CyberASAP Case Studies
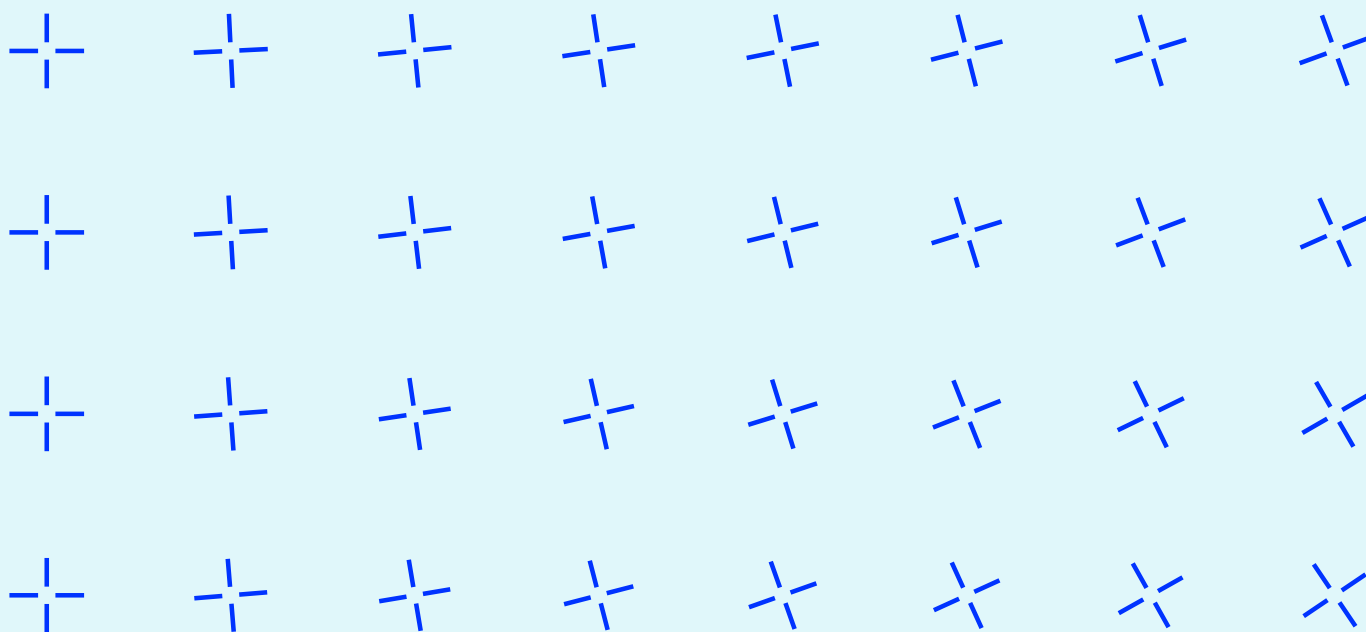
Summer 2021

Insights from CyberASAP Alumni

Contents

Our interactive menu can be clicked on:

Foreword

Since CyberASAP started in 2017, it has been a privilege to support so many academic teams looking to translate their cyber research into new cyber innovations.

In our highly connected world, the security of our cyber interactions is a constant and dynamic imperative. This requires a continuous pipeline of new ideas for technologies and services that anticipate and meet ever-present challenges and opportunities.

Many of those ideas take shape in academic labs throughout the UK. And, sadly, most of them never see the light of day. That's partly because the talented academics who develop them lack the skills and knowledge to convert their academic research into marketable offerings.

CyberASAP was created in order to help those promising innovations flourish, taking them out of academia and developing them into robust, commercially viable prototypes ready for the next stage in their journey to market.

This Case Study booklet showcases the myriad experiences of some of the individuals behind those projects. As you'll see, outcomes vary, from acquisition by Google to licensing deals, successful startups to commercial collaborations.

A broader look at the programme's impact can be found in our Impact Report here

We hope they'll provide some useful inspiration for any academics with an idea they think has commercial potential.

If you would like to be involved in supporting the programme in any way, do please get in touch. You can provide your details here or email one of us on the links below:

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CyberASAP is funded by the UK Government Department of Digital, Culture, Media & Sport and delivered by Innovate UK and Innovate UK KTN working in partnership.

CAPSLOCK

Online learning to reskill individuals as cyber security professionals.

Current Status	University	Location	Category
Spun Out	University of Bradford	Manchester	Cyber Training

Cyberwomen - Expanding opportunities in cyber security

Dr Andrea Cullen and Lorna Armitage, CAPSLOCK

What were your key motivations in commercialising your research?

Andrea: We had both had a few business ideas whilst working as cyber security academics at the University of Bradford; and had both done some consultancy work.

But we joined CyberASAP almost by accident and certainly not with a specific project to commercialise nor any ambition to leave academia and create a startup. As it turned out, it was a very happy accident!

Lorna: Although we were only able to complete Phase 1 of the programme this acted as the catalyst for everything that has followed. The skills, confidence, support and experience of being on the programme were game-changing for us and hugely valuable.

What challenges did you think you might face in commercialising your research, and how have these been borne out?

Lorna: Funding was my key concern. Leaving academia and trusting that we would find the funds to support us to create a new business was a real worry. I still had kids at home and launching a company felt like a very precarious thing to do. An Innovate UK Grant of £100,000 provided a vital lifeline for the development of the business.

Workload was a big issue too: when we were still in academica we weren't able to offload our academic work, so trying to fit in the development work on CyberASAP and continue with our day jobs was difficult. Being women in a male-dominated university department exacerbated this workload issue as we often had additional responsibilities around student support and outreach.

Andrea: My challenge was more around letting myself feel it was OK to be spending time looking at commercialisation options for the research. I had that nagging question "is it OK to be doing this while I'm an academic?".

It took me a while to allow myself to embrace the idea of developing new commercialisation skills and a different mindset - and to acknowledge how valuable these are for any academic.

What do you think are the key barriers for academics in commercialising their research?

Lorna: As well as those issues mentioned above, I think there is a tacit assumption that academics won't cope in the commercial world; that it's not for them - and that view is held by academics themselves. In a way that makes academics feel safe and secure where they are but it really works against them considering a different path.

Andrea: it's easy not to notice how institutionalised one becomes in academia; how trapped one can be. And although many academics do some consultancy work, that's very much as subject specialists. Fear of failure in the commercial world often prevents academics from exploring other options.

Something like CyberASAP can act as a really useful bridge. It provides a safe space in which academics can dip their toe in the water, and learn a whole new language. It provides the time for academics to assess the best options for commercialising their research and pursue the route that suits them as individuals (and there are many, not all of which involve leaving academia) as well as equipping them with the skills and confidence to do this.

It's still rare to find companies with female co-founders. Have there been any particular challenges?

Lorna: Despite so much experience that should make me feel better prepared, I still find myself really surprised by how "invisible" women are if there is a man to communicate about business/finance strategy.

When we were out talking to potential investors they really liked the academic credentials that Andrea and I brought to the table; this gave them confidence in our approach to the learning environment and the curriculum ideas we were proposing. But when it came to discussing financial, investment and business strategy the conversation was always directed to our male Co-Founder, Jonathan.

I honestly don't think that we'd have got the investment we've just raised if we hadn't had a man on our board.

Andrea: We wondered if we were imagining that all the business and financial conversations were being directed at our male colleague, so we decided to measure the extent to which this was happening.

You can read more about our findings here, but I'll give you one chilling tally: across 18 of our most recent meetings with external attendees I was addressed 11 times, Lorna 16 times; while Jonathan's name was used 117 times in total... and counting!

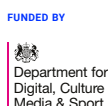## Tell us about the current status of your project.

Andrea: CAPSLOCK is in a great place at the moment. We have 86 Alumni, 70% of whom have already secured cyber security roles, earning them an average salary increase of £15K on what they were earning before they joined the programme. We have a 95% retention rate and are really proud of and committed to ensuring diversity in our learners, in terms of background, ethnicity, gender and neurodiversity. Our financial model, whereby learners don't pay a penny for their course until they're earning well, is designed to remove barriers to learning. We're all about expanding opportunities for everyone.

