CATAPULT
Connected Places

DIATOMIC

COHORT BROCHURE

ABOUT THE PROGRAMME

DIATOMIC (Digital InnovAtion TransfOrMatIve Change) will accelerate place-based innovation in the West Midlands. Harnessing the region's existing international relationships and through a series of targeted initiatives, it will focus on growing the region's clean tech, health tech and med tech markets.

Nine start-up companies have been chosen as part of the DIATOMIC Accelerator programme. The accelerator focuses on improving the management of housing, parks and waste on behalf of Birmingham City Council. It is also looking for new ideas around how to engage better with local people and improve training and knowledge sharing among service delivery teams.

The challenges are:

Data insights

Performance

Knowledge sharing

Citizen engagement

Introducing the Cohort

Think.Air

Air Zone Tech has developed a residential smart ventilation technology called Think.Air™ that protects people's health and wellbeing whilst contributing towards Net Zero.

Start-up company Air Zone Tech Ltd was established by UK and Japanese founders to develop and exploit a residential smart ventilation technology which was developed from PhD research. 'Think.Air' protects people's health and wellbeing in buildings by providing healthy indoor air for occupants to breathe. The circular digital clean air technology contributes towards Net Zero by reducing operational energy and embodied energy compared to traditional 'analogue' systems. Research and Development is supported by the DESNZ Energy Entrepreneurs Net Zero Disruptive Technology funding.

🌐 **https://thinkair.tech/**

chimni

Chimni offers property owners a digital property logbook, providing a secure record of key documents including building work, certification and smart device accounts.

Chimni is a digital property logbook company that gives all property owners a secure digital record of all key data and documentation. We want every home in the UK to have a secure, digital record of all transactions, building work, certification, and permissions as well as giving homeowners the tools to manage their home in an increasingly digital world. Chimni gives owners the tools to manage their white goods, utilities and smart device accounts and all information is held and formatted in ways that can be shared automatically with estate agents and conveyancers if the property is put on the rental or sales market.

🌐 **https://www.chimni.com/**

furbnow

Furbnow helps homeowners looking to invest in energy efficiency solutions in their property to reduce their bills and carbon emissions.

Helping homeowners looking to invest in energy efficiency in their property to reduce their bills, be warmer and reduce their home's carbon emissions. Today, it's too hard to navigate conflicting advice and find quality installers – even the most motivated homeowners may never retrofit their home's because it's too hard. Furbnow starts with a Home Energy Plan to help homeowners figure out where to start. We then design, finance, install and monitor your project – integrating each stage of the project cycle with our scalable platform business model to make it easy for homeowners to get a quality, energy-efficient home.

🌐 **https://furbnow.com/**

kagool

Kagool is a global data and analytics specialist, and a Microsoft partner, which offers missed bins detection using cameras on board waste collection vehicles, GPS and telematics.

We are a Coventry based, but globally operating Data & AI consultancy with specialism for Azure cloud. Our size brings a differentiated level of offering both from a delivery and commercial perspective. These include agility, speed of decision making, access to our executive team, a personalised approach and a true sense of what partnership means.

We were named in the Top 10 strategic D&AI partners of Microsoft USA 2022.

The strength of our partnership with Microsoft gives us direct access to their product engineering teams giving early access to next generation cloud products, allowing us to develop accelerators for customers to use them as soon as they become available.

We possess the full spectrum of expertise in Microsoft technology stack. Kagool employs a team of certified consultants with deep hands-on experience in designing and implementing solutions using Azure and Power Platform technologies to provide efficient data solutions. Our roles include:

- Solution/Technical Architects
- Data Modellers
- Data Engineers
- Power BI Developers

We leverage key learnings from our bleeding edge deployments across the globe and provide recommendations using tried-and-tested solutions from similar data platform programs in the industry.

https://www.kagool.com/

NolijWork

NolijWork is an early-stage software startup that has produced a service diagnostic tool / model that analyses operational processes from data, to understand service performance and identify opportunities for improvement.

In addition to new technology solutions, NolijWork is also driving innovation in the conceptualisation and design of knowledge work itself, i.e. next generation workflow design.

Many of the challenges faced in today's workplaces stem from the shortcomings in work design. The traditional principles of workflow design heavily rely on outdated concepts like "Scientific Management", which were initially crafted for manufacturing rather than service-oriented fields.

Consequently, within service-focused domains such as the public sector, finance, insurance, and legal services, prevailing methodologies tend to be overly complex, demanding specialised business analysis skills. Even with these skills, they frequently yield suboptimal results. This, in turn, has far-reaching consequences in the real world, affecting service delivery, productivity, the identification of automation opportunities, and even the well-being of employees.

NolijWork's approach to workflow design brings about a simplification that is not only easier to comprehend but also more applicable in practice. This leads to a more agile work design, aligning with how people work in the contemporary world.

https://nolijwork.com/

novoville

Novoville is a cloud-based citizen engagement tool allowing residents to apply for benefits, pay bills, report environmental problems and procure repair, maintenance and decarbonisation work for their homes.

