

The Centre for Insurance, Risk & Data Analytics Studies (CIRDAS): A Case Study for Flexible and Agile Online Adult Education for Work-based Learners Across the Insurance Sector in Ireland

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Abstract

This paper explores the Centre for Insurance, Risk and Data Analytics Studies (CIRDAS) as a case study of online adult education which offers flexible upskilling and reskilling opportunities to employees across the Irish insurance sector. It explores how CIRDAS's agile programme development enabled flexible entry, exit and progression routes for work-based learners. It took an innovative approach to the co-creation of programmes with industry representatives and the granular transversal nature of micro-credentials they offered. The experience of learners is shared to demonstrate the effectiveness of CIRDAS in meeting both employer and learner needs for flexible, stackable work-based learning.

Keywords: Lifelong Learning, Work-based learning, Co-creation

Introduction

This practice-based paper will present a case study that is focused on the development of the Centre for Insurance, Risk and Data Analytics Studies (CIRDAS) through the Faculty of Lifelong Learning at South East Technological University (SETU). This paper will present an overview of how this project, funded through the Human Capital Initiative, is agile and innovative, and it will also share examples of good practice. It will show the evidence of why CIRDAS is needed, before addressing how CIRDAS is aligned to national and international adult learning policies. It will then engage in an analysis of the practical aspects of developing CIRDAS, which involves co-creating programmes with industry representatives and delivering the programmes in an agile and innovative way. The focus of CIRDAS is to increase access to higher education programmes through the provision of online adult learning and work-based learning opportunities. The paper will conclude with a review of the feedback from the learners who engaged with CIRDAS and a summary of the main learnings from this project.

The Centre for Insurance, Risk and Data Analytic Studies

The Higher Education Authority (HEA) launched the Human Capital Initiative (HCI) Pillar 3 in December 2019. The €206 million call invited proposals for projects that promoted innovation and agility across the higher education sector. The Faculty of Lifelong Learning in SETU were awarded €1,725,343 to develop and deliver their proposed five-year HCI project. The project was to establish CIRDAS as part of SETU and in partnership with colleagues at Atlantic Technological University (ATU).

CIRDAS was agile in its approach to programme development as it enabled flexible entry, exit and progression routes for work-based learners and it was innovative in its approach to the co-creation of programmes with industry representatives and the granular transversal nature of the micro-credentials on offer. CIRDAS was developed around four key pillars: design thinking, business thinking, data science and equality, diversity and inclusion (see *Figure 1*). The pillars were informed by extensive engagement with industry representatives, which will be addressed in detail later in this paper.

