

Dr Justin Magee

Research Director for Art & Design

Senior Lecturer in Product Design



DEVELOPMENT SERIES

Impact30 Seminar Series

Knowledge Exchange & Impact



Research & Impact

Ulster University
Research Impact Excellence award for KE (2017)

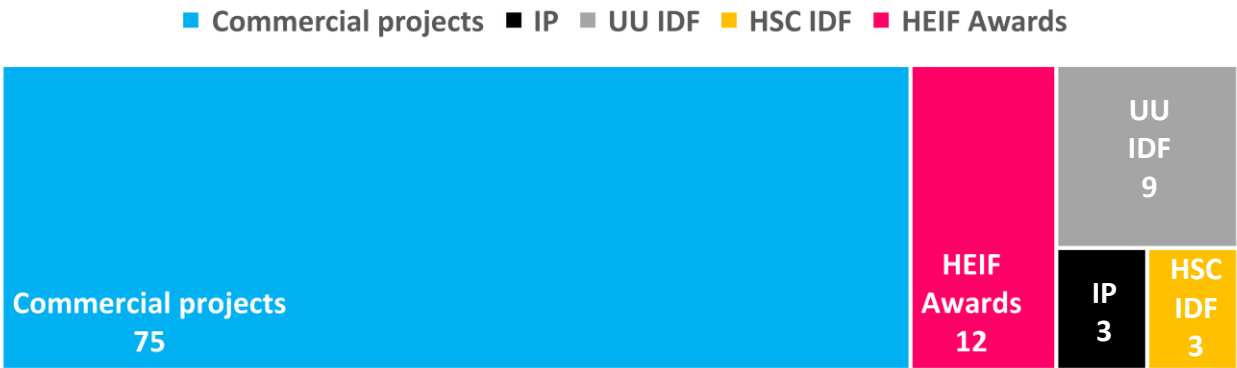
Ulster University
Innovation award (2009)

Ulster University
Distinguished Business Fellowship Award (2007)

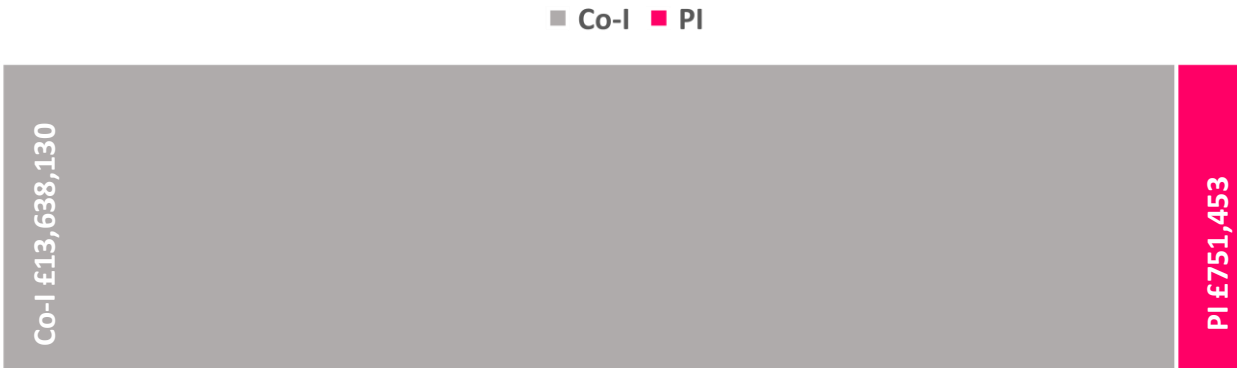
Faculty of Arts
Business & Community Fellowship Award (2007)

Ulster University
Innovation Award (2007)

