The Impact of Responsibility

Report by Doteveryone

Responsible innovation and how to do it is an evolving and growing conversation within the technology sector. Being an early pioneer means being willing to experiment, to learn and grow. It's not about getting it right, but about sharing the attempts with others, so together we can change how tech is made to be about the best interest of people, communities, and the planet.

The Creative R&D Cluster in Bath+Bristol is a responsible innovation pioneer. Its mission is to break down doors and connect university research with creative businesses and develop a shared vision for tomorrow's creative industries.

The Cluster is building an ecosystem for creative technologies using alternative approaches to support the arts and creative industries while stimulating economic growth and trying to build a culture of inclusiveness and responsibility to the community. Watershed and its Pervasive Media Studio are a leading partner in the Cluster and the founding supporter of Doteveryone's involvement, as they are eager to explore responsible innovation and what it means for diverse community focused on creative technologies that they have established.

Doteveryone is the responsible technology think tank working to change how tech is made and used so that it supports a fair, inclusive and sustainable democratic society. Doteveryone wanted to have a measurable impact on the work of the Cluster and to explore how emergent, creative technologies could be responsible.

Together, we wanted to explore how we might begin to model a culture of responsibility within a defined geographic community and a multi-stakeholder, multi-discipline initiative.

To achieve this, we designed a programme and a cross-cutting Responsible Innovation Fellowship sponsored by Watershed to provoke new thinking across the Cluster on what responsibility looks like for those investing in, supporting, and designing creative technologies.

This report outlines what we did and the insights for modelling a culture of responsibility we gained from the programme. It's intended to help others who are interested in making responsible innovation the default way to design and create technology products and services.

WHAT WE DID

Our programme was focused on the Cluster's first Pathfinder Theme - Digital Placemaking. We began by hosting a series of workshops in January 2020 with the following three groups:
1. The owners of new product ideas and businesses funded by the Cluster
2. The producers and fellows supporting the businesses and the theme
3. The executive team overseeing the objectives and activities of the Cluster

In these workshops we explored the consequences of technology, how to make responsible business decisions about a technology investment or product, and what each participant intended for the 'best interest' of people in the community.

We asked the businesses to think about the consequences of their product on many stakeholders and to create responsible product principles to guide the design and behaviours of their products. We asked the producers and fellows what collective responsibility looked like. And we asked the executive team about their intent for the Cluster.

We then held coaching sessions with the Cluster over a period of four months to support them in applying the concepts and ideas we'd introduced them to and collect stories to help demonstrate our impact.

Part of the ambition of Doteveryone's partnership with the Cluster was to also start to develop ways of measuring the impact of adopting responsible innovation practices within a defined geography and over a long period of time.

WHAT WE LEARNED

Our core insights for modelling a culture of responsibility:

- Language really matters - taking the time to learn what others mean when they use certain words and to create shared understanding will be the foundation that allows you to move faster and respond better to changes.

- Building shared models and frameworks are crucial for collective responsibility - collaborations can fail if there isn't a shared sense of what everyone in the collaboration is trying to accomplish. The process of articulating the purpose and objectives of a programme or product and then working out how to best get there helps everyone to align and better determine what they bring and are responsible for.

- Responsible practices create a safe place to explore blindspots - one of the primary reasons we see unintended consequences emerging from technology is a result of the blindspots of those making the tech. They either don't know what they don't know, or

don't have the space to be able to raise their concerns or learn something new. Responsible practices like Consequence Scanning are there to help surface and explore blindspots in a non-judgemental way. They help to normalise and create acceptance around blindspots and consequences, allowing people to explore them in a productive and proactive way.

● Use practices which reinforce the type of culture you are trying to create - it's the same idea as 'what you measure is what matters'. The everyday 'how' of making decisions is what creates a culture, so it's worth ensuring those practices are imbued with the values you want. Starting everything with the question of 'intent' and thinking about how that translates into your actions towards all of your stakeholders has created the biggest change.

Overall, creating a culture of responsibility requires making a commitment to creating the time, space, and openness needed to sustain change.

BEGINNING TO MEASURE THE IMPACT OF ADOPTING RESPONSIBLE INNOVATION PRACTICES

Adopting responsible innovation practices in the creation of emerging technologies is a relatively new concept, so there's not a lot out there on what measurable impact looks like.

Knowing how to measure the impact of a subjective concept across many different types of organisations using and developing different types of technologies in infinite sectors and communities is a daunting task. The Doteveryone team - Sam Brown, Lydia Nicholas, and Alex Mecklenburg - had *a lot* of whiteboard sessions and a very long dictionary to help us all understand the terms and language we were using.

We started by asking ourselves why measuring impact was an important thing to do - there are many worthwhile things a business does that can't or maybe shouldn't be turned into metrics. We decided this wasn't about reporting, but about making the benefits of responsibility tangible - to begin to shape best practice, sharpen areas of focus for governance, and help operationalise responsibility.

To do impact measurement, you need:
1. A theory of the change you are trying to make and measure
2. A framework to outline the types of impact you're looking to measure

We decided to focus on both the areas we wanted to have an impact on, and the stages of maturity those who are trying to be responsible are in. The stages of maturity are both to show progression and to define change.

