AGILE PROGRAMME

The Agile Programme provides multidisciplinary teams the opportunity to propose, develop and engage in short focussed translational research projects, drawing upon an established pool of interdisciplinary researchers working with key partners to address challenges in a timely manner. Agile projects enable early career researchers to take ownership of activities, with the support of mentors.

ROUND 1

Connected Kitchen - Exploring multi-sensor systems that track and model people in kitchen environments to identify behaviours linked to health and safety.

Domesticating Electric Vehicle Charging - Exploring roles and implications of autonomy and smart technologies in residential electric vehicle charging.

Minimal Intervention Distributed Account System (MIDAS) - Investigating the scenario of 'sharing' online accounts in a safe, secure and efficient way.

Robots Mediating Interaction - Exploring cobots in social circumstances, interacting with and around multiple people or groups.
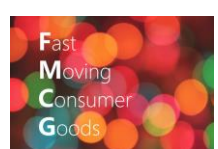
Empowering consumers to co-design FMCGs - Investigating ways to capture uncertainty and leeway in consumer preferences to identify areas of hidden consensus

HIGHLIGHT : EMPOWERING CONSUMERS TO CO-DESIGN FMCGs

The economic viability of personalising products at an individual level is challenging, especially for businesses producing low-cost fast-moving consumer goods (FMCGs).

Our research explored methods for capturing uncertainty in consumer preferences and identified areas of hidden consensus to inform business decisions about product design and market segmentation.

Project partners: Nestle & Pepsico

Outputs: Industry focus groups, dissemination at Association of Business Communications Conference, animated video to support businesses around the design of FMCGs.
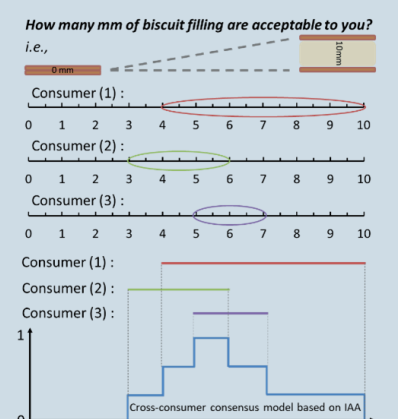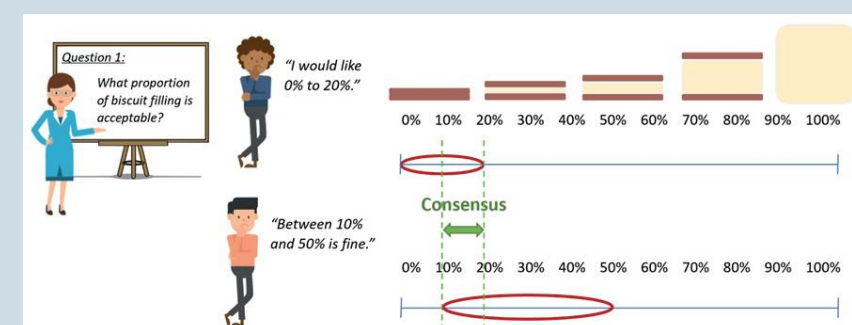
HIGHLIGHT: HOME:Zero

The residential sector ranks high in the list of top contributors to carbon emissions.

This project investigated the inšuence immersive art can have on young individuals, raising awareness and examining their potential as active agents of net zero lifestyles in the home. Research explored the use of HOME:Zero as a catalyst to support family conversations about the impact of household emissions on the climate.

Project partners: Makers of Imaginary Worlds, Lakeside Arts Centre, National Gallery X

Outputs: Public engagement and outreach events at 'trelley Library and Mansfield Museum attracting over 300 visitors. Workshops involving 11 families with children ages 6-10 years old. 91% of adults indicated HOME:Zero had helped raised awareness of climate change issues and 71% stated they had gained ideas on how to address climate change at home.

"It was awesome! I feel like it's a better world" a child member of the co-design team told us!

ROUND 2

**Adaptive Podcasts** - Exploring privacy and trust challenges involved in the adoption of adaptive podcasts

Everything in Moderation - Examining challenges for moderation of online content across public or private communication

HOME:Zero • inspiring children as drivers • or change - Investigating the role of a mixed reality art installation as a catalyst to stimulate family conversations about home emissions and their impact on climate change

Memory Machine - A custom-built physical repository for digital memories accessible to multiple users
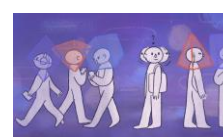
Promoting Net Zero - How to inspire transformative policy and lifestyle changes in support of the transition to a net zero economy

Open All Senses - Exploring how people feel when controlling and interacting with telepresence robots

ROUND 3

EFRESH - creating guidance to support effective, safe and responsible research on online communities

Hybrid Relics - addressing key questions concerning new social computing paradigms for designing hybrid products

horizon
DIGITAL ECONOMY RESEARCH

IMPACT CAMPAIGN PROGRAMME

This campaign is focusing on new kinds of data-driven products, production processes and enabling technologies that combine the physical and digital aspects of products to create new value propositions for consumers. It is exploring innovative interaction techniques and technologies such as augmented reality and robotics to enhance the consumer experience.