CIRDAS Delivery Pillars

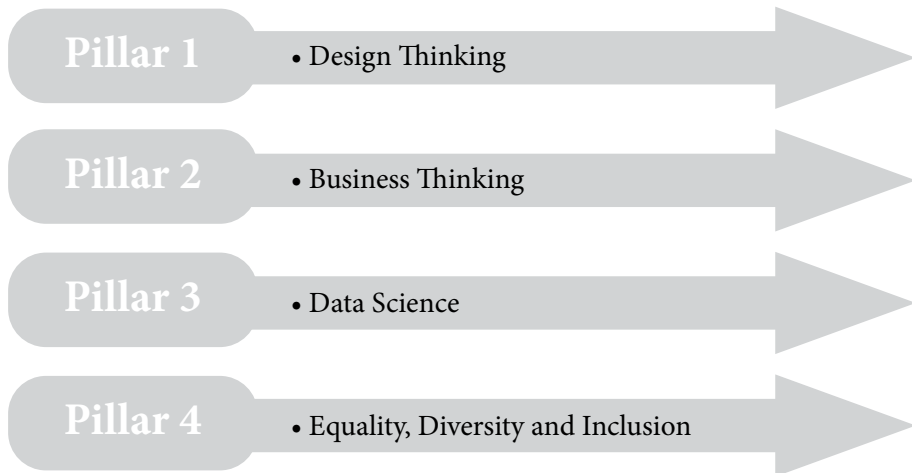


Figure 1. CIRDAS Four Pillars

Evidence of Need

The development of CIRDAS was framed around clear evidence of the need for upskilling and reskilling of the insurance sector. This sector (from broker to multinational insurer) has witnessed a dramatic change in recent years due to numerous challenges and opportunities including Brexit, low interest rates, a challenging claims environment, increased competition, increased regulatory burden and oversight, increased automation, and use of artificial intelligence. More recently, COVID-19 has focused attention towards the need for new approaches to underwriting, delivery, customer service and indeed employee upskilling, as evidenced by the PricewaterhouseCoopers (PwC) report from 2019 (PwC, 2019a). Insurance Ireland commissioned the 2019 PwC report, which found that investment in upskilling and creating the workplace of the future is of critical importance to the sector.

It also highlighted the need for significant development in employee upskilling to address gaps in the existing employee skillset of insurance companies. Traditionally, these deficits were addressed through mainly hiring new staff or outsourcing. This view is amplified in the insurance sector, where 47% of CEOs (versus 30% of other CEOs) indicated that training and upskilling were the most important factors needed to close the skills gap. However, most companies in the insurance sector are not confident in their current capability in this respect, with just 12% of respondents scoring their upskilling programme overall as very effective (PwC, 2019b).

On a macro scale, the insurance industry in Ireland is a vital component allowing for risk pooling among citizens and is a large employer of approximately 28,000 people both directly and indirectly. SETU recognised that this developing situation was resulting in a significant peak in interest and demand among industry representatives not only to look to the insurer of the future but to look in a practical way at the workplace of the future. This workplace presents challenges in dealing with a remote, disparate workforce and managing data, workflows, team structures and dynamics in this environment. The *Future Jobs Ireland* (2019) report under Pillar 3 states that people need to have accessible upskilling options and that Ireland's education and training providers must offer relevant and up-to-date courses that meet the needs of enterprises and workers.

Alignment to National and International Policies

In response to the objectives and ethos of the HCI Pillar 3 call, the project leads co-created with the industry a novel framework that is transformative regionally and nationally, scalable and replicable across other HEIs. This approach, labelled Lifelong Learning 2.0, challenged traditional models of industry and learner engagement, skills discovery, course and Faculty development, and course delivery and accreditation. CIRDAS encompassed learner-centred design and evidence of engagement with these learner cohorts. It was co-created with industry through deep engagement with collaborative and industry partners.

In conjunction with the Faculty of Lifelong Learning, CIRDAS developed and delivered granular transversal courses, from Masterclass up to Masters, with multiple entry, exit and progression routes under the four broad disciplines. This approach was informed by the *National Strategy for Higher Education 2030* which outlines the need for open and flexible learning through creative timetabling and delivery mechanisms, and increased off-campus and workplace provision. CIRDAS is also integrated with national education and enterprise policy objectives and performance frameworks. It fits with national, regional, social and economic current and future needs as it is aligned to *The National Strategy for Higher Education 2030 and Ireland's National Skills Strategy 2025 – Ireland's Future*. Further to this, the development of CIRDAS and the Lifelong Learning 2.0 model have been extensively informed by innovative international best practice including international research by MicroHE (2020) and Deakin University Framework (2020).

Co-creation with Industry

CIRDAS was co-created with industry to meet their identified current and future skills needs. It provides internationally informed best practice approaches to upskilling through the flexible online provision of unaccredited and accredited programmes to existing staff across the industry in Ireland. The ethos of CIRDAS is underpinned by the importance of working with industry representatives, and so the programmes incorporated unaccredited Masterclasses and accredited Certificates (Levels 8 and 9), Higher Diplomas (Level 8) and Masters (Level 9) programmes.

