



Social Science
Research Park

Y Parc Ymchwil
Gwyddorau Cymdeithasol

Careers Wales' Data Intelligence Hub: Evaluating Developments and Potential Trajectories in a Changing Environment

Dr. Katy Huxley, Social Science Research Park (SPARK), Cardiff University

Huxley, K. (2024). *Careers Wales' Data Intelligence Hub: Evaluating Developments and Potential Trajectories in a Changing Environment*. Cardiff University

This report was commissioned in September 2024 by Gyrfa Cymru/Careers Wales. Views expressed in this report are those of the author and not necessarily those of the commissioning organisation.



Gyrfa Cymru
Careers Wales



Cymru'n Gweithio
Working Wales

Contents

Glossary.....	1
1. Introduction.....	2
2. Background.....	4
Careers Wales.....	4
Developing a data intelligence hub.....	5
Changes in governance.....	6
Study Aims.....	7
Methods.....	7
3. Findings.....	8
Assessment of the prototype.....	8
The YEPF data hub.....	14
Data Governance and the Role of Medr.....	16
4. The use of data in the provision and evaluation of English and Scottish Careers Guidance.....	21
The Skills Development Scotland 16+ Data Hub.....	21
English Policy.....	24
5. Purpose and Potential Avenues.....	26
Conclusions.....	29
References.....	32

Glossary

Acronym	Definition
ALN	Additional Learning Needs
CIAG	Careers information, advice and guidance
DPO	Data protection office
DWP	Department for Work and Pension
EPC	Engagement and Progression Coordinator
FE	Further Education
FSM	Free school meals
GDPR	General Data Protection Regulations
HE	Higher Education
HEI	Higher Education Institution
HESA	Higher Education Statistics Agency
HMRC	Her Majesty's Revenue and Customs
JGW	Jobs Growth Wales
LA	Local Authority
LEO	Longitudinal Education Outcomes
LLWR	Lifelong Learner Wales Record
LMI	Labour Market Information
MIS	Management Information System
NEET	Not in Education, Employment or Training
PCET	Post Compulsory Education or Training
PLASC	Pupil Level Annual School Census
RSP	Regional Skills Partnership
SDS	Skills Development Scotland
UCAS	University and Colleges Admissions Service
WBL	Work Based Learning
YEPF	Youth Engagement and Progression Framework
YPG	Young Persons Guarantee

Careers Wales' Data Intelligence Hub: Evaluating Developments and Potential Trajectories in a Changing Environment

1. Introduction

In 2021, the Welsh Government commissioned research into the feasibility of utilising data linkage to support service delivery for Careers Wales and explore the benefits to Careers Wales partners' delivering education, skills and employment support, practice and policy. The development of data-driven intelligence to support service delivery, allow knowledge exchange, and to evaluate outcomes in relation to Careers Wales activity was recommended in the findings of the report, [Careers Wales Data Linking Feasibility Study](#) (Huxley and Davies 2022). A data hub that better utilises tertiary education and employment data to inform and evaluate the activities of Careers Wales, and its partners (such as schools, local authority (LA) services and Welsh Government) was deemed to be feasible and valuable. However, the report also highlighted the weaker legislative basis to assess service provision and outcomes for adults in Wales compared to school pupils and young adults.

Having accepted the recommendations of the feasibility report, Welsh Government and Careers Wales' have invested further in the development of a data hub prototype. Careers Wales requested an evaluation of the prototype and an update to the feasibility study given these developments and changes within the landscape of tertiary governance in Wales. Therefore, further research was commissioned by Careers Wales in September 2024 to evaluate developments related to, and potential trajectories of, the data intelligence hub.

The report herein assesses a prototype data intelligence hub, considers the potential of the data hub within changing policy and governance contexts in Wales, and explores strategies adopted in Scotland and England. The remainder of the report is structured across 5 sections. Section 2 provides some background to Careers Wales remit, the feasibility study and highlights areas that require further scrutiny. Section 3

describes the aims of this research, and the methodology employed. Findings of the study are reported in the Section 4, and potential future trajectories in development of the data intelligence hub are considered in Section 5.

2. Background

Careers Wales

Careers Wales is the central provider of career information, advice and guidance (CIAG) in Wales. A wholly owned government subsidiary, established in 2012, Careers Wales provides independent CIAG for all stages of life by working with individuals, schools and parents, training providers, employers, LAs, and other public and civil society organisations. In delivering careers guidance to young people in secondary schools and colleges and to adults through Working Wales, Careers Wales supports the delivery of Welsh Government policy objectives and plays a role in education, training and employment outcomes across Wales.

The Welsh Governments 'Programme for Government' 2021-2026¹, sets out commitments for education, health and economic strategy, and Careers Wales provide a role in delivering the Programme. Careers Wales are key partners in the delivery of the Youth Engagement and Progression Framework (YEPF) and the Young Persons Guarantee (YPG), alongside partners in schools, colleges and LAs services. These schemes aim to reduce the number of young people not in education, employment or training (NEET), increase the level of engagement in tertiary education and the labour market, and increase the skills of young people aged 16 to 24 years old. Careers Wales' adult services, provided through Working Wales, also contribute towards the development of skill and labour market engagement in adults, supporting workforce and economic priorities for the Welsh Government. As reported by Welsh Government (2024), "30,000 young people have started on employability and skills programmes as part of our Young Persons Guarantee, and since May 2021 we have delivered almost 51,000 all age apprenticeships to provide practical and transferable experience in priority sectors and help reduce skills shortages" (p.4).

Alongside its partners, Careers Wales can add particular value to Welsh Government policy and evidence using administrative data from schools, young peoples' services, the tertiary education sector, and data on skills and labour market outcomes. The

¹ Programme for Government: <https://gov.wales/programme-government>

coverage and content of the data Careers Wales creates and data it receives or accesses from other services can be used to support individuals with tailored advice, support and opportunities as well as help to evaluate programmes and outcomes. Data from schools, data from colleges, data from Careers Wales interactions with clients, data from LAs and more recently from the Department for Work and Pensions (DWP) combine to provide a rich pool of information regarding aspirations, education, skills, and employment. However, there is a need to improve data sharing and regulation to improve the evidence base and decision-making at a variety of levels.

