

# BusinessCloud

EDITION 20, 2020

DEMYSTIFYING TECH

A portrait of Rose Hulse, a woman with dark, wavy hair, wearing a dark blue dress with colorful polka dots. She is resting her chin on her hand and looking towards the camera with a slight smile.

## ROSE HULSE

### FROM SUNDANCE TO STREAMING ENTREPRENEUR

Born during COVID

100 eCommerce Trailblazers

Rise of LiFi

# Open and inclusive



Until COVID-19's devastating arrival, perhaps the leading topic of discussion across sectors was that of diversity and inclusivity.

No longer was it sufficient to pay lip service to this concept. Companies in increasing numbers published data on their salary gaps; journalists and experts discussed the state of affairs in mainstream media; and 'manels' were called out on Twitter.

The tech sector was beginning to realise that a truly open, inclusive workforce and culture could pay dividends not only for positive PR, but also team motivation and the crucial bottom line.

It takes role models breaking through glass ceilings to achieve lasting change. One such figure is Rose Hulse, who speaks openly about her difficulties in raising money as she believes VCs could not envisage a black female as a game-changing entrepreneur (p4).

In her second column for BusinessCloud, FinTech leader Valerie Moran – the first black female to make the Sunday Times Rich List – explains how building a diverse workforce at PFS set the London firm up for success (p35).

Women make up almost half of gamers globally, but only a fraction of the workforce. Our reporter Jenny Brookfield spoke to some of those making waves in the video games industry about their experiences (p40).

With lockdown 2 biting into businesses again this winter, it is uplifting to see many new tech firms launched despite the economic situation. In a wide-ranging report (p23), Jenny uncovers tales of co-founders who have never met, pitching for investment on a screen, pivots and resilience.

As we reveal our second annual 100 eCommerce Trailblazers ranking (p9), we speak with the CEOs of top two firms Peak (p17) and OnBuy (p20) about artificial intelligence, eCommerce and the effect of COVID on the sector.

Broadcaster Clare Balding is among celebrities backing Fonetti to tackle the UK's child literacy problem (p31). We speak to founder Kim Antoniou about her plans for the AI-enabled reading app.

Further interviews in this edition showcase how Deary (p36) is revolutionising how we relive 'memories' of our conversations on social media and WhatsApp; pureLiFi (p44) is harnessing light to solve world's 'spectrum crunch' problem; and Biscuit Tin (p54) is breaking taboos around death and helping people tie up loose ends.

'On the Money' guest columnist Sean Hunter, CIO at OakNorth, explains the need for portfolio diagnostics in the fight against COVID (p53), our Under Review column sings along with celebrities' favourite music streaming box ROXi (p48) and Gadget Gavin (p57) reveals the tech gadgets to consider for your loved ones this Christmas.

Finally, The Explainer (p49) consults the experts to demystify the cybersecurity threats posed by lockdown in six questions while our Tech Counsel advice feature (p56) considers how to approach making your first hire.

Enjoy the magazine.

Jonathan Symcox  
Editor, BusinessCloud

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Tech gadgets to consider for loved ones this Christmas

# From Sundance to streaming



American entrepreneur Rose Hulse could revolutionise how we access streaming services with ScreenHits TV. But her journey there has been far from straightforward

Words: Jonathan Symcox

**W**ith more than 100 meetings with intrigued VCs under her belt, you'd think Rose Hulse would have had little trouble securing substantial investment for her start-up.

However, the Californian with senior experience at the likes of the Sundance Institute, NBC Universal and music licensing firm Audio Network found that would-be investors turned cold the moment she walked into the room.

Her brainchild ScreenHits, based in London with a tech team in Romania, would go on to power video distribution platforms for American media giant Turner Broadcasting and count IMG, Disney, Sony Pictures Television, BBC Worldwide and NBC Universal among its clients.

Yet as a black woman, her face just didn't fit with how they thought a game-changing entrepreneur should look.

"They weren't comfortable meetings. It was almost as though they were saying: 'This is a brilliant idea – but what makes you think that you're going to be able to do it?' They just did not see that I would be the one to change an industry," she tells BusinessCloud. "It was almost like a joke to them."

It is well-documented that less than 1p in every pound invested goes to

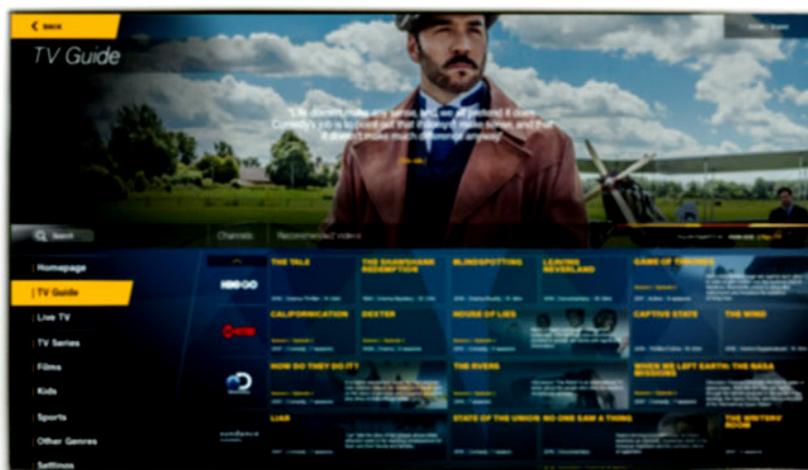


all-female founding teams. More under the radar, perhaps, is the fact the figures are similar for black- and minority-owned businesses. Startlingly, just 13 per cent of black- and minority-owned businesses have secured angel or VC investment.

"When I worked for big companies, even if they didn't respect me, they respected the brand – so they dealt with me. [Even then] I had to win them over in literally

less than 25 seconds to change the mood in the room so they would take me seriously," Hulse recounts.

"When I was launching a new brand that no one ever heard of, when they saw me, I felt that the questions they asked were meant to make me feel as though I didn't deserve to be in that room. What's your discounted cash flow? Tell me exactly how you came up with your valuation?"





"I was not a public company; I was a brand-new start-up seeking seed. Why was I being asked these difficult questions? It was literally meant to be an elevator pitch which should have been followed up later with, 'okay, let's get into some of the details, send me the financials'. I have finance people for those questions.

"I was put on the defence. People say 'you win some and you lose some', and that is true; but in my situation, I didn't even have a chance to win because they never let me enter the race."

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## BLM

Following Black Lives Matter protests sparked by the killing of George Floyd in the United States in May, Black Women in Asset Management – a group of 300 industry professionals in England and Wales – wrote an open letter to investment firms requesting that they move beyond statements of solidarity with the black community.

Fewer than 1% of investment managers in the UK are black, according to industry body the Investment Association. The black community makes up 3% of the total population and more than 13% in London, where the majority of asset management firms are based.

BWAM's view is that the question of racial equality has been forgotten amid calls to increase the number of women in the investment sector. "This agenda has largely excluded black women. Racial issues are often perceived as too abstract, polarising, or political," it said.

Hulse continues: "I had over 100 meetings, which made me believe that VCs knew that I had something on my hands. When they then invested £20m in my competitors, who didn't even have a product in this country, it was the complete red flag. That competitor is pretty much going out of business now.

"Look what I did with no money; what I could have done if I had had that £20m? I have the product, I have the customers, I have the passion, I have the team; we were hungry, and we deserved a chance."

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## COMPETITOR

The competitor to which Hulse refers is TRX, which was launched by brothers David and Matthew Frank in 2017 with support from a VC, Channel 4 and Sky.

Billed as 'the world's TV rights market', the transactional marketplace brings together programme makers and the media companies who might purchase the rights to screen them. As with Hulse's original idea for ScreenHits – which sparked when she saw great independent films at Sundance fail to secure distribution deals – it removes the need for face-to-face deal-making.

The founders, both white males, announced their departure from TRX late last year, stepping down as executive chairman and CEO respectively, although they are still labelled as occupying those roles on the firm's website.

"There were two investors that had three or four meetings with me to just gather information – and then they didn't invest," Hulse recounts. "I told them I had another investor that would match if they came in as a lead investor [but] they told me I needed to get a lead investor.

"I had somebody willing to put in half a million, and they wouldn't do it; but then they invested £2m in my competitors. So that was kind of a slap in the face.

"I had to find other ways around it. I didn't need them, clearly: nobody needs VCs. It's better if you don't need them, because then you can take control of your product. If somebody does get a VC and the company does well, most times that person who founded it gets pushed out for somebody else to come in."



## PIVOTS

ScreenHits underwent something of a pivot in 2015 when Turner Broadcasting approached Hulse asking to license a white label version of its first B2B marketplace.

“The biggest studios were not coming to our marketplace because they didn’t want lose their relationship with their buyer,” says Hulse. “Turner wanted us to aggregate the content across all their channels – TNT, CNN, Cartoon Network, Adult Swim – and put it into our format, so their buyers could see it. It was an interesting transition.”

The more recent move into the consumer space began when certain clients’ use of ScreenHits fell away. “We asked them why this was,” says Hulse. “Disney said: Look, our mandate pretty high up is that we need to start getting our licences back, because we’re going to be creating our own streaming platform – so our only real interest is on original programmes or productions.”

That streaming platform, Disney+, has amassed more than 73m subscribers in its first year since launch.

“We heard this story again, from NBC and Warner Media. We thought ‘oh my God, what’s going to happen to our business if everybody creates their own direct-to-consumer platform and are not licensing third-party content anymore?’ We decided to look at our tech and think about how we could adapt to the market and provide a product that would be beneficial to these [media companies].

“What we noticed was that once you start getting into five or six streaming services,

it becomes difficult for the consumer to discover content and see what’s available across all their platforms without opening up every app. We realised that our existing tech was perfect for it.”

## CONSUMER LAUNCH

The ScreenHits TV app aggregates existing streaming subscriptions and internet video into one interface. Set for full launch in December, it will allow users to browse services such as Netflix, Amazon Prime, Disney+, Britbox, the BBC iPlayer, ITV Hub, Kidoodle and Eurosport in one place.

The firm recently raised £1.6m in a Series A funding round which included existing investors Paul Atkinson of Par Equity, Edward Mackay, Rory Flemming, Jonathan Marshall and the UK government’s Future Fund. The app will be available on desktop, Apple and Android devices, Smart TVs, Amazon Fire Stick, Roku Stick and Google Chromecast.

“It’s not just a video streaming player; it is a very intelligent system which acts like a visual remote control,” says Hulse. “It helps to streamline the viewing experience. Customers can also curate their channels and subscriptions, only paying for channels they actually want to watch versus contributing monthly to the channels they never watch.”

ScreenHits TV will also allow users to bundle services together at a cost saving. “There’s an indie film package, there’s a family package, a kids package. That’s very important.

“We’re also working with IndieFlix and Sundance TV [as] independent film is very important for us. [However] we never will

take more than 50 apps on our platform because it is a very crowded marketplace – and we want to make sure that our partners’ content is being seen by the right people and they’re not being lost in a sea of content.”

The platform has accrued more than 100,000 signups before launch. “Once people find the product, and they see it, they will use it,” is Hulse’s confident view.

“We want to be the TV programming guide of the future. As people start to cut the cord, and they’re starting to get more streaming apps online, we want to be the place people go to find the next thing they want to watch.”

## SCREENHITS TV IN NUMBERS

Founded – 2012

Workforce – 25

Total funding – £4.2m

Consumer launch – December 2020

## STREAMING AHEAD

Online channels featured on consumer app

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# 100 2020

# ECOMMERCE

## TRAILBLAZERS

**U**K tech creators were already blazing a trail in retail before COVID-19 accelerated the transition to online selling and other sector trends. This innovation ranking showcases the pioneering companies who are reinventing how we sell, shop, market and deliver products. It was compiled from a combination of reader votes and an independent judging panel.

Many thanks to the judges, listed below.

Scott Thompson, founder, Retail Technology Innovation Hub

Isobel Chillman, relationship director, Retail Week

Nigel Jones, sector specialist: tech & creative, Department for International Trade

Davina Lines, MD, eCommerce Club and Mixing Digital

Colin Neil, senior VP business development, Adyen

Kristal Ireland, digital director, UK Coaching

Jonathan Symcox, editor, BusinessCloud

### 1. PEAK

Manchester firm Peak's subscription-based artificial intelligence solutions connect the entire customer journey by optimising every touchpoint. From engaging communications to optimising stock and improving loyalty, it delivers incredible results for customers in the retail and consumer packaged goods space.



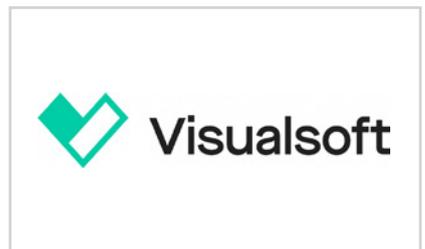
### 2. ONBUY.COM

Poole-based OnBuy is the world's fastest-growing eCommerce marketplace. It does not compete with its sellers, who currently have more than 30 million products listed across thousands of categories spanning beauty, home and garden essentials, tech, toys and baby supplies. **See full profile on following page.**



### 3. VISUALSOFT

Visualsoft is an eCommerce software and digital marketing agency which has more than two decades of codebase under its belt. Headquartered in Stockton-on-Tees, its platform powers more than 1,000 retailers, with £1.20 in every £100 spent online in the UK going through it.



#### 4. SORTED GROUP ▲

Manchester-based makers of parcel delivery software.

#### 5. SHOPIT

Pay-as-you-grow eCommerce platform for retailers based in Manchester. **See full profile on following page.**

#### 6. BIDNAMIC ▼

Leeds firm creating AI to boost Google Shopping performance.

#### 7. LOYALTYLION

Data-driven loyalty marketing platform based in London.

