Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

ATiC
ASSISTIVE TECHNOLOGIES INNOVATION CENTRE
CANOLFAN ARLOESI TECHNOLEGAU CYNORTHWYOL

Assistive Technologies Innovation Centre

Canolfan Arloesi Technolegau Cynorthwyol

DISCOVER
DEFINE
DEVELOP
DELIVER

DISCOVER
DARGANFOD
DEFINE
DIFFINIO
DEVELOP
DATBLYGU
DELIVER
CYFLAWNI

DARGANFOD
DIFFINIO
DATBLYGU
CYFLAWNI

Contents *Cynnwys* 内容

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ATiC
ASSISTIVE TECHNOLOGIES INNOVATION CENTRE
CANOLFAN ARLOESI TECHNOLEGAU CYNORTHWYOL

Cyflymu
Accelerate

Cronfa Datblygu
Rhanbarthol Ewrop
**European Regional
Development Fund**

Foreword *Rhagair* 前言

Welcome to the Assistive Technologies Innovation Centre (ATiC)

Welcome to ATiC, the Assistive Technologies Innovation Centre, here at the University of Wales Trinity Saint David in Swansea. ATiC is an integrated research centre, putting user-centred thinking and strategic innovation tools into practice in our cutting-edge User Experience research facility in UWTSD Swansea's Innovation Quarter.

ATiC works with private industry, the UK's National Health Service, research charities, and academic partners to help develop innovative products, services and systems in the health and wellbeing sector. Since its origins in 2004, through to our current partnership with Cardiff University School of Medicine, Swansea University Medical School and the Life Science Hub Wales, through the Accelerate programme, ATiC's goal has always been to deliver transformational impact – with economic as well as health benefits – for the people of Wales and beyond.

ATiC is a research and innovation centre so we know how important collaboration is. It has developed strategic partnerships, such as the Accelerate Programme and with Wuhan University of Technology in the UK-China Care Design Research Partnership.

As ATiC Director, it is my privilege to welcome you to our first-class team and resources in our new research centre. I also invite you to connect with us as we take the next steps on our innovation journey.

Croeso i Ganolfan Arloesi Technolegau Cynorthwyol (ATiC)

Croeso i ATiC, y Ganolfan Arloesi Technolegau Cynorthwyol, yma ym Mhrifysgol Cymru Y Drindod Dewi Sant yn Abertawe. Mae ATiC yn ganolfan ymchwil integredig sy'n rhoi dulliau meddwl sy'n canolbwyntio ar ddefnyddwyr, a dulliau arloesi strategol, ar waith yn ein cyfleuster o'r radd flaenaf ym maes ymchwil i Brofiadau Defnyddwyr yn Ardal Arloesi Abertawe PCYDDS.

Mae ATiC yn gweithio gyda diwydiant preifat, Gwasanaeth Iechyd Gwladol y DU, elusennau ymchwil, a phartneriaid academaidd i helpu datblygu cynhyrchion, gwasanaethau a systemau arloesol yn y sector iechyd a lles. Ers ei sefydlu yn 2004, hyd at ein partneriaeth bresennol ag Ysgol Feddygaeth Prifysgol Caerdydd, Ysgol Feddygol Prifysgol Abertawe a Hwb Gwyddorau Bywyd Cymru, nod ATiC bob amser trwy'r rhaglen Accelerate, fu cyflawni effaith drawsnewidiol – gyda buddion economaidd yn ogystal â buddion iechyd - i bobl Cymru a thu hwnt.

Canolfan ymchwil ac arloesi yw ATiC felly gwyddom pa mor bwysig yw cydweithio. Mae'r ganolfan wedi datblygu partneriaethau strategol, megis y rhaglen Accelerate, a chyda Phrifysgol Technoleg Wuhan ym Mhartneriaeth Ymchwil Dylunio Gofal y DU-Tsieina.

Fel Cyfarwyddwr ATiC, braint i mi yw eich croesawu i'n tîm blaengar a'n hadnoddau o'r radd flaenaf yn ein canolfan ymchwil newydd. Gwahoddaf chi hefyd i gysylltu â ni wrth i ni gymryd y camau nesaf ar ein taith arloesi.

欢迎来到辅助性技术创新中心 (ATiC)

欢迎来到位于斯旺西的威尔士三一圣大卫大学 (University of Wales Trinity Saint David，简称 UWTSD) 辅助性技术创新中心 (Assistive Technologies Innovation Centre，简称 ATiC)。ATiC 是一个设于 UWTSD 斯旺西创新校区的综合研究中心，该中心借助先进的用户体验研究设施将以用户为中心的理念与战略创新工具付诸实践。

ATiC 与私人企业、英国国家卫生署、公益研究机构和学术合作伙伴携手共同开发医疗与福利领域的创新产品、服务和系统。自 2004 年成立起，ATiC 的目标始终是通过与卡迪夫大学医学院 (Cardiff University School of Medicine)、斯旺西大学医学院 (Swansea University Medical School) 和威尔士生命科学中心 (Life Science Hub Wales) 建立合作关系，以及加速计划为威尔士以及威尔士地区以外的人民带来具有经济与医疗效益的变革性影响。

鉴于 ATiC 是一个研究和创新中心，因此我们深知合作的重要性。我们已经建立了多个战略合作伙伴关系，例如加速计划，以及通过中英关爱设计研究伙伴关系与武汉理工大学成为战略合作伙伴。

作为 ATiC 的主任，能够在此欢迎您加入我们的一流团队以及使用新研究中心的资源，我深感荣幸。我也希望在我们之后的创新征程上，您能一直与我们保持联系。

Professor Ian Walsh

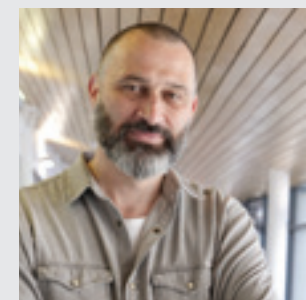ATiC Director
Cyfarwyddwr ATiC
ATiC 主任

Dr Sean Jenkins

ATiC Principal Innovation Fellow
Prif Gymrawd Arloesi ATiC
ATiC 资深创新学者

Overview *Trosolwg* 概观

What we do

There are many ways that ATiC can support business as part of our focus on delivering support for the development of assistive, adaptive and rehabilitative devices.

Our User Experience (UX) Research Lab is at the core of what we do and what we can offer access to. It provides a comprehensive range of data capture tools to analyse user experiences during interaction with physical and digital products, services, systems and spaces.

Our UX Lab has two customisable spaces that we use to help businesses test the experiential and usability qualities of new clinical and healthcare products, services and systems.

Yr hyn a wnawn

Mae sawl ffordd y gall ATiC gefnogi busnesau fel rhan o'n ffocws i ddarparu cymorth i ddatblygu dyfeisiau cynorthwyol, addasol ac adferol.

Mae ein Labordy Ymchwil i Brofiadau Defnyddwyr (UX) yn greiddiol i'r hyn a wnawn a'r hyn y gallwn gynnig mynediad iddo. Mae'n darparu ystod gynhwysfawr o ddulliau cipio data i ddadansoddi profiadau defnyddwyr wrth ryngweithio gyda chynhyrchion, gwasanaethau, systemau a mannau ffisegol a digidol.

Mae gan ein Labordy UX ddau le addasadwy a ddefnyddir gennym i helpu busnesau i brofi rhinweddau cynhyrchion, gwasanaethau a systemau clinigol a gofal iechyd newydd o ran profiad a defnyddioldeb.
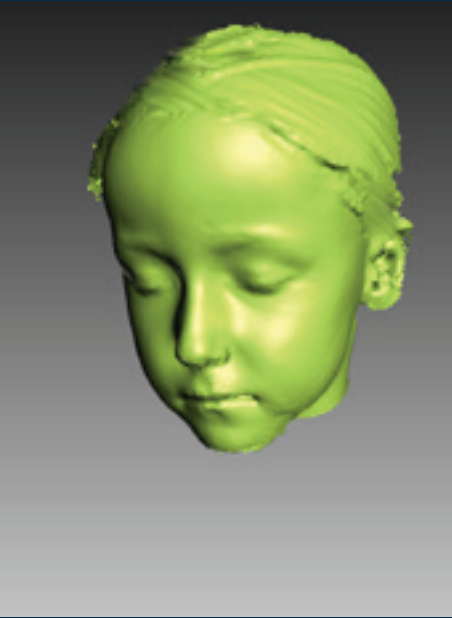
我们的工作

鉴于我们也专注于为辅助、适应和康复设备的开发提供支持，因此 ATiC 可通过多种方式为企业提供支持 。

用户体验（UX）研究实验室是我们工作的核心所在，且我们可提供进入该实验室的机会。UX 研究实验室提供全面的数据捕捉工具，可在用户与实体和数字产品、服务、系统和空间交互时分析用户体验。

UX 实验室有两个可定制空间，用来帮助企业测试新的临床和卫生保健产品、服务和系统的体验质量和使用质量。
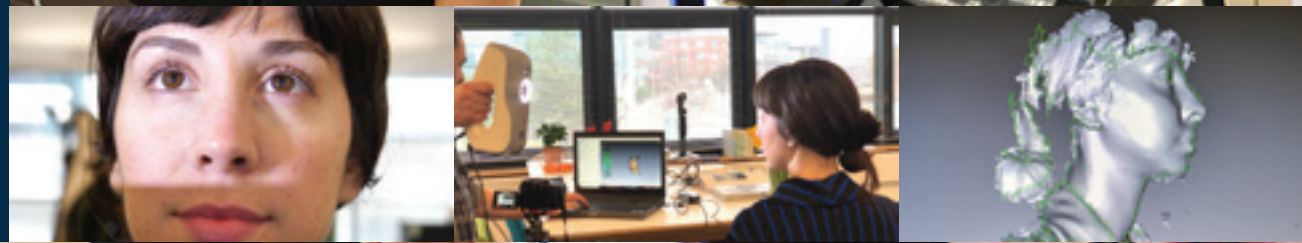
Overview *Trosolwg* 概观

Macro Labordy

Mae'r Macro Labordy yn lle amlbwrpas sy'n caniatáu i ni gipio rhyngweithiadau corfforol a chymdeithasol ar raddfa fawr. Mae'n cipio profiadau defnyddwyr gydag amrywiaeth o ysgogiadau - gan gynnwys prototeipiau maint llawn a brasfodelau o'r amgylchedd, i efelychiadau rhithwir estynedig, llwyr ymdrochol.

