Annual Report 20/21

ktn-uk.org
Connecting for Positive Change.
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Net Promoter score of +40% – recommending KTN to others.

50% of businesses achieved results faster and of higher quality and scale, as a result of KTN.

- (Source Business Survey)
This was a year like no other at KTN. Less than a year after joining as CEO, we re-articulated our purpose, launched our 2020-25 strategy and re-branded the organisation all in the trying context of the Covid-19 pandemic.

Our purpose, which was determined with input from everyone across KTN, is to ‘create diverse connections for positive change’. In this simple statement, we are able to describe what we do and why we do it: driving positive change through innovation, for our environment, society and economy.

We describe in our strategy how this purpose is delivered by three pillars: our powerful connections, our deep expertise and our future shaping capacity – all of which is underpinned by our people.

It is our people who have shown the most commitment, determination, creativity, openness and collaboration over this year. We shifted from being an organisation for which in-person meetings and events were integral to our connecting across the network – to one that is able to deliver even greater impact – through connecting online. Moving forward, we will use these online ways of working to ensure our activity is inclusive and diverse, that we reduce our carbon emissions and that we support the wellbeing of our people and our network.

As we build upon the impact we have made throughout this year, including our work around sustainable innovation and Covid response funding, collaboration with arts and entertainments venues and battery systems, we look forward to a renewed, diverse and inclusive economy aligned with KTN core values and founded on a system of innovation.

Alicia Greated, CEO, KTN
KTN is committed to focusing not only on economic prosperity, but also on societal and environmental change through innovation, starting with the goal of achieving net zero carbon emissions by 2050.

KTN is also committed to embracing and promoting the benefits of a diverse and inclusive economy and society – and using those strengths to innovate globally, creating valuable new opportunities for innovators.
02 Delivering Our Strategy

Net Zero Highlights

KTN has developed a programme of activity that will help the UK transition to Net Zero and drive value for UK businesses and society during the transition. The programme is underpinned by KTN’s unique positioning that enables us to:

- Identify the technologies and capabilities that will drive Net Zero
- Connect Net Zero Innovators to established industrial challenge holders
- Accelerate the adoption of proven innovation across diverse sectors
- Support and facilitate the development of a low carbon supply chain
- Provide cross-sector highlights to inform a positive policy environment

In 2020/21, KTN began to shape government policy on the future of flight through the Jet Zero Council Sustainable Aviation Fuel (SAF) Delivery Group. Acting as secretariat, KTN has convened a range of expert meetings and workshops in order to challenge and further understand the barriers to developing a UK SAF Industry, advising the UK Government on its SAF ambitions.

KTN is the delivery partner for Innovate UK on the Future Flight Challenge. Since February 2020, KTN has:

- Built a network of over 2000 individuals
- Delivered 18 online events with over 15,300 attendees
- Facilitated 461 business introductions and 25 collaborations

KTN has a number of Innovation Networks working on Net Zero solutions: De-carbonising Ports and Harbours, Hydrogen, Cross-Sector Battery Systems.
KTN’s Capability Directorate includes the following teams: Chemistry and Industrial Biotechnology, Manufacturing, Materials, Enabling Technology, Complex Systems and Design and Innovation Effectiveness. 2020/21 highlights for the directorate are the implementation of the ‘Made Smarter Innovation Network’, the continued success of the ‘Net Zero SME Accelerator’ and pivoting to hold one of KTN’s flagship events online.

UK manufacturing represents approximately a third of our carbon footprint. To accelerate the UK’s journey to Net Zero, KTN, sponsored by BEIS, launched the ‘Made Smarter Innovation Network’. Over the next five years, the network will help manufacturers and technology providers to innovate by facilitating knowledge exchange and collaboration. The network aims to pave the way for a more resilient, sustainable, and diverse manufacturing sector.

KTN’s Net Zero SME Accelerator delivered by the Chemistry and Industrial Biotechnology team is also paving the way for a Net Zero future. Over five months, KTN took a cohort of 14 early and late-stage innovators through a programme of training and support to accelerate their journey to commercialisation. Sponsored by Innovate UK and several partners, including Unilever and IBioIC, the accelerator aimed to enable the UK to build a more resilient chemicals supply chain. The cohort received 1-1 advice from KTN experts, scale-up and specialist business support, industry insights and investment readiness training. As a result of the accelerator, one participant decided to pivot their business, two innovators on the programme formed a partnership, and several got in front of private investors.