The range of stakeholders engaged in the consultative process is presented in *Figure 2*. The consultative process was initiated through the co-lead's role as Insurtech Network Centre Manager, a collaborative insurance industry

platform part-funded by Enterprise Ireland, which has an extensive array of contacts in the industry. All stakeholders were invited to take part in consultative online meetings. The co-leads also used the existing South East Financial Services Cluster. The Cluster Manager engaged the Cluster members in further consultative meetings. Similarly, the South East Regional Skills Forum members were also consulted through the South East Regional Skills Forum Manager.



Figure 2. Industry Partners

This process identified that the primary focus of the programmes needed to be on adapting to managing a changing workforce and workplace in line with the recent rapid increase in remote working, the development of skills to adapt to increasing digitalisation of insurance processes and customer behaviours, updating and increasing relevance of skills as industry roles change, and upskilling to enable existing employees to apply for future roles. Based on extensive industry feedback, it was identified that the focus needed to include staff who are already in middle management roles, managing small teams of experienced professionals, and more junior staff members who also require upskilling. The staff members concerned were aged between 30 and 60 some of whom had no previous higher-level education (with the exception of the

Certified Insurance Practitioner [CIP] exams). Others already held degrees and the insurance exams (such as Advanced Diploma in Insurance). As CIRDAS developed, an additional requirement for upskilling senior executives also emerged. The range of stakeholders engaged in the consultative process is presented in *Figure 2*.

Following consultations with industry representatives, it became clear that education provision in this area in the main is either technical (like the Chartered Insurer route provided by the Insurance Institute of Ireland) or broad (such as general business degrees). This has resulted in a large number of employees failing to progress and upskill upon attaining CIP qualification.

The focus of CIRDAS, then, was to collaborate and work in partnership with enterprises to be transformative in facilitating the insurance industry and staff to respond in a flexible, agile, and innovative manner to a rapidly changing workplace and role. The insurance sector nationally and regionally is a major employer across all channels of delivery from brokers, Managing General Agents (MGA) to insurers. In addition, the HCI Pillar 3 call stipulated the requirement for the development of an Industry Advisory Group to oversee the direction, development, and performance of CIRDAS (see *Figure 3*). A formal feedback loop was developed and utilised to ensure the offering is in line with industry requirements and elicit suggestions for continuous improvements (see *Figure 3*). CIRDAS is managed by the Programme and Development Manager and overseen by the Advisory Group and two co-leads. This facilitates SETU's continuous link with enterprise and enables it to develop ways to incorporate research outcomes into taught provision.

	Name	Organisation
1	Mr Declan McGill Chairperson	UNUM
2	Ms Donna Tilson	Sun Life
3	Mr Aidan Shine	South East Business Innovation Centre
4	Ms Linda Roberts	Wrightway Underwriting Ltd
5	Mr Brian Fives	Enterprise Ireland
6	Ms Elizabeth Hore	Wexford LEO
7	Dr Declan Doyle	Institute of Technology Carlow and INC
8	Mr Aidan Mahon	INC
9	Mr Kieran Comerford	Carlow LEO
10	Dr Greg Doyle	Institute of Technology Carlow
11	Mr Hesus Inoma	Grant Thornton
12	Mr Ciaran Hayes	VHI Healthcare
13	Mr Damian Rossiter	CIRDAS
14	Ms Anne-Marie O'Leary	Zurich
15	Mr Gerard de Vere	InsurTech Ireland

Figure 3. Industry Advisory Group

Programme Development

Once CIRDAS was established, the Advisory Board was in place and the CIRDAS Manager appointed, the process of engagement around programme development was initiated with industry representatives. From these consultations, the need for flexible programmes was established offering work-based learners the opportunity to upskill or reskill through unaccredited and accredited programmes. From the accredited perspective, the initial step was to establish the programme teams. These were comprised of industry representatives from *Figure 2* and academic and management team members

from the Faculty of Lifelong Learning. CIRDAS co-leads led the programme teams through four validation panels in December 2021, where the following programmes were successfully validated: Master of Science in Business Risk Management; Master of Business in Executive Leadership; Higher Diplomas in Business in Innovative Data Generation; Analytics and Management and Equality; Diversity and Inclusion.