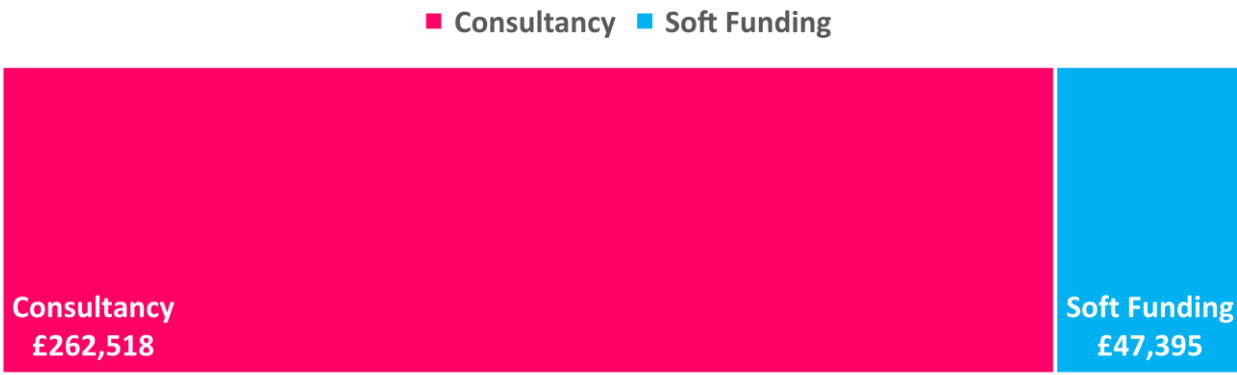
Commercialisation



Research Income : £14,389,583



Consultancy Income & Innovation: £309,913





“Few people think about this or are aware of it. But there is nothing made