In March 2021, KTN hosted the first ‘Global Research and Innovation in Plastics Sustainability’ (GRIPS) conference, exhibition, and showcase. Amidst the transformative context of the pandemic, KTN held this flagship event online, which not only kept delegates safe but improved accessibility and saw a more diverse audience attendance. The event, held over two days, had 186 speakers and nearly 2000 delegates, 30% of whom were international.
Success Story: Phase BioLabs
Accelerating the path to Net Zero for Chemical Manufacturing

Phase Biolabs is an innovative biotechnology and carbon recycling company launched in response to UK’s Net Zero commitments. To reach this target, they leverage gas fermentation to develop a scalable platform for recycling carbon. To accelerate commercialisation, David reached out to KTN to get feedback on the potential applications for the CCU technology that Phase Biolabs was developing.

David said:

“My initial conversation with KTN was really great. We reviewed various performance parameters of the technology together and got really excited about its potential for reducing industrial GHG emissions. KTN provided some critical but constructive feedback on what would be required for the technology to be taken up by industry, and so we set out to find funding to address these issues.”

With KTN’s support, Phase Biolabs was able to secure a Sustainable Innovation Fund SBRI: Phase 1 award in September 2020.

“Securing grant funding was critical to getting us off the ground and to progress beyond the early stages. Crucially, we were able to demonstrate the innovative aspect of our CCU technology. We generated proof of concept data for our innovation and completed a techno economic assessment for the proposed process at scale. In addition, we were able to confirm the novelty of the innovation to determine if we could protect it by filing a patent”.

Success Story: FareShare
Increasing the Efficiency of Food Distribution

FareShare, the UK’s largest charity fighting hunger and food waste, was experiencing problems with food distribution across different food banks.

KTN’s Industrial Mathematics expert helped FareShare solve this problem. Using KTN’s model, FareShare decided to relocate some of their food hubs to increase efficiency and get the food where it needed to be faster.
Directorate Highlights

The Ideas Directorate includes the Emerging Technologies and Industries Teams and over 30 Knowledge Transfer Advisers who deliver the Knowledge Transfer Partnership (KTP) programme as part of their wider engagement with the universities.

During 2020/21, Knowledge Transfer Advisers (KTAs) worked closely with the UK’s academic community. Their active support assisted Innovate UK in developing temporary schemes and new ways of working to enable partnerships to adapt to Covid-19 restrictions. These included mechanisms for pausing projects temporarily and extending projects in exceptional circumstances. Advisers were particularly active in providing one-to-one support to businesses, finding ways to maintain their KTP innovation projects against the backdrop of severe business disruption. Associates too were supported by KTAs, many of whom were having to adjust to delivering innovation projects in the most challenging of professional circumstances.

The year closed with a total of 781 active projects and 812 associate positions. As a testament to our determination fewer than 4% of projects terminated early because of the pandemic. Demand for new partnerships remained strong throughout the year with 289 new partnerships approved. KTP continued to attract the brightest young talent into UK businesses with an international emphasis. The 2020/21 associate cohort comprised 68 different nationalities and more than 50% of associate positions were filled by international graduates, further highlighting the role of KTP in attracting the brightest international talent to work with the UK’s innovation focused businesses.

“At KTN we are committed to shaping innovation communities of the future. Not only are KTPs actively bringing research into commercial business environments, but they are also bringing new ways of thinking, diverse experience, and varied skill sets together to make a meaningful difference in building a sustainable economy and society.” – Alicia Greated.

Another successful pivot to virtual working was the Innovation Canvas training session. Originally built in-person as a programme, KTN redesigned the course to be delivered online. The training helps early-career innovators better understand and reflect on the success drivers in their sector and business.

