

The background is a collage of four images. Top-left: A welder in a mask and gloves is welding a metal piece, with bright sparks and a blue flame. Top-right: A close-up of a blue printed circuit board (PCB) with various electronic components. Bottom-left: A dark blue background with a glowing white network of lines and dots, resembling a circuit or data flow. Bottom-right: A large industrial structure, likely an offshore oil or gas rig, with complex machinery and cables, set against a blue sky and green water.

South West Institute of Technology.

Our Mission.

Working in partnership to drive world-class technical education.

The mission of the South West Institute of Technology is to:

- provide employers with the skills that they need to succeed, now and in the future
- provide learners with excellent technical education
- enable the South West to become one of the world's leading regions for digital, engineering and manufacturing technologies

Anchor HE Partners:



Anchor FE Partners:



Anchor Employers:



The Vision.

What we will achieve



For employers - SWIoT will:



- > tackle employers' current skills gaps and anticipate their future skills needs, drawing on applied research
- > enable employers to develop and retain local talent, reducing the need to recruit from outside of the region
- > provide industry standard, specialist training facilities locally, reducing the need to train outside of the region
- > put in place learning provision that is tailored to the needs of employers, more quickly
- > enable the existing workforce to retrain and upskill, as well as attracting new entrants to the digital, engineering and manufacturing sectors
- > provide strategic leadership across STEM provision and initiatives in the South West, making them more coherent and easier to navigate

For Learners - SWIoT will:



- > offer industry standard teaching and facilities and new curriculum in the digital, engineering and manufacturing sectors
