

Startups in focus for summer



08 Startup culture in the public sector

Northern Ireland Innovation Lab

16 Learning from startups and big tech

Interview with Danske Bank Chief
Digital Officer Søren Rode Andreasen

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Welcome to the summer edition of the Sync NI magazine



About Sync NI

Sync NI is proud to be the voice of Northern Ireland's vibrant technology and business sector.

The Sync NI website and magazine brings readers the latest tech and business news, views, jobs and events in Belfast and beyond.

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Foreword

Richard Caldwell

Managing Director of Personal Banking and Small Business, Danske Bank

Growing a business is a difficult task no matter the size of your organisation. Whether you are running a multinational, a small owner-managed business or launching a new startup, many of the challenges are the same.

Securing funding, winning and retaining customers, marketing your products and services, dealing with competition, finding talented staff, navigating changing regulation and red tape – there are many obstacles to overcome.

It is with this in mind that Danske Bank is proud to be sponsoring this special startup issue of Sync NI. While banks have traditionally not operated extensively in the startup space, we are increasingly working with and supporting companies at an early stage in their growth journey.

The most immediate demonstration of this is the investment we are making in a new co-working space for fintech companies at our Donegall Square West headquarters. We believe this co-working space will help encourage more fintech startups to stay in Northern Ireland as they grow beyond the seed stage. Later in this issue, our Chief Digital Officer, Søren Rode Andreasen, talks about this exciting development in more detail.

Northern Ireland is rich with scalable companies and talented individuals that have the potential to grow into market leaders. But for that to happen, banks have to provide more than just access to finance. If we're to help more local businesses achieve their ambitions, we must equip them with the right tools, information and signposts to additional support channels.

We've already worked with Catalyst Inc on our Danske Business Lab initiative, a version of the Springboard programme, to help high-growth

potential companies including FieldMotion, Fortress Diagnostics and Shnuggle to refine their business goals and strategy.

For small business customers, we know personal engagement is still really important. Over the last 12 months, we sought feedback from our customers which resulted in the introduction of a team of dedicated small business advisers in key locations right across the province, giving customers access to expertise in their local area to discuss business plans and explore funding options. The feedback to date has been fantastic.

We're also investing heavily in our digital offering to make sure we keep up with an increasingly fast-paced world where people want to access products and services 24/7, wherever they are and whenever it suits them. It's not just about getting an account open or accessing finance, it is about how fast and how seamless that process is. Expectations are high and if you can't do it then someone else will.

For companies like ours, technology is the solution to satisfying those demands. But it's also important we support both personal and small business customers and educate them about how to use our digital channels. We cannot just develop solutions and hope customers adopt them. We need to give them confidence to adopt new banking technology, whether that's downloading an app or accessing international payments.

We might soon get to a point where it only takes one click to complete a transaction. But digital is far more powerful when complemented by positive human interactions.

It's a lesson many of the best technology companies have learned and something Northern Ireland's startups should keep in mind as they set out to change the world.



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Inside this edition

06 TECH FOR GOOD

TapSOS founder Becca Hume tells us about her startup

08 PUBLIC SECTOR

Rebecca Walsh on moving from private to public sector with the NI Innovation Lab

10 BLOCKCHAIN

arc-net's Chief Development Officer Brendan Smyth updates Sync NI about the company's progress

11 STARTUP GLOSSARY

Do you know your accelerators from your incubators? Here's our guide to the most-used startup terms

12 CROSS-BORDER TRADE

InterTradeIreland's Aidan Gough on helping early stage businesses across the island of Ireland

14 DIGITAL DNA UPSTARTS

Locate a Locum founder reflects on their year since winning a finalist berth at Digital DNA's startup competition

16 STARTUPS AND BIG TECH

Søren Rode Andreassen on Danske Bank's plans to play a significant role in the local startup scene

19 SCALING UP

CEO of AuditComply Kevin Donaghy chats about the challenges that face a growing startup

20 HEALTH

Advice on how to avoid burnout in a startup from career transition and leadership coach Jenn Fenwick

22 STARTUP STORIES

Marty Neill chats about founding AirPOS and shares his insights into the lessons learned

24 HEALTH TECH

Elemental is a tech for good startup that allows GPs to make and manage social prescriptions referrals

26 TECH TEAMS

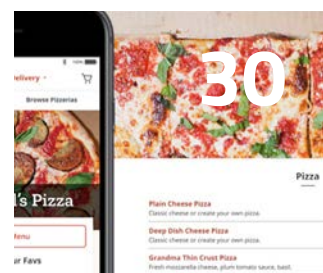
Danske Bank's journey to becoming a truly digital business now includes its own in-house app dev team

28 GDPR

Software engineer Paul McBride asks Forde Campbell's Katey Dixon what GDPR means for startups

30 BELFAST STARTUP SCENE

Slice's CTO, Jason Ordway, chats about engineering culture and company expansion in Northern Ireland



Becca Hume is founder of TapSOS and an entrepreneur in residence at Ormeau Baths, part of the Invest NI Propel Pre-Accelerator programme delivered by IGNITE. She originally studied silversmith and jewellery design before starting her own business.

What's the pitch for your product?

TapSOS is a highly visual, non-verbal method for contacting the emergency services – police, fire service, ambulance or coastguard. It's for people who, for whatever reason, cannot verbally communicate. The TapSOS mobile app can transmit precise GPS coordinates and vital information to the 999 services.

There are many reasons why someone may not be able to vocally reach out for help: deafness, speech impediments, asthma attacks, allergic reactions, or if English isn't your first language.

TapSOS

TECH FOR GOOD

A discreet method of contact without the fear of being heard may also be needed in situations of domestic abuse or being held against your will.

What was the inspiration behind TapSOS?

As a 16-year-old I had a part-time job and worked with a colleague who was Deaf. It was the first time I was faced with a major communication barrier. It inspired me to learn sign language and my tutors encouraged me to really involve myself with the Deaf community. I could understand their frustrations with limitations of products and services and a few ideas started floating around my head.

I was doing a Masters in Multi-



Becca Hume accepting Best Technology-based Business Award at the Belfast Business Awards

disciplinary Design at Ulster University's Belfast campus and at the start of the course, the tutors challenged us to do some blue sky thinking. I had the time to really explore the idea and while on the course I raised £20k of funding which allowed me to form TapSOS and develop the idea after I graduated.

Is TapSOS an example of Tech For Good?

Yes indeed. The product is very people-focused, or user-centric to use the current buzzword. The idea came from seeing a problem and sensing a frustration and coming up with a solution that addresses how the quality of life for people can be improved and people with additional vulnerabilities can be empowered to become more

independent. I think that ticks the boxes for Tech For Good!

People always ask 'how are you making money?' Yes I understand I'm a business, and revenue is part of my planning and strategy. But it was never the reason why I started.

Where have you got to in the product's journey?

The bulk of the development finished at the end of May and we're now moving into the testing phase. We'll be piloting the product with a mobile network operator in July which will be a big milestone.

When people hear that I'm building an app they often wonder why it wasn't

completed long ago. The reality is that I've spent the past two years building trust and relationships with different stakeholders – including the emergency services and with BT who handle the 999 calls – to get them on board so we're not perceived as a threat but seen as something that will benefit wider society. We've partnered with Devon and Cornwall Police to make sure all the design, functionality and testing are approved and we've had a lot of good feedback.

How do you keep going?

I'm motivated by how much change this will bring to people's lives. That's enough to wake me up in the morning and to get me into work no matter how hard the day is. I just know the potential of this to change lives and save lives. For me that's worth it.

I've been supported by grant funding, particularly from the Nominet Trust. They fund social tech that impacts society and communities and saw the opportunity with TapSOS. They've been fantastic and supported us back in March 2017.

Another big linkup was British APCO (Association of Public Safety Communications Officials). There's no money involved but it's the organisation that oversees all the emergency services and network operators. We're one of only two apps they've so far accredited to integrate with the 999 system.

As well as funding from TechstartNI, we've also had angel investors – two this year – who have put in some money and that's helped us get the development phase finished.

You've had a lot of success at pitching competitions?

Some of my mentors tell me to stop applying for awards! I understand what they mean, but I've a spreadsheet that lists every award and competition I've applied for, and every single entry has



Becca Hume explaining her pitch to royal visitors at Catalyst Inc in March 2018

a name beside it or a lead or another opportunity that it's led to.

It's time consuming, but I tend to keep precious office hours free for work and then write up applications in the evenings. TapSOS won this year's Best Technology-based Business award at the Belfast Business Awards, run by Belfast Chamber of Commerce. Last June after pitching to Virgin Media Business I won £5,000 and a brunch meeting with Richard Branson. I've also benefitted from advice and mentoring through Catalyst and Ulster Bank's Entrepreneurial Spark.

