fit The ICT Talent Pipeline

CHOOSE TECH

Choose Tech Programme

AN EDUCATORS GUIDE

For more information on becoming part of the future of technology visit:

www.FIT.ie
or email choosetech@fit.ie

www.apprenticeship.ie
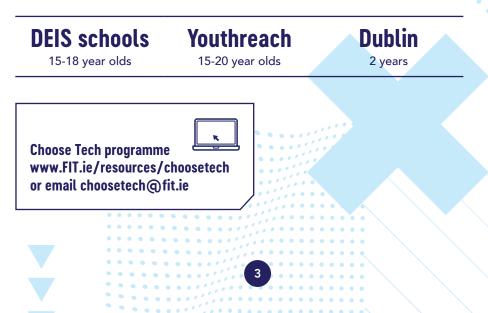www.gradireland.ie
www.smartfutures.ie

What is Choose Tech?

The programme aims to address the structural under-representation of socio-economically disadvantaged young people and increase diversity in the newly launched pre-tech and tech apprenticeships and the tech sector.

It seeks to engage young people at an earlier stage, raising their interest in the tech sector and their awareness of the different pathways available to them.

Who is this programme for?
It will be taught in collaboration with DEIS schools (15 – 18 year olds) and Youthreach (15 – 20 year olds) with the support of an advisory coalition group. The programme will be piloted in Dublin initially over 2 years.

DEIS schools	Youthreach	Dublin
15-18 year olds	15-20 year olds	2 years

Choose Tech programme
www.FIT.ie/resources/choosetech
or email choosetech@fit.ie

What does the programme consist of?

FIT Career Pathways Workshops
FIT Career Pathways Workshops involve fun, interactive learning sessions. The sessions focus on the following:
1. Ireland's vibrant tech sector, the tech roles in demand and the benefits of a tech career.
2. The pathways to a tech career that are available to young people including pre-tech and tech apprenticeships.
3. How young people can get started today on their tech journey. Explainer on micro-credentials, near peer engagements and their benefits.

Duration 35 mins sessions by two. Virtual and/or in classroom.

Information Packs for Students and Educators
Each school or organisation will receive a resource pack including:
- Choose Tech career guidance booklet for students.
- Roadmap infographic poster showing the routes to a tech career for young people including qualifications required for entry/ qualifications gained.
- Pre-Tech and Tech Apprenticeship brochures for students.
- Choose Tech programme overview for educators.

Near Peer Tech Engagements
Through the Choose Tech programme, students will also have an opportunity to achieve an events badge, which recognises interaction with a tech professional. The purpose of this is to allow students to understand the everyday role of a real tech professional. These interactions can be useful to dispel any barriers young people might possess of themselves and help them decipher if a tech role may or may not be of interest to them in the future.

What are micro-credentials?

Micro-credentials are a digital form of certification (also known as digital badges) indicating demonstrated competency in a specific skill or set of skills and acquisition of specific knowledge. They are beneficial given their flexibility and can be used to recognise achievement, motivate learners, identify potential and assist learners to effectively stand out from the crowd.

70+ bite-sized modules
We have partnered with iDEA, to bring you this method of learning.

iDEA

Micro-Credential Certification for Students
Students can choose from over 70 bite-sized modules covering a wide variety of subjects. Each module has different points that can be accumulated to achieve a bronze or silver award. The badges are recognition of tasks completed and knowledge gained and can be shared on their CV/digital portfolio. Through completion of tasks such as Gif making, Cyberspies, Coding, User interface, young people will be able to use tangible examples of their experiential learning in future interview situations and ultimately find areas of technology that interest them the most.