Developing a data intelligence hub

In the earlier feasibility report (Huxley and Davies 2022), research assessed the feasibility of data linkage and the potential of a data intelligence hub to support effective service delivery for Careers Wales and its YEPF partners, particularly Engagement and Progression Coordinators (EPCs) who are based within LAs. Using desk-based research and interviews the feasibility report addressed 6 key questions:

1. What data needs are created by Careers Wales organisational policy and Welsh Government national policy?
2. Do, or can, the data holdings of Careers Wales and partners fulfil these needs?
3. What is the legislative context for administrative data sharing?
4. Are there legal, privacy or other issues or risks that prevent data linkage?
5. What are the benefits and risks associated with data sharing?
6. What, if any, are the feasible approaches to enhancing data utilisation and effectiveness?

Six potential avenues of development for more effective use of data and data intelligence were put forward. The operational, legal, economic, technical and scheduling feasibility of each option were considered. The benefits included supporting effective service delivery, evaluation, planning and future provision. The report suggested that a more developed and systematic approach to data intelligence offered potential to look at customer needs, which is of benefit not only to

those receiving service support from Careers Wales but also to partner organisations. The report concluded that it was appropriate and feasible, with commitment from Welsh Government and partners, to develop a data intelligence hub in order to provide timely access to data for support services that enabled consideration of trajectories, barriers and outcomes.

The recommendation to establish a data hub has since been further developed, with the Welsh Government commissioning Careers Wales to develop and evaluate a prototype in 2023.

Within this report, the contents and purpose of the prototype are examined, reflecting on the initial recommendations of Huxley and Davies (2022). Key questions for this assessment include: What data has been incorporated in the data hub prototype? Could the prototype aid the delivery or evaluation of services? And, what are the potential strategies/options/trajectories moving forward?

Changes in governance

Since the feasibility report, the governance context in relation to tertiary education in Wales has evolved. The Tertiary Education and Research Act (Wales) 2022 led to the establishment of a new Commission for Tertiary Education and Research, Medr. Medr became operational on 1st August 2024. Medr is responsible for funding and regulating tertiary education and research, including Further Education (FE), Higher Education (HE), apprenticeships, school sixth forms, adult community learning (ACL) and government funded research and innovation. It has “strategic priorities to deploy flexible learning, maintain excellent standards, reduce attainment gaps and put the learner at the heart of the tertiary education system.” (Welsh Government, 2024, p.5).

There is much similarity between Medr and Careers Wales’ strategic priorities (see Section 3 in Huxley and Davies 2022). Both organisations have a remit to: support learners to continue in education and be prepared for employment; ensure fair access to opportunities and reduce barriers for under-represented groups; and to contribute to the economic activity of the Welsh population and workforce skills supply for the demands of the future economy. Therefore, a question addressed

within this report is, how does the creation of Medr impact upon the development and functioning of a data intelligence hub?

Study Aims

Careers Wales commissioned this research with the following 3 key aims:

- to assess the development of the data hub prototype in relation to the recommendations made in the feasibility report
- consider whether changes, particularly the establishment of Medr, affect the development of the data hub
- to assess the use of data within careers guidance organisations in Scotland and careers guidance developments in England.

The impact of Medr is explored by examining its legislative basis and responsibilities, its role in data governance and data intelligence for tertiary education provision and outcomes; and its data needs as an organisation.

Consideration of the Scottish and English systems allows for reflection on the nuances and differences in the use of data in careers guidance organisations.

Methods

The findings within this report were informed by interviews with key stakeholders and desk-based research. Interviews were conducted with 11 individuals across the following organisations: Medr, Careers Wales, Regional Skills Partnerships (RSPs), LAs, Welsh Government and Skills Development Scotland. The interviews took place during October 2024, and lasted an average of 51 minutes.

The interviews were semi-structured, guided by a number of themes. The areas covered in the interviews included: information about the job role of the participant and their knowledge of the data hub prototype; the benefits and risks of the data intelligence hub; data and evidence gaps within their organisations/sector or function; how organisations work in partnership on data and information sharing; and understanding of careers guidance contexts in England and Scotland.

Desk-based research focused on reviewing the prototype, availability of data, legal and policy context, and national comparisons. Evidence considered included

Careers Wales' report 'A Data Intelligence Hub for Wales: Prototype Evaluation', organisational policies, reports, websites, and legislation.

The research was approved by the Cardiff University's School of Social Sciences Research Ethics Committee.

3. Findings

Assessment of the prototype

The development of the data hub prototype, led by Careers Wales, drew on information from its data warehouse, Atlas, using PowerBi. This was done in collaboration with the North Wales' RSP and sought to incorporate labour market information (LMI).

The RSPs focus on working with industry to understand the current and future skills needs of business and industry, as well as working with learning providers to understand skills gaps in relation to local job markets. There are 4 RSPs: South East Wales Cardiff Capital Region Skills Partnership (CCRSP), North Wales Regional Skills Partnership (NWRSP), South West Regional Learning and Skills Partnership (RLSP), and Mid Wales Regional Skills Partnership (MWRSP).

The prototype incorporated information intended to enhance employability and skills support and enable analysis by the North Wales RSP's economic "priority sectors". The focus was to develop a proof-of-concept test product that would provide data on customer choices and employer needs, enabling understanding of supply and demand of skills within regions and LAs.

The data used to build the prototype covers a 6-month period between September 2022 and April 2023. The prototype includes data from Careers Wales, schools, colleges, Welsh Government and other partners. The prototype was isolated, created separately from the YEPF data hub (see below) to ensure the continued integrity and functionality of the YEPF data hub during the development of the prototype.

The dashboard interface provides aggregated information only and applies restrictions that prevent the disclosure of small numbers. This minimises the risks of sharing information that could be used to identify individuals.

The prototype data hub was structured around 3 different areas: 'Sectors and Skills' and 'NEET' and 'Unknowns'.

The 'Sectors and Skills' area has three dashboards, each focused on priority sectors, LAs and protected characteristics. It draws on information from the Career Check survey on preferred occupations, enrolments and 'dropouts' from LLWR and colleges data, and Careers Wales' vacancy information, which draws on a number of different sources including jobs vacancies shared directly within Careers Wales but also from the Job Centre, LAs, Indeed and others. The dashboards show the number of vacancies within priority sectors; number of customers enrolled in training and education across the priority sector; enrolment dropouts by priority sector/LA/characteristics; customer per vacancy across the priority sector/LA/characteristics; number of customers preferred occupation per vacancy across the priority sector/LA/characteristics. Protected characteristics include gender; in or leaving LA care status (classified as yes, no or unknown); Free School Meals (FSM) status; disability; and ethnicity.