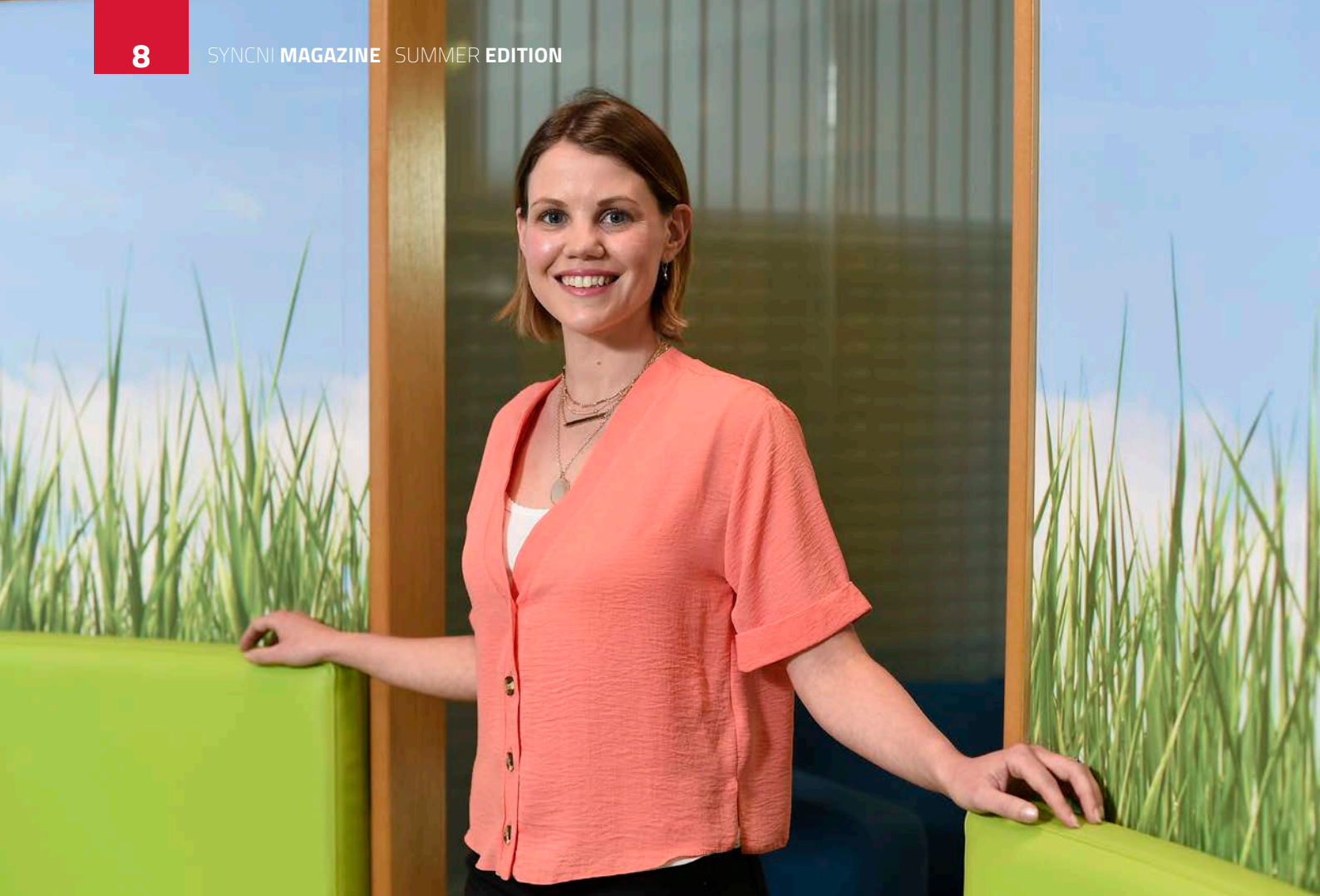
Awards are encouraging and they create a bit of traction. There may not be money every time but there's value in going for them. Because we're still

developing and testing the product we need as many people as possible to know about us and help get the story out there. I have said no to some opportunities, and I've become more cautious with how I spend my time.

When will you stop being a startup?

That's always a question of mine. I know companies that have millions of pounds of revenue and who still call themselves a startup or fall into the category of being a startup.

The exciting thing is that I don't feel TapSOS is the only product idea I have. Once it settles down I've plenty other ideas I want to explore that aren't necessarily too separate from TapSOS – they could just be a spinoff from it or an added layer to the product.



Startup culture in the public sector

Rebecca Walsh on moving from product design in the private sector to becoming the first service designer in the public sector NI Innovation Lab.

Can a government or its civil service act like a startup? Can an intrapreneurial spirit be sustained within large organisations with complex processes?

Rebecca Walsh thinks that they can. She's the first service designer in the Department of Finance NI Innovation Lab which was established in 2014 to respond to challenges where effective service provision for the public has proved most difficult. It aims to improve public services by creating new and groundbreaking innovations through transformation and invention.

Speaking recently at the annual BelTech conference in Belfast

(curated by Kainos), Rebecca used Nesta's 'innovation spiral' to illustrate the difficulties that must be overcome to move from idea generation, development and testing through to producing a valid business case, implementing, delivering and scaling a solution as well as changing systems, behaviours and sometimes even laws in order to fully embed innovations.

"Support for smaller teams to be innovative is where we can start growing a culture of innovation within government," she says. "The Lab is a small team working on specific public sector challenges which makes it easier to do things innovatively and act like a startup. It's when you get into the bigger culture and the systems and processes that support complex public sector services that it becomes harder to act

like a startup.”

Rebecca sees a move in the Lab away from participatory design to the use of co-design.

“Merely having people involved in every stage of the design project can become a box-ticking exercise that invites service users to meetings but ends up losing the sense of it being human-centred.

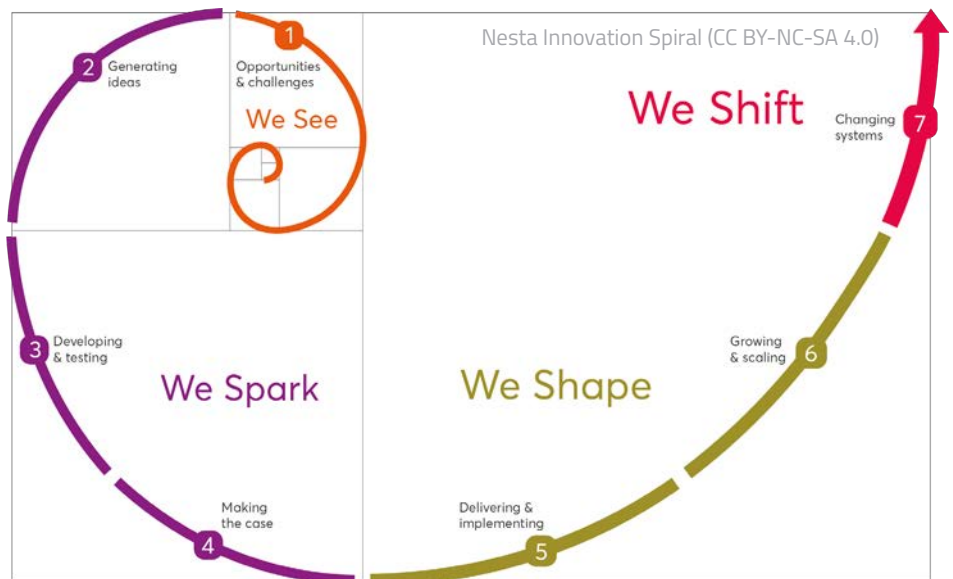
“Co-design has the involvement of everyone impacted by the delivery of a service, with the right people involved in designing with the experts. Not everyone has to be physically sitting with you at all times, but they will have involvement at every stage of the design process, right through testing, delivery and evaluation.”

The biggest public sector challenges that come to the Lab are around health care, though the team has also worked with some other government departments, councils and arm’s-length bodies.

The design team also work with behavioural scientists who can set baseline measures and help with project evaluation through trials.

“The Lab doesn’t just need to understand the stakeholder and user groups who we are designing for, but we need to think early about how to evaluate because this is often the most difficult part in the design process. There’s no point doing all the upfront work – like creating brilliant patient journeys – and then realise that we can’t evaluate the outcome and prove whether the solution is making the right difference.”

Entrepreneurs often find that their startup ideas take much longer to come to fruition than they first predicted. The same is true inside government. Many of the Innovation Lab’s interventions are



still working through the design, pilot and evaluation processes and have not gone fully live.

One project that has been running for 18 months aims to help chronic pain sufferers understand the different options they have to self-manage and de-escalate their pain.

“The project began by talking to the service users and health care professionals. The people we talked to asked for more information so we’re connecting the public up with experts in the field and publishing the advice in new ways.

“An information campaign is now up and running on MyNI (www.myni.life), a new government communication website currently in beta testing. We have started to ask people what they think of the content but we haven’t yet measured the impact on people’s lives.”

A number of external innovations have also grown out of the chronic pain hackathon held in June 2017. Deepa Mann-Kler’s BreatheVR helps people relax and focus on their breathing using a VR headset to make an animated meadow respond to their inhalation and exhalation, encouraging a pattern of diaphragmatic breathing.

The environment maximises the feeling

of immersion and distraction from pain. Other companies are also working on pain-tracking apps.

Design thinking consultancy IDEO coined the slogan “fail often in order to succeed sooner.” Rebecca cautions against embracing the word ‘fail’ too tightly.

“By using ‘failure’ it’s difficult for your customers to envisage what they’re going to get out of a project because you’re saying to them at the end of a long process that we might potentially have the wrong solution and they need to be prepared for that.

“It’s about making sure that you prototype cheaply because the further into the project you get the more costly it can become. We’re very honest when we do a proposal for work with any of the public sector bodies: we will get the right solution but the design process might take a bit of time and iteration.

“Ultimately, if something doesn’t have an impact it doesn’t mean that you have failed on the project, it just means that you’ve learned from that outcome and you’ll do something different the next time.”