Lorna: We've just raised over £1m in pre-seed funding. Here again, we were very committed to finding the right investment partners. It's crucial that there's a good cultural fit. We walked away from other investment offers - even though we really needed the funding at that stage - as the cultural alignment just wasn't there. And it was definitely the right decision.

How would you summarise the impact that CyberASAP has had on you?

Lorna: CyberASAP helped plant the seed for us. When we worked up our idea during the programme, we started to realise that we had something achievable. What had seemed like a pipedream suddenly seemed within reach. CyberASAP gave us that belief, that confidence without which it's really hard to move ahead.

Andrea: The programme was great for us and we were gutted that we couldn't complete it due to lack of support from the university at that time. But while we were on the programme we had the time to reflect on where we were and where we wanted to be.

CYBER ÷ASAP | Academic Startup Accelerator Programme

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CyberASAP really was our catalyst. It enabled us to believe we could take the first step.

What were the most valuable aspects of the programme? And the most challenging?

CyberASAP gives academics a safe practice space. You learn a new language, a different way of thinking and you have to work with new frameworks and approaches. We're still using those today.

But the safe space is not one without challenge: there's a really good balance of support and challenge both from the team and from investors and external mentors. That exposure helps prepare you for the commercial world and work out the right route for you.

Andrea: The community aspect of the programme is really beneficial too - we're still in touch with many of the contacts we made on CyberASAP. And the support from the team - even three years on from leaving the programme - is fantastic.

What advice would you give fellow academics considering commercialising their research/spinning out?

- You'll never feel comfortable enough - so just feel the fear, and do it anyway!
- Don't be afraid to ask for help and use the support that's available to you
- Make sure you have very open communication with your co-founders: understand their motivations and ambitions. Without a shared vision the journey ahead will be bumpy!
- When looking for investment partners, make sure there's a good cultural fit.

Contact CAPSLOCK

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Dr Andrea Cullen and Lorna Armitage, CAPSLOCK

KTN Comment

"Lorna and Andrea's experience highlights many of the reasons why female entrepreneurs are underrepresented in the UK and sadly, their experience is common across all technology sectors.

The good news is that it is something that government departments such as DCMS and Innovate UK are aware of and have been putting programmes and interventions into place to try to address this.

Investors and financial institutions are also aware of the conscious and unconscious bias that creeps in and they are working to address this. I have seen good progress in both internal and external processes across a number of organisations, but we still have a long way to go. The annual Investing in Women Code report highlights the progress and barriers since launch in 2019.

The second key issue identified is the confidence to take the first step. All academics have invested heavily in their careers, developing their research and technical skills and depth of their knowledge base. This is on top of delivering leading edge training and support to the next generation of cyber professionals. It is hard to put time aside to explore the application of all that knowledge to a commercial setting, let alone go out there and validate it, raise finance and learn all the basic commercial skills.

The team at CyberASAP have all had first hand experience in these challenges and brought their personal and professional experiences into the design of the programme. It is great to hear that - though the team was unable to participate across the whole programme - the tools, resources and contacts were, and still are, helpful in their start-up and scale up journey."

Emma Fadlon - Co Director CyberASAP, KTN

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AI and unsupervised Machine Learning finds your critical information

Current Status
Spun Out

University
Goldsmiths

Location
Guildford

Category
Threat intel, monitoring, detection and analysis

Alumni Insights: Case Study Interview, Summer 2021

Academics - you will need to change your mindset!

Mark Bishop, Fact360

What were your motivations to commercialise your research?

At the time that we applied to CyberASAP, I was running a commercially funded centre at Goldsmiths so had had a lot of exposure to corporates (Barclays and Accenture, for example) and was constantly aware of the possibility of exploiting our commercialisation ideas.

When we applied to CyberASAP the seed of our idea had germinated and CyberASAP looked like the perfect mechanism to take the idea to the next stage….to explore what we could do with the idea commercially.

What challenges did you think you might face in doing this?

We were really confident in our Proof of Concept, even though it was not developed to production standard. So we felt that the real challenge would be around getting the first customer and establishing routes to market.

Since setting up the company we've encountered some challenges we hadn't anticipated: aligning our offering with the sales proposition, for example, which sometimes means adapting. That requirement to remain flexible can be difficult, especially for a small team which feels a real sense of "ownership" of the idea. The pivots necessary when establishing a company don't suit everyone. And, as with any new company, mitigating the fragility of the team until you can scale up is key.

But we're in a really good place, with our first paying customers on board and a second round of funding in place.

Is the current status of your project where you'd hope it would be at this stage?

We're in a really good position currently. The technology is progressing really well - I believe it is world-beating.

Financially we're quite comfortable too. We're really confident about what we've developed, really excited by the technology and benchmarking against key players.

Our funder had already taken 10 startups to exit and that experience was really useful when we launched the company.

As well as developing our use case for compliance, we also have international plans. We know it's a slow burner, but we're on the path to getting a major contract - we have really experienced people involved and we're competing strongly against established companies.

FACT360
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How would you summarise the impact that CyberASAP has had?

The programme had a huge impact. We didn't know anything about developing a Minimum Viable Product; about creating a Value Proposition; about how to use social networking effectively; so gaining knowledge and skills in those areas was incredibly useful.

For example, as a result of the CyberASAP LinkedIn session, I decided to try and develop my own profile and network and this has led to myriad positive outcomes including connecting with another academic from whom we have bought the rights to use some amazing software.

Via LinkedIn, my personal profile was dramatically extended, my network increased exponentially, resulting in greater exposure for the research.

I have also met lots of interesting people and had exposure on high profile AI channels, for example being invited to be a panellist at one of the biggest AI conferences in the world. Having such good connections really helps with credibility when establishing a new company.

We were pretty devastated not to be selected for Phase 2 of CyberASAP - not just because we had such confidence in what we were doing; but also because the money to develop our MVP would have been mega.

But we got so much out of being on the programme for Phase 1 so I can't really complain!

What were the most valuable aspects of CyberASAP? And the most challenging?

The most valuable things were also the most challenging: getting out of the academic mindset and into a commercial one. And looking at how you market a project, plan development of Proof of Concept and decide on the best route to market.

What advice would you give fellow academics considering commercialising their research?

Engage in a programme of support, like CyberASAP. It's really hard without it. For us, it provided a massive leg up - I simply can't imagine going on this journey without having had that support.

How important do you think the academic sector is in populating the pipeline for new ideas in this space?

Absolutely critical. For example in our case we needed to develop our product and through academic contacts we found a solution. The academic concept was there and really accelerated the solution as we were able to license the software from the academic team. This has given us a real commercial advantage in terms of time and innovation.

What is the key lesson you've learned from the process of commercialisation?

Academics - you will need to change your mindset!

ktn KTN Comment

"The CyberASAP programme is selective throughout and it's gratifying to see that this project has progressed so strongly; providing powerful evidence of the value of the programme, even when only Phase 1 is completed."

Emma Fadlon - Co Director CyberASAP, KTN

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GraphicsFuzz

Security and reliability testing for graphics processors

Current Status
Acquired by Google

University
Imperial College London

Location
Worldwide

Category
Operating systems and web browsers

Why novelty isn't the most important thing on the road to commercialisation

Ally Donaldson, Co-Founder of GraphicsFuzz

What were your key motivations for commercialising your research?

Curiosity! We were interested in testing out whether and what commercial value our research might have; how useful it might be. The project wasn't a hugely original idea…..but we had adapted and applied our research to a new domain, tried it out in graphics devices and wanted to test and demonstrate its usefulness in security.

We didn't have a plan to set up a company and leave academia; we had thought we might go down the licensing route but were open-minded. Our expectations were for either no success or limited sales, with organic growth. We certainly weren't looking to go down the route of getting investors and leaving academia.

What challenges did you think you might face?

IP. We knew we wouldn't be able to buy the IP and worried that this might be a barrier… A greater understanding – both ours and the university's – about how to do software licences would have been useful.

