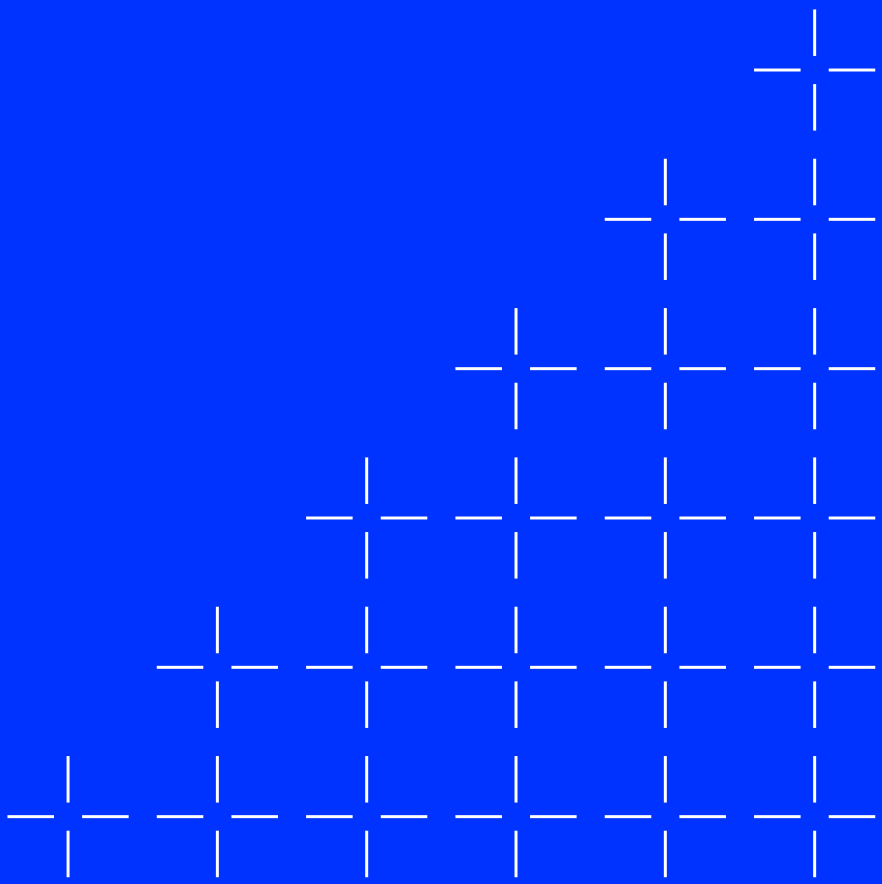
CYBER + ASAP | Academic Startup Accelerator Programme

Impact and Insights Report

Autumn 2021



Introduction & Context

The Cyber Security Academic Start-up Accelerator Programme (CyberASAP) is the only pre-seed accelerator programme in the UK's Cyber Security ecosystem. Launched in 2017, it is an initiative designed to encourage the commercialisation of UK academic research in cyber security.

The programme is funded by the UK Government Department for Digital, Culture, Media and Sport (DCMS) and delivered in partnership by KTN and Innovate UK. The programme has played a complementary role alongside other DCMS-funded initiatives supporting the establishment, growth and scale-up of cyber businesses in the UK.

Cited as a Case Study in the UK Government's July 2020 UK Research and Development Roadmap, CyberASAP has built up a demonstrable track record of delivering commercialisation impact to a diverse and growing pool of academic teams and universities right across the UK.

"The CyberASAP programme plays an important role supporting academics to turn their research into market-ready products and it will not only help us build back better from the pandemic but also keep people across the country secure online."

Matt Warman MP, Minister for Digital Infrastructure (July 2019 to September 2021)

"Due to the nature of our expertise and experience in helping support and commercialise promising innovations, we were able to deliver a programme - conceived and developed by DCMS, Innovate UK and KTN - for academics looking to take their research out of the lab and into the market". Since we selected our first cohort for CyberASAP back in 2017, it has been a huge privilege to see so many academics develop their skills, progress their ideas and make such a significant contribution to the vitally important cyber security ecosystem here in the UK".

