Are you planning to become an

Entrepreneurial Campus?

Nurturing entrepreneurial learning communities to create start-up companies that solve global issues

POLAR

Foreward

For over 50 years, leading global universities have been creating entrepreneurial cultures that nurture startups and drive innovation.

This generates economic growth for the region, enhances the university's own reputation, and attracts future generations of like-minded students, mentors, and start-up investment.

These universities — such as Stanford, MIT, Aalto, Tecnológico de Monterrey, and Harvard — now have this entrepreneurial mindset in their DNA, and are continually evolving their connections with governments, collaborations with industry partners, and funding for research.

Today's students must become tomorrows' torchbearers of knowledge, research, leadership, and innovation.

To become entrepreneurs, students need a journey of intellectual growth and constant self-discovery. By its very nature, entrepreneurship is about creating something that has never been done before.

For too long, undergraduate students have had to conform to cultural and academic norms around degree course learning, that can be measured, assessed and completed within a specific time frame.

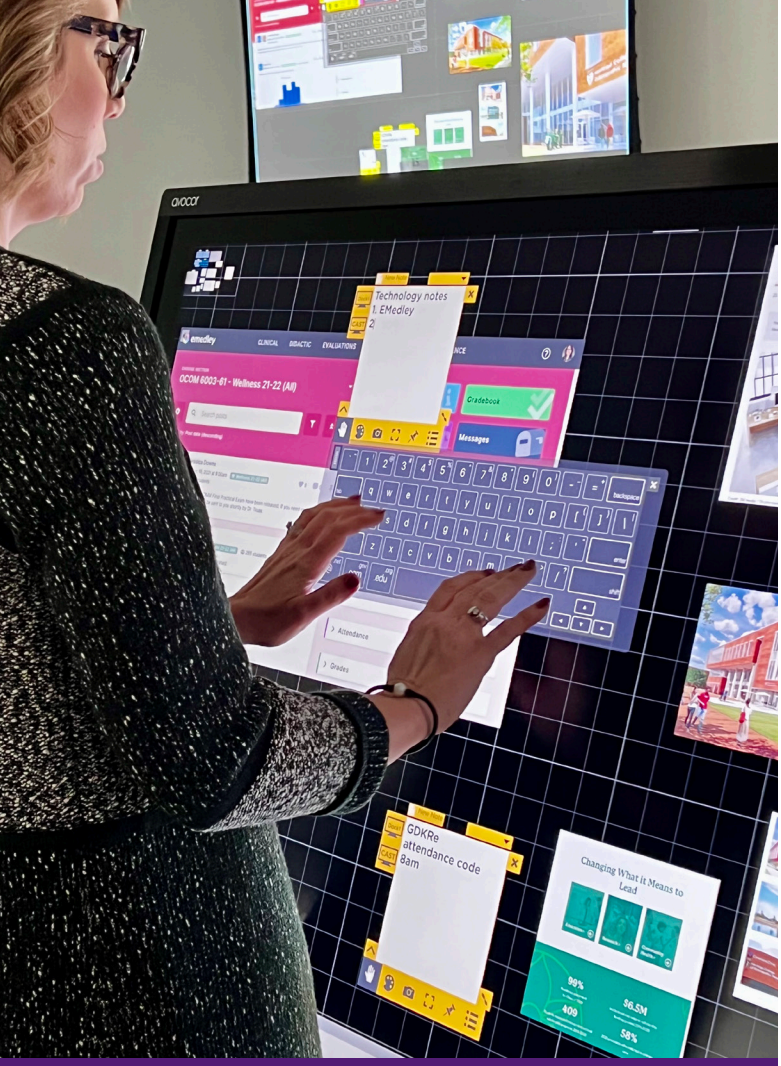
Entrepreneurship doesn't conform to these standard completion time periods. Product development succeeds best when it is a team endeavour, and even then, it will be prone to the ebbs and flows of curiosity, capabilities, commitments, and creativity, all of which cannot be contained within published semester dates. New curriculums and assessments must follow.

Nor are standard classrooms and lecture halls the correct environments for the engagement and innovation required by entrepreneurial students, along with their tutors and mentors.

For the correct mindsets to be developed, and where collaboration in many different in-room and hybrid scenarios is fully supported, entrepreneurial learning requires immersive spaces with multiple displays, writing surfaces, and configurations in which these new cultures of learning can thrive.

Entrepreneurs are the new breed of rock stars, with the opportunity to impact and change the world with innovations that solve the most pressing issues for healthcare, education, climate change and more.

