CREATIVE WORKS LONDON

LONDON'S DIGITAL ECONOMY

Creating Cultures of Innovation

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Executive Summary

In seeking spaces and models for knowledge exchange from arts and humanities research to digital creative industries (DCI) of the creative economy, we came to consider approaches that had been applied to other areas of the economy. One approach we discovered that could also be highly effective for the DCI is the Creating Cultures of Innovation (CCoI) 'anti-consultancy' approach of the Glasgow School of Art's (GSA's) Institute of Design Innovation (InDI). It has similarly aimed to transfer techniques and approaches from design research to SMEs, but as of yet has not been applied to the DCI. Furthermore, the CCoI approach has been used with a number of SMEs, suggesting that it could be applied to the SMEs with the DCI. The DCI are often unique in the wider creative industries from being mostly staffed by those who have been primarily educated in the sciences and engineering, rather than the arts and humanities. This is made more acute by early specialisation in the British education system. In proposing a model to better facilitate such transfers to the DCI we should consider the GSA's InDI's CCoI activities. However, while CCoI activities have been considered successful and are ongoing, we found limited academic information in terms of critical understanding of the approach.

We consider the Creating Cultures of Innovation (CCoI) action research programme being delivered by the Glasgow School of Art (GSA), in partnership with the Institute of Directors (IoD) and the University of Glasgow Business School (UGBS), to explore the role that higher education might play in improving skills utilisation in the workplace. The premise of the initiative is to explore the use of design thinking in improving performance, innovation and economic productivity in participating companies. The project involves working with leaders to harness creativity within their organisation and enable workplace innovation through collaboration. It is being delivered through a series of integrated workshops for a cross-functional team at each participating company. These pilots were run over a period of two years, delivered at approximately monthly intervals, with interim tasks for the team to take back and apply in the workplace, ensuring a ripple effect of skills and learning from the core group across the rest of the organisation. After summarising the approach taken, we consider three case studies of organisations from the pilot of the programme; Scott & Fyfe, a technical textile manufacturer; Schuh, a high street shoe retailer and Cairngorm Mountain Ltd., a not-for-profit organisation who manage recreational facilities at the top of Cairngorm mountain in Aviemore. We conclude by considering the effectiveness of the approach, and its potential for other industries, including the Digital Creative Industries.

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1 Introduction

The Creating Cultures of Innovation (CCoI) programme is an action research project delivered by the Glasgow School of Art (GSA), in partnership with the Institute of Directors (IoD), and the University of Glasgow Business School (UGBS), to explore the role that higher education might play in improving skills utilisation in the workplace. It is a unique design intervention project that works with businesses to explore how to apply design approaches to transform in-house innovation capacity, boost employees use of skills, increasing motivation and productivity and providing creative leadership to support collective solution generation. Their research was developed from the findings of the Cox Review [4] which defined *design, that which links creativity and innovation.* Therefore, our hypothesis is can design act as a vehicle enhance and embed innovative capability in SMEs. Our collaborations seek to understand how we might build the capacity for sustain-

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able innovation, where creativity is permanently embedded in flexible, multi-disciplinary teams.

CCoI arose from understanding the potential of design in service innovation. Service innovation is the fundamental focus of service science, a discipline that takes a cross-functional approach to service management. As innovation relies more and more on knowledge exchange, value co-creation and creativity within complex systems, academics are challenged to break from traditional, technology-lead forms of innovation thinking. Service Science is a relatively recent discipline. It first emerged in 2004 from the efforts of researchers at IBM and associated academics, based on a call for more research in areas related to services [2]. The fundamental context in which it finds its roots is an accrued service orientation in todays business practices, departing from the traditional manufacturing game [10]. Services are defined as *the application of competences (knowledge and skills) for the benefit of another entity* [12]. A service economy is hence putting in the forefront new managerial issues, which are linked to an intensification of not only knowledge, but also information technologies, innovation and demand for highly qualified people [5].