Current Status of the project?

GraphicsFuzz was acquired by Google in 2018. The Proof of Concept developed on CyberASAP was the core product GraphicsFuzz was promoting at this time. The GraphicsFuzz team from Imperial all joined Google, and I retained a part-time faculty position at Imperial. I recently left Google to resume my full-time post at Imperial College.

What impact did CyberASAP have on your commercialisation plans?

We joined CyberASAP as a follow-on from iCURE, without which nothing would have happened. It allowed us to have a funded break from research to go on the road and talk to industry. Those conversations were invaluable.

Joining CyberASAP gave us the funding and the time to develop a Proof of Concept – crucial to progressing any commercialisation ambitions.

The programme also provided some really useful tools, skills and experience: a framework for creating customisable decks, for example – again, essential when talking to industry. And it allowed us to learn new skills like writing a business plan, developing and practising pitching experience; picking up new vocabulary so that we were better able to "talk the talk".

All of these elements of the programme helped equip us to better handle the conversations with industry. So, for example, when we got into conversations about sales and company valuation, the fact that we already had plans and numbers in place gave us more confidence in the negotiations.

GraphicsFuzz

What advice would you give fellow academics considering commercialising their research?

+ Don't be afraid to let your research slip for a year or so if you want to focus on translating research into something.

+ Don't be overly focussed on how novel the idea is that you're commercialising.

+ Be brave when you're thinking about marketing. Developing a social media campaign that sheds your product in a positive light requires a completely different mindset from that of a rigorous scientific researcher, but developing such a campaign is essential in order to get attention.

+ Don't just think about securing large investments, spinning out/scaling up…..consider the possibility of running a long-term, small, successful business with slower, organic growth.

What are the key lessons you've learned from the process of commercialisation?

Academics like doing something different so the commercialisation journey was a great new experience.

Think about your priorities: there's more freedom to innovate in academia – where you can work on an interesting, hard problem for a long time – than in the commercial world, where your activities need to be business focused and therefore may need to change rapidly to follow the needs of the business.

KTN Comment

"I love that Ally says it was initially curiosity that led to the creation of GraphicsFuzz – that's exactly why CyberASAP exists: to help build on the fantastic research, often driven by curiosity, that already takes place in UK Universities, and allow the academics time to explore whether there is potential to take it further into the commercial domain.

Sometimes it's not all about having a groundbreakingly original idea – a different approach or maybe just some space to step back and take stock is what's needed. And that's what the framework of CyberASAP helps provide.

The acquisition of GraphicsFuzz by Google was a welcome validation of the approach the team had been taking – not only did Google obtain the skills, knowledge and experience of the founders but the benefits of the project continued to be available under open source licence."

Robin Kennedy, Co-Director – CyberASAP

"A key lesson taken from GraphicsFuzz is that if you are wanting to commercialise your academic research the route to commercialisation is not a one way ticket.

CyberASAP gave Ally and the team an opportunity to translate their academic research into a tangible commercial product and in the process developed new technical and commercial skills.

Moving back into academia, from Google's commercial research environment, Ally brings fresh ideas and new perspectives to his research and the university."

Emma Fadlon, Co-Director – CyberASAP

Contact Graphics Fuzz

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View interview online

Current Status	University	Location	Category
In Development	Bournemouth	Aberdeen	Information risk assessment and management

Learning the language of commercialisation is crucial for academics

Shamal Fally, Founder, Huahana/CAIRIS

What were your key motivations in commercialising your research?

We had done some work on creating our software platform, CAIRIS, and were interested in perhaps exploring the possibility of licensing it in order to fund further research; or looking at making it available open source. We weren't thinking about starting up a company and trying to become millionaires!

We felt there was a lot of potential for our platform and a few different routes we could take. In order to establish the best way forward we felt it would be beneficial to focus on developing one Minimum Viable Product (MVP).

What challenges did you think you might face in doing this?

We anticipated that one of our key difficulties would be refining our pitch for potential investors/ partners. Very few people really understand how to build software so we needed to develop a pitch that was sufficiently high level to communicate the opportunity; and at the same time detailed enough to communicate our key competitive differentiators.

As researchers we're used to presenting ideas in order to secure research funding, but this is different. We spent most of our time trying to conceptualise the MVP and hone our pitch. We had the basis of the product so one of our other challenges was about pivoting the product to respond to the need and the market.

Tell us about the current status of your project.

Huahana as a concept is dead, partly as a result of the difficulties with IP. Bournemouth University (BU) owns the "foreground" IP (HuaHana), but I own the "background" IP (CAIRIS).

This was something of a test case for the university which, at the time, didn't have a Technology Transfer Officer (TTO). We had numerous conversations with IP consultants but the university would only consider a spin out, whereas a licensing deal would have been more appropriate.

Huahana is a thin layer on top of CAIRIS and, as the market has moved on, we are now going back to the idea we had in Year 1 - to create an open source platform.

I am working with a company now, together with students, and we're looking at a possible partnership. I'm there in an advisory capacity.

What challenges have you faced?

We were really held back by difficulties in agreeing terms with the university. They wanted a detailed business plan and evidence of customers before discussing IP. So this meant we couldn't progress to developing a Demo. We should really have just agreed a licensing deal for the software. However, working on the HuaHana prototype helped develop CAIRIS, and that still has a promising future.

How would you summarise the impact that CyberASAP has had?

A strong impact in a number of ways:

- This was a test case for BU. Since we did CyberASAP the Uni has a new IP policy and there have been other projects join the programme

- The impact on developing CAIRIS was significant. Via HuaHana we improved CAIRIS, and this is something people are now using in real projects

- Learning the language of commercialisation; understanding terms like MVP, and its significance - these things were really important. And the information and knowledge we gained around where to go with funding was really useful too.

What are your future support needs and how are you addressing these?

I'm moving to Robert Gordon University and will also be providing advice and support to a new company around commercialising CAIRIS. There are different ways we could spin out CAIRIS as a platform so I am looking forward to applying the know-how we learned on CyberASAP to explore the opportunities that lie ahead.

But the key thing is getting the first customer……

What advice would you give fellow academics considering commercialising their research?

Make sure you've got the foundation of something scientifically valid to commercialise as the basis of MVP.

Academics deal with failure all the time, but the difference is that we don't have the financial pressures of startups…..

What are they key lessons you've learned from the process of commercialisation?

- Don't underestimate the complexity of company formation and IP agreement

- Start talking early to your university TTO and try to discuss and resolve IP issues.

KTN Comment

"The impact and outcomes from the programme can take a while to emerge, but they're not transitory, nor project-specific: here, the team joined with one research idea and the skills and knowledge gained are benefiting another promising project"

Robin Kennedy - Co-Director, CyberASAP, KTN

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KETS >™

Pioneering chip-based quantum encryption hardware

Current Status
Spun Out

University
University of Bristol

Location
Bristol

Category
Network Security

Entrepreneurship is not a dirty word, says KETS Quantum Security co-founder

Chris Erven, Founder, KETS Quantum

What were your key motivations in commercialising your research?

I attended the University of Waterloo in Canada which is known as a very entrepreneurial university with a unique IP policy where all researchers own their own IP, as well as a co-op programme that allowed me to work in a number of start-ups as an undergrad. Entrepreneurship was pretty much hard-wired into our thinking.

I had built rudimentary quantum communication systems for my PhD back when quantum was very new. To make the tech practical I joined QETLabs at the University of Bristol who were pioneering a chip-based approach to quantum technologies. With the first demonstrations under our belt as academics, we created a team to commercialise these developments in KETS.

What challenges did you think you might face in doing this?

Too often technology innovation is characterised as being a solution looking for a problem. We were very conscious that the biggest challenge for us would be to find and build a robust commercial proposition: one that addresses a real problem and where the fit between the need and the opportunity is really strong.

Why did you choose to apply to CyberASAP to progress your project?