A key component of each of the validation panels was the programme team's need for minor awards to also be extracted from the major award programmes, so 27 minor award certificates were validated at Levels 8 and 9 minor award postgraduate certificates were validated from the Master's programmes (see *Figure 4*). This represents the flexible entry and exit points that work-based learners require. The breadth of programmes validated was reflective of the complex and varied needs of the insurance industry and the development of programmes at Levels 8 and 9 enabled progression opportunities for those who already held qualifications at Levels 7 or 8.

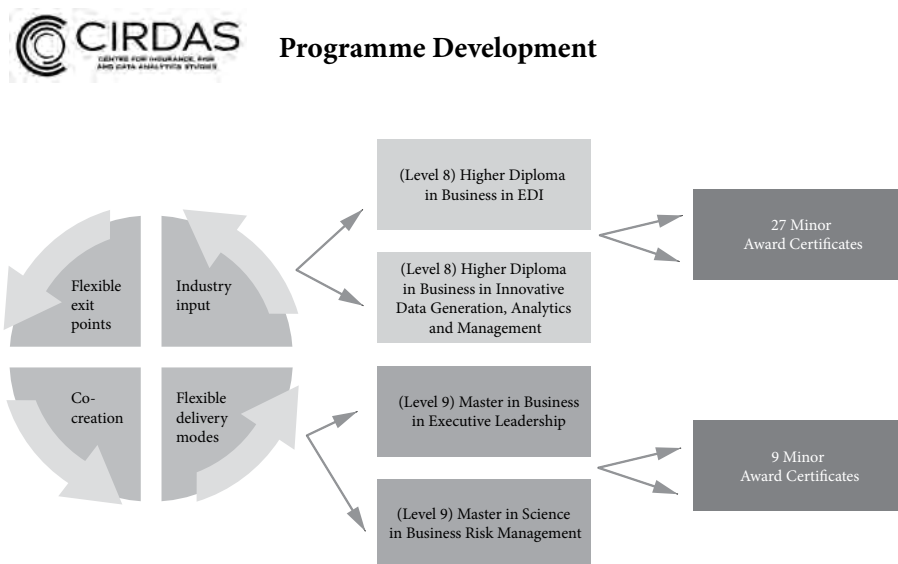


Figure 4. Programmes Development in CIRDAS

As discussed, the industry partners also expressed the need for unaccredited options for upskilling for staff. This informed the development of the Master-classes, which were facilitated by knowledgeable colleagues across the four pillars of CIRDAS. The Masterclasses included different topics developed from

CIRDAS pillars, such as: a ‘Great Minds Like a Think’ series, which engaged with the industry and offered opportunities to learn and share as well as a network of fellow professionals; a ‘Governance, Compliance, and Data Protection in Fin Services’ Masterclass with Insurance SETU Carlow; an ‘Equality, Diversity, and Inclusion’ series in conjunction with Inclusio; and a ‘Demystifying Data’ series (see *Figure 5*). In total, 47 Masterclasses have been delivered to 2,100 insurance industry employees. Turning then to the accredited programmes, 167 learners have completed Level 8 awards and 145 are registered to Level 9 awards from across the sector.