Entrepreneurial campuses should be the engine rooms for student success, a magnet for attracting new students, and the heart of regional economic growth.



Introduction

STUDENT EXPECTATIONS

Students attending established entrepreneurial universities now expect more than just the very best learning; they envisage being fully involved in start-up enterprises.

A network of support, advice, and incubator facilities develops within and alongside these universities, enticing these young inventors of new products and services to continue living there as their companies grow.

ECONOMIC GROWTH

Successful companies positively impact the communities where they are established, generating jobs that increase prosperity, and being seen as a force for social and environmental good that comes from an increasing focus on developing environmentally robust solutions to solve global challenges around sustainability and social impact.

PLAYING CATCH UP

As already noted, universities only now embarking on developing entrepreneurial programs have a significant gap to close.

Developing programs and creating new learning spaces that provide the foundations is all well and good, but a new internal culture and connections outside the university must be nurtured, and neither can be forced overnight.

HOW IDEAS FLOW

Entrepreneurship is a team sport rather than an individual pursuit. It isn't about who has the best original idea, it's about identifying a problem that needs solving, and then people working together with a bunch of activities to move ideas forward. Sometimes they fail, but often they reach the stage where a commercial opportunity is recognised, at which point investment is needed.

It's not always about original ideas. Being able to take an idea that someone else couldn't develop and make it successful, perhaps because they have identified a different market potential, or successfully analysed what improvements are needed, is equally valid entrepreneurship.

COLLABORATION IS KEY

Product and service development requires many inputs to be successful. You must have a paying customer(s) because unless you can make money, the product is irrelevant. Design, marketing, cash-flow, are all important, as is the protection of your work through Patents and other IP measures.

The most successful developments from innovation driven enterprises were generated by collaboration in 'Project Rooms.' In some ways, adopting technology has been a step backwards, but digital technology now offers the opportunity to close the 50-year gap.

Photo: © Courtesy of Strategic Insight, Ltd.

Traditional Project Rooms

Remember the project rooms that every organisation used to have? These were rooms where the walls were full of content so that:

- Anyone could add content — you didn't have to wait for someone else to stop working.
- Everything could be viewed in a single visual panorama allowing connections and comparisons to be made from contextual content.

But these rooms had some downsides too:

- Whilst the content was on the walls, the rooms were for the exclusive use of the project, which often meant that they were unused if team members were working elsewhere.
- Sharing the content to people not present was virtually impossible.
- Remote team members couldn't share their content into the room.

DIGITAL TOOK US BACKWARDS

Projectors, and especially large screens, that we could connect our laptops to, changed the collaborative dynamic of these rooms, that had given everyone the same equity of participation.

Now, instead of the room always being a group resource, individuals connected their devices and the emphasis shifted to presentation led rather than idea led.

And using tools like PowerPoint™, individuals dominated sessions with linear-driven ideas they had created in advance.

Any real-time content, pinned to walls or written on dry erase surfaces and flipcharts, was not saved along with the digital content, but separately from it, if at all.

Today, a new digital approach, one that engages everyone in group participation, is the way forward for immersive spaces that support entrepreneurship.

Modern Collaborative Spaces

Entrepreneurial education requires immersive spaces that provide the foundations for innovative mindsets to be developed, multi-faculty learning and research to flourish, supporting collaborations with:

- Hybrid Students
- Industry Partners
- Other Universities/Colleges
- Alumni
- Governments and public sector bodies

These spaces must be the catalyst for developing new cultures of learning, with new (or updated) curriculums and assessments, based on effective collaborations with a wide range of stakeholders and partners.

These immersive spaces will support a variety of workflows with in-room and hybrid participants.

ENTREPRENEURIAL TRAITS ADVANCED IN IMMERSIVE ROOMS

Increasing the variety of content in a single visual panorama, that can be saved together for full context (and re-opened), improves the ability to solve problems in new ways. Multiple sources of information help breakdown single silos, enabling **imaginative thinking.**

In a space where multiple people can contribute multiple sources of information simultaneously, the ability to **collaborate** with others to perform complex tasks, whilst being aware of other peoples' needs, is truly evolutionary.

Working alongside others will help embrace diversity, develop equality and inclusion, and ultimately create a strong, cohesive, and sustainable multicultural community. These are spaces where theory and practice unite, and students listen to their peers.

