

Fostering innovation in Cardiff's creative industries through human-centred R&D

A PDR Expertise Report
2021 - 2022

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clwstwr

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Introduction: R&D in the creative industries

The creative industries have a complex relationship with research and development.

As a major 2020 study highlighted, many small or emerging players in the sector do not see research and development (R&D) as “for them”. Common reasons include being too tiny, too busy or too cash-strapped to undertake R&D activities. Some simply feel they were doing fine without it.¹

Behind such lukewarm responses was not ignorance of the recognised benefits of R&D for innovation and corporate performance: it was the widely held perception of R&D as a technologically driven, big-budget activity; something done by engineers in lab-coats, not writers, podcasters or other creative people.² As one Clwstwr participant put it, “I’m not very technically-minded, start-up-y or app-y.”³

In practice, theatre companies, documentary-makers and many other crea-

tive businesses are continually developing new content, reshaping existing content for new platforms, asking their audiences for feedback or testing new modes of delivery in order. And, such activities have expanded and accelerated as businesses try to stay viable during a global pandemic. All these activities fit the rubric of “creative and systematic work undertaken in order to increase the stock of knowledge... and to devise new applications of available knowledge” – which is how the OECD defines R&D.⁴

Creative sector organisations that prioritise R&D are more likely to grow, adopt new technologies, attract highly skilled employees and generate more of their turn-over from new products and services.⁵ Unless they can see the relevance of R&D – or recognise the extent to which they are already pursuing it – small and emerging creative practitioners may miss significant opportunities for innovation and growth.

The creative industries contribute more than £111bn to the UK every year, with the sector expanding at five times the rate of the economy as a whole.⁶ Cardiff in particular has developed an enviable reputation around screen industries, which includes film, television, gaming and other narrative media. But the local industry must innovate rapidly if it is to achieve leadership in new areas. Clwstwr aimed to give micro-to-medium businesses, particularly those working in screen-based storytelling and news delivery, the tools to rise to the challenge through funding and training in R&D.

In total, Clwstwr supported 118 micro-to-medium creative industry projects with £3.6 million in funding and around £0.75 million in expert R&D training and advice. This generated an additional investment of £2.1 million from the participating projects.

Clwstwr Creadigol: A brief overview

Clwstwr Creadigol was a collaborative enterprise formed by a consortium of three higher education institutions, each with an established record of creative industry excellence: Cardiff University, the University of South Wales and Cardiff Metropolitan University (of which PDR is the design and innovation research centre). Other partners included the Welsh Government, the major Welsh broadcasters and representatives of key local screen industry businesses.

The structure of Clwstwr represented an ambitious exercise in bringing together high-achieving professionals from a range of organisations to provide academic rigour, transparent accountability, hands-on training and cutting-edge research practices. As figure 1 shows (on the following page), the Clwstwr delivery team centred around a core group of producers, screen industry experts who provided day-to-day professional support to Clwstwr-funded projects. Other deliv-

ery team members handled communications, research impact and financial management.

Ultimate governance of Clwstwr rested with a steering board of senior academic and industry names who oversaw strategy and direction. This board was supported by an experienced and diverse management team that had final approval of projects and funding. A panel of academics from design, screen media, journalism and other branches of the creative industries provided a co-investigator for each project, offering insights from their discipline's knowledge base and research practices. At the heart of the project sat PDR's team of design researchers, human-centred designers and other design experts who were tasked with providing R&D training and support.

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- 1 Bird, G., Gorry, H., Roper, S. & Love, J. (n.d.). R&D in Creative Industries Survey 2020. Prepared for the Department for Digital, Culture, Media and Sport By OMB Research. [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/919052/4565_-_DCMS_RD_in_Creative_Industries_Survey_-_Report_-_D8_PDF.pdf
 - 2 Miles, I. & Green, L. (n.d.). Hidden innovation in the creative industries. [online] Available at: https://media.nesta.org.uk/documents/hidden_innovation_creative_industries_report.pdf
 - 3 King, R. (2020) 'Clwstwr participant video feedback – Richard: Ideas Lab experience'. [Zoom], 11 December.
 - 4 ACAS Julia, STI/COM (2015). Frascati Manual -2015 Edition Guidelines for Collecting and Reporting Data on Research and Experimental Development. [online] Available at: <https://www.oecd.org/sti/inno/Frascati-Manual-2015-Flyer-EN.pdf>
 - 5 Siepel, J., Ospina, J., Camerani, R., Bloom, M., Masucci, M. & Casadei, P. (2021). Creative Radar 2021. [online] Available at: <https://cdn2.assets-servd.host/creative-pec/production/assets/publications/Creative-Radar-2021-The-Impact-of-Covid-19-on-the-Creative-Industries-PEC-July-2021.pdf>
 - 6 DCMS (2020). DCMS Sectors Economic Estimates 2018 (provisional): Gross Value Added. [online] www.gov.uk. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/959053/DCMS_Sectors_Economic_Estimates_GVA_2018_V2.pdf