大型实验室

大型实验室是一个多功能空间，可以让我们捕捉到大规模的生理和社会互动。它通过众多包括全尺寸原型和环境模型在内的刺激物，以及增强式和完全沉浸式虚拟模拟来捕捉用户体验。

Macro Lab

The Macro Lab is a multi-purpose space that allows us to capture large-scale physical and social interactions. It captures user experiences with a range of stimuli – including full size prototypes and environment mock-ups, through to augmented and fully immersive virtual simulations.
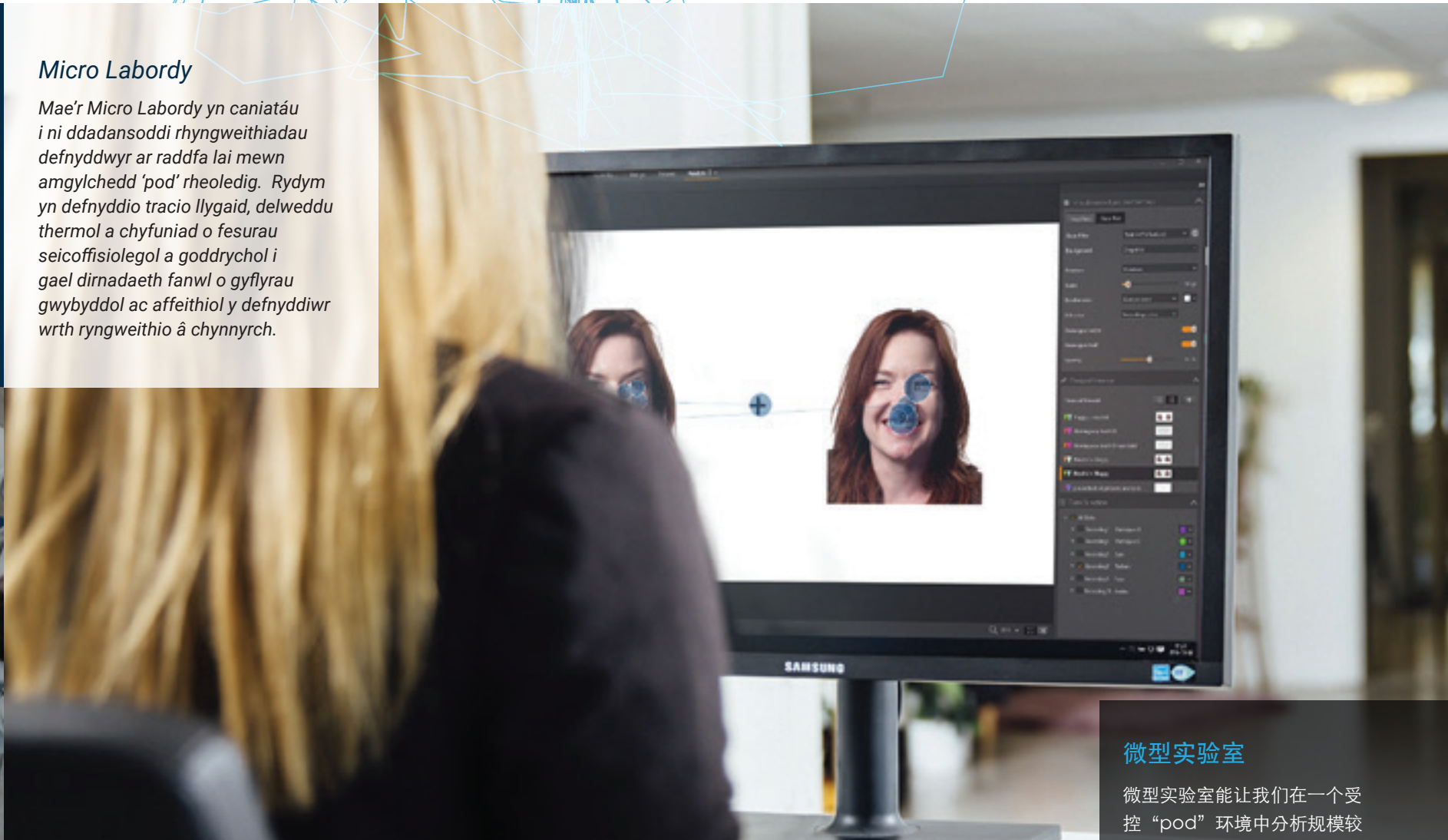
Overview *Trosolwg* 概观

Micro Lab

The Micro Lab lets us analyse smaller scale user interactions in a controlled 'pod' environment. We use eye tracking, thermal imaging and a combination of psychophysiological and subjective measures to get detailed insights into users' cognitive and affective states while interacting with a product.

Micro Labordy

Mae'r Micro Labordy yn caniatáu i ni ddadansoddi rhyngweithiadau defnyddwyr ar raddfa lai mewn amgylchedd 'pod' rheoledig. Rydym yn defnyddio tracio llygaid, delweddu thermol a chyfuniad o fesurau seicoffisiolegol a goddrychol i gael dirnadaeth fanwl o gyflyrau gwybyddol ac affeithiol y defnyddiwr wrth ryngweithio â chynnyrch.

微型实验室

微型实验室能让我们在一个受控"pod"环境中分析规模较小的用户交互。我们利用眼动追踪和热成像，并将心理生理测量与主观测量相结合，深入了解用户在与产品交互时的认知与情感状态。
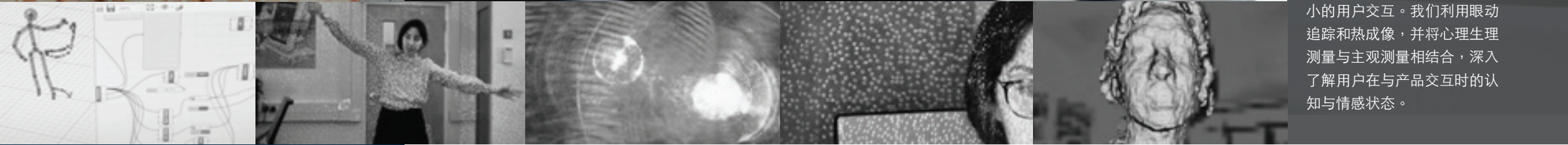
Overview *Trosolwg* 概观

Reality Capture

We also have extensive reality capture systems for high-resolution 3D scanning of the human body, objects and environments, as well as a state-of-the-art full body marker-less motion capture and bio-mechanical analysis. We can also help develop prototypes, using our 3D printing systems and because we have several mobile field systems, we can also track user experience outside of the lab environment.