Emma Fadlon, Co-Director, CyberASAP, KTN

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CyberASAP Team

KTN

Emma Fadlon & Robin Kennedy
Co Directors

Lorna Miller
Project Administrator

Chloe Walker Harrison
Project Manager

Cat Maclean
Comms Consultant

George Lintott
Marketing Manager

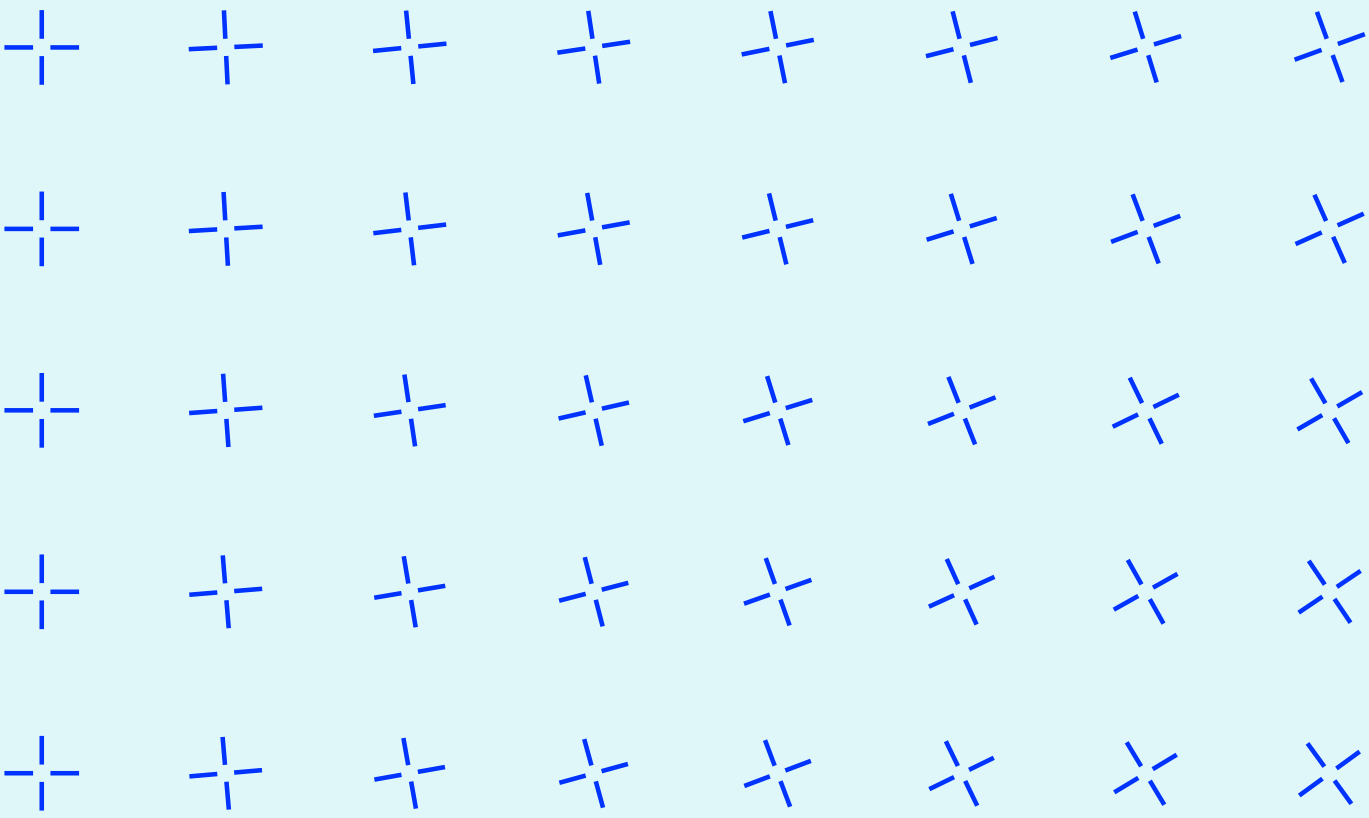
Other Contributors

KTN

Alexandra Jugureanu & Stuart Thompson
Innovation Insights and Policy Analysts

cyberasap.co.uk
@CyberASAP
cyberasap@ktn-uk.org
/cyberasap

Key Facts and Impacts



93 Projects have participated

47 Projects have graduated

51 Universities have participated

31 Universities have graduated

An additional 24 teams (not included in the number above) started Year 5 of the programme in April 2021