by **human beings** that does not involve a **design decision** somewhere.”

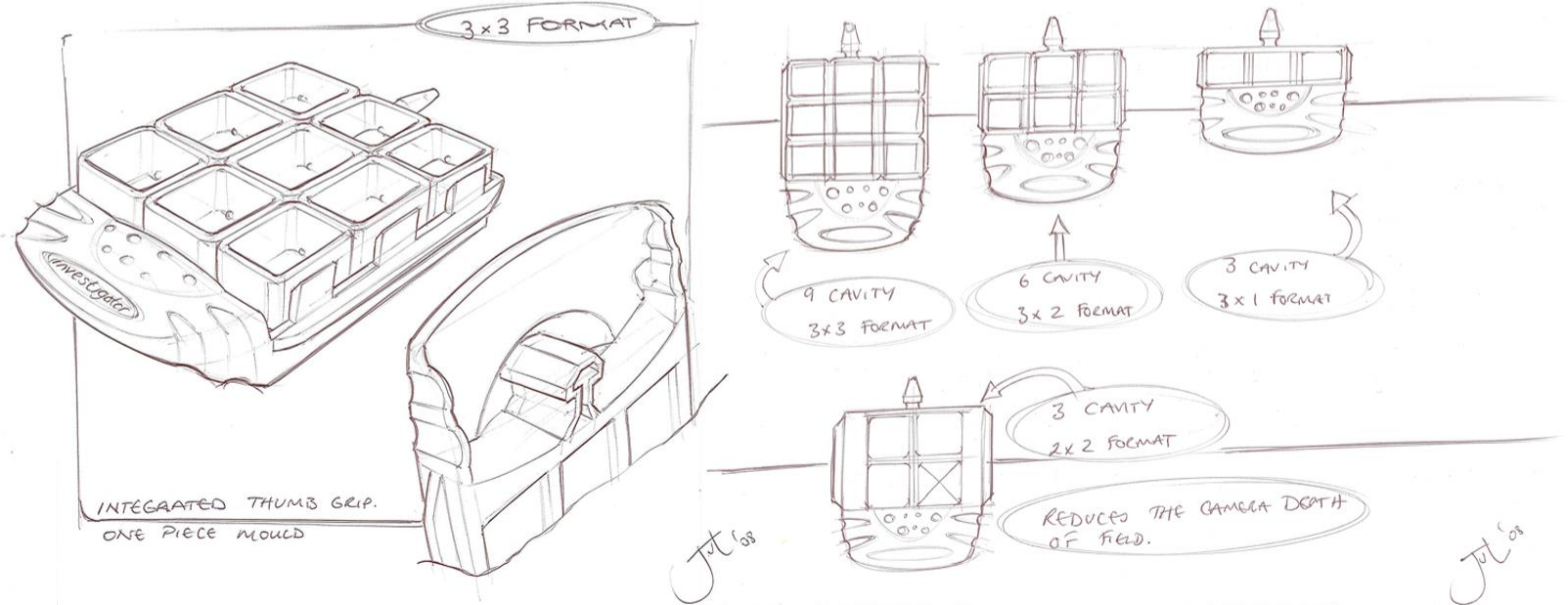
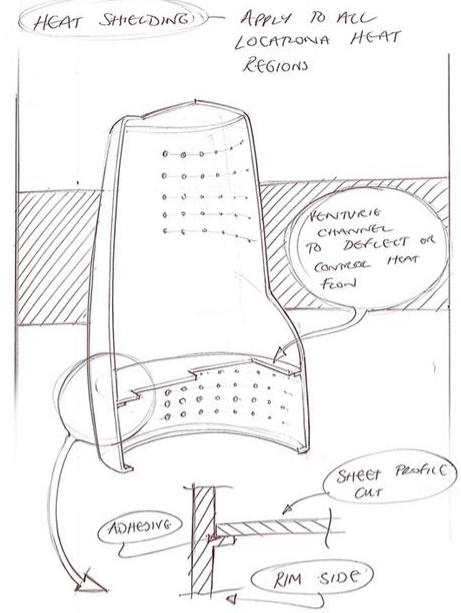
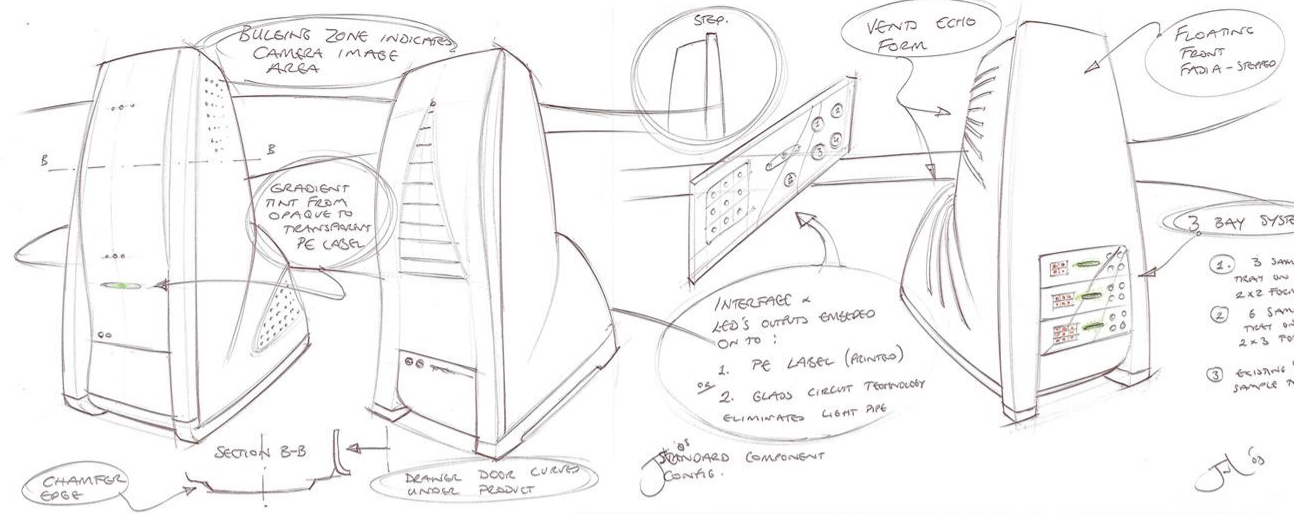
(Bill Moggridge)