CO PRODUCTION

This campaign involved engaging consumers in the making and distribution of hybrid products. We worked with Partners from the Creative and Cultural industries who were considering exploring the design of new products and offered a safe and accessible testbed.

Projects explored novel ways for consumers to produce content and shape products through the use of personal data, in a safe and trustworthy environment.

Adaptive Interactive Movies - Investigating the processes involved in the creation of adaptive movies that collect and use audiences' real-time personal data.

Storytelling - Grow Your Own Adventure - Researching, developing and evaluating an easily accessible digital storytelling voice assistant (DSVA) that enables children and storytellers to grow their own adventure.

Future Festivals - Exploring technology support for the co-production of blended festival experiences by performers, producers and volunteers as well as local and remote audiences.

HIGHLIGHT: Future Festivals

Covid-19 threw the creative sector into a significant decline. Venues closed, jobs and revenue lost and the social experience of attending live entertainment and performances taken away due to repeated lock downs and social distancing measures. Future Festivals worked with several creative partners including Oxfam, helping them continue to engage with their audiences during and post pandemic.

Work explored existing methods used to deliver online music experiences which uncovered challenges around virtual volunteering, the roles necessary to deliver a shared experience and what a unified system for delivering festivals might look like.

Project partners: Streampark, Oxfam and Live Cinema

Outputs: Bubbles platform - a unique multi-user 3D environment with live feeds set in a festival environment. The platform supported the delivery of Voxjam and UPBEAT festivals, the University of Nottingham's Diversity Festival and the recreation of a 1930's German Jewish apartment in partnership with the National Holocaust Centre & Museum.
Publications: Producing Liveness: The Trials of Moving Folk Clubs Online During the Global Pandemic" and "Infrastructures for Virtual Volunteering at Online Music Festivals"


Bubbles at OXJAM '21

HIGHLIGHT: FAILSAFE

Robotics technologies have seen a rapid advance in the last decade, however these state-of-the-art systems are challenged by frequent failures, especially for long-term autonomy. This is a potential barrier to consumer acceptance and trust in these future systems.

This project is exploring risks and accountabilities with stakeholders to broaden understanding of potential failures for human-robot interaction and address stakeholders needs and concerns around the use of such technologies.

Project Partner: Beko

Outputs: Expert and Public ideation workshops, Paper "In-the-Wild Failures in a Long-Term HRI Deployment" and presentation at IEEE International Conference on Robotics and Automation (ICRA) 2023
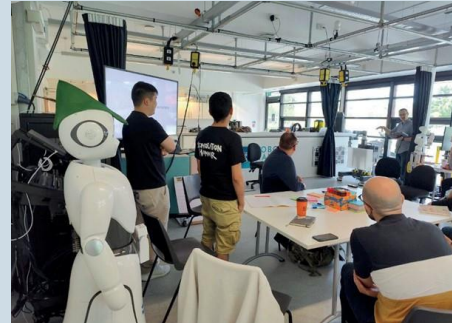
CONSUMER PRODUCTS

This campaign is working to explore integration with manufacturing processes. We are investigating the creative design and manufacturing of digitally enhanced fast moving consumer goods (FMCGs). This explores how technologies such as virtual and augmented reality can enhance the consumer experience. We are addressing how product identity and digital footprint are conveyed to add value and drive responsible consumption.

E‡pressive personalisation of consumer Products through dance - Exploring how people can use their expressive skills to interact with generative algorithms to personalise products, stamping them with their identities to make them more desirable and meaningful.

FAILSAFE - Understanding robotic failures and exploring how people perceive and resolve these with a view to design robot interactions that enhance consumer experience of future robotic systems.

Unpacking the re-current value of Digitally Augmented FMCGs - Investigating how novel digital technologies, such as mobile phone-based augmented-reality, can responsibly improve the value of fast-moving consumer goods, for example, by providing more detailed information, a playful or a mindful experience.

WELFARE

This campaign will explore personalised health, well-being and a consumer welfare agenda. We will focus on:

Wellbeing on the Internet, relating to both to the Internet as a technology to boost wellbeing, and the Internet as technology which directly affects peoples' wellbeing

Digital Mental Health, encompassing novel data-driven technologies for digital mental health (DMH) with RRI at its heart. "

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