CyberASAP helps establish new cyber security businesses

21 startup companies have been formed by CyberASAP participants

CyberASAP reaches different parts of the UK Academic Research Base*

74%
of projects are from non Russell Group Universities

60%
of projects are from neither Russell Group nor ACE-CSR institutions

64%
of projects are from non Academic Centres of Excellence in Cyber Security Research (ACE-CSR)

over **£16.3m*****

CyberASAP Graduates succeed in raising further funding from a range of sources to develop their product/service idea

Sources: *Alumni tracking years 1-4 inclusive, CyberASAP, ongoing ** Alumni Research project, Insights Team, KTN 2020 ***Figure correct as at September 6 2021

CyberASAP develops the cyber security pipeline*

46%
Spinning out / in development

29%
Spinouts

5%
Acquired

5%
Licensed

15%
Dormant

Percentage of Graduate projects

CyberASAP gets academics started on the road to commercialisation**

More than 50%

of survey respondees are now either operating a company that they established or are actively looking for funding for their spin-out

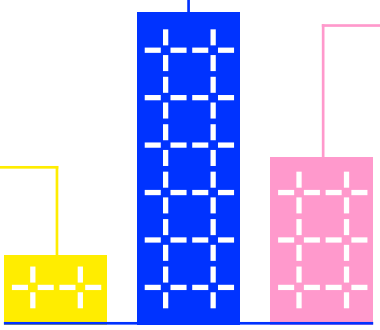
A further 22%

are continuing research on their idea

CyberASAP catalyses commercialisation**

61%
wouldn't have started the project at all without CyberASAP

Only 11%
of survey respondees would have done the project anyway



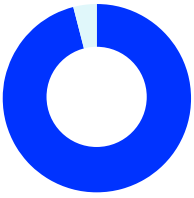
27%
would have done the project at a lower level or more slowly

Sources: *Alumni tracking years 1-4 inclusive, CyberASAP, ongoing ** Alumni Research project, Insights Team, KTN 2020 ***Figure correct as at September 6 2021

CyberASAP delivers highly valued content**

82%

scored the training a maximum score of **5 out of 5**



96%

would **recommend** CyberASAP to others in a similar position

> 4 out of 5

The average **satisfaction rating** of survey respondees for every module of the programme

CyberASAP acts as a gateway to other development support**

Almost 40%

of respondents had moved onto other accelerators or programmes of support.

CyberASAP helps participants to understand business and commercialisation**

Key achievements of survey respondees were:

Product development (prototype or minimum viable product)

Market testing and understanding

Establishing a company

Developing Commercial skills

Finding funding

Sources: *Alumni tracking years 1-4 inclusive, CyberASAP, ongoing ** Alumni Research project, Insights Team, KTN 2020 ***Figure correct as at September 6 2021

About the Programme

Programme Overview

Now in its fifth year, CyberASAP continues to provide a comprehensive range of support to develop academics' entrepreneurial skills and translate their research into products and services in the cyber security sector.

Through a varied, year-long programme of expert workshops, training, briefings and bootcamps CyberASAP helps teams at every stage along the complex journey from lab to market.

The programme operates over three stages, supported by external assessments. Teams receive a grant to cover their engagement in the programme and, for those progressing to Phase 2, to develop a Proof of Concept. Throughout, they benefit from the input of experts within KTN as well as its wider network of industry specialists, entrepreneurs and investors.

Graduates of the programme have been encouraged to progress their projects, going on to achieve a range of successes including:

- Acquisition by technology firms;
- Receiving seed funding;
- Joining other accelerator programmes;
- Securing government grants;
- Making important innovative approaches available open source;
- Partnering with commercial enterprises.

In helping accelerate the roll out of great cyber security ideas from universities, CyberASAP supports the ecosystem and DCMS's aims to develop and sustain sustain a security sector that meets the UK's national security demands.

By doing so CyberASAP creates a dynamic interface between government, cyber security academics and the business and investment community so vital to the health and development of this critically important sector.

