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

The University of Exeter

The University of Plymouth

Anchor FE Partners

Exeter College

PETROC

Bridgwater & Taunton College

City College Plymouth

Humber College

Penwith College

Anchor Employers

Oxygen House

Trusted to deliver

Met Office

TDK

Heart of the South West

Build re-imagine partner

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 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
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.

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.

TRYING TO PROVIDE AN INNOVATIVE APPROACH TO THE DELIVERY OF LEARNER PROGRAMS
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

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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 the world:

- 6th in UK, 9th in Europe and top 40 in the world in the CWTS Leiden Ranking
- 12th in UK in the Times/Sunday Times Good University Guide
- 10th 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 9 TEF Gold Russell Groups universities, the University of Exeter is commended for learning enriched by business, industry and professional expertise; 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. Its 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 continue 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
- Whituni Student Choice Awards: 4th in the international category in 2018
- Teaching Excellence Framework - Silver
- A 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 Frontiers: 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
- Times Higher Education World University Rankings: #1 nationally for clinical medicine research output
- Times Higher Education World University Rankings: Top 50 Research Fortnight
- National College for Nuclear Instrumentation & Behaviours 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 continue to evolve in response to changing need.

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BRIDGWATER & TAUNTON COLLEGE

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

Bridgwater & Taunton College (BTC) is an exceptionally successful provider of education. Offering a range qualifications across three campuses. Courses combine real-world experience with academic rigour, ensuring boarding students to Red Brick universities, prestigious companies and exciting careers.

INVESTING IN SWIoT

BTC is developing two world-class facilities, a Welding Centre of Excellence brings industry-standard equipment and a class-leading welding environment for welders and employers seeking training, testing and qualifications whilst at the National College for Nuclear the Flow Loop-simulator is being extended and further developed to enhance experiential learning opportunities, so important to safety-critical installation, commissioning and maintenance with a focus on control & instrumentation and behaviours training.

These new facilities provide further engineering specialisation training from Levels 1 to 6, addressing regional skills shortages.

OUR AWARDS

BTC is a chartered institute for education, a clear mark of excellence which demonstrates they are an education provider in a centre of supreme quality in the areas of governance, leadership, professional development, teaching practice and community impact.

This is reflected in the number of prestigious, nationally recognised awards they hold, including:
- SEMTA Award
- TES FE Award: Apprenticeship Programme of the Year Winner
- Lion Awards ‘Centre of the Year’
- TEF Silver Award
- Queen’s Anniversary Prize

OFFSTED RATINGS

Bridgwater & Taunton College has been rated Good with Outstanding features by Ofsted. The Ofsted inspection, took place in March 2019 and recognised key strengths in leadership and management, personal development, behaviours and welfare, apprenticeships, adult learning and high needs provision confirming the college as a leading skills and learning provider in the area.

www.btc.ac.uk
www.ncfn.ac.uk
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 for Excellence in Maths.
> Effective-rated for innovative teaching that is engaging, stimulating and motivating.
> City College Plymouth is the third highest performing general further education college in the country for employer satisfaction with a 98.1% positive rating (2017/18 FE Choices Employer Satisfaction Survey).
> The College’s Apprenticeship achievement rates place us 1st in the South West and 2nd nationally out of all General Further Education Colleges (source: National Achievement Rates Tables 2018/19).

OFFSTED RATINGS
Effective-rated for outstanding teaching, learning and assessment, which is effective in promoting rapid improvement in student outcomes and the quality of educational provision.

STEM ACCOLADES
Our £3m 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 transferrable skills that local employers need.

INVESTING IN SWIOT
Within the SwiOt, a £2.1million local investment will enable the College to create new facilities and purchase cutting-edge equipment to deliver an innovative new curriculum of higher-level technical courses within the marine, engineering, manufacturing and digital sectors - all city priority sectors.

To house our growing marine operations, we will establish City College Plymouth within the city’s Oceansgate Marine Enterprise Zone, offering a world-class hub with test facilities for marine research, innovation and production. The waterfront facilities will enable our students to access specialist test facilities such as Smart Sound Plymouth, a proving area for designing, testing and developing cutting-edge products (including CAD, VR, CNC, Composites and Marine Autonomy) and services for the advanced marine sector.

