public and private sectors. Specialising in technical strategy and AI-driven solutions, he excels at aligning complex technology with business goals to build reliable, high-growth systems. In recent years, Steven has focused on integrating Generative and Agentic AI into enterprise SaaS products, with a passion for applying data-driven technology to drive sustainability and the green transition.

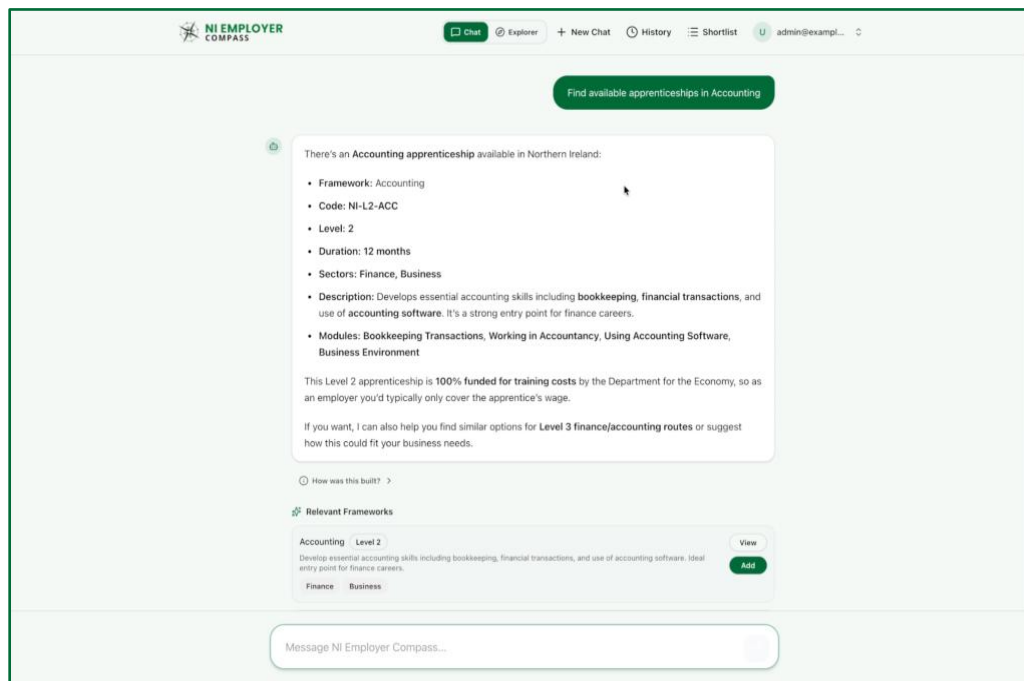
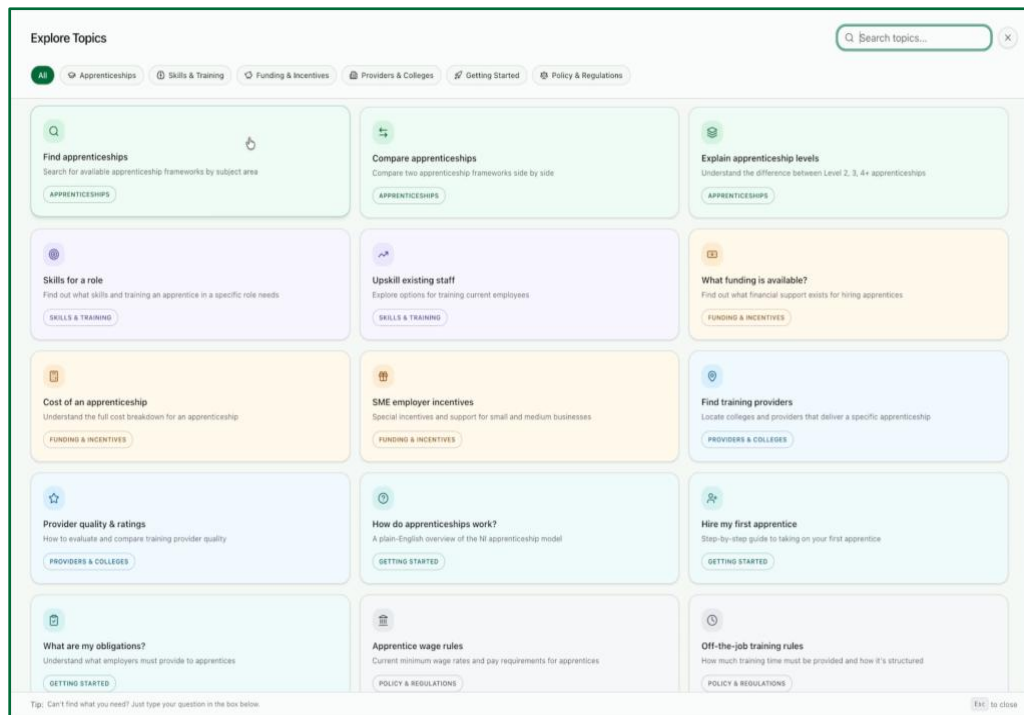
James Greer (Pivotal Policy): James Greer is an experienced policy researcher specialising in employability and skills ecosystems. With a deep focus on the intersection of public policy and labour market outcomes, James has spent his career analysing the structural barriers to workforce development. At Pivotal Policy, he leads research initiatives aimed at transforming how complex policy information is communicated to government, ensuring that evidence-based insights are translated into actionable, user-focused solutions for the Northern Ireland skills landscape.