The Canvas Studio, Karelia University of Applied Sciences, Joensuu, Finland
Photo © Duncan Peberdy

Using multiple displays, especially when connected to create a single workflow, opens new possibilities for increasing student engagement by creating dynamic, highly visual entrepreneurial learning interactions that advance participation for both in-class and hybrid sessions.

WHY MULTIPLE DISPLAY ENVIRONMENTS WORK

Multiple displays (with unique content — not repeater screens) better facilitate engaging and immersive learning interactions which, with the right learning design, provide students with meaningful collaborative and experiential experiences. Whether discipline-specific, interdisciplinary, or a life-long learning scenario, each encourages critical thinking, creativity and collaboration; anytime, anywhere.

A larger working area supports the scaffolding of multiple learning objects within a single visual panorama, allowing connections and comparisons to be made, and understanding to be discovered instead of taught.

Teaching becomes more rewarding, and only your imagination and learning design limits the possibilities for increasing student success. Correctly using Multiple displays will impact learning and teaching with:

- Increased student engagement, well-being and belonging
- The development of collaboration, critical thinking, creativity and campus cultures
- Hybrid learning that embeds small group collaborative learning strategies
- Inclusive and accessible environments that support well-being and mental health

ONE CANVAS COMBINING MULTIPLE FORMATS

Different file types, such as PDFs, photos, and spreadsheets, typically open in separate programs associated with them. This is not good enough. A visual collaboration canvas must be able to simultaneously combine:

- Notes and sketches (mini digital whiteboards) that you create at the display.
- Websites - multiple at the same time.
- Images, videos, PDFs that you store in your personalised media tray.
- Multiple live camera feeds, including whiteboard cams, i.e. Logitech Scribe.
- HDMI feeds from laptops, visualisers, medical & engineering devices, etc.
- Information from wirelessly connected smartphones and laptops, located anywhere.
- Groups that amalgamate any of the above content together, enabling agile work with Sticky Notes that contain these supporting images, URLs, live smartphone feeds, etc.

Encrypted Visual Collaboration platforms are used by universities, medical research institutions, defence, financial sector, consulting companies, and more, across the globe.

Case Study

Karelia University of Applied Sciences

At the Karelia University of Applied Sciences in Joensuu, Finland, their Canvas Studio contains a triple display **ThinkHub** visual collaboration system.

A single ThinkHub canvas spans all three adjacent interactive displays, displaying a wide array of visual content that anyone can add to, and all of which can be saved as a single file.

The larger non-interactive screen on the end wall is acting as a **'dock screen'** which, with a single click, allows the tutor to place any piece of content on the display when greater persistence or more emphasis on a piece of content is required. The 'dock' is dynamic, meaning it will continue to show live content as well as static images, slides, etc.

Quite commonly, the MS Teams™ or Zoom™ call that remote students join for a hybrid session, is placed on the Dock screen so remote participants are visible throughout a hybrid session.