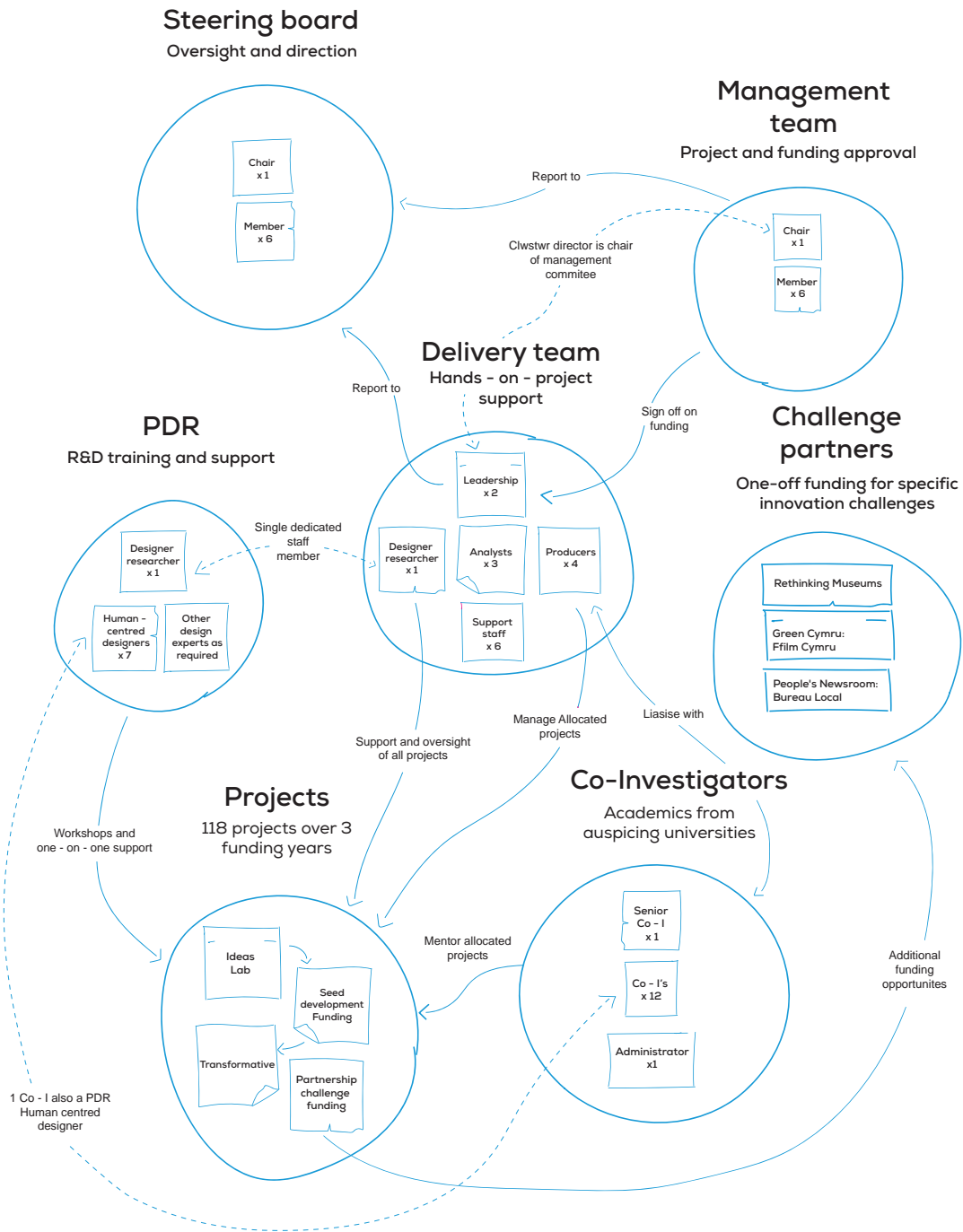


Figure 1: The structure of Clwstwr Creadigol.

PDR and human-centred R&D

PDR's approach to R&D evolved from methods that designers have refined over decades to solve problems and spark innovation. Driven by curiosity and empathy, PDR's research focuses on identifying what clients, users and audiences actually need. The approach seeks to ask "why?" and "what if?" and to tune in to what people do as well as what they say.

Development begins by taking what is learned about people and their needs and exploring where it aligns with an organisation's strengths and values. PDR works with organisations to build their capacity to deliver something both useful and new.

PDR found that this flexible, creative and empowering approach resonated deeply with Clwstwr participants. A growing familiarity with human-centred research techniques helped them recognise themselves as capable and resourceful innovators who have already begun their R&D journey –

they just needed some signposts and a companion or two on the way.

PDR's role in Clwstwr centred on introducing participants to R&D activities that were appropriate to their goals, sustainable within their resources, delivered actionable insights and promoted genuine innovation. As partners in the R&D process, PDR's goal was to help small and emerging creative businesses to articulate their aims and objectives, opportunities and obstacles, with the aim of matching their skills and passions to real existing human needs.

The biggest impact of Clwstwr was "being given language, terminology and frameworks for things that I already did, but that I'd never been able to put value on. I'd done a lot of R&D, but I didn't have the vocabulary to name it."⁷

PDR guided them through a range of human-centred research methods, including observation, focus-groups, diary studies and prototype-testing. Concepts such as stakeholders, iterative development, customer journeys and the "double diamond" model of design thinking were unpacked in ways that applied to their own concrete situations and challenges. PDR acted as coaches and mentors to assist participants in planning user researcher and then interpreting the findings to help bring a new product, service or experience to market.

As well as advising on methods, PDR encouraged creative practitioners to become responsible researchers, conducting research ethically, striving to include a diverse range of audiences or customers, and safeguarding research participants' privacy.

⁷ Murphy, Y. (2020). 'Clwstwr participant video feedback – Yvonne: Ideas Lab experience'. [Zoom], 04 December.

R&D training delivery structure

Clwstwr offered several different access points for R&D funding and support. Applicants who wanted to explore an idea for a new product or service could submit an expression of interest to take part in an “Ideas Lab”. Delivered by PDR over two days, these fully-funded workshops introduced the key mindsets and methods of human centred design and problem solving. Participants worked in collaborative groups to solve an R&D design challenge using tools and techniques they could then apply to their own creative idea. See the following table for an overview of the content of Ideas Lab.

Day 1

Morning

Overview
Formation of working groups
Presentation of the R&D challenge all groups will address
Introduction to design thinking tools to identify obstacles and opportunities, map stakeholders and evaluate success

Afternoon

Introduction to human-centred research tools, including exploratory and evaluative research, interviews, co-creation and usability testing
Research ethics
Pitching refined challenge statement to cohort

Evening

Social interaction and networking

Day 2

Morning

Regroup and reflect
Introduction to design thinking tools for rapid ideation/idea generation

Afternoon

Evaluating potential solutions
Refining and executing solutions and analysing risk
Pitching solution to cohort
Wrap-up/next steps

At the end of the two days, participants were equipped to:

1. Identify how their R&D idea offered something useful or beneficial to a particular audience or user-group;
2. Evaluate how well they were positioned to deliver this new product or service;
3. Recognise how it would add value to their offering as a creative enterprise;
4. Formulate a plan to test the viability of their idea using appropriate human-centred research techniques; and
5. Communicate their idea concisely and persuasively to a range of audiences including potential funding bodies.

“The first PDR session [Ideas Lab] was the best workshop I’d ever been involved in in Wales, and it did make me think a great deal. I’d had various ideas and thoughts about how to approach Clwstwr, but that workshop really did focus them and enabled me to think more acutely.”⁸

Ideas Lab “graduates” were encouraged to apply for a grant of up to £10,000 Clwstwr “Seed Funding” which launched them on a three-to-six month R&D program. This enabled them to identify an appropriate next-stage goal for their idea and work towards it, supported by a combination of workshops and one-on-one consultations from PDR’s experts in design research, product design and service design.

Clwstwr also held open call rounds in which Seed Funding recipients or other applicants could apply for up to £100,000 in “Developmental Funding” for a proposal with sufficient scope and potential impact. The timescale for these projects was up to nine months.