Outreach Support
Each school or organisation will benefit from specific recommendations from an advisory coalition made up of relevant stakeholders. In addition, teachers and leaders will have an Outreach Support Manager to help them get registered, to organise suitable dates for the FIT workshops and near peer engagements.
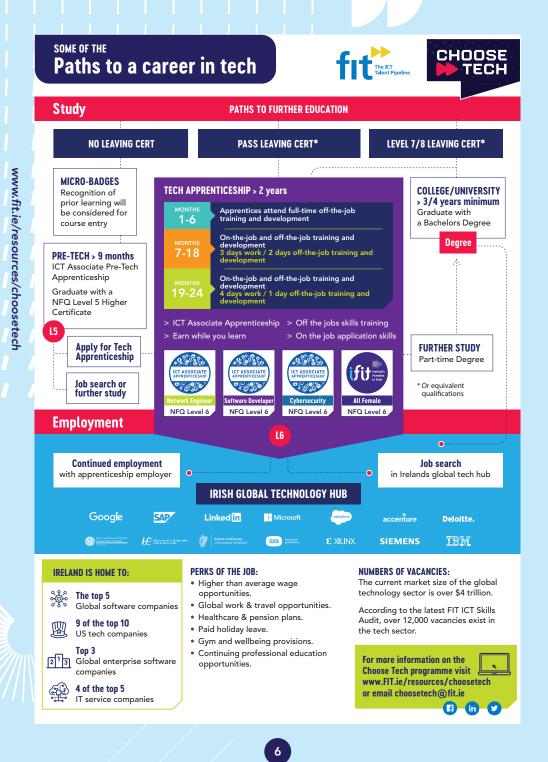
Educators & Leaders
A good place to start: get more informed and help your students get on the right pathway to a tech career by completing the **FIT DIGITAL PATHWAYS BADGE**. Topics covered include tech roles in demand, tech sector in Ireland, pathways & apprenticeships, obstacles for young people in achieving a tech career & the perks of a tech career in Ireland.

SOME OF THE
Paths to a career in tech

fit The ICT Talent Pipeline

CHOOSE TECH

Study | PATHS TO FURTHER EDUCATION

| NO LEAVING CERT | PASS LEAVING CERT* | LEVEL 7/8 LEAVING CERT* |

MICRO-BADGES
Recognition of prior learning will be considered for course entry

PRE-TECH > 9 months
ICT Associate Pre-Tech Apprenticeship

Graduate with a NFQ Level 5 Higher Certificate

L5

Apply for Tech Apprenticeship

Job search or further study

TECH APPRENTICESHIP > 2 years

MONTHS 1-6 Apprentices attend full-time off-the-job training and development

MONTHS 7-18 On-the-job and off-the-job training and development
3 days work / 2 days off-the-job training and development

MONTHS 19-24 On-the-job and off-the-job training and development
4 days work / 1 day off-the-job training and development

> ICT Associate Apprenticeship
> Earn while you learn
> Off the jobs skills training
> On the job application skills

ICT ASSOCIATE APPRENTICESHIP Network Engineer NFQ Level 6

ICT ASSOCIATE APPRENTICESHIP Software Developer NFQ Level 6

ICT ASSOCIATE APPRENTICESHIP Cybersecurity NFQ Level 6

ifit Ireland's Females in Tech All Female NFQ Level 6

COLLEGE/UNIVERSITY > 3/4 years minimum
Graduate with a Bachelors Degree

Degree

FURTHER STUDY
Part-time Degree

* Or equivalent qualifications

L6

Employment

Continued employment
with apprenticeship employer

IRISH GLOBAL TECHNOLOGY HUB

Job search
in Irelands global tech hub

Google | SAP | Linked in | Microsoft | salesforce | accenture | Deloitte.

XILINX | SIEMENS | IBM

IRELAND IS HOME TO:

The top 5
Global software companies

9 of the top 10
US tech companies

Top 3
Global enterprise software companies

4 of the top 5
IT service companies

PERKS OF THE JOB:
- Higher than average wage opportunities.
- Global work & travel opportunities.
- Healthcare & pension plans.
- Paid holiday leave.
- Gym and wellbeing provisions.
- Continuing professional education opportunities.

NUMBERS OF VACANCIES:
The current market size of the global technology sector is over $4 trillion.

According to the latest FIT ICT Skills Audit, over 12,000 vacancies exist in the tech sector.

For more information on the Choose Tech programme visit www.FIT.ie/resources/choosetech or email choosetech@fit.ie

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How to join the Choose Tech programme

Ensure that your organisation meets the following criteria:

DEIS School (15-18 years of age) or Youthreach (15 - 20 years of age) Dublin City or County (initial pilot phase)

To register your school/organisation please visit:
www.fit.ie/resources/choosetech

Follow the steps outlined on our website. Educators and Group Leaders will need to register first. You can then register your group and get the students to join by following a unique url link or by entering a unique code in their profile.

Once registered we will contact you to organise your resource pack, FIT career pathways workshops and tech events for your class or group.

iDEA BRONZE

50pts | 50pts | 50pts | 50pts | 50pts

What are bronze badges?

Bronze badges are beginner level and can be used to develop existing or learn new skills.