Our curriculum offer, which has been strategically developed with employers, education providers and strategic agencies, includes wide-ranging STEM provision to meet locally identified demand, with programmes mapped to emerging occupations and sector specialisms. Furthermore, both our capital infrastructure development and curriculum will equip learners with employer-required professional skills, resilience, adaptive capabilities and workplace abilities aligned to digital transformation.

MATHS CENTRE FOR EXCELLENCE
The College is one of 21 Maths Centres for Excellence in the UK, and the high quality of the College’s maths education was highlighted in the 2020 Ofsted inspection.

INVESTING IN SWIOT
Exeter College will create a new £10.3 million Digital and Data Centre at its Hele Road site, helping to realise digital skills across the region from the heart of the South West. The new state-of-the-art facility, which is match-funded by the college, will provide learners with opportunities in the digital sector, including courses around data analytics, cybersecurity and software development.

Encompassing state-of-the-art digital learning laboratories, IT workspaces, seminar spaces and lecture and presentation facilities, the centre will be the key part of a growing network of digital learning excellence across the SWiOt area. As well as industry-standard digital facilities and technology, the centre will work with world class employers such as the Met Office to maximise the potential of Exeter and the wider South West.

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
> BITC 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 a handful of 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

OFFSTED RATINGS
Exeter College has been rated as Ofsted ‘Outstanding’ for overall effectiveness as well as across 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 was named as the national STEM FE College of the Year in 2018 and has been recognised with awards celebrating excellence in teaching in STEM.

Leading the way nationally in the teaching of science, technology and mathematics, Exeter College was awarded the Further Education College of the Year ENTHUSE Celebration Award from STEM Learning in 2018.
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
The new Ofsted Education Inspection Framework (EIF) took place in November 2019, and confirmed that Petroc continues to be recognised as a good provider of education and training. We were particularly pleased with some of the comments highlighted in their report, which not only acknowledge the fantastic results that are achieved by our learners but also the quality of our provision.

These include:
- Learners and apprentices are overwhelmingly positive about the quality of education and training they receive.
- Learners and apprentices benefit from a curriculum which is well designed, improves their subject knowledge and behaviours and develops new skills.
- The curriculum at all levels enables learners to develop new knowledge, skills and behaviours which match the needs of regional employers and the aspirations of learners.
- Teachers are highly experienced in their subjects or industries.
- Learners and apprentices produce high standards of work because of the teaching they receive and the high expectations of staff.
- Learners view staff as good role models for the chosen industry or academic study.

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 SWOT
Petroc and the Department for Education will invest £3.2m into the revitalisation of part of their campus in Barnstaple, transforming the facility into a multi discipline engineering, digital and advanced manufacturing centre in the heart of Northern Devon. Bringing forward new bespoke engineering laboratory space, digital immersion facilities, 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.

PETROC
Raising Aspirations, Realising Potential, Delivering Success.

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 2018.

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 SWOT
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 2018 Inspection.
## DIGITAL

<table>
<thead>
<tr>
<th>Full-time Degrees</th>
<th>Degree Apprenticeship (BSc)</th>
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<tbody>
<tr>
<td>3D Game Design</td>
<td>Data Scientist</td>
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<tr>
<td>BSc (Hons) Applied Computer Technologies</td>
<td>Digital and Technology Solutions Professional (degree)</td>
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<tr>
<td>Digital Computing (Top-Up degree)</td>
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<th>Foundation Degree</th>
<th>Higher Apprenticeship</th>
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<tr>
<td>Business Computing</td>
<td>Cyber Intrusion Analyst</td>
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<tr>
<td>Computer Systems Development</td>
<td>Cyber Security Technologist</td>
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<tr>
<td>Computing and Internet technologies</td>
<td>Data Analyst</td>
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<td>Cyber Security</td>
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<td>Data Science and Machine Learning</td>
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<td>Software Development</td>
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<tr>
<td>Virtual Reality and 3D Modelling</td>
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<tr>
<th>Degree Apprenticeship (MSc)</th>
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<tbody>
<tr>
<td>Digital and Technology Solutions Specialist (degree)</td>
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<tr>
<td>Data Scientist Specialist</td>
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## ENGINEERING

### 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

### Degree Apprenticeship
- Digital and Technology Solutions Specialist (degree)
- Data Scientist Specialist

### 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