⁸ King, R. (2022). Interview by Sally Cloke [Zoom], 13 May.

Clwstwr joined forces with several Welsh cultural organisations to offer three “Challenge Funding” calls focusing on specific innovation opportunities. Amgueddfa Cymru / Museum of Wales supported a call for innovative and creative ways to re-think the museum experience, Ffilm Cymru led a project supporting initiatives for making the film industry more sustainable and Bureau Local headed a group of organisations seeking to develop more grassroots journalism.

“I left the Ideas Lab feeling clearer that this wasn’t about [starting out with] solid ideas: this was about R&D, about a vision, an idea, an opportunity... What an amazing thing: to get funded to go on an R&D journey!”⁹

“Clwstwr is one of the only funds within Wales that offers money to experiential or experimental projects and to people that are looking to do something new in the digital and screen industry. This project is something that we’ve talked about for a long time, but we’ve never found a fund we’ve been eligible for.”¹⁰

For PDR, a key indicator of success was seeing participants grasp the concepts and language of human-centred design and make them their own, understanding how they applied to their own practice and adding them to their tool-box. This also equipped them to confidently “speak the language” when engaging with potential investors and others in world of R&D.

“I initially dismissed as ‘pessimistic’ the prospect of our R&D being anything other than a straight trajectory from concept to market. But my naivety quickly shone through, and sure enough we found ourselves sitting smack bang in the middle of a squiggle – this is a technical R&D term! (see figure 2). We’ve learned a lot, regrouped and changed tack on several occasions but that, in and of itself, has been an invaluable process.”¹¹

9 Hardy, R. (2020). ‘Clwstwr participant video feedback – Rebecca: Ideas Lab experience’. [Zoom], 4 December.

10 clwstwr.org.uk. (n.d.). Yello Brick: Imagining new realities for digi-physical games | Clwstwr. [online] Available at: <https://clwstwr.org.uk/yello-brick-imagining-new-realities-digi-physical-games>

11 clwstwr.org.uk. (n.d.). Perspective: Hannah Vaughan Jones, one half of Lewnah Ltd, talks Kids News | Clwstwr. [online] Available at: <https://clwstwr.org.uk/perspective-hannah-vaughan-jones-one-half-lewnah-ltd-talks-kids-news>

Uncertainty / Patterns / Insights

Clarity / Focus

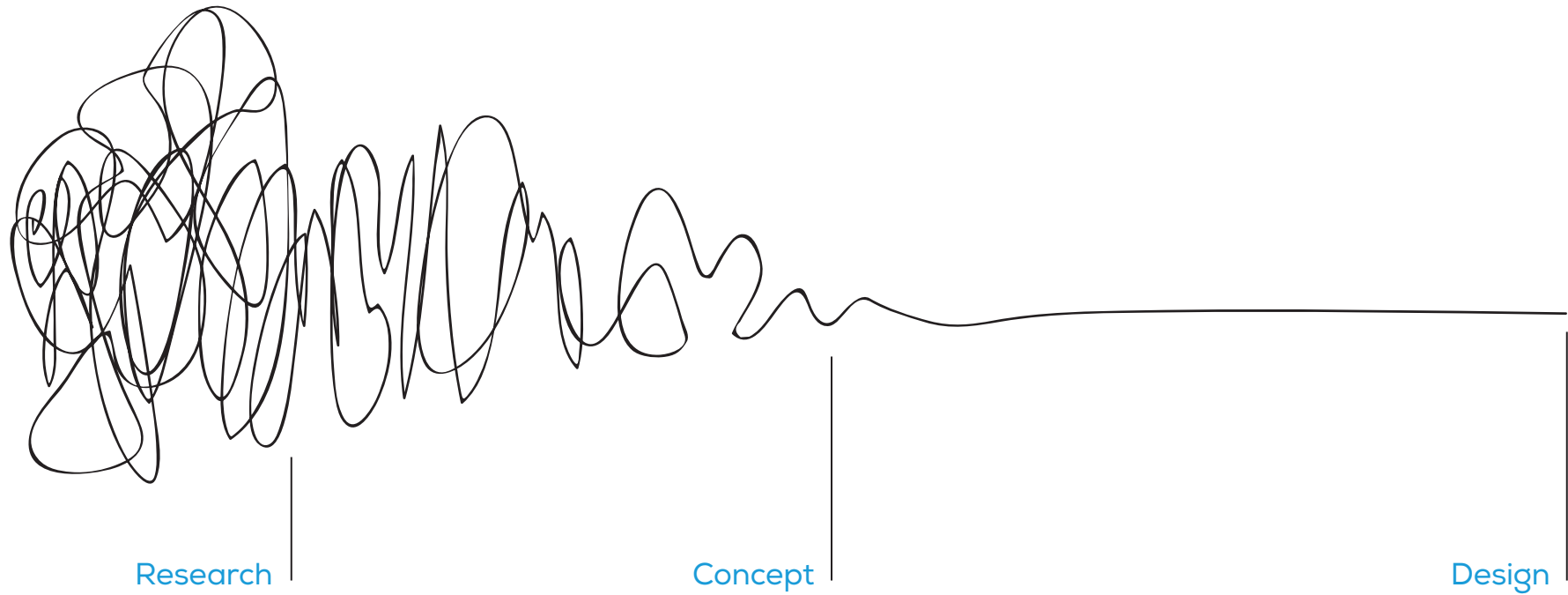
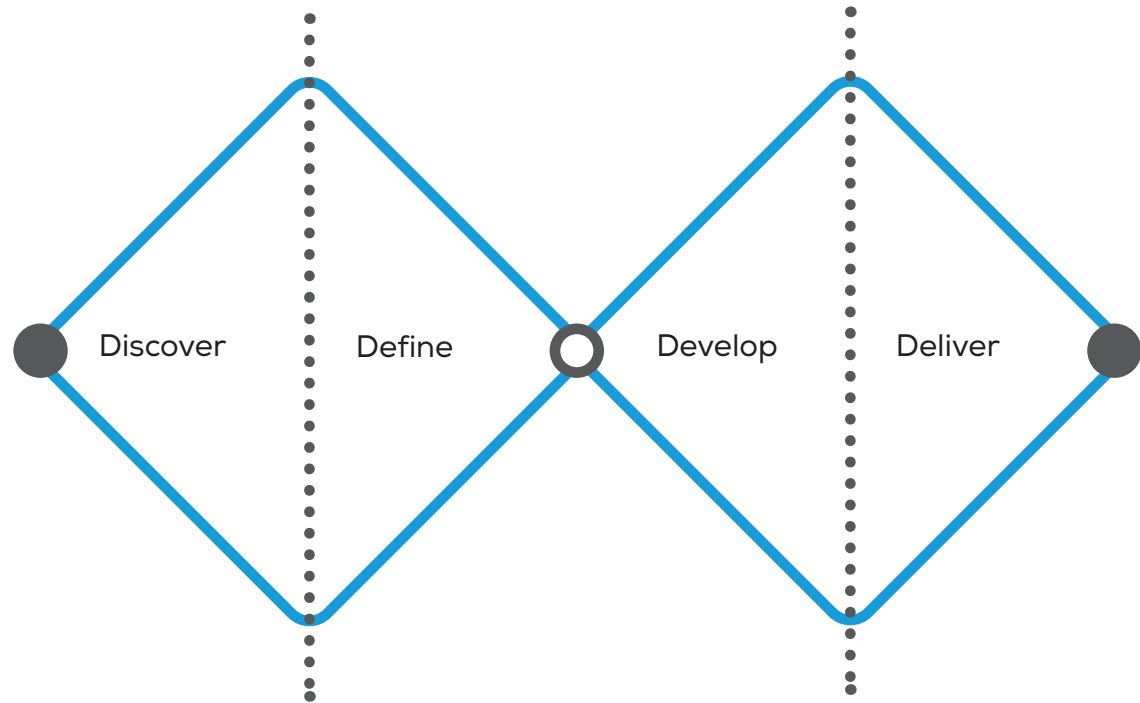


