

Institution: University of Salford		
Unit of Assessment: 17		
Title of case study: Delivering organisational change to SMEs through knowledge exchange		
Period when the underpinning research was undertaken: January 2005 – December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Dr Marie Griffiths	Reader of Digital Technologies	January 2004 – Present
Dr Gordon Fletcher	Director Business 4.0	September 2002 – Present
Dr David Kreps	Reader in Philosophy of Information Systems	January 2004 – December 2020
Dr Alex Fenton	Lecturer in Digital Business	May 2004 – Present
Prof. Ben (Brian) Light	Professor of Digital Media	October 1999 – December 2013; June 2016 – Present
Period when the claimed impact occurred: August 2013 – December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact <p>Small and Medium-sized Enterprises (SMEs) account for 99% of UK businesses, but they generally lack the resources of bigger businesses to strategically improve. A government-funded solution to this complex challenge for SMEs is Knowledge Transfer Partnerships (KTPs). Salford researchers have partnered with 12 SMEs since 2013, utilising insights from research output spanning 15 years. The research applied to these partnerships has initiated processes of digital transformation that deliver long-term positive organisational change, producing more innovative organisations and increasing their economic value. It is calculated that approximately GBP26,000,000 of additional value has been created through these projects to date and the strategic changes introduced into these organisations continue to provide lasting social as well as economic benefit.</p>		
2. Underpinning research <p>KTPs are partnerships between a knowledge base, government and a business that are enabled by a graduate, known as the associate. Since August 2013, Salford's research team has contributed to 10 KTPs, with GBP1,310,000 of funding (including GBP511,000 of company contribution) and two Knowledge eXchange Projects (KXPs), producing GBP72,000 of company funding. These projects increasingly benefitted from a developing body of research that drew upon learning introduced from each subsequent project, emphasising the value and need to generate overall positive change in the underlying organisational culture. While commercial companies do not directly measure cultural change the success of the application of this research is indicated through the proxies of increased financial value and ability to grow through new mergers and acquisitions. The body of research presented here advocates a balanced and ethical approach to people and technology that enables sustainable commercial growth.</p> <p>This means that while all KTPs exploit existing research, in Salford's case the continuous pursuit of knowledge exchange also forms the platform for the underpinning research and the basis for the holistic organisational change advocated by this research. This underpinning body of research spans 15 years and explores the interrelated organisational, sociotechnical, and</p>		

systems-based challenges that emerged from the team's first KTP and which is recognisable in all the subsequent partnerships. In all partnerships there has been a need to position the workforce more centrally, with organisational change key to a successful transformation.

Organisational: The first output that used a KTP as its evidence base highlighted these large interlinked challenges through the procurement and selection of software. The company offered executive outplacement services and needed an enterprise system to effectively support its geographical expansion strategy. Griffiths was the associate and Light (UoA34) was the lead academic in this KTP. This study revealed issues of power and control between management, vendors and consultants. The research identified the connections between social and technical structures that are internal and external to the organisation [3.1]. As organisations increasingly select digital 'solutions', understanding this process in practice is critical to practitioners and relevant to researchers. The social construction of technology perspective was expressed again with an interrogation of the broad parameters that influence the selection of software [3.2]. The systematic framework for the selection of software in this work shapes the approach used in all subsequent partnerships. It is in these two papers that there is a recognition of the need for accommodating organisational change in order to align with technical requirements.

Sociotechnical: The social shaping of technology perspective highlights important but less considered aspects of system development in SMEs. This viewpoint and additional partnerships informed a monograph by Kreps (UoA34) that brought more consciously ethical dimensions to SME strategy and performance improvement [3.3]. Research developed as part of this emerging body of work more clearly defined approaches for successfully transferring knowledge. By ensuring that the workforce is considered in all aspects of these projects, the research embeds advocacy for creating an organisational culture of continuous change and innovation within SMEs [3.4]. In one marketing partnership, a workforce technology survey was conducted at the start and close of the project, with the aim of gauging acceptance and cultural change. This exercise was threefold: first to communicate project objectives, second to understand levels of awareness and plug those gaps and ultimately to reduce resistance. The balance between the efficiencies brought by technology and the need to accommodate the requirements of people within the organisation becomes more nuanced in these works. Addressing the issue of resistance from people as part of an organisational change in its culture has become consciously combined with the ethical use of technology in this research.