- > inspire and raise the aspirations of learners, from school students to lifelong learners
- > provide learners with the non-academic skills required in the modern workplace, as well as technical skills
- > increase social mobility, reach under-represented groups, develop unidentified talent and improve gender balance
- > break down geographical barriers, through a mix of local and digital delivery
- > enable learners to get good jobs and follow progression pathways that have been mapped out with employers

For providers - SWIoT will:



- > promote technical education to learners, parents, employers and other stakeholders, raising its status relative to academic education
- > make it easier to attract expert teaching staff and provide them with outstanding development opportunities
- > enable innovation and create economies of scale, through the sharing of expertise and resources between colleges and universities
- > develop new curriculum that is informed by research and insight from employers
- > develop new approaches to learning delivery, through collaboration between employers and providers

For the South West - SWIoT will:



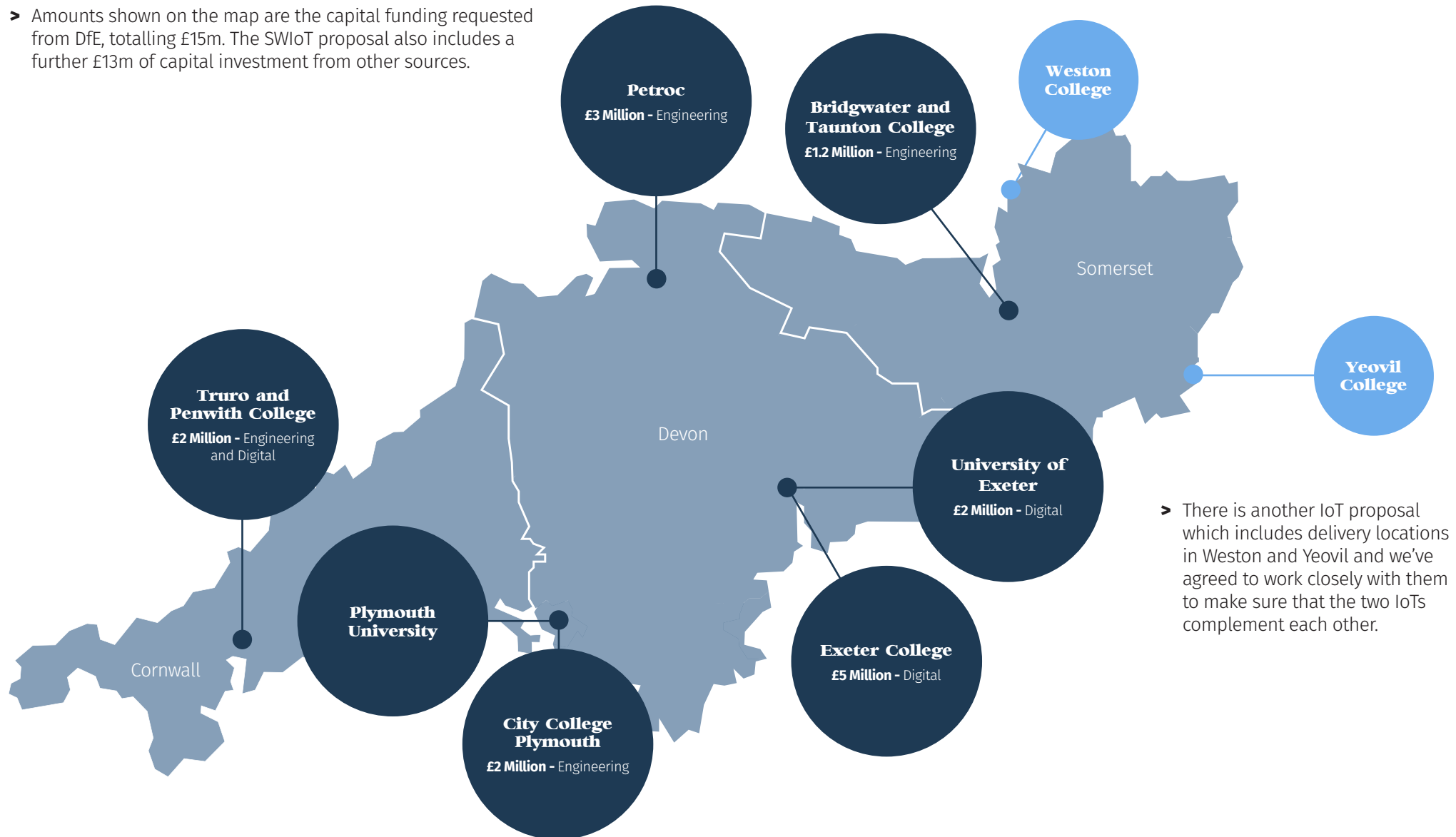
- > put the South West on the map, as a great place to learn, work, recruit, invest and innovate in the digital, engineering and manufacturing sectors
- > make a crucial contribution to industrial strategy, raising regional and UK productivity and growth
- > promote social mobility and inclusion by offering new opportunities to a wide range of learners
- > contribute to and benefit from the sharing of innovative practice, as part of a national network of IoTs
- > attract substantial other funding and investment, to enable SWIoT to have a greater impact on the region
- > promote the role of STEM in tackling major social problems, as well as creating economic opportunity