Figure 2: The "Design Squiggle" created by Damien Newman to visualise the design process.

“As creatives we go through a discover phase, and a define and develop and a deliver phase (see figure 3). But I didn’t have the vocabulary to name it... People naming [the R&D process] for me and giving me a support structure for it – I just found it incredible and I could then articulate my process to other people.”¹²



¹² Murphy, Y. (2020). 'Clwstwr participant video feedback – Yvonne: Ideas Lab experience'. [Zoom], 04 December.

Figure 3: The Design Council's Double Diamond used to map the design-driven research process.

Analysis and recommendations

The completion of the Clwstwr programme is an appropriate time for PDR to review its achievements in delivering research, development and innovation training and support. The research team at PDR has undertaken a qualitative review of the work with Clwstwr, designed to augment the regular quantitative analyses carried out by the Clwstwr delivery team.

The method included a desk review of a wide range of Clwstwr and PDR-generated documents. These included interviews with funding recipients, project reports, training and instructional materials and records of participants' R&D activities. The following list sets out the scope:

- Clwstwr Participant Satisfaction Reports;
- Clwstwr Seed Lab participant feedback videos;
- Instructional materials for R&D training delivered at Ideas Lab workshops;
- Milestone project reporting forms from 70+ projects and other information-gathering instruments;
- Records of projects' R&D activities recorded in the form of Miro online working spaces; and
- Blog posts, project updates and other Clwstwr website material.

In addition, an insight gathering workshop was conducted with key PDR staff in March 2022. Experiences and understandings accumulated from working with Clwstwr participants and other delivery partners over three funding years were documented and discussed.

A process of thematic analysis was then applied to the workshop data in order to organise and interpret what was shared. Thematic analysis involves identifying and making sense of patterns or themes within qualitative data, such as interview transcripts, survey results or diary studies. It is widely regarded by qualitative researchers as an appropriate method for seeking to understand human behaviour, perceptions and experiences.¹³

We based our thematic analysis on an established six-step pattern:¹⁴

1. Becoming familiar with the data through close reading;
2. Generating initial codes to highlight where particular ideas or issues occur in the data;
3. Searching for common threads among the highlighted findings and identifying unifying themes;
4. Reviewing the themes against the data to refine and clarify;
5. Analysing themes and formulating recommendations; and
6. Writing-up the analysis to communicate findings and recommendations.

We hope our findings and recommendations will assist any organisation or funding body that wishes to advance R&D and innovation within the creative sector.

They are grouped into the following five areas:

- A. Supporting and communicating a sector-appropriate understanding of research, development and innovation;
- B. Managing internal communication and coordination;
- C. Fostering partnerships and collaboration;
- D. Finetuning R&D content and delivery; and
- E. Embedding sustainable innovation and inclusion.

13 Kiger, M.E. & Varpio, L. (2020). Thematic Analysis of Qualitative data: AMEE Guide no. 131. *Medical Teacher*, 42(8), pp.1–9. doi:10.1080/0142159X.2020.1755030

14 Maguire, M. & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Higher Education*, [online] 9(3). Available at: <https://ojs.aishe.org/index.php/aishe-j/article/view/335>

A)

Supporting and communicating a sector-appropriate understanding of R&D and innovation

PDR sought to present a model of R&D that was broad, flexible and appropriate for micro-to-medium creative enterprises. As noted above, a large percentage of creative practitioners take a view of R&D that is significantly shaped by its popular association with science and engineering. This was anecdotally confirmed by numerous Clwstwr participants.¹⁵

This is not to say that Clwstwr projects shied away from technology. On the contrary, participants developed a wide range of technologically innovative projects, including:

- Using artificial intelligence to support patient rehabilitation after orthopaedic surgery;
- Creating virtual pets that can move seamlessly across any digital platform, from social media to games; and
- Employing virtual reality to reduce pain and anxiety in childbirth.

Regardless of the project focus, many Clwstwr participants found that being introduced to new ways of understanding and doing R&D was a watershed moment in their self-understanding as innovators and in their research and creative practice.

Encouraging “R&D sceptic” creative practitioners to become “R&D evangelists” was a significant achievement for Clwstwr and an endorsement of PDR’s design-driven, human centred approach. While this model resonated with Clwstwr participants, it was not always possible to ensure that all delivery partners shared the same understanding, particularly those who came from a STEM or “pure R&D” background who may have found it difficult not to bring their discipline’s understanding of R&D into Clwstwr.

¹⁵ No data is available on how many potential applications did not apply to Clwstwr because they viewed R&D as irrelevant or felt they lacked the requisite “tech mindset”.

“It’s hard to get your head around what R&D is in the creative sector. Even when we were applying for funding, some of us didn’t quite know what we should be asking for. Now that we’ve been through it, I can see how the time we spent looking under the hood of the business and analysing the industry has made a huge difference... Having R&D funding is different to what I thought I’d be; it’s been better.”¹⁶

A lack of clarity also existed around the concept of “innovation”, including what constituted innovation in the context of the creative industries generally and Clwstwr specifically. PDR took an open view of innovation, encouraging projects to define their own innovation goals. This approach had its drawbacks, allowing some projects that would have gained from being “pushed” to retreat into their comfort zones. However, the majority recognised the commercial advantages and other flow-on benefits of innovation.