How do you earn a bronze award?
You will need 250 points to win a bronze award. These points must include 50 from each of the following badge categories: Citizen, Worker, Maker, Entrepreneur.

Disclaimer note: The modules listed in this booklet are correct at time of print. Please note that they are updated constantly online, and may differ to those listed here, to reflect the changes in technology.

SAFE ONLINE
Stay safe online and learn how to avoid being tricked by hackers and online trolls.

CYBERSECURITY
Don't let the simple design of this badge put you off – make like Alan Turing cracking the Enigma code and find out how to do things James Bond and Jason Bourne would be proud of.

WHAT IS THE CLOUD
Cloud computing is a way to store data in cyberspace, so it doesn't take up real space at home or at work and avoids using up memory on your phone or computer. Find out why it matters and how you can use it.

FARMTECH
Sustainably feeding the world's growing population is one of the biggest challenges facing humanity. Learn about how different technologies and careers are helping make a difference and discover the UN's Global Goals - what they are and why they matter.

GLOBAL GOALS
Getting to know the UN Global Goals and why they matter, helps us all better understand how we can play our part. This iamtheCODE badge helps decode the Goals and shows how individuals, communities, businesses, and technology can all help advance them, and change the world.

E-COMMERCE
Money makes the world go around. Tools, tips and tricks to ensure you look after your pennies.

FAKE NEWS
Unfortunately we live in a world where some people spread lies and manipulate the truth. It's vital to your digital health to be able to spot fake news, and use critical thinking to make sensible, rational judgements on the information you source online. This introduction helps show you how.

CYBER SPIES
Take on a traineeship with the Cyber Spies. Learn how to protect and fortify a website to keep it safe from hackers, and then put your knowledge to the test as an attack is simulated.

DIGITAL ETHICS
Being a good digital citizen and learning how to manage the issues and the ethics of the digital world are vital skills everybody needs. Learn here about some of the challenges which arise from aspects of digital innovation, and how to deal with them.

SOCIAL MEDIA ETHICS
Social Media channels are helping to make the world a more networked, connected place. With that connectedness comes responsibility, to us and to each other. Pick up some tips for using social media appropriately including how to safeguard against cyberbullying and how to spot fake news.

TEAMWORK
How we work together and make the most of each other's talents is essential in business. Learn how with Teamwork!

PERSONAL STATEMENT
Your personal statement helps you showcase what you can do and helps potential employers and educational institutions discover what makes you a perfect fit for the job or the course you are applying for. Boost your chances of success and find out how to identify your transferable skills.

GDPR
How many of us understand what 'GDPR' is, and feel confident about complying with it? 'GDPR' stands for the 'General Data Protection Regulation'. Get to grips with this critical piece of data protection legislation today and download a free guide you can refer to anytime.

E-SAFETY & ONLINE ETIQUETTE
Get cyber-savvy to help you and your friends stay safe and avoid being a victim of fraud and theft online. Everyone who uses the internet needs to do this easy but important intro to e-safety.

BRAIN HACK
Imagine if there was a quick and easy module you could do which would make you better at all the rest of your studies. Well, this might just be it! Find out how your brain works and get ready for some great results.

DATA PLAY
Find out what it feels like to work with the cyber team to solve a crime. BUT FIRST please note this badge is built using games technology called Unity. This version will ONLY work on your desktop or laptop. Second, when you start the cybersecurity challenge, you will find it takes ages to load so allow plenty of time. Cybersecurity specialists need patience and persistence!

SOCIAL MEDIA SET-UP
It can be baffling trying to set yourself up on social media channels. This badge helps you understand what you need to do on the main ones: Facebook, Instagram, LinkedIn, Twitter, YouTube and Snapchat. Even if you already use one or more, you can download the free guide in this badge to keep for reference in the future.

INTERNET & WEB
Wouldn't it be brilliant if there was a simple guide which helped people understand what the Internet does and how the World Wide Web works? Well, now there is. Not only will you learn loads of useful things about the digital world, but you will also be able to download and keep a glossary which demystifies all the jargon.

iDEA WORKER

COLLABORATION
Tools and technologies of the digital world are making it easier for teams to collaborate and complete their work more efficiently. Can you build a brilliant team and implement the appropriate tech to help make your business a success?

DATA VISUALISATION
Data visualisation is both an art and a science. Patterns, trends and correlations can be discovered and documented more easily when we visualise data. In this badge, you will be introduced to some of the concepts of data visualisation as you follow Napoleon on his journey during the French invasion of Russia.