With that in mind, we created an impact measurement framework for responsible innovation. The framework starts with three areas we wanted to have an impact on:

- **Responsible Innovators (the individual people engaging with responsibility)** - to what extent do they have language or mental models to help them be responsible innovators?
- **Responsible Innovation (the organisational method of building technologies; looking at decision-making, principles and practice)** - to what extent have the adoption of responsible principles and practices helped build technology that takes into account people, communities, and planet?
- **Responsible Technology (business and/or community impact)** - to what extent has technology that was created responsibly helped the business and/or the wider community?

And we looked at three stages of maturity at which an individual, organisation or project can be on their responsibility journey. They are:

- **CODIFYING - defining responsibility in an organisation**
- **TRANSFORMING -planning where and how will it live in an organisation**
- **EMBEDDING -putting principles and practices in place for the long term**

We created a set of research questions for each area according to their stage of maturity to show what we wanted to measure depending on what the intervention was. Each research question was to have a question set of both qualitative and quantitative measures. Due to the onset of COVID-19 and subsequent lockdown cutting our research time short, Doteveryone wasn't able to test these questions, but the Research team within Watershed and the Cluster will be considering how to integrate them into the ongoing work.

The rest of this article focuses on demonstrating impact through storytelling, using evidence gathered through interviews and field notes from our support sessions.

Responsible Technology Impact Measurement Framework

Area to measure	Stage of Maturity & Research Questions			Intent
	CODIFY	TRANSFORM	EMBED	
People	Has thinking about responsibility given them a new language or mental model to approach business decisions?	Are they able to map their mental model of responsibility to the organisation?	Have responsible processes, policies, and practices resulted in a new mindset?	Responsible Innovator
Process of making tech; principles & practice	Have they developed a definition of what responsibility means to the organisation?	How are they implementing responsible policies and practices?	How adopted are the responsible policies and practices?	Responsible Innovation
Business / Community	Has the development of their definition of responsibility helped their business?	How are the organisation's people responding? How are the people who use the technology responding?	Is their definition aligned with the actual design and experiences of their tech? How has this helped their business? How has this helped the community?	Responsible Technology

WHAT WE LEARNED IN THE CLUSTER

Given the Cluster is a new collaboration with very early stage creative businesses and processes, Doteveryone's research and support was focused on codifying responsibility.

Across four months Doteveryone spoke with the creative businesses, producers and fellows, and members of the executive team within the Cluster. We used our impact measurement

framework to explore the following research questions, listening to the stories and the actions taken across the Cluster as a result of our intervention.

As we supported the Cluster in their explorations of different applications of our frameworks and ideas, this what we found across the three areas we were looking to learn about our impact in:

Responsible Innovators

Research question: for the individual people involved in our work, had thinking about their responsibility and the consequences of their business decisions given them new language or mental models?

In our early research, we found that ways of proving someone had adopted a new mental model were scarce and not academically sound. Thinking about how to show new mental models as a way of showing impact meant we needed to show progression from how someone thought before, to how they thought after being introduced to responsible innovation concepts.

This requires categorisation of someone's thinking and learning processes related to a subjective understanding of 'responsible technology'. This is a very complex area that requires quite a bit of nuance, research and experimentation before deciding if and how to proceed. We decided to start by exploring the use and adoption of the language we introduced in our workshops as an early proxy. What language landed and with who?

Impact

Our focus on the language of consequences - intended and unintended - resonated with many of our participants and became the most recurring terminology used over the next few months.

For example, the idea of unintended consequences landed immediately within Watershed's Pervasive Media Studio. Asking about the unintended consequences of a decision became

second nature, requiring people to think through not only what they intend, but also what else may happen when making proposals and decisions.

Producers have been sharing with us that this new language triggered a whole new set of questions that they were starting to explore with the businesses and fellows. Questions that would help make tensions and trade-offs more explicit; questions that explore the importance of collective responsibility in creative collaborations; and questions that explore relationships to the different stakeholders and their prioritisation when making specific decisions within a project.

In particular, this language made a real difference to those who were collaborating together for the first time while trying to build something new.

Over the last 2 months, Little Lost Robot has introduced the word 'intent' into their collective decision making process. Regular check-ins on shared intent have become a part of their business practices.

The result of the new language has been to provide a more solid and shared foundation for the businesses and the Cluster to have discussions about impact.

One of the reasons we're focused on impact on an individual level despite it being hard and intangible is that the technology and creative sectors are often made up of freelancers and networks of individuals or businesses that work on different projects or different parts of projects at different times. If we want responsible technology to be the new normal, then impacting individuals and having them carry what they've learned to new places is an important aspect of achieving positive change.

We've already seen movement on the individual level, with members of the creative community coming together to explore these concepts as individuals. Following our workshops and coaching sessions, Paul Clarke - one of the digital peacemaking fellows - convened all of his partners and collaborators to introduce the concept of 'shared responsibility in innovation'. He asked them each to share their particular interests and intent for a prototype they are working on together. Following that they drafted a shared set of principles for the project and a project mission, as a collective signal for intent.