Novoville is a multi-purpose citizen engagement and customer service solution currently open to over 2 million people around Europe. Developed with local residents at the centre, it is an intuitive and simple way to access council services, engage with the local authority, and benefit from proprietary housing and mobility services provided by Novoville in collaboration with the local authority.

The solution combines service delivery and civic engagement features in a single cloud-based environment which can be accessed on the web or mobile apps. A one-stop shop, Novoville removes friction and creates an environment conducive to citizens' engagement, diligence and satisfaction. In Novoville, residents can report local environmental problems, apply for benefits, pay for mobility tickets, fines or bills, respond to consultations, engage with the community, and procure repair, maintenance and decarbonisation work for their homes. The strength of Novoville lies in its modularity and cross-sectoral approach to serving residents, providing an HQ for all things local.

https://www.novoville.com/

OSM IUM

Osmium delivers real-time asset management services including energy monitoring for buildings. The Birmingham-based company aims to make a significant contribution to the region's development as a centre for innovative sustainable technology.

Osmium develops and delivers real-time asset management services including energy and multi-utility monitoring. We aim to play a significant part in making the West Midlands a centre for the development of sustainable technology, including the development of innovative services to reduce energy and fuel usage in buildings and travelling between sites.

Initially our focus was on remote monitoring and control of wind turbines and other complex electro-mechanical devices such as variable-speed drives and hydraulic oil contamination monitoring units. This side of the business continues to grow and is increasingly being supplemented by our multi-utility monitoring capability which we are deploying in schools, modular buildings, breweries and leisure parks. We have grown the business primarily through partnering with larger companies who need our technology for their strategic development and who in return can help us scale in their sectors. For example we partner with Europa PLC who have taken us into the electrical component supply market and supply chain and with MP Filtri UK who deploy our products with a wide range of hydraulic fluid condition monitoring customers.

https://www.osmium.app/blog

Secure Sensor Innovative Design is an Internet of Things zero carbon specialist, whose software, Safe House, monitors the environmental conditions of a property and the surroundings of an individual, using sensors and alerts when the property may be at risk of mould and damp.

Safehouse provides an end-to-end IoT service (infrastructure, sensors and cloud services) based on our Viper SaaS. Viper monitors the environmental conditions of a property and the surroundings of an individual, using any manufacturer's sensors and alerts when the property may be at risk of mould and damp and allows early intervention for social services and facilities management to address these issues at an early stage.

It is recognised that health & social care requires change to adopt new and evolving technologies to replace the traditional telecare offerings for the elderly and vulnerable in our society. Environmental factors and conditions directly affect the health and well-being of individuals living independently and often go unnoticed. Viper alerts when a property is under performing and compares the data to a 30 day baseline for more detailed analysis. Using automatically generated APIs and standardised data in an open environment allows AI and ML integration to personalise the alerts to the property and individual.

Our service runs completely in the background and does not interfere with the lifestyle of the users and the Viper mobile app encourages behavioural change to take more interest in their carbon footprint and energy usage. An analysis function monitors all of the properties connected to Viper possibly being at risk of mould and damp and can indicate changes in behaviour associated with mental illness and dementia.

By design Viper is a data platform, gathering information from industry standard sensors, regardless of manufacturer, and displaying the data in a standard format open data platform that can be shared between multiple disciplines to measure the health of the individual and the property, allowing early intervention and remedy.

https://liverpool5g.org.uk/portfolio/safe-house/

Tenants Hub

Tenants Hub Tech offers building and city-wide fault management software; technology that powers the future of civic management.

Tenants Hub brings much needed digital transformation to fundamental basic services. We enable clear communication, documentation and real time fault and asset tracking between council staff, maintenance teams and citizens or residents. Our software targets key unmet needs seen in many local authorities and housing authorities in the UK and can scale to both government and private customers.

Our robust fault management solution is designed to cater to the intricacies of property management while expanding to encompass broader civic responsibilities such as potholes, street lamps, bins, parks, public buildings and other vital assets. Our website and companion mobile apps are designed with modern data visualisation techniques and an emphasis on intuitive simplicity. Accessible anywhere, it ensures that maintenance personnel can address issues promptly, enhancing their efficiency on-the-go.

We use AI to perform deep analysis of issues, identifying systemic faults, predicting when issues may arise or the end of life for assets. Assets that regularly fail can be identified and this information can help the council and housing associations allocate funds more effectively.

While our innovative technology forms the bedrock of our offering, it's our real-world application that truly validates our claims. With a proven track record in the commercial sector and endorsements from two notable companies, our app is not merely a tool, but a transformative solution. For councils and housing associations, adopting our solution is synonymous with fostering efficient operations, ensuring substantial cost savings and enhancing the quality of communal living.

https://www.tenantshub.co.uk/

Locally-led Innovation Accelerators delivered in partnership with DSIT, Innovate UK and City Regions

Department for Science, Innovation, & Technology

UKRI Innovate UK

West Midlands Combined Authority

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