#### 8. GO INSTORE ▼

London firm connecting online customers with in-store experts via video.

#### 9. MERCARTO =

Manchester-based eCommerce platform with enterprise division servicing UK's largest engineering buying group and one of largest fast fashion brands in world. **See full profile on page 12.**

#### 10. FULFILMENTCROWD ▼

Leading automated order fulfilment specialist based in Chorley.

#### 11. SHOPBLOCKS ▲

Stockport-based eCommerce platform for retailers offering custom website design.

#### 12. DREAM AGILITY ▼

AI software for optimising presence on Google Ads, Facebook and Microsoft Ads. Based in Ramsbottom.

#### 13. HERO ▲

London firm connecting online shoppers with sales assistants.

#### 14. OFFIGO

Blackpool company bringing local high street deals to online customers.

#### 15. ZIGZAG GLOBAL

Platform to manage process of product returns. Based in London.

#### 16. TOSHI

London firm providing in-home clienteling for fashion brands.

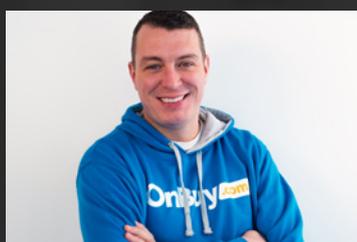
#### 17. HOLOME ▲

London-based start-up recreating humans in augmented reality for retail clients.

#### 18. HUBOO

Bristol company providing multi-channel fulfilment service for eCommerce businesses.

## 2. ONBUY



The world's fastest-growing marketplace, OnBuy.com operates on values of fairness, transparency and ethics to create a level playing field for all online retailers, no matter their size.

Founded by eCommerce entrepreneur Cas Paton in November 2016, OnBuy has had an incredible 2020. The marketplace created 600% year-on-year growth for the third consecutive year (with a record 24,000% growth seen over the past four years), and as it isn't a retailer, this growth has supported small, medium, and large sellers throughout the global health crisis.

2020 has also seen OnBuy triple its team to over 50 people and announce globalisation plans. The marketplace will launch into 42 additional countries before the end of the year, expanding sellers' reach and providing customers in those countries with a location-tailored shopping experience. This is just the beginning – OnBuy will have over 140 dedicated country websites in total by year-end 2023.

OnBuy is growing beyond its headquarters in Poole in Dorset to create a second office in Manchester in spring 2021. As part of a £10m investment, this will create over 100 jobs in the city over the next two years.

OnBuy's growth and success is down to the ethical business model it champions. By never holding its own stock, OnBuy never competes against its sellers, instead providing them with a level playing field and a trusted marketplace to sell through. As the popularity of online retail continues to accelerate worldwide, OnBuy is set to continue growing rapidly.

-  [www.onbuy.com](https://www.onbuy.com)
-  @OnBuy
-  @onbuy
-  @onbuy\_gb
-  @OnBuyGB

## 19. RELATIVE INSIGHT NEW ▲

Based in Lancaster, its language analysis helps retail brands connect with customers.

## 20. REBOUND NEW

Intelligent eCommerce product returns firm based in Telford.

## 21. LEASING.COM ▲

Stockport-based marketplace for new car contract hire and leasing offers.

## 22. BY ROTATION NEW

Fashion rental platform based in London with a focus on sustainability.

## 23. COMMON OBJECTIVE NEW

London-based business network promoting sustainability in fashion industry.

## 24. PROXIMITY INSIGHT ▲

App helping shop floor staff to drive physical and online traffic. Based in London.

## 25. STOK.LY NEW

Hereford firm providing stock control, multichannel eCommerce and ePos solutions for retailers.

## 26. PADDLE ▲

Subscription and commerce platform based in London.

## 27. BRIGHTPEARL ▲

Bristol-based omnichannel retail management system.

## 28. HYPER GROUP NEW

AI-powered customised marketing for retail based in Leeds.

## 29. DIGITALBRIDGE ▲

Manchester-based AI-powered design tool for DIY and home decor retailers.

## 30. EKM ▼

eCommerce platform based in Preston serving more than 80,000 retailers.

## 31. AERO ▼

Middlesbrough-based firm behind API-driven eCommerce platform for retailers.

## 32. CODEC NEW

London company creating AI to help brands understand audience culture.

## 33. CLEARMARK SOLUTIONS NEW

Coding and labelling solutions for packaging. Based in Nottingham.

## 5. SHOPIT



Created within a Manchester eCommerce agency, Shopit is the first PAYG eCommerce platform in the world. Having heard all the problems and barriers that growing brands faced, Adam Pritchard and his team set about building something bigger and better.

Shopit believes in giving all features to every client from day one - from stock management to being able to create unlimited websites - thus helping clients scale and grow globally and maximise their chances of success. Where Shopify Plus charges £2,000/mth for 10 sites, Shopit unleashes growth potential from as little as £20/mth.

A Google Cloud technology partner, clients gain first class cloud hosting and security, and a range of enterprise features that strip away the limitations of the common tiered subscription model.

"It's a highly restrictive model when you only give the high end XYZ features to those who can afford it" says Pritchard, "and business shouldn't be about that. If you have design, procurement or marketing talent, that should be what drives you forward globally, not just what you can afford."

If you are interested in becoming a client or a Shopit Premier Partner, visit its website.

 [www.shopitcommerce.com](http://www.shopitcommerce.com)  
 @shopitcommerce

### 34. CYBERTILL ▲

Knowsley-based makers of cloud-based EPoS system and retail management software.

### 35. WHOCANFIXMYCAR.COM



Price comparison site for car repairs based in Newcastle.

### 36. PAPERCLIP



Cardiff-based local classified ads marketplace.

### 37. PERSONIFY XP



Anonymous personalisation experience platform based in London.

### 38. INTELISTYLE



London-headquartered firm's AI helps fashion retailers create personalised outfit recommendations.

### 39. DELIVEROO ▼

Online food delivery giant headquartered in London.

### 40. DRESSIPI ▲

London-based fashion prediction platform.

### 41. IRP COMMERCE



Belfast-based eCommerce platform for retailers focused on intelligence, returns & profit. **See full profile on page 13.**

### 42. ASOS



Fashion marketplace plus white label platform for retailers. Based in London.

### 43. DIVIDO ▼

London-based retail finance platform for spreading purchase cost.

### 44. REVLIFTER



AI deals personalisation platform based in London.

### 45. YIELDIFY ▼

London firm predicting behaviour to optimise customer experience.

### 46. REGITAL



Manchester-based programmatic marketing specialist.

### 47. WORDNERDS



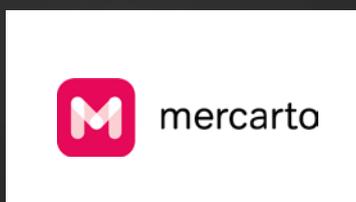
Gateshead firm using advanced linguistics and AI to analyse customer feedback.

### 48. SOOK



Cambridge-based by-the-hour retail rental specialist.

## 9. MERCARTO



- [www.mercarto.com](https://www.mercarto.com)
- @mercarto
- @mercarto
- @mercarto
- @mymercato

Mercarto is set to relaunch a new concept in the ecommerce solution market - an online store builder platform that exhibits its own internal third-party marketplace.

After its initial launch of the platform in late-2017, the idea quickly gained traction in the online entrepreneurial world. Within a couple of months, Mercarto saw 4,000 sign-ups and 150,000 products in the marketplace.

After re-building its tech stack over the past couple of years, the Manchester-based company is set to relaunch early next year with an internal third-party marketplace that differentiates itself from fierce competition in the ecommerce platform industry.

It is this cutting-edge marketplace technology that attracted the attention of global giants who were interested in such an innovative means of streamlining their procurement operations.

Delivering a custom B2BC platform for the UK's largest engineering buying group, with a portfolio of 350 members and selling power of \$1.5 billion, Mercarto Enterprise allowed the company to streamline its procurement operations and increase profitability.

Most recently, Mercarto Enterprise has built a bespoke C2C marketplace for a global fast fashion brand, allowing the client to position themselves at the forefront of sustainability and marketplace technology in their sector.

With plans in place to take on more clients and significant discussions already underway with market leaders across multiple sectors who are looking to accelerate and enhance their digital proposition, the marketplace provider is looking forward to what 2021 has to offer.

**49. THREEDIUM** 

3D imaging and AR solutions for retailers. Based in London.

**50. ZAPPI** 

London-based ad and innovation testing platform.

**51. JRNI** 

Customer engagement software for enterprises headquartered in London.

**52. ADZOOMA** 

Nottingham firm behind digital marketing software.

**53. PARCELLY** 

London company enabling parcel delivery to locations such as convenience stores, bars and gyms.

**54. VYPR** 

Predictive consumer behaviour intelligence start-up based in Manchester.

**55. OCADO** 

Hatfield-headquartered online supermarket using robotics to automate fulfilment.

**56. FEEDR** 

Food delivery alternative to office canteens. Based in London.

**57. SHOPTIMISED** 

South Shields firm behind product feed management software for eCommerce.

**58. EDITED** 

London company providing analytics for fashion retailers.

**59. FRUUGO** 

Ulverston-based online marketplace helping British retailers drive products internationally.

**60. LOCALISTICO** 

London creator of local marketing and analytics platform for bricks-and-mortar retailers.

**61. MACHINE LABS** 

Edinburgh-based firm provides AI-powered email and database marketing for eCommerce.

**62. SPARKBOX** 

Southampton firm helping merchandising teams make data-driven pricing decisions.

**41. IRP COMMERCE**



IRP Commerce has developed an e-commerce platform, the IRP, that focuses predominately on intelligence, returns and long-term profitability. It has transacted £1.5 billion online sales for some of the UK's most successful retailers, manufacturers and distributors. Customers on the IRP platform are in the mid-market category with a turnover >£1 million.

One such customer is Ann's Cottage, one of Europe's most iconic and respected surf and lifestyle brands. Located in Cornwall, the company runs 14 stores and stocks the biggest brands in surfing. Since re-platforming to the IRP, mobile conversion was up by 130% and revenues up by 100% virtually straight away after going live, increasing significantly to >350% during the last eight months.

E-commerce manager for Ann's Cottage, Luke Fox, said: "I needed a partner company I could trust but also had the technology, expertise and vision to help us grow. IRP Commerce are perfect. Their attention to detail ensured we hit our go-live targets and have maintained excellent results ever since. The IRP App is a gamechanger and the IRP Insights Terminal offers another level of analytics I believe no other platform offers."

The IRP platform allows Ann's Cottage to take back control and to focus on marketing its website and growing profits and sales.

Philip Macartney, Chief Commercial Officer for IRP Commerce, said: "Ann's Cottage is an excellent example of a retailer that, through utilising the key functions of the IRP has transformed its business and is on target to becoming a seven-figure turnover company much earlier than expected."

-  [www.irpcommerce.com](http://www.irpcommerce.com)
-  [sales@irpcommerce.com](mailto:sales@irpcommerce.com)
-  [@irp-commerce](https://www.linkedin.com/company/irp-commerce)

### 63. **TEBEX** ▲

Nottingham firm provides commerce solutions for online games including Minecraft.

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### 64. **FREWEBSTORE** ▲

Burnley-based free platform hosting almost three-quarters of a million online stores.

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### 65. **NEXUS VEHICLE RENTAL**

Online vehicle rental booking and management platform based in Leeds.

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### 66. **FARFETCH** ▲

Global tech platform for luxury fashion industry headquartered in London.

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### 67. **VEEQO** ▼

Swansea-based retail automation platform.

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### 68. **CARWOW** ▼

London-headquartered car buying comparison site.

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### 69. **LOVE THE SALES** ▲

AI-powered aggregator for sales items based in London.

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### 70. **UNIDAYS**

Nottingham firm connecting brands with students by offering discounts.

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### 71. **GOOD-LOOP**

Edinburgh company providing ethical advertising tech for retailers.

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### 72. **BLACKCURVE** ▼

SaaS pricing optimisation platform for retailers based in London.

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### 73. **HENDERSON TECHNOLOGY** ▼

Newtownabbey firm behind electronic point-of-sale systems for retailers.

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### 74. **NEIGHBOURLY**

Bristol-based community engagement platform linking retailers to food banks and charities.

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### 75. **TVSQUARED**

Edinburgh firm providing analytics for TV ad campaigns.

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### 76. **TROUVA** ▼

Online marketplace focused on independent bricks-and-mortar boutiques. Based in London.

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### 77. **EVOKE CREATIVE**

Wirral firm providing digital signage and self-service solutions for world's biggest brands.

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### 78. **AMPLIENCE** ▼

London company behind content management software for retail.

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### 79. **ADXBA**

Manchester firm creating turnkey digital signage solutions.

---

### 80. **AVASAM**

London-based automated dropshipping platform.

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### 81. **CAPTIFY** ▼

London firm providing consumer search behaviour analysis.

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### 82. **DROPIT** ▼

London company delivers shopping bags from store to door.

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### 83. **ICE LOLLY** ▼

Leeds-based holiday price comparison site.

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### 84. **INFECTIOUS MEDIA**

London firm providing programmatic advertising and data insights.

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### 85. **LOYALBE**

Data-driven loyalty marketing platform based in Belfast.

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### 86. **METAL**

Cambridge firm behind 3D body modelling and digital garment visualisation for apparel.

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### 87. **WEGIFT** ▼

London-based digital rewards platform.

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### 88. **PARCEL2GO** ▼

Comparison website for deliveries based in Bolton.

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### 89. **SESSIONCAM**

Norwich firm providing website behaviour visualisation solutions.

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### 90. REDU GROUP

Seaham company behind retail apps including Reward Me Now.

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### 91. WHITE LABEL LOYALTY

Leeds firm turns bank cards into loyalty cards.