From its onset, service science literature has made reference to service design as a constituent of service science and innovation (e.g. [9, 12]. However, research up to date has kept this angle of service innovation fairly under-investigated, despite its potential to overcome the technological boundaries that are limiting the scope of service innovation research so far. The strength of adopting a design approach lies in its focus on creative, human-centred and participatory methods to model service performance [7]. As Kimbell [8] puts it, *designing for services is the conceiving, planning and realising of the dynamic systems and experiences in which one service is exchanged for another in an ongoing process, the value of which is constituted in practice.* With this participatory, dynamic and creative stance, service design focuses on co-creation of value as the end product of the knowledge exchange process [6], breaking with the limited view of technology integration.

When using design principles within service innovation or systems, one must however be wary not to restrain it to modelling or prototyping [3], which would fall back into the technologically-bounded trap. Rather, the approach this study follows is concentrated on getting design principles to percolate through the innovation process in which knowledge is exchanged and creatively created by and for people. As van Aken [1] puts it, *design science is not concerned with action itself, but with knowledge to be used in designing solutions, to be followed by design-based action.* More specifically, we seek to determine and define the different elements that shape design thinking in service innovation settings and how these elements interact. This will be done in an attempt to integrate the existing technology-lead focus of innovation with emerging human and creativity-lead thinking.

The service science literature converges in many respects with the design literature, which is long rooted in a paradigm focused on tangibility, aesthetics and prototyping. Design literature is now attempting to break free from this technological determinism and artefact-centred assumptions which create a widespread misunderstanding of the design process [11]. Design is in fact increasingly seen as a long term tool to change the innovation process of companies sustainably and lead to collaborative innovation performance for teams and individuals. Like service sciences, design aims to cut across discipline boundaries. Collaborative teams can achieve creativity through design skills and knowledge exchange, allowing every actor to work toward their own and shared goals [6]. This way of structuring group creativity toward valuable outcomes using design methods is called design innovation. The Cox Review of Creativity in Business [4] carried out by

the British Government defines design as what links creativity and innovation. It shapes ideas to become practical and attractive propositions for users or customers. Design may therefore be described as creativity deployed to a specific end, which can be considered by design intervention into the SMEs of the CCoI programme.

2 Approach

CCoI is exploring the use of design thinking in improving the effective use of skills in the workforce of participating companies to enhance performance, innovation and economic productivity. The GSA is partnering with the IOD and UGBS, drawing both on the academic expertise in design innovation and management theory, and matching this to the business acumen of the IoD. This is being delivered with participating companies and involves close engagement with the company leader in order to *use the knowledge and expertise of their workforce in applied creative projects which have the benefit of generating innovations for the business or service.*

The programme is delivered as a series of bespoke, integrated workshops for a cross functional team from the company encompassing a *diagonal slice* of the workforce. The basic framework incorporates the *double diamond* design process, and as part of the research GSA has developing a series of tools and modules to populate this framework. However, the focus of the intervention is to address a specific area identified collaboratively with the company at the outset i.e. the workshops are tailored specifically to meet the objectives of each company.

The process was delivered over three phases. The first phase of *scoping* involves identifying the companies, engaging their commitment, through board discussions, the delivery of *taster sessions*, and discussions with the company leader. The overall aim of the intended intervention would then be agreed.

The second phase of *design and delivery* consists of workshops that are designed specifically for each company to address the area that they wished to focus upon. A suite of Design tools have been developed by GSA for use within these workshops. Effectively these tools were prototyped and tested by the delivery team as part of the *learning by doing* for the GSA research team. The approach of the workshops involves the company participants being taught the design thinking techniques, testing their use in a safe (non-work) environment, and then applying them to the work challenge set for the team (often in inter-workshop tasks to be completed by the team). On-going observation, self-reflection and self-reporting helped gather continual evidence of the effectiveness of the process.

The third and final phase of *evaluation* is been carried out at several levels. Firstly the findings and analysis of feedback from each workshop, and the self-reporting helped capture the on-going experience of the participants and the company leader (who was not always part of the workshop group). Secondly a range of external evaluation had helped independently to capture the experience of the pilot companies and the GSA design team. The design team themselves had a post workshop review after each session to evaluate the effectiveness of the tools used, and to capture that learning. After the workshops had been completed, a review has been held with the companies to undertake a *stickiness audit*, which as the name suggests is to evaluate to what extent the skills and knowledge, and the different approach developed has been embedded and adopted as a new way of working. This review also gives the opportunity to update the results from the company which often take some time to finally come to fruition.