Knowledge Exchange

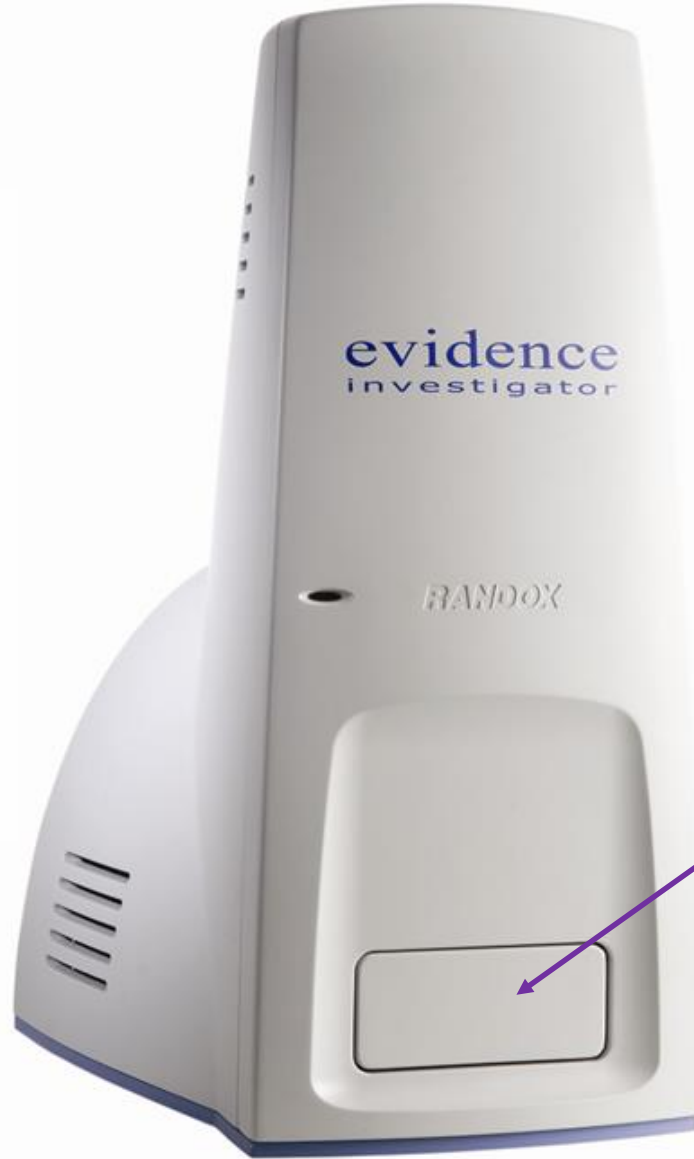
2008
PFW
LIFESTYLE
INNOVATION
AWARD
WWW.PETFASHIONWEEK.COM



RANDOX



RANDOX





“There is nothing more frustrating than coming up with the **right answer** to the **wrong question.**”

(Tim Brown)



IZAK9
@AbacusandHelix

Follow

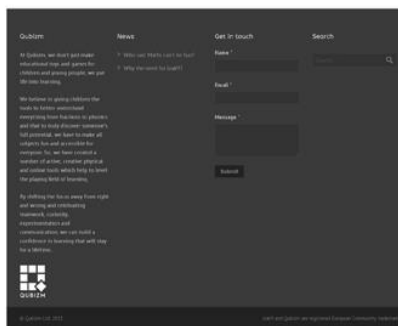
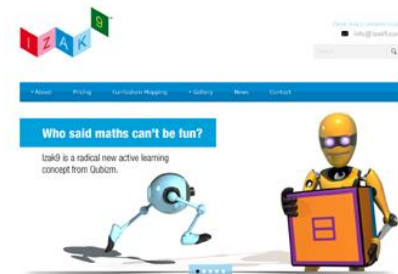
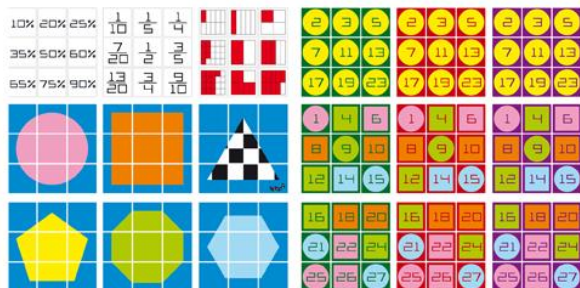
Primary 2 teachers by far the best problem solvers today. Izak9 training in Our Lady's Girls' PS. Magnificent!



4:49 am - 26 Aug 2015



Eliminator



IZAK9: the sum of :

Product : Brand : Typeface : Labels

E-learning website : 3D Characters

Animations : Promotional film

switch selection





Impact



“Knowledge Exchange is not Impact”

(Gormley-Heenan, C., 2018)



*“Impact is a **learning process**, and I believe that if we want to have **amazing impact** in the world, then **we need to be amazing at Knowledge Exchange**”*

(Reed, M 2016)