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### 92. REVIEWS.IO

Leicester-based customer feedback review platform.

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### 93. SANCUS INSIGHTS

Manchester firm connects bricks-and-mortar retailers with customers using online tools.

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### 94. THE HUT GROUP

Manchester-headquartered tech platform taking brands direct to global consumers.

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### 95. DEPOP

London-based peer-to-peer social shopping app.

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### 96. THE VERY GROUP

Liverpool-headquartered integrated retail and financial services provider.

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### 97. SKYSCANNER

Flight comparison site giant based in Edinburgh.

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### 98. PURECLARITY

York firm creating intelligent eCommerce personalisation software.

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### 99. POQ

London-based SaaS platform for mobile app commerce.

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### 100. MERCAUX

SaaS platform for physical retail stores based in London.

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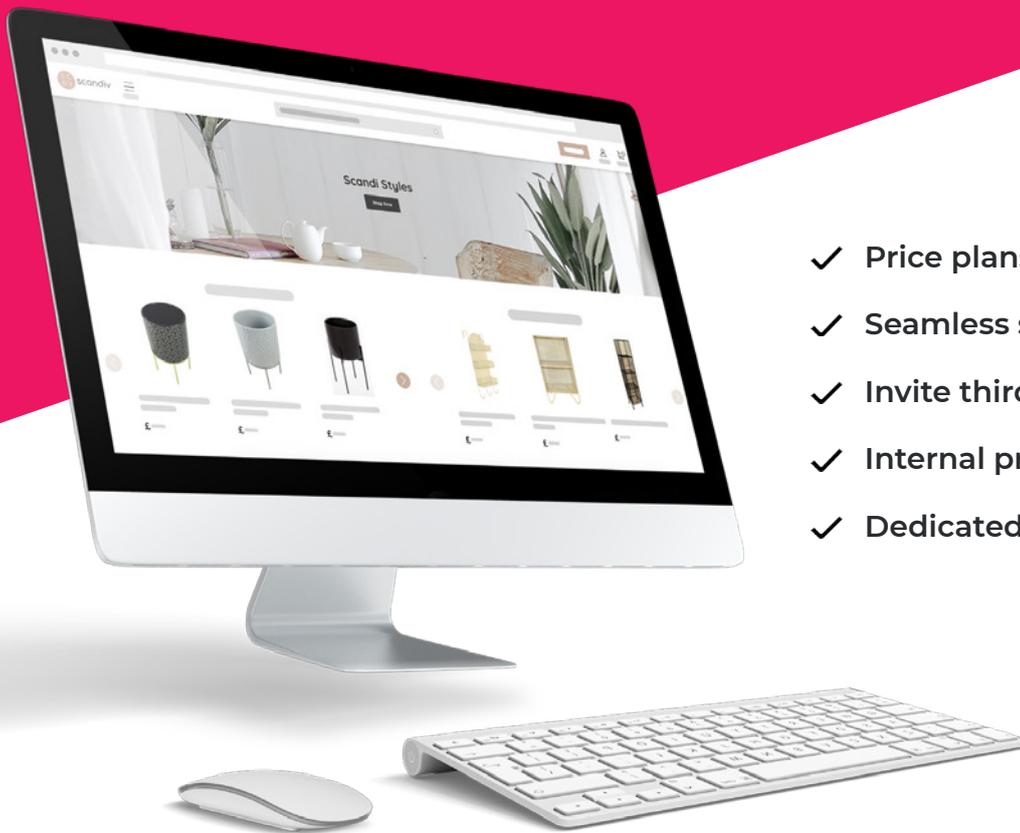


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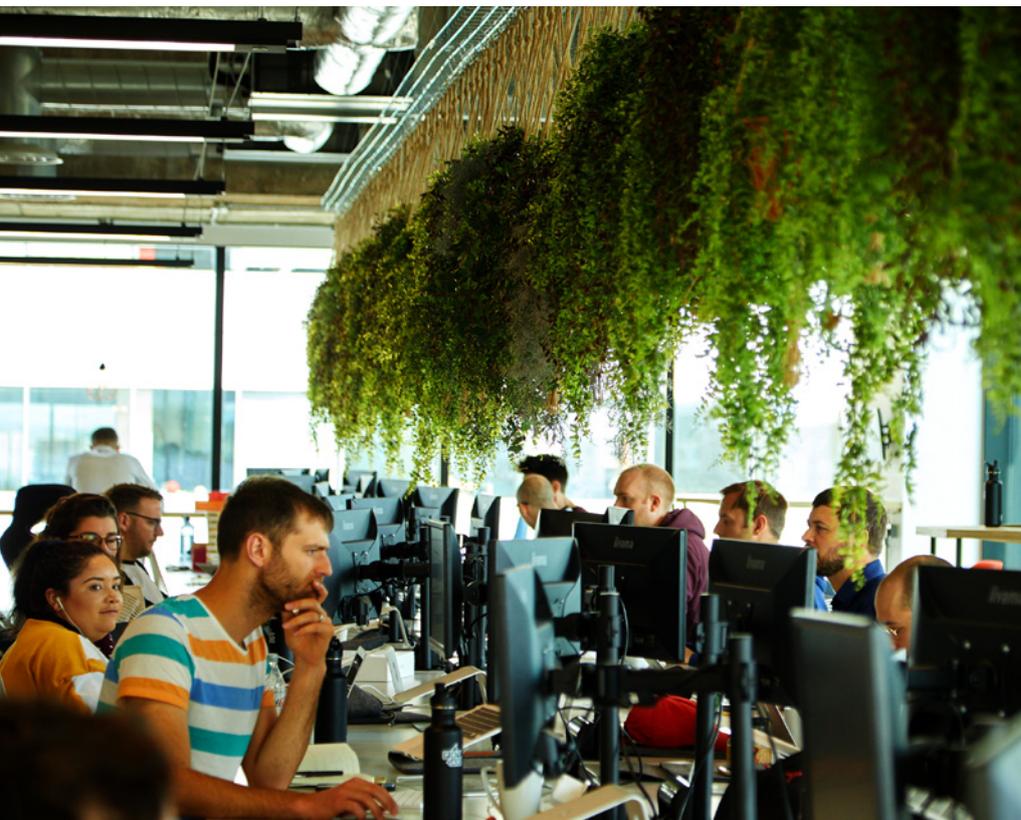


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# PERFORMANCE



HOW IS ARTIFICIAL INTELLIGENCE POWERING THE RETAIL SECTOR? WE ASKED PEAK CO-FOUNDER AND CEO RICHARD POTTER FOR HIS VIEW AFTER THE MANCHESTER FIRM TOPPED OUR 100 ECOMMERCE TRAILBLAZERS RANKING

Interview: Jonathan Symcox



### WHAT LED YOU AND YOUR CO-FOUNDERS TO START UP PEAK?

We set up Peak to change industries, by providing every enterprise business with the opportunity to become AI-driven in the new era. It's our belief that, in the future, every company will need to be an AI company in order to succeed. To do this, we

believe that there's a need to leverage your data and put it to work to its full potential, creating an AI for your individual business.

Most companies aren't going to be able to do this alone, and we felt like there weren't any tech companies out there that supported businesses on this crucially important journey. Peak was born to democratise the power of data analytics and AI.

### HOW DO YOU CLEAN, CRUNCH AND ANALYSE DATA FOR CLIENTS?

Peak has delivered some amazing results for our customers, particularly those working in the retail and consumer packaged goods space. Some of our more notable results include delivering a 28% uplift in marketing revenues, a 4x increase in return on capital employed, and a 147-tonne reduction in CO2 emissions through optimised logistics and resource planning.

We achieve these results by ingesting and unifying data sources from across the business, as well as data from any relevant third-party sources. Our AI generates predictions, recommendations and categorisations to help businesses. A marketing-focused example is our work with Footasylum: AI informs them which customers are in market, what they're likely to buy, how much they want to pay, lifetime value, churn risk, comms preferences – the list goes on!

### WHY IS CREATING LONG-TERM PARTNERSHIPS KEY TO YOUR BUSINESS MODEL?

Our product gives a company everything it needs, from a technology perspective, to make the leap to becoming AI-driven. However, there's more to our approach. While the major cloud service providers, as well as other vendors, offer AI tools to allow data science teams within enterprises to 'self serve', the vast majority of enterprises do not have such data science teams.

That's why we also work in true partnership with our customers, giving them full AI capability by implementing and supporting them on that journey through access to our own data science team and world-class engineers.

### WHY IS RETAIL PARTICULARLY SUITED TO YOUR PLATFORM?

In retail, it's becoming increasingly apparent that AI is now critical to a business' future success, rather than being a 'nice-to-have'. If you look at those who are thriving in today's market, they're all agile businesses who have taken a data-first approach from day one.



As an industry, retail is ripe for AI adoption. Given the vast amounts of data a retailer produces, the potential AI technology brings the industry is huge. Our work with the likes of boohoo, ASOS and Footasylum demonstrates this, with these businesses achieving game-changing outcomes from taking an AI-driven approach.

## HOW HAS PEAK HELPED RETAIL AND ECOMMERCE BUSINESSES NAVIGATE COVID-19?

Commercially, we sped up the release of several products that were designed to save our customers money and help them in these difficult times. These products focused on enabling our customers to be more efficient whilst still growing their sales, and were targeted specifically in the marketing, advertising and PPC optimisation space.

## HOW DID YOUR OWN BUSINESS RESPOND TO LOCKDOWN?

The onset of the pandemic changed Peak in several ways. The biggest change was obviously operationally, as we had to shift from being an office-centric team towards a remote working model. We made the decision to switch to working from home a few weeks before it was enforced by the government, so we've been remote for the vast majority of the year.

This was a change to the core of our operating model, our company rituals, our company culture and how we interact with each other, so that was a huge transition for us. It's been a learning curve for the whole business, and we've introduced new measures to support the team through this process, which has been difficult for some as not everyone is really set up to work effectively from home.

## WHAT WILL BE YOUR WFH POLICY IN 2021 AND BEYOND?

Obviously, being able to work from home does give employees more flexibility – not to mention shorter commutes! – so it's something that will continue to be a part of life at Peak going forward.

I'm not sure if the traditional office model – coming in Monday-Friday, 9-5 – will have

a place in the near future; but we will be reopening the office as fully as possible soon as it's safe to do so. It'll be up to our employees how and when they use the office as everyone works in different ways and has different commitments.

## HAS THE PANDEMIC ALTERED THE COURSE OF PEAK ITSELF IN ANY WAY?

The pandemic has acted as a huge accelerator of underlying change that already existed. In our case, the pandemic has accelerated the need for businesses to make that shift to becoming data-driven and highly-optimised. Businesses are now more aware of the need to be more resilient and agile to deal with shock events such as the pandemic. In short, we feel like our market opportunity has been accelerated forward, and has gotten much bigger in the medium term; which, in turn, has impacted our company strategy and growth trajectory.

## HOW DO YOU SEE THE RETAIL/ECOMMERCE SECTOR EVOLVING AS A RESULT OF COVID?

A number of retailers who we're speaking to are still focused solely on navigating the short-term operational challenges caused by the pandemic. Looking at the bigger picture and planning for the long-term might seem like a luxury, particularly when you factor in the continued uncertainty of Brexit, but it's never been more important to look ahead as a retailer. Those who do this and prepare effectively will be in a better position to reap the rewards when the dust does begin to settle.

In terms of sector evolution, obviously the growth of eCommerce, subscription services and home delivery will accelerate further as customers become more used to convenience. Online competition will be tougher, and there'll be a real need for eCommerce businesses to be as optimised as possible in order to stand out from the crowd and keep their customers happy. Next day delivery, for example, is now considered the norm for many, and is something that is expected of brands.

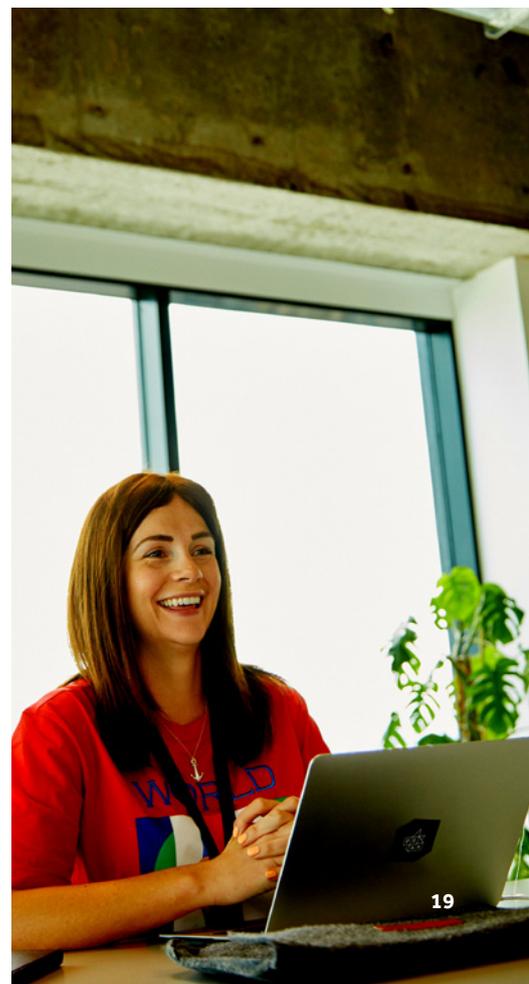
I suspect we'll see more bricks and mortar closures, with not every business able to survive the impact of COVID-19. However, they may live on as online-only

brands – we've already seen this trend begin to emerge in 'normal times' with the likes of Maplin and Toys R Us closing their doors only to be acquired and relaunched virtually later down the line.