Responsible Innovation

Research question: had the organisations involved in our work developed their own definition of responsible? What were they doing to embed that within how they operated?

The main focus of our work with the Cluster was exploring how, on an organisational level, we could help change how technologies were being made through adopting responsible innovation practices. We were interested in seeing how a definition of responsibility came to be formed within businesses and collaborations. Where and how would practices and principles start to show up? How could this influence how the Cluster itself was making decisions and supporting business ideas?

Impact

Doteveryone introduced responsible innovation practices in our workshops; one of the practices we demonstrated was [Consequence Scanning](#) - our practical way to have organisational discussions about consequences and blindspots.

Responsible product principles helped participants to describe their intended impact on different stakeholders.

What we found was that following the introduction of these practices, businesses and producers felt more empowered to run their own sessions or to experiment with the ideas.

The creative businesses in the first pathfinder programme Digital Placemaking have embraced the ideas of responsible innovation.

They have started to actively integrate 'responsible innovation' thinking and methodologies into their business processes and policies, and into their project development.

An example of responsible innovation in project development is [Stupid Cities](#). While working on the project, Little Lost Robot adopted the practise of 'Consequence Scanning' to make project decisions that truly align with their intent and responsibility for each of their stakeholders. This has resulted in reshaping some of the project design of Stupid Cities.

Many of the creative businesses have started to work through some of the challenges around the concept of 'responsible innovation'.

For example, when we started working with [Bristol Popmap](#) - a partnership between [Calvium and and City ID](#) together with Bristol City Council - they were struggling with issues of power dynamics.

This is a partnership of organisations working on a project, where none of those working on the project were members of the leadership teams of their respective organisations. This meant there was confusion around who had 'permission' to create collaboration principles and decide on the mission for the collaboration.
The organisations involved also all have different primary stakeholders, and this raised further questions around who has responsibility for the consequences of the tech they build.

For Calvium and City ID, their primary stakeholder is the client they're creating their prototypes and concepts for, whereas for the Council their primary stakeholder is the end users of the product. As Calvium and City ID don't usually see their projects to the end, but rather hand them over after the prototype stage - should they take responsibility for the way the project ultimately comes alive and its consequences once in the real world? And if not, what is their responsibility?

These are common tensions in tech projects where outside technical experts may be building a product for a client as opposed to the end user. In this case, what are the things you can take direct responsibility for, what can you influence, and how do you make sure you aren't being complacent in deciding this?

Doteveryone hosted a workshop for the executive team of the Cluster, which helped to raise fundamental questions around their clarity of purpose and the corresponding behaviours they needed to match their intent.

This resulted in the team changing how they run their executive team meetings so they could better support more open and strategic discussion – creating more opportunity for concerns, ideas and opinions to be represented by the different entities in the Cluster collaboration - as opposed to focusing only on operational control.

The team started to design a new way to make funding decisions that supports the type of impact they intend to have within the Cluster. The process is based on conversations about intended impact, their research questions related to the theme they are exploring, and the behaviours they need to have in place to achieve that impact. Part of this new approach which

they are experimenting with includes doing a Consequence Scanning session with the producers on each technology product idea submitted to the Cluster for funding.

These new approaches have started to change how this multi-stakeholder team is collaborating, with a clearer sense of direction and a team commitment to tackling tensions and challenges - having open conversations about how to balance so many different disciplines, cultures, and ways of working as a group has been a much more useful starting point and is better modelling and reinforcing the culture of inclusivity the Cluster wants to create.

Responsible Technology

Research question: had the use of responsible innovation helped the Cluster or the businesses, and the communities they were a part of?

Given how early stage the Cluster and the pathfinder businesses were, being able to measure community impact or long-term business impact was going to be difficult, and so we were focused more on the immediate help our interventions were providing, and the decisions the Cluster and businesses made in the short term to reflect what they had learned with us.

Impact

According to Jo Landsdowne, Executive Producer of Watershed and member of the Cluster executive team, Doteveryone's intervention gave the executive team, the producers and fellows, and the businesses "a framework to have a different conversation about broader aims and their work in the context of the rest of the world".

As artists, creatives, academics and doers, giving frameworks for conversations that were grounded in action helped people to translate their big questions - about values, power relationships, meaning, and ethics - into more tangible processes of governance or product design.

Notably, the concept of 'intent' and the need for alignment around understanding what responsibility means for everybody in the process and who/what it is they take responsibility

for is being used in all of the businesses. Another tangible output has been the development of data and privacy principles and policies.

CONCLUSION

We finished this partnership with leaders who are now experimenting with new ways of thinking, producers who are better equipped to support businesses, and a critical mass of people at the centre of a community who see the importance of continuing to think about how to be responsible in building a cluster of emergent, creative technologies.

This is what makes the Creative R&D Cluster in Bath+Bristol and Watershed responsible innovation pioneers.

In sharing these attempts with others, we hope that we can start a conversation and help others to show evidence of responsible innovation being the best way to achieve positive impact for both organisations and people, communities, and the planet.

The next step will be to find ways to sustain and build on this initial work in a time that it's more crucial than ever to recognise our collective and mutual responsibilities to one another.