We were probably more advanced than many of the other cohorts on CyberASAP, having done iCURE. But through having done iCURE and SETSquared; so I knew some of the people involved and it was very valuable in that it allowed us to develop a second product. Having the funding to create another prototype was incredibly beneficial, as was the exposure we got at the Demo Day.

Tell us about the current status of your project?

We're in a good place having completed two funding rounds which together have raised £4.6m plus we've been very successful with grants and are very lucky to have so much support early on from Innovate UK.

We're doing field trials and small production runs and are focused getting early solutions out for feedback and iterations, and to start generating income.

Of course, we'd like to move faster - we're in a competitive market and our competition is working hard and fast too. Other challenges include export controls, particularly in light of protectionist governmental policies around quantum technology and the fact that ours is a dual-use technology.

The UK has great quantum tech start-ups, quite a bit of government funding, but less early commercial pull; while the reverse is true in Europe.

All of this is causing us to carefully consider how to shape the company and the geography of the company.

KETS > ™

The KETS Quantum Security team

How would you summarise the impact that CyberASAP has had on you?

The programme was a key enabler in developing the prototype for our second product. It was also really useful in honing our pitching skills.

What advice would you give fellow academics?

+ Entrepreneurship is not a dirty word!

+ You'll have to move at a pace that you're not comfortable with. In academics, it's perfectly alright to take a month to respond to someone. When you're a commercial company, you have to respond to investors and key customers within 24 hours max!

+ Find some mentors/team mates who've done it before, you don't have to reinvent the wheel every time. This will help you find short-cuts, confidence in your plans, and accelerate things.

+ Tech is easy - building and managing your team is hard. While a single engineer could have probably got us to the moon, it would take them a million years! You need a team to deliver it quickly. Also, don't discount the incredibly important skill set it takes to manage a team well. Techies often forget this.

+ Setting up a company requires some real emotional intelligence as it's all about teamwork and there's all sorts of difficult conversations along the way.

+ Be prepared to deal with failure. Academics really are not used to this - most of us were high achievers, embarrassed by anything less than an A. But it's essential to be able to handle and build back from setbacks: failure is only failure if you don't learn from the experience. Grit is a key skill you need to cultivate to be successful.

+ Be flexible: being able to pivot is a key requirement for the start up.

+ It can be a lot of fun! The amount of support we've had from entrepreneurs, worth 7 figures and up who should be relaxing on a yacht somewhere, has been phenomenal. These are really successful people who've given up their time to come and talk to us just because someone helped them back in the day. The pay-if-forward culture of entrepreneurship is one of its best parts!

What are they key lessons you've learned from the process of commercialisation?

In the UK a paradigm shift is needed. Here academics still think that filing a patent is the key commercialisation step to success. But the commercial landscape is littered… in fact, overwhelmed with great ideas that went nowhere. It's the execution, not the idea, that really matters ie. everything that comes after the patent.

More dialogue between academics and start-ups would be great. Universities taking a hard look at their commercialisation policies and seeing whether they genuinely are helping to deliver the goals they're setting would be even better.

And if you do go down this path, pretty soon you'll have to choose. You can't be both an academic and a CEO! And the sooner you choose, the more hair, sanity, and sleep you'll be left with!

ktn KTN Comment

"At the core of CyberASAP is a series of workshops and interventions that help academics shift their mindset so they start to think like entrepreneurs, not researchers. This shift, as Chris stresses, is key."

Emma Fadlon - Co Director CyberASAP, KTN

Contact KETS

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Dynamic AI-driven deception solution that lures in-network adversaries and ensures business continuity

Current Status

Spun Out

University

University of Strathclyde

Location

Edinburgh

Category

Threat intel, monitoring, detection and analysis

Don't worry about people stealing your idea!

Xavier Bellekens, Co Founder, Lupovis

What were your motivations in commercialising your research?

I was approached by an organisation who needed help to detect unknown breaches. That's where the research started, and then when we trialled Lupovis, we realised it solved a problem that numerous people had…..that's when we thought we could create something useful; something with a value.

But we didn't have a plan to commercialise the idea until the university's commercialisation officer told us about CyberASAP. We filed an Invention Disclosure with the University who also recommended the programme….I could see how the programme delivered a tangible outcome so I signed up with my colleagues and co-founders, who'd done two spin outs before.

What challenges did you think you might face in doing this?

My colleague had already had to confront different challenges with previous experiences of spinning out which meant he was well placed to navigate the "university maze". He had a lot of information about the process and had a coherent plan. And this was validated by the framework of CyberASAP.

I felt the first challenges would be around the freedom to operate; finding a customer, and a valid, commercialisable product.

What is the current status of your project?

Things are pretty positive and exciting: We have spun out; we have finalised a sizeable pre-seed investment; we have been selected for support by the high growth venture group from Scottish Enterprise and we have made our first sale…….

Discussions with Venture Capital companies are very complex, time consuming and take a lot of careful preparation and practice - there are many thorny challenges around IP; licensing; royalties; negotiating the share to the university.

Finding the right, experienced voices to support you really makes a difference. And that means you have to talk to a lot of people! We spoke to so many individuals and organisations operating in the sector before we found the right people to work with and form our board.

Other challenges? My suspicion is that the first customer might be the easy bit….the second customer might be harder as that requires a validated value proposition and brand!

How would you summarise the impact of CyberASAP?

Without CyberASAP we wouldn't have a company at all. The programme provided us with dedicated time to develop and position the value proposition in relation to the competition fundamental to proving the viability of a business; and you learn on the good practices to progress an idea to something that has commercial value. Via the programme you learn how to talk to people, how to profile customers.

You end up with a package of knowledge, skills and processes and a new way of thinking. You learn not to talk about the tech but to talk about the benefits of the tech. That's a changed mindset....

What were the most valuable aspects of CyberASAP? And the most challenging?

For me, the most valuable thing was creating the pitch...... Creating the customisable slide deck on CyberASAP has been incredibly helpful in our discussions with VCs - we tailor each one and it's been a vital engagement tool. It helped us in meetings with VCs to deliver a consistent case; a really good framework that you can refine. And this allowed us to raise the money. The sales training was my favourite bit of the course!

What are your future support needs and how are you addressing these?

I have no expertise in leading a company though I do have excellent support from my board. But running a company is a different thing to leading a research group. And I believe my management will change as the business grows

I've been in contact with a couple of friends running unicorns and had lots of conversations with them to understand more about the challenges ahead. People are generally very generous with their time and advice. I have applied to NCSC and will also look at LORCA.

What advice would you give fellow academics considering commercialising their research?

Spinning out from a University is really complex. Have a conversation very early with the TTO and try to involve someone who has spun out from a university

Those early conversations and agreements with the university are crucial - you don't want to find further down the track that what you've agreed with the university makes it impossible to secure VC/Angel funding.

Universities need to understand that once you spin out, you are only at the start of the journey - so if they ask for too much equity it hinders progression and can even be a complete barrier to commercialisation - and that benefits no one.

What are they key lessons you've learned from the process of commercialisation?

- Your Uni is there to support you. Talk to the TTO office as soon as possible.
- Don't take CyberASAP lightly if you're looking to spin out. Everything on the programme is valuable. The funding is not 'yet another research project'.
- Go and talk to people about what you're doing...... don't worry about people stealing the idea as it is highly unlikely they will have the expertise and ability to make value form your ideas ....all feedback is useful, especially negative!

We've had great support from the uni. And we've had awesome support from the CyberASAP team.........they have always responded and gone beyond our expectations......
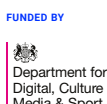
KTN Comment

"Xavier's story already has many of the key elements which we have seen in other successful CyberASAP projects. The lightbulb moment for me is the realisation that "it solved a problem that lots of people had". While there is clearly a LOT of work to progress an idea beyond this stage, nevertheless this feels like a pivotal moment when an idea has a life of its own and becomes more than a piece of academic research.

Having someone on the team with previous experience of the challenges of spinning out and navigating a "university system" is clearly highly beneficial and the Lupovis story confirms this.