Cipio Realiti

Mae gennym hefyd systemau cipio realiti helaeth ar gyfer sganiau 3D cydraniad uchel o'r corff dynol, gwrthrychau ac amgylcheddau, yn ogystal â systemau o'r radd flaenaf ar gyfer cipio symudiad corff llawn heb farcwyr a dadansoddiad bio-fecanyddol. Gallwn hefyd helpu i ddatblygu prototeipiau, gan ddefnyddio ein systemau argraffu 3D ac oherwydd bod gennym nifer o systemau maes symudol, gallwn hefyd dracio profiadau defnyddwyr y tu allan i amgylchedd y labordy.
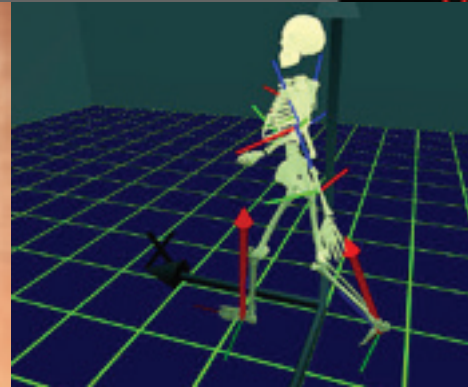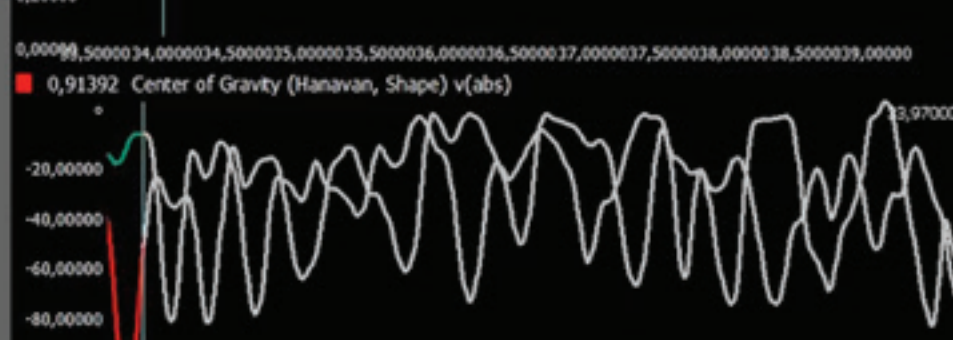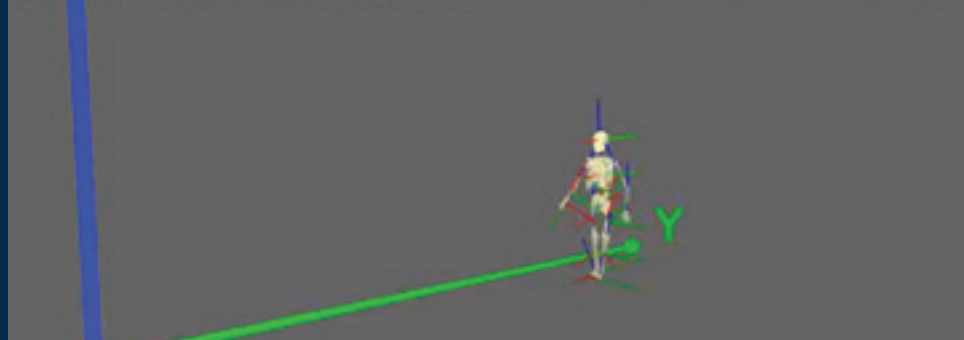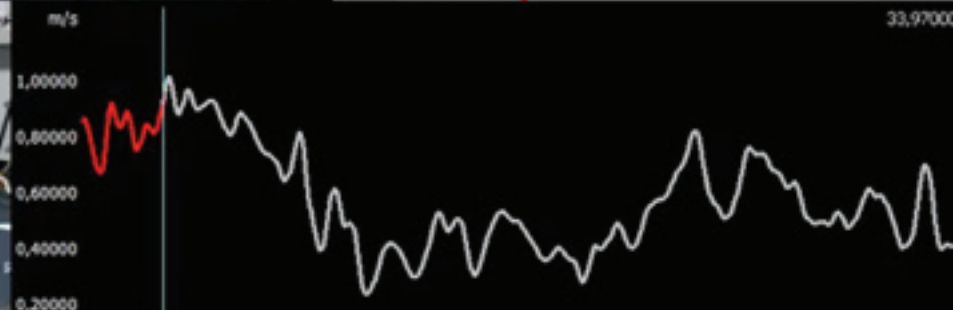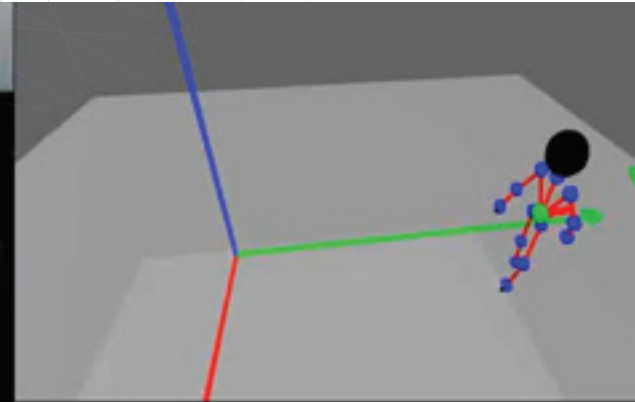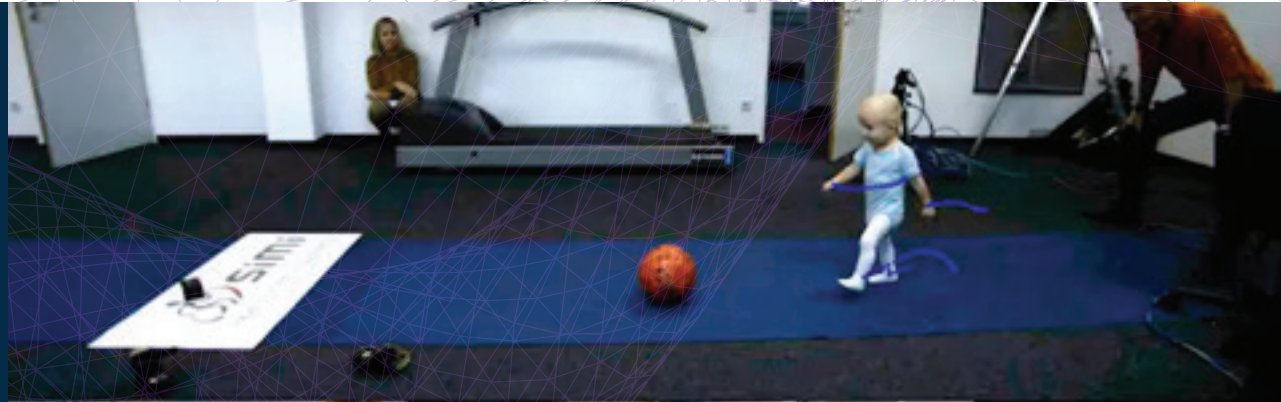
现实捕捉

我们还有一系列现实捕捉系统，可对人体、物体和环境进行高分辨率 3D 扫描，以及开展最先进的全身无标记运动捕捉和生物力学分析。我们还可通过 3D 打印系统帮助开发建立原型。而且我们还有多个移动现场系统，可以在实验室环境之外追踪用户体验。

Research *Ymchwil* 研究

Young Person's ATiC – develops physical interventions to help children with challenging conditions and improve social inclusion.

Older Person's ATiC – addresses the barriers faced by older people to ensure that health and independence are available to all.

Virtual ATiC – evaluates user experiences of products and spaces using cutting edge virtual reality simulations.

Living ATiC – addresses the needs of individuals seeking to live independently in the community.

Mobile ATiC – focuses on the needs for new forms of mobility solutions for an ageing population.

ATiC Pobl Ifanc – yn datblygu ymyraethau corfforol i helpu plant â chyflyrau heriol yn ogystal â gwella cynhwysiant cymdeithasol.

ATiC Pobl Hŷn – yn mynd i'r afael â'r rhwystrau a wynebir gan bobl hŷn er mwyn sicrhau bod iechyd ac annibyniaeth ar gael i bawb.

ATiC Rhithwir – yn gwerthuso profiadau defnyddwyr o gynhyrchion a gofodau gan ddefnyddio'r efelychiadau realiti rhithwir diweddaraf.

ATiC Byw – yn cwrdd â gofynion unigolion sy'n ceisio byw'n annibynnol yn y gymuned.

ATiC Symudol – yn canolbwyntio ar yr angen am ffurfiau newydd ar wasanaethau symudedd ar gyfer poblogaeth sy'n heneiddio.

Innovation *Arloesi* 革新

User Centred Design Research & Innovation Process

ATiC engages with collaborative partners using the principles of Open Innovation and employs design thinking strategies to support the successful translation of emerging research and technologies into new and improved products, services and systems for Health and Social Care.

Ymchwil Dylunio a Phrosesau Arloesi sy'n Canolbwyntio ar Ddefnyddwyr

Mae ATiC yn ymgysylltu â phartneriaid cydweithredol, gan ddefnyddio egwyddorion Arloesedd Agored a strategaethau meddwl dylunio er mwyn helpu troi ymchwil a thechnolegau datblygol yn gynhyrchion, gwasanaethau a systemau newydd a gwell ar gyfer Iechyd a Gofal Cymdeithasol.

Mobile ATiC

Young Person's ATiC

Older Person's ATiC

Virtual ATiC

ATiC RESEARCH

Living ATiC
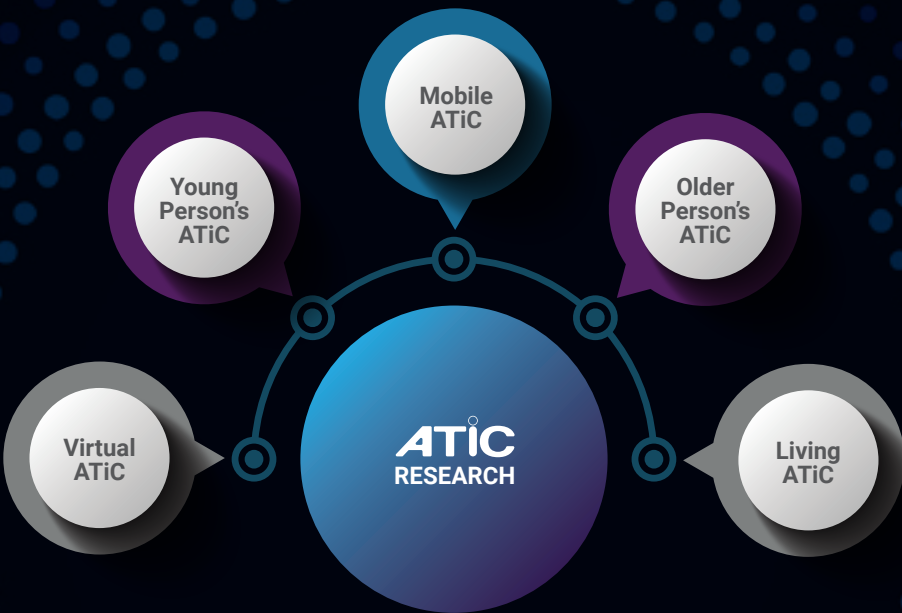
青少年的 ATiC ——为条件困难的儿童开发物理干预措施，提升社会包容性。

老年人的 ATiC ——解决老年人面临的障碍，确保所有人都能拥有健康和独立。

虚拟 ATiC ——利用前沿虚拟现实模拟对产品和空间的用户体验进行评估。

生活 ATiC ——解决希望在社区中独立生活的个人的需求问题。

出行 ATiC ——关注老龄化人口所需的新型出行解决方案。

以用户为中心的设计研究和创新流程

ATiC 在与合作伙伴合作的过程中秉承开放创新原则，并使用设计思考策略，支持将最新研究和技术成功转化为新的和改进的 产品、服务和系统，为医疗和社会关爱作出贡献。

Innovation **+** Health & Social Care **+** Enterprise **=** ATiC

Process *Proses* 處理

User Centred Design Research & Innovation Process

ATiC employs a diverse range of user centred design research methods in parallel with extensive state-of-the-art, multi-modal facilities to capture a broad spectrum of user metrics that enhance our understanding of users' physical, emotional and cognitive needs.

Ymchwil Dylunio a Phrosesau Arloesi sy'n Canolbwyntio ar Ddefnyddwyr

Mae ATiC yn defnyddio ystod amrywiol o ddulliau ymchwil dylunio sy'n canolbwyntio ar ddefnyddwyr, ynghyd â chyfleusterau dwys ac aml-foddol diweddar er mwyn dal sbectrwm eang o fetrigau defnyddwyr i gyfoethogi'n dealltwriaeth o anghenion corfforol, emosiynol a gwybyddol y defnyddiwr.