We will help deliver skilled local people, economic growth and prosperity in the South West

The South West.

South West Delivery Locations and Investment.

- Amounts shown on the map are the capital funding requested from DfE, totalling £15m. The SWIoT proposal also includes a further £13m of capital investment from other sources.



- There is another IoT proposal which includes delivery locations in Weston and Yeovil and we've agreed to work closely with them to make sure that the two IoTs complement each other.

Learners.

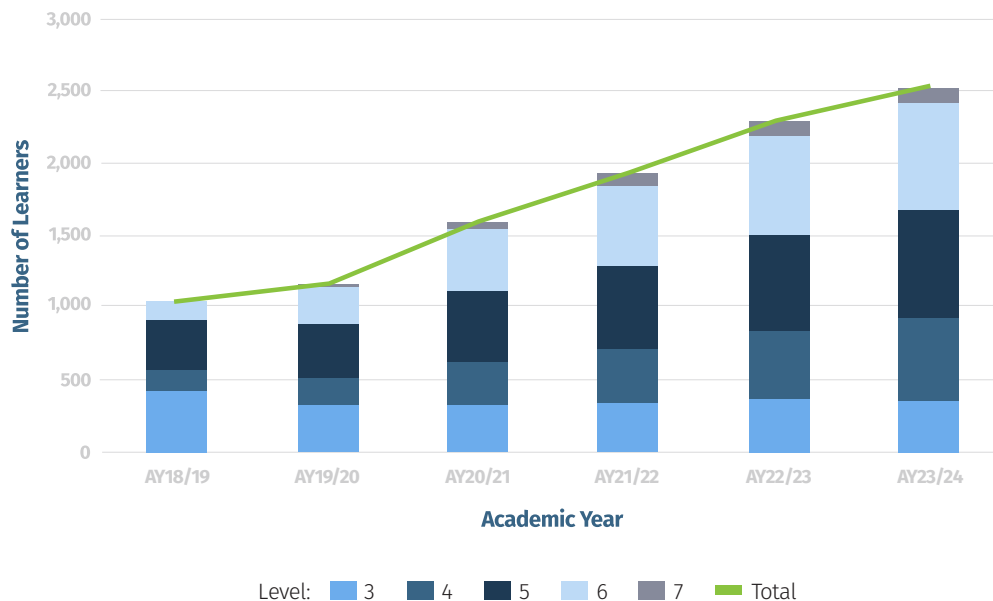
Growing the skills that employers need.

Each of the SWIoT partners has extensive experience of working to attract, recruit and retain learners in Digital and Engineering subjects. We have seen growth in learner numbers taking these courses at level 3 and also a growing requirement from local employers for higher level Digital and Engineering skills.