Follow Northern Ireland Innovation Lab

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arc-net's blockchain offers food chain security



Belfast-based startup arc-net (Advanced Research Cryptography) was founded in 2014 and has developed a cloud-based platform that uses the power of blockchain technology to enable food producers and retailers to assure customers of the provenance and authenticity of their products.

Blockchain is the technology behind Bitcoin, a much-talked about, and volatile, virtual currency. However the distributed ledger technology is not limited to financial applications and can be applied to disrupt many different industry sectors.

Headquartered in Belfast and with offices in Edinburgh, arc-net's blockchain service supplies a secure, immutable, distributed ledger that delivers product authentication, supply-chain transparency and provides a platform to support a connected community of growers, producers, retailers and consumers. It allows brands and product owners to communicate the story and uniqueness behind their brand.

arc-net's Chief Development Officer, Brendan Smyth, updated Sync NI about the company's progress.

"We've built a platform and we've got it live, we're finding multiple uses for it and we're

getting a good response from our customers. We have recently licensed the platform to a US company involved in food traceability, helping us to get a foothold in that market. It's a very exciting time because we have so many opportunities that could be developed."

Many consumers will remember the UK horsemeat scandal in 2013. Four years before that, nine people died and hundreds fell ill worldwide after eating Salmonella contaminated peanut butter products. Product recalls are often complicated by a lack of traceability and poor food safety and quality management systems.

This means that thousands if not millions of products are removed from supermarket shelves in bulk since the smaller number of affected items cannot be precisely targeted.

In 2015 PwC estimated that food fraud costs the global economy in excess of \$40 billion a year, putting an additional \$5 per week on the price of the average weekly shop. Research from the World Health Organisation shows that, each year, almost one in 10 people worldwide get ill from eating contaminated food.

Earlier this year, arc-net teamed up with Fusion Whisky and Adelphi who have created an international blend from Glen Garioch and Glen Grant distilleries and a five-year-old Australian whisky. It's called 'The Brisbane' in honour of the Scot who founded the third most populous city in Australia. Blockchain technology records The Brisbane's provenance and complex production history, with each bottle uniquely



identified through the use of QR codes. arc-net are now also helping Ireland Craft Beers use the provenance of their products to connect with their customers.

Brendan says that the startup is “engaged in the EU Horizons 2020 project where arc-net are the technology provider to trace pork products from the UK to China and back, as well as work with animal feed companies.”

In 2017 arc-net announced a significant investment in the company by Dr Richard Steeves, a leading investor and former EY UK Entrepreneur of the Year. The team also won the coveted Startup of the Year at the 2017 Digital

DNA Awards. As a startup wanting to grow and scale, Brendan recognises the challenge of finding the right balance of customers.

“Very large international conglomerates have a long lead time – typically 12–18 months – to take decisions and engage. Conversely you need so many smaller, more agile players to make the numbers work. And if you go after smaller artisans you can be boxed into that space and are less attractive to larger customers who want to be confident that your platform scales. So you have to find a balance.

“Ideally we’re looking for customers with deep pockets, but not necessarily the big bureaucracy behind them, who

can make decisions quickly. But even those companies can take months to commit.”

With Brexit on the horizon, Brendan is confident that arc-net is well-placed to offer traceability and product origin assurance solutions to the European food and drink sector.

“With the uncertainty that Brexit has created for businesses, the ability for producers to demonstrate the provenance of their products and be able to track and trace them across borders provides a significant advantage to producers wanting to differentiate themselves, connect to their customers and build trust in their brand.”

A short startup glossary

A **startup** is a company in its early stages, trying to understand and solve a problem and develop a business model that will make the company viable and able to grow.

Incubators help startups work through the problems their new businesses are trying to solve and develop a business model, offering cost effective help with building teams and introductions to experts and guidance. Most offer shared working space.

Some offer support in exchange for equity in the company. *Barclays Eagle Lab* is an example of an incubator, based at Ormeau Baths in Belfast, offering facilities as well as mentoring, events, access into their network and a relationship with a managed banking service.

An **accelerator** is a particular type of incubator. Startups which pass their application process are accepted onto a fixed-duration structured programme with access to mentors to grow their business through the attraction of funding and expertise. The *Ulster Bank Entrepreneur Accelerator* offers a 6–18 month programme for high growth businesses looking to scale up, as well as a 12-week pre-acceleration programme for early stage startups.

Catalyst Connect's Springboard is another example of an intensive accelerator programme that leverages the collective knowledge of a network of experienced entrepreneurs and business leaders in an open, nurturing environment. Ormeau Baths hosts the *Ignite* 12 week accelerator programme for technology startups, and as well as the six-month *Propel* pre-accelerator for early stage companies.

A **seed fund** is a venture capital fund specialising in very early stage startups.

An **angel investor** provides a small amount of (often personal) capital to a startup in return for a stake in the company. The investor is unaffiliated with the startup – not a founder, family or friend – and their investment usually occurs in a startup's infancy, before a seed round of funding.

Venture capital is money made available from a fund supported by a number of investors to small, high risk startups with the potential to scale. **Venture capitalists** tend to focus on particular markets and sectors in which they have experience and expertise.

InterTradelreland

supporting early stage companies

InterTradelreland is a cross-border trade development body, supported by the governments on both sides of the border. It helps startups as well as more established businesses across the island with practical business funding, intelligence and contacts.

Aidan Gough (right) is InterTradelreland's strategy and policy director. He explained to Sync NI that "practically, we help small businesses explore new cross-border markets, develop new products, processes and services in order to become investor-ready. Ambitious companies are assisted through funding opportunities, innovative new research, industry insights, programmes and advice as well as the chance to take part in Seedcorn, the largest business competition on the island."

A number of InterTradelreland programmes seek to drive competitiveness, growth and jobs in small businesses.

The **Elevate** programme offers micro businesses funding of up to €5,000 for sales and marketing consultancy support. With 100% funding, Elevate can help new firms identify and capitalise on cross-border sales opportunities. Businesses benefit from an assessment of their Export Readiness capability, help with identifying cross-border sales leads and the development of a dedicated cross-border sales and

marketing strategy.

Trade Accelerator Vouchers worth up to £1000/€1000 can help early stage businesses access advice from participating expert providers in Northern Ireland and Ireland. The vouchers can be redeemed against the cost of practical advice and access to specific expertise as well as helping new businesses scope out potential business opportunities across the border.

One of the biggest challenges for equity-raising businesses is to become 'investor ready' in order to boost the chances of attracting venture finance. Aidan explains: "InterTradelreland offers a free one-to-one equity advisory service, business planning workshops and an annual Venture Capital conference to hear practical advice from our network of investors as well as firms who have already taken this step. All this is delivered through our Funding Advisory Programme."

The flagship **Seedcorn** competition is the largest business competition on the island with a total cash prize fund of €280k. It is open to startups and early stage companies that are less than five years old. Applications are sought in April each year.

Asked in a survey about their plans to deal with the post-Brexit world, InterTradelreland discovered that more than 90% of businesses say they have



none in place. Aidan finds this statistic alarming.

"InterTradelreland's message is simple: while we recognise the pressures facing small business owners dealing with the here and now, this is the ideal time to prepare for the challenges and indeed the opportunities that will be presented by a new cross-border trading relationship that is set to emerge over the next few years."

Support is available to help small businesses get advice on specific issues such as movement of labour, goods, services and currency management. InterTradelreland is offering 100% financial support up to £2000/€2000 towards professional advice around Brexit readiness.

More details about all these programmes can be found on the intertradeireland.com website.



Cross-border markets - great opportunities for startups

Young companies can find it difficult to explore cross-border markets due to a lack of resources, both human and financial, because their focus is on day-to-day operations with little time to plan ahead.

Cross-border markets remain a logical first step for businesses to develop their exporting, giving experience of working in a different legislative system and a different currency. Once mastered, this makes wider European markets a more realistic prospect.

Case study - See.Sense

See.Sense is a cycling technology and data firm manufacturing smart bike products that use sensors to collect anonymised data to help city planning. The Newtownards firm won the regional Seedcorn final in 2013 and has used this success as a springboard for further growth.

Philip McAleese, co-founder of See. Sense, said: "Cashflow is a big priority for young companies and the regional €20,000 Seedcorn cash prize was incredibly useful, helping us accelerate our sales growth and move the business forward considerably. It opened doors for us with suppliers and with our routes to market due to the wide recognition and value placed on the award, as well as the network – really a family – of other companies that have been helped by InterTradelreland.

"InterTradelreland has been with us through various stages of our development and the team has always been very supportive. They understood our vision that took us beyond a bike light into a technology company that has big potential."



PHARMACIST BOOKINGS IN UNDER

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MINUTE

LOCATE A LOCUM

Pharmacy UpStarts reflect on being finalists in last year's Digital DNA startup competition

Locate a Locum were finalists in last year's Digital DNA UpStart competition. Pitching against 34 other startup was nerve-racking said Jonny Clarke, CEO and co-founder. "But learning to pitch is an essential tool of an entrepreneur," he says.

Like many entrepreneurs, Jonny picked up skills outside the world of business before becoming an entrepreneur.

"I studied pharmacy at Queen's University for four years, then I did a year in pre-reg, so five years total. After that, I came out at the height of the recession with no job," says Jonny, reflective of a time post-graduation when things were a lot different. "So, I did locum work for a couple of months. Then I was lucky to be offered a job in the Royal Hospital in Belfast for around three years."

The time spent looking for work during that period gave him the inspiration for Locate a Locum.