3 Case Studies

The case studies are from the three companies selected to take part in the pilot of the CCoI design intervention project. These companies met the GSA team through business networking events and expressed an interest in taking part in the research project. A series of scoping meetings and site visits refined the outcomes each wishes to achieve by creating a culture of innovation and established the format and pace of the GSAs intervention.

The following sub-sections captures the story from each company, including company drivers and objectives (need), approach and activities, what happened and what has changed. Including the impact on the project team, the company and the individuals involved.

3.1 Cairngorm Mountain

Cairngorm Mountain Limited (CML) operates the facilities on Cairngorm mountain near Aviemore. CML operates all year, but the revenue has been previously focused on the winter market, especially skiing. With the increase in competitiveness in the tourism sector, and the variability of mountain conditions, there was a strong need to develop a year round, 4 season strategy, and explore market opportunities with multiple users. The overall objective of the project was to find new opportunities that were good for the mountain, good for the user and good for the revenue of CML.

3.1.1 Approach

The intervention with CML took the form of workshops with the a diagonal slice team of nine members across the company, including customer service staff, mountain rangers, the kitchen team, engineering and finance support. The team named themselves the Uplift team, to describe both the mountain activity, and the improvement ambition needed for the company. Through the design process, including mapping user journeys, testing and prototyping, and fail faster approaches, the team identified and pursued improvements across a number of areas (user groups). Including dog owners, coach visitors, kitchen offerings and ski hire. There was also a parallel activity looking at overall branding. Branding has run alongside these projects and fed across as appropriate in new posters, information and brochures. Overall branding and signage is reinforcing the nature focused, quality aspect of the brand.

Different sub?teams took forward the improvements in the different areas, but fed into the overall progress of the Uplift team. Progress across the projects has been positive, with some real improvements already set in motion. These will be revisited to see progress and the extent of embedding, but actions already include the their *dog user project*. User journeys of a dog owning customer highlighted the fact that the approach from CML was not encouraging a potentially high number of visitors with dogs. From previously being somewhat antagonistic to dog owning users, and seeing dogs as a problem, the attitude has shifted to welcoming dog owners (including a dog rest area and hitches outside the cafe) but expecting them to be responsible. Posters, banners and dog bins on major routes from the car park helped reinforce the message. Clarifying the rules for dogs on the train has immediately identified revenue previously not collected.

The *ski hire* project as completely redesigned the customer flow through the ski hire process, using brainstorming on challenges, mapping the skiing user journey, and getting customer feedback (from expert users). The project had identified savings forecast at

around £20,000, as well as improving the customer experience. Early signs from the start of the season are that the new system is working well. The Catering Action Team (CAT) within kitchen started later than the others, but is already seeing progress. Staff and customer feedback has been used for improvements, including outside recycling bins and biodegradable packaging, as well as improved food offerings. The team has also prototyped a ski season outdoor catering takeaway product, the cairngorm venison burger. Coach trips are a large part of the summer business which had seen a decline. Analysis, trialling and feedback (from coach drivers) has led to a reshaping of the offering to target certain market segments, including organised coach tours, on spec visits, niche tours. The brochure has been redesigned and a package with two other venues has been developed, the Cairngorm attraction group. Coach business has already seen a rise of 28% for the first 8 months of the year, with summer trade seeing a huge increase.

As well as brainstorming, prototyping and gaining customer feedback, the most powerful tool that has then been widely adopted at CML is the User Journey. This has allowed the perspective of the many different users of the mountain to be considered and moved the approach from largely thinking predominantly of the mountain and staff as priority, to one where the customer experience is very important. Although not part of the initial improvement projects, these tools (including brainstorming, six hats, and user journey mapping) have again been used in exploring the user journey of the less physically able visitor, and in looking at the offering for the walker on the mountain.

3.1.2 Impact

The project team has communicated the ambitions and progress of the Uplift team on a continual basis to encourage the ripple effect, especially through their weekly *magic circle* communications. Whilst at the start there was scepticism, and participation was not always supported, this has improved. Many of the projects involved staff as key users of their services, and new ideas have been brought forward (and been adopted as improvements) by many other staff members. Other inputs have been encouraged, for example photos of the mountain for use in the brochures. Through the work in CCoI, the Uplift team sees part of their mission to encourage others to be curious, and to be continually looking for opportunities. The team has identified that as a result of CCoI, CML is now making fewer assumptions, involving customers in the process, and are now more proactive. This is not seen as a one off activity. Ideas generated during the process, and also subsequently, have been documented in an *ideas bank*, that will be the next round of improvements. As has already been shown, the techniques learnt have been put into practice for new improvement project that are now being taken forward. The company has also used this reflective approach to redesign offices and workspaces to allow them to be multi?functional and more creative. Overall the company are identifying new market opportunities, improving the user journey, exploring ways to add value to the company. To do this they are working with mixed teams beyond the initial Uplift team.

As well as encouraging cross department working, the uplift project has seen some participants move into different roles to build on the capabilities identified during the project. Some of the projects were taken on quicker than others, and members of the Uplift team have moved from their usual areas of functionality to support other parts of the organisation in their improvement projects.

3.2 Schuh

Schuh is a high street retailer, founded in Edinburgh 30 years ago, who now have over 60 stores across the UK. In order to differentiate themselves from other retailers, Schuh were interested in exploring how their culture and ethos could be identified as something customers would find aspirational. As part of this they were interested in developing a Corporate Social Responsibility (CSR) strategy.

3.2.1 Approach

A core team of six was established to take forward this process, with a further eight *floating* participants. This meant that for the series of workshops there were between 8 and 14 attendees. All the workshops took place in the companys Livingstone headquarters. The team named themselves the *schuh-gooders*. Brand identity, and what *Schuh* really meant was explored as part of the workshop process, to inform the philosophy behind the CSR strategy. The final output of the process was a manifesto, outlining the core principles of a Schuh CSR strategy.

Just at the time of the workshops, Schuh were bought over by US based firm Genesco. This understandably led to a hiatus in immediate progress. However, as part of the takeover deal, as well as rewards for all employees, the *Schuh Trust* was established. The learning and plans for the CSR strategy have fed into the plans and activity of the Schuh Trust. In addition, the new employee handbook has been re-issued featuring the outcomes created through the CCoI workshops such as the CSR manifesto. Initially, earlier on in the process, the CEO in particular had wanted the CSR aspect of the company to be *under the radar*. However this had been argued against within the team. The establishment of the Schuh Trust and tangible activity such as recently introduce shoe recycling in every store, is evidencing the change in approach introduced through the workshop process. In addition, the *Schu-ness* criteria, established as part of the workshops, is planned to be built into selection methods for projects which the Schuh Trust will fund. To exhibit *Schu-ness* a project has to demonstrate alignment (with Schuh priorities), level of need, story and impact, and that it could be sustainable.

As well as the outcomes described, members of the team also report on-going use of the tools introduced during the process. Brainstorming has proved particularly useful, and guidelines shared to ensure increased effectiveness. User journeys (especially in a retail environment) have identified blockages and focused on the customer experience, gathering valuable insight.

3.2.2 Impact

Whereas the company takeover is clearly a larger element in any long term change in culture in the company, it is worth reviewing how CCoI has already had an influence on ways of working in Schuh. Involvement in the CCoI initiative was the first time that this level of resource (especially of peoples time) had been invested in a single project. It was also the first time that a cross functional team had been used that truly represented the totality of the company. Previously the retail arm of the company was not involved. Some shop based staff reported that before the CCoI workshops they had never even been to the companys headquarters in Livingstone.