R&D offers an opportunity “to try something out that you wouldn’t be able to try otherwise. You make it a success, you make it viable, and then your company grows, you create more jobs locally, you create more expertise locally. That’s what it’s all about.”¹⁷

More discussion could have focused on broadening the purpose of R&D beyond its potential financial outcomes. Since the mid-1990s, the concept of the triple bottom line – putting people and planet alongside profit – has been promoted as a way to encourage businesses to take responsibility for their impact on social equity and sustainability.¹⁸

As will be discussed below, sustainability and inclusion were two of Clwstwr’s stated foundational principles. However, it was only as the program progressed that suitable ways of putting these principles into practice began to emerge.

Embedding a triple bottom line model of innovation from the beginning of the

¹⁶ clwstwr.org.uk. (n.d.). Bait Studio: supporting collaborative, remote working in the screen industries | Clwstwr. [online] Available at: <https://clwstwr.org.uk/bait-studio-supporting-collaborative-remote-working-screen-industries>

¹⁷ Taylor, A. (2020). ‘Clwstwr participant video feedback – Andy: Ideas Lab experience’. [Zoom], 11 December.

program may have helped both projects and delivery partners broaden their understanding of R&D.

There were also challenges in maintaining consistency around the use of other key terms. For example: what did it mean to commercialise a product or service; what was a prototype.

“I thought a prototype would cost a lot to produce and maintain; when Clwstwr told us that a prototype can be as simple as a PowerPoint presentation, I couldn’t believe it!”¹⁹

Other terminology came with baggage attached: titles such as “co-investigators” and “producers” have established meanings in academic and creative industries contexts which did not fully align with how they were employed within Clwstwr. See the table on the following page for details.

Recommendations:

- Continue to develop and communicate a model of what R&D and innovation “looks like” for the creative industries.
- Consider using the triple bottom line model to shape how the sector conceptualises innovation.
- Ensure clarity and consistency around key terms.

18 Elkington, J. (1998), “Accounting for the Triple Bottom Line”, *Measuring Business Excellence*, Vol. 2 No. 3, pp. 18-22. <https://doi.org/10.1108/eb025539>

19 clwstwr.org.uk. (n.d.). The White Tent Company: Using AI to add realism to murder mystery events | Clwstwr. [online] Available at: <https://clwstwr.org.uk/white-tent-company-using-ai-add-realism-murder-mystery-events>

Academia / creative industries

Clwstwr

“Producer”

A professional tasked with overseeing the planning, budgeting, co-ordination and other behind the scenes management of a creative project.²⁰

The first point of contact for Clwstwr participants, advising them on industry best practice, facilitating relationships to other delivery partners and ensuring they meet reporting milestones.

“Co-investigator”

An academic who has co-responsibility for directing a research project and ensuring its compliance with relevant laws, regulations and institutional policies.²¹

An academic sounding-board for Clwstwr participants, linking them to relevant academic literature or experts and advising them on research best-practice.

20 StudioBinder. (2020). What Does A Producer Do: Various Types of Producers in Film & TV. [online] Available at: <https://www.studiobinder.com/blog/what-does-a-producer-do>

21 www.umass.edu. (n.d.). Roles and Responsibilities of Principal Investigators/Co-Investigators | Research Administration. [online] Available at: <https://www.umass.edu/research/policy/pi-and-co-pi-roles-and-responsibilities>

B)

Managing internal communication and coordination

As the structure diagram shows (figure 1 above), Clwstwr was itself a “cluster” formed by bringing together a mix of personnel from academia and various professional backgrounds, many with varying levels of experience in the creative industries or R&D and other responsibilities to juggle.

Clwstwr’s diverse make-up and the variety of organisations which comprised it enabled supported projects to benefit from a breadth of different experience and expertise and have access to extensive support network. However, it also entailed challenges for internal communication and co-ordination with some cross-over or duplication between roles and room for divergent interpretation of responsibilities.

The most effective step PDR took in managing internal communication and coordination was appointing a PDR design researcher to Clwstwr full time. This person became integral

to the program’s organisational and administrative functioning by staying across the needs and progress of every project in a cohort and acting as a conduit between all parties. Their role evolved into a “champion for the cohort”, taking on the responsibility of ensuring the best interests of the participants remained at the heart of the program.²² This represented a major investment of resources by PDR. However, it was key in enabling PDR and other Clwstwr delivery team members to get to know each project and the people behind it, build trust and offer bespoke support.

It should not be surprising that the most successful projects tended to be those with the closest working relationships between participant, producer and academic co-investigator. Some steps were taken over the

²² PDR. (2022). ‘PDR internal Clwstwr insight gathering workshop’. Facilitation by Sally Cloke. 1 April.

three Clwstwr cohorts to help facilitate this – for example, PDR began inviting producers to attend all delivery workshops to give them first-hand knowledge of a project’s R&D progress.

“Some funding partners can be very hands-off and unwilling to respond to questions, so you’re left to your own devices. With Clwstwr, we felt like the team wanted to help every project to succeed. Clwstwr were so willing to give feedback, contribute and help shape things.”²³

Clwstwr was structured to ensure PDR staff who provided support and guidance on funding applications had no role in the approval of content delivery. Although PDR had a representative on the management team, which was responsible for all project and funding decision, this person was not involved in delivering R&D training and support.

While this measure was designed to promote good governance, it did not always support a common understanding of what made for R&D excellence in the creative industries. More co-ordination between these two arms of the funding process would have ensured a smoother and less uncertain application experience. (See discussion of the application process under Section D below.)

Recommendations:

- Provide all delivery partners with a comprehensive job description.
- Consider regular in-service training for all delivery personnel.

²³ clwstwr.org.uk. (n.d.). AMPLYFI: using AI to fast-track investigative journalism | Clwstwr. [online] Available at: <https://clwstwr.org.uk/amplyfi-using-ai-fast-track-investigative-journalism>

C)

Fostering partnerships and collaboration

Because Clwstwr brought such a variety of people and organisations together – participants as well as delivery partners – it had a substantial capacity for fostering networking, collaborating and cross-fertilisation. Workshops and small group work were very effective formats for building relationships and cooperation within a cohort. While these delivery methods were affected by the move online as a result of the Covid pandemic (see below), significant peer support was reported by participants and such collaboration was highly valued.