"I was constantly passing on my business cards to pharmacies. I noticed a habit that they had of keeping all the business cards in a drawer," says Jonny. "Instead of my cards simply joining the pile, ready to be shuffled, I thought about setting up my own website, with my own professional details on it. I thought that this would work well for some of my friends and colleagues too, and I persuaded them to sign up to it. And the business grew out that."

The genius behind the app was inspired by real-life experience, and has developed an impressive number of features over recent months. "Basically, we have created a website and app which connects pharmacies and locums directly. A pharmacy registers with the site, saying that they need a locum pharmacist to work, say, tomorrow. The website and app are smart and automatically notify registered locums in the area. With one click of a button,

the locum applies for a shift, and is connected with the pharmacy, cutting out the inefficiency of a manual recruitment agency sitting in the middle."

According to Jonny and his co-founder Michael Budden their participation in the local incubator programme Entrepreneurial Spark (e-Spark) really helped them flesh out their business plan and get moving. "I took a career break and focussed on Locate a Locum whilst travelling in Thailand. Michael was still in his previous job at that time, so we were talking a lot in the background. When I came back, e-Spark really helped us. They ask for nothing in return. It's open and honest, and they are helping Belfast solidify its reputation as a renowned startup hub."

It's been a rollercoaster of a year, with Jonny getting married and Locate a Locum's team swelling while their list of clients across the UK and Ireland continues to expand.

They are now connecting 4,000 locums with over 8,000 pharmacies, and the team plan to hire five new staff over the next six months in anticipation of further growth.

Jonny is hopeful for the future of the business: "We think it's going to be massive. We focus on pharmacy at the moment, but we would like to expand into different areas outside of pharmacies."

"We took the decision to jump ship, and leave our careers. We aren't smarter than anyone else. The only difference is, we took a stab at it."

His advice to people taking part in this year's Digital DNA UpStart competition in St George's Market?

"Practice, practice, practice!"



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Danske Bank: learning from startups and big tech

Danske Bank's Chief Digital Officer Søren Rode Andreasen has already accelerated the digital transformation of the bank since arriving in Northern Ireland, but he has more big plans for the future, which include Danske playing a significant role in the local startup scene.

It is not often that you hear a senior bank official saying their organisation could learn from the young, risk-taking entrepreneurs of the startup world.

But Søren Rode Andreasen is not a traditional bank official, he's Danske Bank's Chief Digital Officer (CDO) and he is in the process of making Danske not just the most digitally focused bank in Northern Ireland, but setting it on the road to becoming a bank known globally for its digital excellence.

"Banks are undergoing very big changes and some of those changes are because we can see that transactional income is converging towards zero. There is more and more automation and competition in the financial sector, and that means we have to reinvent ourselves in the digital world," explains Søren.

"It is being led by consumer behaviour and how customers want to bank with us. The number of digital transactions now far outweigh physical interactions. That means that our biggest touch point is in our digital solutions, so it makes sense for us to focus on making those really awesome."

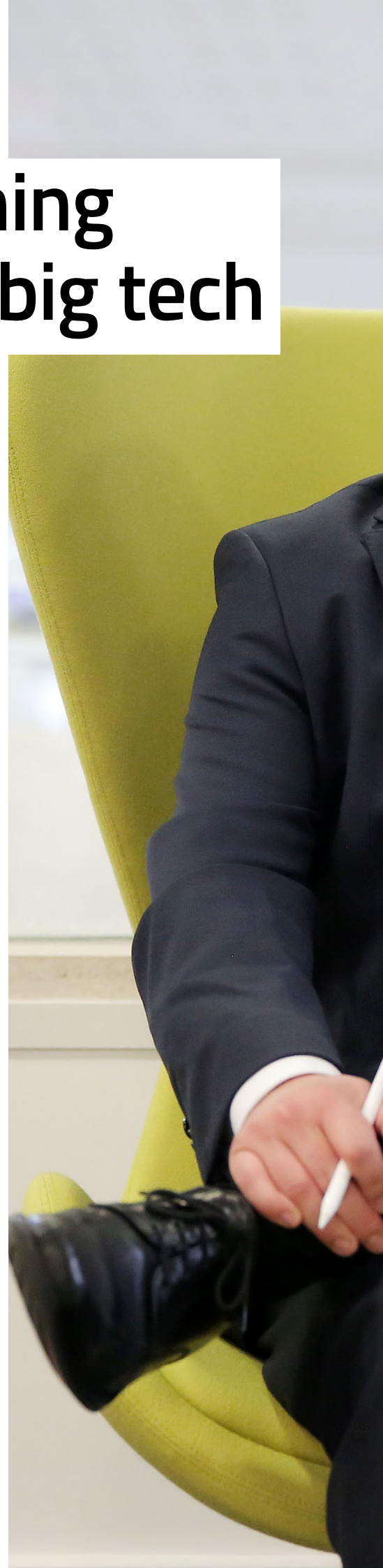
That is where the startup mentality comes in. Danske Bank, like most banks, has traditionally had a risk focused – some might say risk averse – culture, a conservative approach which adds a lot

of value in banking. While he does not want to change that which has made Danske successful, Søren believes the organisation also needs to deliver at pace and add customer value by being fast to market.

"The practices we have adopted from startups include being super focused on the customer value proposition and developing products in cooperation with our customers. It is about being agile, both in our processes and our mindset; and it's about trying things out, not having everything based on a one year business plan," he says.

Søren elaborates that, having adopted some of that startup mindset, he is also focused on those companies – the tech giants – that are driving innovation. Google, Amazon, Facebook and Apple are investing hundreds of billions of dollars into technology advancement which means they are the ones setting the expectations of the bank's customers. If you are used to the seamless process of shopping from home on Amazon, why would you expect anything less when applying for a loan or a credit card?

"The expectations of customers are no longer being set by our competitors around the corner. If I look at where competition is coming from I'm not really looking at other banks, or challenger banks. I'm focused on our customers and providing value for





them, because if we do that they will choose us as their provider. I look for inspiration from startups and from the big tech companies.

"What I'm looking at now is how we can go from being very, very good in a Northern Ireland context to being very, very good in a global context. That means learning from the best."

DIGITAL TRANSFORMATION

Technology, he believes, makes it possible for Danske Bank to compete globally and the CDO says the bank sees the changing landscape as an opportunity, not a threat.

Danske is already well underway with its transformation from a traditional bank into a company that has digital at heart. Earlier this year it became the first local bank to provide Samsung Pay for customers and the first bank in the UK to make Garmin Pay available.

The bank has added the capability for small business customers to get lending decisions in a matter of minutes in many situations, such as business overdrafts.

It is predicted that 72% of the UK population – 35 million people – will bank via a phone app by 2023 and 22 million already manage their current account on their phone. The bank has rebuilt its website to be mobile responsive and has redeveloped its mobile app from scratch.

"Customers tell us they are very happy with the current app, but we can see it is not going to be fit for purpose in the future. There will be lots of scope to build on with this new app, which just wasn't possible on our existing platform. It's still in development, so we'll be adding more functionality throughout 2018.

"This is one of our biggest customer-facing developments in many years. We're incorporating user feedback, providing exciting new features and continuously improving in order to provide a great customer experience."

Internally the bank is building up its digital capabilities, hiring digital experts to build customer solutions and help transform the bank on the inside by developing new employee apps.

"I think it was Facebook who said we are '1% done'. A digital company will never be done. I saw a survey the

other day where 80% of bank executives said they thought they were done with digital. They had e-banking, they had an app. But being a digital company is about constantly challenging the status quo and improving value to your customers," says Søren.

"Once you see the pattern of automation and connectivity and IoT and advanced analytics you can see that whatever can be automated will be automated. This also means that we will put additional focus on those areas that cannot be digitised so we can provide an amazing digital experience with a human touch when this adds value to the customer experience.

"You always have to reinvent yourself. If you don't, then you're Kodak."

difficult to find investors who can add more than just finance.

He recounts a conversation with a three-person startup team who had decided to move to Edinburgh because they felt they had outgrown Belfast and were finding it hard to recruit.

"Many large cities are investing a lot in creating a startup environment that supports innovation and risk taking amongst startups. When I look at Northern Ireland I think we are behind in this area. We have a lot of good intentions but when I benchmark to what I see in other countries I see a gap."

The Hub has a lot of knowledge jobs in the Nordics and, as people looking for



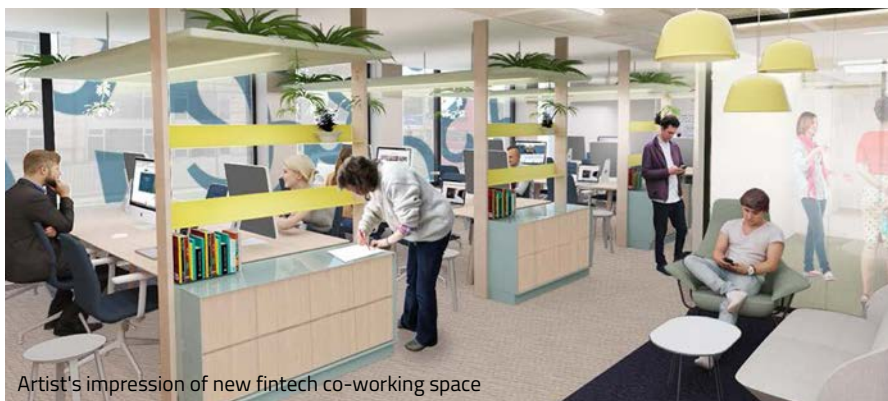
dedicated to the growing cluster of fintech companies that are setting up in Northern Ireland. Søren says the space will support innovation within this field, helping fintech companies who are reaching the point in their lifecycle where they need to scale but don't yet need their own office.