"CyberASAP has been a whirlwind of excellence, business communication and the 'how to' models of change. We are loving our journey and look forward to building our vision into reality".

Ellen Kay, University of Wolverhampton,
Year 4 cohort

Programme Structure & Funding

The programme has evolved since inception and currently has a two-phase approach starting in April each year and taking place over eleven months (including a summer break).

Phase 1A
Development of Value Proposition

- ~2 months
- Up to £16,000 grant

Phase 1B
Market Validation of Value Proposition

- ~2 months
- Up to £16,000 grant

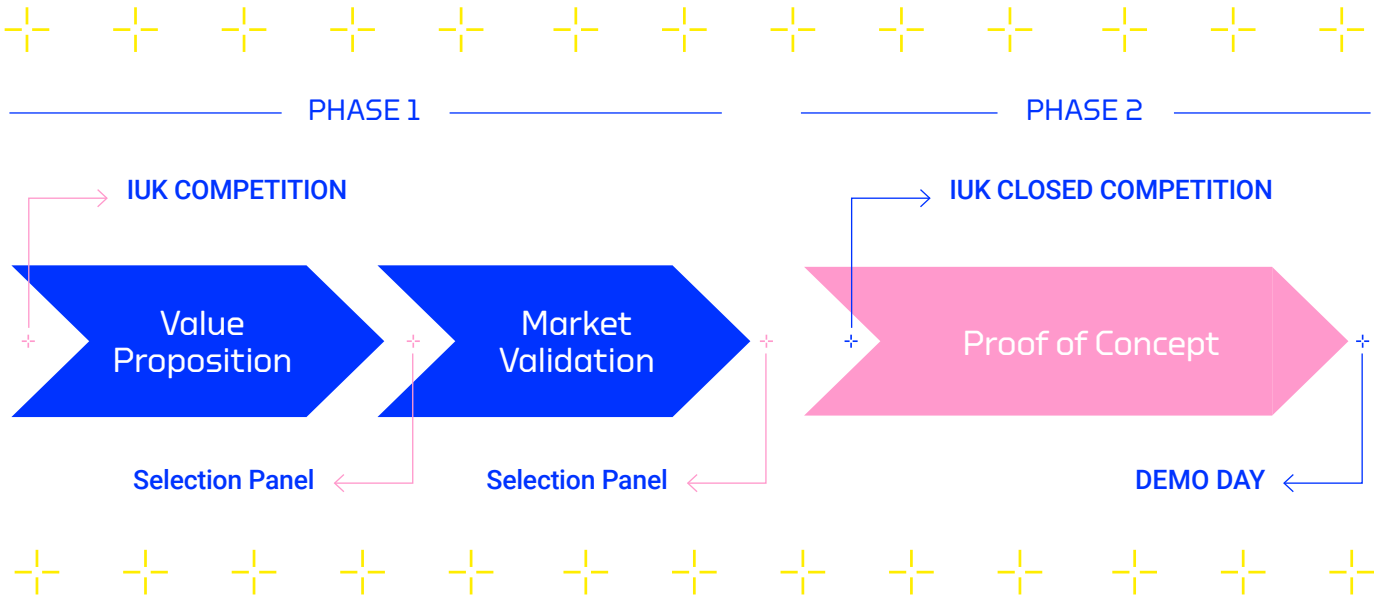
Projects are assessed at the end of Phase 1A & 1B by external, industry-led panels and only those projects which pass can proceed to the next stage.

Application to Phase 2 is via a closed Innovate UK competition. This is invitation-only to those who have successfully passed Phase 1B.

Phase 2
Development of Proof of Concept (PoC)

- ~5 months
- Up to £60,000 grant

Projects receive a grant only for the duration they are on the programme. The grant is largely to cover academic salaries although it can also be used on Phase 2 for the PoC development.



Programme Content and Project Selection

A series of interventions - including bootcamps, workshops, seminars, and mentoring sessions - provides participating teams with the insights and skills necessary to take their product /service to the market.

Led by KTN's Emma Fadlon and Robin Kennedy, the programme draws on their expertise, and also benefits from the experience and specialist knowledge of their extensive network of practitioners (including in IP, New Product Development, Innovation Planning, Investment, Pitching, Communications, Sales) who contribute to the 11 month programme.