“One of the best things about working with Clwstwr is the spirit of collaboration.”²⁴

Ideas Lab “gave me a chance to work with people where I didn’t have the skills... In those two days, in my group, I got a content producer and an animator that I worked with... The other two people in my group – one a musician and the other an author – have been my support all the way through. We’ve become a support network for each other.”²⁵

24 clwstwr.org.uk. (n.d.). Perspective: Five things I've learned in my first Clwstwr month | Clwstwr. [online] Available at: <https://clwstwr.org.uk/perspective-five-things-ive-learned-my-first-clwstwr-month>

25 Murphy, Y. (2020). 'Clwstwr participant video feedback – Yvonne: Ideas Lab experience'. [Zoom], 04 December.

Clwstwr was the catalyst for a range of mutual support activities, from participants working on each other's projects to using each other as sounding-boards for ideas. Figure 4 (opposite page) maps the variety and richness of the connection and affinities between Clwstwr projects.

Examples worth highlighting include:

- A project exploring how to make the animation industry more sustainable recruited two Clwstwr animation-focused projects for an environmental impact study;
- A film and TV-focused augmented reality project contracted a digital agency working on another Clwstwr project to build their app; and
- The creator of a new podcast technology created an episode about a Clwstwr project encouraging young people to participate in democracy.

While these are encouraging developments, the opportunity exists to focus more of these partnerships directly on R&D, as in the first example, rather than on outcome delivery.

Other networking opportunities were provided by producers through their own industry contacts, as well as by academic co-investigators, who assisted projects' R&D through ways such as recruiting students for focus groups or providing access to their peers' research.

The three challenge partnerships which Clwstwr entered into provided successful projects with enviable opportunities to develop innovative products, services or experiences with direct industry application. These partnerships were sui generis arrangements and not as fully embedded into Clwstwr's delivery model as other aspects of the program. Nevertheless, these opportunities could have been

better communicated to Clwstwr participants and the application process brought more in line with existing procedures.

Recommendations:

- Continue to promote opportunities for cross fertilisation between projects while promoting a focus on collaborating on R&D.
- Streamline integration with external, project-based funding partners.

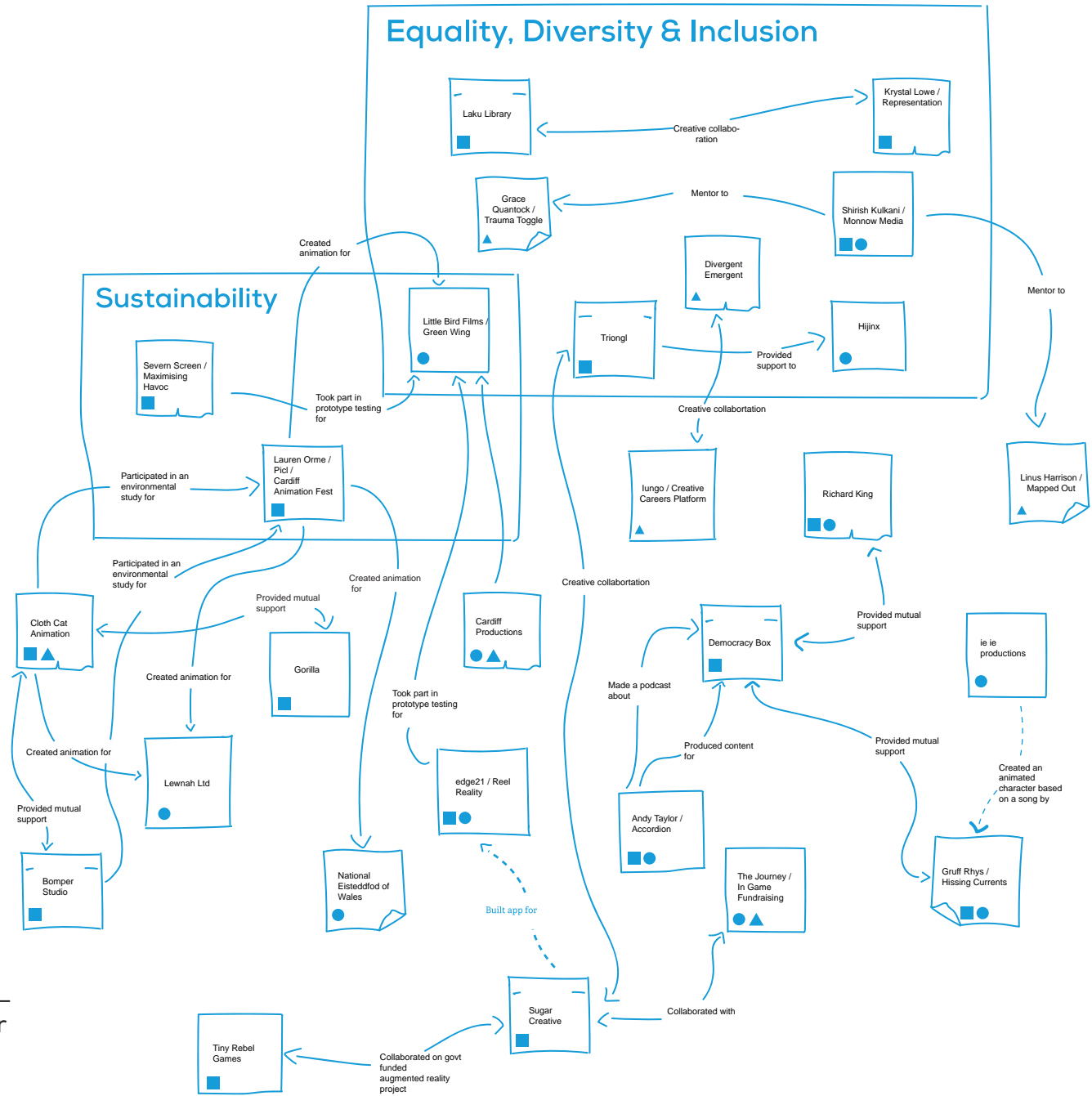
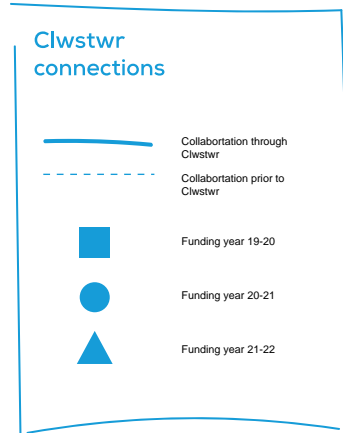


Figure 4: Collaborative and other links between Clwstwr projects.