Systems-based: With the research team working across a range of SMEs in various sectors (such as telecom, haulage, technology, legal, printers, water treatment and training), a team realisation was that all the projects had begun with a technical requirement that evolved into a wider desire for strategic change in organisational culture. This realisation was the maturing of the research into a clear model for action and application. To consolidate this perspective and the insight from previous papers, the team formalised this iterative loop of applying research and the learning that has come out of each project [3.5]. This consolidated learning has been subsequently embedded as a project planning model for further partnership working activities. The model is labelled iHINGE and incorporates the key stages necessary to successfully transform a business. Further outputs have been developed by partnering with leaders from SMEs who were first engaged through KTPs and other commercial engagement work. These collaborations represent eight chapters in an edited book including the management of the transformation process with Tim Griggs from ARUP, the role of leadership during change with Tina Judic of Found and the need for continuous organisational change with Naomi Timperley of Tech North Advocates [3.6]. These chapters practically support the challenges SMEs face in realising their potential through digital transformation.

3. References to the research

3.1. Howcroft, D. and Light, B. (2006). Reflections on issues of power in packaged software selection, *Information Systems Journal*, 16(3), pp. 215-235. <https://doi.org/10.1111/j.1365-2575.2006.00216.x>

3.2. Howcroft, D. and **Light, B.** (2010). The social shaping of packaged software selection, *Journal of the Association for Information Systems*, 11(3). pp. 122-148.

<https://doi.org/10.17705/1jais.00224>

3.3. **Kreps, D.** (2018) *Against Nature: The Metaphysics of Information Systems*, London: Routledge. ISBN:9780815377757. <https://doi.org/10.4324/9781351233828> (**REF2**)

3.4. **Griffiths, M.** and **Light, B.** (2009). An investigation into resistance practices at an SME consultancy, *Journal of Enterprise Information Management*, 22(1/2), pp. 119-136.

<https://doi.org/10.1108/17410390910932786>

3.5. Heinze, A., **Griffiths, M.**, **Fenton, A.** and **Fletcher, G.** (2018). Knowledge exchange partnership leads to digital transformation at Hydro-X Water Treatment, Ltd., *Global Business and Organizational Excellence*, 37(4), pp. 6-13. <https://doi.org/10.1002/joe.21859>

3.6. **Fenton, A.**, **Fletcher, G.** and **Griffiths, M.** (Eds.) (2020) *Strategic Digital Transformation: A Results-Driven Approach*, Abingdon: Taylor and Francis. ISBN:9780367031060.

<https://doi.org/10.4324/9780429020469>

All publications **3.1 – 3.6** have been subject to external peer review.

4. Details of the impact

Driving sustainable organisational change that results in **increased economic value** and **creates innovative environments** that are capable of delivering further commercial success are the key themes emerging from Salford's research. This research has brought a wider context to KTP and SME partnership projects that goes beyond the introduction of new products or services into the company: the technical focus of the projects is the starting point for what becomes a more comprehensive change programme across the whole organisation [**see 3.5**].

Salford's research team calculates that **GBP26,000,000 of additional value** has been created through its projects between August 2013 and December 2020. The basis for the team's contribution to increased value is illustrated throughout this section [**4.1 – 4.3**]. Funder Innovate UK also sees a return on its initial investment through increased taxation gained from more valuable businesses.