Finally, during his CyberASAP journey, Xavier - like all CyberASAP participants - had to come up with a one-line description of his project. Xavier's was fantastic: Lupovis - Turning your network from a flock of sheep to a pack of wolves". Anything you can do to succinctly and memorably capture the essence of your idea is SO valuable, particularly at an early stage when you and your idea are competing for attention."

Contact Lupovis

lupovis.io
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FUNDED BY Department for Digital, Culture Media & Sport

DELIVERED BY UKRI Innovate UK ktn

View interview online

MaCRA

Adaptive maritime cyber risk assessment software for international shipping operators and insurers

Current Status
Spun Out

University
University of Plymouth

Location
Plymouth

Category
Cyber Risk Assessment

Be positive and believe that your idea has potential

Kevin Forshaw, Co- Founder, MaCRA

What were your key motivations in commercialising your research?

When we decided to apply to CyberASAP we were pretty open minded about what commercialisation options might be possible. We had already published the research on which MaCRA is based, so we were interested in exploring what routes might be available for developing the idea and making it commercially available.

But when we started CyberASAP we weren't thinking of starting a company - and we probably wouldn't have gone down the spin out route without CyberASAP. The programme made us, allowed us, to think more ambitiously about the best way to take the idea to market.

What challenges did you think you might face?

For me, the issue of raising finance was my primary concern. I know some university teams have had challenges agreeing IP etc with their university, but I wasn't worried about IP/patents, that sort of thing. Our idea had already been published; and we knew the university would be supportive which they have been.

Why did you choose to apply to CyberASAP to progress your project?

CyberASAP looked like the perfect vehicle for us. To be honest, without it I don't think we'd have progressed the idea at anything like the pace we are now.

Is the current status of your project where you'd hope it would be at this stage?

We've made really good progress. We are now developing the software via a contract with Secure Technologies Ltd – a contact via CyberASAP. We've taken this route as we really need to develop our prototype and it's hard to do when not working full time on the project. We're about a third of the way through this process.

Also we've filed a US patent, have European trademarks and we're filing others. We have permission from the University to spin out….and have managed to raise further funding to enable the development of our prototype.

We have been fortunate to get endorsement from third parties (including getting the top prize at the NSCS Cyber Den earlier this year) and this has been hugely important, helping further build our credibility; we have a string of meetings in the diary with key potential customers (shipping operators etc) to demonstrate our prototype.

Alumni Insights: Case Study Interview, Summer 2021

How would you summarise the impact that CyberASAP has had on you?

Massive! Without it we definitely wouldn't have progressed the project to this extent.

What CyberASAP gave us was the confidence to be bold. If you haven't been through the spin out process, or been through a programme like CyberASAP, you lack the confidence to imagine you have a strong enough proposition to make a commercial success.

The discipline that CyberASAP imposed on us was really useful. Plus it provides a holistic oversight of everything you might come across, so when you go out into the market, you feel really well prepared.

What were the most valuable aspects of CyberASAP? And the most challenging?

As well as the points above, what CyberASAP gave us was exposure to people who've been there and done it. That was the most valuable thing as we'd never have had this without the programme.

Sometimes the programme can feel like a pretty big commitment - you have to put the time in, and at times it felt quite onerous; but by having to complete tasks set outside of the formal workshops, you really do consolidate your knowledge, and that has proved invaluable.

CyberASAP gives you a good grounding on what might be possible and you learn a really comprehensive range of skills and knowledge so that when you do go out into the commercial world, nothing comes as a surprise. You know the language; you understand the challenges and you're prepared for the tough questions.

What are your future support needs and how are you addressing these?

We need to secure further finance to continue our journey. And we need to get people in post to do things full time.

What advice would you give fellow academics considering commercialising their research?

- Have the confidence to take the first step. The UK mindset often mitigates against risk - I think we could do with a more "Can-do" attitude, as in the US.

- Be positive and have belief that your idea has potential - and remember that everything starts small.
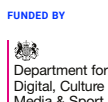
KTN Comment

"Maritime cyber security is only gaining in importance as more aspects of the supply chain become automated. The MaCRA team, building on the University of Plymouth's experience in this area, is therefore commercialising its research at a highly appropriate time. We are delighted that CyberASAP gave the team both the confidence and discipline to progress their ideas. It is particularly gratifying that, without the programme, they probably would not have gone down the spin out route at all. Winning the NCSC Cyber Den in 2021 is further endorsement of the quality of their approach and importance of this topic".

Robin Kennedy, Co Director, CyberASAP, KTN

Contact MaCRA

⌂ Visit website

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CYBER ÷ASAP | Academic Startup Accelerator Programme

View interview online

For more case studies & project profiles visit cyberasap.co.uk

MEMCRYPT
Protect and Recover Your Most Important Secrets

Protects and recovers confidential data from ransomware attacks

Current Status
Spun Out

University
Edinburgh Napier University

Location
Edinburgh

Category
Cyber Security

Open and transparent communication between team members and university is key to a successful spin-out.

Owen Lo, Co-Founder, MemCrypt

What were your key motivations in commercialising your research?

MemCrypt originated from Peter McLaren's (CTO of MemCrypt) PhD thesis titled 'Investigations into Decrypting Live Secure Traffic in Virtual Environments' in 2019. It was recognised early on that Peter's research, the detection of cryptographic keys, had many possible applications within the cyber security industry.

The research and market validation conducted as part of the CyberASAP programme helped us identify that ransomware was a significant threat in cyber security and there was untapped potential in the Ransomware protection market.

Thus, we chose to apply MemCrypt's innovative technology to combat this threat.

What challenges did you think you might face?

As a life-long academic, one of the personal challenges faced was transitioning from an academic role to a commercial one. Fortunately, the industry focused research projects I have conducted at Edinburgh Napier University provided me with ample experience to face this new challenge.

Why did you choose to apply to CyberASAP to progress your project?
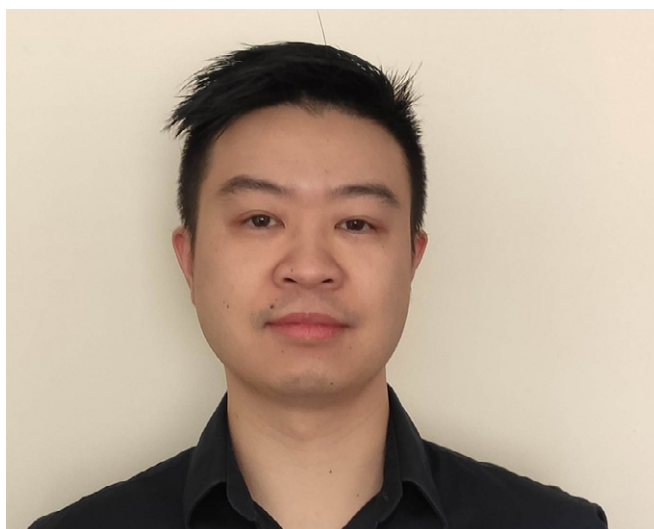
We had intended to commercialise MemCrypt before joining CyberASAP. Therefore, the programme was the perfect opportunity for the team to learn more about the commercialisation process and the training proved invaluable in transitioning from an academic project to a commercial one.

Is the current status of your project where you'd hope it would be at this stage?

Our intention had always been to spin-out from the University and we have been successful in this goal thanks to the hard work of all involved during the commercialisation journey.

How would you summarise the impact that CyberASAP has had on you?

CyberASAP has provided a very positive impact on MemCrypt. The training provided allowed us to articulate our value proposition, identify and validate the market and establish potential channel partners. Furthermore, the esteem of graduating from the CyberASAP programme has increased MemCrypt's public profile and served to help the project receive additional funding to commercialise our technology.

MEMCRYPT
Protect and Recover Your Most Important Secrets

What advice would you give fellow academics considering commercialising their research?

Engage with the university as soon as possible to obtain advice and discuss the process of IP ownership, the commercialisation process and other related procedures. Also consider engaging with industry and other start-ups if possible to get their opinion and advice on commercialisation.

What are they key lessons you've learned from the process of commercialisation?