D)

Finetuning R&D content and delivery

Considerable finetuning of delivery, content and methods took place over the three cohorts. PDR was able to develop and refine a range of R&D focused teaching materials, such as templates, worksheets and videos, which became valuable resources for participants and have the potential for adaptation for other applications.

PDR worked to find a balance between the two main delivery formats, group workshops and individual consultations. Workshops helped ensure that content was consistent across all projects and represented the most efficient use of resources. As noted above, they also helped build relationships between participants and promote collaboration.

These advantages tended to make them the “go to” mode of delivery for R&D support and training, even when other methods, such as videos or webinars, might have been more or equally appropriate. Not all participants

were happy with this, preferring one-on-one engagement tailored to their particular project. PDR remained committed to meeting individually with participants from early on in the process to help shape their R&D journey from the beginning.

While the inaugural Ideas Lab was held face-to-face, the introduction of Covid restrictions meant that R&D training and support for the first cohort of Seed Funded projects had to pivot rapidly into remote delivery. The following two cohorts were online only. This had limitations, especially on how participants were able to interact, but also strengths.

“Something about us all being in the same boat, mixed with the informality of being in our own homes... made the experience brilliant. We achieved more, had more fun and found it easier to think in fresher ways. I now see remote working as a creative opportunity for this R&D project, not a limiting factor.”²⁶

As already noted, maintaining clarity around the definition of key terminology and roles was a challenge for Clwstwr. Participants have also expressed a desire for more clarity and transparency on concepts and process, especially in the following areas.²⁷

- The application process: more information on what type of projects would be considered by Clwstwr and what funding opportunities

would be available; greater transparency in the selection process.

- Deliverables: more guidance on what participants needed to submit for their milestone reporting and their final outcome; clearer expectations of what was required from participants throughout.
- Language: less academic language; more constructive feedback; clearer definitions of key terms.

Related, but not confined, to the application process was a lack of ease of use of forms and other (digital) paperwork. Application, financial and reporting forms were described as complex, confusing and inflexible. They were not easily accessible for people with disabilities or neurodivergent users.

PDR has trialled alternative means of reporting, including videos and online presentations. Considerations of participant parity and provider workload need to be factored in, as well as

the question of how acceptable such approaches would be within the wider R&D funding ecosystem.

Questions over deliverables and expectations link back to Clwstwr's ongoing struggle to define R&D in a way that is academically rigorous, robust enough to generate commercialisable innovation and appropriate to the creative sector. PDR attempted to provide Clwstwr participants with a clearer vision of what a successful Clwstwr project looked like by showcasing actual examples from previous cohorts. Doing more of this could help inspire innovation while reinforcing the point that there is no one-size-fits all model when it comes to either innovative outcomes or R&D methodology.

²⁶ Taylor, A. (2020). 'Clwstwr participant video feedback – Andy: Ideas Lab experience'. [Zoom], 11 December.

²⁷ Komorowski, M. (2020). Seed Call Clwstwr Ideas Lab Satisfaction Report: February 2020. Clwstwr.

For example Richard King's location-specific oral history project would make an excellent case study (see below).

Participation in R&D training was optional for Clwstwr participants and not every project took advantage of it. While there will always be those who are only interested in the financial aspect of an industry support scheme, it is worth exploring how to promote or incentivise involvement if this is an issue for other funding bodies.

My project "came from R&D. Put simply, I knew I had the audio and I investigated ways of developing it outside of my main authorial practice. [The idea] came from mapping, from site research, from looking at the geography of Wales and how it's represented... It came from analysing the tourism industry, the mechanisms that work within public spaces in rural Wales, such as the coastal path, and the various municipal and national authorities that have oversight of it... It came from analysing what was permitted and what wasn't permitted... and how the market functions... So that was a research and development process that took over a year."²⁸

Recommendations:

- Ensure information gathering tools are easy to use, appropriate and inclusive in design and language.
- Continue to explore what alternative methods of reporting might be appropriate and under what circumstances.
- Research what methods other industry support bodies use to promote the uptake of R&D training.

²⁸ King, R. (2022). Interview by Sally Cloke [Zoom], 13 May.

E)

Embedding sustainable and inclusive innovation

To quote the Clwstwr website: “Our vision [is] for Wales to become a leader in moving towards green media production. We will spur innovative ideas for carbon footprint reduction and a lower environmental impact, both with the projects we deliver and with the media sector across Wales”.²⁹

A number of Clwstwr projects centred on sustainability. These included:

- An investigation into ways to make the animation industry and animation festivals more environmentally friendly;
- A tool to assist location broadcasters and screen producers choose greener sources of power; and
- A consultancy to help film and television producers minimise their carbon footprint.

Clwstwr participated in industry initiatives aimed to decarbonise film and TV production and establish more sustainable working practices. These

included the Screen New Deal Transformational Plan and the Green Cymru Challenge Fund. The latter, a partnership with Ffilm Cymru Wales which led to their engagement in subsequent Clwstwr projects, was particularly effective in helping participants think seriously about sustainability.

However, Clwstwr did not always articulate a clear connection between sustainability and innovation or engender an appreciation of the value of sustainability as an innovation driver instead of a box that needed ticking. At times this led to sustainability being “bolted on” to projects rather than acting as a foundational principle.³⁰

²⁹ clwstwr.org.uk. (n.d.). Environmental Sustainability | Clwstwr. [online] Available at: <https://clwstwr.org.uk/about/environmental-sustainability>

³⁰ Quote from PDR internal Clwstwr insight gathering workshop.

As noted above, incorporating the concept of the triple bottom line into how a funding body conceptualises innovation may go towards rectifying this.

There is also opportunity to leverage Wales' policy strengths and growing reputation as a "green" nation to make sustainable innovation a key point of difference. Wales is one of the first countries in the world to have a commitment to sustainability enshrined in legislation.³¹

The Wellbeing of Future Generations Act offers a ground-breaking framework for environmental stewardship and human flourishing. Regional initiatives such as Net Zero Wales and Sustainable Wales provide excellent potential for partnership opportunities in areas such as emissions reduction, the circular economy and renewable energy.

Another of Clwstwr's principles was a commitment to increasing cultural and

social diversity in the creative industries. Clwstwr had a dedicated inclusion officer working on this area and a number of supported projects centred on equality, diversity and representation. These included:

- An investigation of how to make live performance and screen media more engaging for people living with blindness or visual impairment;
- An app to help neurodivergent job seekers promote their skills and overcome barriers to employment; and
- A platform showcasing and supporting Welsh language podcasts.