Previously the key driver of the business had always been cost efficiency. Their offering was based on extremely efficient distribution systems. This was the first time that the

business had reviewed itself from a brand/customer focused point of view when initiating innovation and improvement. The team reports a change in attitude within the company, initiated by the work of the Schuh-gooders, including a shift toward challenging the *way weve always done it* to *the way we could do it*. There is also reported to be more commonality between departments as a result of working in a diagonal slice project team. Through incorporation of the manifesto in the employee handbook, and the visibility of the Schuh Trust the influence of the Schuh-gooders has permeated across the company. In addition, although operating a relatively flat structure, there was a culture of high level authorisation, where all decisions had to be made/approved at a senior level. This project was the first where bottom up approaches were the leading focus. The CEO is keen to use the process again (although he would like the process to be shorter) especially when planning parts of the strategy. The main reason he gave for this was that it *brought in different voices* with diverse knowledge and insights.

The project allowed a cross section of the company to engage in an improvement project, and learn new skills and techniques. It also drew on the ideas and experience from across the company. The confidence this gave was exemplified by the way the team was able to convince the CEO of the value of being more open about CSR priorities. Some of the team have used this to progress further in the company.

3.3 Scott & Fyfe

Scott & Fyfe are a long established textile manufacturing company based in Tayport. Originally focused on jute manufacture, the company today produces highly technical material in multiple processes, including their market leader Textron, the principle textile used in rubber underlay. The company had identified the need for an improved new product development process to meet the increasing needs of customers and address the issue of shorter product life cycles. The current 4-5 stage product Ideation process was largely reactive, responding to customer requests and enquiries. The Chief Executive Officer (CEO) was a relatively recent appointment and interested in exploring ways of initiating new ideas in what was a traditional, family owned manufacturing culture.

3.3.1 Approach

A 12 member multidisciplinary team was established taken from a *diagonal slice* of the company, across all business functions and different levels of staff and management (although not the CEO). The team named themselves the NOW team (New Opportunities Within), to encompass the area they were exploring and the urgency with which they needed to progress. Its mission statement was *To grow and secure the business as a centre for excellence in Tayport by creating cross-functional teams which share experience and contribute to how we commercialise NPI.* The team underwent a series of workshops with the GSA/IoD design team, always off-site to enable the team to focus on the task in hand and not be drawn back into day to day operational activity. As part of these workshops they were introduced to design thinking approaches, allowed to test them in non-work environments, before applying them more directly onto work related issues. In addition, the team were tasked with taking forward some work in between the workshops, and presenting progress back at the following workshop. A few months after the final workshop a review meeting was carried out with the group to evaluate the longer term effect.

Through the process described above Scott & Fyfe have successfully designed and implemented a new approach to new product development and implementation. This has been described in a *manifesto* that outlines the new approach and is used as a way of communicating this to the wider company. The approach uses many of the concepts learnt during the workshops, including exploring market and customer needs, prototyping and failing faster. The process involves three linked teams to take forward developing ideas, project managing development and promoting and selling new product/into new markets. NOW team members are involved in all these teams. A Virtuous Circle for product development now exists NOW Product Ideation (NPI) feeds into NOW product Creation (NPD) where development is project managed, through to promotion and sales at Fruition, looking at routes to market and branding. In addition, the NOW team itself still meets monthly (after convincing the CEO of the benefits of continuation) to review how the process is working, addressing any blockages and challenges, and continually improving the process.

Tools used The skills and techniques learnt in the workshops have been adopted and utilised by the team. Brainstorming, mindmapping and dotocracy have been used regularly during the process, as well as *peachy keachy* presentation approaches to allow people to get up to speed very quickly. For other tools, such as 6 hats, the team was less confident in using. As a result the NOW meeting is planning to use at the next meeting in order to allow the team to practice and gain confidence. This is also evidence that they are still improving their processes.

3.3.2 Impact

The main impact has been the successful implementation of a new NPD process, involving a wide range of expertise from across the company and utilising the techniques learnt during the workshop sessions. Through the new process a number of new products are being actively pursued. This includes a new filtration product (not a previous area for the company), which is being taken through the NPI/NPD process and progressing well. Also, several international markets are now being explored for potential customers of existing products. In addition, existing products are being considered for new channels. For example, as a way of exploring different customers (and generated as a random idea from a brainstorming session) an existing product was put up for sale as garden ground cover on eBay. which has already generated some sales. As well as successes, the team reports that the process has also eliminated wasted time on eliminating non-viable products earlier in the development process.