EVOLVING LEARNING DESIGN

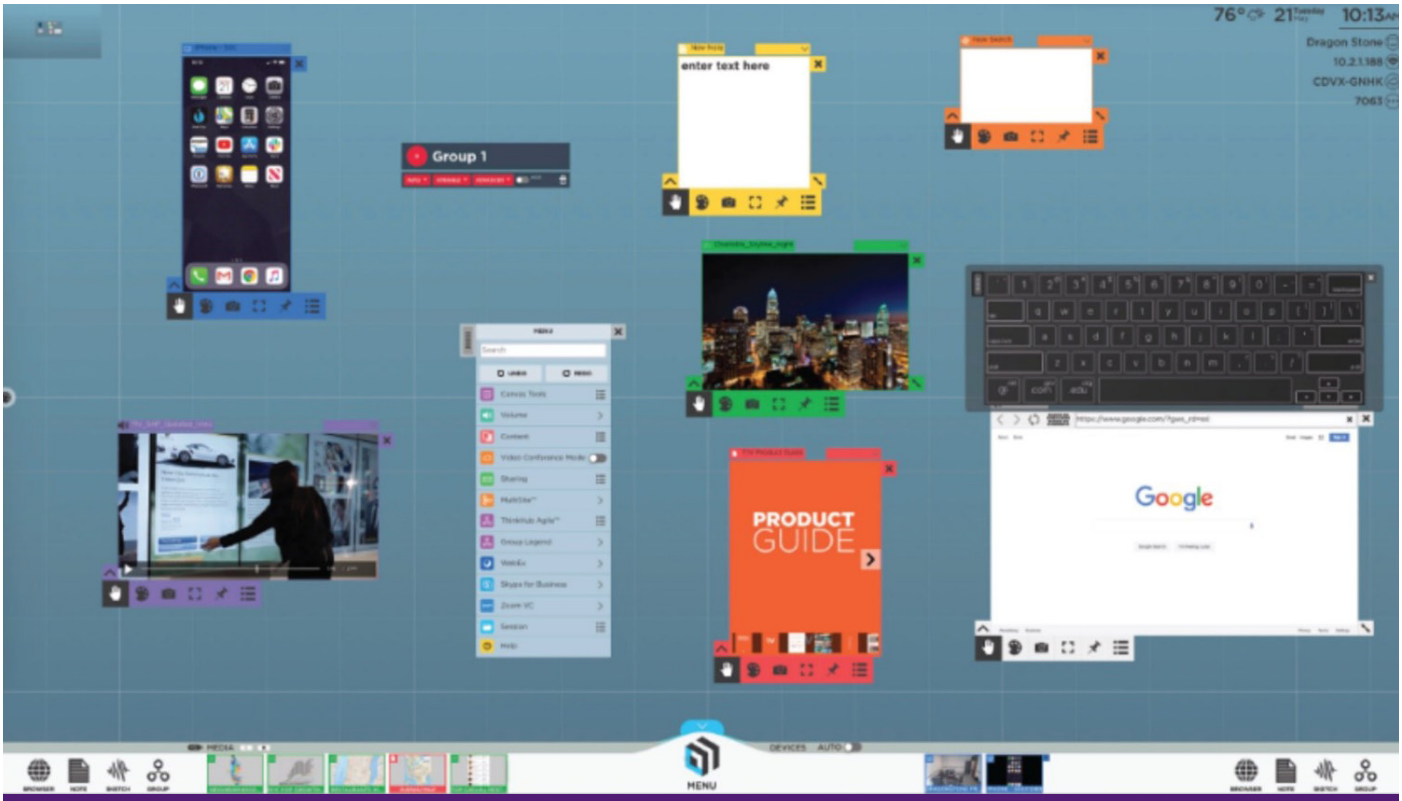
Students can simultaneously engage and interact with ThinkHub from wherever they are located. This is not the passive viewing of someone else's shared screen that you experience with video platforms, nor the frustration of having to wait for your turn when there's something valuable that you're longing to contribute. Instead, ThinkHub provides the ability for anyone to contribute at the display or from any wirelessly connected device using the free T1V App.

"Can't we just contribute to a browser instead of using an App?" is a regular question.

The truth is that browser-based solutions are typically more restrictive and often require plug-ins and embedded apps. With ThinkHub, there's no need to drown in a sea of different Apps and Plug-Ins. If you need special software, simply connect your device with the tools you already know, and it's available on the ThinkHub canvas to use or share via the App or in a video call.

ThinkHub Canvas

One Canvas: Combine Multiple Formats



A ThinkHub Canvas on a single touchscreen containing notes, groups, sketches, PDF's, URL, video, and a remote smartphone. The canvas working area is 20 times greater than the physical display size. With a single click, any piece of content can be copied, made full screen, or emailed. Multitouch enables several people to work simultaneously with different pieces of content. Remote users can see this content on their devices, which they can edit, annotate and rearrange, and contribute their own content to it.

FLEXIBLE TECHNOLOGY

Already, collaborative spaces are the most used learning spaces on campuses.

Too often, multiple displays are used to duplicate content instead of realising their true value. Or their content comes from different sources, which are then captured as separate streams instead of together in the context they were used.

With ThinkHub, the displays can be used in many ways to support the needs of different workflows for both in-room and hybrid scenarios.

ACCESSIBILITY AND FAR MORE

ThinkHub is a platform that supports Accessibility, Neurodiversity, and far more.
It's highly customisable and offers options to use directly at a touch screen, or equally well with a connected device if assistive technology is being used.

Students can determine how information is arranged, what colours are used for background, writing, etc. Working collaboratively together builds trust, friendships, and reduces isolation.

Entrepreneurial Learning

The World Economic Forum has identified that the ability to solve problems in new ways, by thinking imaginatively across multiple disciplines, to be an essential part of an entrepreneurial mind.

DIGITAL SKILLS

Time and time again, research highlights that the UK workforce doesn't possess enough digital skills. According to the EU Commission, Entrepreneurs must have the abilities to master new forms of digital technology. These include Algorithm design, data collection and analysis, and the much- hyped AI.