"We would prefer to see a lot of these tech companies working in the financial services sector setting up in Belfast rather than London or Manchester or Dublin," he says.

"I want to help them and I believe we can do that by having them close to us and contributing knowledge. We have fintech hubs in Belfast but nobody with a global outlook. Danske is globally focused and we want to plug them into our network of fintech hubs and partner banks."

Søren is keen to stress that it is not a Danske Bank co-working space, it will be a Belfast co-working space. There is no requirement to work with the bank. "There is a requirement that you want to be part of a community but Danske Bank will not run that community. We want to give, we don't want to take. This is something we are doing for Belfast and Northern Ireland to give back.

"That's also why we are inviting all the other co-working spaces here to collaborate on the fintech side. I don't see us as a competitor to the other co-working spaces in Belfast. I would love to work with them and invite them in to our network and we'll also help them as much as we can to really put Belfast on the world map as a global hub within financial technology."



Artist's impression of new fintech co-working space

THE HUB

Danske Bank is committed to supporting innovation so that some of the great companies that emerge in this new industrial revolution are based here in Belfast.

To assist, the bank is launching a local version of The Hub, a platform which has proved successful in the Nordic countries for connecting startups with both investors and talent – both of which are problem issues for local startups.

Søren says he has heard first hand that attracting talent is difficult for startups in Northern Ireland as we are somewhat isolated. And while it is often not difficult to attract seed capital, it can be

these jobs are highly mobile, it's not inconceivable we could see an influx of Scandinavian developers once it gains traction. At the same time Søren wants investors and startups here to use the platform to connect with the other countries.

BELFAST FINTECHS

It is not just in the online realm that Danske Bank is showing its support for startups. It is putting its money where its mouth is and taking the radical step of creating a brand new startup space on the ground floor of its Donegall Square West headquarters.

Located alongside the bank's flagship Belfast branch, the whole floor is being transformed into a co-working space

Scaling up

CEO of AuditComply Kevin Donaghy was in conversation with Big Motive's Damian Cranney at the recent BelTech conference curated by Kainos. The two founders delved into some of the challenges that face a growing startup.

AuditComply helps customers in heavily regulated industries reduce the human effort required to complete compliance checks and automate processes.

Making better business decisions and reducing the time taken to collect information (some of which is necessary but of little actual value) makes human interactions more efficient.

Kevin explained: "Demonstrating that you're working to a particular standard is often a mundane task typically done with Excel and Word. Our digital system can identify risk much earlier than those more manual systems, allowing organisations to assess their compliance in real time."

AuditComply's system can spot anomalies and outliers in a company's data that are less obvious to human inspection.

"We spent the first few years visiting companies to understand their existing processes ... and working with auditors

to understand what is best practice in that industry.

"Anytime a customer tells us a particular problem, we go on site and walk around the shopfloor to understand exactly what they do. It prevents us making poor assumptions about processes."

Four years and three million audits later, AuditComply is growing and Kevin says that their "big challenges are around scale and the user journey."

He reflected that coming from a performance engineering background the company initially lacked some of the necessary finesse around user experience, but they have subsequently worked with usability experts.

Instrumentation on their software helps the team understand which features are used and which ones are ignored. In response, underused features can either be deprecated because they are not needed, or can be better explained and promoted to benefit customers who are missing out.

Customers also provide qualitative feedback and case studies that help improve and innovate the product.

A company might have a thousand products, each with its own checklist to meet.

"That's quite a challenge to scale up to and support," admits the AuditComply founder. With his background in mathematics, he approaches the problem by "abstracting everything and then tying the individual components back together again."

As a startup, AuditComply's model has been "to move as fast as possible and then worry about the scale afterwards once a good market fit has been proven."

"We probably didn't do too much on the scale side early on, and it has cost us to engineer it in later on. The first questions are whether there is a good product fit and whether customers are biting.

"Sometimes we have to move at speed and are constantly developing on top of fragile code. We don't want to maintain dead code!"

The penalty of this intentional approach has been the subsequent need to spend time reengineering the code to perform at scale. In many ways, it's a good problem to have, and something that may need to be revisited as the complexity of the product and the size of its customer base continue to grow.

Follow **AuditComply**



@AuditComply

How to avoid burnout in a startup



Jenn Fenwick is a career transition and leadership coach with 14 years of experience supporting all kinds of businesses, from startups through to Fortune 500 global organisations, and she has a special interest in preventing burnout.

Jenn's super power is to help people break free from whatever is holding them back so they can reach their potential. She removes the 'noise' that tends to overwhelm in the busy-ness of modern life so that clients can be clear about what is really important and what they want to achieve. More impact, less burnout.

Ever feel like you are hurtling through life on a rollercoaster? Air punching and on top of the world one moment, yet overwhelmed and just wanting to get off the next?

If it is any consolation, you are not alone. The emotional and learning journey of being an entrepreneur can be challenging for even the most experienced of business owners. Throw in the fact that our brains are hard-wired to keep us safe and in our comfort zones, and even your own mind can feel like it is working against you.

Don't get me wrong, running a business is all sorts of wonderful, and every day I am thankful I took the plunge and became my own boss. I love what I am doing and the flexibility it has given me. However, that very same freedom caused me endless stress in my first year of business. Burnout is the result of chronic stress.

Chronic stress and elevated cortisol levels interfere with our normal body functions, such as sleep, digestion and our immune system. Burnout effects everyone in different ways and to different extents. Some common signs include:

- physical exhaustion: fatigue, regularly sickness, weight gain or loss;
- emotional exhaustion: anxiety, insomnia, depression;
- reduced motivation and productivity;
- feelings of irritability and being overwhelmed.

According to a study of over 7,000 professionals by Dr Sharon Toker and her team of researchers at Tel Aviv University, job burnout has been associated with a 79% increased risk of heart disease. Toker described her finding as “alarming” and more extreme than the researchers had expected.

Burnout is a stronger predictor of coronary heart disease than some other better known risk factors like smoking and a lack of physical activity.

No one wants to go down this path. As a business owner in the startup phase when *you* are the business, you simply cannot afford to.

Ready for some good news? Research shows that workplace health and wellbeing has considerable business returns. It's a win-win. You just have to look at Silicon Valley to see the increased focus on health and wellbeing initiatives. There's never been a better time to ask for a nap pod!

Ultimately, if you are an entrepreneur and you want to be the best, you have to be just as committed to your own health and wellbeing as you are to growing your business.

During the startup phase it can feel counter-intuitive and a luxury too far to step away from the daily grind

of business. However, for the sake of yourself and your business it is essential, and strategic. Hopefully this way of framing the situation makes you feel better?

So be kind to yourself, remove the pressure and focus on taking care of your health and wellbeing ... and in turn, you will be able to take care of your business.

Visit online **Rebel Road**

 rebelroadcoaching.com

10 tips to avoid burnout

- 1.** Prioritise your health: without it nothing else works. Move your body, exercise has endless benefits. Eat well, it's brain food. Ask yourself “when am I most relaxed?” and build more of that into your routine.
- 2.** Set some work-life boundaries. Don't fall into the trap of working 24/7: this is the highway to burnout. The more you work, the less work you'll do. Trust me!
- 3.** Be productive with your time. Manage your diary based on 'energy'. When are you at your best for different tasks? Always build some flexibility and wiggle room into your diary. Focus on daily micro-goals: the feeling of progress is good.
- 4.** Find some strategic headspace. Get a change of scenery or visit a new coffee shop and just allow your mind to freestyle for half an hour. Creativity lives in the downtime, away from our laptops. Embrace weekly guilt-free relaxation time.
- 5.** You need a support network. Build a trusted network around you, before you need it. Embrace vulnerability and don't be afraid to ask for advice. Talking to other business owners will give you perspective. Outsource tasks that weigh you down, it's an investment in you.
- 6.** Be realistic. Have a vision for your business, then break it down into clear short-term goals and set mini-milestones. Solely focusing on your five year goal will overwhelm you.
- 7.** Embrace and cultivate your interests outside of work. Never forget to have fun: your work will be better for it. In times of play, ideas and inspiration appear. So work benefits even though you're away from your desk injecting more 'life' into your life.
- 8.** Regularly build in time to self-reflect on the small wins. Progress is motivating, so take time to celebrate it. Success is made up of small steps in the right direction. Failure is only really failure if you didn't learn something from the experience.
- 9.** Remember why you are running your business. Why did you set out to do what you do? How do you want to run your business? Keep coming back to your vision.
- 10.** Don't be controlled by technology. It's your friend, however, don't let it become a distraction or a stressor. Have regular detox time. You'll be more productive afterwards. The world will not collapse if you turn your devices off or leave them in another room.

The startup mentality is 'attrition until it works ... or you give up'

Marty Neill (right) founded AirPOS in 2009 as a spinoff from e-commerce company No More Art. He previously worked in the record industry and music publishing.

"It began as a notion over a beer in a Belfast record shop that my friend inherited. We realised that one of the things we'd have to do to save it would be to sell online. I assumed there would be a system that would help us. But we had a problem in the shop that I hadn't seen before."