2020/21 saw KTN launch a new interactive online Innovation Strategy course for KTP Associates, built around the Innovation Canvas. Designed for innovation practitioners, three cohorts, comprising over 130 early career researchers (KTP Associates), have taken part in this remote learning opportunity. The Innovation Strategy course has now become a mainstream part of KTN’s support for KTP associates, with further cohorts being built into the subsequent year. The course alumni represents 125 companies and 55 knowledge bases across 23 industry sectors.

“KTN's Innovation Canvas is an amazing tool which significantly enhanced the overall success of my KTP project. This lively and engaging course encouraged me to open valuable conversations within the partnership which may not have happened otherwise. The resulting innovation strategy was of great value.” Deepak Ajayakumar, KTP Associate, The University of Manchester and Procter & Gamble.
In November 2020, as part of the Quantum Innovation Network, the Emerging Technologies and Industries Team delivered the Quantum Technologies Showcase. The Showcase was KTN’s first online exhibition and attracted over 1,400 delegates and featured 80 exhibitors, over half of which ran an interactive virtual booth with lab tours and product demonstrations. A highlight of the event was KTN launching the UK Quantum Landscape Map. The map has been well received by the community and appreciated as a valuable and complete resource to find contacts and capabilities.

KTN’s Neurotechnology Innovation Network (NIN) team embarked on a series of meetings with government stakeholders to support the development of a Roadmap to support the neurotechnology sector in the UK. A follow-up meeting with senior policy advisers at the Cabinet Office led to an invitation to present the Innovation Network to a cross-government working group (including DIT\(^1\), BEIS\(^2\), UKRI\(^3\), MOD\(^4\), DCMS\(^5\), DHSC\(^6\) and DEFRA\(^7\)) looking at Human Augmentation. The Cabinet Office then asked the NIN to write a commission to the Regulatory Horizons Council on neurotechnology as we are now regarded as the UK experts in this field.

KTN’s Position, Navigating and Time (PNT) Innovation Network, was approached to support the Cabinet Office on the government PNT strategy. This project positioned KTN for more engagement with the Cabinet Office Group, in a sector now receiving strong government support and possibly substantial new funding. The PNT Innovation Network also worked on a project for the UK Space Agency to refresh a PNT Roadmap, last published in 2014. In collaboration with the UK’s National Timing Centre and National Physical Laboratory (NPL), KTN also hosted four workshops to capture the timing needs of users in various sectors, to give scope to the activities of the NTC and future innovation funding competitions.

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1 DIT – Department for International Trade
2 BEIS – Department for Business, Energy and Industrial Strategy
3 UKRI – UK Research and Innovation
4 MOD – Ministry of Defence
5 DCMS – Department for Digital, Culture, Media and Sport
6 DHSC – Department of Health and Social Care
7 DEFRA – Department for Environment, Food and Rural Affairs
The Application Directorate is made up of five industry-facing teams that primarily focus on identifying challenges and innovation adoption. The industries covered are Agri-Food, Digital and Creative, Health, Clean Energy and Infrastructure and Transport.

2020/21 highlights for the Directorate include the publication of the AI for Services Report, the launch of the Microbiome Innovation Network strategic roadmap and delivering virtual missions to boost UK-Africa Agri-Food collaboration.

The AgriFood Africa Connect Virtual Missions 2020 brought together 878 stakeholders from African countries and the UK through 40 online events. During the missions, over 85 expert speakers highlighted challenges and trends within African AgriFood systems. The virtual events were a success for inclusivity and allowed for a broader audience, generating more powerful connections.
KTN’s AgriFood experts drive the adoption of digital technologies in the sector. KTN has helped UK company Breedr develop an innovative digital platform that helps livestock farmers improve productivity and meet Net Zero targets. KTN has facilitated introductions to key industry partners and helped Breedr secure substantial grant and investment growth funding. Since working with KTN, Breedr has grown from two to 20 employees, with the technology used by over 1,5000 active farmers daily.

In February 2021, the Microbiome Innovation Network published its strategic roadmap, setting out recommendations to establish the UK as a leader in the Microbiome space. Driven by KTN, the roadmap had input from over 70 key opinion leaders in the UK. In the first week after launch, the roadmap had over 2000 views and 1000 downloads.