Academics initially apply to Phase 1 in February/early March via an open competition through Innovate UK who manage the selection process and monitor the grants. The following eligibility criteria applies:

Applicants must:

- be based in a UK academic institution
- have a cyber security idea
- be interested in the commercialisation of their idea
- have the support of their academic institution's Technology Transfer Office, or equivalent.

"I was already impressed with this programme when I got an opportunity to attend the Demo day. True to what they do, the team provided some excellent guidance to the cohort this year on how to progress with our innovative ideas. The expertise available with this team is worth tapping into even if you yourself are an expert".

Meha Shukla, PhD Candidate, Physical & Cyber security of smart street infrastructure, Department of Security and Crime Science and Civil, Environmental and Geomatic Engineering, University College London, UK.

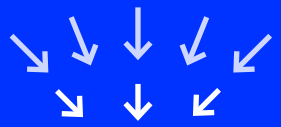
CyberASAP Programme Directors, KTN

Robin Kennedy
KTM, Cyber Security

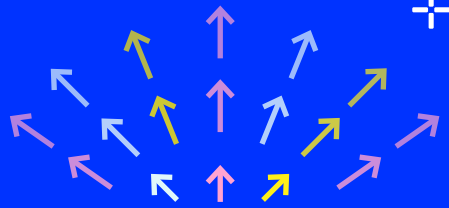
Dr Emma Fadlon
KTM, Investment

Overview of Programme Reach and Impact

CYBER + ASAP



INPUTS



OUTPUTS

Structure	Activities	Outcomes	Impacts
University Team Application/Selection: » ACE » Russell Group » Post 92 » All across UK » Independent Assessors	**KTN Specialists devise & deliver the programme:** » Bootcamps » Training » Tools » Mentoring » Peer to Peer learning » Industry Showcase (Demo Day) **KTN-curated sessions with external mentors on:** » Sales & Presentations » PR, Marketing & Comms » Meet the Entrepreneur » Market Validation » Developing a Proof of Concept » Investor Readiness » IP & Legal Issues	✢ Validated proof of concept ✢ Spin outs / patents / trademarks ✢ Further funding ✢ New skills ✢ New jobs ✢ Industry / academic collaboration ✢ Pipeline	✢ UK has leading cyber security sector ✢ UK academics recognised as source of innovation ✢ Helps develop University teaching

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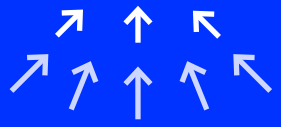
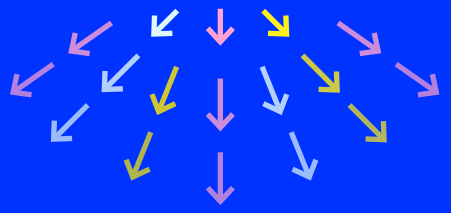
Structure Activities Outcomes Impacts