以用户为中心的设计研究和创新流程

ATiC 在使用广泛的行业前沿多模式设施的同时，采用各种各样的以用户为中心的设计研究方法来捕捉大量不同的用户指标，增强我们对用户的物理、情绪和认知需要的理解。
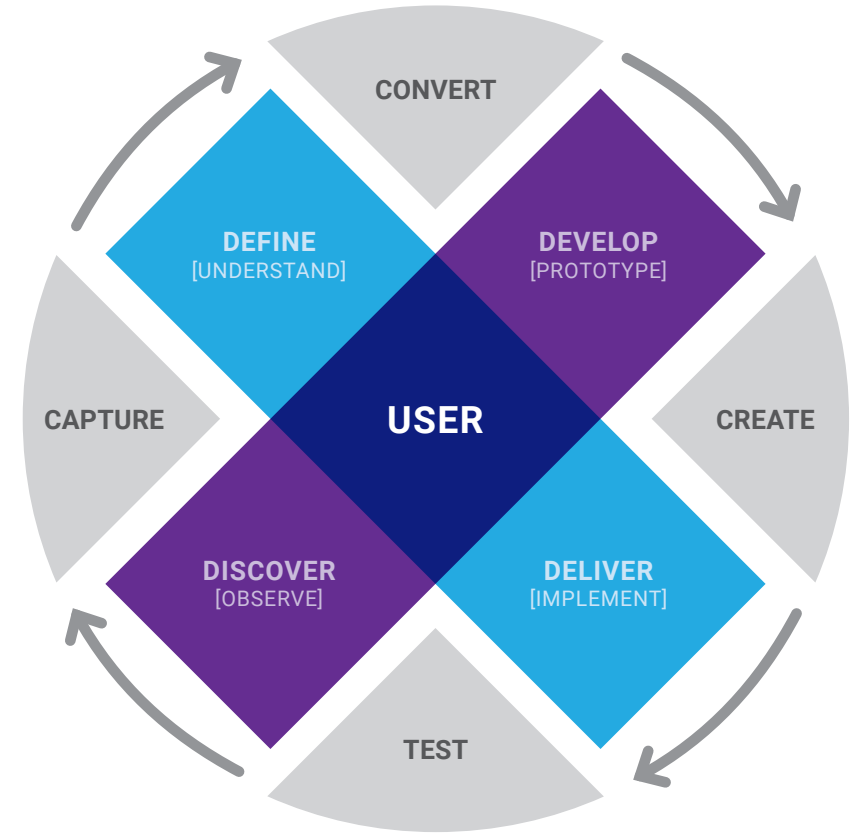
Unique state of the art laboratory for UCD & Innovation

DISCOVER [OBSERVE]	DEFINE [UNDERSTAND]	DEVELOP [PROTOTYPE]	DELIVER [IMPLEMENT]
User Data & UX Capture	Data Analysis & Conversion	Innovate & Create	Proof of Concept
Lifestyle & Environment	Scenario Building & Mapping	Participatory Design	Critical Review
Behavioural Observation	Multi-modal Analysis	Lo-Fi > Hi-Fi Prototyping	Health & Wellbeing Impact
Video Capture & Eye Tracking	Ergonomics, Usability, HCI, UX	Virtual / Augmented Reality	Economic Impact
Facial Expression Capture	Data Modelling	3D CAD & Visualisation	Service Innovation
Psychophysiological Sensing	Experience Mapping	Modelling & Simulation	Product Innovation
3D Scanning/Motion Capture	Lifestyle	Activity Analysis	User Testing	Intellectual Property
Ethnographic Tools	Contextual Mapping	Stakeholder Engagement	Collaborative R&D

Capabilities *Galluoedd* 功能

User Experience

Within the ATiC UX Lab we offer a comprehensive range of biometric and psychophysiological ways of measuring User Experience:

Behavioural observation lab using Noldus Viso, Observer XT and FaceReader analysis software

Simi Motion Markerless Body Motion Capture Analysis System

High powered VR workstations

Portable Psychophysiological Measurement System (GSR, ECG, EEG)

FLIR T1K HD Thermal Imaging Camera

Eye tracking: Mobile, remote and VR

Profiadau Defnyddwyr

O fewn Labordy UX ATiC rydym yn cynnig amrywiaeth gynhwysfawr o ffyrdd biometrig a seicoffisiolegol o fesur Profiadau Defnyddwyr:

Labordy arsylwi ymddygiad gan ddefnyddio meddalwedd dadansoddi Noldus Viso, Observer XT a FaceReader.

System Ddadansoddi Simi Motion i Gipio Symudiad Corff heb Farcwyr

Gweithfannau rhithrealiti (VR) pŵer uchel

System Fesur Seicoffisiolegol Gludadwy (GSR, ECG, EEG)

Camera Delweddu Thermol FLIR T1K HD

Tracio Llygaid: Symudol, o bell a rhithrealiti (VR)
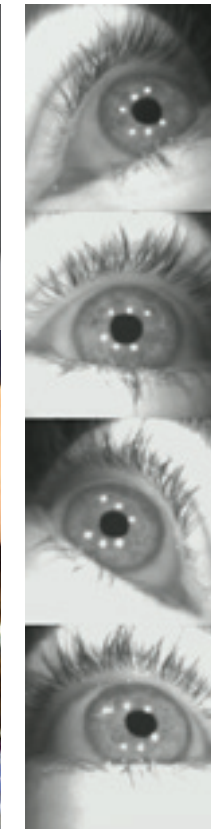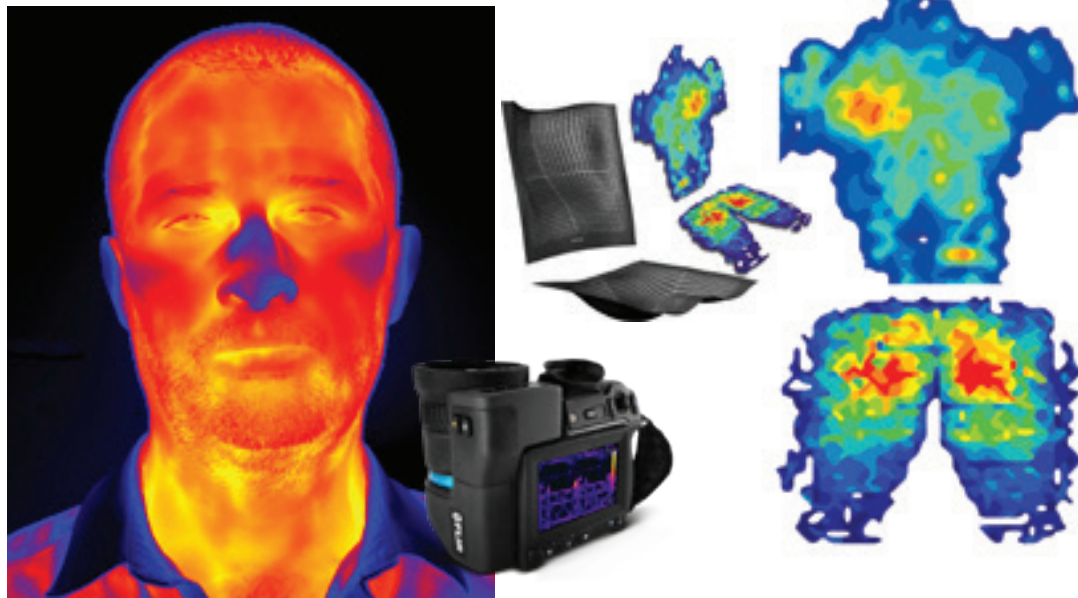
用户体验

在 ATiC UX 实验室，我们提供全面的生物特征识别和心理生理学方法来测量用户体验：

配有诺达斯音视频控制管理系统 (Noldus Viso)、行为观察记录分析系统 (Observer XT) 和面部表情分析软件 (FaceReader) 的行为观察实验室

Simi Motion 无标记人体运动捕捉分析系统

高功率 VR 工作站

便携式心理生理测量系统，其中包括移动式皮电反应 (GSR) 系统、心电图 (ECG) 系统和脑电图 (EEG) 系统。

FLIR T1K 高清红外热像仪

眼动追踪：移动、远程和 VR

Capabilities *Galluoedd* 功能

Reality Capture

A range of industry standard scanning solutions for the accurate scanning and measuring of the body, objects and spatial environments. With the ability to use this information to model, analyse and also realise in virtual reality.

Artec Eva and Space Spider

Mantis Vision F6 and F6-SR

Cipio Realiti

Amrywiaeth o systemau sganio o safon diwydiant ar gyfer sganio a mesur y corff, gwrthrychau ac amgylcheddau gofodol yn fanwl gywir. Gyda'r gallu i ddefnyddio'r wybodaeth hon i fodelu, dadansoddi a hefyd gwireddu mewn rhithrealiti.

Artec Eva a Space Spider

Mantis Vision F6 a F6-SR

现实捕捉

一系列针对精确扫描以及人体、物体、空间环境测量的行业标准扫描方案。我们能够使用获取的信息进行建模、分析，并在虚拟现实中实现。

Artec Eva 和 Space Spider 3D 扫描仪

Mantis Vision F6 和 F6-SR 手持扫描仪

Capabilities *Galluoedd* 功能

Prototyping

Our range of workshops and facilities allow us to prototype and finish in a vast range of materials:

CNC routers

Laser cutters

Waterjet cutter

With rapid 3D prototyping in a range of materials, such as plastic, carbon fibre, wax and resin, to suit many applications. From familiar desktop printing to engineering grade such as:

Stratasys

Ultimaker

Formlabs

Bigrep Studio

Markforged

Prototeipio

Mae ein hamrywiaeth o weithdai a chyfleusterau yn caniatáu i ni brototeipio a gorffennu mewn ystod eang o ddeunyddiau:

Llwybryddion CNC

Torwyr laser

Torrwr jet dŵr

Gyda phrototeipio 3D cyflym mewn amrywiaeth o ddefnyddiau, megis plastig, ffibr carbon, cwyr a resin, i weddu i lawer o gymwysiadau. O argraffu pen bwrdd cyfarwydd i safon peirianneg

Stratasys

Ultimaker

Formlabs

Bigrep Studio

Markforged

原型制作

我们有各种车间与设备，能用各种材料制作原型并进行精加工：

数控雕刻机

激光切割机

水刀切割机

我们可使用各种材料来快速制作 3D 原型以满足多种应用要求，如塑料、碳纤维、蜡和树脂。从常见的桌面级 3D 打印机到工程级 3D 打印机，一应俱全，例如：

Stratasys 3D 打印机

Ultimaker 3D 打印机

Formlabs 3D 打印机

Bigrep Studio 3D 打印机

Markforged 3D 打印机

Cerebra *Cerebra* 案例研究

For brain injured children and young people

Cerebra Innovation Centre (CIC) is a collaborative venture between national children's charity Cerebra and the University of Wales Trinity Saint David. CIC is a design and development research centre comprising a permanent team of product designers. CIC works with academics at the University and colleagues from across the Cerebra family to design and produce bespoke solutions to support children with serious brain injuries and their families. The CIC team receives requests for assistance from the charity's members to design products to help them in their everyday lives in accordance with Cerebra's goal to give children with brain injuries a better life.