Target groups

We are committed to addressing the balance of women, mature learners, people from HE cold spots and low-income households. We are heavily involved in a number of national planning and monitoring initiatives such as Access Agreements. In addition, SWIoT partners are members of the regional Next Steps South West outreach network.

As part of the SWIoT, partners will share our individual practice in this area to improve our effectiveness and work collectively to link with both regional and national initiatives.



Digital.

Our Digital curriculum.

Full-time Degrees

3D Game Design

BSc (Hons) Applied Computing Technologies

Digital Computing (Top-Up degree)

Foundation Degree

Business Computing

Computer Systems Development

Computing and Internet technologies

Cyber Security

Data Science and Machine Learning

Software Development

Virtual Reality and 3D Modelling

Degree Apprenticeship (MSc)

Digital and Technology Solutions Specialist (degree)

Data Scientist Specialist

Degree Apprenticeship (BSc)

Data Scientist

Digital and Technology Solutions Professional (degree)

Higher Apprenticeship

Cyber Intrusion Analyst

Cyber Security Technologist

Data Analyst

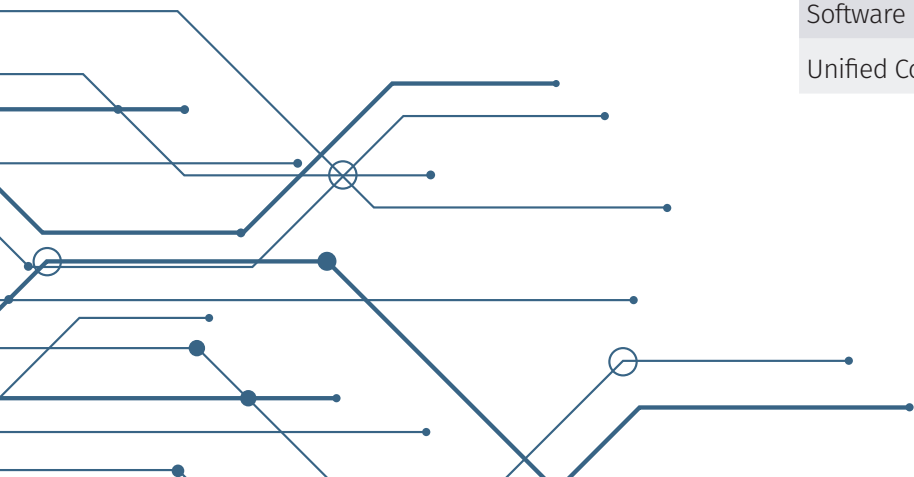
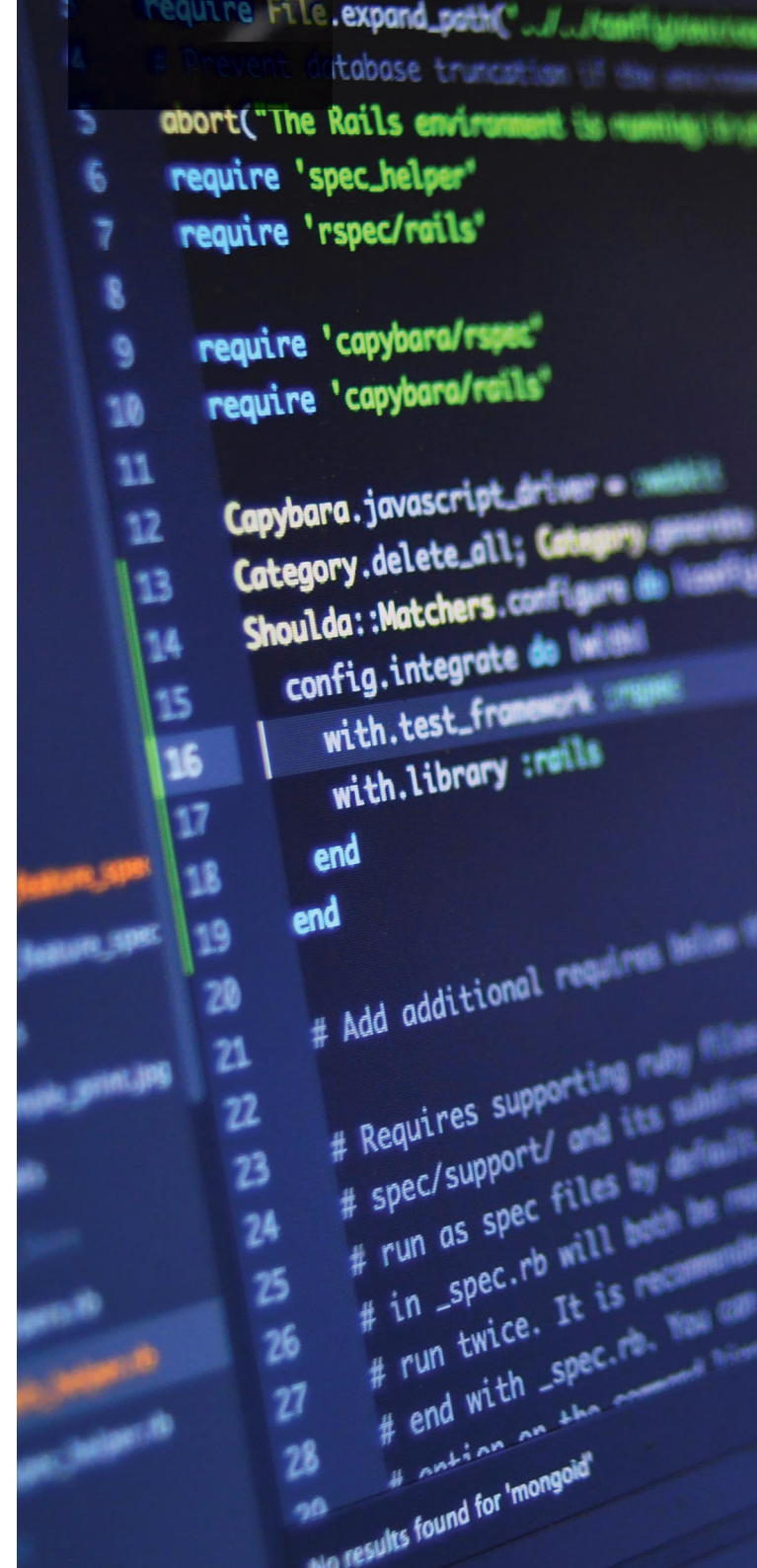
IS Business Analyst