The concept of retail stores could shift entirely, with stores seen more as hubs for online fulfilment. This could well become the end game for all physical retail, at some point in the future. Next is a great example of this, with its annual reports reaffirming its commitment to keeping "loss making stores" open to help support delivery-to-store and ship-from-store processes.

## WHAT ARE YOUR HIRING PLANS FOR 2021?

We're on a rapid growth trajectory, and continually expanding our team is critical to the success of our mission. There's currently 150 of us working at Peak, and the plan is to reach 250 by the end of 2021. We want to continually push the bar on talent and not feel like we're compromising on the quality or capability of people in the team that we've worked so hard to build! So we want every new person who joins Peak to be additive to the capability of the business and its culture. It's an exciting time!



# Going Global

ONBUY'S MARKETPLACE HAS EXPERIENCED INCREDIBLE GROWTH IN JUST FOUR YEARS. AFTER THE DORSET COMPANY FINISHED SECOND IN OUR 100 ECOMMERCE TRAILBLAZERS RANKING, WE ASKED FOUNDER AND CEO CAS PATON ABOUT ITS FUTURE PLANS - AND THE EFFECT OF COVID-19

Interview: Jonathan Symcox



## WHAT LED YOU TO START UP A MARKETPLACE?

I recognised from my previous career as an eCommerce consultant that there was a gap in the industry for a fairer, more transparent, and ethical marketplace. Our strongest differentiator is that we never compete against our sellers. OnBuy isn't a retailer, so we don't hold our own stock and we never will – all of our efforts are focused on helping sellers to grow and expand their businesses.

Our belief in consistently championing the independent sellers on our platform results in a huge amount of choice for our customers, who currently have over 30 million products to choose from across thousands of categories spanning beauty, home and garden essentials, tech, toys and baby supplies.

## YOU HAVE GROWN RAPIDLY OVER THE LAST TWO YEARS. WHAT WAS KEY TO THAT?

The 24,000% growth OnBuy has demonstrated across its first four years of business has shown that the desire for the ethical eCommerce ecosystem that we've created is tremendously strong. Customers and sellers respond well to transparency and a promise of fairness, and the more we deliver on these core pillars, the more we can grow.

## HOW BIG IS THE POOLE-BASED BUSINESS TODAY?

In terms of staff, OnBuy has tripled its workforce to over 50 full-time team members during 2020, and when our second office opens in Manchester in spring 2021 as part of a £10 million investment into our expansion, we'll be welcoming over 100 more people on board.

In the first week of November 2020 alone, we saw sales growth climb by 837%, bolstered both by our own enhancements to our platform and ever-increasing brand awareness as much as the spending habits of customers in a highly unique year. We have over 8 million buyers and counting using our marketplace, and we've seen record numbers of sellers joining us this year, increasing our seller base by 10% each month.

## WHAT DO YOUR GLOBAL EXPANSION PLANS LOOK LIKE?

We'll bring 42 new country-specific OnBuy websites online before the end of this year, which is part of our broader plan to surpass over 140 additional sites in total by year-end 2023. This will establish OnBuy as a first-of-its-kind global player – we'll be the world's first truly global marketplace.

## HOW HAS ONBUY HELPED RETAIL BUSINESSES NAVIGATE COVID-19?

Our commitment to supporting our sellers and customers alike was – and still is – unwavering. We worked to ensure our website could handle the increased load as consumers turned to shopping online, we didn't restrict what could or couldn't be sold via our marketplace, and we made sure that customers could find both essential and luxury items at fair prices throughout.

We also invested £5 million into our marketing strategy for November and December to increase consumer awareness of OnBuy and drive more sales for our sellers. This included a national TV advertising campaign across ITV and YouTube as well as a fleet of billboards and out of home media. We'd originally planned to launch a TV campaign in 2021, but we brought our plans forward to give our sellers an even better end to the year.

## YOU HAVE BROUGHT ON BOARD STRATEGIC PARTNERS. HOW DO THESE RELATIONSHIPS WORK?

We work with leading eCommerce integrations and logistics companies to offer sellers the opportunity to grow and scale up alongside our marketplace, while ensuring strong customer satisfaction. We work with a range of top integrations for inventory management and delivery that sellers moving onto OnBuy from other marketplaces may already be using. This fluency of transition is key, whether a seller is joining us as their sole way of selling moving forward, or as a multichannel selling strategy that they need to run in perfect sync with their other channels.

## HOW DID YOUR OWN BUSINESS RESPOND TO LOCKDOWN?

The lockdown came as a surprise to everyone in the UK, and we immediately recognised that the health and safety of our colleagues and their families has to take precedence. During the initial springtime lockdown, we transitioned to a full remote-working model, running the business in a decentralised way. This let us remain agile enough to continue operating, supporting our sellers and buyers alike, and we were also able to remotely hire and train new staff even with lockdown in full effect.

The arrival of the November 2020 lockdown was sudden but because we've experienced a lockdown before, we're confident moving forward, although our office space also sustains a full COVID-secure design to enable essential staff to work in the office safely.

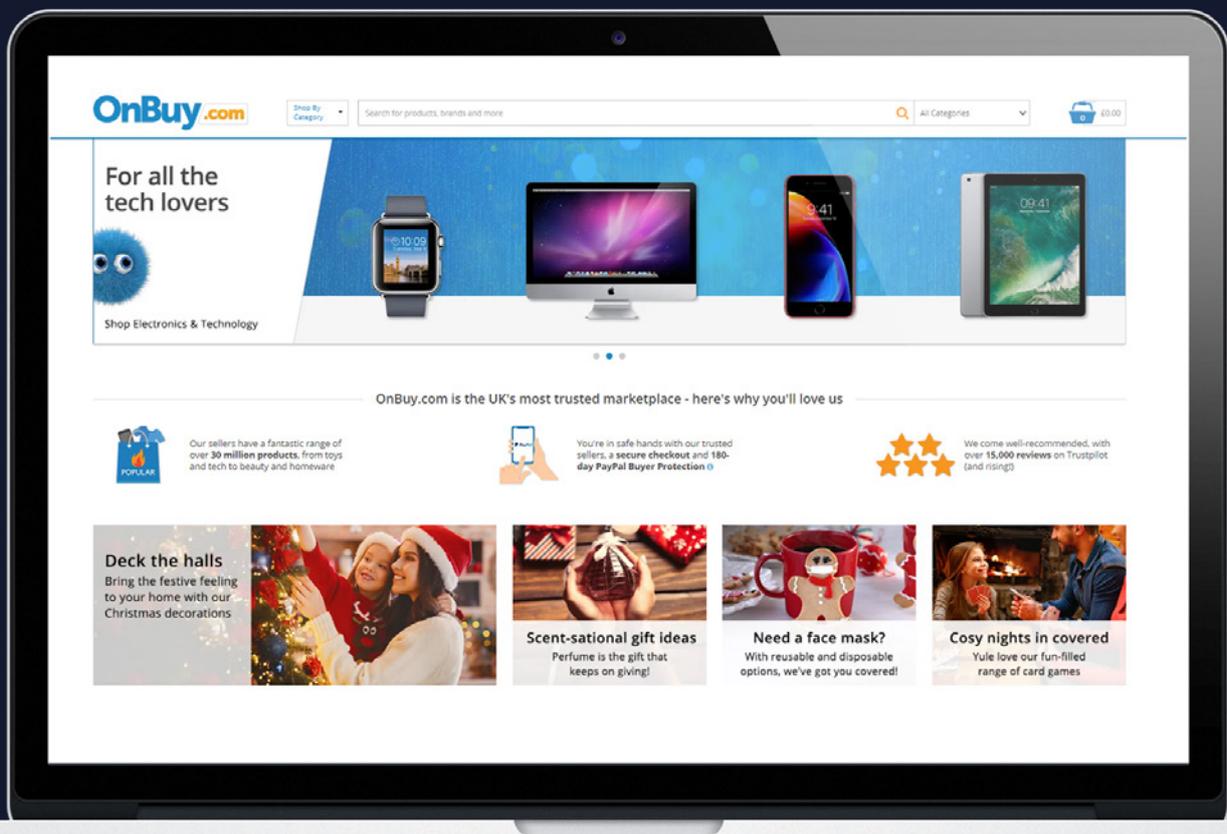
## WHAT ARE YOUR HIRING PLANS FOR 2021?

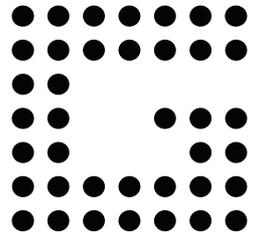
The events of 2020 have created countless economic concerns, but I'm excited and proud to be both growing the business and consistently hiring against the backdrop of such uncertainty. Naturally, the main focus will be on getting our Manchester office up and running, and I'm hugely excited to unlock the talent of my home city. Meanwhile, our Dorset headquarters will continue to grow apace with the expansion of the business.

## HOW DO YOU SEE THE RETAIL/ ECOMMERCE SECTOR EVOLVING AS A RESULT OF COVID?

Consumer expectations have been reset as a result of the global health crisis. It's become a double-edged sword, as expectations were more lenient when the pandemic began and they're now more stringent because eCommerce is a lifeline to so many people now. Standards for service are always going to be high, yet the pressure on shipping and logistics especially is going to be more consistent than ever before.

It's largely expected that the rise of eCommerce, and the heightened adoption rate of users, will remain even after the global health crisis is solved. The processes, infrastructure, and innovations we are all creating as an industry are providing a huge opportunity to lay the foundations for this decade of eCommerce. Over time, we anticipate that the line between physical and online retail will blur to the point that true omnichannel selling becomes the new norm, across businesses and retailers of every size.





# MAKING SPACE FOR YOUR FUTURE

TheGallery.com is a unique space for startups and creatives in the media and tech world.

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# COVID BORN, COVID BRED

HOW DO YOU LAUNCH A BUSINESS DURING A PANDEMIC? FROM CO-FOUNDERS WHO HAVE NEVER MET TO PITCHING FOR INVESTMENT ON A SCREEN AND COMPLETE PIVOTS, READ ON FOR TALES OF RESILIENCE

Words: Jenny Brookfield

## WEB AUTOMATION

**“IF I DIDN’T DO THIS NOW, I’D ALWAYS BE LOOKING FOR EXCUSES”**

Victor Bolu’s wife was expecting their third child when he gave up his £100,000 a year job in March to set up his own business.

He and co-founder Ozcan Yukaribas came up with the idea and created a pitch deck during 2019 before moving on to testing and reaching out to potential customers in January 2020. Feedback was positive.

Then came lockdown. “We were paying two lots of nursery fees and expecting another baby, and my wife said it probably wasn’t the best time to be starting a business – other people said maybe I should put it on hold and

wait for the pandemic to go away,” he says. “I’m a bit of a risk taker anyway but I had a strong conviction that if I didn’t do this now, I’d always be looking for excuses. It’s never going to be the perfect time so why not now?”



London-based Web Automation allows customers to extract data from websites without writing code. For example, eCommerce businesses – which make up 70 per cent of the customer base – may need to compare competitors’ pricing with their own to ensure they price products and promotions competitively. Usually, this would involve trawling websites to copy and paste the information, but Web Automation’s self-service tool cuts the web scraping process from hours to minutes.

Early customers were from the travel sector, an industry that disappeared overnight when the pandemic hit, yet there have been advantages to 2020's unique set of circumstances. CEO Bolu believes many of the clients they targeted would not have done business with them during normal times.

"People want to buy from people they've met and it originally worried me that we couldn't have physical meetings, but we've ended up with clients in the US, Germany and all over the world," he says. "People are now more receptive to having a phone call or Zoom, where they would have wanted you to go to see them before, which means things can move much faster."

There have also been positives brought about by remote working. The original plan was to have everyone working from the same room. "By the end of March we were conscious that wasn't going to happen, but it ended up working out better because it opened up the pool of people we could hire globally," says Bolu, adding that they have recruited from Turkey and Columbia – employees they have yet to meet in person.

Funding goals were put on hold by the pandemic, yet these will restart again in 2021, while the pair intend to experiment with new tech such as AI and machine learning to improve the product. Though the lack of funding has meant sales have grown organically, Bolu believes the experience has made the business better.

"We've become resourceful because we've had to find ways to do things without spending a lot of money and we've also learned to accept rejection when we've had customers that have had to stop trading," he says. "I made a promise to myself that I was never going to blame COVID because even if we lost a customer there would always be other people who would need our services."

## GLAIZE

### "I FELT LIKE I WAS MISSING OUT WHILE I BATTLED COVID"

Former investment banker Gina Farran began her place on a six-month business accelerator run by global venture capital firm Antler in March. Two weeks in, she began to feel unwell and, by the time the UK went into complete lockdown, she had tested positive for COVID-19.

It wasn't the best start for her new business, but not one that has held her back. "It was an emotional rollercoaster and when you spend three weeks battling something like COVID, at the start of the programme when everyone else is getting on with building a business, you feel like you're missing out on a lot," she says.

Joining the scheme, the second UK cohort run by Singapore-based Antler, she had not settled on a business idea, but teamed up with co-founder Chris Mosedale, who then swiftly relocated to Glasgow for lockdown.

Glaize came from Lebanon-born Gina's own frustrations with nail care. "In Lebanon, women are always really glammed up and beauty services are very accessible and a lot cheaper than anywhere in Europe," she says. "When I joined the hardcore environment of investment banking, I didn't have time to do these things that made me feel better about myself anymore."

Glaize delivers toxin-free, made-to-measure gel nails to your door, which can be stuck on for 10-14 days. Customers submit four photos of their hands with a smartphone and Glaize uses computer vision technology to produce a 3D model, which is then used to make customised gel nails. With Mosedale's background in biotech, the business also

aims to focus on the chemical composition of gels, which can be harmful to the nails.