As a research charity, its mission is to research and develop interventions to help children whilst concentrating on increasing social inclusion by intelligent and well-styled design. CIC make bespoke products offering aesthetics which appeal to the young people rather than those of typical disability products. CIC also specialises in adaptations of existing products to make them more suitable for children and young people.

In the course of our work with children with special needs, CIC has developed a range of products that also appeal to a mainstream market. These have been commercialised through partnerships with private sector manufacturers.

Ar gyfer plant a phobl ifanc sydd wedi'u hanafu gan yr ymennydd

Mae Canolfan Arloesi Cerebra (CIC) yn fenter gydweithredol rhwng yr elusen blant genedlaethol Cerebra a Phrifysgol Cymru Y Drindod Dewi Sant. Mae CIC yn ganolfan ymchwil dylunio a datblygu sy'n cynnwys tîm parhaol o ddylunwyr cynnyrch. Mae Cerebra yn gweithio gydag academyddion yn y Brifysgol a chydweithwyr o deulu Cerebra i ddylunio a chynhyrchu datrysiadau pwrpasol i gynorthwyo plant â niwed difrifol i'r ymennydd a'u teuluoedd. Mae tîm CIC yn derbyn ceisiadau am gymorth gan aelodau'r elusen i ddylunio cynnyrch i'w helpu yn eu bywydau bob dydd, yn unol â nod Cerebra i roi bywyd i blant â niwed i'r ymennydd.

Fel elusen ymchwil, cenhadaeth Cerebra yw ymchwilio a datblygu ymyriadau i helpu plant, ac ar yr un pryd ganolbwyntio ar gynyddu cynhwysiant cymdeithasol drwy ddylunio deallus a chelfydd. Mae CIC yn gwneud cynhyrchion pwrpasol sy'n cynnig estheteg sy'n apelio at bobl ifanc yn hytrach nag estheteg cynhyrchion anabledd nodweddiadol. Mae CIC hefyd yn arbenigo mewn addasu cynhyrchion sydd eisoes yn bodoli er mwyn eu gwneud yn fwy addas i blant a phobl ifanc.

Yn ystod ein gwaith gyda phlant sydd ag anghenion arbennig, mae CIC wedi datblygu amrywiaeth o gynhyrchion sydd hefyd yn apelio at farchnad brif ffrwd. Mae'r rhain wedi eu masnacheiddio trwy bartneriaethau â gweithgynhyrchwyr yn y sector preifat.

适用于脑部受伤儿童和青少年

Cerebra 创新中心 (CIC) 是英国儿童慈善机构 Cerebra 和威尔士三一圣大卫大学的合作项目。CIC 是一个由固定的产品设计师团队组成的设计与开发研究中心。CIC 和威尔士大学的学者以及 Cerebra 的同事携手共同为患有严重脑损伤的儿童及其家庭设计与制作专门的解决方案。CIC 团队会收到慈善机构成员的产品设计援助申请，团队会遵循 Cerebra 改善患有脑损伤儿童生活的目标，为这些成员设计能改善日常生活的产品。

作为一家公益研究机构，它的使命是研发能帮助儿童的干预措施，并致力于通过智能化且布局良好的设计来提升社会包容性。CIC 定制的产品不仅仅是普通的残疾人用品，其还富有能够吸引年轻人的美感。CIC 还专注于改进现有产品，使这些产品更适合儿童和年轻人使用。

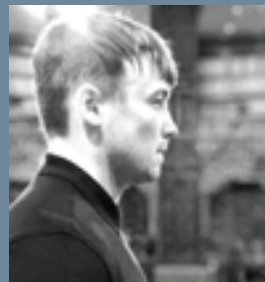在为有特殊需求的儿童服务的过程中，CIC 开发了一系列在主流市场同样受欢迎的产品。CIC 已通过与私营制造企业合作将这些产品商业化。

Dr Ross Head
Product Design Manager

Gerallt Devonald
Product Designer

David Jarvis
Product Designer

Case Study *Astudiaeth Achos* 案例分析

CEREBRA
Working wonders for children
with brain conditions

Riding Helmet

The CIC team was approached by a school on behalf of a young man called Tommy Lee. Tommy Lee was unable to participate in his weekly horse riding sessions as the riding centre did not have a helmet that would fit his unique head shape. CIC worked on designing and making this bespoke riding helmet enabling Tommy to take part in riding lessons with his friends. The helmet was not only comfortable but safe and thanks to the generosity of the British Standard Institute (BSI), it is certified as passing the VG1 Equestrian helmet tests.

The process involved 3D scanning Tommy's head to render and measure a bespoke fit for the riding helmet. This shape was then milled out of foam using a CNC machine to ensure an original fit.

Helmed Farchogaeth

Cysylltwyd â thîm CIC gan ysgol ar ran llanc ifanc o'r enw Tommy Lee. Ni allai Tommy Lee gymryd rhan yn eu sesiynau marchogaeth wythnosol oherwydd nid oedd gan y ganolfan farchogaeth helmed a fyddai'n ffitio siâp unigryw ei ben. Gweithiodd CIC ar ddylunio a gwneud yr helmed farchogaeth bersonol hon gan alluogi Tommy i gymryd rhan mewn gwersi marchogaeth gyda'i ffrindiau. Nid yn unig roedd yr helmed yn gyfforddus, roedd hefyd yn ddiogel a diolch i haelioni'r Sefydliad Safonau Prydeinig (BSI), ardystiwyd ei fod yn pasio profion helmedau Marchogaeth VG1.

Roedd y broses yn golygu gwneud sgan 3D o ben Tommy i fesur a darparu ffit bersonol ar gyfer yr helmed farchogaeth. Yna cafodd y siâp hwn ei dorri allan o sbwng gan ddefnyddio peiriant CNC i sicrhau ffit unigryw.

马术头盔

一所学校的代表，名叫汤米·李 (Tommy Lee) 的年轻人找到了 CIC 团队。因为马术中心没有适合 Tommy Lee 独特头形的头盔，所以他无法参加每周的马术课。CIC 为他设计和制作了专门的马术头盔，让他能和朋友们一起上课。这顶头盔不仅舒适，而且安全。头盔通过了英国标准协会 (British Standard Institute，简称 BSI) VG1 马术头盔测试，并获得了 BSI 的认证。

设计制作过程包括对 Tommy 的头部进行 3D 扫描，为骑行头盔绘制和测量适合的形状。然后使用数控机床铣削泡沫材料，将扫描的形状制作成原始尺寸模型。

Cerebra   *Cerebra* 案例研究

Expertise *Arbenigedd* 员工与专家

Specialist Staff

ATiC Research is staffed by experienced researchers and R&I specialists drawn from across the University and complemented both by external appointments and internal secondments on a project-by-project basis.

Staff ac Arbenigedd

Cyflawnir Ymchwil ATiC gan ymchwilwyr profiadol ac arbenigwyr Ymchwil ac Arloesi sy'n dod o bob rhan o'r Brifysgol, gyda phenodiadau allanol a secondiadau mewnol yn ategu hyn fesul prosiect.

专业人员

ATiC 的工作人员是来自威尔士大学经验丰富的研究员和研究与创新专家。根据具体项目情况，我们也会采取外部任命和内部借调的方式进行人员补充。

Professor Ian Walsh

Dr Sean Jenkins

Dr Shelley Doolan

Matt Archer

Ian Williams

Garry Bartlett

Dr Caroline Hagerman

Tim Stokes

Yolanda Rendon-Guerrero

Professor Ian Walsh

ATiC Director
Cyfarwyddwr ATiC　ATiC 主任

Professor Ian Walsh has led a number of EU funded projects including the Institute for Sustainable Design (ISD) and the Design for Successful Ageing (DSA) project. He obtained his first degree in 3D Design from the University of Wales, Newport in 1988 and his PhD entitled '*nurturing innovation in industrial design - quantifying innovation propensity in industrial design by means of a novel innovation trait index*' from the University of Wales, Swansea in 2008.

He has 30 years' experience as a designer, academic and researcher and is a Fellow of the Royal Society of Arts (FRSA). Current research interests include the role of design thinking in assisted living and nurturing innovation in individuals and organisations.

Mae'r Athro Ian Walsh wedi arwain nifer o brosiectau a ariannwyd gan yr UE gan gynnwys y Sefydliad Dylunio Cynaliadwy (ISD) a'r prosiect Dylunio ar gyfer Heneiddio Llwyddiannus (DSA). Enillodd ei radd gyntaf mewn Dylunio 3D gan Brifysgol Cymru, Casnewydd yn 1988, a'i PhD dan y teitl 'nurturing innovation in industrial design - quantifying innovation propensity in industrial design by means of a novel innovation trait index' gan Brifysgol Cymru, Abertawe yn 2008.

Mae ganddo dros 30 mlynedd o brofiad fel dylunydd, academydd ac ymchwilydd ac mae'n Gymrawd Cymdeithas Frenhinol y Celfyddydau (FRSA). Mae'i ddiddordebau ymchwil cyfredol yn cynnwys rôl meddylfryd dylunio mewn byw gyda chymorth, a meithrin arloesi mewn unigolion a sefydliadau.

Ian Walsh 教授是许多欧盟资助项目的负责人，其中包括可持续设计所（ISD）和成功老龄化设计（DSA）项目。他于 1988 年获得威尔士大学新港学院（University of Wales, Newport）的 3D 设计学位，并于 2008 年获得威尔士大学斯旺西学院（University of Wales, Swansea）的 "培养工业设计创新——用新颖的创新特性指数量化工业设计中的创新倾向" 博士学位。

他有 30 年的设计师、学者和研究员工作经验，同时他也是皇家艺术学会会员。Ian 目前的研究方向包括设计思维在辅助生活方式中的作用，以及个人和组织的创新培养。

Dr Sean Jenkins

ATiC Principal Innovation Fellow
Prif Gymrawd Arloesi ATiC   ATiC 资深创新学者

Sean leads the research and knowledge transfer activity of ATiC, working with a team of highly creative and talented Innovation Fellows. Sean has a degree in 3D Design, a Master's degree in Industrial Design and a PhD in the "Thermographic Measurement of User Experience during Human-Product Interaction".