INPUTS



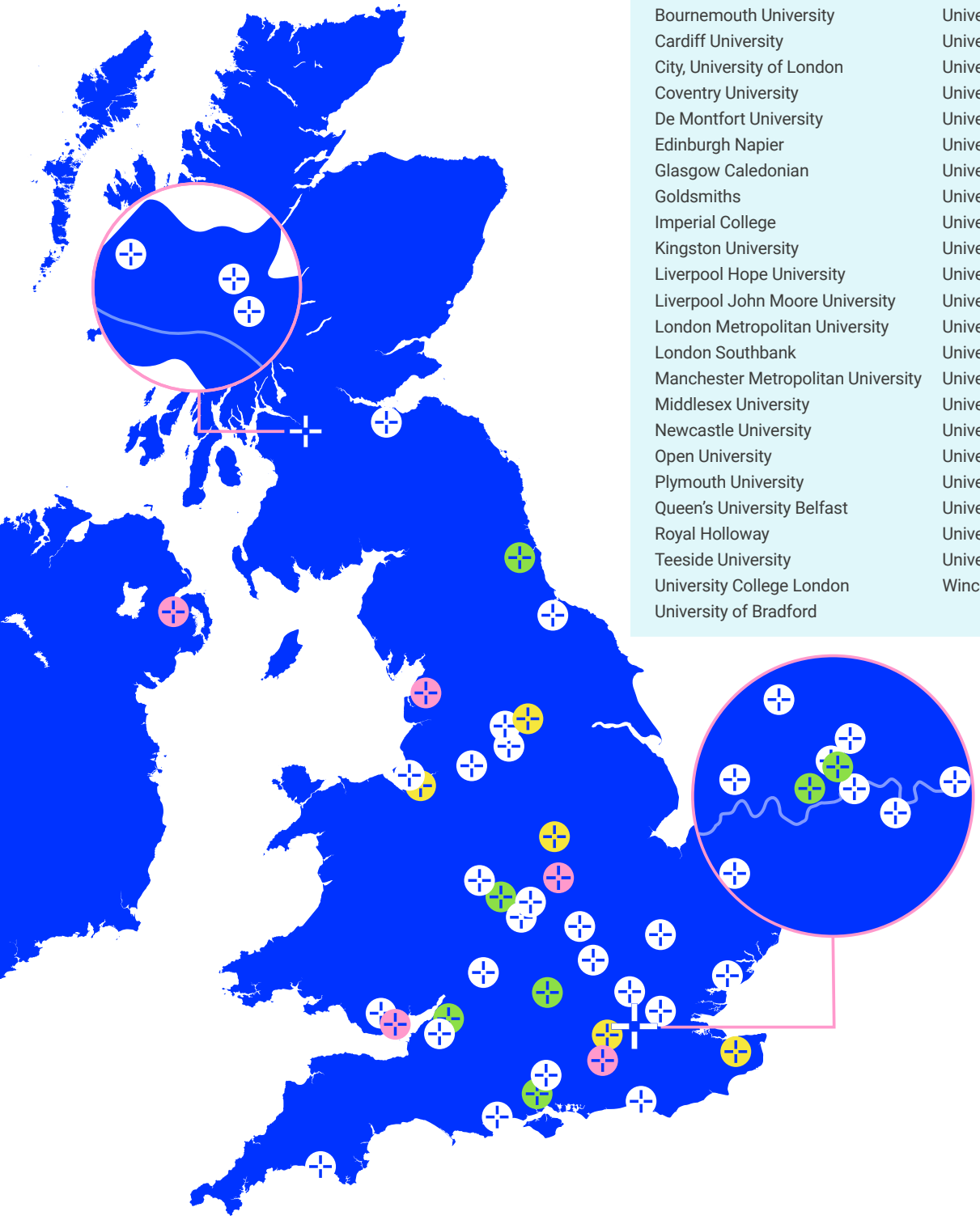
OUTPUTS



Reaching a Broad Spread of the UK Academic Base

Participating Universities:

Anglia Ruskin
Birmingham City University
Bournemouth University
Cardiff University
City, University of London
Coventry University
De Montfort University
Edinburgh Napier
Glasgow Caledonian
Goldsmiths
Imperial College
Kingston University
Liverpool Hope University
Liverpool John Moore University
London Metropolitan University
London Southbank
Manchester Metropolitan University
Middlesex University
Newcastle University
Open University
Plymouth University
Queen's University Belfast
Royal Holloway
Teeside University
University College London
University of Bradford
University of Brighton
University of Bristol
University of Cambridge
University of East London
University of Essex
University of Glasgow
University of Gloucestershire
University of Hertfordshire
University of Huddersfield
University of Kent
University of Lancaster
University of Leeds
University of Liverpool
University of Northampton
University of Nottingham
University of Oxford
University of South Wales
University of Southampton
University of Strathclyde
University of Surrey
University of Warwick
University of West London
University of West of England
University of Wolverhampton
Winchester University



Key:

- ACE
- Russell Group
- ACE & Russell Group
- No Group

Reaching a Broad Spread of the UK Academic Base

As of April 2021

47 Projects have graduated

93 projects from **51 universities** have participated

CyberASAP represents a wide geographic spread of Universities with excellent representation from non Russell Group and Non ACE-CSR institutions

Graduate Projects

79% come from universities outside London

26% come from Russell Group universities

36% come from Academic Centres of Excellence for Cyber Security Research (ACE-CSR).