There was a very limited supply, often just one copy, of each vinyl record to sell in store and online. But traditional electronic point-of-sale (ePOS) solutions for small retailers weren't built to track stock levels of unique or limited quantity products.

One of Marty's existing customers had a similar problem selling individual high-end guitars that could not be resold once a shop or online customer had placed an order.

"We started to see the inventory monitoring problem everywhere – it was rife – any place that had limited stock. No More Art had been part of the problem because we had been selling e-commerce to these guys paying no regard to their existing processes and systems. So we became part of the solution and in 2009, we proposed the world's first ePOS and e-commerce

system as a software-as-a-service company."

Marty admits that back then he didn't really know what a startup was. "We just did stuff," he says.

Belfast-born investor David Kirk visited

he called me outside to hand me a cheque!" AirPOS had its first investor who is still on the board today. That St Patrick's Day he also met another future board member, Mike Gill.

"Adult supervision is so important in the early days. If you don't have it, you'll



the small team in Belfast. He had a retail software background as senior management experience at AOL and Cisco Systems. "He told me I had to go to San Francisco and meet him at The Chieftain bar on St Patrick's Day. And if I could do that we could talk. So we did."

Attending the Irish Leadership Technology Group's Silicon Valley awards, Marty met back up with David. "It was St Patrick's Day and we were having a drink in The Chieftain when

fly off a cliff. You do need capital. But if someone came to me tomorrow with a cheque for half a million pounds and I didn't understand their expectations and they didn't have experience, I would be duty bound to say no. We learned that the wrong investor kills a business quicker than any amount of capital. You need an investor's experience and their tough questions."

AirPOS participated in an early version of InvestNI's Propel programme. But

Marty says that their best mentoring came from US-based investors.

"We've had extraordinary adult supervision, but it came from San Francisco expats. We had David Kirk, Mike Gill, John Hartnett and Jonny Gilmore. It was our startup school. The only problem was that it was in the wrong time zone. You had to be on a call at 9 o'clock every night, which when you're married and you have kids is certainly not romantic."

Seven years after starting to build the software, Marty struggles to give a straight answer to the question of whether AirPOS is still a startup?

"At the point where you suspect that you've solved the problem, and you have some proof points that say you can grow predictably and sustain yourself, can retain customers, then, arguably, you may be moving out of startup. But I would be reticent to say that AirPOS is no longer a startup.

"I'm the only executive. If you come back in two years' time and there are three executives – and it's not the founder wearing four hats and scrapping his way to the next milestone – I'll consider us to be beyond startup."

Later in the interview he admits that "going bust is no longer an option for AirPOS" which may mean that they've gone "slightly beyond startup." He sees their options as settling as a niche boutique software business, slow growth that lessens the gap between the burn rate and profitability, and doubling the existing investment over the next two years.

"We are classic software-as-a-service company, built to scale. This whole organisation, every single piece of its DNA has been geared towards removing impediments to scale. It'll be a terrible shame to me if it doesn't get the opportunity to do so."

From a beer in a record shop to a cheque outside a San Francisco pub and now a company with 10 staff and loyal customers seeking further investment and growth. They're well on their way to their goal of raising their next £500,000. Has the journey been worth it?

"The thing for me is that I don't want to not solve the problem. I've always done startups, our record label was a startup, our magazine was a startup. I'm stupid enough to go and do this to myself again and again.

"If it was an easy journey then everybody would do it. You have to have a certain mentality. This is not a job. This is not a career. Anyone who thinks this is cool is deluding themselves. This is attrition until it works ... or you give up."

Marty's lessons learned

The two commandments of building tech (passed on from Mike Gill)

1. Coding is an administrative task: you should never write a line of code until you have a plan for why you're doing so.
2. Nothing ever works until version three. A startup's prototypes accumulate huge technical debt if you do everything too fast. The AirPOS product is now working at version three!

Know your metrics

Startups work on a very tight set of metrics: cost of customer acquisition and customer lifetime value. It's terrifying to meet people from local programmes who don't know these numbers. It should be the culture of your business: it's the yardstick for everything.

Someone could come to me with the greatest marketing idea in the world and I will go what's the cost of customer acquisition going to be? Because if it's above a certain level it changes the dynamic of the business and we have to raise our price and then we're anti-competitive.

Crowdfunding

Last year, AirPOS experimented by raising funding through CrowdCube crowdsource platform. I've realised that crowdfunding can never be a replacement for Venture Capitalists. It's not the same thing at all. If you don't get expertise along with the capital then you're hosed.

Paying it forward

Spending time in California, especially in San Francisco, I discovered a genuine mentality of 'paying it forward'. When you have contacts, you share them. When you know how to do something, you have to help. That generosity drives startups forward.

Lots of people in Northern Ireland have done well and have built up great experience. But there's a curious disconnect between some successful entrepreneurs in Northern Ireland and new startup entrepreneurs. And there's a low awareness and appreciation of the diaspora who could help introduce local startups to investors.



Elemental

growing Derry-based leader in digital social prescribing

Derry-based Elemental is a growing tech for good startup that allows GPs to make and manage social prescription referrals into community programmes and offer services that will reduce health risks.

In the same way a GP would write a prescription for medication, Elemental's software makes it easier for them to issue a social prescription for debt advice, exercise, mindfulness or suicide bereavement counselling to tackle the social determinants that affect people's health.

Jennifer Neff explained to Sync NI that she had been delivering digital skills programmes in neighbourhoods to help people learn to use digital technology while Leeann Monk-Özgül was the programme manager of the Healthy Living Centre in Derry.

"As community development workers we both saw people being told they would really benefit from engaging in local activities in their communities that they might not be aware of. We shared a frustration that people often didn't know what was happening in their local area and we knew that they needed more support to attend and engage in these activities: it's not enough to hand someone a phone number and expect them to go along.

"And from the health commissioners' side of the things, we could see money being spent on different initiatives in different areas but with no analytics about outcomes, engagement, gaps in service provision or health risk hotspots.

"Our solution would allow a GP in Derry to refer someone suffering from mild depression to Bogside & Brandywell Health Forum or The Old Library Trust where a community development worker will sit down with the person and help them understand their basic health risks. The person will be able to choose from a menu of different activities, free swimming lessons one morning a week or perhaps joining a walking group and then moving onto a 'Couch to 5K' programme. The change in the patient's health can be evaluated along with the difference it's making to the health and social care sector."

As part of the City of Culture year, Derry promoted its digital business potential throughout the world. Jennifer remembers the "infectious optimism in the air" that made the pair wonder what role digital could play in health and wellness in the support of communities most at risk.

"In the summer of 2013 we entered the TMED Health Challenge run by the Clinical Translational Research and Innovation Centre (C-TRIC) and pitched our idea. But when Professor Maurice Mulvenna from Ulster University won, he said that our idea was better and gave us the £500 prize and the three months of incubation space at C-TRIC. So the start of Elemental was really down to the generosity of Maurice and

the fact that he got social prescribing!"

Jennifer puts the company's expansion over the last 12 months "down to founders who understand the challenges surrounding community health, a good board, a great product developed with customers, and being able to access funding from social impact investors to kick start growth."

"This time last year there were three of us. We had five customers when we went out for our first round of funding. These were customers across Northern Ireland and England who were paying money to use the platform and helping us develop its future roadmap at the same time. That gave us traction.

"We knew that the 'usual' angel investors and VCs may not necessarily get social prescribing or health inequalities. We had to target those who would appreciate the importance of social impact because that was at our core, so we approached the ClearlySo social impact investment network. They got it straight away and 43 days after our pitch £300,000 was sitting into our bank account enabling us to make key hires and activate our sales and marketing plan.

"We had been doing everything ourselves, just Leeann and I and our lead developer, Mark Gowdy. Today Elemental has 11 staff, and is benefitting from a Selective Financial Assistance (SFA) grant from Invest NI to contribute towards the first year of new salaries.

"Now we have 18 customers across four primary markets. We entered into the Republic of Ireland market last month, and we have projects in Northern Ireland, Wales, Scotland, England and expansion into Finland was announced at the start of June."

The company has recently been shortlisted in the Best Female-Led Angel Investment category of the UK

Jennifer Neff speaking at TEDx



Business Angels Association awards.

Elemental's expertise has been recognised near and far. They won a tender from the Mayor of London Sadiq Khan and are helping develop the social prescribing strategy for London that will be launched this autumn. In Dubai the team has helped the government health authority write social prescribing into their health strategy.

Reflecting on their journey so far, Jennifer is thankful for the influence of good mentors at key points in Elemental's development. "Find the right one, be choosy about who they are and how their skills align with where you are going. Don't just take anyone," she says.

Upon getting the investment, the team were warned that they "were about to go from a rickety roller coaster onto the Oblivion." (Alton Towers' Oblivion ride includes a vertical free-fall drop and sharp corners.)

"At that stage, we wondered how it could be any more full on than it was, but with the market opportunities and the way we're continually developing the software into something that is both demand-led and something people want to pay for, it's been nonstop. But we keep each other going and have a fantastic team."

Elemental's gamechanger within the UK market has been its integration with the UK clinical systems provider, EMIS Health, which sits on the desks of most GPs. "With only eight minutes set aside for each patient, GPs told us that they didn't want to have to switch between two systems when they knew someone would benefit from a social prescription. We invested our time and energy into making it a seamless integration so now GPs can make, manage and view all the social prescription referrals that they're making."

What's next for Elemental?