Sean is an experienced academic whose prior experience includes a role as the Head of the School of Design & Applied Arts at Swansea College of Art UWTSD. He is a Product Designer with a research interest in User Experience (UX) measurement, particularly psychophysiological responses during human-product interaction, and the application of new digital design tools and prototyping technologies in design research and practice. He is a Certified Infrared Thermographer and a Fellow of the Royal Society of the Arts.
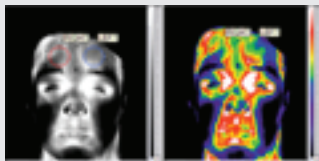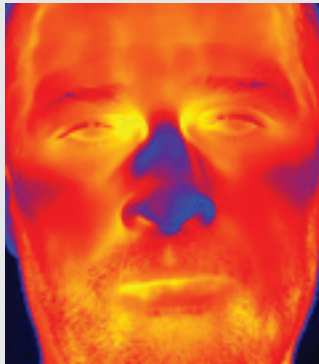
Mae Sean yn arwain gweithgarwch ymchwil a throsglwyddo gwybodaeth ATiC, gan weithio gyda thîm o Gymrodyr Arloesi creadigol a thalentog iawn. Mae gan Sean radd mewn Dylunio 3D, gradd Meistr mewn Dylunio Diwydiannol, a PhD ar y testun "Thermographic Measurement of User Experience during Human-Product Interaction".

Mae Sean yn academydd profiadol y mae ei brofiad blaenorol yn cynnwys rôl fel Pennaeth yr Ysgol Dylunio a'r Celfyddydau Cymhwysol yng Ngholeg Celf Abertawe, y Drindod Dewi Sant. Mae'n Ddylunydd Cynnyrch â diddordeb ymchwil mewn mesur Profiadau Defnyddwyr (UX), yn enwedig ymatebion seicoffisiolegol yn ystod rhyngweithio rhwng pobl a chynnyrch, a chymhwyso dulliau dylunio digidol newydd a thechnolegau prototeipio mewn ymchwil ac arfer dylunio. Mae'n Thermograffydd Is-goch Ardystiedig ac yn Gymrawd Cymdeithas Frenhinol y Celfyddydau.

Sean 领导着 ATiC 的研究与知识转移活动，与其共事的是一群富有创造力与才华的创新学者。 Sean 拥有 3D 设计学位、工业设计硕士学位和"人与产品交互时用户体验的热成像测量"博士学位。

Sean 是一位经验丰富的学者，曾担任 UWTSD 斯旺西艺术学院设计与应用艺术系主任。 他还是一名产品设计师，研究方向涵盖用户体验测量，特别是人与产品交互时的心理生理反应，还包括新的数字设计工具与原型制作技术在设计研究与实践中的应用。 他也是一名认证红外热成像师，以及英国皇家艺术学会（Royal Society of the Arts）会员。

Dr Shelley Doolan

ATiC Project Manager
Rheolwr Prosiect ATiC   ATiC 项目经理

Shelley brings experience of working on collaborative research and innovation projects with a variety of industry partners across a range of disciplines. She has extensive experience of developing, managing and securing funding for multi-partner European projects.

Shelley's research focused on the role of technology within craft practice. Evolving research outcomes were investigated through practice and collaborative case studies, supported by an experimental approach. Research interests include the significance of the act of making and its impact on creativity and well-being for the maker and the impact upon the 'consumer' of the crafted artefact. Shelley is currently developing the research beyond her own practice and finding routes to apply and adapt findings within educational and industrial contexts.

Daw Shelley â phrofiad o weithio ar brosiectau ymchwil ac arloesi cydweithredol gydag amrywiaeth o bartneriaid yn y diwydiant ar draws amrywiaeth o ddisgyblaethau. Mae ganddi brofiad helaeth o ddatblygu, rheoli a sicrhau cyllid ar gyfer prosiectau Ewropeaidd gyda nifer o bartneriaid.

Roedd ymchwil Shelley'n canolbwyntio ar rôl technoleg o fewn arfer crefft. Archwiliwyd deilliannau ymchwil esblygol drwy arfer ac astudiaethau achos cydweithredol, a gefnogwyd gan ddull arbrofol. Mae ei diddordebau ymchwil yn cynnwys arwyddocâd y weithred o wneud a'i effaith ar greadigrwydd a lles i'r gwneuthurwr, a'r effaith ar 'ddefnyddiwr' yr arteffact a saernïwyd. Ar hyn o bryd mae Shelley'n datblygu'r ymchwil y tu hwnt i'w harfer ei hun ac yn dod o hyd i ffyrdd o gymhwyso ac addasu canfyddiadau o fewn cyd-destunau addysgol a diwydiannol.

Shelley 带来了她在与各个学科不同行业的合作伙伴进行合作研究与开展创新项目时积累的经验。 她在开展、管理和保障多伙伴欧洲项目的资金方面有着十分丰富的经验。

Shelley 的研究重点是技术在工艺实践中的作用。通过实践和合作案例研究，使用实验研究法对不断发展的研究成果进行检验。 她的研究方向包括制作行为的重要性、制作行为对制作者创造性与健康的影响，以及其对精心制作的工艺品的"消费者"的影响。 Shelley 目前正在开展其研究范围外的研究，寻找在教育和工业环境中应用与调整研究结果的方式。

Matt Archer

ATiC Senior Innovation Fellow
Uwch Gymrawd Arloesi ATiC   ATiC 资深创新学者

Matt is a senior academic whose prior experience includes managing the Postgraduate and Undergraduate pathways for the Product Design programmes at Swansea College of Art UWTSD. His teaching focus and academic interest is in the digital integration of computer modelling and prototyping technologies in the field of Design Creativity. As a Product Design Consultant, Matt has a diverse portfolio of research and development projects for SME's and multi-national companies. Current research interests include 'The Future of Making'; he is intrigued by the design of everyday objects and how we as humans can benefit from the rapidly evolving technological innovations and societal and environmental challenges we face today. He is sharp, direct and passionate about designing 'good' products for our future.

Mae Matt yn uwch academydd a'i brofiad blaenorol yn cynnwys rheoli'r llwybrau Ôl-raddedig ac Israddedig ar gyfer y rhaglenni Dylunio Cynnyrch yng Ngholeg Celf Abertawe, y Drindod Dewi Sant. Ei ffocws addysgu a'i ddiddordeb academaidd yw integreiddio technolegau modelu a phrototeipio cyfrifiadurol yn ddigidol ym maes Creadigrwydd Dylunio. Fel Ymgynghorydd Dylunio Cynnyrch, mae gan Matt bortffolio amrywiol o brosiectau ymchwil a datblygu ar gyfer BBaChau a chwmnïau rhyngwladol. Mae ei ddiddordebau ymchwil cyfredol yn cynnwys 'Dyfodol Gwneud'; mae'n chwilfrydig ynghylch dylunio gwrthrychau pob dydd a sut y gallwn ni fel pobl elwa ar y dyfeisiau technolegol newydd sy'n datblygu'n gyflym a'r heriau cymdeithasol ac amgylcheddol a wynebwn heddiw. Mae'n graff, yn uniongyrchol ac yn angerddol am ddylunio cynhyrchion 'da' ar gyfer ein dyfodol.

Matt 是一位资深学者，以往经验包括管理 UWSTSD 斯旺西学院产品设计项目的研究生和本科生课程。 他的教学重点和科研兴趣是设计创意领域的计算机建模之数字化集成和原型技术。 Matt 作为产品设计咨询顾问参与了多个中小企业和跨国公司的研发项目。 他目前的研究方向包括"制造的未来"；他对日常物品的设计和我们作为人类如何从快速变化的技术创新和如今面临的社会和环境挑战中获益非常感兴趣。 Matt 敏锐、直接，对为未来设计"好的"产品充满激情。

Ian Williams

ATiC Senior Innovation Fellow
### *Uwch Gymrawd Arloesi ATiC*   ATiC 资深创新学者

After graduating with a BSc Product Design, Ian joined Product Development Centre (PDC Innovation) at Swansea Metropolitan University and worked on research and development for SME's and multi-national companies, including Belron®. Ian has also managed the IDEAS Centre as part of University of Wales Trinity Saint David's Commercial Services.

Ian has developed ideas/products in industrial and consumer sectors and has experience in all aspect of product development process from the conceptual stages through to manufacturing. Ian's interests include the use of additive manufacturing processes digital tools and how they are incorporated within the product development workflow. Other areas of interest include assistive living, augmented reality and how this helps with visualising concepts in situ before proceeding to manufacturing.

Ar ôl graddio â BSc mewn Dylunio Cynnyrch, ymunodd Ian â'r Ganolfan Datblygu Cynnyrch (PDC Innovation) ym Mhrifysgol Fetropolitan Abertawe a gweithiodd ar ymchwil a datblygu ar gyfer BBaChau a chwmnïau rhyngwladol, gan gynnwys Belron®. Mae Ian hefyd wedi rheoli Canolfan IDEAS yn rhan o Wasanaethau Masnachol Prifysgol Cymru Y Drindod Dewi Sant.