Under 'NEETs' there are two dashboards: 'NEETs' and 'Destinations and journeys'. These show the number of NEETs, percentage of NEETs, change in the number of enrolment drop outs over time, number of NEETs flagged as at risk, and the number of learners at risk of becoming NEET. Infographics are also provided for NEETs by age (16,17,18), NEETs by status (non-employed active seeking; non-employed not available; non-employed not ready; social services provision); number of NEETs by month (i.e. over time) and the number of NEETs by LA.

'Destinations and journeys' reveals whether a 'destination' had been achieved or not achieved, and breaks this down by the destination type (education, training, other, employment, or self-employment); age at destination; NEET status by Tiers 2 and 3; number of customers by Tier (1-5). Within this section, reporting can be examined by the protected characteristics noted above.

'Unknowns': Number of unknowns and NEETs by region (North, South, West, and Mid Wales); number of unknowns and percentage of unknown across LAs; number of NEETs and percentage of unknowns by LA; and unknowns over time (by Month).

Careers Wales' evaluation of the prototype through workshops focused on 4 key areas: the potential benefits of a data hub; the gaps it might address; data content (within the prototype, additional data needs and partner organisations data holdings); and challenges/barriers to data hub delivery. Considering evidence from the internal evaluation and from interviews, the prototype has significantly increased the awareness of the data holdings of Careers Wales, and demonstrated the value of this data, particularly preferred occupations, intended destinations and the potential to consider different characteristics. Whilst the information on preferred occupations is used internally to support careers guidance services, it also provides partners with access to information on the potential supply of future skills. One interviewee who had attended the workshops commented:

"We had the demonstration, and then gone to colleagues and said, "do you know that this is here because it's really good?" and I think it meets a lot of our needs".

The benefits of having a data hub that would be accessible by a wide range of partners were as reported in Huxley and Davies (2022). These findings still hold in relation to the prototype. The benefits to partners delivering services (such as youth services) were seen to be particularly valuable to understanding not only prior educational engagement but also to the barriers to engagement. It was also clear that there is currently a lack of 'up-to-date' information, and a lack of access to data from other partners. For example, the RSPs (as we consider below) have very little access to 'supply' data – what education and skills training are being undertaken, and what vocations are learners considering - making it more difficult to target and support learners to make choices that will provide employment opportunities. The functionality of the data hub was seen to provide a significant improvement that would allow evidence-based decision-making, in supporting individuals, in developing programmes of support or targeted interventions, and in supporting policy making.

Whilst the potential of the prototype was seen to be valuable in providing a clearer picture of the prospective skills supply and engagement/disengagement from

education and training, there were a number of areas that will require further development. Firstly, evaluating longitudinal outcomes of destinations is limited without access to HE and employment data; and secondly issues were raised in terms of skills demand analysis.

Longitudinal outcomes are important for the evaluation of Careers Wales' services, the schemes and initiatives to which they and their partners contribute as well as to influence policy and practice that enable positive outcomes for learners and the labour market in Wales. The workshop evaluations and the interviews highlighted areas where further data inclusion would strengthen the data hub. This included:

- 1) the ability to consider the type of learning programme that people enrol in
- 2) reasons for disengagement across all tertiary institutions
- 3) UCAS, HE and employment data

Understanding course choices for those entering tertiary education and reasons for disengagement can help not only in terms of service provision, but also in relation to policy development. The occupational choices of those entering employment will provide an informative picture of future skills supply. For example, participants suggested that being able to understand, in a more timely manner, information on apprenticeship starters, or qualifications related to in-demand occupations and industries would support labour market interventions. There were also suggestions that, in evaluation of employability support, there are gaps in understanding the outcomes for individuals in various support programmes (e.g. Working Wales, employability such as JGW+, ReACT, Maximus) due to a lack of longitudinal employment data.

Reasons for disengagement are currently not well understood and further access to and examination of data to support individuals and to provide data on aggregate trends would be useful. Whilst Careers Wales are currently notified by FE colleges and Sixth Forms when someone has withdrawn, the reasons for disengagement might not be shared. There is also currently no information related to disengagement from HE. Again, this information could enable better support to be provided to individuals and in turn may improve education or employment outcomes.

Regarding outcomes, UCAS data, HE data and His Majesty's Revenue and Customs (HMRC) data were all raised as valuable data assets that could support better understanding of education and employment outcomes. Interview participants also suggested that more detailed geographic information, such as LSOA and WIMD would also be useful in understanding the needs of clients within particular areas. Another gap identified included data on Additional Learning Needs (ALN) in the post-16 context, and there is interest in having better understanding of pathways for those with neurodivergence conditions. The scant data available on individuals after post-compulsory education remained a significant barrier to outcome evaluations. This affects our understanding of how effective education and support funded through the public purse are in providing positive economic outcomes for Wales.

The development of the prototype and the inclusion of priority areas to consider skills supply and demand has further revealed the complexities, noted in the 2022 feasibility report, in mapping across disparate data and classification systems. The preferred occupations (derived from Career Check and updated subsequently where possible), sector vacancy information (using Standard Occupation Classification (SOC) codes), and the information on courses (using Qualification Framework codes) raises some questions. The lack of alignment in data within the available sources means that work in this area would be a significant undertaking and would need to be well resourced in order to implement a robust methodology to allocate or adapt the preferred occupations held within Career Check data, to qualifications, occupations and industries that represents potential and actual pathways. Reviews will need to be undertaken to ensure data on vacancies reflect and align with the skills and industry classifications used elsewhere. However, the alignment of data, whilst necessary, would be more fruitful were outcomes for learners over 18 years old more easily accessible. This is possible through the inclusion of HE and employment data to which Careers Wales is currently lacking access.

In the development of the prototype, the inclusion of LMI information, raised some questions. The primary intended purpose of the hub was to provide information on aspirations, pathways and outcomes for learners as they move into employment (or not). The development of the data hub to serve as a vehicle to consider supply *and* demand represents a further development.