DIGITAL PORTFOLIOS
Creating a digital portfolio is one of the main ways people can showcase their achievements to potential employers. Use this masterclass to get yours to the top of the pile.

USER INTERFACES
All of us use apps and websites every day, some of which we love, some of which just aren't very good. Learn how to design brilliant online experiences which look great.

IMAGE SPECIALIST
There's a real art to making images look brilliant – whether that's on posters, book covers, adverts, packaging or websites. This 'day in the life of a digital image specialist' covers how to do it – everything from picking the right pictures to using them well.

PSYCHOLOGY IN WEB DESIGN
Making engaging online content is as much an art as a science. Get an insight into the psychology of web design to learn some of the tips and techniques you need to make your websites shine.

CODERDOJO RANDOMNESS
Everything from game design to music streaming can be enhanced by using the secret art of randomness. Find out how to trigger great experiences using a number of generators!

DIGITAL RESEARCH
Fast track your way to be a digital ninja by using these tips and tricks for finding stuff out online. You'll learn how to take short-cuts in Google which save time and effort – AND help you make sure your research is accurate.

CRISIS MANAGEMENT
Crisis Management is the process of dealing with disruptive and unexpected events that threaten to harm you or your organisation's wellbeing. In this badge, you will take your own business through a pandemic and not only survive, but thrive through problem solving, innovation and adapting during a crisis.

WHAT IS AI?
AI is a broad area of computer science that makes machines seem like they have human intelligence. Humans are the most intelligent creatures that we know of so this makes AI both exciting and concerning, but why? Find out in this badge!

PROJECTS
Effective project management is key to success in business. Learn how to drive your projects to a brilliant finish.

USER EXPERIENCE
Fantastic websites and apps are designed by thinking carefully about the people who will use them. Find out how the best web developers do this so you can put their techniques into practice yourself.

WORKING & LEARNING FROM HOME
Working and learning digitally from home is becoming more and more common and it is important to find ways to stay healthy, productive and effective when doing so. In this badge, you will learn some tips for setting up your workspace, digital tools for communication and collaboration, learning styles to help you engage as well as time management and productivity techniques.

PROBLEM SOLVING WITH AI
You could use AI to solve problems and make a positive impact within your community, city, country and the world. In this badge, we will explore ways to identify problems that you could solve with AI and learn about how AI was used to solve the Kimchi Crisis in Korea!

DIGITAL PATHWAYS
Whether you or someone you know is considering a career in tech in Ireland, the UK or globally, this badge will set out some of the opportunities, pathways and benefits in tech, as well as ways to overcome potential challenges. Ideal for Educators/leaders.

SYSADMIN
Fast becoming one of the key roles in computing, systems administrators work forensically to troubleshoot web-page errors and get websites up and running.

iDEA MAKER

JQUERY CODING
People who have done this say it's like magic. We can't promise magic but we can promise you an exciting, experimental sandpit so you can learn how to make animating images. The science bit: you'll learn how to combine coding in jQuery (a clever interface library) with HTML (a mark-up language) and CSS (which makes web pages look great).

ANIMATION
Fancy working in the gaming or video industry? Start here by getting to grips with animation tips and tricks. See if you can make a superhero animate!

GIF MAKING
GIFs are file formats that have super-powers to store and animate multiple images. Learn how they work and how to make them.

GRAPHIC DESIGN
Eye-catching visuals can make or break a project. Get the inside track on graphic design and find out how to make words and pictures work across any media.

AUTOMATION
Life hacks are smart ways to use tech and make everyday life easier. Find out more about algorithms, variables and the Internet of Things to start making your own life hacks.

CODING SOLUTIONS
Learning how to troubleshoot effectively is one of the key skills web developers need to acquire. This badge helps you learn how to analyse and fix errors in code.

COLOURS
Anyone who wants to do anything in digital needs to do this badge. Colours might seem a simple topic, but they affect everything we do - colours speak all languages. Using them smartly will put you in a different league.

MAKING WEBSITES
Having an online presence is becoming increasingly important for businesses, products and services. Find out how to make a website and set up a blog with this easy-to-follow guide.

JUNIOR WEB DESIGNER
This 'day in the life of a web designer' introduces you to the role of a web developer using a 'bootstrap framework' - a free resource which provides lots of templates for making fantastic websites.