Open and transparent communication between team members and university is key to a successful spin-out.

What were the most valuable aspects of CyberASAP? And the most challenging?

The training, advice and suggested formats provided for the numerous presentation pitches one is expected to carry out for the commercialisation process was very useful. One of the most challenging aspects was articulating our value proposition and USP. The numerous training workshops provided by CyberASAP helped greatly in addressing this challenge.

What are your future support needs and how are you addressing these?

We are currently recruiting additional software developers to help build our product and bring it to market. To address the recruitment needs, we are engaging with recruiting firms and other related channels to identify the best candidates for the role.

How have you changed as a result of gaining commercialisation skills & insights?

I have gained greater confidence when it comes to pitch presentations and also obtained more knowledge in regard to the overall commercialisation process.

ktn KTN Comment

"We hear time and again from our cohorts about the importance of engaging early with their university's Technology Transfer Offices (TTOs). This relationship is key, and we are looking at ways to reflect this in the constantly evolving programme we create for CyberASAP. We have now added a session specifically designed for TTOs and hope this will help support the positive partnership needed between academics and TTOs for commercialisation success."

Emma Fadlon - Co Director CyberASAP, KTN

Contact MemCrypt

⌂ memcrypt.io
🐦 @memcrypt

CYBER ∻ ASAP | Academic Startup Accelerator Programme

RAVEN SCIENCE

Intelligent software to find, classify, and analyse online extremist content

Current Status	University	Location	Category
Spun Out	City University, London	London	Network Security

We wanted to make a real difference to society, countering terrorist propaganda

Tom Chen, Founder of Raven Science

What were the key motivations to commercialise your research?

The academic research that led to Raven was the result of an EPSRC project, SEEK, that searched for online terrorist videos and tested them for hidden messages. During the SEEK project, we began years of regular meetings with the Metropolitan Police about their interest in online terrorist propaganda.

The CyberASAP opportunity came up at a good time because we had come to understand the police's interests but did not have the impetus or funding to develop a MVP without the CyberASAP opportunity.

Personally we had been motivated to work on terrorist propaganda for a long time, ever since 9/11.

While academic research is interesting, the opportunity to start a company and work with the police was really gratifying to feel that our work may be making a real difference to society.

What challenges did you think the commercialisation process would present?

We felt we would have two main challenges: finding customers and creating a real sellable product with limited resources (people and money).

Why did you choose to apply to CyberASAP to progress your project?

We probably would not have thought seriously about commercialising our research without the impetus from CyberASAP. CyberASAP offered both business training and funds to develop a MVP. Both were important reasons to apply.

Tell about your project's current status

It has gone slower than I personally had hoped but we had decided from the beginning to grow organically. We're not ready to scale up yet, and we have not tried to find investment. Instead we have been focusing on getting customers.

A couple of years ago the Met Police was interested in doing a trial of Raven, and we were in serious talks with Interpol about licensing Raven; but neither came to fruition.

In the meantime, we won the 2019 Mayor of London's Civic Innovation Challenge which funded development of a phone app iReportIt which became our first successful product unexpectedly.

The CTIRU (Counter Terrorism Internet Referral Unit) in the Metropolitan Police Service views the app as a useful tool, and has agreed to fund another year of maintenance and feature upgrades. That is generally a small development effort, and our startup is still small (essentially two people).

In summary, we had a couple of promising developments that did not pan out. If they had, we would have expanded but since they did not we are still a micro, researching a couple of new product ideas with limited people and time resources and considering sources of funding for these new ideas.

How would you summarise the impact that CyberASAP has had on you?

CyberASAP gave us crucial business training, and the lesson that the business capability in the company is as important as the technology, if not more important. CyberASAP also gave us the impetus to form the company. We would not have been as motivated to do that otherwise.

What were the most valuable aspects of CyberASAP? And the most challenging?

As academics, we usually envision a company created from a great idea and success will automatically follow from great technology. It was very useful to learn from CyberASAP that this is not true: it takes a lot of business development effort, and as important, business people are needed in the company for success.

The biggest challenge throughout the CyberASAP programme was learning about the business side - academics are trained to think only about technology and research.

What advice would you give fellow academics considering commercialising their research?

I would say the main lesson is that great technology by itself is not sufficient for commercial success. At least a full time business development manager is needed in the team.

What are they key lessons you've learned from the process of commercialisation?

In our case, it has become more clear what capabilities are needed to grow the company. We need someone "hands on" with developing the technology. In our case, we have been outsourcing software development as needed but it would be great if we could hire a full time software developer (we are not in a position to do that yet). We also need a full time business development manager (again we are hoping to get into a position to hire).

"I personally found the CyberASAP opportunity very valuable and worthwhile, and encourage other academics interested in seeing real world impact from commercialising their research to apply to the programme".

ktn KTN Comment

"Raven is an excellent example of a project finance-led business model, allowing the team to be agile enough to meet the sector's needs while building out a viable commercial offer using project finance to build on their proof of concept/MVP."

Emma Fadlon - Co-Director, CyberASAP, KTN

Contact Raven Science

△ ravenscience.com
🐦 RavenScienceLtd

CYBER ÷ASAP | Academic Startup Accelerator Programme

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View interview online

Insights into the partnership potential of Academics and Technology Transfer Offices

A positive partnership between academics and Technology Transfer Offices would lead to much better outcomes.

Fay Kassibawi, Technology and Knowledge Transfer Manager, Royal Holloway University of London

Tell us about your background

I started my career as a researcher, at the University of Auckland in New Zealand (NZ). After a few years there, I moved to the corporate world and took a role in GE Healthcare in Auckland, NZ. During my time there, my clients were researchers from government research institutes, pharmaceutical start-ups, and universities. This exposure made me appreciate the significant innovative output and the potential impact of research. More importantly, I recognised the need for a "catalyst" role to convert these innovations into products and services.

Working as the IP and Commercialisation Consultant at City University, I came across CyberASAP and have supported three projects through the programme, all of which are still live.

CyberASAP was the catalyst for me helping put in place a brand new policy for start-ups when I moved from City to Royal Holloway University of London (RHUL) where I now work..

What issues were you looking to address when you joined RHUL?

When I joined RHUL, CyberASAP was completely new to the university and there was no policy about how to support any start-up entity which might emerge from the programme.

I looked to change all of that and this in turn put pressure on the university to create the policies to support any start-up created as a result of the programme.

This led to me helping the university to develop a clear start-up policy so that academics have a defined and well understood route map before venturing out on their commercialisation journey.

So I'd say that CyberASAP played a crucial role in helping educate and empower academics at RHUL to take their innovation to the market. The programme also created a good appetite for commercialisation and a much better understanding of what's involved.

What sort of obstacles did you need to overcome establishing a workable commercialisation pathway?

Universities want to see impact as well as a good return on investment, and realising commercialisation options - whether that is through agreeing licensing deals or supporting start-ups - is a great way to demonstrate both/either.

However, there is often a lot of resistance from universities around protecting Intellectual Property (IP) and/or negotiating "ownership".

This is a highly sensitive area as there is an obvious tension between what the university considers fair and what potential investors in a start-up will find attractive (and therefore what will influence the success of the venture). Also, it is imperative that the value of the inventor's input be reflected in any "deal".

RHUL came up with the idea of assigning the IP to the start-up company in exchange for a share for the university @ <10% as this would make the venture more attractive for investors. We have formalised this as part of our policy.

What role and challenges do TTOs face in the commercialisation process?

TTOs need to assess the IP; they are dealing with publicly funded research and they need the experience and knowledge to recommend how best to use that IP for their university: is this about impact generation or income generation? Is it a company? Is it a licence?

There is a need to have clear processes in place, which should be based on relevant IP and commercialisation policy, and an effective commercialisation strategy. This process needs to be developed around the innovation life cycle, and shared with the research community. Awareness and transparency of the commercialisation process is key in building partnership with researchers.

