Conclusion

A roadmap for successful creative industries' R,D&I

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As we have discussed throughout this book, research, development and innovation (R,D&I) is a relatively new phenomenon in the creative industries. We are still learning how R,D&I is perceived and utilised, how it creates value and how it can enhance the ability of regional creative clusters – made up primarily of small businesses – to compete globally. In a broad sense, R,D&I is often equated with creativity and creative work but applying R,D&I in the creative industries is widely misunderstood. While creativity is crucial for innovation, R,D&I extends beyond imaginative thinking, involving a methodical and replicable approach to tackling real challenges and progressing from challenges to workable solutions. This book integrated four analytical dimensions – epistemological, perceptual, systemic and performative – to shed light on how R,D&I operates in the creative industries and how it can be effectively utilised to support a local innovation ecosystem.

Chapter 1 argues for rethinking rather than rejecting the idea of the creative economy, to allow economic structures to align with – rather than run counter to – cultural and creative value. We positioned our own work within that framework, arguing for the importance of an understanding of the creative economy and creative industries in order to develop new economic models to also produce positive social and cultural outcomes. The Clwstwr programme fits squarely within that model, aiming to create an ecosystem that supports the green, fair development of the creative industries, embracing place-making and positive social and economic impacts. The structure of Clwstwr – and its experimental and reflective approach to R&D – provides a strong and practical case for exploring the value and efficacy of R,D&I within the creative industries – one that goes beyond the techno-centric, linear, STEM-focused notions of R&D that have dominated both the literature and policy domains to date.

Chapter 2 presents our first analysis of the 68 Clwstwr R,D&I projects. It shows that a clear majority -93% of respondents - found that while R&D often pushed them into unfamiliar areas, it was worth the

investment of time and resources. Even in traditional terms – using the typology of technology readiness levels – most Clwstwr projects achieved a level of progress that met their expectations. Despite the fairly modest levels of investment and limited time frames, over a third reached the later stages of readiness levels (developing a product, service or experience to a point close to market readiness). We further identified seven traits that characterise creative industries' R&D. Many of these – uncertainty, openendedness, the need for learning, the discovery of new possibilities and so on – require time and resources, suggesting both the need for external funding and support systems to guide creative businesses through the complex terrain of R&D. This shows that although businesses in the creative industries find it challenging – associated with high levels of uncertainty – they recognise the importance and long-term impact of R&D.

Chapter 3 following on from Chapter 2, suggests a novel typology of R,D&I in the creative industries that is more accessible, inclusive and less focused on technology than most traditional models. This includes more experimental and less rigid approaches to conducting R&D, as well as acknowledging informal and flexible methods of transferring knowledge. This typology was based on the R&D processes the creative industries' projects go through to innovate, rather than stages between 'blue sky' and 'close to market' that define more traditional R&D processes. We developed a four-point grid based on two axes identifying the R&D process. The first axis describes the degree of pre-defined determination or R&D direction, from a highly focused and goal-oriented to a more open-ended and exploratory R&D process. The second axis describes the degree of learning throughout the R&D process, which ranges from refining existing knowledge and applying it to solve specific problems to acquiring new knowledge with the potential to open completely new (and hitherto unknown) opportunities. This gave us a framework identifying four different archetypes of creative industries innovation. (1) Technocratic innovation, which represents the most structured and focused form of innovation within the creative industries, and most closely aligns with traditional forms of R&D, where the primary goal is to refine existing knowledge and apply it to solve well-defined problems. (2) Incremental innovation, which also uses a structured R&D approach, while incorporating a degree of exploration within this framework, balanced between exploitative and exploratory learning. (3) Conceptualising innovation, which represents a shift towards a more open-ended and exploratory approach to R&D, embracing a knowledge-based form of investigation that aligns with the concept of open innovation. This openness allows for collaboration with external knowledge sources and the exploration of entirely new creative possibilities while leveraging their existing knowledge base as a springboard for exploration. (4) Disruptive innovation, which is characterised by high levels of uncertainty and a commitment to exploratory learning. Disruptive innovation embraces open innovation to its fullest extent, actively seeking out external knowledge sources and venturing into entirely new creative territories.

Chapter 4 looks into the optimal support levels for R,D&I projects in the creative industries. Clwstwr saw funding for R&D as part of a broader ecosystem – one that provided training in R&D methods (through UCD) and included a range of support and collaboration mechanisms. Our research endorses this approach and suggests that projects that engaged with this ecosystem of support were more likely to report successful outcomes than those that did not – although too much dependence could be counterproductive (for both the funding programme and the project). This indicates that innovation programmes that simply offer financial grants are less likely to be effective: essentially, Clwstwr's creation of an ecosystem and support network – in addition to funding – played a key role in its success

As R&D activity in the creative industries' progresses, there will be a growing need for more sophisticated strategies, techniques and instruments to make the case for – and efficacy of – public investment. This research takes a significant step in this direction by offering a comprehensive roadmap for effective R,D&I in the creative industries.

Firstly, there is a need for an epistemic shift that aligns our understanding of value generation in the creative economy, fostering a model of innovation where economic targets align with forms of social and cultural value.

Secondly, it suggests an expanded conceptual model of R&D types and processes in the creative industries to understand the value and perception of R,D&I. Such a model should emerge, bottom-up, through creative businesses' own ideas about what effective R&D means in their sector, best developed during empirical, large-scale, 'action research' programmes such as Clwstwr. The model expands on existing models such as the one provided by the *Frascati Manual* by deepening our understanding of the concept both at the theoretical and practical levels in order to differentiate its practice from other sectors.

Thirdly, a model for classifying R&D-based typologies of innovation is useful for rendering the entire process of innovation within the creative industries more transparent. To date, much of the innovation work in this sector is associated with creativity and the ability to come up with new ideas. The proposed classification model expands on existing ones while distinguishing between different pathways leading to innovation and their particular operational specificities. In doing so, it sheds light on the variety of R&D pathways and mechanisms leading to innovation. It also provides a systemic overview of the innovation forms within the creative industries to guide practitioners and inform policymakers.

And fourthly, our book shows that we need more inclusive and flexible funding schemes that operate within a support ecosystem that should work for a sector based mainly on small businesses or freelancers with little capacity for R&D. These should not only provide seed funding, but a solid foundation that consolidates long-term resilience. Support schemes should take into account the need to incentivise early milestones and the need to maintain levels of engagement that support – but do not overly constrain – R&D. It should facilitate the building of inclusive funding schemes that embrace diversity and allow for the multiplicity of voices within creative industries to access R,D&I. It also needs to seek more long-term impact through follow-up funding, continued mentorship and robust networking opportunities while providing flexibility.

This book is one of the first systematic attempts – using quantitative and qualitative methods – to address the field of R,D&I in the creative industries. We hope the frameworks, models and instruments developed in this book form a coherent roadmap through which we can envisage how successful R,D&I can work in the creative industries. Overall, our work suggests that place-based R,D&I can add real social, economic and cultural value. There is clear evidence to continue supporting R,D&I in the creative industries through funding and support ecosystems, with levers and mechanisms that align to real industry needs and operate as effectively as possible to create long-term economic, cultural and social impact.