VIDEO EDITING
Making your own films can be a lot of fun – and tech these days means it's easy to create video content. Learn the craft of editing to hone your video storytelling skills as YouTubers do.

VIRTUAL REALITY
The magic of immersion – Virtual Reality can transport you into any scenario. This introduction opens the amazing world of VR, how you can use it and how you can make it!

iDEA ENTREPRENEUR

ADVERTISING
What is advertising and how does it work? From the very first advert to the way businesses promote products and services now – find out how to make an impact in today's digital world.

INNOVATION
Entrepreneurs often try to come up with something new to stay ahead of the competition. Learn how to innovate effectively with a range of tools used by some of the most successful teams in the business.

BLOCKCHAIN
Blockchain technology has been around for some time now, and it's beginning to transform the way several sectors operate. But what is blockchain, and how do cryptocurrencies work? Pick up the basics here and get a downloadable jargon buster.

INFLUENCER
Becoming an entrepreneur takes self-belief and inspiration. It also takes grit, determination and hard work. Helping people understand your product or service and getting them excited about it is a core enterprise skill. This badge helps you put some of this into practice.

GROWTH HACKING
Growth hacking is finding clever ways to get people talking about your business. Think of it as marketing for the digital age – this badge is a vital introduction for any budding entrepreneurs.

BIG DATA
The term 'Big Data' is something we are generally familiar with – but what does it mean, why do we need it, and how should we use it? The challenges and opportunities are – not surprisingly – vast. This fascinating introduction covers the history of Big Data and reveals the incredible range of applications it has – today and for the future.

CRM
It's no good having a wonderful product if you can't tell anyone about it, help people if they get stuck or look after the needs of your clients. Learn how 'customer relationship management' techniques affect your ability to sell things and get some tips for providing excellent service.

JARGON BUSTER
One of the UK's most brilliant business leaders is Dragon Peter Jones. Anyone interested in business and enterprise needs to get to grips with the jargon people use and learn how to weigh up risks. Try this jargon-buster and business guide.

MONEY MANAGEMENT
Pick up some tips and techniques to help you manage your money – from saving to investing in handling a budget. Learn too about how technology has changed the way we make transactions – do YOU know what a 'satoshi' is?

SOCIAL SELLING
Social selling is all about learning how to change the way we sell by using the power of digital connectivity. Find out more about the people who use your products and services - and learn how to personalise your relationships with them.

THE ART OF SELLING
If you've developed a product or service, chances are you will want to persuade people to use it. There are lots of diverse ways you can go about finding routes to market, and several tried and tested methods that suit different situations. This useful guide introduces you to concepts you might not know and helps reinforce some of the principles that work.

GROWTH MINDSET
Do you have a growth mindset or a fixed one? Do you believe that intelligence and abilities can be developed or are they static qualities that you are simply born with? Try this badge to find out what a growth mindset is and how developing one can make your brain smarter and stronger!

RESEARCHER
Researchers find out facts and figures and make great investigators. This 'day in the life of a researcher' helps you uncover details others might miss.

PROBLEM-SOLVING
Problem-solving is a valuable life skill. It is highly transferable across a range of jobs and sectors, and vital in business. Discover some key principles which are useful to apply when tackling problems and learn about some great real-life examples of problem-solving by companies including Spotify, Amazon and PayPal.

SOCIAL MEDIA IN BUSINESS
One of the best ways of attracting attention to your product or service is to use social media wisely and well. You can build a loyal customer base and find routes to market. Discover which social media channels work best for different marketing challenges and how to use them effectively.

BAFTA GAME CONCEPT
Young Game Designers is an initiative by BAFTA that inspires and supports young people to create, develop and present their new game idea to the world. Learn here how to plan, develop, design, set difficulty levels, test and market your game idea!

GAME DESIGNER
The gaming industry makes more money than music and movies combined. This 'day in the life of a gamer' helps you earn your gaming stripes by showing how game mechanics influence gameplay. And get to design your own game!

INTRO TO GAMING
The gaming industry generates more revenue than movies and music combined. Ian Livingstone is one of the world's most famous gaming entrepreneurs. Here, he offers an introduction to the world of gaming with some insights on how to get started making your own games.

PYTHON QUIZ
CoderDojo is famous for helping thousands of young people learn how to code. In this fantastic module, you can learn how to build a quiz in Python (a programming language) and at the same time understand some of the basics of coding.

MAKE A GAME
Hone your logic skills with one of the world's best tech creator companies – Raspberry Pi. Code a game and learn some of the basics of Python, such as how to write loops, use random numbers and draw lines.