Recommending the best pathway requires experience (and also a great IP Contract Lawyer!) - and, in my opinion, there is a real lack of experience amongst TTOs which is a big barrier. This also leads to a lack of trust in TTOs by academics - again a hurdle which we really need to overcome in order to more fully exploit the potential impact of research. An absence of informed leadership in tech transfer, plus high staff turnover in the sector, are real problems too.

What recommendations do you have for improving the commercialisation process in universities?

- TTOs need to engage early with post-grads and researchers to establish a positive dialogue
- Create clear commercialisation pathways and communicate these effectively so that academics know what potential routes are open to them
- Academics need to be educated, empowered and motivated to engage with the commercialisation potential of their research. They also need to know how, why and when to involve their commercialisation offices. CyberASAP is a great initiative to achieve this goal.
- A positive partnership between academics and TTOs is key to realising the impact potential of research
- The tech transfer sector needs to recruit, develop and retain more highly qualified and experienced staff
- We need to improve levels of understanding about the commercialisation process - amongst academics and TTOs.

KTN Comment

"Early engagement of academics with their TTO has been identified as a key success factor by a number of our cohort. We actively encourage TTOs to attend the training days, participate in Meet the Entrepreneur and Investor days to support this important relationship. This year we added a special group forum for TTOs to discuss the common challenges and celebrate successes. Our hope is that this will support the positive relationship of the cohort and TTO and provide the CyberASAP with insight on what further support might be given."

Emma Fadlon - Co Director CyberASAP, KTN

Contact RHUL

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View interview online

SEEV.
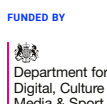
The unique end-to-end verifiable e-voting system

Current Status
Spinning Out

University
Universities of
Warwick & Newcastle

Location
Newcastle upon Tyne

Category
Professional
Cyber Services

Verifiable E-voting: from trials in UK Local Election to India's Major Hindu festival, Durga Puja

Feng Hao, Founder, SEEV

Why did you want to commercialise your research and why CyberASAP?

We really wanted to demonstrate the impact of our five years of research, so I joined CyberASAP in Year 2. The programme provided the perfect opportunity to create a Minimal Viable Product (MVP), facilitating essential dialogue with businesses and the chance to showcase the unique attributes of our e-voting system.

With no specific vision for a potential commercialisation pathway, we started CyberASAP with an open mind about where the programme might lead in terms of extending the scope of our research.
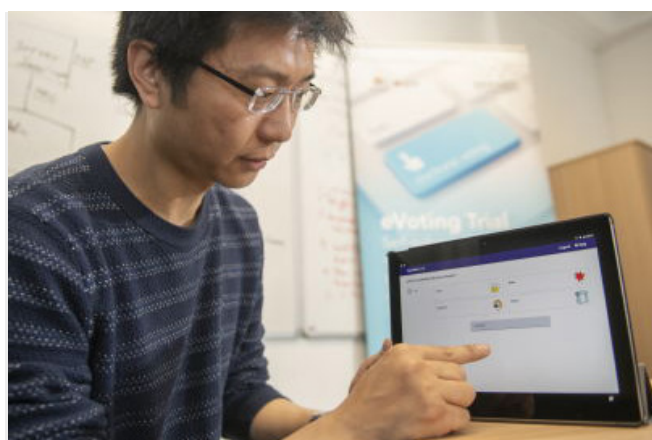
Anticipated and actual challenges?

We were confident of our ability to build a robust MVP, so felt that the biggest challenge we would face would be how to get investment; how to engage with industry - we're scientists, not entrepreneurs! For me, a key value of the CyberASAP programme is to help scientists think more like entrepreneurs and provide the business skills, training and confidence to operate in commercial as well as academic settings.

Current status of your project?

Things are at a good stage: IP issues are resolved and SEEV has developed two MVPs - one, which attracted BBC media attention, was trialled in local elections in Gateshead in 2019. The trial generated positive feedback from users who found it a convenient and secure way of placing their vote; and press coverage widely acknowledged that this kind of end to end encrypted "e-voting system could eventually transform elections, doing away with the need for an election count".

Media interest in this initial MVP trial, developed via CyberASAP, generated further enquiries (including for their shareholder voting MVP) and SEEV is now working with the Indian Government to do a trial with the Durga Puja festival in October.

SEEV.

Around 100,000 participate in the festival during which local residents can vote for their favourite festival decorations - due to Covid-19, the festival celebration in 2021 is cancelled, so the plan is that we'll be trialling the SEEV system to do this in 2022.

E-voting is a competitive market, but we're confident in the Unique Selling Point of our product: that the whole process is verifiable and the data open, which means there is no need for trusted authorities to count votes. If there is any hacker or inside attacker trying to tamper with the electronic votes and tally, this will become publicly evident.

How would you summarise the impact that CyberASAP had on your project?

We couldn't have done anything without a MVP: CyberASAP enabled us to develop our MVPs which opened up lots of opportunities. We could demonstrate the product with real people, as in the Gateshead trial where voters could compare the traditional voting process with our new e-voting system. We couldn't have done this without CyberASAP.

I also want to stress how crucial it is to have an MVP in order to enable meaningful discussions with industry. Without an MVP, you are just talking about a theoretical approach. An MVP lets you demonstrate the actual potential.

The commercial skills delivered through CyberASAP had a very big impact - learning new skills such as "pitching" and closing a deal were invaluable, even if they did mean "going out of our comfort zone.

Future Challenges?

The key challenge is securing the funding required to fill the gap between developing a MVP and a commercial product.

And further ahead?

The real test is having a sustainable company and we're not there yet…..that will require a different mindset but CyberASAP has helped prepare us for that.

Advice for fellow academics?

Have a really good MVP - so you're not just talking theory. But there is still a gap between the MVP and a commercial project and you really need to get business partners in the field to help fill that gap. Find the right person to push forward this process. If you can find a suitable early career researcher, consider applying for the Innovate UK iCure program. But if not, be prepared to push the process by yourself.

Key lesson learned?

Talk to your university Technology Transfer Officer very early to sort out IP issues!

ktn KTN Comment

"CyberASAP is delivered in partnership by KTN and Innovate UK. Together these two organisations can provide a pathway to other accelerator programmes and funding. As Feng points out, the journey can be complex so knowing about and accessing the right kind of ongoing support - such as that signposted by CyberASAP - is really useful."

Robin Kennedy - Co-Director, CyberASAP, KTN

Contact SEEV

△ seevtechnologies.com

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CYBER ASAP | Academic Startup Accelerator Programme

SHOJI

Making private data useful and keeping useful data private

Current Status
Spun Out

University
Imperial College London

Location
London

Category
Information Risk Assessment & Management

You can have the most ground-breaking, cutting-edge research but you'll never get customers or investment if you don't have a deep understanding of the customer's need for it.

Jack Hogan, Co-Founder, Shoji

What were your key motivations in commercialising your research?

We're both data scientists, so we're passionate about the possibilities and opportunities that can be unlocked using data. Unfortunately, global excitement about these opportunities led to ill-considered and irresponsible data handling practices.

Data privacy is finally starting to receive widespread attention and recognition as an important issue that warrants technological––not just regulatory–– solutions. We realised that there exists a large gap between the capabilities being developed in academia and the technologies being offered in the market. Since early on in our PhDs we were motivated to package our research into a solution that would make it easier for businesses to extract value from their data and protect its privacy at the same time.

What challenges did you think you might face?

The main challenge we anticipated was our lack of commercial experience. Save for a few internships and work placements, we had both come from undergraduate, straight through to Masters and PhDs. We knew it would be a challenge to convince potential customers and investors that we had what it takes to deliver a market-ready product.

Why did you choose to apply to CyberASAP to progress your project?

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

Is the current status of your project where you'd hope it would be at this stage?

Yes, further than I expected before joining CyberASAP. I thought we might be able to get some PoCs underway by the end of the programme, with a view to getting a small amount of investment later down the line. In reality, we had a paying customer and pre-seed investment before the programme finished.

How would you summarise the impact that CyberASAP has had on you?

The programme gave us the impetus we needed to stop talking about commercialising our research and actually go out and do it.