The duo pitched to Antler and were one of seven businesses selected for investment, a challenge in itself as presentations were done over video call. "We stood up when we were pitching, as we would have done in the same room, and it was difficult but the end



result was positive," says London-based Farran, adding that the hard work came afterwards – executing the dream they had sold to investors.

"We started experiencing delays with suppliers, with some orders being held somewhere for three weeks because everywhere was operating with less capacity. The logistics sector was badly hit and that affected us with product development."

There was also the fact that the two co-founders were separated by geography, but the clear segregation of roles addressed this, she adds.

The product, introduced at a time when salons have spent much of the year closed, has launched to a small group of people, with a full launch in Q1 2021 and, shortly after, the business will introduce a fully plant-based product, Farran says, with a roll-out to other countries. They are also working towards closing a £250,000 funding round by the end of 2020 to enable them to expand the workforce.

"Coping with the pandemic has made us stronger and more resilient, although anyone starting a business already has to be tough," she adds.





## LIVE TECH GAMES

### “WE LEFT SECURE ROLES WITH THE WORLD’S MOST VALUABLE COMPANY”

When they closed a £400,000 funding round in April, Sam Worsley and Nathan Moore hit a problem – finding a bank to open them a business account for the cash to be paid into.

“The banks weren’t opening any new accounts during lockdown and the high street banks want you to go in person anyway, and they weren’t open, so it was a strange time,” says Worsley. They tried 13 banks and hit lucky with their 14th, Monzo, enabling them to take the investment for Live Tech Games, their London-based mobile entertainment business, which launched in June.

The pair met three years ago while working for Microsoft on its graduate scheme and had always dreamed of running their own business, taking the “difficult” decision to leave the tech giant once they had their idea.

Their business centres on developing simple mobile games for the whole family – the first being Roshambo Live, a free digital rock, paper, scissors tournament where players go head-to-head nationwide in live knockout rounds, with a prize of £1,000 for the ultimate champion three times a week.

Their initial idea was to partner with the likes of bars, restaurants, concert venues and football clubs, which would offer the free five-minute games to customers and stump up their own prize, such as a chance to meet the artist, for example. They started



developing the tech in September 2019 and had started to make themselves known in the venues when lockdown hit, forcing a change of plans.

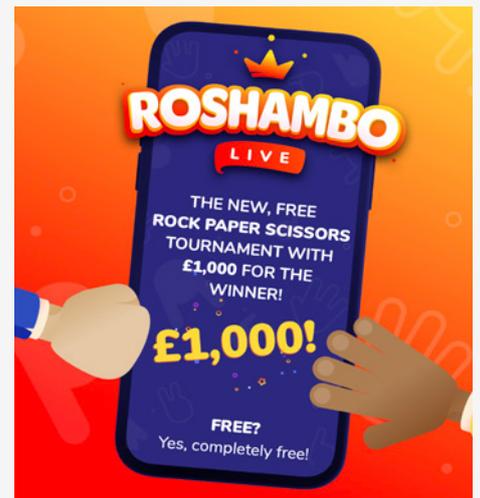
“We had to look at ourselves and ask how we could become relevant in the present situation, and it was a time when people were doing quizzes together remotely,” says Worsley.

Most of their business had been planned around in-person interaction, from the games being played in live venues to their marketing plan, which included guerrilla techniques to get themselves noticed, and

learning from focus groups, which couldn’t take place. Instead, they decided to launch a basic version and then learn from the data. Their user demographic has also been different due to the pandemic.

“We’d originally thought our key market was students because they have the time and the tech, and the chance to win some free money is a good sell to them, but because everyone has been at home we’ve found that maybe a son or daughter gets the app and then the parents do, and then lots of families play together,” says Moore. “We have users in their eighties, which we didn’t expect.”

Since launch, Roshambo has 15,000 active users – 5,000 more than predicted pre-coronavirus. Students have still been a target. The duo each have brothers at university and are holding university-wide tournaments that aim to get people talking, in turn partnering with businesses local to that university for sponsorship.



“One of the great things about this pivot we’ve had to make is that we can still do both when the venues reopen, so we’ll have both revenue streams,” says Moore. “There have been rough days, and it’s been difficult particularly to try to build a culture in the business, but we think this has made us stronger on a personal level.

“We left secure roles with the world’s most valuable company and there was a pride in that, so we never thought about putting the business on ice this year – it was always about dealing with what was ahead of us, and being backed into some of these corners has made us more creative.”





## SENTAI

### “PANDEMIC OPENED US UP TO A LARGER TALENT POOL”

Sentai is another start-up that could be described as fitting for the year of its launch.

The business aims to use tech to combat loneliness in elderly people. Swindon-based Phil Marshman came up with the idea as he wanted to find better help care for his dad without being a nuisance.

The pandemic meant a larger pool of talent available to join the now 16-strong team, he says, who are based in Cheltenham, Worcester, Surrey and Chennai. There were challenges, too, in things like user testing when you can't meet people face-to-face and observe their reactions.

The resulting device uses AI, machine learning, sensors and augmented voice technology to be where carers can't be – monitoring movements, starting conversations and keeping carers constantly connected.

It aims to interact with an elderly person like a human would, enabling it to start conversations about the user's favourite football team, for example, or give them a gentle nudge to remind them to take medication. It learns routines and can alert relatives to unexpected changes.

The business launched a Kickstarter campaign in November and Marshman, who says remote working has seen productivity levels go “through the roof”, is targeting a workforce numbering 1,000 in five years.

“We're developing the technology to include different personalities so that you'd get, for example, 'Kate', an entertainments person, offering you a quiz but suggesting you ring a particular friend to join in with you,” he says. “We're just scratching the surface with what we could do, the road map is huge.”



## KARSHARE

### “WFH ACCELERATED CAR-SHARING TREND”

Bristol-based Karshare enables people to make money by renting out their cars, using keyless technology that enables owners and renters to be contact-free.

Andy Hibbert was running Car and Away, which allows travellers from Gatwick and Bristol airports to rent out their vehicles while on holiday, and, when travel stopped, decided to do something to assist key workers in the Bristol area.

He established a fleet of 700 cars, on loan from members of the local community, which were used by health workers, care workers, charity workers, food bank and NHS volunteers, absolutely free of charge, taking care of the cleaning, insurance and breakdown cover costs to enable key frontline workers and charities to still operate during the lockdown.

From this, Karshare was born, after Hibbert noticed the “real ground swell of people who have cars that are willing to share them and people who don’t have cars but would like one occasionally”.

Cars in the scheme are fitted with a piece of tech that transforms them into a keyless vehicle and users find a suitable car for their journey on the Karshare platform.



“Cars in general are sat idle for 96 per cent of the time and more people are being told to work from home,” says Hibbert, adding that the system will be rolled out to four more cities in 2021. “There are 32m cars owned privately in the UK but we could build a more sustainable future by sharing.”



## TICKD

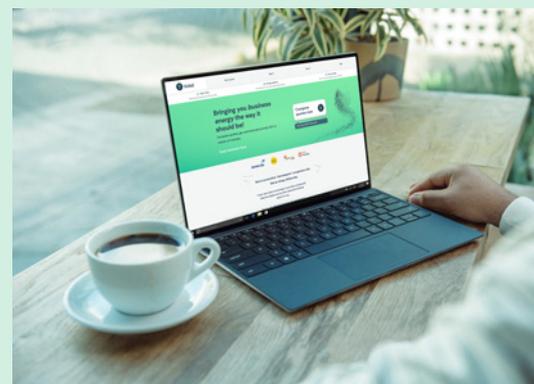
### “BEING TECH-BASED ALLOWED US TO CRACK ON”

Richard Price has never met three of his five-strong team in person, having recruited for business energy start-up Tickd via video call.

“It’s a strange situation when the whole recruitment process has been done by Microsoft Teams because it’s a big decision offering somebody a job and then there have been all the things humans miss about building a bond with their colleagues,” he says.

“You’re buying into a face on a monitor and having to build trust and get them to understand your mission, which is a unique situation.”

What it has done is opened opportunities by employing from a wider pool of talent geographically. Nottingham-based Tickd aims to help small businesses get a better deal on their energy bills and came from an



idea formed in December 2019 by Price, a former utilities sales director, his co-founder. They believed small businesses were underserved in the energy market, not spending enough to warrant time from an energy broker to get them a better deal.

In February they spoke to focus groups and by April, the business was taking shape and had raised investment. “It was an interesting time when COVID hit and I was concerned about whether our investors would get nervous, but thankfully they didn’t and it was a case of ‘we’re tech-based so let’s crack on’,” says Price, managing director.

The business launched in September, which was always the plan, but the team had to remain ‘reactive’, Price says, to help them deal with the challenges of the situation.

As well as in recruitment, there has also been challenges in cultivating relationships with suppliers when you are unable to build the same rapport as you would in person. Where the business would have been promoted at exhibitions, Price says affiliate marketing opportunities – teaming up with business organisations that deal with small businesses – and digital marketing has been effective.

“It’s interesting because it’s a different way of looking at things in terms of building credibility and trust and achieving what we usually do remotely,” he says. “

## VOLUNTEERO

### “I’VE NEVER MET MY CO-FOUNDERS”

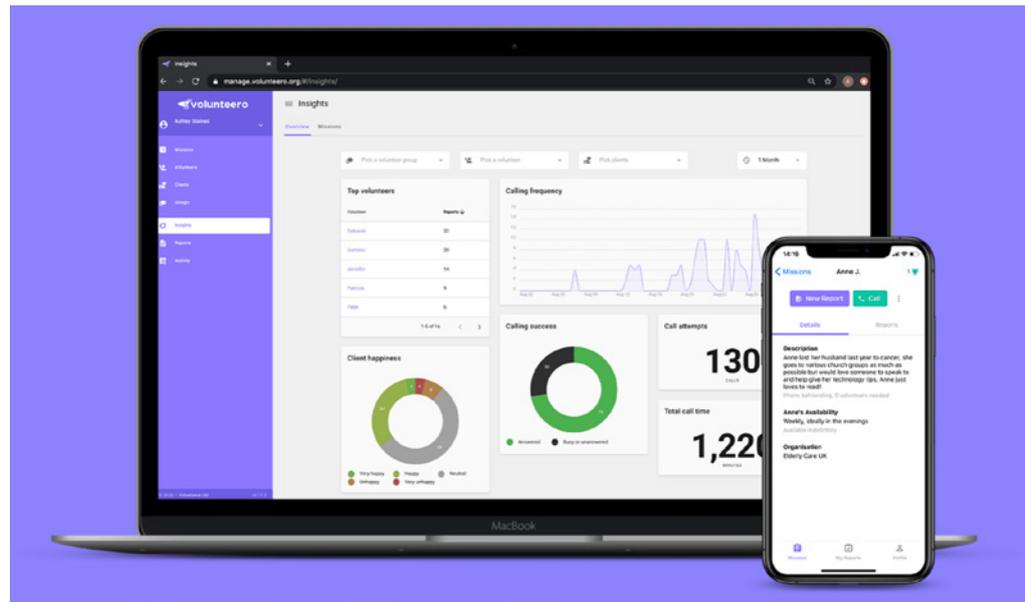
Former banker Ashley Staines has never met the two other co-founders of the business they set up in May.

Volunteero is a digital volunteer management platform for charities, which enables them to create standalone tasks

“We’ve never met and have just generated a friendship over Skype, so we do feel like we know each other and we share a lot of the same values,” says Staines, adding that they gained an Innovate UK grant for cutting edge start-ups in May.

Challenges have included launching a charity platform at a time when charity donations are down by 30 per cent, but Staines believes the business can weather this.

He also had a challenge in opening a bank



that pre-vetted volunteers can then sign up to complete. The business aims to save charity staff time in managing their volunteer workforces and has launched with Age UK in Gateshead, where Staines already helps out as a befriender, resulting in a 280 per cent increase in productivity.

Founders Kedar Kasarekar and Luca Weibel are Switzerland-based, introduced to Staines previously through his network.

account to deposit the Innovate funding when banks were closed. “We have a real vision that we can make a meaningful impact on volunteering in the UK,” he adds.