100pts   100pts   100pts   100pts

SILVER

What are silver badges?

Silver badges are intermediate level and scenario-based challenges that help you learn digital, employability and enterprise skills. Like Bronze badges, Silver badges are also split into 5 core categories: Citizen, Worker, Maker, Entrepreneur, and Gamer.

How do you earn a silver award?
There are 3 badge levels within each Silver category: Foundation, Activation and Resolution. You unlock access to each badge as the scenarios (known as Quests) develop. You will need 100 points to complete each category. To win the Silver Award you will need at least 400 points and to have completed 4 of the 5 badge categories.

CITIZEN

CITIZEN FOUNDATION
Gain access to the iDEA Digital City by earning your cyber passport, training in digital citizenship and developing awareness around cyber responsibility and digital ethics.

CITIZEN ACTIVATION
Explore the iDEA Digital City and discover your digital tattoo. Find out how to protect your digital footprint by safeguarding your data and learning how to operate safely and securely online.

CITIZEN RESOLUTION
Learn about malware, privacy, the 'billboard test', safeguarding your online presence - and the logic around sanitising your data. Download a jargon buster to help you remember how to stay safe and be an iDEA Digital Citizen.

WORKER FOUNDATION

As the Digital Detective, you are sent on a series of missions to discover employability skills and find out how different working environments function. Learn how to prioritise well, communicate effectively and develop a great mindset.

WORKER ACTIVATION

Explore the digital city skyscraper further and learn how to plan your time, develop research skills and find out how to present information in different, useful ways. You will also get to play with the planets and hone your ability to think laterally and solve problems.

WORKER RESOLUTION

Investigate the secrets of employability to complete your mission. Try out web design and work in a social media company to deepen your problem-solving skills, use your creativity, and test your resilience.

MAKER FOUNDATION

Explore the iDEA Makerverse and start collecting the skills points of the maker worlds you visit. Find out the tools you need and start discovering the secrets of image manipulation, colours, pixel art, 'nearest-neighbour interpolation' and 'dithering'.

MAKER ACTIVATION

Next stop in the Makerverse is the coding and engineering part of your journey. Learn some core coding syntax (in this case JavaScript) where the logic can be applied across coding languages, and pick up 3D modelling and AI skills.

MAKER RESOLUTION

Use HTML and PHP to code a planet's ecosystem and make it habitable. Hone the skills you've developed to make a website, deploy robotics and unlock points to become a Digital Adventurer.

ENTREPRENEUR FOUNDATION

This is your chance to earn your iDEA Motivational Business Adventure (MBA). Discover the core traits of an entrepreneur and learn how to navigate the business jungle to solve real problems in real-time.

ENTREPRENEUR ACTIVATION

Hone your team-building skills and learn leadership techniques like the RACI framework. Discover the surprising truth about what motivates us and find out why agility and adaptability matter in business.

ENTREPRENEUR RESOLUTION

Develop and take a product to market and learn how to overcome obstacles as they arise. Find out how to develop a pitch, create a business plan and roadmap, raise investment and take on competitors.

GAMER FOUNDATION

Start your journey to becoming a Digital Architect by experimenting in the iDEA Imaginarium. Find out why the games industry matters and the range of skills and jobs in gaming. Discover the gaming timeline and find out if your perceptions about gaming are accurate.

GAMER ACTIVATION

Get to grips with Motion Capture, education in gaming, and the major categories of the gaming world. Then experiment with your own IDE (integrated development environment) to make games yourself - and download a jargon buster.

GAMER RESOLUTION

Learn about staying safe in gaming and have a go operating a virtual reality environment in the iDEA Imaginarium. Finally get put through your paces at Bootcamp to pull all you've learned about physics, gameplay, simulation and coding together to pass the Gaming Gateway.

About FIT

Established in 1999, FIT is dedicated to addressing the skills requirements of Ireland's increasingly digitalised economy. Promoting inclusion and diversity FIT consistently demonstrates that wider access to tech skills training leads to exciting career paths and quality employment opportunities for all those who have a curiosity and passion for technology.

1999	**21,000+**	**15,000+**
established	job seekers	employed

FIT is the National Coordinator ICT Tech Apprenticeships at NFQ Level 6 and is delivering three apprenticeships programmes in Network Engineering, Software Development and Cybersecurity with a fourth in Cloud Computing currently in development.