Network Engineer

Software Tester

Software Development

Unified Communications Troubleshooter



Engineering.

Our Engineering curriculum.

Bachelors Degrees

BSc Engineering (Top-Up)

Electrical and Control Engineering for Nuclear

Marine Autonomous Vehicles (Top-Up)

Mechanical Engineering Nuclear

Foundation Degree

Leadership and Management for the Engineering Sector

Aircraft Engineering

Electrical & Electronic Engineering

Marine Autonomous Vehicles

Marine Engineering

Mechanical Engineering

Naval Architecture

HNC and HND

Electrical & Electronic Engineering

Engineering

Manufacturing Engineering

Marine Engineering

Mechanical Design & Manufacture

HNC and HND (Continued)

Mechanical Engineering

Naval Architecture

Production Engineering

Degree Apprenticeship

Digital Engineering Technologies

Control Support Technician

Embedded Electronic Systems Design and Development Engineer

Non-destructive Test Engineer

Nuclear Engineer

Process Controls Systems Engineer

Advanced Apprenticeships

Boat Builder

Higher Apprenticeship

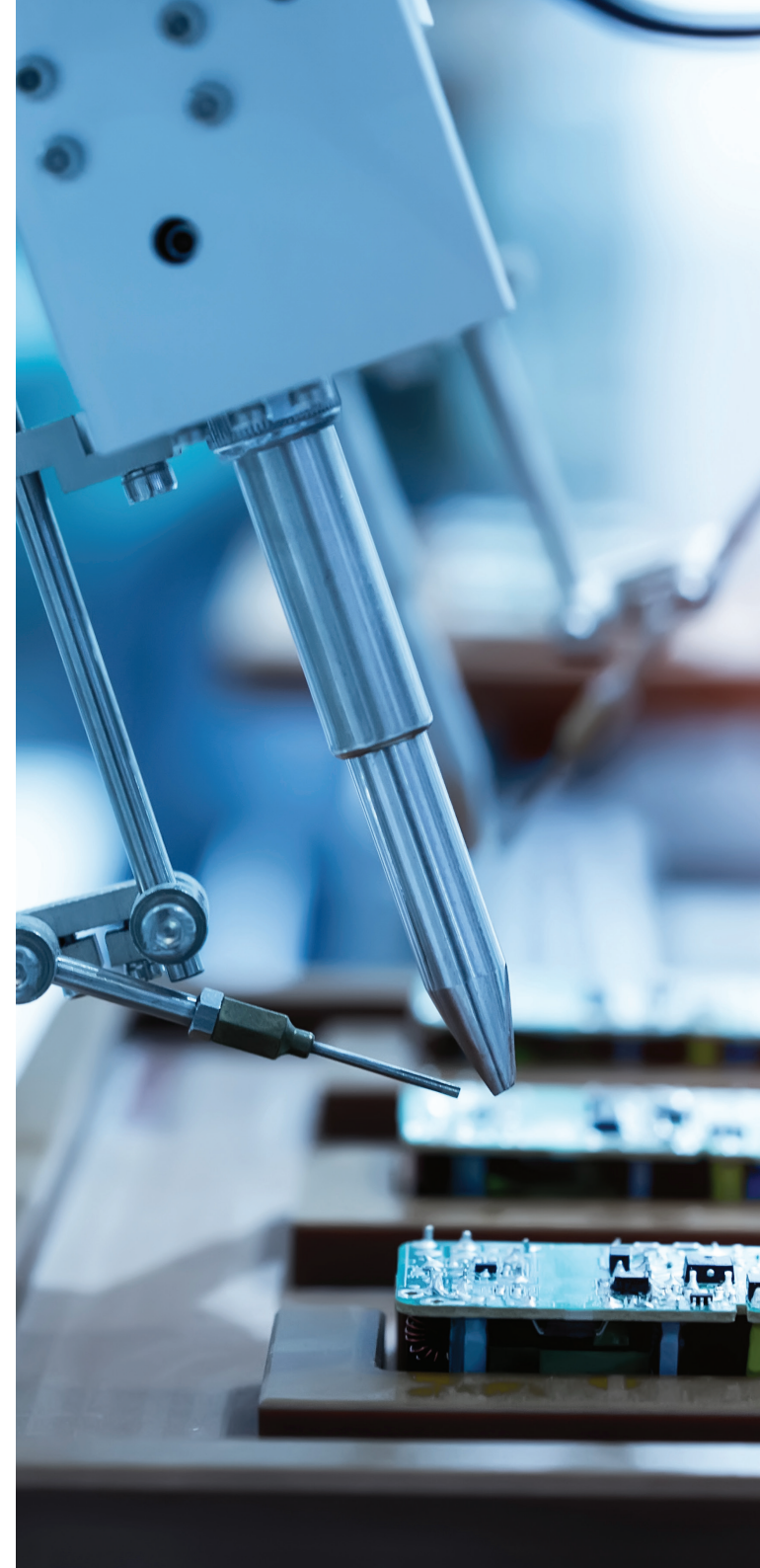
Engineering

Manufacturing Engineering

Mineral Processing and Static Plant Engineer

Nuclear Technician

Welding Inspection Technician



Skilled Teachers.

Working closely together.

We are proud of the world-class skills of our current teaching staff. With a number recognised through National Teaching Fellowships we have a proven track record in sharing our technical teaching excellence regionally and nationally.

We are already working closely with the ETF on a number of initiatives to increase the number of technically skilled people coming into teaching in the South-West. These include the Further Forces and Pathway programmes to tap into the military and graduate supply in the region.

SWIoT Observatory

To ensure a strong fit with business, SWIoT will build employer needs and industry standards into the teaching of our courses. Drawing on the expertise of the two universities, SWIoT will establish the SWIoT Observatory, ensuring that its teaching is directly matched to current and future occupations and skills needs, through market intelligence, horizon scanning and primary research.

SWIoT Academy

We have created a SWIoT Academy to offer specialised training to current staff through the University of Exeter's Academic Professional apprenticeship programme. The Academy, and our teachers, will also benefit from the close partnership with employers and direct access to the latest industry-standard tools and techniques.

Recruitment of skilled teachers:

We believe that SWIoT will enhance our ability to recruit the best teachers by:

- packaging full and part time roles that will be attractive enough to help retain talent; key to this is having roles that let staff focus on their key skills and passion
- creating roles that will be promoted as SWIoT roles
- creating roles that will support learners across SWIoT partners; delivering both face to face, blended and distance delivery; this aligns with ensuring our curricula offer is both fit for purpose but offering more than we can currently deliver as individual partners



University of Exeter.

Leading university - world class research with excellent student satisfaction.

The University of Exeter is ranked amongst the foremost universities in the UK and world:

Exeter is one of the top universities in the world:

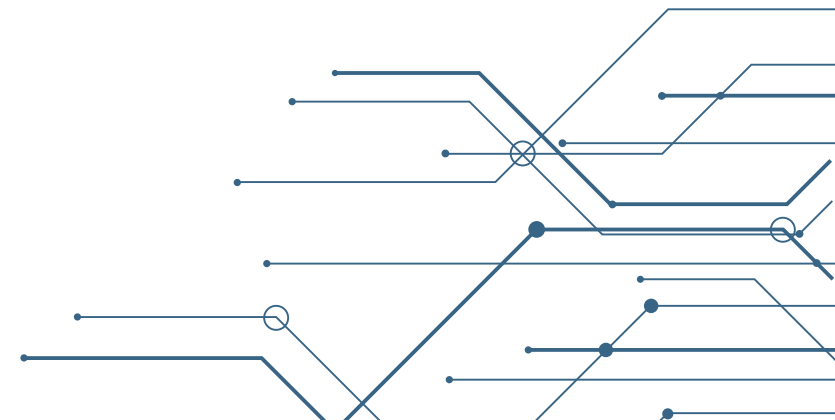
- 7th in UK, 9th in Europe and top 40 in the world in the CWTS Leiden Ranking
- 14th in UK in the Times / Sunday Times Good University Guide
- 13th out of 121 HEIs in The Guardian tables
- Sunday Times 2012 University of the Year and three times winner of the Queens Anniversary Award
- One of just 8 TEF Gold Russell Groups universities, the University of Exeter is commended for learning enriched by business, industry and professional experts; an outstanding learning environment; and a commitment to ensuring positive outcomes for all students

Expertise and experience of particular relevance to the IoT includes:

- Membership of the Alan Turing Institute
- Core Institute for Coding partner
- Creation of a new Institute for Data Science and AI delivering a step change in Exeter's data and computer science capabilities
- Delivery of SETsquared, the World Number 1 high-tech innovation and business incubator supporting 1,000+ businesses

Investing in SWIoT

Investing in a £3.7m extension to the new computer science building, incorporating a computer lab and artificial intelligence arena - creating a new technical centre of excellence.



University of Plymouth.

Advancing knowledge and transforming lives through education and research.

About Us

The University of Plymouth is renowned for high quality, internationally-leading education, research and innovation. With a mission to Advance Knowledge and Transform Lives, Plymouth is a top 50 research university with clusters of world class research across a wide range of disciplines including marine science and engineering, medicine, robotics and psychology. A twice winner of the Queen's Anniversary Prize for Higher Education, the University of Plymouth continues to grow in stature and reputation.

It has a strong track record for teaching and learning excellence including in digital and engineering, and has one of the highest numbers of National Teaching Fellows of any UK university. With 21,000 students, and a further 17,000 studying for a Plymouth degree at partner institutions in the UK, five of which are SWIoT partners. It's graduates make an impact locally and around the world and with over 100,000 alumni pursuing their chosen careers globally, it has a growing global presence.



Investing in SWIoT

The University of Plymouth is making a major investment in supporting the SWIoT curriculum design and award approval process, working with partners to ensure we have new and updated digital and engineering curricula available from September 2019 and providing ongoing support to ensure the SWIoT curricula continues to evolve in response to changing need.

Our Awards

- 2nd in the UK and 86th globally - 2018 Times Higher Education Young University ranking
- 23 National Teaching Fellowships in HE since 2000
- Guardian University Awards: 2013 winner - Student Experience
- Times Higher Education Awards: 2014 winner - outstanding employer engagement
- Guardian University Awards: 2015 winner for Social and Community Impact
- The first university to be awarded the Social Enterprise Mark
- Whatuni Student Choice Awards: 4th in the international category in 2018
- Teaching Excellence Framework - Silver
- #1 nationally for clinical medicine research output (REF 2014)
- Almost 2/3 research ranked either World-Leading or Internationally Excellent in 2014 Research Excellence Framework (REF)
- Top 50 Research Fortnight Power List
- A two-time winner of the Queen's Anniversary Prize for Higher and Further Education, most recently in 2012 for marine and maritime expertise
- European Commission HR Excellence in Research Award

Bridgwater and Taunton.

We believe in the ability of each of our students to fulfill their potential and become the best they can be.

Our Awards

- Lion Awards 'Centre of the Year'
- TEF Silver Award
- Winner of Michelmores Property Awards 2018
- Institute of the Motor Industry Outstanding Achievement Award 2017
- Queen's Anniversary Prize
- TES FE Awards 2016 - Pearson Silver Teaching Awards
- Beacon College Status

Ofsted Ratings

Bridgwater College and Somerset College merged in June 2016. Ofsted state that "once a college undergoes a merger it no longer has an Ofsted rating, until they are re-inspected within three years."

However, rest assured, prior to the merger, Bridgwater College was deemed outstanding and Somerset College was good with outstanding features.

Since merger, we have been rated as Outstanding in the areas that Ofsted have inspected, care standards and the childcare centre.

Investing in SWIoT

Bridgwater and Taunton College (BTC) will invest a further £1.5m into the College's existing campuses in Taunton and Cannington, creating additional facilities for high integrity welding and control and instrumentation training. Building on the National College for Nuclear and wider expertise within BTC, the new facilities will enable further specialisation around engineering training and reinforce the College's already impressive technical offer within the heart of Somerset.



City College Plymouth.

We've been helping students to get the skills and qualifications they need since 1887.