There are a number of disparate sources that contain regional information available on skills demands and skills gaps. Information from InfoBaseCymru, providing 'data for an intelligent Wales' does include figures on work-based learning (WBL) including apprenticeships, traineeships at different levels and by LA. Data is currently available up to 2022. Each RSP provides support to upskill and reskill into newer occupational roles in their region working with young people to think about the opportunities available. They produce employment and skills plans every three years. These identify regional and sub-regional skills priorities using a number of data sources. A significant role is played through the RSPs and their websites. RSPs aim to address skills shortages by influencing post-16 provision, and raising awareness of opportunities.

“RSPs are a pivotal component of the regional skills landscape, providing labour market intelligence to Welsh Government. They are already woven in key policy documents such as the Apprenticeship Plan, Employability Delivery Plan and Net Zero Wales.” [Regional Skills Partnerships | Business Wales Skills Gateway \(gov.wales\)](#)

RSPs are well integrated into the same systems and networks as Careers Wales, including Medr. They are involved in careers events, including in partnership with Careers Wales and provide information and data to support careers guidance, to develop and create contacts or opportunities with business. They receive data reports, quarterly, provided by Careers Wales. They work with colleges to understand delivery and the skills needs and with YEPFs 14-19 coordinators, LAs and HE around education provision and opportunities to engage with employers.

RSPs have created Memorandum of Understanding with Medr, and promoted engagement with Medr's consultation on its strategic plan to employers and industry, facilitating cluster workshops. RSPs organised sessions to gather intelligence with businesses and industry to inform their submission to the current Medr consultation.

Documentation on RSP websites, for example, the North Wales Skills and Employment Plan 2023-2025 and the Mid Wales 2024 Update, provide information on regional skills needs. The North Wales Skill and Employment Plan contains information (in Section 6) on occupational demands, future skills needs; provides breakdown infographics on energy and environment, construction, advanced manufacturing, creative and digital, tourism and hospitality, health and social care,

food and farming, financial and professional, and the public sector. Currently, the RSPs have no access to LLWR or post-16 data, which would greatly add value to their ability to forecast future skills supplies.

However, the availability of information on skill demand, through industry, Welsh Government and other bodies such as RSPs sources, should be further explored to ensure any future developments in this area are not duplicating efforts elsewhere, are pooling resources, and add value to existing sources in the most effective way. Participants highlighted that knowing where to find information can be difficult, particularly at a local level.

The YEPF data hub

Careers Wales use their administrative data to supply information to those supporting NEETs. YEPF data hub allows access to individual level information on young people in Tier 1 and Tier 2. It enables assessments and evaluations to be informed by intended destinations, preferred occupation, ethnicity, gender, and disability, and has more recently included barriers from the Career Check survey. Those with access rights (currently Careers Wales staff and YEPF EPCs) can look at written notes on individuals related to their status. LAs regularly send through updated information to enable data corrections and or revisions. The YEPF data hub additionally allows for comparisons across Wales and LAs. The YEPF model is largely working well, though there was acknowledgement of variation in engagement across LAs.

EPCs can use data from the YEPF hub to monitor Tier 1 “unknowns” and Tier 2 individuals, and will use this to inform their working, checking the data to see if it is up-to-date. Though practice across EPCs varies, they will work with internal stakeholders such as Communities for Work, social services, Youth Offending Services, Youth service projects, providing information from reports and cross reference with internal data sources. Movements can also be considered, enabling identification of individuals who have moved into Tier 1 and Tier 2 in their area.

The YEPF data hub was well-regarded by those interviewed, especially those who were accessing the system regularly. It was judged to be user-friendly, and engaging, allowing EPCs to access information on different barriers to engagement for

individuals, as well looking at trends. Having access to the YEPF datahub provides easier assessment of performance in reducing NEET numbers comparing LA numbers nationally, looking at averages and performances over the year. The YEPF hub was identified as being much easier than previous systems that were less intuitive and harder to use effectively, with better visualisation functions such as maps and the inclusion of new data fields. Preferred occupations and barriers to engagement were seen to be particularly useful, as were flags for groups that are often less likely to engage in tertiary education and employment. Ward breakdowns were also useful to look at evidence on a local level.

Criticisms related to the YEPF hub included slow, or infrequent, formal data flows into Careers Wales, such as information from schools on pupils who have moved, on 'in year' cohort numbers, and the lag between collecting destinations data and publication. The need for timely, as up-to-date data as possible was seen as key to intervention. The speed at which support could be provided was understood to influence positive outcomes for individuals, and Wales' economy more broadly.

Within LAs, systems allow for central LA data to be checked, highlighting to Careers Wales who might be at risk, particularly using data from schools within LAs education directorate systems, with EPCs providing ad hoc or more systematic (such as on a fortnightly basis) information to Careers Wales to ensure the data within the YEPF data hub is accurate and up to date. Data accuracy was reported to have improved over time and were well supported between YEPF actors.

A criticism related to data access was on information about Tier 3 individuals, where concerns were raised about EPCs only accessing Tier 1 and Tier 2 data. Tier 3s are those that are disengaged from education, employment and training but are engaging with Careers Wales or are actively seeking work. Whilst Careers Wales and EPCs discuss the numbers of Tier 3s, data on Tier 3 individuals is not currently shared, meaning that EPCs lack access to this information where they could increase the robustness and accuracy of information. LAs are "held accountable for the NEET figure" (those in Tiers 1 to 3) but asked "how are we meant to implement and affect change if we can't see who is in that Tier". Relying on Careers Wales to change individuals Tier status where engagement has not been possible, meant it was difficult to provide predict who would move from Tier 3.

Another limitation of the YEPF is the perceived difficulty in sharing data on those leaving Year 13 who are not in Tier 1 and Tier 2, causing barriers to tracking outcomes and but also in offering support to Tier 3.

In assessing the potential of the prototype, Careers Wales' internal evaluation and the interviews and desk research conducted for this report suggest that a lack of legislative prescription, in what should be shared (by schools, and when), in the provision of data for those who complete 6th form and FE, and in access for UCAS, HE and HRMC data could undermine the value of the data hub. However, there is still a view that Careers Wales should lead in this area and that a data hub with Careers Wales generated data and school data would be a significant addition to the understanding of outcomes for a number of support services beyond Careers Wales.