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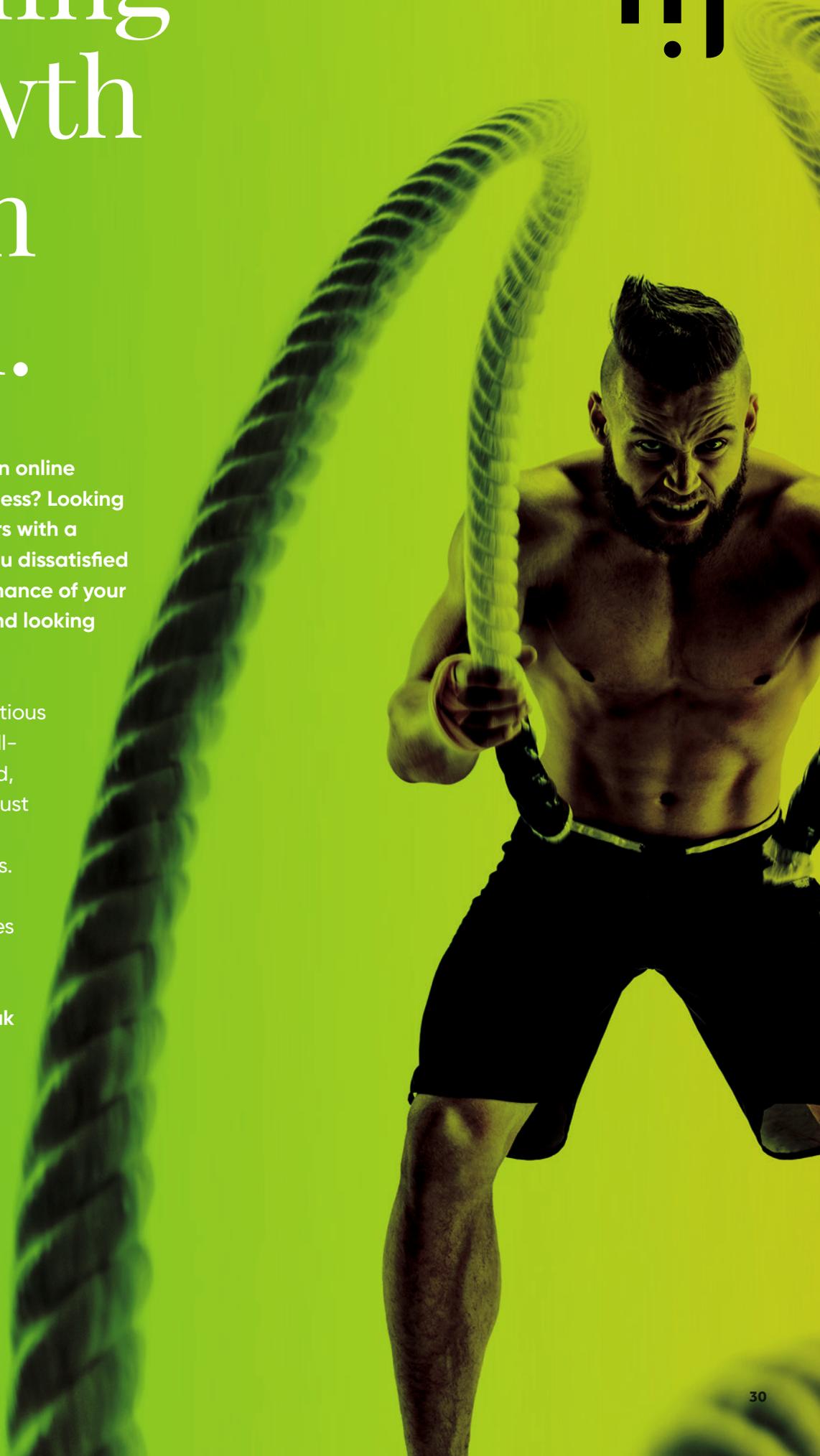
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# AI APP IS WELL-READ

CELEBRITIES ARE BACKING FONETTI TO TACKLE THE UK'S CHILD LITERACY PROBLEM - AND BREED A GENERATION OF ADVENTUROUS, BRAVE READERS

Words: Jonathan Symcox

## Fonetti



**R**eading is crucial to a child's development – yet one in nine kids in this country don't own a book.

Practise at home is fundamental to improving and honing this most important of skills. However, helping a child navigate through a book in a way which benefits them may not be straightforward for many grown-ups.

"The reality is, not all parents have got the time – especially at the moment – to sit and read with their children," Kim Antoniou, founder of Auris Tech – the company behind AI-powered reading app Fonetti – tells BusinessCloud.

"You've got lots of parents, and single parents, that are struggling. They are juggling working from home, paying the bills, home-schooling their kids.

"Even more importantly, many do not have the skills to do this. I know a young woman, with two young boys, who is highly dyslexic. They probably read better than she does. My daughter Victoria [who is also dyslexic] is in her late 30s and she still struggles with reading.

"Equally, parents that don't speak English as a first language also don't have the ability to sit and read with their children. It's just not fair to put all of the onus on the parents without giving them tools to help them."

Reading is crucial to learning: the impact of illiteracy or below-par literacy will be felt keenly throughout a person's life. Yet, Antoniou says, there's another critical element which many people underestimate: reading aloud.

"It helps with confidence," she says. "All through your life, being able to read aloud competently and comfortably is such an important life skill."



## VOICE RECOGNITION

In an age where children can navigate a tablet almost as quickly as they are able to walk, harnessing technology to support the ability to read seems a no-brainer. Inspired by her then two-year-old grandson's use of YouTube, Antoniou launched Auris in 2016 to bring fledgling voice recognition tech into the primary school learning environment.

However, she came to realise that off-the-shelf models were not sufficient for such a specific skill. "One of the things that's fundamentally important to understand about voice technology is that there aren't any real meaningful tools out there for children," she says. "And when it comes to reading, that is a very, very different speech pattern to conversational speech.

"The Siris, Cortanas and Alexas haven't been designed for kids – and they haven't been designed in the context of reading."

Auris teamed up with Dr Peter Bell, an expert in speech technology at the University of Edinburgh and member of the Centre for Speech Technology Research, to develop a proprietary algorithm focused specifically on children reading out loud.

"After modelling our engine, we had to get the contextual data to train it – so we spent an entire year going all around the whole of the United Kingdom, recording children reading," explain Antoniou. "We've got the largest repository of children's reading voices in every UK accent on record."

It became apparent that reading in silence would not provide optimal data. "That's not the real world, so we conducted our data collection in school libraries and public places. We needed that background noise, the different levels of reading and errors to feed into the engine.

"The net result is that our engine has now got benchmarked accuracy of over 92%."

## INTRODUCING FONETTI

The resulting app, Fonetti, features an array of books which children can access on iPads, with Android tablets to follow before the end of 2020. As they read aloud, the words

change colour – to green if they get it right, grey if not – and they can double-tap on any word to hear it spoken correctly.

Two of my own children spent a good half-hour reading titles, from stories about a cat which refused to go outside to a non-fiction book about wild animals. The app picked up when Jack, as he is wont to do, missed a word; and also recognised when Charlie backtracked to repeat a sentence which he had not turned fully green the first time around.

It also knew to disregard the inevitable background noise, such as yelps from the baby monitor and commentary from the 'non-reading' brother.

"The real-time acknowledgement that Jack is getting it right tends to help children pay attention," Antoniou says of my eight-year-old's tendency to daydream and read superficially. "In the New Year we're introducing comprehension, so at the end of certain books, children can answer questions about the content: what was the dog's name? What was the colour of Jack's hat?"

"The app allows them to make mistakes, to stop and start again, and to pick up and carry on with their train of reading.

"At the end of every book, they will be presented with stars depending on how accurate they were – so they're always striving for three stars – but also a fanfare, because it's all about encouraging children to read more."

## SUPPORTIVE

The ability for children to manage this process themselves is crucial. "We get quite a lot of recognition in the dyslexia and SEN (Special Educational Needs) environments, because if you've got a child with dyslexia, the worst thing you can do is to ask them to read aloud in front of someone," explains Antoniou.

"Giving them a platform to be able to practise in private, independently, and knowing that they're receiving encouragement – with nothing negative – is so powerful for a dyslexic.

"Plus, if a highly dyslexic parent [for example] is sitting with their child as they use Fonetti,



they can still be part of the process, but the parent does not have the pressure of being the one that's doing the assessment because the app is doing it for them."

Available on the platform is the Sadsville series of books, which were created by TV personality Martin Roberts to support the work of the NSPCC in making children aware how they can seek help when needed.

The app was one of eight selected for the government's Hungry Little Minds educational campaign around the turn of the year, but the initiative has fallen by the wayside as a result of the coronavirus pandemic. Given the potential of these apps to support home learning, Antoniou says the government has "dropped the ball" in allowing it to fade into the background.

## CELEBRITY ENDORSEMENT

TV presenter Clare Balding is a brand ambassador and investor in Fonetti. She is leading a '12 Days of Christmas' campaign which will see a dozen celebrities read a story from the Fonetti library from Christmas Day for 12 days.

"It's such a simple concept and a brilliant use of technology to support children, make them feel more confident and allow parents to monitor their progress," says Balding. "It recognises the individuality of children's intonation and regional accents. It is helpful and supportive of hesitant delivery or speech impediments and will be an endlessly patient and non-judgmental friend to nervous readers, encouraging them to be more confident and braver."



"I have always wanted to be involved with an idea that could change the world and I believe Fonetti is the one."

The ultimate aim is to get half a million children using the platform, which operates a subscription model, in 2021. "We're just launching in schools now. We'll be working in 20 schools by the end of the year for our beta programme, and then we're launching properly into schools in the New Year," says Antoniou, who made the platform available for free during the two COVID-19 lockdowns. "Our plan is to have 2,500 schools by this time next year."

Personal logins can be linked to the school's account, giving the child access to the library of books. This allows schools to track when and what their pupils are reading, their accuracy and when to move them on to a higher level of books.

## DATA

The high quality of data has opened up an additional unexpected revenue opportunity. "We've got conversations on the go with several major publishers," reveals Antoniou. "We can tell them how many books have sold; whether those books have actually been read; and the places where people stop reading and become disengaged."

Among the first of these 'premium' titles which can be purchased inside the app are the books of Enid Blyton.

There are also plans to extend the technology to assist the recovery of stroke patients and to help people in global markets to learn English. However, the original vision holds true for Antoniou, who plans to raise a Series A round of investment next year.

"One of the most powerful things [when things don't go as smoothly as you expected] is when I see children using the platform - and I remember why we're doing this," she says. "When we've asked children how using Fonetti makes them feel, several told us 'it makes me feel brave'. Imagine that."

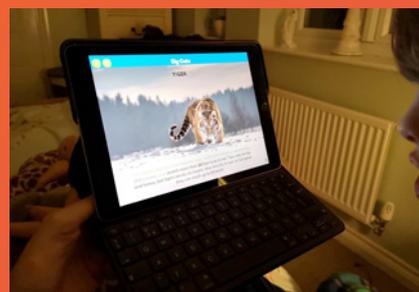
"My whole team has been incredible throughout the pandemic. They've all put blood sweat and tears into what we're doing because they feel that there's a purpose."

## WHAT THE CHILDREN THOUGHT

"It was really fun and I loved it. Especially the story about the boy who wanted a pet shark! I know you liked the one about tigers, Daddy. Good books."

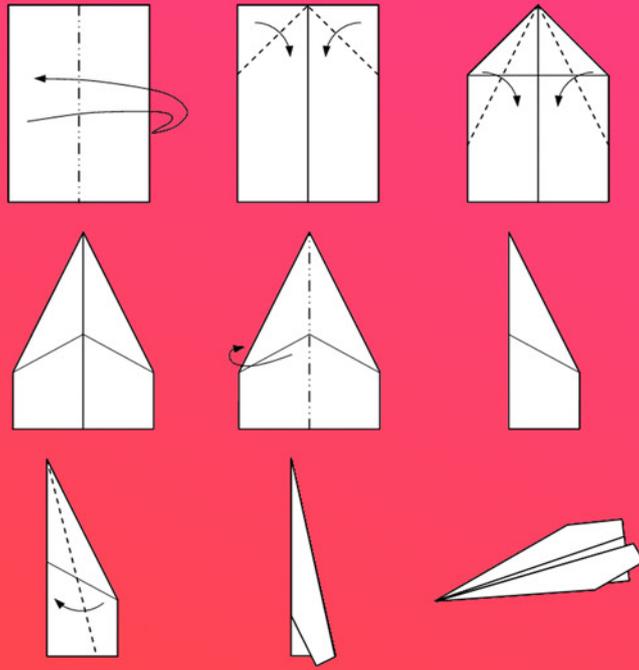
"The little creature [which pops up at the end of a story] was funny. I was happy to feed him words because he must be hungry!"

"It made me feel happy. I think I'm a really good reader now. I was very proud of myself."



## FONETTI IN NUMBERS

- Founded – 2016
- Funding – £1.5m+
- Workforce – 16
- Beta users – 2,500
- 2021 target – 500,000



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# Change your inclusion mindset



**Valerie Moran, head of operations at FinTech eComm and the only black woman to appear on the Sunday Times Rich List, on the importance of creating opportunity for all**

**I**f you look at the tech industry as a whole, there are not enough minority people in high-profile roles.

When I was growing my previous business PFS with my husband Noel, I couldn't find many other women of colour in FinTech. Since I owned the business, I decided to create an open-door policy – a community within my own workforce which embraced people from every background.

That policy allowed people to see that if they worked hard, they would move up the ranks. It shouldn't be about where you're from or who you are: you should look at whether the individual is right for a particular role.

We had 52 per cent women on the workforce as a result of creating equal opportunities for both genders. And then, where we felt there was potential within an individual, we provided training and helped move them up through the ranks.

I think that's very important: you might not necessarily have somebody who's got all the qualifications, but that person might have a lot of potential and be willing to give their all for a particular role if handed the opportunity.

It worked very well because, whenever we aimed to pioneer a new market, our employees helped us to understand the culture in their native countries and how to roll out the product there.

If you do business with people from different backgrounds all over the world, what's so wrong about hiring them yourself?

One thing I realised by doing this was that it created a warm sense of belonging within the business, and an appreciation that everyone was equal and the same.

There shouldn't be any glass ceilings. The only limit should be your potential: if you limit yourself, then I can't do anything about that; but if you have potential, you can get to the very top.

Diversity and inclusion has to start with the leaders in a company. It is not enough to have a HR policy, write about it and hold seminars to discuss it. No. It's not about that. It's about changing the mindset.

When you change the mindset of the leader in the company, you also change the mindset of those below them. All the managers and everyone else within the company will embrace that culture.

I think that's where it needs to really start off; otherwise, it's just a policy introduced by the business and nothing ever really happens.

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INTERVIEW

# CHAT SHOW



'MEMORIES' HAVE BECOME AN INTEGRAL PART OF THE SOCIAL MEDIA EXPERIENCE. INSPIRED BY A BELIEF THAT MESSAGES CAN BE AS PRECIOUS AS PICTURES, THE DEARY APP AIMS TO REVOLUTIONISE HOW PEOPLE RELIVE CONVERSATIONS IN WHATSAPP, FACEBOOK AND INSTAGRAM

Words: Alistair Hardaker

**D**igital memories are a relatively new reward for long-time users of platforms, offering a rose-tinted view of the past.