Selected examples from Salford-SME partnerships demonstrate the scale of the impact in organisational, social and economic terms:

4.1. Driving sustainable organisational changes

People, organisational culture, social structures and systems are a pervasive theme across all of the projects. Drawing on the underpinning research, the team has taken an approach that is consciously ethical [**3.3**]. The partnership with Sigma Consulting Solutions Ltd. (KTP:9455, 07/02/2014 – 05/07/2016) involved the development of a user experience methodology. The project introduced a **values-driven approach to innovation** into the company. This action was a response to the recognised need to become more ethical in its practices. The UK Government's Digital Inclusion Charter was **adopted and signed** during the project, and as a result, in the following year Sigma won **over GBP500,000 of new business**, building on year-on-year revenue increases associated with user research during the KTP [**5.1**]. The Managing Director at Sigma confirms that '*the KTP was also influential in Sigma securing a position on the **BBC Design Research framework** [...] to the value of **£150k** and helped us to establish a new **User Experience Competency Centre for AstraZeneca**, our largest client, from which we still see high demand, in both the UK and now in our Swedish business units*' [**5.1**]. Furthermore, the company's adaptable research framework, developed as a result of the project, has been '*instrumental in engaging new customers in the value of user engagement at different stages of their product or service development*' and is still used in commercial discussions to help customers understand methods and outcomes [**5.1**].

As a result of being open to delivering a technology-based transformation project, the management teams of the SMEs are also responsive to actions that bring wider changes, such

as evolving organisational culture or encouraging a willingness to share thoughts and ideas. As an example, the KTP at FastWebMedia (FWM) (KTP: 8813, 19/12/2011 – 16/05/2014) created an environment that produced a **fundamental shift in the underlying business model**, a **change in business name**, **new patented technology** and a **shift in premises** [5.2]. As the Managing Director of FWM observed, the scale of change in the company as a result of the KTP *'has facilitated a new **major strategic development** for FWM. The developments brought about through the KTP have widened FWM's perspective on the offerings that it can make to its customers. By moving away from providing services only, products such as the enhanced BIGprofile product are **realising a new income stream** and **diversifying the risks associated with operating as a service company**'* [5.2]. Furthermore, the knowledge acquired through the KTP was shared at different levels: at an **operational level** through documentation of the modules developed and staff training; at a **strategic level** through the wider view of the company's relationship with industry in diversifying into software products; and at a **visionary level** [3.6], whereby the company has embedded this perspective through development of a Digital Innovation Factory [5.2].

4.2. Creating innovative environments through engagement

Major **policy-driven innovation** was achieved through a project with Tameside Metropolitan Borough Council (KTP:8867, 24/08/2012 – 10/02/2015), which was ranked as **outstanding** by the InnovateUK grading panel [5.3]. The aim of the project was to create an organisational environment of engagement that could enable innovative solutions with social benefit to develop [3.4]. The result was the **returning of empty homes back into use**. At the time of the project there were **1700 empty homes** in Tameside, with *'no mechanism for engaging with their owners and no coordinated or strategic approach to providing services to bring these properties back into use'* [5.4]. Through the project, the Council adopted a more progressive and productive way of working for the public good and was **recognised as an exemplar** in addressing a national problem, as well as an overlooked area of housing policy [5.4]: Salford's research contributed to an **evidence-based Empty Home Owners engagement strategy**, which resulted in the **development of an empty home service** that remains embedded within operational service delivery at the Council [5.4]. As a result, the Council has more effective routes to engagement in linking owners with the support needed to return their homes to use [5.4].

The project was endorsed by the Association of Greater Manchester Authorities (AGMA), and the Housing Growth Lead at the Council verified that the KTP *'helped Tameside return 70 homes back into use'*, continuing that: *'This was a **high-impact outcome for Tameside**, which typically only builds 350 homes per year, and has generated **£400k in New Homes Bonus (NHB) for the Council**. Across the Greater Manchester region, the KTP has supported 541 homes being returned into use, which is **equivalent to £3.7 million in NHB** across the ten local authority districts'* [5.4]. The Council confirms that it continues to retain the approaches developed during the KTP and to apply similar principles to other housing projects [5.4]. This project highlights the potential for the body of research to be applied to wider contexts beyond SMEs and the ability for this work to generate social benefits alongside increased value generation [3.6].