Our Awards

- Awarded TEF Gold for Higher Education programmes
- Achieving the highest rate of student satisfaction in the country for a further education college
- The College is one of only 21 UK Centres of Excellence for Maths
- One of only 7 CITB Immersive Learning projects to be awarded in the UK - driving forward innovative learning technology in teaching and learning
- City College Plymouth is the highest performing general further education college in the country for employer satisfaction with a 99.5% positive rating (2016-17 FE Choices Employer Satisfaction Survey)
- City College Plymouth's outstanding Apprenticeship provision has achievement rates 15% above the national average

Ofsted Ratings

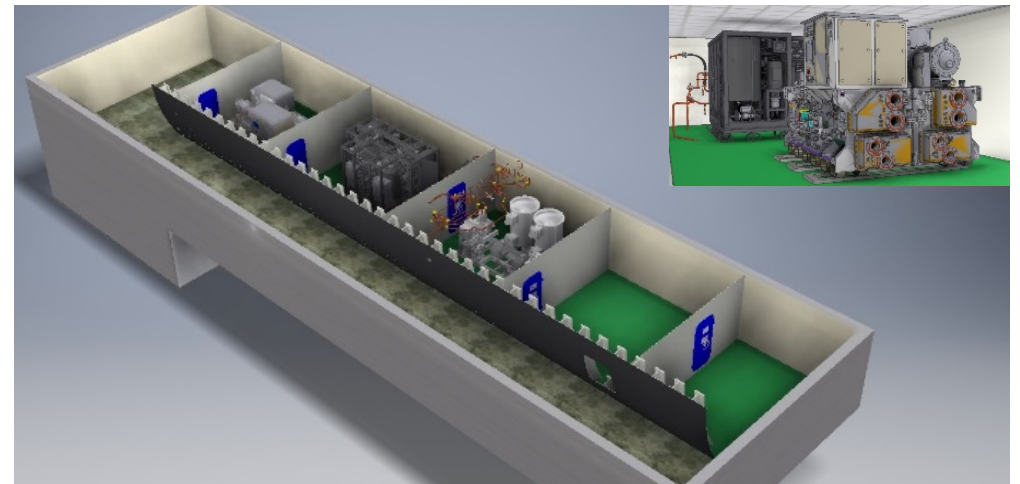
Ofsted rated the College as 'good' in its 2016 inspection visit.

STEM Accolades

Our £13m Regional Centre of Excellence for STEM opened in Autumn 2017 and boasts a range of fantastic facilities. The Centre was developed with the input of over 200 employers and gives City College students the opportunity to work together across traditional subject boundaries, building the transferable skills that local employers need.

Investing in SWIoT

City College Plymouth will invest a further £2.1m into its recently completed Advanced Engineering Centre and refurbishment of wider premises to provide new clean workspaces, workshops, industry level equipment and updated digital and VR assets on campus. The project also includes a newly built centre of excellence for marine engineering. Developed in conjunction with Babcock and other employer partners, the SWIoT offer in Plymouth will reinforce and expand the College's leading-edge marine training offer to local employers and national stakeholders.



Exeter College.

A large, thriving and growing tertiary college.

Our Awards

- STEM FE College of the Year 2018
- City and Guilds College of the Year 2016
- BTEC College of the Year 2014
- The Sunday Times 100 Best Not-For-Profit Organisations to Work For 2019
- Awarded TEF Gold for Higher Education programmes
- Winner TES FE Awards 2016 - Apprenticeship Programme of the Year
- Best FE College in the South West for employer satisfaction
- One of only 12 colleges in the UK to be named a Microsoft Showcase College
- Selected as one of the first providers of new 'T Levels'
- Quality Assurance Agency for Higher Education (QAA) assured

Ofsted Ratings

The team of 14 Ofsted inspectors, who visited the college in January 2014, awarded the highest 'Outstanding' grade for Overall Effectiveness as well as across each of the aspect grades of Outcomes for Learners, the Quality of Teaching, Learning and Assessment and the Effectiveness of Leadership and Management.

STEM Accolades

Exeter College has been named national STEM FE College of the Year and has received a prestigious award celebrating excellence in teaching in STEM.

Leading the way nationally in the teaching of science, technology, engineering and mathematics, Exeter College has received the Further Education College of the Year ENTHUSE Celebration Award from STEM Learning.

Investing in SWIoT

Exeter College will create a new £10.3m Digital and Data Education Hub at its Hele Road Campus, providing a nationally significant digital learning centre within the Heart of the South West. Encompassing state of the art digital learning laboratories, IT workspaces and classrooms, seminar spaces, and lecture and presentation facilities, the hub will form the centre of a growing network of digital learning excellence across the SWIoT area. It will provide industry-standard digital facilities to support world class employers such as the Met Office to maximise the potential of Exeter and the wider South West.