Facebook users are regularly served photos from bygone years which may otherwise have been lost in the digital pile. Long-time iPhone owners are automatically served albums of photos 'On This Day'. Even Spotify is in the game, recently introducing a 'Time Capsule' playlist built from songs you enjoyed years ago.

But for every photo taken and song listened to, it's safe to say that tens, if not hundreds, of messages are sent – and these face the same threat of digital elimination.

Enter Deary. Founded by CEO Federico Allegro, AI lead Federico Ghirardelli, marketing head Francisco Fidalgo and CTO Luca Soldera, the app began life in Italy but has moved to London to benefit from the capital's tech start-up ecosystem.

Fidalgo had been living in Canada and maintained a long-distance relationship with his girlfriend in Korea. The couple exchanged almost half a million messages in a three-year period, inspiring the start-up's creation.



"I realised how much of our lives were lost inside our chat-history – basically most of our memories together," he tells BusinessCloud.

"I started wondering: why is it that we have all these devices recording our lives, but we have no way to get some value out of our data?"

The idea had precedence, with digital memory platform Timehop having raised \$14m in venture funding. "They focus mainly on visual content. We think messages are the missing context. What will be able to provide a fuller memory of that experience?" asks Fidalgo. "The difficulty is to transform that history into their story."

Deary has around 600 active users, a number growing by 20% every week, and has amassed around 9,000 downloads.

memories to be pulled out. The app's AI can find happy, sad and joyful memories; topical chats about sport or travel; or 'hard memories'.

"We optimise the AI for what the users like to view the most, regardless of if they are happy or unhappy. The more you use Deary, the more it will know what type of memories you want to relive," explains Fidalgo.

"We offer some level of control over your memories with themed cards. Sometimes these will be a really sad memory, other times a funny one. This gives users a level of control over their Deary experience, as users may feel different each day and want to remember something that matches their mood."

## SECURE

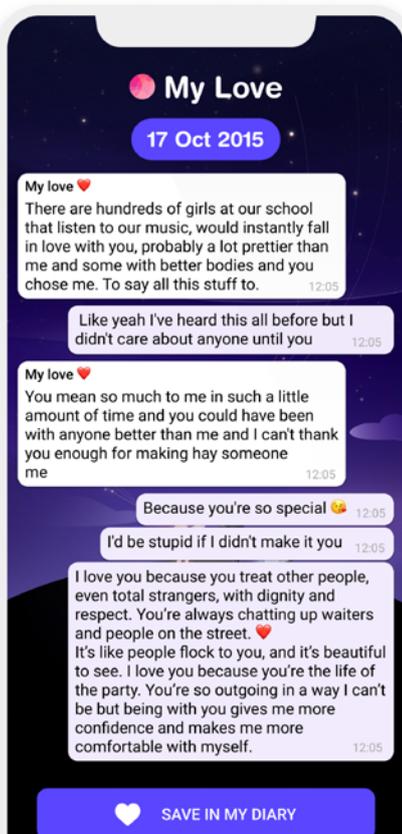
On the security concerns consumers may have when giving access to a history of private conversation, Deary claims to upload the messages to a "high-end encrypted server" to run its AI models. This AI only has access to a siloed version of the dataset, working with virtually unidentifiable data.

Fidalgo says the AI needs a large user base in order to work properly and intends to "leverage the network effects in messaging apps to acquire users for free".

## ALL MOODS

Arguably the most innovative feature of the app – which works with WhatsApp, Instagram messaging and Facebook Messenger – is an approach to memory which takes off those rose-tinted specs.

Unlike Facebook's focus on resurfacing only happy memories via its algorithm – a goal it spectacularly failed on one occasion, placing a dancing cartoon over a photo of a mother's grave – Deary allows for a range of emotional





## CONVERSATION STARTER

The platforms from which Deary can pull content



## DEARY IN NUMBERS

Messages imported  
250m

Active users  
600

Growth rate  
20% per week

Countries  
80

Funding  
\$30,000

Planned seed round  
£500k

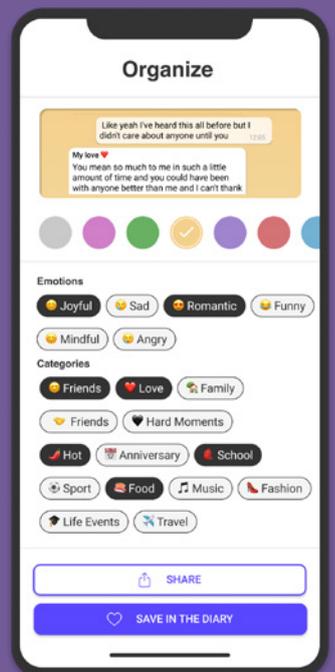
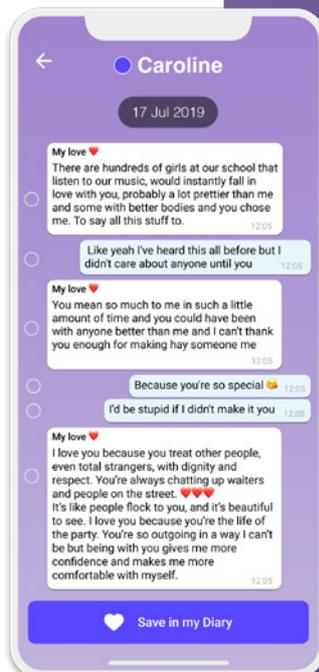
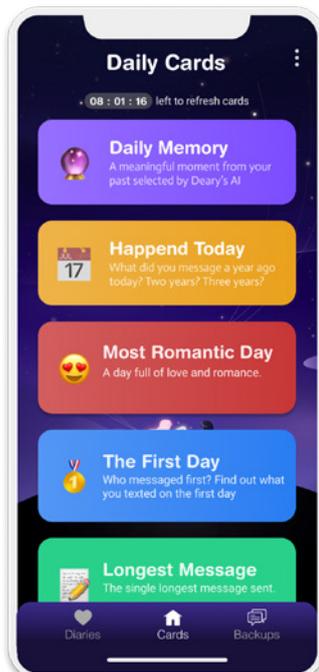
The firm's first round of funding was more modest than Timehop's, at around \$30K from friends, family and an angel investor.

The firm says it has active users in 80 countries and has imported 250m messages over the past seven months of organic growth, with no ad spend. It is currently raising a pre-seed of £500k to expand its team and AI capability.

This despite no clear route to monetisation. "Our main asset is

the AI technology we are building, which allows us to recognise what is meaningful inside any kind of conversation," said Fidalgo.

"So for now, we are not concerned with a business model. Here we share Zuckerberg's philosophy: until the network is strong enough we won't think to disrupt it with monetisation; afterwards [we will] scale and our AI will offer plenty of monetisation opportunities."



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# A LEVEL PLAYING FIELD

ALMOST HALF OF GAMERS GLOBALLY ARE WOMEN,  
SO WHY ARE THERE SO FEW FEMALE DEVELOPERS  
ACTUALLY MAKING THOSE VIDEO GAMES?

Words: Jenny Brookfield

**A**leksandra Turabova has loved video games for as long as she can remember.

During her childhood in Belarus, she would unwind after school with Tetris, Snake or games on the family's home computer. "Every day I played for at least four hours, and the biggest punishment for me was always a ban on games," she says. "I studied well, but my grandmother was worried about my future."

She never dreamt she'd turn her hobby into a career with one of the fastest-growing companies in Europe. Her employer, London-headquartered Gismart, has achieved 9,000 per cent growth over the last three years to reach \$71 million turnover. Turabova herself has worked on a game – Cool Goal – that reached number one in the game charts in 62 countries and generated 60m downloads worldwide.

Although Minsk-based Turabova, a level designer, is part of a 40 per cent female workforce at Gismart, reaching the next level has not been straightforward. "There were companies I worked for where I was the only woman in the game development team," she tells BusinessCloud. "My colleagues treated me differently; some did not take me seriously."

## DREAM

Before starting her university studies in IT and economic informatics, she targeted a summer job in game design. "I envisaged my main barrier was going to be my lack of professional experience, but I was adamant to not let it hold me back," she says. "The lack of women in the sector was also a hurdle when first starting out, particularly if you find yourself at a male-dominated company."

She didn't have any professional experience in the role so she listed all the games she'd played in the last 10 years on her CV. "This helped to demonstrate my passion to prospective employers and proved really valuable when securing a job, helping me to begin my journey in game development," she says.

When working within other companies, and finding she faced negative perceptions because she was a woman, it was her experience that set her apart. "I quickly learnt that not all the men in the department had gaming experience like me, so I made

sure to tell people about the number of 'played' hours I'd spend on games and that would get people to listen to me," she says. "Despite the challenges, you are ultimately appreciated for your professionalism, experience, and love for games."

"I've have seen positive changes over the years, however. I've worked in companies where the atmosphere was completely friendly, and where I felt on equal terms from the very beginning. The industry is now considerably more welcoming to women, and there are a lot of women who can now be seen as role models."

Gismart, which has offices in London, Minsk, Beijing and Kiev, develops and publishes games, which means there are usually a few dozen games in development simultaneously. Its open corporate culture and friendly, creative atmosphere sees people hired based purely on their professional experience.



"Every month I have a new project and working at this pace is not only exciting but very interesting too," she says. "I am responsible for the environment of a game level, which means that I create, balance, and tune mechanics and difficulty for the game, while taking playtesting, feedback and live metrics into account."

"I start my work around 10am and sync up with the team. During the day, I mostly communicate with game developers and game producers. I spend some time analysing metrics and then fixing game levels based on results. At the end of the working day I review my progress from the day and plan the next day's activities."

The hugely successful Cool Goal is her favourite project to date. "This is the kind of motivation that pushes a game designer, but I didn't stop there. I continue to progress by learning from my colleagues' experience and attending game design courses."





online games. She co-runs a 4,000-strong volunteer-run meet-up for women – [www.geekgirlmeetup.co.uk](http://www.geekgirlmeetup.co.uk) – and is on the judging panel for js13kgames, a JavaScript coding competition that challenges entrants to make a game limited to 13kb.

“I’ve built a community around gaming and learning to code through building games because it’s all about logical thinking,” says Kubow, based in Battersea, London. “People make tutorials on how to build websites, but I believe games are the way forward to improve coding skills.”

Her place on the judging panel, she hopes, will encourage other girls to enter and then go on to have careers in gaming. “There’s a challenge to getting women who are interested in software development to believe they could consider gaming because there are not enough women out there working in games development.”

The problem may stem from bootcamps, she says, which, in her experience, tend to signpost people towards other software development roles and offer little in gaming education. For those that do want to develop games, the onus is on them to build up their experience, and that’s where her YouTube channel comes in. “I think women aren’t considering gaming due to the lack of representation in the sector and I’d like to change that,” she says.

Work needs to be done in recruitment, too, although there are positive steps being

made. “I’ve worked in a start-up and there’s a mentality to recruit people similar to you. Women may get overlooked or not feel part of the conversation,” she says.

“There are initiatives out there from VCs who will only invest in start-ups if there are women on the board and that’s a step in the right direction.

“It’s fantastic to see young women feeling inspired to go down the route [of game development]. My advice would be to join communities and competitions, ask people in the online communities for advice and people will always be willing to help.

“For businesses, they may have to recruit based on somebody being self-taught rather than having the experience, which isn’t always available. Hopefully we can start to see more women in the industry and things levelling out.”

## BALANCING ACT

Turabova believes employers must actively work towards ensuring a gender balance and look at female candidates favourably. Gismart caters to individual needs, including flexible working for women, as well as offering social packages.

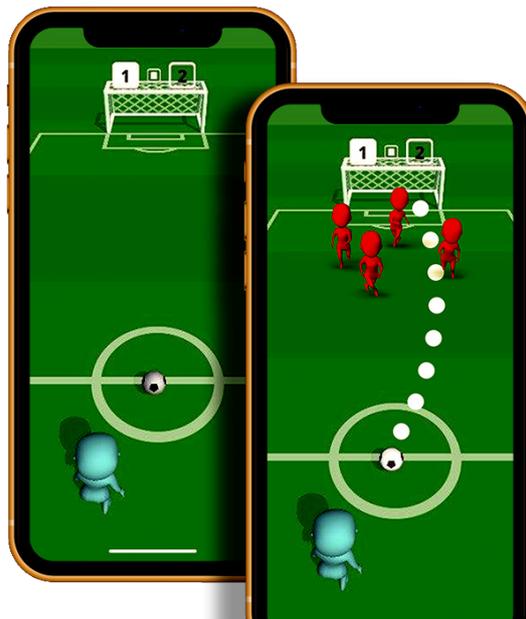
“I think companies need to be more open in promoting diversity in the workplace, and in taking an active role in leading positive change,” she says. “They can do this holistically by valuing diversity in all aspects of the business and demonstrating inclusivity both from a strategic business standpoint and in the way people are treated.

“Flexibility and understanding are important components of creating a more diverse workplace, alongside the fact that doing so can make the business a more appealing and welcoming place for women to work.”

## COMMUNITY

Software developer Ania Kubow believes more women should consider gaming as a career – and is doing all she can to lead by example.