Data Governance and the Role of Medr

Within the feasibility report (Huxley and Davies 2022) concluded that Careers Wales was the organisation best placed to deliver a data hub. The evidence gathered within this study continue to support that conclusion, as noted in the previous section. Governance of the data hub was judged to be better placed to be at arm's length from government, with Careers Wales being involved at early part of learners journeys, with comprehensive and varied data already held on school pupils, interconnectedness with other services and the novel data, particularly, characteristics, preferred occupation and barriers. One interview participant commented:

“They’ve got the early intervention, they’ve got the relationships across the skills piece, so they are a key partner or leader in the skills and employability landscape...they are well placed”.

The introduction of Medr as an actor in the education, training and employment landscape was seen as a significant opportunity to streamline and improve data collection and analysis, but this was not seen as a significant impediment to the delivery of the data hub by Careers Wales.

The data that could add value to understanding of Careers Wales' service provision and evaluation and the legal provisions for accessing data were outlined in the feasibility report (See sections 3.22 to 3.28 in Huxley and Davies 2022). However, it

is worth reiterating that access to tertiary education data by Careers Wales is made possible through provisions within different pieces of legislation:

“Under the Apprenticeships, Skills, Children and Learning Act 2009 (Part 2 of Schedule 2 section 253A(2)(d))² and the Education (Student Information) (Wales) Regulations 2017 Act, Careers Wales (CCDG) and other education organisations involved in Post Compulsory Education or Training (PCET) provision (such as HEFQW, Qualifications Wales, HESA and UCAS) are identified as organisations that are able to share student information for the purposes of research, producing statistics or analysis, or providing information advice and guidance.”

Furthermore, for adults learners “the Employment and Training Act 1973 provides a legal basis by which Careers Wales can undertake the provision of CIAG, to decide “what employments, having regard to their capabilities, are or will be suitable for and available to them, and what training or education is or will be required by and available to them in order to fit them for those employments” and to process personal and special category data for this purpose” (Huxley and Davies 2022).

Despite these and other pieces of legislation, data sharing is commonly cited as a barrier to evaluation of participation and outcomes – a key need for many different organisations and departments with Welsh Government to support a flourishing economy. What has the creation of Medr meant for the legislative environment? Unfortunately, the Tertiary Education and Research Act Wales 2022, currently provides no further provisions by which Careers Wales can access data to support the delivery and evaluation of its services.

Under Part 6: Information, advice and guidance – (S126-131) provisions are set out on information and advice from Medr to Welsh Ministers, Medr’s ability to request information from other persons, for specified bodies to share information with Medr, for Ministers to request application-to-acceptance information (i.e. UCAS data) to be given to the Welsh Ministers or Medr for limited research purposes. Developments to share data between Medr and Careers Wales is not explicitly mentioned.

² Apprenticeships, Skills, Children and Learning Act 2009
<https://www.legislation.gov.uk/ukpga/2009/22/section/253A>

If, or when, data responsibilities for LLWR and Post-16 are transferred to Medr, there may be changes in the responsibilities to develop official statistics but the operational development of official statistics is not yet clear within this new landscape. Questions remain over HE data provision to Medr, agreements are not yet secured with HESA/HEIs but the expectation is that access to data, as under HEFCW functions, will remain in place. Official statistics may be maintained within WG with Medr providing data and support, but it could be transferred to Medr. Careers Wales, with its obligations to undertake the Destinations Survey of Leavers could see its role expanded in this area, and given further legislative backing for doing so, supporting Medr and Welsh Government with access to data and evaluation of such data. However, under its current resourcing, Careers Wales would not be able to add further value without further resources.

There was an acknowledgement that data was crucial to an informed evidence base, and that there is a significant gap across tertiary education around who is participating in what courses, particularly by socio-economic status, and significant difficulty to track individual journeys in and out of (now Medr funded) provision. Concerns were raised about 'working blindly' or 'working ad hoc' with limited data such as the Longitudinal Employment Outcomes data (LEO) and Graduate Outcomes (a survey of HE leavers by HESA). These were seen to only provide partial information. Destinations and outcomes that can be utilised to analysis journeys, in a longitudinal way, were highlighted as crucial in understanding the value of education, training and employment to individuals, to localities and to the Welsh labour market. In turn this can have economic benefits for Wales, enabling good decisions to be made on programmes and funding, and supporting improved outcomes and engagement in the labour market, strengthening the Welsh economy.

Understanding was that there are 'big data gaps', in terms of tracking individuals into employment, to understand peoples' pathways but also to evaluate services, data is lacking. Recent issues with coverage of the Annual Population Survey data mean the national NEET estimates are not completely robust, yet this information is also used for the Welsh Government national measure on participation. A further concern was that what is published by Welsh Government is often not available at local levels, or for protected characteristics beyond gender, evidence suggests that there is a need to improve this in Wales. Whilst the LEO data provides some information on

outcomes, there is a time-lag in the availability of information by a couple of years, and the individuals included must have been educated in Wales. The potential of the data hub to provide more timely access to information on participation would be welcomed to provide a national picture, but also to break this down by more regional and local geographies and by protected and other characteristics. The longitudinal picture by a wide range of characteristics is difficult at present.

Currently, Medr have followed operational structures in Welsh Government with separate governance and statistics teams with a remit for FE, apprenticeships and adult learning, and teams with a remit for HE. The views expressed in interviews were that data collection will be changed in future, in order to reduce the burdens on providers but also to bring greater alignment across tertiary education data collections. Any changes will include a review of equalities and privacy impacts in line with legislation such as the Equalities Act, the Wellbeing and Future Generations Act and General Data Protection Regulation (GDPR). However, no decisions have yet been made or publicised.

Value-added from the operational data that comes from LAs and Careers Wales was thought to enable those supporting disengaged learners or workers, or at risk of disengagement. A resource such as the data intelligence hub would provide a richer picture than data that is currently publicly available. Data that would be useful for Medr would include data WIMD and WIMD domains. This could easily be linked to Careers Wales records from publicly available data. Welsh language was also a very important aspect for Medr, this information could be provided by schools.

Furthermore, employability and work experience data are data that are currently 'missing'. Understanding what 'works' for different individuals, in different areas of Wales would be a step forward. However, this can only be realised with the inclusion of post-18 data on employment and education.