Masterclasses								
Jan 21	Mar 21	Apr 21	Jun 21	Sep 21	Oct 21	Nov 21	Dec 21	Q1 22
Masterclass for SAI ‘Building a data analytics framework’ Nsurely masterclasses building AI empowered alternative to motor risk rating platform, Central bank innovation hub ‘An intro & what you need to know’ webinar	Unconscious bias masterclass delivered to Insurance Ireland with Dr Alisson Kinneally	Unconscious bias (II) masterclass delivered to Insurance Ireland with Dr Alisson Kinneally	‘Great minds like a think’ masterclass series launched ‘Economics of usage based insurance’ with insurtech start up Nsurely CEO Aravind Ravi	‘Race & Ethnicity’ masterclass delivered by Dr Susan Flynn to Insurance Ireland	‘Cross industry standard for data mining (CRISP DM) for SAI’ delivered by Dr Greg Doyle, ‘Great minds like a think’ masterclass ‘Data enrichment for non-life insurance’ delivered by Geoinsure CEO Jonathon Guard	‘Strategic design for innovation’ masterclass to be delivered to Irish Life by Lynn Whelan of Design+	‘Great minds like a think’ masterclass series ‘Consumer Insurance Contract Act (CICA)’ to be delivered by Insurance fellow and Senior QA with Zurich Denise Kent	‘Great minds like a think’ masterclass series ‘Strategic design for innovation’ to be delivered by Lynn Whelan EDI masterclass series with Sandra Healy CEO of Inclusion

Figure 5. Range of Masterclasses

Agile and Innovative Pedagogy

From a pedagogical perspective, CIRDAS provided multiple entry, exit and progression routes from Masterclass, Certificates, Higher Diplomas and Masters. It also operated within the SETU Recognition of Prior Learning (RPL) policy to formally recognise prior experience for work-based applicants. CIRDAS is built upon the direct links and partnerships with collaborative partners Insurtech Network Centre, the South East Financial Services Cluster, the South East Regional Skills Forum, and industry representatives. So much so that industry representatives were the co-creators of the programmes and formed an integral part of the programme teams. CIRDAS displays

pedagogical agility through its dual learning approach, where learners engage in part-time online study while working in the insurance industry, so they have a combination of e-classroom-based learning and the practical application of their learning in the workplace. All programmes were timetabled in consultation with industry to ensure that the delivery schedule was flexible in order to fit with the business needs of work-based learners. The Associate Lecturers who delivered the accredited programmes represented a blend of industry experts with academic experience, who taught with the Faculty of Lifelong Learning on a part-time basis while working full-time in the industry themselves.

Learner Voice

Learner Voice in education means that learners should have a say in decisions about their own education. It means that those who learn, not just those who teach, should influence the educational experience (AONTAS, 2023). To incorporate this approach and to continually evaluate the effectiveness of the programmes delivered through CIRDAS, learners were invited to give regular feedback to continually reflect on and incorporate research outcomes into taught provision. This feedback is captured on an ongoing basis through the Advisory Group as well as the ongoing consultations with industry partners. More specifically, feedback was sought at the beginning of each programme, in the middle and at the end using online surveys. A snapshot of feedback from one of the micro-credential certificates demonstrates the usefulness of the programmes for the work-based learners (see *Figure 6* and *Figure 7*).

How would you rate the Certificate in meeting your expectations?

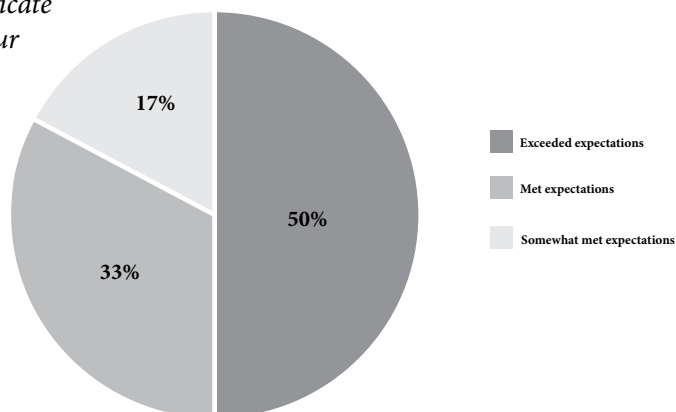


Figure 6. Learner Feedback

How would you rate the usefulness of the Certificate to your current or future roles?