A visual collaboration platform, which is in itself highly intuitive to use, is the perfect place to bring all these sources of content together.

COLLABORATION

The USA's O'Net Resource Center promotes the ability to work with others to perform complex tasks as a key skill, highlighting the need to adjust your actions in relation to other peoples' needs.

GLOBAL CITIZENSHIP

Promotes a universal respect for people from other cultures, with a willingness to embrace diversity, equality, and inclusion to create strong, cohesive, and sustainable communities.

ENVIRONMENTAL STEWARDSHIP

Understanding the fragility and finiteness of natural ecosystems and how we must only interact with them in sustainable ways.

Rather than being the choice for a small number of start-ups, having sustainability at the heart of new developments should be a 100% requirement.

This in turn will lead to a wholesale cultural shift that every business, existing and new, must embrace and act upon in order to remain relevant to their customers and investors.

Solving local and global issues around sustainability and social justice that will really change the world, must be embedded in every entrepreneurial mindset.

NEW LEARNING LANDSCAPES

Visual Collaboration Platforms, such as **T1V's ThinkHub**, will provide universities and their students with the opportunity to shorten their catch-up years.

On its own, technology rarely solves or improves anything. For Entrepreneurial learning, it is the enabler around which new cultures of learning, new mindsets, new curriculums, new assessments, and new ways of preparing students for the world of work, can be successfully built.

LET VISUAL COLLABORATION BE YOUR KEY DRIVER OF INNOVATION AND AN ECONOMIC GROWTH ACCELERATOR.

Technology Requirements

Using the triple-display installation at Karelia University of Applied Science in Finland as a benchmark for simplicity, replicating that deployment would provide an excellent ThinkHub Visual Collaboration system to support **Entrepreneurial Learning.**

HARDWARE:

ThinkHub computer to support:

3 x Interactive Touch Displays

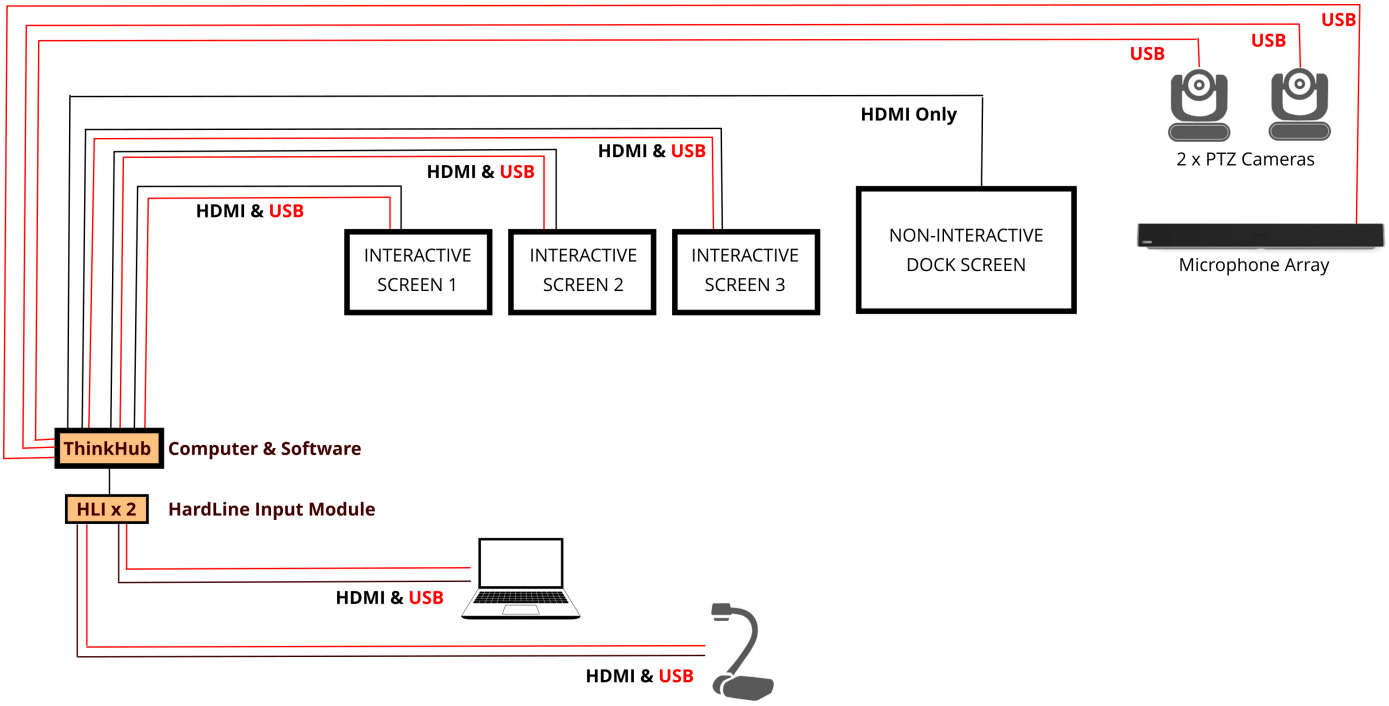
1 x Dock display

2 x Hardline Inputs (Laptops, Visualisers etc.)

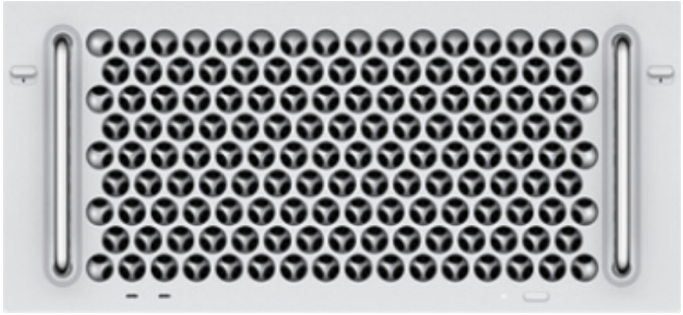
Microphone(s)

Speakers

2 x USB Camera inputs (Multiple PTZ cameras provide better images for hybrid participants)



The ThinkHub Computer in this instance is supplied in a 5U rackmount enclosure. Hardline Inputs connect into an additional small rackmount case. There is a temptation to place the ThinkHub in a server room, extending all the necessary HDMI and USB connections into the room. If a small cabinet can be placed in the front corner of the room, as Karelia did, this removes the complexity and cost of extender cables/boxes, reducing the cost of installation too.



ThinkHub Computer for Triple 4K screens

Optional HardLine Input (HLI) Module

ABOUT DUNCAN PEBERDY

Since 2006, when Duncan worked with the University of Nottingham on collaboration solutions that were part of the Visual Learning Lab — a HEFCE Funded Center for Excellence in Teaching and Learning (CETL), Duncan has helped universities and colleges develop new ways of learning and teaching enabled by technology, including innovations with multiple display technologies to support new pedagogies.

In 2015 Duncan innovated the Digital Classroom Roadshow that took new active collaborative technologies and furniture on to university and college campuses across the UK and into Europe. These roadshows were ultimately responsible for hundreds of active collaborative classrooms being installed on campuses throughout the UK, and in the Netherlands and Ireland.

In 2018 the roadshows (and Duncan) became part of Jisc and was re-branded as The Sticky Campus Roadshow, with Duncan becoming Jisc's Senior Lead for Digital Learning Spaces.

When Covid struck and campus roadshows weren't possible, Duncan provided consultancy to Intel on developments in EdTech, before joining T1V in 2022 to spearhead their solutions for hybrid working and learning across Europe.

In 2023, Duncan joined POLAR, quickly developing collaborations with multiple manufacturers to jointly deliver best-in-class immersive environments for entrepreneurial learning in Higher Education, and Customer Experience Centres for commercial organisations.

Duncan has written two business books on meetings commissioned by Pearson, and self-published two books — with contributions from Higher Education experts in Pedagogy, Technology & Professional Services — on the use of digital technology for small group active collaborative learning.

ABOUT POLAR

POLAR is the UK's premier distributor of Workplace Technology solutions offering professional audio, immersive environments for entrepreneurial learning, room and resource management, audio visual, and equipment control solutions.

Founded in 1969, POLAR offer a comprehensive range of products, services and support that help organisations increase productivity whilst reducing costs. We offer technology solutions that help people communicate in the education, corporate and commercial sectors. From simple technology for a single person or small group of users, to collaboration platforms with the power to connect dispersed groups and individuals in multiple locations across the world.

Within education, POLAR's solutions empower schools to create a range of effective immersive and creative educational environments. Clear communication is the foundation for learning, enabling inclusivity and higher levels of engagement that enable successful learning outcomes.

Based in Burgess Hill, West Sussex, POLAR exclusively represents many audio, visual and workplace technology companies in the UK and Ireland and work directly with the approved specialist integrators who supply and support the education sector.

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