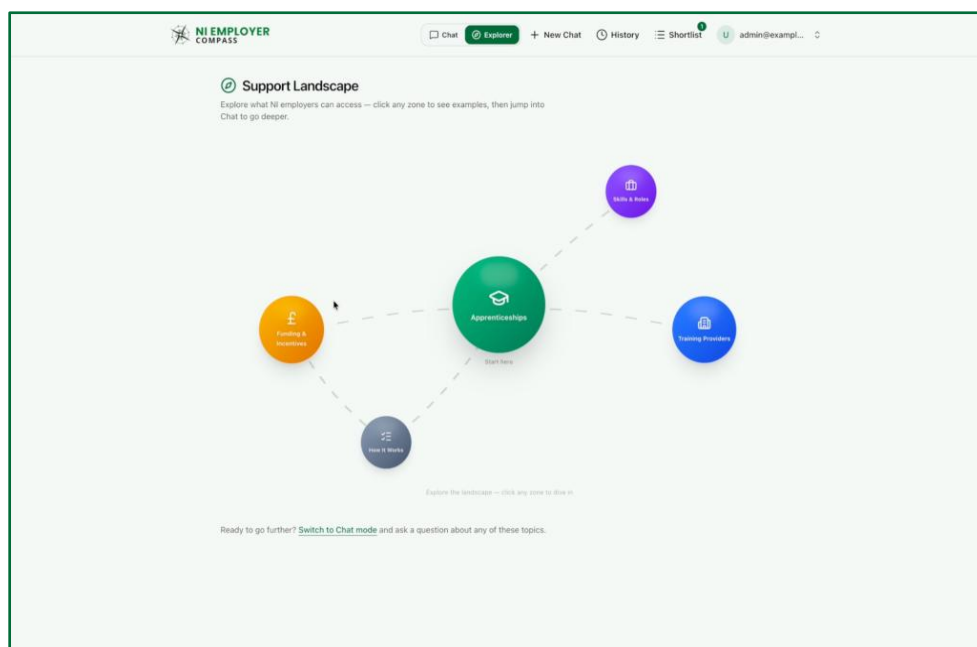
9. Appendices

Appendix 1 Initial User Interface

Below are several screenshots showing the initial User Interface implemented prior to initial feedback from key stakeholders.







Appendix 2 Raw Employer Feedback Session Scores

Refer to section 4.2 for our detailed overview of the questions asked of each employer. The raw scores are summarised below.

ID	Q1	Q2	Q3	Q4	Q5	Q6
E01	5	4	5	5	5	5
E02	4	3	3	4	5	4
E03	5	5	4	5	4	5
E04	3	4	3	5	5	5
E05	4	5	4	5	5	5
E06	3	5	4	5	4	5
E07	4	4	5	5	5	5
E08	3	2	3	3	4	3
E09	5	5	4	4	5	5
E10	3	5	5	5	5	5