Whilst collaboration between education, training and employment actors is important, and a significant aspect of Medr's strategic plan, how the tertiary data landscape looks and operates in future will be dependent upon Medr's actions. However, the data landscape and access to data is still being discussed within Medr and the future of data collection and any reforms across the tertiary sector, as yet, remain unknown. Whilst the intricacies of the organisational structure, remit and activity of Medr are

still being 'worked out', the governance and operational functions of Medr with regard to data on tertiary education, and other organisations roles and abilities to use that data must be scrutinised and delivered as a significant priority. Using the deep and rich data from Careers Wales to understand diversity in engagement across tertiary education would add significant value to understanding learner journeys but further data sharing with Careers Wales required for the data hub to have positive impacts in this area.

Summary – the prototype and Medr

The prototype was well received within Careers Wales, Welsh Government and partner organisations and was believed to be able to provide benefits to those organisations working within education and employment support services who aim to positively impact upon the skills and labour supply in the Welsh economy. The creation of Medr has not adversely impacted the view that Careers Wales are well placed and the best organisation to deliver a data hub. The benefits, however, are still constrained by a lack of prescription and legislative imperative for sharing data with Careers Wales.

4. The use of data in the provision and evaluation of English and Scottish Careers Guidance

The following section considers data use in the context of English and Scottish Careers Guidance. These provide points of national comparison, however, it must be remembered that Scottish and Welsh Governments have devolved powers over education. This has led to divergence from England in educational policy, for example with differences in pathways and systems in post-16 education, and different HE learner funding strategies. It must also be noted that a largely privatised and fragmented English system appears on the brink of centralisation, and the Scottish system has an active data hub in place, supported by legislation, as detailed below.

The Skills Development Scotland 16+ Data Hub

Skills Development Scotland (SDS), the national careers guidance service, provides an all-age service, with a focus on young people and those with additional barriers provided a higher level of support – a very similar model to Careers Wales.

Under the policies 'Opportunities for All' and 'More Choices, More Chances' (MCMC), data sharing was embedded as a key principle. Better, more timely and more regular data sharing by all partners involved in the support of young people ensure that they have the same information to ensure the right support is put in place, particularly for the most vulnerable. Those that are less likely to make a positive transition from school to further learning or employment can be prioritised as data sharing enables their identification.

SDS play a significant role in official statistics and reporting national figures and access to data is central to this. School leaver destinations are provided twice a year. A range of reports are made for partners. SDS also calculate and are responsible for the Annual Participation Measure amongst 16-19 years olds, in August each year. Interim measure reports are produced twice a year (in May and December). SDS also provide reports to colleges and LAs.

The Post 16 Education Scotland Act 2013 provides a legal basis to partners to provide data to the SDS. Partners are legally mandated to do so. Details are

provided in 'Opportunities For All, Post-16 transitions: Data Practice Framework' (Scottish Government, 2014). Under this framework, Scotland has advanced its data sharing ability and created a 16+ data hub, used to identify individuals who may require support and to allow the production of reports and statistics (as noted above).

The 16+ Data Hub has been operational for over 10 years and is well-embedded into the operations of SDS and its partners. The hub is a secure online portal, using Microsoft Dynamics (the same system as Careers Wales). ScotXed (equivalent to the Pupil Level Annual School Census (PLASC)) provides data for all secondary school pupils (S1 to S6). For Senior Phase pupils (S4, S5 and S6, equivalent to Year 11 to Year 13 in Wales), data is shared by 32 LAs, all of which use the same data management system, via a web-based module that is structured to provide the same data, providing consistency in data fields across Scotland.

Colleges provide information on enrolments, courses, start and end dates and withdrawal, age 16-24. The Student Awards Agency Scotland (SAAS) provides a HE data enrolment data, and courses collected in relation to funding of HE places (which is state funded for Scottish pupils). The Scottish Funding Council, responsible for the funding of colleges and universities, provided some data to back up college data (though plays a less significant role due to better alignment of data and data collection methods). The SDS is responsible for funding of national training programmes, such as apprenticeships. Details of all apprentices are collected and that data is provided monthly to the SDS management information system (MIS). In addition, some non-legislative partners provide information, for example, prison service data on young people, where appropriate. More recently DWP data has been shared, providing legacy benefit data and Universal Credit data. Sharing here is to enable understanding of the journey and outcomes for individuals and identify when support might be needed and is made possible on the basis of the Employment and Training Act 1973.

The transfer of data occurs regularly and is specified in the 'Data Practice Framework' (see Figure 1). Data fields provided by LAs include: year group, admission date, anticipated and actual school leaving date, status (education, training or employment), provider or employer name, start dates, and job titles (where applicable). The inclusion of destinations and employment provide rich data

to consider skills supply and allows for understanding of what is happening within a particular locality or region.

Figure 1: SDS data transfer frequency

Person	Frequency	Processed by SDS
Local Authority	Fortnightly/Monthly	Fortnightly/Monthly
College	Monthly	Monthly
The Scottish Ministers (SAAS)	Monthly	Enrolment data - Bi-annually All other data - Monthly
SFC	Monthly	Quarterly

Characteristics, recorded as ‘yes’ or ‘no’, include: additional support needs, coordinated support plan, individual education programme, integrated assessment single plan or child’s plan, looked after at home, looked after away from home, preferred occupation, preferred route, transition plan, and young carer. These flags help to identify young people who may have less positive transitions and they will be offered extra support.

The extent of data coverage allows validation checks to be undertaken, using partners data, to ensure that destinations are correct and can be followed up if there are discrepancies to ensure the data is accurate, can be updated or allow support to be offered to individuals.

The SDS also hold information separately on the labour market via a ‘Data Matrix’, using data on skills supply, demand and mismatches. They also provide Skill Assessment reports for regions and sectors using existing datasets and forecasts. Regional Skill Assessments produced in October 2023, focused on current and future demand; with infographics available for LAs, regions, city deals and growth deal areas.

Assessment of the Scottish system indicates that it is well advanced in terms of data sharing, use of data and in its ambitions, and this is underscored by the legislative backing of the Post 16 Education Scotland Act 2013. However, two areas can be identified that may improve the Scottish model and enable further interrogation of the complex data around education, training and employment to support a healthy labour

market. One is the integration of the aggregated 16+ Data Hub data with the Data Matrix that can provide robust evidence on the future of the skills market and skills gaps. The second is limited information on employment. Currently, assumptions must be made that the employment status reported in the school data provided by LAs is accurate. Cross-checking DWP and post-16 education data can be used to identify changes, but the picture would be much more accurate were HMRC data incorporated into the SDS system.