Petroc.

Raising Aspirations, Realising Potential, Delivering Success.

Our Awards

- NicDex no 1 College in 2018
- Alps top 20% provider at A Level
- Stem Assured College
- Planet Mark Accredited for Carbon Reduction
- TEF Silver

Ofsted Ratings

Ofsted inspection took place in November 2015, and confirmed that Petroc continues to be recognised as a good provider of education and training.

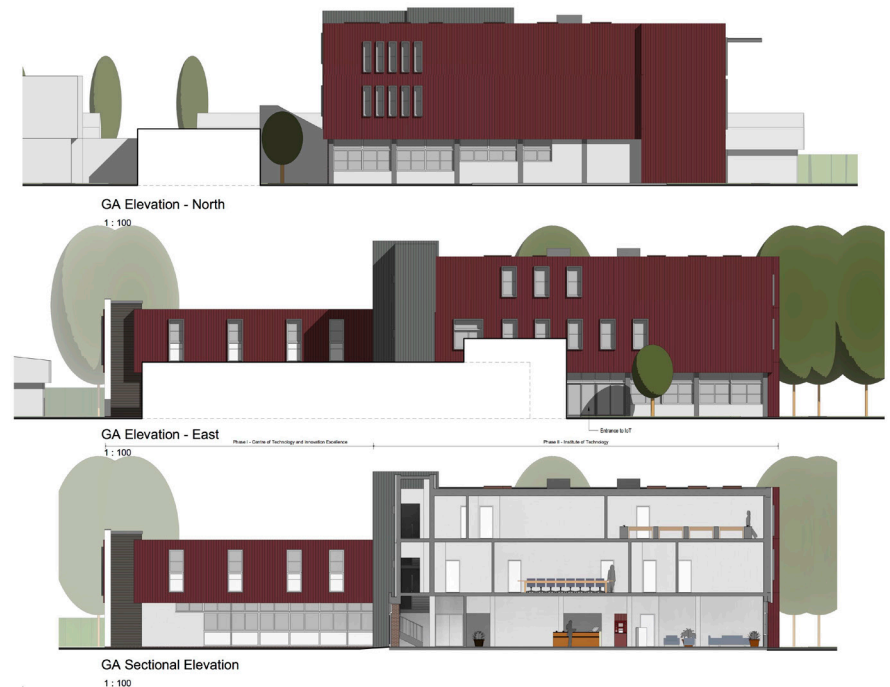
STEM Accolades

Petroc has a long history of excellence in STEM, and in December 2017, our STEM Assured status was re-confirmed. The STE(A)M agenda is very much at the heart of the College, guiding our curriculum thinking and inspiring our Learners.

Investing in SWIoT

Petroc will invest £3.2m into the revitalisation of part of their campus in Barnstaple, transforming the facility into a multi discipline engineering and advanced manufacturing centre in the heart of Northern Devon.

Bringing forward new bespoke engineering laboratory space, digital immersion facilities, additive and other emergent manufacturing capacity, and additional spaces for research and learning, the campus will provide a new hub for high quality engineering training and innovation to complement Northern Devon's existing sectoral offer.



Truro and Penwith College.

A culture where learning and achievement flourish as a result of excellent teaching*.

Our Awards

- Gold Award for Workplace Health
- Short-listed as FE UK College of the Year 2019
- TEF Gold standard Higher Education programmes
- AoC Beacon Award for Mental Health and Wellbeing 2017
- AoC Leading Light Award 2017
- AoC Beacon Award for Governance and Leadership 2016

Ofsted Ratings

Truro and Penwith College are officially recognised as one of the best colleges in the country and Ofsted has awarded the College 'Outstanding' status as a result of its inspection in 2016.

Not only are we the best performing state A Level provider in Cornwall, we are also one of the highest performing colleges nationally on all courses at all levels. You can choose from a huge range of A Levels, vocational courses and Apprenticeships, all taught by highly-qualified, specialist educators.

STEM Accolades

Truro and Penwith College provides over half of all post-16 Science, Technology, Engineering and Mathematics (STEM) related courses in the county and is one of the largest in the country. This volume of activity, together with exceptional student achievement and progression to some of the top institutions in the world, has cemented the College as a national leader and outstanding STEM provider.

Investing in SWIoT

Truro and Penwith College will take forward a £7.3m investment into a new two-storey, higher-level technology centre in the heart of Cornwall. Providing laboratory space to explore robotics and wider engineering capabilities, industry-standard engineering equipment and environments, and associated learning and presentation spaces, the new technology hub will expand the engineering and digital offer to match the best available across the country, as part of an integrated training offer for the South West.



* From the OFSTED 2016 Inspection.

SWIoT Partnership:



Developed in collaboration with:

