



Understanding Knowledge Exchange

at University of the Arts London

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of the arts  
london

## Author

Dr Lara Salinas is a Senior Research Fellow in Knowledge Exchange and design researcher and educator at University of the Arts London. She holds a PhD in Creative Exchange from Lancaster University. Her expertise is in collaborative design for innovation.

## Contact

[l.salinas@lcc.arts.ac.uk](mailto:l.salinas@lcc.arts.ac.uk)

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## RECOMMENDATIONS

### How can art and design universities better support knowledge exchange activities?

Maintain a **culture of experimentation** to further knowledge exchange practices and develop **new modes of interaction** for knowledge exchange in arts and design.

Recognise and better support the figure of **knowledge exchange facilitators** for planning, delivering and reflecting on knowledge exchange interventions.

Secure **extra support to 'talk the talk'** in close collaboration with stakeholders, as resources for knowledge exchange are typically directed to 'walk the walk'.

Develop tailored and **agile bureaucracies** that respond to the particularities of art and design disciplines and modes of interaction, such as flexible 'collaboration agreements', innovative 'knowledge protection strategies' and pioneering support to further 'commercial activities' in arts and design.

**Report holistically** to address the teaching, research and innovation aspect of the intervention and avoid reporting fatigue.

### What tools and activities can contribute to better support knowledge exchange activities?

**Archive of Knowledge Exchange activities**, ongoing and finished, using the Knowledge Exchange Case Study Template to provide illustrative examples of what knowledge exchange looks like, articulate thematic expertise, and serve as a portfolio to support new partnerships.

**Knowledge Exchange Community of Practice** across the university, to integrate research, theory and practice on knowledge exchange, being exposed to new ways of working and gain recognition from peers.

**Knowledge Exchange Events** aimed at creating new opportunities of collaboration with external organizations, across colleges and courses.

**Knowledge Exchange Training** including: guiding principles on knowledge exchange, easily transferable models, case studies, evaluation principles and essential tools.

**Knowledge Exchange Starting Pack:** including a basic guide on how to get started, the do's and don't, including guiding principles, and some easily transferable models of knowledge exchange interactions.

## Further research

**Knowledge Exchange Typologies** of activities in art and design, based on a multidimensional framework to set the basis to theoretically ground evaluative frameworks.

**Predefined Matrix of Outcomes** grounded in a longitudinal study of diverse art and design knowledge exchange activities.

**Creative Evaluation Toolkit** that features different approaches to evaluation, based on arts and design methods to facilitate collaborative planning, monitoring and valuation of knowledge exchange activities in arts and design, created in collaboration with artists, designers, stakeholders and **expert evaluators**.

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## SECTION ONE - CONTEXT

### The brief

In August 2017, University of the Arts London commissioned this study, seeking to better understand the richness of its knowledge exchange ecosystem and in doing so inform its Knowledge Exchange Strategy.

The research conducted for the current report took place between September 2017 and July 2018, after a pause, the writing of the findings was resumed in April 2019.

Following an iterative and participatory process this research set out to better understand the distinctive value of knowledge exchange in arts and design and University of the Arts London in particular.

### Structure of the report

The report features research in progress.

**Section One** situates the research, commissioned by University of the Arts London.

**Section Two** situates knowledge exchange as the third mission of universities and offers an overview of current institutionalised methods to assess knowledge exchange interventions.

**Section Three** provides a multidimensional framework to approach knowledge exchange activities in arts and design. Each dimension is addressed from two complementary perspectives: a review of academic and grey literature on the one hand, and primary research at University of the Arts London.

**Section Four** presents the Knowledge exchange Ecosystem Tool and a Knowledge Exchange Case study Template.

**Annex** offers further detail on the **Research Methodology** and **References**.

## Terms of reference

This report features research in progress. The research is exploratory, descriptive and does not aim to reach evaluative conclusions.

Rather than producing an exhaustive audit of knowledge exchange activities, this research has aimed to better understand the key challenges and opportunities for knowledge exchange in arts and design in general and at University of the Arts London in particular.

This report is written in a time of change due to the implementation of the Higher Education and Research Bill 2016, the articulation of the Knowledge Exchange Concordat for the development of the Knowledge Excellence Framework.

The report is informed by insights gained from an analysis of relevant grey and academic literature and knowledge exchange practices at University of the Arts London.

## SECTION TWO - SITUATING KNOWLEDGE EXCHANGE

that together with teaching and research has become the third mission of higher education institutions. It is through knowledge exchange activities that universities are integrated into the socio-economic and cultural milieux and positively contribute to the social and economic development of territories (Zawdie, 2010) (Figure 1). Knowledge exchange activities are intermingled with teaching and research, across disciplines and departments (PACEC 2015). Back in the mid-1990s the Triple Helix model of innovation based on

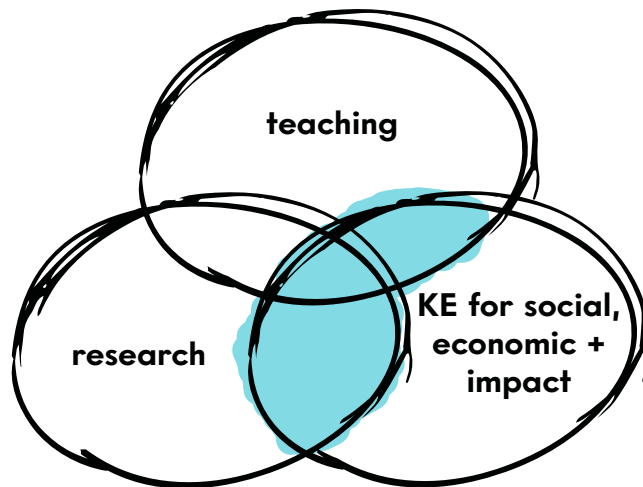


Figure 1: First, second and third missions.

university-industry-government relations emerged as a response to the third mission: seeking to meet the policy objective of encouraging a wider benefit from the commercialisation of new knowledge, promoting cooperative interaction between knowledge (university), production (industry) and public (government) sectors' (Zawdie, 2010:153; Lauton Smith & Leydesdorff 2017) (Figure 2).

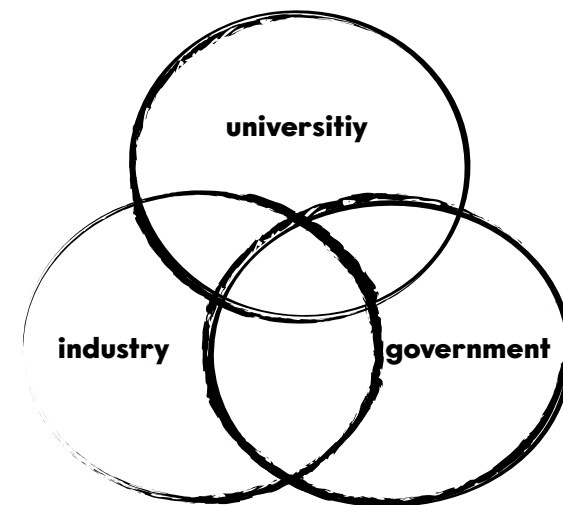


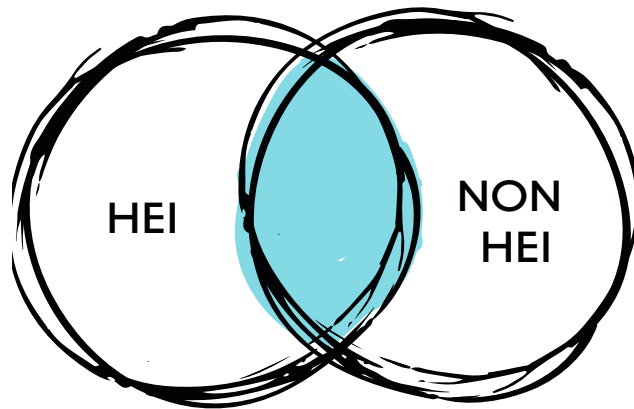
Figure 2: Triple Helix model of innovation.



Universities have different cultural orientations towards their third mission and have, therefore, elaborated different interpretations of how it should play out in practice (Loi & Di Guardo, 2015). Consequently, there is no single definition of knowledge exchange in higher education: well-defined and normative approaches coexist with rather vague and opportunistic approaches to knowledge exchange.

Knowledge exchange is employed as a shorthand for the multiple interactions between HEIs and businesses, public services, charities and communities to create social and economic benefit (HEFCE 2017) (Figure 3). Consequently, knowledge exchange is often employed as a general term to refer to the 'process of generating, sharing, and/or using knowledge through various methods appropriate to the context, purpose, and participants involved' (Fazey et al. 2012:1) and therefore used to refer to processes as diverse and specific as knowledge transfer or co-production of knowledge among others.

More recently, 'knowledge exchange' has been defined as '**a set of activities, processes and skills that enable close collaboration between universities and non-academic partners to deliver commercial, environmental, cultural and societal benefits, opportunities for students and economic growth**' (McMillan et al. 2019:3)



*Figure 3: Knowledge exchange is what happens when HEI and non-HEI actors interact.*

### SECTION THREE - DISENTANGLING KNOWLEDGE EXCHANGE: A MULTIDIMENSIONAL FRAMEWORK

Grey literature often seems to suggest that universities 1) develop infrastructure in order to support knowledge exchange activities, 2) this infrastructure enables engagement with external organizations through diverse mechanisms, 3) from which universities, businesses and communities benefit. (Figure 4) In this context, higher education institutions are responsible for developing the appropriate infrastructure and impact is best expressed in terms of income generation.

However,

- Infrastructure refers to physical and organisational structures and facilities that make knowledge exchange possible, in other words, that enable knowledge exchange. But the key enablers of knowledge exchange interactions are not only infrastructure!
- New proxies for impact that account for the generation of 'commercial, environmental, cultural and societal benefits, opportunities for students and economic growth' (McMillan et al. 2019:3) are required.

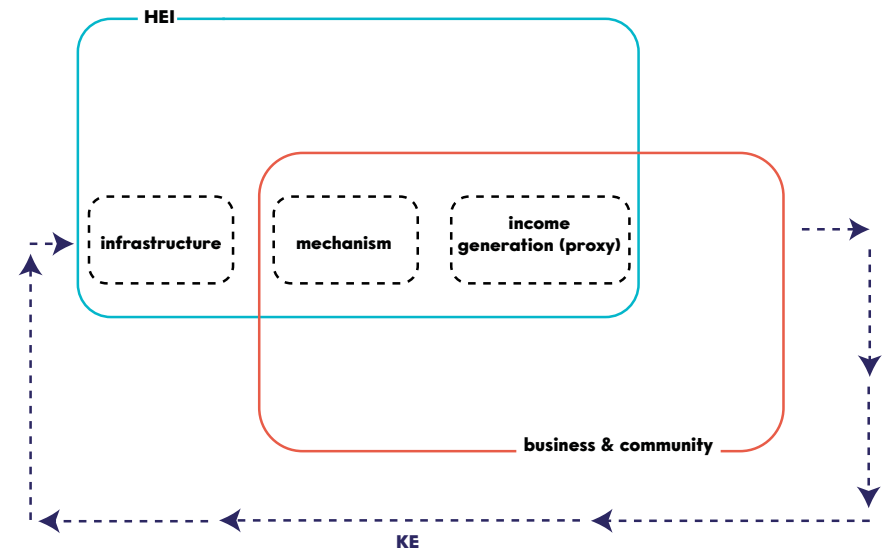


Figure 4: Enablers, mechanisms and benefits of knowledge exchange as described in grey literature, e.g. PACEC 2012

The author proposes an alternative approach (Figure 5) that aims to reflect **all parties shared responsibility** over developing enablers that facilitate engagement as well as a wide range of benefits to all parties. This alternative approach has three interrelated features: enablers of knowledge exchange, different modes of interaction, and benefits generated from knowledge exchange interactions.

Drawing on the overarching principles for evaluating knowledge exchange (Fazey et al. 2014) the proposed approach is expanded into a **multidimensional framework** that seeks to put diverse mono-dimensional approaches to knowledge exchange into dialogue:

1. What is knowledge exchange?
2. How is knowledge exchanged? What are the mechanism(s) that support knowledge exchange interactions? What are the inputs, enablers and barriers to that support the mechanism?
3. What are the typical impacts and value of knowledge exchange activities? How do outputs and outcomes become apparent? What outputs and outcomes are accounted for?
4. How is the value of knowledge exchange activities captured and communicated? When, by whom and for what purpose and audiences?

The key feature of this multidimensional framework is that all four dimensions are deeply intertwined, for how we conceptualise knowledge exchange will in turn effect how we articulate it, understand its benefits and design for its evaluation.

This multidimensional framework addresses knowledge exchange at three scales: policy, strategy and interventions (Figure 6).

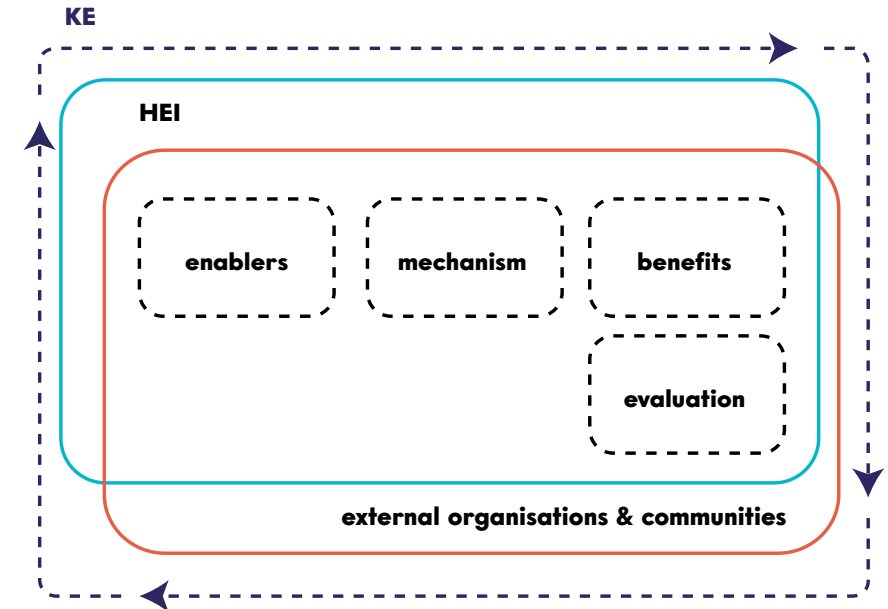


Figure 5: Proposed approach to enablers, mechanisms and benefits of knowledge exchange

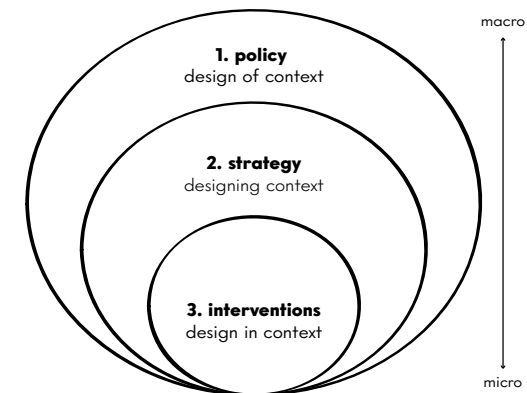


Figure 6: Three scales: policy, strategy and interventions. Inspired by Siodmok (2017)

This section continues by exploring each of the dimensions of the framework, with an emphasis on knowledge exchange interactions. Each dimension is addressed **from two complementary perspectives**: the review of academic and grey literature and insights gained at University of the Arts London ([see Research Methodology](#)).

## 1. What is knowledge exchange?

There is no single definition of knowledge exchange in Higher Education. There are two main uses of the term knowledge exchange:

- **Knowledge exchange as a catch-all term** for the 'process of generating, sharing, and/or using knowledge through various methods appropriate to the context, purpose, and participants involved' (Fazey et al. 2012:1).
- **Knowledge exchange as a specific practice** that 'implies a two- or multiple-path process with reciprocity and mutual benefits, maybe with multiple learning, but not necessarily recognition of the equitable value of the different forms of knowledge being exchanged' (Fazey et al. 2012:2).

Knowledge exchange is best understood as a **collaborative practice that implies reciprocity, mutual benefit and learning for all the stakeholders involved**. In any case, it is often difficult to put your finger on what knowledge exchange is as it is deeply intertwined with teaching and research.

## Knowledge exchange as the coproduction of (new) knowledge

Research is defined as 'a process of investigation leading to new insights, effectively shared' (REF 2017/04:4). In a research context, the practice of knowledge exchange occurs in some form of applied research either through formal or informal mechanisms and processes in which researchers engage with others (Fazey et al. 2014).

The Arts and Humanities Research Council (AHRC) approaches knowledge exchange specifically as the co-production of knowledge through the interaction of academics and non-academic individuals and groups, which is of benefit to both parties and is distinct from the one-way dissemination of research findings. In this line, the AHRC-funded Knowledge Exchange Hubs for the Creative Economy (2012-2016) explored knowledge exchange interactions with creative industries and in the context of the creative economy.

The Hubs focused on the co-production and co-design of knowledge, goods and services, establishing and nurturing partnerships, in line with Dowling Review of Business University Collaborations (2015).

The Hubs have developed new models, methods and approaches to facilitate creative exchange based on an understanding of collaboration as co-creation, in which the value of collaborative work extends far beyond passive transfer of knowledge from one sector to another (Senior et al. 2016; AHRC 2017). Examples of it are Design in Action's Chiasma workshops, REACT's Sandbox, The Creative Exchange's Labs, early-stage Intellectual Property models, new 'collaboration agreement' and 'collaborative intellectual property'.

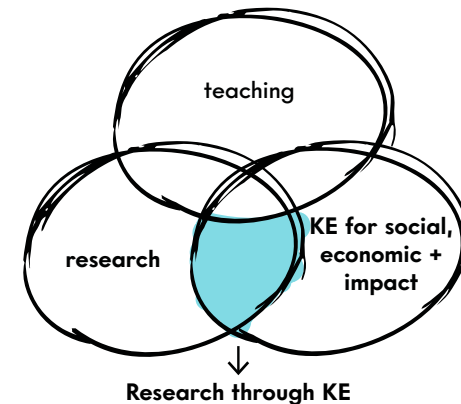


Figure 7: Research through Knowledge Exchange

## Knowledge exchange as knowledge transfer

Knowledge transfer is one of the many processes to exchange knowledge, which provides the dominant framework for understanding universities' impact upon industry. It is 'defined as the processes of spinning out new companies based on university intellectual property (IP) and licensing IP to existing companies' (HEFCE, 2016:3). Knowledge Transfer streams from Technology Transfer models in which 'patentable items [are] exchanged between universities and established businesses' (Dovey et al. 2016:18)

Viewing knowledge as something that can be passed around fixed or inert in a traditional process of 'transfer' in whichever context is outmoded and problematic, as it does not reflect how knowledge is constructed and shared (Fazey and et al. 2012:5).

## 2. How is knowledge exchanged? What are the mechanisms that support knowledge exchange interactions?

The former Higher Education Funding Council for England (HEFCE) employed the term knowledge exchange as a shorthand for the multiple interactions without discrimination of knowledge exchange processes or objectives. Consequently, HEFCE's account of knowledge exchange encompasses rather diverse mechanisms or **modes of interaction** between academics and external organisations, which are typically categorised as follows (PACEC, 2012; Hughes et al. 2016; HEFCE, 2016) (Figure 8).

### 1. Knowledge exchange models of non-commercial interactions:

1.1. Problem-solving activities, such as informal advice, joint research, prototyping/testing, joint publications, external secondments, creation of physical facilities, contract research, consortia and consultancy.

1.2. People-based activities are concerned with 'networking with and provision of education services to professional external organizations' (Hughes et al. 2016:31) such as external lectures, external visits, curriculum development, network, standards forums, organising conferences, post-course placements, enterprise education, attending conferences, Continuing Professional Development (CPD) courses and advisory boards.

1.3. Community-based activities are concerned with 'exchanges with the general public and the voluntary and cultural sector' (Hughes et al. 2016:31) such as public lectures, performing arts, school projects, community sports and exhibitions.

### 2. Knowledge exchange models of commercial interactions:

2.1. Commercialisation activities, such as patenting, licensed research, spin-out company and formed/run consultancy.

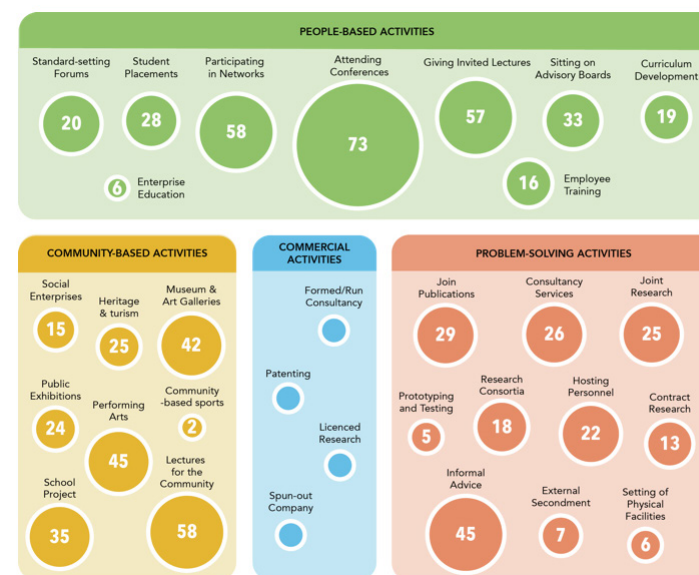


Figure 8: Academic external interaction activity and commercialisation in the last three years (% of respondents) in the Arts and Humanities. Author's visualisation based on Hughes et al. 2016. Data for commercial activities not available.

This account of knowledge exchange by modes of interactions is highly relevant and illustrative of knowledge exchange. It extends the range of knowledge exchange practices from four commercial activities -typically associated with knowledge transfer- to twenty seven non-commercial activities. In doing so, the diversity of modes of interaction for knowledge exchange is acknowledged and in turn the multiple routes to impact and different support that these disparate practices require (PACEC 2015; HEFCE 2016).

In any case, **the mechanisms outlined are indicative but not normative** of how knowledge exchange activities might crystalize. **Knowledge exchange can take (too) many shapes (at once)**, often featuring multiple mechanisms simultaneously, concurrently or sequentially. Looking at modes of interactions is a good starting point for grasping what knowledge exchange might look like, but a perspective on knowledge exchange exclusively based on modes of interaction offers a limited account of how knowledge is constructed and shared.

Many knowledge exchange interactions unfold in the context of the academic curriculum and therefore aim at enhancing teaching and learning. This might be why data suggests that art and design don't seem to do particularly well at 'commercial activities' but it doesn't mean that there isn't a huge potential for it.

Finally, it is important to maintain a **culture of experimentation** for 'best practice – if ever identifiable and attainable – does not stand still.' (HEFCE, 2016:8).



## 2.1 What are enablers that support knowledge exchange interactions?

Enablers of knowledge exchange are often referred to as infrastructure in grey literature. However, knowledge exchange is significantly influenced by a range of contextual factors that are probably best approached as enablers (Figure 5), **principles or values for building knowledge exchange ecosystems** (Fazey and et al. 2012, Dovey et al. 2016).

- **Knowledge exchange is highly relational, driven by values rather than outputs:** the productivity of knowledge exchange networks arises from the relationship between people working within the network, and they succeed when driven by shared 'values rather than outputs' (Dovey et al 2016:12).
- **Collaboration is a journey** that begins before a knowledge exchange activity kicks-off. It is essential to allocate resources to nurture the quality of relationships within established and emergent networks, rather than limiting resources to the delivery of knowledge exchange activities. In this sense, it is essential to '[c]urate people as much as projects' to ensure 'that partners have a positive, professional and respectful relationship' (Dovey et al. 2016:21).
- **Activating strategic relationships:** HEIs take a leading role in strengthening local ecosystems, acting as knowledge exchange brokers to activate cross-sector and cross-discipline collaborations, connecting innovators with trusted networks (Dovey et al. 2016). Knowledge exchange ecosystems build on pre-existent networks, relying heavily on key actors' networks and thematic expertise.
- **Knowledge exchange requires diversity:** Complex networks in which different approaches to knowledge exchange are curated, managed and nurtured, in order to maintain a wide breath of practices. It is challenging to organise new networks and maintain existing ones. Not surprisingly, many knowledge exchange activities count as an achievement the formalisation of ad hoc collaborations into sustained and long-term relationships that enable more strategic and possibly more impactful knowledge exchange activities.
- **Parity, trust and respect:** Evidence shows that approaches based on 'parity of opportunity, trust, and respect' encourage future cross-sector collaborative activities (Senior et al. 2016:12). This ethos must be **consistently** nurtured from the very beginning and shared among participants, as it is determinant to enable successful interactions.
- **Value for each stakeholder:** It is essential to recognize the importance of mutual benefit in sustaining productive collaborations, generating value and positive impact on all collaborative partners involved (Senior et al. 2016; AHRC 2017). Articulating knowledge exchange activities to the mutual benefit of all collaborative partners implies working towards **multiple targets**. All actors should recognise own and others assumptions and ways of doing things, as well as understanding different stakeholders' motivations and expectations. Additionally, aiming to deliver pedagogical value adds specific requirements to setting and delivering knowledge exchange interactions.

- **Organisational culture change:** Setting up collaborative activities requires HEIs to be agile and supportive of diverse knowledge exchange practices and activities –not just inherited from knowledge transfer! Whereas institutional support might be available, it might not be fit for purpose and require innovative approaches such as (agile) collaboration agreements, knowledge protection strategies, finance or risk assessment that support knowledge exchange.
- **Knowledge Exchange facilitators:** Bearing in mind that knowledge exchange interactions are relational rather than transactional, the role of facilitators is paramount to facilitate dialogue among stakeholders from early stages and set the tone of the collaboration.
- Collaborative practice in the context of HE is a **new territory** for many practitioners, who need to build up know how and an evidence-based portfolio of collaborations.

### 3. What are the impacts and value of knowledge exchange activities? What outcomes are accounted for? By whom?

**Evaluation** is 'the systematic and objective assessment of a [...] project, programme or policy, its design, implementation and results. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability' (OECD 2006:np) An evaluation should be systematic and objective, provide information that is credible and useful, enable the incorporation of lessons learned and determine the significance of the intervention.

Evaluation is a crucial part of the knowledge exchange process. Advantages of evaluating knowledge exchange activities go beyond external accountability or validation for whether a project has been successful. Overall, evaluation is an important part of **improving** knowledge exchange interactions and contributes to (Everly et al 2012:3):

- refine practice either/both during implementation and the design of new initiatives;
- clarify objectives and increase shared ownership and responsibility for delivering knowledge exchange, and with it the likelihood that the goals will be met;
- examine underlying assumptions and consider whether alternative approaches would be more effective;
- give opportunities for stakeholders to share perspectives.

- **Outcomes of knowledge exchange activities are wide ranging:** Successful knowledge exchange networks produce many different kinds of impact (Dovey et al. 2016). The outcomes of knowledge exchange activities depend greatly on 'how knowledge exchange is defined, how goals are identified, and the process implemented' (Fazey and et al. 2012:5).
- **Wider positive spill-over effects:** Despite the overemphasis on income based indicators as a proxy for impact, knowledge exchange activities generally are not a source of additional revenue though they lead to wider benefits (HEFCE, 2016; PACEC 2015) Stop just counting and look out for real stories of impact and value to the economy and society.
- **Unpredictable and emergent effects:** As the knowledge exchange activities would transcend participants' expertise and expectations the impacts of a collaborative journey might not be apparent during the process (Bowen et al. 2016; Dovey et al. 2016).
- **Predefined matrix of outcomes:** Key to develop effective evaluation is knowing what the intended objectives of a project are meant to be (Everly et al. 2012).
- The uncertainty and emergence of knowledge exchange is not at odds with clarifying the activity objectives and expected outcomes. **Create a predefined matrix of outcomes:** Create a map of actual outcomes, both intended and emergent, grounded

on a longitudinal study of diverse art and design knowledge exchange activities.

- **From value chain to value network:** The value of knowledge exchange interventions emerge from complex networks of interactions rather than chains.
- **Determining cause and effect:** The effects of individual knowledge exchange activities on stakeholders' performance are difficult to disentangle (PACEC 2015). Each stakeholder is well-equipped to legitimize claims on the value of knowledge exchange activities from their unique **point of view**, e.g. key partners, collaborators, clients, stakeholders, students, tutors.
- Evaluation is a **shared endeavour** that requires bringing together varied and often antagonistic voices. **Get different stakeholders** involved in capturing and articulating the diverse benefits of knowledge exchange interactions. Academic and support staff might not be fully equipped to conduct an evaluation.
- **Longitudinal studies:** Actors might not be explicitly aware of how their knowledge has changed and it may not be evident until sometime after the intervention. In turn, self-reporting methods of evaluation are unlikely to capture tacit knowledge, particularly directly after the knowledge exchange activity! Instead, Jacobs (2013) advocates for longitudinal studies to develop an experimental (evaluative) framework.

#### 4. How is the value of knowledge exchange activities recognised and disseminated?

Catch-all approaches to evaluation of knowledge exchange are neither appropriate nor desirable: 'Different kinds of knowledge exchange activities require different methods of evaluation' according to how knowledge exchange is conceptualized and implemented (Fazey et al. 2013:3).

Fazey et al. (2013) account for three main factors in designing methodology for knowledge exchange evaluations: Firstly, the selection of evaluation methodologies needs to take into account both how knowledge exchange is conceptualized and how is knowledge exchange is implemented. These factors are in turn influenced by actors' epistemological and ontological positions. Secondly, evaluative methods must be appropriate for the specific practice. Thirdly, the design of methodologies for knowledge exchange evaluations must consider the outcomes to be evaluated.

- **Tailored evaluations:** It is necessary to design tailored evaluations, as catch-all types of evaluations are unlikely to work well.
- **Inclusive evaluation:** Involving stakeholders as participants in the evaluation process requires different methods for different stakeholders.
- **Empowerment evaluation:** Giving stakeholders the opportunity to share their perspectives can enhance their motivation and empower them to deliver the desired outcomes.

- **Evaluate throughout:** Evaluations can be of a planned, on-going or completed intervention, but it is best if evaluations are included throughout the intervention.
- **Expert support:** Evaluation requires specialist knowledge and additional resources to employ a diversity of disciplinary perspectives and methods appropriate to the knowledge exchange activity.

Bowen et al. (2016) capture post-hoc accounts of collaborators' experiences through **interviews and annotated timelines**. The co-creation of annotated timelines can act as a visual communicative means for people to actively re-construct their experiences in dialogue.

Evely et al. (2012) suggest **logframe** and **Theory of Change** for the evaluation of knowledge exchange when there is enough resources: sufficient time is spent, process is guided by professional facilitation and involves multiple stakeholders with shared ownership.

Leapfrog: Transforming Public Service Consultation by Design has developed tools to facilitate new approaches to public consultation, which are highly relevant for the practice and evaluation of knowledge exchange, such as '**Bunch of Impact**' (Cruickshank, L. 2015-2018)

Kimbell and Julier's Social Design Method Menu (2012:41-42) features an '**outcomes matrix**' that includes the point of view of different stakeholders and what matters to them.

**All together now:** Best practice has been identified when stakeholders have ownership and assume a proactive and leading role in documenting and disseminating.

Involve different stakeholders and use **appropriate methods** to engage with each of them. Collaborative reporting between stakeholders is also a moment of **collaborative reflection and learning**.

**Document throughout:** Ensure data collection is in progress from the beginning of the project to capture change.

Consider early-on whether a **holistic report** that addresses the teaching, research and innovation aspect of the intervention is appropriate and **avoid reporting fatigue**.

**Get evidence from diverse sources**, using different methods that take into consideration each stakeholder.

**Allocate resources to 'talk the talk':** Resources for knowledge exchange are typically directed to 'walk the walk' Allocate some additional resources (usually staff time and additional expertise) to reflect, report and disseminate.

**Follow-up:** Agree to a follow-up sessions early on with stakeholders, to reflect and capture impact sometime after the intervention has finished.

What is **the purpose of disseminating** the value of knowledge exchange activities? An often unspoken challenge of dissemination is to **identify what to feature and how to evidence it**.

## SECTION FOUR – SOME TOOLS

### Knowledge Exchange Ecosystem Tool

**The Knowledge Exchange Ecosystem Tool** (Figure 9) was developed iteratively, informed by insights gained from the literature review and workshops (see Annex).

At the workshops, participants completed their ecosystem based on assumptions about a chosen knowledge exchange activity, however, its potential to act as a boundary object (Star & Griesemer 1989) was largely recognised. The tool would both elicit and consolidate multiple-stakeholders perspectives in one place, also becoming a data gathering instrument as it is iterated throughout the duration of the collaboration.

The Knowledge Exchange Ecosystem Tool has the potential to assist practitioners **to better plan, monitor and assess the value and impacts of multi-stakeholder knowledge exchange activities**, by:

- engage in collaborative reflection that contributes to the unearthing of emergent and unexpected benefits for diverse stakeholders; in addition to agreed outcomes.
- talking about the difference they hope to make, rather than the activities they hope to deliver;
- outline a holistic overview of a complex multi-stakeholder intervention, take into consideration the unique perspective of each actor and put their unique points of view into dialogue, facilitating the identification of synergetic and antagonistic relationships, raising assumptions, power relationships and contributing to articulate fully participatory and ethical interactions;

1. Brief and summary of how the collaboration is formalised.
2. Each of the individual actors, by sector and discipline.
3. Explain why the collaboration took place from the point of view of each actor.
4. Note the outcomes desired by each actor.
5. Reflect: note unforeseen benefits from the collaboration.

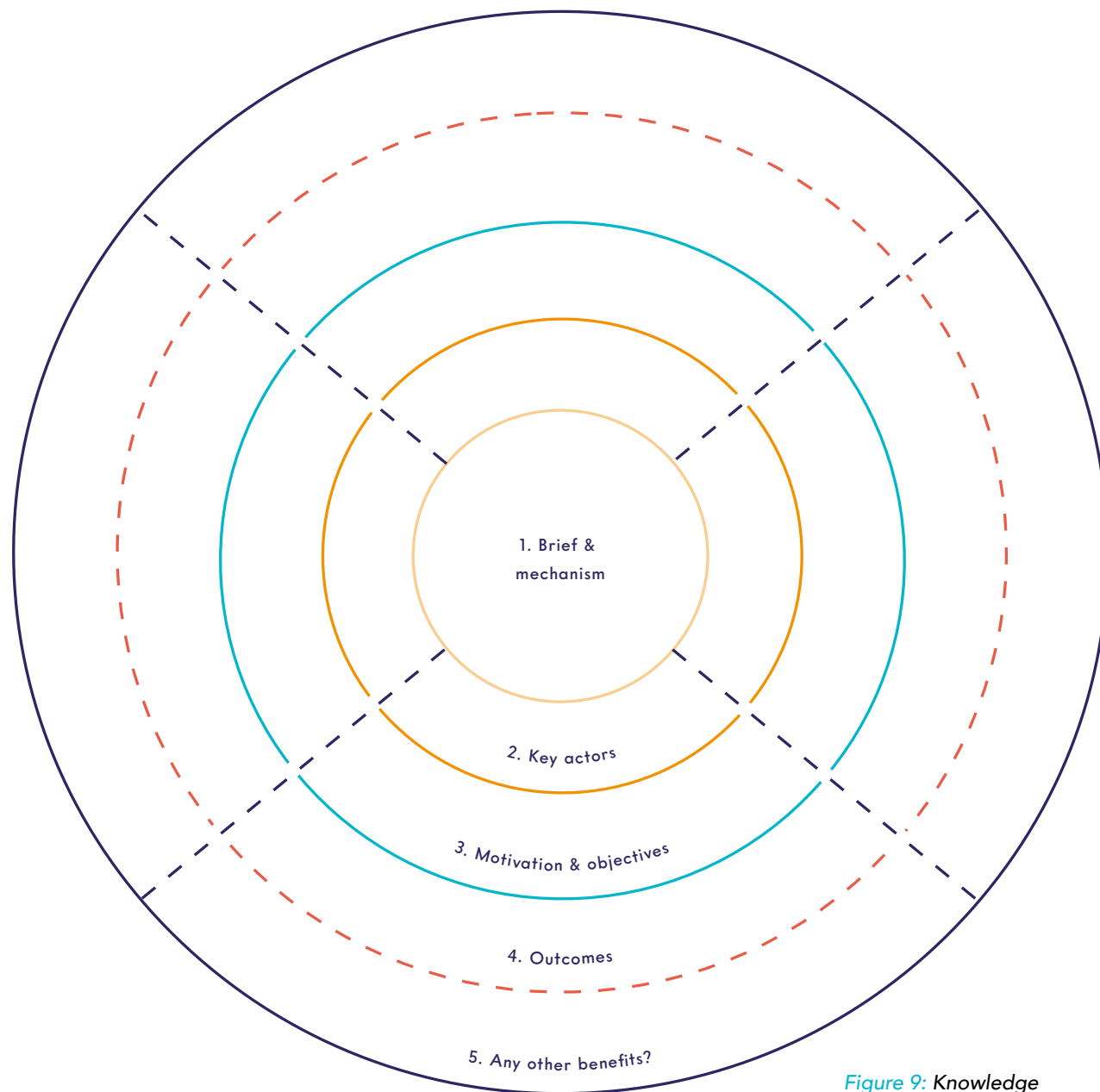


Figure 9: Knowledge Exchange Ecosystem Tool (v3) (Salinas 2018c)



## Knowledge Exchange Case Study Template

The Knowledge Exchange Case Study Template (Table 1) was developed iteratively, informed by insights gained from the literature

review, Knowledge Exchange Ecosystem Tool and analysis of the commissioned case studies (see Annex).

<b>Title:</b> Title of the (main) knowledge exchange activity		<b>Disciplinary approach(es):</b> Disciplines that feature in the (main) knowledge exchange activity		
<b>Reporting:</b> Author of the case study		<b>Mechanisms of collaboration:</b> What form the (main) knowledge exchange activity takes		
<b>Brief:</b> Outline of the (main) knowledge exchange activity		<b>Timeline:</b> Including delivery, plus time for preparation and evaluation		
<b>Context:</b> 'Builds on' and 'develops in the context of'				

Key actors of the knowledge exchange activity	Their motivation, objectives or aims	The output they produce, or their input to the activity	The outcomes they expect	Their evaluation of the knowledge exchange activity
Such as partner(s) who are involved in scoping the activity.				Such as short-term
Partners often are decision-makers and often duty-holders.				or mid-term
Such as collaborator(s) who contribute to the activity in different capacities and intensities.			Learning outcomes, if students are involved.	or long-term
Partners and collaborators can be professional experts and stakeholders.				

Table 1: Knowledge Exchange Case Study Template

## ANNEX

### Research methodology

The research follows an iterative and inclusive approach. The research began with a **scoping literature review** of academic and grey literature from arts and design, innovation, studies of evaluation. Given the time and resource limit of the project the research strategy aimed to be as broad and comprehensive as possible, but not exhaustive. The primary focus of the literature search has been on materials related to knowledge exchange, on published academic research and grey literature focused but not limited to the arts and humanities. In addition to academic literature, the review includes reports published by Higher Education Funding Council for England (HEFCE), Research Councils United Kingdom (RCUK) with emphasis on the Knowledge Exchange Hubs for the Creative Economy funded by Arts and Humanities Research Council (AHRC KE Hubs), and the National Centre for Universities and Businesses (NCUB). The disparate approaches found on the literature revealed the need for a multidimensional framework to put different perspectives into dialogue. As a result, a **multidimensional framework** has been developed iteratively.

Concurrently to the literature review, four half-day **workshops** involving a total of 30 academics and 35 supporting staff experienced in knowledge exchange were held across University of the Arts London. Participants self-nominated to attend. The workshops were open to members of staff and therefore workshops in different colleges are not necessarily representative of the college's knowledge exchange activity.

### Mapping out knowledge exchange activities

At the workshops participants were asked to write down the most representative knowledge exchange activities in which they have been involved over the past three years and to place them on a quadrant chart according to whether the project had involved direct income generation for any of the stakeholders (non-monetised/monetised), and whether the evaluation conducted was qualitative, mixed-methods or qualitative. A total of 163 interactions were captured, providing a **quick-and-dirty map** of knowledge exchange activities (Figure 10)

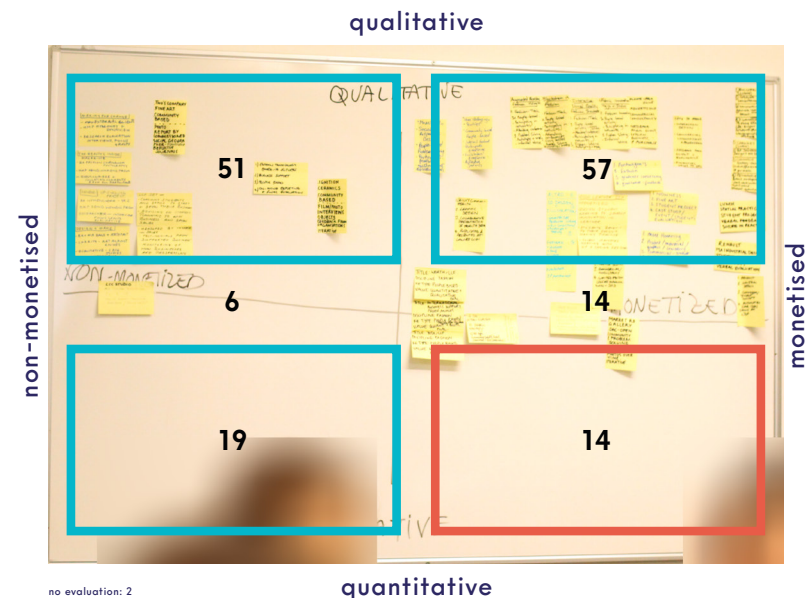


Figure 10: Summary of the 163 knowledge exchange activities provided by 30 academics and 35 supporting staff during the four half-days workshops held at University of the Arts London (Salinas 2018b)

## A quick look into the current evaluative practices to assess the impact of knowledge exchange interventions

Within universities' audit culture, public funding bodies have established processes to assess the excellence of publicly funded activities and inform further allocation of funds. Currently, the Higher Education Statistics Agency (HESA) undertakes the collection and analysis of the Higher Education Business and Community Interaction survey (HE-BCI) from higher education providers (HEPs) –which includes all UK publicly funded higher education institutions (HEIs) and a number of alternative providers (APs). The HE-BCI survey 'captures a range of qualitative and quantitative information on research and innovation activities' (RCUK 2016:8). As a **proxy for impact** HE-BCI captures **income metrics** from collaborative research, contract research, consultancy, facilities and equipment related services, Continuing Professional Development (CPD) and Continuing Education (CE), regeneration and developing, and intellectual property; and **numeric but non-income metrics** from disclosures, patent application, licenses, HEI and formal spin-offs, staff and graduates' start-ups and public events. HESA acknowledges that as a 'low-burden questionnaire' it is 'likely not to capture everything given the complexity of such interactions' nevertheless it should reflect 'the majority of HEP's third stream income' (HESA, n.d.)

The limitations of current academic bureaucracies to assess the value of knowledge exchange have been extensively discussed and the development of new impact metrics encouraged (Dowling 2015). A Knowledge Exchange Framework (KEF) is currently under development aiming to develop new metrics to benchmark performance from university-external organisations' interaction alongside REF and TEF (Johnson 2017).

## What is the current survey instrument potentially assessing and missing out?

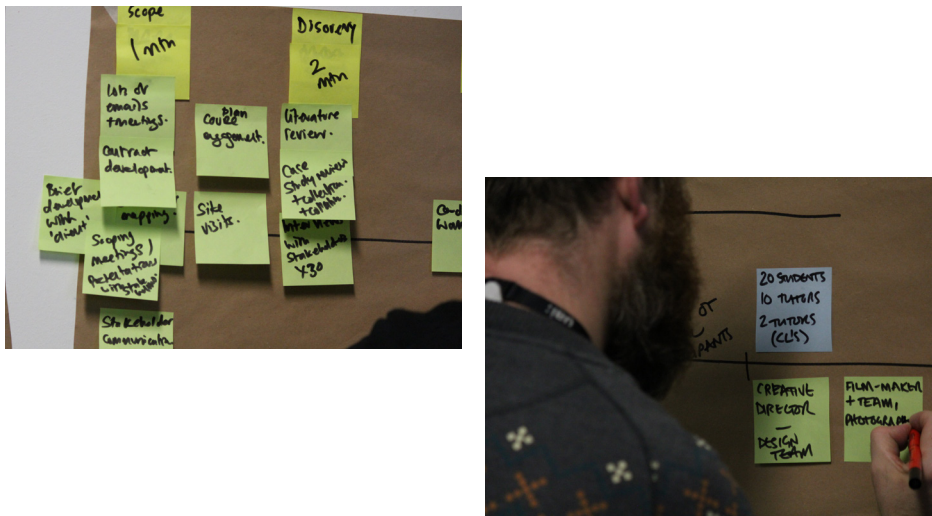
**Commercial activities** such as consultancy or patenting have 'featured prominently in the assessment of knowledge exchange capabilities for universities', however, this seems unjustified as they account for just a small proportion of universities' external income and **non-commercial activities are dominant in all disciplinary fields** (Hughes et al. 2016:35). These 'non-commercial' activities are often initiated through informal mechanisms that 'may not require contractual and transactional services' offered by universities' administrative units (Hughes et al. 2016:43). In addition to offering support, these units are typically tasked with the completion of the HE-BCI survey. It seems safe to assume that interactions initiated through informal mechanisms, such as personal networks, are unlikely to be reported to HE-BCI.

Although knowledge exchange is defined by HEFCE as an interaction between academics and non-academics aimed at 'creat[ing] social and economic benefit' (HEFCE 2017) the current overemphasis on income metrics as a proxy for impact largely overlooks the social, cultural and/or environmental benefits that these activities may generate. Additionally, this way of reporting does not support reflective practice that may lead to improve knowledge exchange interactions.

## Knowledge Exchange Journeys

At the first of the four half-days workshops, participants were asked to choose a project and map out the project's journey and stakeholders' interaction:

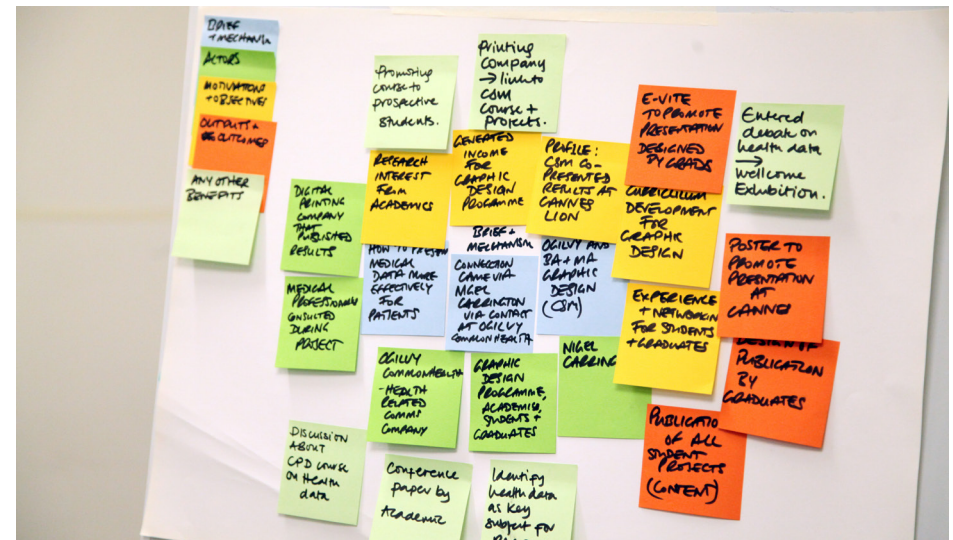
- interaction with non-university actors over the timeline of the project was represented as a complex network, full of ramifications that streamed from the main knowledge exchange intervention.
- interactions with university actors focused on signalling interaction with academic support and the operational challenges of setting and carrying out knowledge exchange interventions.