English Policy

In England, the National Careers Service provides information, advice and guidance in schools and colleges, guided by Section 45 of the Education Act 1997, but also Section 72 of the Education and Skills Act 2008, and Schedule 4(15) of the School Information (England) Regulations 2008.

The change in government in England means there will be an altered landscape for careers and skills strategy and systems in the near future, with significant changes being brought in by the new Labour Government. Prime Minister Sir Keir Starmer has stated:

“the skills system in England is confusing for young people, adults, and employers. Apprenticeship numbers have plummeted. Skills shortages are widespread. Young people have been left without the opportunities they need. The result is an economy without the necessary skills, nor any plan for the skills needs of the future. Labour will address this by bringing forward a comprehensive strategy for post-16 education. And we will guarantee training, an apprenticeship, or help to find work for all 18- to 21-year-olds”.

These aims are in parallel with the aims of Scotland’s ‘Opportunities for All’ and Wales’ Young Person’s Guarantee (YPG). Within the 2024 Labour Manifesto, a number of changes were proposed. Jobcentre Plus and the National Careers Service will be brought together, however, it’s currently unclear what the Labour government changes will mean for data sharing and careers provision.

The establishment of Skills England to undertake labour market analysis, transformation of FE colleges into Technical Excellence Colleges, changes to

apprenticeship funding, and regional devolution of adult skills funding are significant policies which aim to “*ensure we have the highly trained workforce needed ... to make sure training in England accounts for the overall needs of the labour market... to provide young people with better job opportunities and the highly trained workforce that local economies need.*”

Skills England was launched in July 2024. In a new policy document, ‘Skills England: Driving growth and widening opportunities’ (DfE 2024), the Secretary of State for the Department of Education states that the “fractured skills landscape” needs to be brought together, and the establishment of this a new body will be central to delivering government policies. Skills England will be established in the next 12 months. It will have responsibility for looking at skills gaps in the short, medium and long term; and consider strategies to support the development of skills in England.

A recent paper produced for Skills England (2024), ‘[Occupations in Demand](#)’ has created a demand index (ranked critical, elevated or not in high demand) using 7 labour market indicators for 336 of 412 SOC codes. Whilst this is useful information to inform strategies across the UK, the analysis does not provide breakdowns for nations, regions, or for LAs.

In comparison to a well-integrated structure in Scotland, and a centralised system in Wales, the situation in England is much more fluid, and any changes in England will consider developments in Wales and Scotland, as well as Northern Ireland, bringing a more aligned system of skills support across the 4 nations.

5. Purpose and Potential Avenues

The focus for the development of the data hub currently needs to remain on data, trends and evidence generated through Careers Wales' service provision and additional data that can inform assessment of the performance and delivery of support. Providing information on aspirations, intentions and barriers can help to support partners in policy and operational planning. The data gathered by Careers Wales alone is, according to EPCs, already have a significant impact on their ability to support Tier 1 and Tier 2 learners. Furthermore, there is benefit in sharing with YOS, Youth Services, housing and homelessness teams and others who are aiming to increase engagement in education, training and employment. The need to understand outcomes related to these services are intrinsically linked to data held by other organisations – engagement in tertiary education and employment.

However, in order for Careers Wales' data to contribute to robust analysis of pathways, interventions and outcomes there is a need for further data access, and legalisation, in line with the Scottish model, can provide this. The Scottish model provides a useful framework to consider integration of data that allows interrogation of the subject/skills being studied or unemployment information by a range of personal characteristics at a local, regional, and national level. This model is backed by prescriptive legislation with mandates partners to share their data, and has enabled a deeper understanding of the skills supply and demands in Scotland.

For Wales, LLWR data for adult learners would provide a broader picture to consider the impact of Working Wales; UCAS applications could help identify post-Year 13 disengagement, as well as HE data, which would also support analysis of outcomes, as well as skills supply. These are unlikely to be more frequently available than on an annual basis based on current data cycles. The last piece of the data puzzle would be HMRC data to identify those in work and their occupation. These additions, provided regularly, would add significant value to the data hub. Significant, focused work is needed to establish the basis for sharing this data with Careers Wales and securing data agreements with these partners.

Given that operations related to data collection, processing and reporting between Medr and Welsh Government and the roles and responsibilities have not been

confirmed, and that there is uncertainty, this report recommends that Medr and Welsh Government seriously consider the potential for a legislatively defined role for Careers Wales in supporting evidence needs and how data from post-16 education and training, support services, and employment can be utilised in a way that allows for longitudinal analysis. Changes to the tertiary data landscape may be created by mandates from Medr and it will be important to ensure any future data sharing agreements and privacy notices include consideration of roles and responsibilities of the differing actors that support education and labour market interventions. However, given that Careers Wales data current data agreements will be ending in March 2025, there is a clear need to define the data and data sharing agreements for data that Medr will hold, which are vital to the success of the data hub. Until data collections change (assuming that post-16 sixth form data and LLWR data become more aligned), the priority should be on securing the continuity of data agreements that support the activities of Careers Wales and their partners for the current data collections, and for the beneficial data that has been identified, in their current forms.

Actions that could support better analysis of outcomes in the shorter and longer term include: 1. The scrutiny and development of data sharing agreements, a data access and missing data, particularly with Medr; 2. Development of Careers Wales data into a public facing dash board; 3. A review to assess the alignment of occupational preference with skills and employment classifications.

Firstly, the setup of a data hub that includes only Careers Wales data and limited information from other sources will not be of as much value as one which incorporates data that enables evaluation by a range of characteristics and of longitudinal outcomes. It is recommended that, in the short term, Careers Wales focus on scoping data items and secure data agreements with partners, including a robust review of publicly available data on skills supplies and demand; assessment of the timing of data provisions to Careers Wales; and to work closely with Welsh Government and Medr to ensure Careers Wales are able to access data on tertiary education, from LLWR to HMRC. This review should also consider the data that is not currently shared but could be made available with further legislative backing.