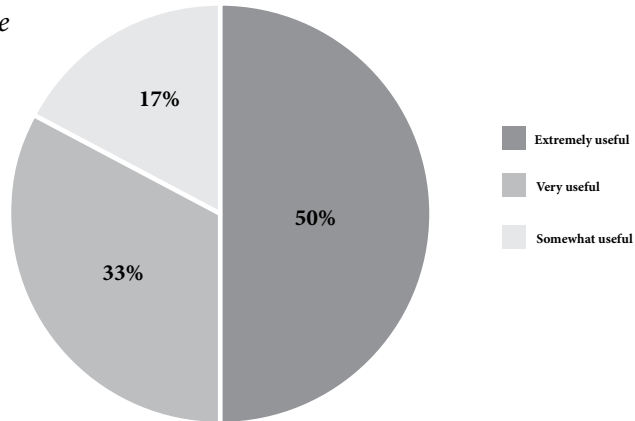


Figure 7. Learner Feedback

Figure 8 also gives a sense of the ongoing feedback received for the unaccredited Masterclasses.

Qualitative Findings

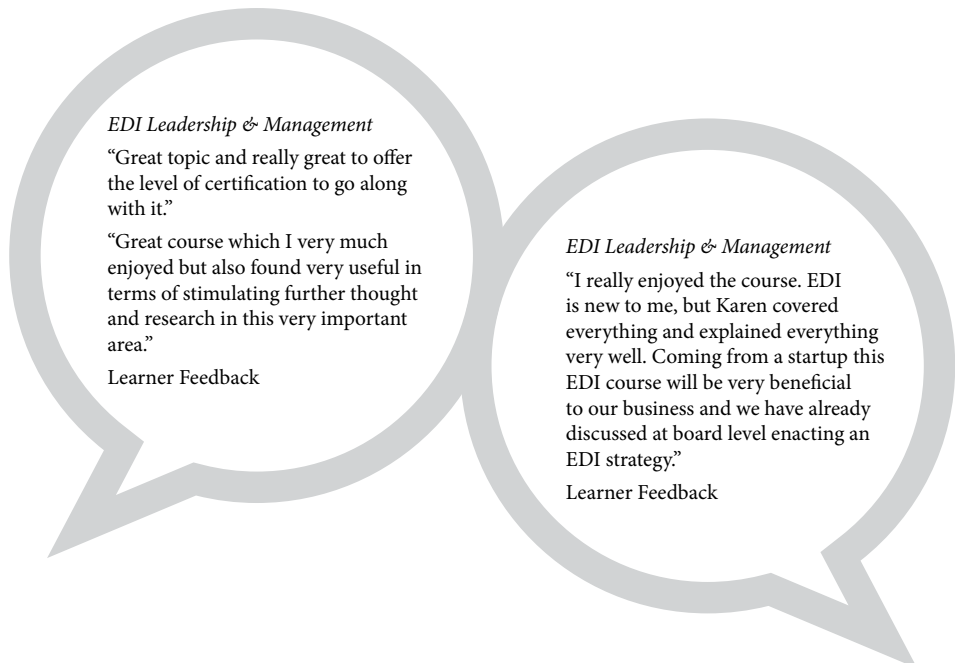


Figure 8. Learner Feedback

The Application of Adult Learning Theories and Concepts

The approach to co-creating CIRDAS programmes was modelled on lifelong learning as a theoretical construct (Carlson, 2019). It was also modelled on London's (2012) definition of lifelong learning as development after formal education, the continuing development of knowledge and skills that people experience throughout their lives. The focus was to create online adult accredited and unaccredited learning opportunities to give maximum flexibility in the type of learning available for learners in the insurance sector.