As well as learning specific skills and techniques, the individual members of the team have also reported benefits. Many of the team members have now expanded roles, exploiting the wider capabilities uncovered during the process. Some individuals have received promotion in recognition of this enhanced expertise, and also to explicitly allow then to continue to deliver this capability. Rather than being fixed roles, the Chair of the NOW meetings rotate across the team members. This results in exposure of some team members to a role of responsibility they had previously not experienced, allowing further skills development and confidence building. The NOW team also revisited their assessment of innovation in the business and showed a marked improvement.

Within the wider company there is real evidence of a *ripple effect* with the learning expanding beyond the original team. Initially the tools learnt in the workshops have also been used with the wider organisation. For example, brainstorming and dotocracy were used to identify solutions to a machine blockage problem. After interest in these

techniques, for example, one of the NOW team members ran an informal training session available to any staff member that was very well attended. Further activity of this type is planned. Involvement in the new teams has been broadened out beyond the NOW team, and is planned for further expansion. The NOW team also has identified a development space alongside the shop floor to enable prototyping of new product ideas, which will also make the work of the team more visible and accessible to the whole company (including, importantly, the shop floor). Most recently, the whole NOW approach has led to a redesign of working practices across the company, with four *Pods* operating as separate and independent business units, responsible for it making profit, dealing with its own budget and coming up with new business. They are supported by an ideas generation process (called the Innovation Cloud) which uses many of the NOW tools to generate new ideas. These are then taken forward by existing or new Pods as appropriate.

4 Discussion

Each organisation presents a different scenario and followed a unique journey of discovery, revealing hidden talents, skills, knowledge and experience that were successfully applied to solve problems and develop ideas. So, the case studies for each company showed the unique outcomes for the organisations involved. The case studies also showed that CCoI benefits not just the organisations who participate, but also the project teams and the individuals themselves. Participants reported improved confidence and awareness of both their own skills and those of their colleagues. They also showed improved communication, collaboration, collective problem-solving and leadership skills as a result of the programme. Participants have been able to demonstrate these skills both in the workshops and back in the work place, applying creative thinking to day-to-day operations leading to innovation.

Design thinking skills enable participants to take a user-centred approach to innovation, encouraging teams to think about the broader impact of decisions. By encouraging an experimental approach to testing and prototyping, participants overcame their fear of failure, moving to a solution-focused mindset. Involving leaders at all levels of the organisation as champions of the innovation process was key to the success of the interventions. The ripple effect used to cascade skills and learning from the workshops across the organisation has proved key to engaging employees and overcoming internal inhibitors, ensuring a sustainable impact.

Although developed as a series of workshops for the company, in reality the role of the design team was much more ongoing that this implies. The team were regularly contacted on emails and telephone to help overcome difficulties encountered. As such they became more of a mentoring (coaching) role. For the company leaders specific one to one update meetings were scheduled, to talk about progress, both for the company, the team and individuals. Although this was predominantly organised to ensure the support was continuous, and any barriers quickly overcome, is also acted as a support and feedback for the company leader themselves. In addition to project specific support, certain team members also visited the studios at GSA to help gain ideas and insight into design processes, broadening their experience.

5 Conclusion

The pilot of the programme has been an initial step in testing the hypothesis that design thinking and methodology could support innovation in the SME sector. The programme was designed to support people to develop their creative skills by working collaboratively, to improve leaders ability to create workplace innovation. Findings from the pilot of the programme are being applied to an extended version of CCoI, fine-tuning the methodology and applying to a wider group of companies.

The CCoI approach could also be highly effective for the Digital Creative Industries (DCI), but as of yet has not been applied to the DCI. The Digital Creative Industries (DCI) are often unique in the wider creative industries from being mostly staffed by those who have been primarily educated in the sciences and engineering, rather than the arts and humanities. This is made more acute by early specialisation in the British education system. So, the CCoI approach could provide the basis for a model to better facilitate knowledge exchange from arts and humanities research to the DCI of the creative economy.

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