Despite this, participant diversity was recognised as an area where more proactive steps were needed.³² A broader mix of gender, sexual orientation, ethnic or linguistic backgrounds and increased participation by people from lower socioeconomic areas and people living with disabilities would

have made the cohorts more representative of the sector and the community.

Recommendations:

- Create a framework for embedding environmental sustainability into R&D within the creative industries.
- Build on Wales' growing reputation as a leader in sustainability.
- Develop robust tools to support equality, diversity and inclusion among participating projects.

31 Wales. (2020). Sustainability. [online] Available at: <https://www.wales.com/lifestyle/sustainability>

32 Komorowski, M., Griffith, S. & Alatise, L. (2021). Diversity Monitoring Report 1: Diversity within the Clwstwr Programme in Relation to Wales' Creative Sectors. [online] Available at: https://clwstwr.org.uk/sites/default/files/2021-08/Clwstwr%20Programme%20Diversity%20Monitoring%20Report%201_Final_compressed.pdf



Conclusion and summary

Clwstwr represented an ambitious step forward in delivering R&D funding and support to the creative industries in Cardiff and beyond. It addressed directly what creative practitioners named as a significant barrier to their embracing of and investment in research, development and innovation: the perception that R&D represented high-tech, high-cost STEM-focused practices with no application to the creative sector.

Clwstwr countered this by presenting a model of R&D that was both appropriate and paradigm-changing. It gave micro-to-medium creative enterprises the tools and language to embrace R&D and harness its potential in delivering truly innovative products, services and experiences.

Encouraging “R&D sceptic” creative practitioners to become “R&D evangelists” is an achievement worth celebrating and building upon.

As many of Clwstwr’s activities and priorities will be taken up by Media Cymru, the following pages pair the recommendations from this report with some potential suggestions on how they could be taken up effectively and further developed.

A) Supporting and communicating a sector-appropriate understanding of R&D and innovation

Recommendation

Potential benefit/s for Media Cymru and other creative industries R&D support programmes

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- | | |
|--|---|
| <p>1 Continue to develop and communicate a model of appropriate R&D and innovation for the creative industries.</p> | <p>Pushing back against STEM-dominated understandings of R&D is an ongoing task. Clwstwr has demonstrated how re-defining R&D for creative practitioners helps build their capacity to innovate and their confidence to access further funding. Continuing to develop and communicate flexible and sector-appropriate models of innovation has the potential to establish a more R&D-positive mindset across the creative industries, especially among smaller and emerging players, leading to further growth and success.</p> |
| <p>2 Consider using the triple bottom line model to shape how the sector conceptualises innovation.</p> | <p>Sustainability and inclusion offer enormous opportunities for creative practitioners to deliver imaginative and unexpected solutions. Building R&D support programs that focus on the triple bottom line can help entrench an understanding of R&D that goes beyond commercialisation while helping ensure that sustainability and inclusion are seen as fundamental R&D drivers, not add-ons.</p> |
| <p>3 Ensure clarity and consistency around key terms.</p> | <p>Consistent nomenclature not only helps improve the experience of the funding recipients, save time and reduce confusion: it encourages the adoption of an appropriate professional vocabulary which assists creative practitioners in negotiating the wider R&D ecosystem.</p> |
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B) Managing internal communication and coordination

Recommendation

Potential benefit/s for Media Cymru and other creative industries R&D support programmes

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- 4** Provide all delivery partners with a comprehensive job description.

Clwstwr modelled an ambitious delivery structure that brought together professionals from a diverse sectors representing a wealth of expertise. We firmly believe that the outcomes of Clwstwr support the continued exploration of such hybrid models.

Developing job descriptions with clear expectations and outcomes, together with an understanding of where each role fits in the overall structure, is a simple way of streamlining the collaborative process.

Making all participation expectations explicit is likely to prompt greater participation from academics, industry professionals and others juggling multiple responsibilities.

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- 5** Consider regular in-service training for all delivery personnel.

Building in time for training seminars, information-sharing and other activities designed to shape organisational culture can strengthen relationships between delivery partners and streamline internal communication.

C) Fostering partnerships and collaboration

Recommendation

Potential benefit/s for Media Cymru and other creative industries R&D support programmes

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- | | |
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| 6 Continue to promote opportunities for cross-fertilisation between projects while promoting a focus on collaborating on R&D. | Clwstwr participants generated a rich matrix of collaborative and co-operative relationships, greatly enriching each other's practice and outcomes. The use of delivery methods that support such cross-fertilisations – workshops, small-group work and more – as well as the exploration of potential new models, should be encouraged. There is significant scope to promote collaborative efforts that focus on cooperative R&D practices, not just on outcome delivery. |
| 7 Streamline integration with external, project-based funding partners. | Clwstwr's Challenge Partners provided participants with enviable opportunities to work on real-world R&D problems. Where possible, avoiding duplication and working to co-ordinate reporting requirements, deadlines and approval processes will encourage uptake and improve the beneficiary experience. |
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D) Finetuning R&D content and delivery

Recommendation	Potential benefit/s for Media Cymru and other creative industries R&D support programmes
8 Ensure information gathering tools are easy to use, appropriate and inclusive in design and language.	Forms and other data gathering tools should be critically assessed to ensure their focus is aligned with the overall emphasis and direction of the program. Administrative requirements that are hard to navigate or are perceived to add little value should be overhauled to encourage a greater diversity of applicants.
9 Continue to explore what alternate methods of reporting might be appropriate and under what circumstances.	Creative industry development programmes are uniquely placed to support non-standard forms of information gathering. Video and other creative reporting methods can readily be repurposed for other audiences such as stakeholders or potential applicants.
10 Research what methods other industry support bodies use to promote the uptake of R&D training.	Encouraging all funding beneficiaries to take advantage of training opportunities will help ensure that evaluation metrics such as participant feedback reflect the full range of opportunities offered.

E) Embedding sustainable and inclusive innovation

Recommendation	Potential benefit/s for Media Cymru and other creative industries R&D support programmes
11 Create a framework for embedding environmental sustainability into R&D within the creative industries.	There is enormous scope – and pressing need - to embed environmental sustainability goals at all levels of R&D, from innovative products, services and experiences that address sustainability challenges, to sustainable business models and investment practices. Using the triple bottom line, as discussed above, may be beneficial here.
12 Build on Wales' growing reputation as a leader in sustainability.	This could be promoted as a major point of difference for any Welsh creative industry R&D body as well as offering potential partnership opportunities with the Welsh Government and significant sector NGOs.
13 Develop robust tools to support equality, diversity and inclusion among participating projects.	As well as efforts to mainstream inclusion, it may be effective to offer dedicated funding calls or streams for specific segments.

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