Secondly, in the short term, incorporating further career check data and information on courses studied in college and 6th forms into the data hub, should be a priority for

Careers Wales. Careers Wales' information should be utilised by providers to consider training offers, by RSPs to inform skills analysis, and by Welsh Government and other partners, in a number of different ways that support a strong labour market. The portal could be publicly available, providing aggregate data around skills supply. This would involve careful consideration of the breakdowns, particularly related to protected or sensitive characteristics, that would be possible. A public facing platform would also reduce costs associated with an access-only platform but should only be made available at aggregated levels, whilst providing breakdowns by as small geographic areas as possible. Provision of meta-data and reports using the data should also be clearly signposted and materials developed to support use and interpretation of the data. However, within the current resourcing of Careers Wales, this work would not be possible, and either additional work is needed that can support the successful delivery of data sharing agreements, data flows, data transfer, data quality checks, dashboard development, and management will be necessary. All of these tasks require dedicated time and resource to ensure quality frameworks and operating procedures. The ability of the data hub to support positive economic impacts will only come to fruition if it is well resourced.

In the first instance, developing the data hub could be advanced with a relatively small amount of additional resource for a data scientist or developer to use the current data generated by Careers Wales, and for a business analyst role with expertise in relation to data management and data sharing (either as consultants or as in-house roles). This work could be done in relation to a public facing data portal that can be accessed by partners for whom aggregate information is useful, which can be built from the YEPF data hub (where data is held at an individual level) to support service delivery on the ground. As more data agreements are secured and data arrangements in place, the need would be less on structuring the system, but in maintaining, checking and publishing the data dashboards. This would, in time, require further investment in posts related to data management, analysis and administration.

Finally, in the medium to longer term Careers Wales should aim to develop a skills-led schema, that is accessible to young people and that can inform the preferred occupations classifications used within Career Check. Aligning with qualification, occupation and industry classifications will help to inform supply side understanding

of current skills. Elias, Dickerson and Bachelor's (2023) work on skills classifications could usefully inform developments in this area. This could then support future work with Medr and RSPs in relation to skills supply and demand in a more meaningful way, aligning with other sources of national data. This could then be further incorporated into the data intelligence hub.

Conclusions

Understanding the education, skills and employment picture in Wales is challenging, using fragmented sources that must be pieced together and that are often 'out-of-date'. A central theme raised across the research was the lack of a 'complete picture'. This has negative consequences for the ability to change and improve economic labour market engagement of individuals, and the continuation of strategies which lack evidence in relation to outcomes. The potential to positively impact on engagement in the labour market in Wales is hampered by a lack of longitudinal data, which could be provided by the data hub.

In order to provide effective services and policies at the local, regional and national levels longitudinal data is needed. It is clear that it is necessary to not only consider 'inputs' – who is progressing, who is employed and the offer of support to those who are not (where needed), – but also the pathways – what skills are people gaining, what jobs and industries can these serve, who is at risk of disengagement, what support did they access – and importantly the outcomes – who engages in the labour market, in what jobs and industries, and to what extent is this sustained. This information can inform careers guidance and LA service provision, allow education providers to consider the appropriateness of their learning offer to fulfil the needs/aspirations of learners, but also inform analysis and evidence for the needs of current and future labour markets and industries.

The benefit of providing a data hub that encapsulates a complete picture, from schooling to employment, will not only enable services to provide targeted support but it will help to ensure that the Welsh workforce have the skills needed to be employed in the jobs and industries that they aspire to but also to jobs and industries that are required for strong local economies in Wales. For services on the ground, detailed information from Careers Wales linked to education data, provides an

advantage in supporting those who are particularly vulnerable or likely to disengage. It can provide information on skills supply for organisations operating locally, regionally (like RSPs) and nationally (like Welsh Ministers), and importantly can provide breakdowns by a much broader characteristics than other data sources. The rich detail that is available can provide evidence and understanding of the local/regional/national patterns that can inform better decision-making and policy interventions, and would be of significant benefit to organisations such as Medr could outcomes also be reported and evaluated.

Developments to increase knowledge sharing by providing access to Career Check data and intended destinations and including barriers to engagements for NEETs is useful for Careers Wales, LAs, RSPs and Medr, and Welsh Government more broadly. The prototype that has been developed would benefit from additional inclusion of Careers' Wales data and the development of HE, UCAS and HMRC data to provide a more complete picture of the journeys to employment, as well as further data from LLWR (such as older learners not covered by the Careers Wales data spine). However, the picture of how tertiary data will be collected and the role of Medr is still not yet fully formed, and this has implications for data going forward. The creation of Medr provides an opportunity to reassess the routes to data access for Careers Wales, and the legislative basis for this.

The impact on the Welsh economy – through better understanding of pathways, that enables targeted intervention that is considerate of individual aspirations, needs and barriers, and local/regional economic skills – can be enhanced by data sharing and access. The functionality of the data hub, as evidenced by positive reviews of the YEPF hub and prototype data portal, can provide beneficial understanding of current trends and needs that will ultimately benefit the labour market and the Welsh economy. The evaluation of services will, however, remain problematic unless data needs related to post-18 education and employment outcomes are overcome.

It is suggested that further development of the prototype should consider developing Careers Wales' own data, for example on 'NEET' and 'Unknowns', as well as overviews of the patterns in the Careers Wales data from Career Check, at aggregate levels (regional and national but also more locally, perhaps by LSOA). However, including subject choice in 6th Forms, FE and HE would help to support

data gaps for most organisations involved in the skills and employment landscape. Further resource and support within Careers Wales is needed for this. Only when access to further data (backed by legislation), and the mechanisms and resources needed to receive, assess, analyse and share information are in place, will the value of a data hub be realised, as is in place in Scotland.

References

Huxley, K and Davies O.R. (2022). *Careers Wales Data Linking Feasibility Study: Final Report*. Cardiff: Welsh Government, GSR report number 65/2022. Available at:

[Careers Wales Data Linking Feasibility Study \(gov.wales\)](https://gov.wales/careers-wales-data-linking-feasibility-study)

DfE (2024) 'Skills England: Driving growth and widening opportunities'. DfE.

Labour Party (2024) 'Change: Labour Party Manifesto 2024', [Change Labour Party Manifesto 2024](#)

North Wales RSP (2023) *North Wales Skills and Employment Plan 2023-2025*, [Download.aspx \(rspnorth.wales\)](#)

Skills England (2024), 'Occupations in Demand' [Occupations in demand, Calendar year 2024 - Explore education statistics - GOV.UK \(explore-education-statistics.service.gov.uk\)](#)

Welsh Government (2024) *Welsh Government Annual Report 2023-2024*. Available at: [Welsh Government Annual Report 2023-2024](#)