4.3. Increasing economic value to partner organisations

Commercial organisations measure the success of our research through the proxies of increased financial value and their ability to grow through new mergers and acquisitions. Transformation at Avoira (formerly Pennine Telecom and now part of the Salford-based Nycomm Group - KTP:9102, 11/03/2013 – 07/06/2015) resulted in **group sales rising from GBP9,500,000 to GBP13,800,000** in the year following completion of the KTP [5.5]. The embedding of an innovative organisational culture continued in 2017, when the company merged with the GBP130,000,000 turnover Nycomm Group, who are recognised as one of fastest growing privately-owned UK companies. Avoira's Managing Director attests that the **knowledge gained through the KTP helped to secure the merger**: *'The **phenomenal sales growth** and the digital marketing techniques we learned during the KTP all helped to seal that*

deal and many of the **lessons learnt during the KTP have been adopted by the larger group company** [5.5]. The digital marketing techniques referred to here were: new ways of reaching their customers, locating new target markets, using technologies to manage the customer journey more strategically and learning to be innovative. This transfer of knowledge is reciprocal and Salford's team were exposed to the importance of digital leadership and championing of the partnerships to inform their ongoing research [see 3.6]. The sustainable economic outcome, referenced by the Managing Director of Avoira, is a **turnover of GBP29,000,000 per annum**, a figure three times larger than when the KTP started [5.5].

Hydro-X Water Treatment Ltd. (KXP:1023994, 05/12/2016 – 05/05/2017), one of two Knowledge eXchange Projects, is a water treatment company which had the strategic challenge of establishing an innovative new business model. The objective was to deliver a subscription-based sales and management platform for health and safety training. This was achieved and the company extended the knowledge gained from the project by **expanding their portfolio of online training** [3.5]. Hydro-X Training's Managing Director confirmed: *'We have also somewhat established ourselves in the Legionella training marketplace and have now incorporated Hydro-X Training as a Limited Company to continue trading independently as part of the Hydro-X Group'* [5.6]. The company affirmed that the **enhanced knowledge and experience of digital marketing** gained and embedded within Hydro-X's workforce during the project has carried over to the larger company's operations, meaning that new and developed knowledge and experience is being used to **improve the company's overall digital presence** [5.6]. The company's turnover tripled throughout the 18 months of the project, producing **GBP120,000 of additional revenue** [5.6].

Salford's research on digital transformation [3.6] has also been fundamental to other external organisations in ensuring that they have an end-to-end 360° business plan, with the COVID-19 pandemic forcing businesses with a reliance on offline activity (e.g. retailers with stores or business-to-business clients reliant on events to drive leads) to rethink their strategy and make digital transformation a priority [5.7]. The Chief Executive Officer of Found, a London-based digital agency, has been collaborating with Salford's researchers since 2015 and states that the agency *'continue[s] to value the academic research approach towards the development of our new innovative products and services which we believe gives us a competitive edge, academic rigour and a mutually beneficial two-way flow with the university'* [5.7]. This focus on digital transformation enabled Found to **relaunch an existing brand** (Disrupt, an influencer and social agency) and **establish a new service** (Connect) focusing on the data and technology services that Found provides in order to support other digital transformation projects [5.7].

5. Sources to corroborate the impact

5.1. Testimonial: Sigma Consulting Solutions Ltd. (February 2020), on the values-driven approach to innovation introduced by the KTP and new business won as a result (4.1)

5.2. Final KTP Report: FastWebMedia (KTP:8813) (May 2014), on the shift in business model and transformation change at the company as a result of the KTP (4.1)

5.3. Letter: Confirmation of KTP:8867 ranking as 'outstanding' (3 June 2015) (4.2)

5.4. Testimonial: Tameside Metropolitan Borough Council (November 2020), on the development of its empty homes strategy and return of homes to use as a result of the KTP (4.2)

5.5. Testimonial: Avoira (March 2020), on the improvement in company revenues and marketing techniques as a result of the KTP (4.3)

5.6. Final KTP Report: Hydro-X Water Treatment Ltd. (KXP:1023994) (September 2018), on the company's improved digital presence and revenues generated as a result of the KXP (4.3)

5.7. Testimonial: Found (November 2020), on the mutually beneficial relationship with the University to drive development of innovative products and services (4.3)