KTN’s Digital and Creative Team manage several programmes including, AI for Services, Immerse UK, CyberASAP, UK5G and the Safety Tech Innovation Network. In September 2020, AI for Services published their first report providing insight into the adoption of AI and data technologies by professional services; accountancy, insurance, and law. KTN continued to deliver CyberASAP in partnership with Innovate UK, completing its fourth year in February 2021. The DCMS funded programme has supported over 47 projects, and funding raised by all CyberASAP Alumni has exceeded £16million. The Safety Tech Innovation Network and UK5G both saw significant growth. UK5G membership now exceeds over 4000+ registered users, and the Safety Tech Innovation Network secured 300 members in its first three months.

KTN’s Innovation Exchange platform continued to support collaboration between challenge holders and innovators already working on solutions. The platform has published over 90 challenges, for which 443 innovators presented solutions, leading to 88 trials and 22 contracts valued at over £2m. The estimated impact to challenge holders totals £17m.
KTN’s Strategic Development Directorate is made up of the following teams; Investment and Business Development, KTN Global Alliance, Stakeholder Relationships, KTN Futures and the Strategic Portfolio Office (SPO). The purpose of the directorate is to ensure that KTN successfully delivers against its strategic goals, generates evidence of our success, and builds new strategic partnerships to extend our networks and create greater value for those we work with.

Innovation is increasingly global. During this year, under the banner of KTN Global Alliance Africa, we have established new teams in South Africa, Kenya and Nigeria to create opportunities to connect for positive change and increase the innovation capacity of these countries, while also benefiting UK companies and universities. Some of our tried and tested models in the UK, such as Innovation Exchange (iX), and Knowledge Transfer Partnerships are being used in these countries to strengthen their innovation systems.

The Global Expert Missions (GEM) programme is funded by Innovate UK to support the Industrial Strategy’s ambition for the UK to be the international partner of choice for science and innovation. Led by KTN, GEMs play an important role in building strategic partnerships, providing deep insight into the opportunities for UK innovation and shaping future bilateral collaboration programmes. Examples of (virtual) Missions this year include an Advanced Therapies mission to Canada, and Artificial Intelligence mission to Germany and a Precision Medicine mission to Israel.

The UK’s membership of Horizon Europe is significant and KTN has worked tirelessly to promote the opportunities for UK companies to play a key role once again in European R&D.

KTN engaged with several partners and stakeholders when developing our brand and 5-year strategy including; Innovate UK, Optos, the Scottish Government and Offshore Renewable Energy Catapult, to name a few. Working in partnership with key members of the innovation landscape allowed KTN to build a strategy that would accelerate UK innovation and drive positive change.

Our strategy includes diversifying our client base, initially prioritising UKRI, BEIS and other Government departments to work on larger scale projects to deliver greater impact. During 2020/21, KTN worked with 33 clients, on 144 projects*.

We played a key role in supporting BEIS in the development of the Innovation Strategy, published in July 2021. KTN facilitated and organised several consultation events, ensuring the voices of a broad and diverse spectrum of businesses were heard and incorporated into the strategy. KTN utilised its broad Network of businesses, from start-ups and SMEs to corporates across all sectors and regions of the UK to discuss key components of the strategy including finance, global innovation and mission led innovation.

KTN has strengthened its relationship with Innovate UK by developing a robust governance structure and reporting requirements jointly with IUK. This has ensured a more thorough reporting process and developed a more effective partnership between both senior leadership and colleagues.

As well as this, KTN joined Airto, which is the Association for Innovation, Research and Technology Organisations, with key innovation bodies becoming part of the network. This has provided KTN with a platform to collaborate with like-minded partners and share best practice and lessons learned in the innovation space.

For more information click here.
KTN in Numbers

- **231,541** Innovators in our Network
- **589** Events
- **49,487** Active Subscribers
- **397,799** KTN Website Users
- **37,962** Organisations
- **2.4 million** KTN Website + Microsites Page Views
- **57,334** Unique Delegates
- **63%** New to KTN

Based on FY 2019/20 data, innovators within our network grew by 7,954 this year, and with only 71 additional events, the number of unique delegates increased by 24,811. KTN’s website had 67,799 more users and 300,000 more page views.
## 2020/21 Figures

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