**Figure 11: Knowledge Exchange Journeys (Salinas 2018b)**

## Knowledge Exchange Ecosystem Tool

Participants formed groups to map out one knowledge exchange intervention. Due to the limited time, participants were asked to prioritise providing content about external stakeholders rather than university actors such as academic support or students. Each group presented their ecosystem to the rest of the workshops' participants. A total of 15 knowledge exchange interactions were mapped in the four workshops with university staff. In addition, the tool was also tested by 30 design graduate students experienced in knowledge exchange as a means to help them plan for and reflect upon their multi-stakeholder design projects.



**Figure 12: Knowledge Exchange Ecosystem (Salinas 2018b)**





Figure 13: KE Ecosystem by workshop participant (1) (Salinas 2018b)

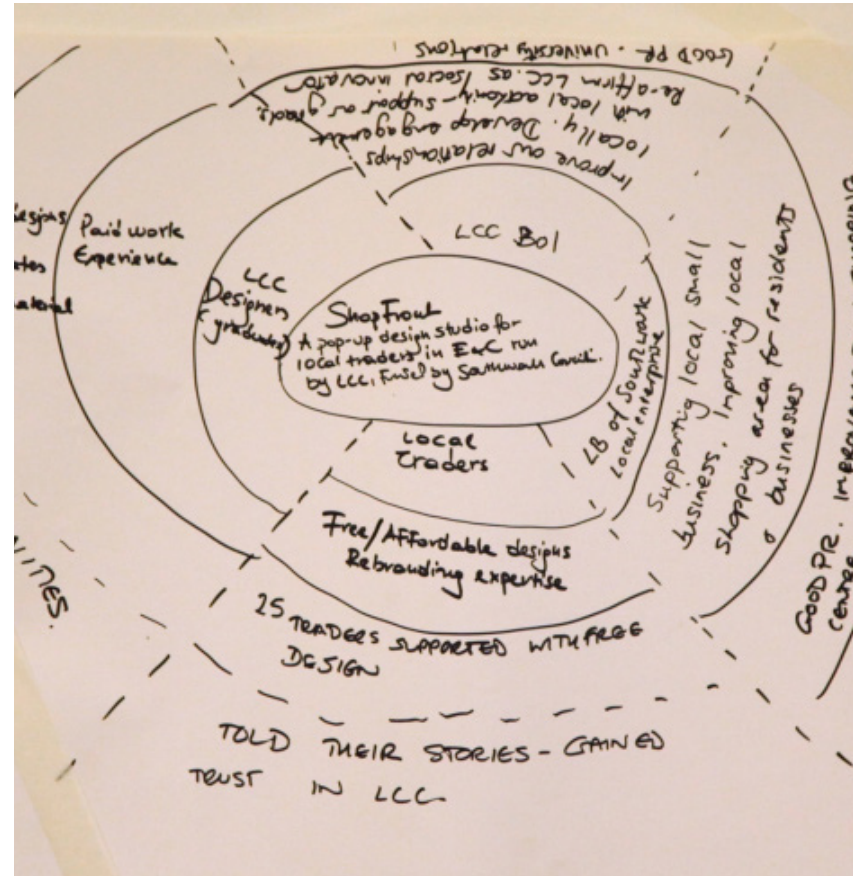


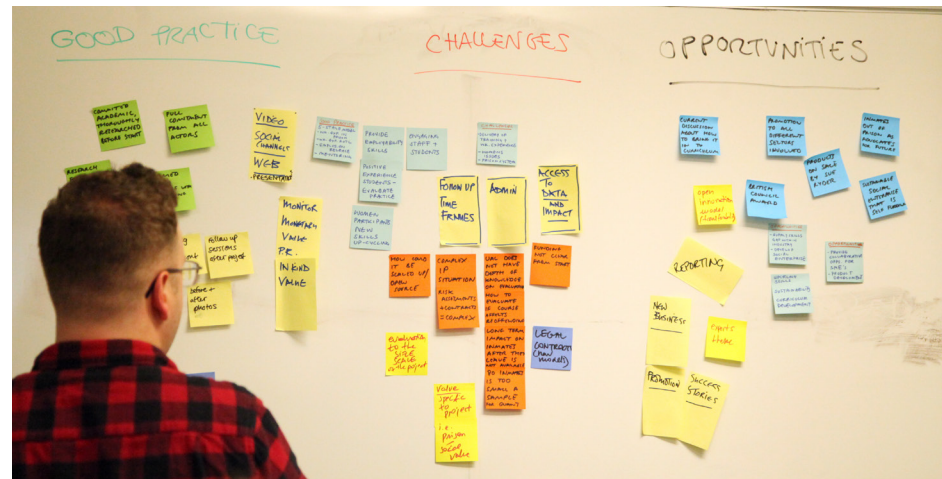
Figure 14: KE Ecosystem by workshop participant (2) (Salinas 2018b)



Figure 15: KE Ecosystem by workshop participant (3) (Salinas 2018b)

## Collective reflection

During the presentation and following discussion of the selected knowledge exchange projects, participants annotated, shared and reflected on the best practices, challenges and opportunities that emerged during the conversation.



## Case studies

Participants to the workshops were invited to submit an expression of interest to develop a knowledge exchange case study. A total of 13 applications were received and 6 case studies representative of the diversity of knowledge exchange interactions across University of the Arts London were commissioned.

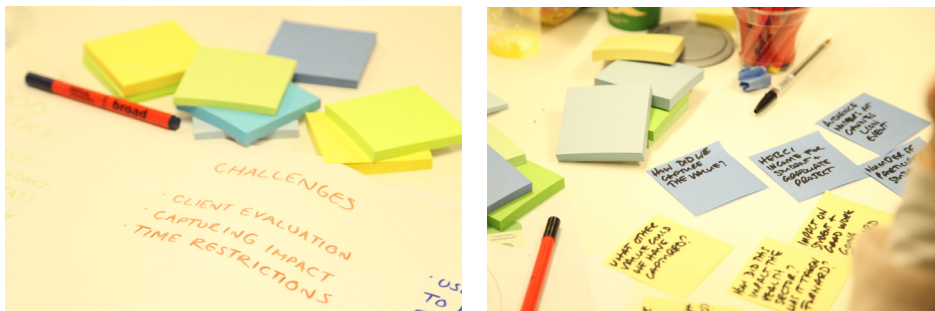


Figure 18: Collective reflection (Salinas 2018b)

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