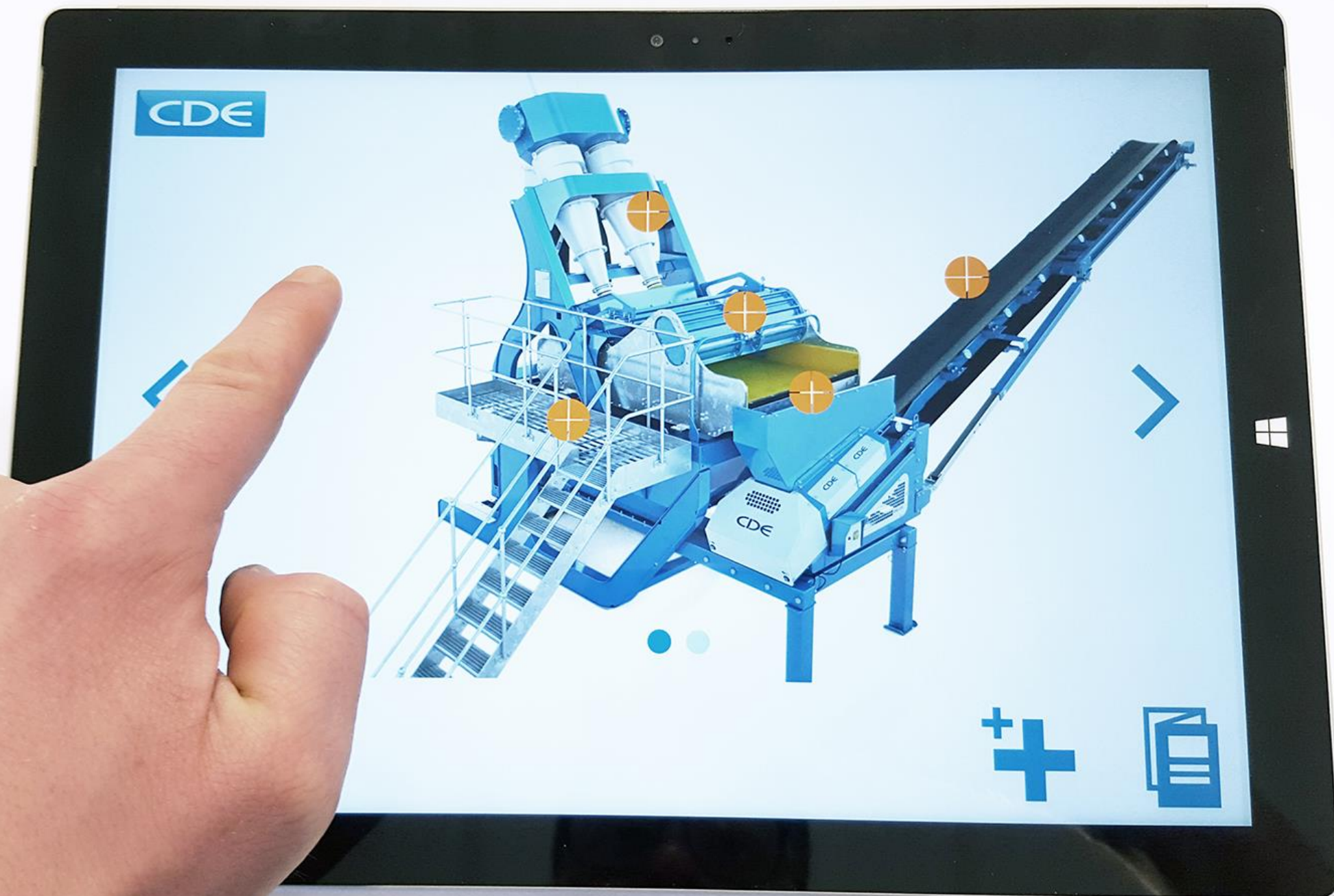
Innovate UK
Knowledge Transfer Network



Impact Case Study (proposed: UoA32)

CDE Global Ltd.

Dr J Magee, T. Quigley, M Cullen, P. Lynch, A. Hutton





Environment

- Virtual Systems in MultiMedia (2017) scientific committee and industrial expo
- Belfast Design week event on UX and DT within industry (2017)
- Advertised PhD topics (2019)

Research & Impact: Knowledge Exchange Strategy

- Impact Excellence Awards (2017), Knowledge Exchange Impact Excellence Award
- McCall B (2017), *'An immersive tour of the virtual machine'* Irish Times (9th Feb 2017)
- Impact30 Seminar series: Knowledge Exchange & Impact
- Research & Impact Team developing pathways to impact

- **Sales increase from £21.1M to £46.3M (2015-2017)**
- **In 2018 tenders in the £10M** range have been achieved from under £5M previously
- **Creative Industries capability** embedded within the engineering sector
- **5 new employment positions** were made:
 - Digital Development Manager (2016, Associate new role)
 - Brand manager (2016)
 - Placement Graphic Designer (2017)
 - Graphic Designer (2017)
 - 3D visualisation designer (2018)