Mae Ian wedi datblygu syniadau/cynhyrchion mewn sectorau defnyddwyr a diwydiannol ac mae ganddo brofiad ym mhob agwedd ar y broses datblygu cynnyrch o'r cyfnod cysyniadol i'r cyfnod cynhyrchu. Mae diddordebau Ian yn cynnwys defnyddio prosesau gweithgynhyrchu ac offer digidol ychwanegol a sut y cânt eu hymgorffori o fewn llif gwaith datblygu'r cynnyrch. Mae meysydd diddordeb eraill yn cynnwys byw gyda chymorth, realiti estynedig a sut mae hyn yn helpu i ddelweddu cysyniadau yn y fan a'r lle cyn bwrw ati i'w gweithgynhyrchu.
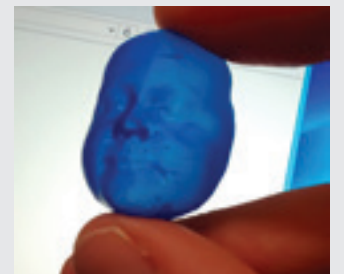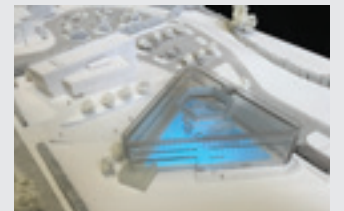
在获得产品设计理学学士学位之后，Ian 加入了斯旺西城市大学（Swansea Metropolitan University）产品开发中心，为中小企业和包括 Belron 在内的跨国企业开展研究与开发工作。他还管理过 IDEAS 中心，该中心是 UWTSD 商业服务的一部分。

Ian 还在工业和消费者领域开发理念与产品。从概念阶段一直到产品生产的整个开发过程，他都有非常丰富的经验。 Ian 的研究方向包含增材制造过程的数字工具，以及如何将这些工具整合到产品开发工作流程中。在其它领域的研究方向包括辅助生活、增强现实，以及增强现实技术如何在产品开始生产前实现概念现场可视化。

Garry Bartlett

ATiC Technical Manager
Rheolwr Technegol ATiC   ATiC 技术经理

Garry has worked across many fields in the creative sector, starting out as a product and architectural modelmaker and subsequently moving in to digital model making and animation. Over the years Garry has worked as the technical manager for various public art and theatre projects.

Garry has worked in UWTSD on a variety European funded projects working with SME's in the film and TV sectors and more generally, with SME's on business use of social media. As Technical Manager for ATiC, Garry will be investigating how the project's resources can be best applied whilst also supporting the researchers and partner organisations in developing new services, tools and protocols through the use of existing and emergent technologies.

Mae Garry wedi gweithio ar draws nifer o feysydd yn y sector creadigol, gan ddechrau fel gwneuthurwr modelau cynnyrch a phensaernïol cyn symud ymlaen i wneud modelau digidol ac animeiddio. Dros y blynyddoedd mae Garry wedi gweithio fel rheolwr technegol amrywiol brosiectau theatr a chelf gyhoeddus.

Mae Garry wedi gweithio yn y Drindod Dewi Sant ar amrywiaeth o brosiectau a gyllidwyd gan arian Ewropeaidd gan weithio gyda BBaChau yn y sectorau ffilm a theledu, ac yn fwy cyffredinol gyda BBaChau ar ddefnydd busnesau o gyfryngau cymdeithasol. Fel Rheolwr Technegol ATiC, bydd Garry'n ymchwilio i'r ffordd orau o gymhwyso adnoddau'r prosiect gan hefyd gefnogi'r ymchwilwyr a'r sefydliadau partner i ddatblygu gwasanaethau, offer a phrotocolau newydd trwy ddefnyddio technolegau cyfredol a datblygol.

Garry 曾在创新行业的多个领域工作，起初是做产品和建筑模型制作，随后转向数字模型制作与动画。多年来，Garry 一直担任各种公共艺术与戏剧项目的技术经理。
在 UWTSD 任职期间，Garry 参与了很多欧洲资助项目，与中小企业在电影电视领域、乃至社交媒体的商业化使用上进行合作。作为 ATiC 的技术经理，Garry 研究如何最优化使用项目资源，同时通过使用现有与新兴技术来帮助研究员和合作机构开发新的服务、工具和原型。

Dr Caroline Hagerman

ATiC Innovation Fellow
Cymrawd Arloesi ATiC   ATiC 创新学者

Caroline is a scientist by training, with degrees in synthetic chemistry. She escaped the lab and moved to the world of innovation consulting, where she worked with major corporations to develop new concepts and technologies into successful breakthrough products. Caroline worked on topics ranging from surgical staplers to fabric dyeing to pharmaceuticals to makeup, focusing on the chemistry that underpins the world around us. She also developed an interest in user interaction and behaviour, particularly as applied to healthcare and consumer choices. Caroline has experience in design of behavioural/user studies, facilitation, workshops, client engagement and report writing. In her spare time, she runs a ceramics business – she creates useful objects which are unique and natural.

Mae Caroline yn wyddonydd yn ôl ei hyfforddiant, gyda graddau mewn cemeg synthetig. Dihangodd o'r labordy a symud i fyd ymgynghoriaeth arloesi lle bu'n gweithio gyda chorfforaethau mawr i ddatblygu cysyniadau a thechnolegau newydd yn gynhyrchion arloesol llwyddiannus. Bu Caroline yn gweithio ar bynciau yn amrywio o styffylwyr llawfeddygol i liwio ffabrigau, i ddeunydd fferyllol i golur, gan ganolbwyntio ar y cemeg sy'n sail i'r byd o'n cwmpas. Datblygodd ddiddordeb hefyd yn rhyngweithiad ac ymddygiad defnyddwyr, yn enwedig fel y bo'n berthnasol i ofal iechyd a dewisiadau defnyddwyr. Mae gan Caroline brofiad o ddylunio astudiaethau ymddygiadol/defnyddwyr, hwyluso, gweithdai, ymgysylltu â chleientiaid ac ysgrifennu adroddiadau. Yn ei hamser sbâr, mae'n rhedeg busnes cerameg – mae'n creu gwrthrychau defnyddiol sy'n unigryw ac yn naturiol.

Caroline 是一位通过专业训练获得合成化学学位的科学家。她没有进入实验室工作而是进入了创新咨询领域。她和大企业合作，将开发的新概念和技术发展为成功的具有突破性的产品。Caroline 的工作主题十分广泛，从外科缝合器到织物染色，再到药物和化妆品。她一直专注于支撑我们周边世界的化学。她还对用户交互与行为产生了兴趣，特别是在卫生保健和消费者选择领域。Caroline 在行为/用户研究设计、简易化、工作坊、客户参与和报告撰写上有着丰富的经验。她在空余时间还经营着一家制陶公司，制作独特而自然的有用之物。

Tim Stokes

ATiC Innovation Fellow
Cymrawd Arloesi ATiC   ATiC 创新学者

Tim draws upon a background as an artist, maker and creative thinker, using a range of digital media, moving image, physical materials and processes. He is transferring his creative skillset to the team.

Tim will work in collaboration with a variety of enterprises within the fields of health and life sciences to support Research and Innovation projects. He is currently researching 3D printing, interpreting user biometrics and ways of interacting with digital software to innovate the future of health, fitness and wellbeing. Tim's creative practice involves metaphorically exploring and physically mixing materials and how they manipulate the body or bodies. His current art looks towards making and creating as a way of survival, building structures and harnessing a range of found materials, spaces and environments.
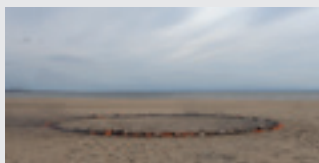
Mae gan Tim gefndir fel artist, gwneuthurwr a meddyliwr creadigol, a defnyddia amrywiaeth o gyfryngau digidol, delwedd symudol, defnyddiau a phrosesau ffisegol. Mae'n trosglwyddo ei sgiliau creadigol i'r tîm.

Bydd Tim yn gweithio mewn cydweithrediad ag amrywiaeth o fentrau o fewn y meysydd iechyd a gwyddorau bywyd i gefnogi prosiectau Ymchwil ac Arloesi. Ar hyn o bryd mae'n ymchwilio i argraffu 3D, yn dehongli biometreg defnyddwyr a ffyrdd o ryngweithio â meddalwedd ddigidol i arloesi dyfodol iechyd, ffitrwydd a lles. Mae arfer creadigol Tim yn ymwneud ag archwilio defnyddiau'n fetafforig a'u cymysgu'n ffisegol a'r modd maen nhw'n dylanwadu ar y corff neu'r cyrff. Mae ei gelf gyfredol yn ystyried gwneud a chreu yn ffordd o oroesi, gan adeiladu strwythurau a defnyddio amrywiaeth o ddefnyddiau hapgael, mannau ac amgylcheddau.

Tim 充分利用了自己作为艺术家、制作者和创意思考者的身份，和使用过一系列数字媒体、动态图像、物理材料与过程的背景，将其创意技能组合传递给团队。

Tim 将和卫生与生命科学领域的众多企业合作，以支持各种研究与创新项目。他目前正在研究 3D 打印、解读用户生物识别技术，以及与数字软件交互的方式，为卫生、健康与福利创造新未来。
Tim 的创造性实践涉及隐喻性探索和物理混合材料，以及这些材料如何影响人体。他目前的研究着眼于制作、创造（他的生存方式）和建造结构，以及充分利用一系列已发现的材料、空间和环境。

Yolanda Rendon-Guerrero

ATiC Innovation Fellow
Cymrawd Arloesi ATiC   ATiC 创新学者

Yolanda is an architect by trade and an experienced maker. Her previous work with Fab Lab Sevilla and Fab Lab Amsterdam led her to explore the combination of traditional crafting techniques with industry 4.0, which she has incorporated as part of her work.

On a research level, she has investigated the possibilities of a low-cost prosthesis DIY kit, optimisation of furniture design and manufacture and the impact of conservation plans in constant growing city centres. She is interested in parametric design, prototype making, electronics and new materials and is looking forward to working in collaboration with a wide range of enterprises from the fields of health and life sciences.

Pensaer yw Yolanda yn ôl ei chrefft ac mae'n wneuthurwraig brofiadol. Yn dilyn ei gwaith blaenorol gyda Fab Lab Sevilla a Fab Lab Amsterdam bu'n archwilio'r cyfuniad o dechnegau crefftio traddodiadol gyda diwydiant 4.0, y mae wedi'i ymgorffori fel rhan o'i gwaith.

Ar lefel ymchwil, mae wedi ymchwilio i'r posibiliadau o ran pecyn prosthesis DIY cost isel, optimeiddio dylunio a gweithgynhyrchu celfi ac effaith cynlluniau cadwraeth mewn ardaloedd canol dinas sy'n tyfu'n barhaus. Mae ganddi ddiddordeb mewn dylunio parametrig, gwneud prototeipiau, electroneg a deunyddiau newydd ac mae'n edrych ymlaen at weithio ar y cyd ag amrywiaeth eang o fentrau o feysydd iechyd a gwyddorau bywyd.