"When we began, we didn't realise that social prescribing was going to become so big. There's not a day goes by now when social prescribing is not referenced in the newspapers and the benefits of non-medical intervention for healthier lives. The Royal College of General Practitioners is calling for every General Practice to be social prescribing. The national policy has caught up!

"We want to be in every GP practice as the system of choice to make social referrals. And we want to help the voluntary, community and social enterprise sectors demonstrate the impact they are making on the health and social care sector.

"We are the market leaders in terms of digital social prescribing. But in this game, digital can't be to the fore; it has to play a very subtle but effective role in the background because face-to-face interaction is the most important thing when you're trying to help communities reduce a health risk.

"So we're supporting the people on the ground, the GPs, link workers and facilitators who are doing great work reducing obesity, loneliness, mental health issues and other conditions."

But while the team have three new markets in mind for expansion, Jennifer insists that "Derry will always be our base."



L-R Declan Kidd, Steven McComb, Conor Mageean, Peter Gourley, Alex Turnbull and Zoe Bambrick

No gimmicks for Danske Bank's agile app team

Danske Bank's journey to becoming a truly digital business now includes its own in-house app development team.

Founding members Steven McComb (team lead) and Zoe Bambrick (graduate app developer) set up the tech stack, and have been joined by further developers handpicked for their full stack experience. The bank will be on the look-out for junior developers and graduates to help bolster the team before the end of the summer.

Peter Gourley, Head of Digital Channels at Danske Bank, believes that the investment in this in-house capability is testament to the appetite and commitment the Bank has to digitally transform the organisation here in Northern Ireland.

"Danske Bank is embracing digital in a transformative way – and I count myself very privileged to be joining the bank on what will be an incredibly exciting journey," he explains.

"The arrival of Open Banking means we need to move quickly to respond to changes in the banking landscape, to test and develop concepts that make more possible for our customers. We didn't have that capability locally six months ago.

"We set up the team in Donegall Square West, rooted in agile ways of working. We work on greenfield projects and have considerable autonomy over our pipeline, which is not typical in a banking structure. Zoe, Alex, Declan and Conor have an equal remit for product ownership as they do for app development, working closely with specialists from functions right across the bank."

Peter pointed out that this team will look beyond traditional banking solutions, following new digital trends and leveraging emerging technologies to build, test and iterate proof of

concept solutions for both customers and colleagues. Customer co-creation and evaluation based on data analytics will guide how the team develops these new products and services.

"We are not here to create whimsical, gimmicky innovation; we want to create innovation that has a good chance of succeeding. We are very prepared to pivot on an idea or close down an idea if we prove it is not adding value, and move on to the next one.

"We expect the team will evolve to deliver products and services beyond mobile apps and develop core competencies beyond pure engineering. Blending technical capability with customer design thinking is the sweet spot we are aiming for. It's about listening to our customers and using data-driven insights to build what they tell us they want."

That approach has been apparent in the team's first major project – an

employee app called Danske Life that has been rolled out to the bank's 1,400 strong workforce across Northern Ireland. The app aims to develop the digital capability of Danske's people by enabling them to interact digitally both inside and outside of work.

"Our people are our biggest digital asset. By prioritising an internal app as our first project, we hope to raise that digital awareness and engagement amongst our colleagues. This gives us a strong user platform which, as we now change focus towards developing customer-facing apps, allows us to harness their feedback as a colleague-first test ground."

Peter returned home to work in Northern Ireland for the first time in 10 years after joining Danske Bank from Tesco Bank Edinburgh in December 2017.

"The ambition and air of entrepreneurship here in Northern

Ireland is palpable and the level of investment, optimism and talent in the tech community here has blown me away.

"Building collaborative partnerships is imperative to an organisation in this increasingly connected digital ecosystem."

And he has this message for any startups or fintechs looking for a partner: "Here at Danske Bank we're committed to fostering strong relationships through meaningful collaboration and by opening up our network, with a view to bringing some thought leadership and solutions back to the bank for the benefit of our customers.

"We want to show what can be made possible through partnering with the high-calibre tech talent we have here in Northern Ireland, and our team is primed and ready to start co-creating."



syncni



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GDPR FOR STAR

For most people, springtime in 2018 will be remembered for the Cambridge Analytica scandal which raised the issue of data security in the public consciousness and an explosion of messages in our inboxes asking us to confirm whether we wanted to continue to be a member of mailing lists and customer databases.

Software engineer Paul McBride asked Forde Campbell's Data Protection Lawyer Katey Dixon what the General Data Protection Regulation (GDPR) means for app businesses.

The conversation will be relevant to many small businesses who are building new software and infrastructure and are determined to design in privacy and security from the start.

Paul: My app has an invite system where a customer can enter another person's details to send them an invitation. Who is responsible for the data?

Katey: The GDPR splits responsibilities between controllers and processors, so the first thing to do is work out who is the controller.

A controller makes the decisions about what data to collect and how to use it. The processor collects, stores and uses data because the controller has told them to. So if business A (a controller) asks business B (a processor) to store data for it, then business B has no interest in the data and makes

no decisions about it other than the mechanical and security measures it implements.

In your scenario, Paul, if the customer enters another person's details into your app to send them an invite, then your business is the controller in respect of the customer's data. Your business is a processor in respect of the other person's details since it is only processing it at your customer's instruction. The customer is responsible to the other person for making the decision to upload their data and send them an invite.

If the message sent is an invitation to set up an account on your app, then as soon as that other person signs up and ticks your terms of use, you'll be acting as a controller when you handle their name, login, preferences and any other data you collect from their use of your app.

A user has requested that their data is deleted from my app. What do I have to do and how quickly? Does all of their data have to be deleted, or only personal information?

The 'right to erasure' is enforceable by a data subject against a controller in respect of the personal data they hold on them (whether they or their processors hold it).

If you are the controller, you have to comply with valid requests within one month. You'll need to verify the identity of the individual making the request, then work out if you are



legally obliged to comply. The right to be forgotten is not absolute; your right to retain the data may override the rights of the data subject.

If you hold any data for marketing purposes then remove the individual from your mailing list. If your lawful basis for processing relies on consent, start deleting!

The GDPR doesn't specify what 'erasure' means, whether it means destruction of the data or anonymisation. If you have to comply with a request, the Information Commissioner's Office's guidance on deleting personal data indicates that they will take a pragmatic approach and that the obligation will be met so long as the information by which the individual can be identified is put 'beyond use'.

My app has customers all around the world, meaning I use servers positioned all over the globe. What does the GDPR say about this?

The GDPR prohibits the transfer of personal data to 'third countries' – this means countries outside the EEA (which includes the EU, Iceland, Liechtenstein and Norway) – except in certain circumstances: (i) if the transfer is to a territory which the EU has listed as having adequate data safeguards; (ii) if approved safeguards have been put in place between the transferring and receiving party; or (iii) if the transfer falls within one of the derogations allowed in specific circumstances.

Here are three possible approaches (which aren't mutually exclusive). No matter how you decide to approach the transfer, it's worth remembering:

- if you're acting as a processor you will always need the consent of the controller and this can be managed in your terms of business;
- you'll need to make the fact of the transfer clear in your privacy notice and explain why it's permitted;
- don't forget that the hosting services provider is another link in the chain: it's a sub-processor and you'll need to make sure it's contact with you conforms with the GDPR.

Option 1: *Only use servers in places which have been deemed safe or have self-certified.* Restrict your transfers to servers based in the EEA or countries for which the EU Commission has made an adequate data safeguards decision (Andorra, Argentina, Canada, Faroe Islands, Guernsey, Israel, Isle of Man, Jersey, New Zealand, Switzerland and Uruguay) or transfer to servers in the US provided by companies registered under the EU-US Privacy Shield.

Option 2: *Implement appropriate safeguards through your contracts.* If you need to use servers in territories outside those listed under option 1, or to a US company which hasn't signed up to Privacy Shield, you could consider adding 'model contract clauses' (downloadable from ec.europa.eu) to your terms of business. However,

they may be of limited benefit to most app businesses since the available clauses don't yet include the processor-to-processor provisions you'd need to manage data on behalf of your customer as a processor.

You could also set up a subsidiary company in the country in which the servers will be based and enter into a data processing agreement with that subsidiary, undertaking a permitted transfer in reliance on 'binding corporate terms'. These terms are freely available online, but since the GDPR imposes restrictions on onward transfer to third countries, this option is limited.

Option 3: *Derogations for specific situations.* If neither option 1 nor 2 work for all of the territories in which you need servers, then you should consider whether any of the eight derogations set out in Article 49 of the GDPR apply.

For the purposes of your app business, Paul, it is likely that the only viable option would be to obtain the explicit consent of the data subject to the transfer of their data, having explained the risks.

In a B2C model the user can freely decide if they want to use your service or not. But in a B2B model where the app is licensed by a company with its employees as designated users, given the asymmetric structure between an employer and its employees, the courts may be reluctant to deem any such consent as freely given.

Forde Campbell LLC have shared this conversation in a bid to fill in gaps between principle and practice. GDPR is a new law in a very big space. It is as yet untested and each business will need to find its own path. Don't rely on this article as a definitive guide or as legal advice. Read it, have a think and drop a note to katey@fordelaw.com and hello@paulmcbride.net if you have further questions or want to be part of the continuing conversation.