SHOJI

Jordan Noble and Jack Hogan, Shoji

What were the most valuable aspects of CyberASAP? And the most challenging?

The most valuable aspect was the clearly defined process and route map to refining a business idea around academic research, explained and delivered alongside lessons from experienced entrepreneurs.

The most challenging aspect was market validation. Overcoming internal biases is a difficult but important lesson to learn to effectively refine your value proposition. I would recommend a book, "The Mom Test" by Rob Fitzpatrick to future cohorts.

What are your future support needs and how are you addressing these?

Our priority now is recruiting top talent (see our open roles here) and securing early customers. We could benefit from support from the CyberASAP network for both.

How have you changed as a result of gaining commercialisation skills & insights?

I have tried to shift from an academic mindset to a commercial one. I have become much better at avoiding the temptation to focus on the technical features of the product and conveying instead the commercial benefits of the solution.

What advice would you give fellow academics considering commercialising their research?

Give it a shot. You'll learn in 6 months whether there's potential demand for it in the market. At worst, you can go back to academia, having gained a huge amount of commercial experience. At best, you start an exciting company with the potential to solve a real problem.

What are they key lessons you've learned from the process of commercialisation?

Focus on the commercials. You can have the most ground-breaking, cutting-edge research but you'll never get customers or investment if you don't have a deep understanding of the customer's need for it.
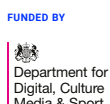
KTN Comment

"We are always reminding our teams that people do not buy [product/service] features but their benefits. Communicating these to potential customers is a very different skill for academics as the focus is to listen to your customers, rather than teach.

CyberASAP provided Jack and Jordan with the time, tools and resources to go out there and test their assumptions and learn from the market. Clearly the value proposition Jack and Jordan developed hit the mark. Securing a customer and investment before completing the whole programme was an excellent outcome."

Emma Fadlon, Co-director CyberASAP, KTM-Investment

Contact Shoji

shoji.ai

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Verifiable Credentials Ltd

Strong authentication, identification and authorisation with W3C standardised, cryptographically secured and privacy protecting electronic credentials

Current Status	University	Location	Category
Acquired 2021	University of Kent	London	Identification, authentication and access control

Winning a commercial contract requires successful delivery - whereas with a research grant, you can always fail

Prof David Chadwick, Founder, Verifiable Credentials

What were your key motivations in commercialising your research?

Commercialisation was never an end goal of my academic work. But when I got to 65 (I was doing part time work and research) the opportunity arose to do CyberASAP which I did full time……most of the people I was working with at that time were companies and I felt confident that there were commercial opportunities for Verifiable Credentials.

What challenges did you think the commercialisation process would present?

Building the system in such a tight timescale and with limited budget and resources. I asked one of my previous PhD students to help out over the Christmas holidays to build the Proof of Concept we developed during CyberASAP. He's now the CTO of Verifiable Credentials!

I also anticipated that the admin involved with the University would be slow and laborious so I tried to make as much progress as possible independently, whilst still talking to them.

Getting R&D income can be a real challenge for companies - we applied for a number of grants and were awarded some of them (including from Innovate UK) which was very helpful.

And of course securing customers is the number one challenge for any new company with a brand new product. Our collaboration (and subsequent acquisition by) Crossword CyberSecurity has helped mitigate this - with their experience we are able to put in credible bids to large organisations, for example the NHS.

Is the current status of your project (or other project started as a direct or indirect result of CyberASAP) where you'd hope it would be at this stage?

At the moment we're ahead of where we'd have hoped to be. We've just submitted two proposals to the NHS which we couldn't have done without Crossword CyberSecurity - and of course they couldn't have done without us, so it's a mutually beneficial relationship.

What challenges lie ahead?

I think the challenges ahead are much bigger than the initial challenges of commercialisation. Winning a commercial contract requires successful delivery - whereas with a research grant, you can always fail, and that's acceptable.

How would you summarise the impact of CyberASAP on you?

If I hadn't been on CyberASAP I would have been retired and drawing my pension……so it's been massively beneficial!

The University also benefited as I stayed on longer than I would otherwise as the University got the grant money from CyberASAP - and also benefited from the equity share from the acquisition of Verifiable Credentials.

What were the most valuable aspects of CyberASAP?

The most valuable aspect of CyberASAP is that it exists! And that I did it!

Everything about the programme is valuable - the concept of the Value Proposition was the most enlightening as it meant I could look at my research from a completely different perspective.

It was also invaluable to get a grant to build the Proof of Concept (although more time and budget would have been useful).

What advice would you give fellow academics considering commercialising their research?

You must fulfil a real or perceived user need and you have to be able to articulate believable use cases for your research output, because without users you won't have a business. In my case it was relatively easy because W3C had already developed some use cases for verifiable credentials.

What are the key lessons you've learned from the commercialisation process?

Being an academic is good training for becoming a CEO, due to the number and variety of different tasks you have to undertake. There is nothing mundane about being a research active academic or a CEO.

Relationships are important. People can help or hinder you. We had a potential sale, but the buyer had a close relationship with the owner of a competing (inferior) product and decided to buy that due to the personal commitment.
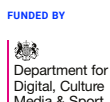
KTN Comment

"Great to see such a successful outcome for one of our Alumnus in a very short period of time. This not only demonstrates the quality of the product and the proposition, but also shows how important a role these early stage companies can play in the ecosystem – they're smart and agile enough to pivot and respond to changing market needs and VCL's work with Covid-19 certificates is a real case in point."
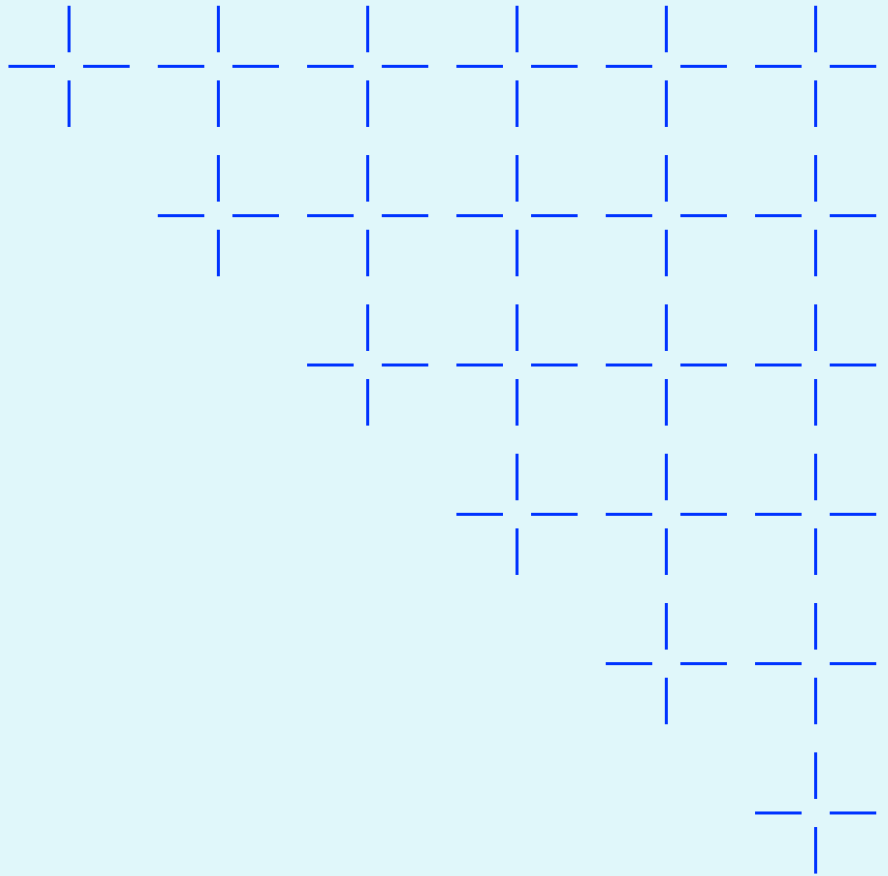
Emma Fadlon - Co-Director, CyberASAP, KTN

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