60% come from universities that are neither Russell Group nor ACE-CSR.

Attracting Funding from a Variety of Sources

In addition to the 21 companies formed, we are aware that several former CyberASAP projects are planning to register companies in the near future. In some cases this will be delayed as receipt of public sector grants means that companies cannot be established due to WTO Subsidies control rules.

Over the 4 years of CyberASAP

21 startup companies have been formed from CyberASAP participants, find out more here

Over £16.3 million attracted by projects from CyberASAP from a range of sources including:

- Private investment
- Angel investment
- SEED stage investment
- Direct investment (Lloyds banking)
- Innovate UK funding (ICURe Covid 19)
- Company buy-out (by Google)
- EU grants (Horizon 2020 ERDF)
- Accelerator programmes.

Graduates have joined further (in some cases multiple) accelerator and incubator programmes including:

- HutZero (at least 3 projects)
- IoT Accelerator Wales
- BetaDen
- Seraphim Space Camp
- Facebook & BT's TIP Ecosystem Acceleration Centre (TEAC)
- Cyber101 (at least 5 projects)
- MI Garage
- Entrepreneurs First – Europe 15
- Barclaycard Techstars
- NCSC
- Mastercard accelerator
- ICURe

Beyond CyberASAP

Programme Impact Extends Wider than Start-Up Success

- Projects which have not graduated from CyberASAP have **joined ICURe** to further develop their proposition.
- A number of projects which participated in the early phase but did not graduate from CyberASAP have still gone on to **commercialise their offering** (product/service), e.g. Fact360, Seclea.
- Where the original CyberASAP project has been abandoned, the training, insights, motivation and inspiration from the programme have led to development of **other Cyber related businesses,** commercial projects or alternative employment (outside academia). E.g. Capslock, SceneGraph Studios.
- Outputs from at least three projects have been made available open source - allowing for **wider exploitation and commercialisation.** It is important to recognise the further value of open source content for both the public good and commercialisation in other activities.
- Further commercial opportunities exist around the implementation of **open source activities.** E.g. Cambridge Authentication and GraphicsFuzz.
- At least three companies have **patents associated with their project in the UK.** Patenting is not traditionally a route of intellectual property protection associated with cyber and digital technologies such as software. Other IP rights have been secured, such as trademarks, copyright and database rights.
- Some projects are also exploring the need for **patents overseas** as well as registering trademarks.
- A number of projects have **influential and valuable collaborators and partners**. E.g. PhishAR with Mastercard, AirID with Lloyds Banking Group, RavenScience with Metropolitan Police and Mayor of London, GraphicsFuzz with Google.

Soft outcomes of the programme include:

- Commercial upskilling, enterprise training and development of academics (including sales, networking, communications, IP)
- Commercialisation including spinout, licensing and open source of products, goods and services
- Better understanding of how to engage and collaborate with industry
- Greater awareness within the academic community for the programme and subsequent applications and participation
- In some cases, improvements to university processes and practices for commercialisation and IP management.

Testimonials

"CyberASAP has been extremely valuable in communicating the importance of finding the right product/market-fit, encouraging our team to take the time and energy for market validation, and in providing us with valuable feedback to carve out the unique selling points for our project."

Ivo Sluganovic, PhishAR/University of Oxford

"CyberASAP seemed perfectly designed for us: academics with a desire to commercialise academic cybersecurity research but no clear understanding of what Step 1 looked like."

Jack Hogan, Shoji/Imperial College London

"The training provided throughout both phases of the programme was excellently delivered by the KTN Team, including many interesting external speakers. This was the first time I had received marketing and commercialisation training, so this was very useful to me and will be applied during my future research activities. The development of the Proof of Concept has enabled me to propose a spinout company from Bournemouth University, to disseminate Authentibility Pass, as well as my previous research projects."

Prof David Chadwick, Verifiable Credentials/University of Kent

"CyberASAP kickstarted my journey and gave me the confidence to step away from academia, and do something that potentially makes a huge impact to society."

Daniel Lewis, Awen Collective/University of South Wales

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For more information visit cyberasap.co.uk

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Innovate UK manages and monitors grant funding to the universities. KTN delivers the CyberASAP programme.