就职业而言，Yolanda 是一名建筑师，同时也是一位经验丰富的制作者。她曾与赛利维亚微观装配实验室 (Fab Lab Sevilla) 和阿姆斯特丹微观装配实验室 (Fab Lab Amsterdam) 合作，启发她将传统工艺技术与工业 4.0 相结合并加以探索，这已经成为了她工作的一部分。

在研究层面，她探究了低成本假肢 DIY 成套设备的可能性、家具设计与生产的优化，以及保护计划对不断发展的城市中心的影响。

她的研究方向包括参数化设计、原型制作、电子产品和新材料。她期望能和卫生与生命科学领域的众多企业合作。

Hwb Gwyddorau Bywyd Cymru
Life Sciences Hub Wales

Canolfan Technoleg Gofal Iechyd
Healthcare Technology Centre

Cyflymydd Arloesedd Clinigol
Clinical Innovation Accelerator

Canolfan Arloesi Technolegau Cynorthwyol
Assistive Technologies Innovation Centre

ATiC is one of four partners in the Accelerate (Welsh Health Innovation Technology Accelerator) programme.

Accelerate is a pioneering collaboration between three of Wales' universities and the Life Science Hub Wales. It helps translate innovative ideas into new technology, products and services for the health and care sector, quickly.

Accelerate helps innovators in Wales turn their ideas into solutions that can be adopted into health and care. Whether you have an idea for a healthcare technology but aren't sure what steps to take next, you are in business and looking to expand your product range, or you are an allied health professional who has spotted a smart way to improve a process – we want to work with you.

Rather than providing funding or grants, the programme offers access to the academic expertise, in-depth understanding of the life sciences eco-system and cutting-edge facilities that innovators and entrepreneurs need to get their idea off the ground.

At ATiC, we focus on innovation in assistive technologies. We have extensive resources in product design and user experience and insight, including assistive technology, user-centred design and psychological analysis.

Through Accelerate, our partners can help you tackle a wide range of research and development challenges.

- **The Life Science Hub Wales** – has a strategic oversight role. It has extensive knowledge of the challenges and needs of health and care services in Wales and provides links with the broader Welsh life sciences ecosystem.
- **Cardiff University's Clinical Innovation Accelerator** – based at the Cardiff and Vale University Health Board, CIA has many connections within the hospital, to doctors, patients and clinical researchers. It can help innovators access and work with these resources.
- **Swansea University's Health Technology Centre** – has wet lab capabilities, from cell biology to nanotechnology, as well as a data scientist and strong links throughout the ecosystem of researchers at Swansea University.

Mae ATiC yn un o bedwar partner yn rhaglen Accelerate (Sbardun Arloesi a Thechnoleg Iechyd Cymru).

Mae Accelerate, yn gydweithrediad arloesol rhwng tri o brifysgolion Cymru a Hwb Gwyddorau Bywyd Cymru. Mae'n helpu trosi syniadau arloesol yn gynhyrchion a gwasanaethau technoleg newydd i'r sector iechyd a gofal, yn gyflym.

Mae Accelerate yn helpu arloeswyr yng Nghymru i droi eu syniadau'n ddatrysiadau y gellir eu mabwysiadu ym maes iechyd a gofal. Os oes gennych syniad ar gyfer technoleg gofal iechyd ond nid ydych yn siŵr pa gamau i'w cymryd nesaf, os ydych mewn busnes ac yn chwilio i ehangu eich ystod o gynhyrchion, neu os ydych yn weithiwr proffesiynol perthynol i iechyd sydd wedi sylwi ar ffordd glyfar o wella proses – rydyn ni eisiau gweithio gyda chi.

Yn hytrach na darparu cyllid neu grantiau, mae'r rhaglen yn cynnig mynediad i'r arbenigedd academaidd, y ddealltwriaeth fanwl o ecosystem gwyddorau bywyd a'r cyfleusterau o'r radd flaenaf sydd eu hangen ar arloeswyr ac entrepreneuriaid i roi eu syniad ar waith.

Yn ATiC, rydym yn canolbwyntio ar arloesi mewn technolegau cynorthwyol. Mae gennym adnoddau helaeth mewn dylunio cynnyrch a phrofiad a dirnadaeth defnyddwyr, gan gynnwys technoleg gynorthwyol, dylunio sy'n canolbwyntio ar ddefnyddwyr a dadansoddi seicolegol.

Trwy Accelerate, gall ein partneriaid eich helpu chi i fynd i'r afael ag ystod eang o heriau ymchwil a datblygu.

- *Hwb Gwyddorau Bywyd Cymru – mae ganddo rôl goruchwylio strategol. Mae ganddo wybodaeth helaeth o heriau ac anghenion gwasanaethau iechyd a gofal yng Nghymru ac mae'n darparu cysylltiadau ag ecosystem ehangach gwyddorau bywyd Cymru.*
- *Symbylydd Arloesi Clinigol (CIA) Prifysgol Caerdydd – wedi'i leoli ym Mwrdd Iechyd Prifysgol Caerdydd a'r Fro, mae gan CIA nifer o gysylltiadau o fewn yr ysbyty, â meddygon, cleifion ac ymchwilwyr clinigol. Mae'n gallu helpu arloeswyr i gael mynediad i'r adnoddau hyn a gweithio gyda nhw.*
- *Canolfan Technoleg Iechyd Prifysgol Abertawe – mae ganddi gyfleusterau labordy gwlyb, o fioleg celloedd i nanodechnoleg, yn ogystal â gwyddonydd data a chysylltiadau cryf ar draws yr ecosystem ymchwilwyr ym Mhrifysgol Abertawe.*

ATiC 是加速计划（即威尔士医疗创新技术加速器计划）的四个成员机构之一。

加速计划是威尔士三所大学和威尔士生命科学中心之间的开创性合作。它能快速地将创新理念转化为卫生与保健行业的新科技、产品和服务。

在加速计划的帮助下，威尔士的创新者将其想法转化为适用于卫生与保健行业的解决方案。不管您是在卫生保健技术方面有很好的想法，但是不确定下一步怎么做；还是经营着自己的公司，并希望能扩充产品范围；又或者您是一位综合医疗保健人员，发现了能改进流程的好方法，我们均希望能与您展开合作。

加速计划不提供资金或赠款，提供的是获取学术专业知识、深入了解生命科学生态系统和创新者与企业家将其想法付诸实践所需先进设备的途径。

在 ATiC，我们专注于辅助性技术的创新。我们在产品设计、用户体验和用户洞察方面拥有丰富的资源，包括辅助性技术、以用户为中心的设计和心理分析。

凭借加速计划，我们的合作方能够帮助您应对各种研发挑战。

- 威尔士生命科学中心：担任战略管理职责。它对威尔士在卫生与保健服务方面面临的挑战与需求有着深入的了解，并能提供与更广泛的威尔士生命科学生态系统有关的链接。
- 卡迪夫大学临床创新加速器 ：设于卡迪夫公学卫生理事会。临床创新加速器与医院、医生、病人和临床研究员均保持着联系。它能帮助创新者获取以及使用这些资源。
- 斯旺西大学卫生技术中心 ：具备湿性实验室能力，研究范围覆盖细胞生物学和纳米技术。技术中心还有一名数据科学家，且与整个斯旺西大学研究员生态系统保持着紧密的联系。

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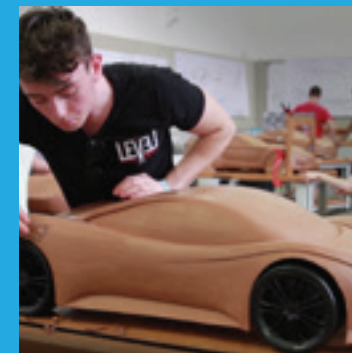# UWTSD *YDDS*

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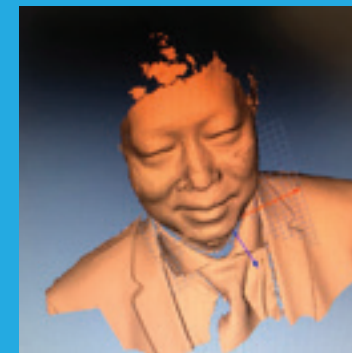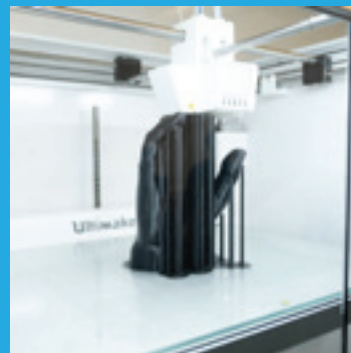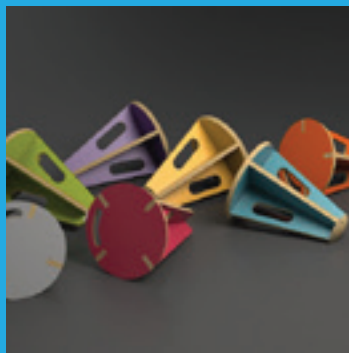Trinity Saint David
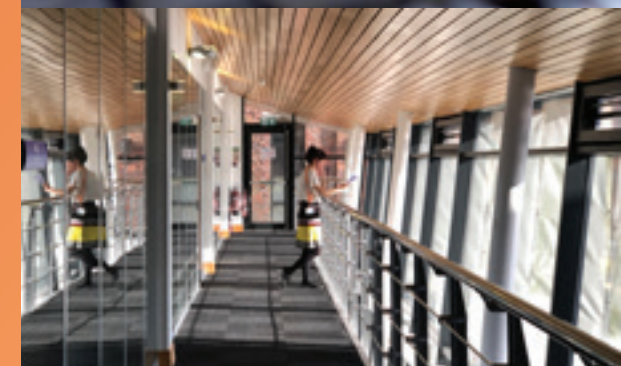
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Assistive Technologies Innovation Centre (ATiC)

Technium 1
Swansea Waterfront
King's Road
Swansea   SA1 8PH

+44 (0)1792 481232

www.uwtsd.ac.uk/atic
atic@uwtsd.ac.uk

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
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