CIRDAS is framed around the concept that learning is 'an evolving, continuously renewed set of relations' (Lave and Wenger, 1991, pp.50). More simply, it is a process of social participation where the nature of the situation impacts significantly on the process itself. Communities of Practice (CoPs) enable practitioners to take collective responsibility for managing the knowledge they need, and recognise that, given the proper structure, they are in the best position to do this (Wenger, 2015).

This social participation underpinned CIRDAS and its approach to adult learning. The programme team adopted the principles of andragogy to ensure the programme was focused on adult learning (Knowles, 1975). This is evident as the programme team ensured that learner voice was captured through ongoing evaluations while also ensuring the content was focused on group work. This enabled learners to apply their own experiences to the concepts discussed. The work-based learning focused on real work problems which learners could reflect on and develop their assessments around.

The work-based learning element was further underpinned by research conducted by Advance HE in 2006, which reported that practitioners who engaged in delivering work-based learning strongly felt that there is still a need to develop and fund a credit-based system for learning at a higher level. Such a system would enable greater transparency, transferability and consistency across the higher education sector.

CIRDAS developed major awards ensuring that all modules were validated as minor awards in their own right, to afford maximum flexibility to learners and the opportunity to stack their credits towards one of the major awards. Though work-based learning is growing in demand, particularly in the area of lifelong learning, more attention is needed in relation to digital pedagogy and the effective use of online methods to support work-based learning with corresponding implications for staff development. There are institutional implications in terms of ensuring that systems and structures support what is,

particularly for work-based learners, likely to be a permanent move towards digital, blended and online learning (Lester and Crawford-Lee, 2022).

On a global scale, micro-credentials have increasingly become positioned as a solution to a wide range of economic, labour market, and social challenges. Broadly defined, they are stackable, industry-aligned short units of learning designed to help individuals form specific skills and signal those skills to employers. Stemming from the economic disruption caused by the COVID-19 pandemic, micro-credentials appear to have catapulted to the foreground of policy and industry discourse (Robson, 2022). In fact, skills-focused courses, like the ones developed through CIRDAS, are a fast, flexible, and accessible way for individuals to up or re-skill to meet immediate skills gaps and position themselves competitively within challenging labour markets. In addition, micro-credentials are increasingly emphasised as a means of democratising access to and through labour markets, enabling employers to select or promote applicants based on actual skills rather than the signalling power of degrees or institutional prestige (Robson, 2022).

Key Learnings

The programmes offered through CIRDAS engaged all levels of employee learners on a share-and-learn platform. For example, the Masterclass sessions accommodated a high volume of learners. This share-and-learn platform was promoted to learners as a useful support network for their lifelong learning journey and career development, offering easy sharing links for other platforms such as LinkedIn. The Masterclass sessions also had live networking opportunities and access to relevant industry expert speakers. The content was delivered in a granular fashion, with multiple entry, exit, and progression routes allowing for the combination of disciplines and awarding of a hybrid qualification. This is consistent with industry demand for transversal upskilling.

In addition, the content was delivered in a flexible, blended, and industry-responsive manner which focused on dual learning opportunities for work-based learners. Taking such an innovative and agile approach to programme creation has meant that 2,100 learners have engaged in unaccredited programmes and 312 have engaged in accredited programmes through CIRDAS. The key learning is the value of engaging in a meaningful way with industry partners and to situate them as co-creators of programmes and as part of the programme teams. This ensures that agile, innovative, and responsive lifelong learning programmes are created to meet the needs of industry as the world continues to evolve after the COVID-19 pandemic and towards the workplaces of the future.

Conclusion

This paper has examined the creation of CIRDAS in response to the HCI Pillar 3 call for innovative and agile projects. The focus of the project was to work in partnership with industry stakeholders to co-create programmes that focused on upskilling and reskilling employees across the insurance sector in Ireland. The mode of delivery was online to ensure maximum flexibility for learners to access the programmes across the country and to create delivery schedules that could fit around the varying business needs of the sector. The creation of the programmes was guided by both national and international policies and key research in the area of micro-credentials and work-based learning through higher education.

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