Belfast as a hotbed for startups

Jason Ordway on engineering culture and Slice's expansion in Northern Ireland

Sync NI interviewed Slice's CTO, Jason Ordway, in the Belfast city centre offices now occupied by the pizza ordering technology startup's team of engineers.

Jason remembers a very patient professor who introduced him to website development. It was "an amazing immersion into the World Wide Web before that was a thing." More than 22 years later, having spent two decades in New York City, Jason is using his Belfast ties to accelerate Slice's ambitious growth plans.

Slice supports over 10,000 pizzerias on its platform. A £400,000 investment from Invest NI has helped create 50 roles in Belfast. He sees a hotbed of well-developed, hardworking talent with a strong engineering culture that puts Northern Ireland at the top of the pile when it comes to sourcing tech professionals.

"I joined the company just under a year ago, and pretty quickly started the process of working out how soon I could get back to Belfast and help improve on the already talented team in New York with a comparable team here in Belfast. Today we have 12 people in position and we're looking to expand rather quickly with upwards of 50 people likely

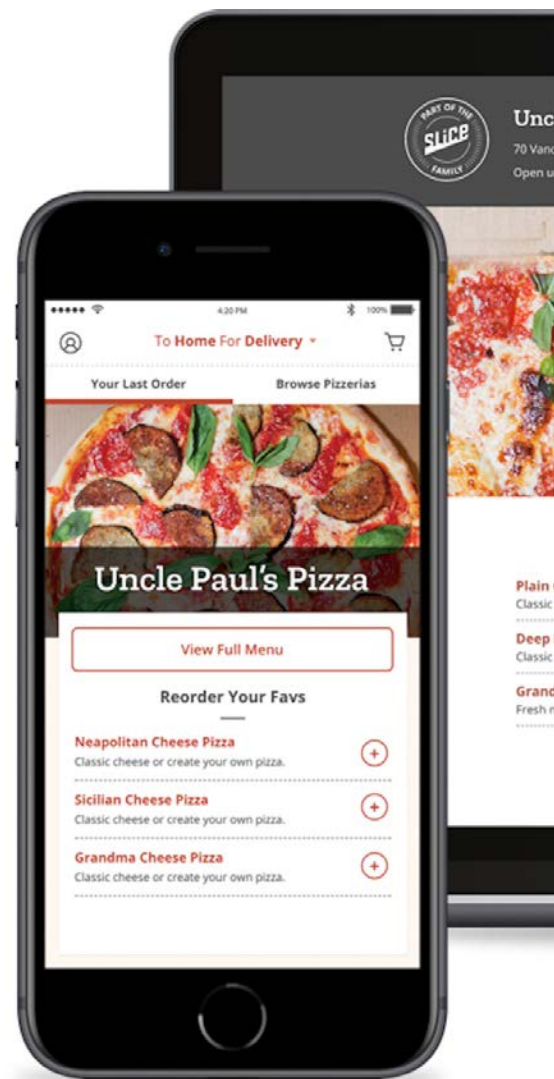
employed within three years."

When asked about his specific draw to Belfast, Jason talked about his previous experience of the local startup scene and the rapid development he has witnessed on these shores. The engineering culture that helps drive innovation locally is particularly attractive.

"Looking at the level of talent in the UK, the feeder universities are obviously pretty strong and the burgeoning startup scene is a lot cooler now than when I first got here. Back then we were creating the meet-up space and an engineering culture here in Belfast; now it is pretty well run across the board. I think there were only a handful of startups here when I first got here; now six years later there are startups everywhere."

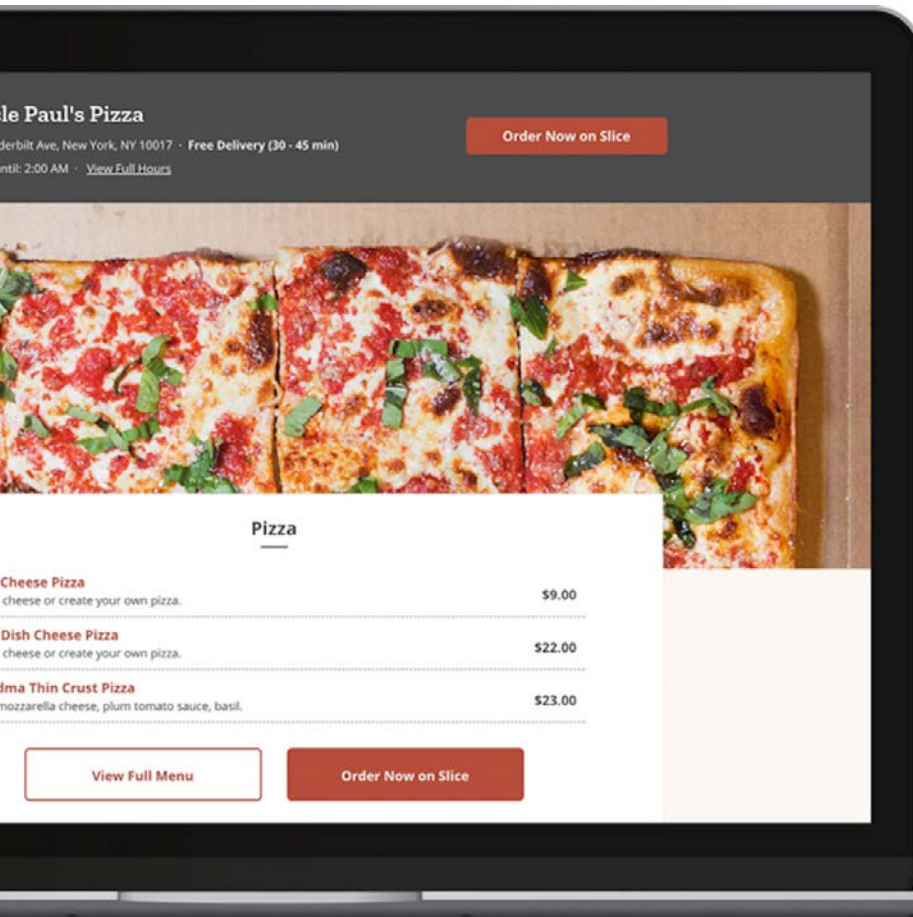
He sees the local tech community as a particularly attractive workforce with which international startups can engage.

"We're probably most impressed with the talent, frankly. Our folks said this is the New York scene but in Belfast, where you have an engineering culture, and you have a smart group of kids coming out of school, you have corporate involvement in helping those



kids become more successful. It's not big corps; there's a lot of little guys like Slice. We have a very big market opportunity, but as a company my team is 50 people total. It's going to be interesting to see the evolution of the team here as well as supporting Android, iOS, and a whole suite of other services."

"I would come back to Belfast over and over – I've had really good luck here," admitted Jason. "In terms of the quality of the folks I can hire as well as them being English-speaking, having an insane work ethic, and just being good people, I can't say enough good things about Belfast. And the city has been very supportive of the startup environment because the universities have really strong Computer Science courses and also are supportive of startups being here."



someone else's dream, you should do that."

Slice faces the same challenges as many other early stage businesses and rises to them by employing the most highly talented individuals available.

"Just like every other startup in the community, we don't have an infinite number of engineers, so we have to focus on the right things. Your day-to-day is most certainly challenging, that's for sure! You're working with a team of highly talented individuals. To get in the door, you need to pass technical interviews as well as a pretty comprehensive coding challenge: we set the bar pretty high."

Asked what makes an excellent engineer and how young people could prepare for upcoming roles at Slice, Jason was a fount of useful information.

He encourages novice developers to collaborate, innovate, and remain humble as they continue to grow in such a rapidly developing and changing industry.

"If I look at some of the programmes in the US that have had gaps," mused Jason, "it was kids leaving school and not having all of the relevant coding languages under their belt or even, to a certain extent, agile software development principles. You've done a good thing here by integrating the startups into the university, so a lot of the kids are at least coming out ready to get started."

"Get out there, pull down some open-source code, make some changes and get some feedback. Please be social about your code. GitHub is a thing. Paired programming is something you should try – it's also a thing! – and seek help."

"One of the things younger engineers have to learn on the job is you won't always know everything, so very early days, be open to feedback."

What makes Jason so passionate about Slice is that it shares his own dedication to small businesses and startups. Its ethic of helping 'mom and pop' pizzerias compete against big pizza chains extends far beyond a simple desire for a piece of the \$44 billion pizza industry in the US.

Slice aims to attack the US pizza vertical and capture the market as far as possible while supporting pizzerias that sell wonderful pizza but struggle to utilise the same technologies as the bigger players.


"For Slice, the real sell is coming to a pizzeria that does a great job selling fabulous pizza, but certainly needs help in their digital world. From a sales perspective, we talk to owners that range from the owner, maker, and person you speak to on the phone being the same person, to multiple-station, pretty large pizzeria restaurants.

"Our goal really is to bring to these

small pizzerias the idea that they can compete with big pizza. The online presence for some of those larger providers, whether online or on mobile devices, is pretty impressive. Your average pizzeria is not going to spend what they can on websites, online ordering, or mobile apps. We've been able to provide a lot of those services to the small guys and help them win because, at the end of the day, we can all agree that local pizza is amazing."

Slice seeks to nourish its internal culture by focusing on many of the same qualities he admires in the Belfast engineering workforce.

"Doubling down on our involvement with universities helps again," he explained. "And around the world, open-source software is something as a team we believe in. It goes to the core of our ethos of supporting the little guy. Not everybody has a team as large as ours that can do some cool work, so if you build something that can support



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