7 international Expos reaching > 100,000 people

- Institute of Quarrying South Africa Conference and Exhibition (2017)
- Canadian Frac Sand Exhibition Conference (2017)
- The North American Frac Sand Exhibition Conference, Texas (2017)
- AGG1 Aggregates Academy & Expo, Nashville, USA (2016)
- BAUMA, Munich, Germany (2016)
- TIP EX and TANK EX, Harrogate Convention Centre (2017)
- Hillhead, England (2016)
- ConExpo / ConAgg Las Vegas, USA (2017)
- Institute of Quarrying Australia, inward visit 5 May 2017
- Danish Aggregates Association, Denmark 13 September 2016 / inward visit 2017

4 Case Studies

- National Centre for Universities & Business (NCUB) State of the relationship annual report (2018), under the section Driving Solutions
- Invest NI KTP showcase , titled 'Your business in their hands' (2016)
- Innovate UK: 250 company KTP shortlist database (2017)
- Confederation of British Industry's (CBI) annual Innovation conference in Belfast (2018)

3 Awards

- A finalist at the Times Higher Education Leadership Management Awards (THELMA) 2018 for Knowledge Exchange initiative of the year.
- Innovate UK Certificate of Excellence (2017)
- A finalist at Digital DNA 2017
- >30% of KTP's in Ulster gaining Outstanding: National average of 21%

NCUB 2018 State of the relationship 2018

- CDE Case study highlighted under Driving Solutions section at Report Launch, Bush House London (26th June 2018)
- The online report viewed **2.4k times**
- NCUB hosted report read **527 times**.
- Printed report was shared with all **80 universities** and **50 large UK business, 94 launch attendees** and **7 UK government departments and royal academies/societies**
- UKRI
- Research England
- OfS
- Innovate UK
- Scottish Funding Council
- HEFCW
- DfE NI

Company challenges

- Impact data collection
- VVTracker compliance from company
- Internal infrastructure change (people)
- Inconsistency of team leadership

Further issues

- Business priorities
- Budget restraints and politics
- Misunderstanding of the technological IP

Actions

- Fast Track Impact workshop : **Empathy**
Underpins five ways of impact tracking
- Meeting with stakeholders: Company and individual priorities and needs.
- Agreed Impact action plan

‘Stay flexible’

(Mark Reed)

Origins of the Research

Magee, J (2003) Designing a prototype with elements of virtual behaviour for interactive biomechanics applications, in M McNeill (ed.), vol. 2, pp. 43-52, *Eurographics Ireland Chapter*, Workshop proceedings 2003, 30/04/03.

Magee, J., McClelland, B., & Winder, J. (2012). Current issues with standards in the measurement and documentation of human skeletal anatomy. *Journal of Anatomy*, 221(3), 240-251.

Magee, J (2015), 'Three Dimensional Digital Modelling of Human Spine Anthropometrics and Kinematics from Meta-analysis. How Relevant is Existing Anatomical Research?' *Journal of Spine* vol 4, no. 1, pp. 1-7.

EPSRC (2006-2012) *Academic Fellowships x 2, The Digital Human Project*, EP/E500676/1 **£250,000** (Magee)

DCAL (2002-2003) *Creatively Seed Fund, 'Orthoped-X'* **£43,933** (Magee)



KTP CDE Global (2014-2016) : £89,393 (Magee, Quigley, Hutton, Lynch, Cullen)

Case study has influenced or led to:

KTP Axial 3D (2017-2019) £147,840 (Wilson, Magee, Donnelly)

KTP Alexander Boyd (2018-2020) £155,950 (McGinn, Quigley)

KTP BBC (under application) – (Magee, Parkin, Boyd)

FUSION Engineering Documentation (under application)
(Magee, Quigley, Parkin, Boyd)

Future Screens NI (2018-2023) £13M (Moore et al)

Future Screens NI: Objective 1

*“to develop the creative industries sector in order that it can replace the diminishing traditional heavy industry sector while at the same time using **new creative technologies/practices** to leverage new opportunities for those **heavy industries** which still operate. This objective offers in **particular an opportunity for the** identification and development of **immersive technologies;**”*

Empathy | Collaboration | Evidence