In just six months she has built a following of 22,000 people for her YouTube tutorials in making retro



## WHAT’S THE SCORE?

Female representation in global video games industry

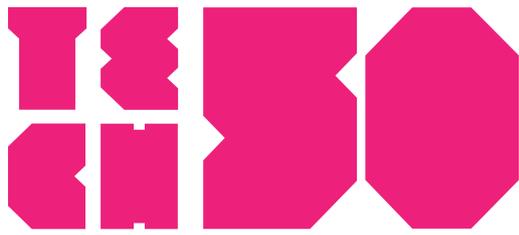
Gamers – 46%

Developers – 24%

Lead protagonists in games at E3 conference – 5% (22% male)

## JOB ROLES IN UK GAMES INDUSTRY BY GENDER

	Female	Non binary / other	Male
Programming	10%	3%	87%
IT	15%	2%	83%
Design	17%	1%	82%
Audio	14%	8%	78%
QA	27%	4%	69%
Art	29%	3%	68%
Sales/marketing/communications	35%	1%	64%
Other	36%	1%	63%
Business operations	42%	0.5%	58%
Project Management	41%	1%	58%
Writing	38%	8%	55%
Localisation	46%	-%	54%



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1. 365 Response
2. Synap
3. Bimsense
4. rradar
5. Freeze Debt
6. Panintelligence
7. SleepCogni
8. APD Communications
9. Connexin
10. Kwizzbit

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LET THERE BE

LiFi



AS THE WORLD BECOMES INCREASINGLY RELIANT ON THE INTERNET, DATA IS RISING EXPONENTIALLY. HARNESSING THE LIGHT SPECTRUM COULD PROVIDE A 'MOTORWAY SYSTEM' TO CONVEY IT AT SPEED

**‘Spectrum crunch’ is fast becoming a headache for the connected world – and it has nothing to do with throwing your 1980s computer in the skip.**

With data traffic increasing exponentially every year, the strain upon traditional RF technologies such as Wi-Fi could soon reach a critical point.

Scottish tech firm pureLiFi believes it has the answer. Founded by Prof. Harald Haas and Dr Mostafa Afgani as a spin-out of the University of Edinburgh, it uses the light spectrum to send data rather than radio frequencies. By making small adjustments in the intensity of light, it can deliver an internet connection with a bandwidth far beyond the capabilities of conventional wireless communications.

The potential for easing the burden on existing technologies is massive, says CEO Alistair Banham. “The world’s reliance on the internet is

“We’re not here to replace RF, which is a great technology; we’re here to complement it. LiFi will become one of the biggest – if not the biggest – bearer of data within future networks and systems.”

The company was founded in 2012, with funding from Scottish Enterprise, on the back of a TEDGlobal Talk where the technology was demonstrated in public for the first time – and Prof. Haas coined the term LiFi.

**STRONG & SECURE**

LiFi is already capable of gigabit connectivity but has the potential to reach tens of gigabits per second, according to Banham, who joined the firm in 2016. It also has major benefits when it comes to security and stability.

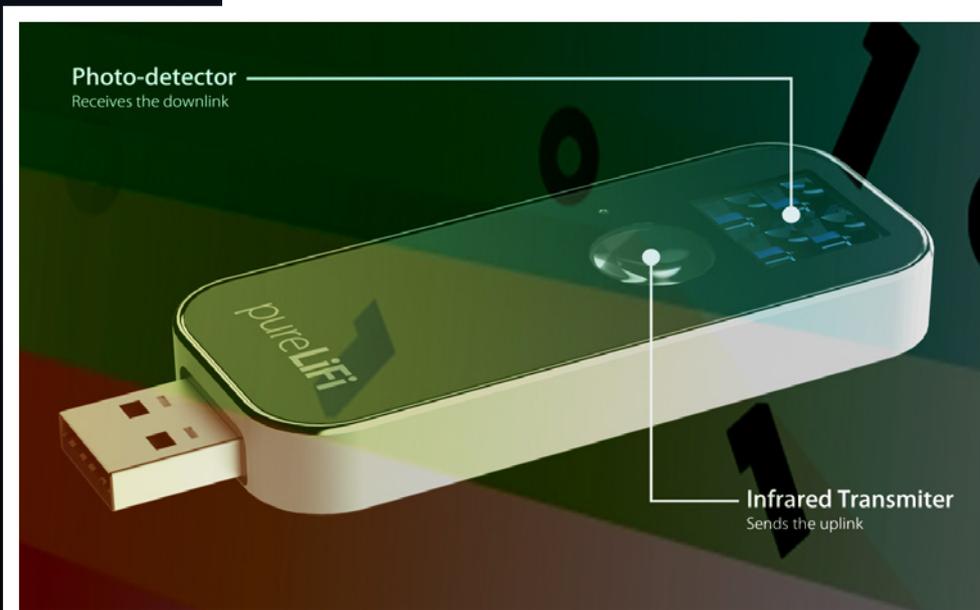
“With RF, you can get these little sniffer machines that can detect electromagnetic waves and show a footprint. Using the light spectrum, there’s no digital footprint: there’s no way of anyone capturing the data in that light signal,” he explains.

“You don’t even know where it is. There’s a lot of talk about cyber security at the moment, which means people are coming to us to ask whether we have a solution to make them more secure.

“The quality of the connection is very good. With RF systems there

can be quite a lot of interference: if you’re living in flats and there are Wi-Fi signals above you, below you and beside you, that starts to cause issues and the net impact is that the signal decays.

“RF is a big bubble. The more people get into the bubble, the more issues you have with the amount of data that each of you can receive and transmit. In a public area such as an airport, you might be desperate to send an important



growing exponentially,” he tells BusinessCloud. “In order to sustain the current level of bandwidth requirement we need to release more spectrum.

“Light has 1000x the spectrum of Radio Frequency. A simple way to compare LiFi and RF technology such as Wi-Fi and cellular is to think of them as light roads: LiFi is the motorway and RF is a country road. You can simply push a lot more traffic through with light rather than radio.

document to your boss but find it impossible to get on to the network; and if you do get on, you could be kicked off at any point.

“You don’t get that with our technology. Light doesn’t pass through walls, so you can’t jam the source. We also don’t steal bandwidth from the next access point: if you’re sitting under one light cone, and I’m next to you under my light, we’re both transmitting and receiving data. But if I happen to download a massive Netflix film, your bandwidth doesn’t get affected.”

In the smartphone of the future, you might select LiFi rather than Wi-Fi when sitting in a café. In your own home or other familiar locations, where you’ve set up protocols, the device will automatically connect when you enter the cone’s transmission zone. When you move outside of that cone, it immediately switches off.

## DEPLOYMENTS

Today pureLiFi has 200 deployments being evaluated in 20 countries across 20 different use-cases. For example a partnership with Getac has seen LiFi incorporated into

the manufacturer’s rugged tablets and PCs for the military, manufacturing and automotive industries. It is also working with Cisco.

“We have very good relationships with global OEM companies,” says Banham. “We’re going to provide LiFi components for the mass market through our light antenna devices which integrate into mobile devices. We still have a long way to go because when you are evolving a new technology, it’s not an overnight design; it takes quite a bit of time to embed, test and evaluate it, and make sure you’ve got the right use-cases.

“But we believe we’re over the early adopters now and the next few years are going to be extremely exciting for us. I would say that we’ll probably get pervasive with this technology in the next two, three, four years. COVID’s not helping because everything is slowing down, but we’re on the right trajectory.”

Light becomes data



## CHANGING THE LIGHT BULBS

### WHY DID BANHAM JOIN A START-UP AFTER 30 YEARS AS A SEMICONDUCTOR EXEC?

A contacts book built during executive roles at Philips, Wolfson Microelectronics and ON Semiconductor could be crucial to taking LiFi mass market.

“I took some time out for a couple of years. When I was approached about this opportunity, being very candid with you, I hadn’t even heard of LiFi! The more I researched it, the more I loved looking at what this new technology could bring.

“If you’re in a start-up, you’re changing the light bulbs, helping in the lab, helping the team. It’s part of the fun. But in addition, because of the fortunate experience I have, having worked with some of those great companies, I can do the strategic stuff as well.

“It’s a great challenge working with a start-up and a bunch of really bright engineers to deliver this technology and make it pervasive and part of our DNA.”

### BANHAM ON TOPPING SCOTLAND TECH 50 RANKING

“Scotland is renowned for leaving a legacy of great inventions. It’s a hotbed of advanced research, knowledge and know-how of developing new tech.

“I see LiFi as another legacy technology which will become pervasive across the world. We are the forefront of the technology: people come to us because we drive it forward.

“It’s a great honour to be crowned Scotland’s most innovative tech company. Innovation is one of our core values and it’s extremely rewarding for the entire team to be recognised for it.

“We all have one vision in mind: to take this LiFi technology mainstream.”



# »» FAST FORWARD

## FASTFORWARD TECH PODCAST

**Do you lay awake at night fretting about how to grow your business? In uncertain times, more of us than ever are worried about the future. The FastForward podcast, from Tech Manchester, helps to change that by giving entrepreneurs like you the answers they need to take their business to the next level - helping you get a better night's sleep in the process. We call that a win-win!**

Hosted by Tech Manchester's director Patricia Keating, FastForward shares the stories and expertise of business experts and founders at all stages of their business journey. It's crammed full of practical advice on how to take your startup to the next level.

### Recent podcast highlights:



#### **Episode 104: Mark Wright: Being an entrepreneur is a bit like riding a tiger**

In 2012, Mark Wright landed in UK from his native Australia with a passion for business and just £172. 2014 saw him win BBC TV show The Apprentice. Fast forward to today and Mark is an award-winning, influential entrepreneur, running the fastest growing digital marketing agency during lockdown.



#### **Episode 103: Valerie & Noel Moran: Bootstrapping to bumper payday**

The couple founded Prepaid Financial Services in 2008, during the height of the last recession. At the time no one believed it would work. But with bootstrapping, hard graft and a ton of belief they proved the naysayers wrong. In 2019, PFS was sold for €327 million. Following the deal Valerie became the first black woman to be listed in the Sunday Times Rich List.



#### **Episode 91: Dame Jayne-Anne Gadhia: From Virgin Money CEO to FinTech entrepreneur**

Dame Jayne-Anne Gadhia is the former CEO of Virgin Money. She started her career as an accountant, but her life took a different path after being introduced to Sir Richard Branson. She launched Snoop in April of this year, in the middle of a global pandemic, and closed a £3.2 million funding round at the start of lockdown then in October closed a further £10m round.



The FastForward podcast is published every Tuesday on every major podcast platform. Listen and subscribe now, so that you don't miss an episode.

The FastForward podcast is part of Tech Manchester's range of services, delivered to support early-stage tech businesses in the North West. Find out more: [www.techmanchester.co.uk](http://www.techmanchester.co.uk)

## UNDER REVIEW



IN OUR TECH REVIEW COLUMN, JONATHAN SYMCOX SINGS ALONG WITH MUSIC STREAMING BOX ROXi

UNDER REVIEW

### POSITIVES

- Amazing library of music
- Superb karaoke experience
- Quick and easy to use
- Kids love it

### NEGATIVES

- Karaoke timing indicator can lag

### OVERALL RATING

5/5

## BACKGROUND

Music streaming hardware start-up Electric Jukebox launched in its home UK market in 2016 before rebranding to ROXi in 2017.

A portable entertainment console including a microphone, its platform includes more than 55 million songs as well as music trivia games, radio stations, karaoke and more.

The set-top box plugs into a TV and can also be connected to external Bluetooth-enabled speakers, while the service was also recently made available on Sky Q via subscription.

ROXi CEO Rob Lewis claims that by the end of 2022, ROXi will be available to 500 million TVs worldwide.

## QUICK START

Anyone used to waiting an age to play on their PlayStation or Xbox will be pleasantly surprised to find that once you hit the 'on' button, ROXi loads within seconds – and you can simply press the button again to turn it off.

## MIC

The microphone is used to navigate the menu system. Cleverly, you point it at the TV to control an on-screen cursor, in the style of a Wii Remote; but unlike Nintendo's ground-breaking console, it is not necessary to balance a receiver bar on top of your telly.

## MUSIC

The main menu allows you to choose from saved music, curated playlists, official singles and album charts plus

'tastemakers' – the favourite music of stars including Kylie Minogue, Robbie Williams, Sheryl Crow and Alesha Dixon. These musicians are all investors in ROXi. For example, Aussie pop queen Kylie's 'All-time Favourites' playlist includes tracks from Electric Light Orchestra, Sly & The Family Stone and Donna Summer.

## SEARCH

The main way you will find music is the search button on the mic. Holding it in and saying the name of an artist, song or album is easy and the results auto-correct so they are almost always spot-on. Often several versions of the same song are found: for example, 'All Along the Watchtower' brings up different recordings from Bob Dylan and Jimi Hendrix – including live and remixed, previously unreleased versions – while a scroll reveals covers from Neil Young, The Grateful Dead, Brian Ferry and U2. You can filter your search results by songs, albums, radio stations, saved music and karaoke.

## KARAOKE

In an era of multiple devices, ROXi is billed as a way to bring the family together to enjoy music. However, a big selling point is the 60,000-plus tracks available to sing along with. Practically every song I fancied belting out was available, from Bryan Adams and Bon Jovi to Radiohead, Muse and Oasis. The words are available on-screen – with the occasional amusing typo – and includes a timing indicator to keep you at the right place. A smaller selection of tracks is available as pure karaoke – just the backing tracks with no singing at all.

## QUIZZES

Multiple-choice 'name the song' games are great fun, especially for the kids, and available across genres. There are tracks from Disney films and TV shows as well as more general music.

## FAMILY

My seven- and eight-year-old boys loved searching for tracks – especially music from Fortnite! – and singing along to songs. It is possible to plug your console into a friend or family member's TV, connect to their WiFi and use with your own account. On my sister-in-law's slow WiFi, the karaoke timing indicator was off, but I have suffered no such problems at home.

## MORE

A vast slideshow of images is shown when you leave the music playing for a short while. You can connect your Facebook albums to show these instead. 10,000 radio stations from around the world are available while 'therapeutic soundscapes' to accompany meditation or yoga are very relaxing. Songs labelled as 'explicit content' can be hidden from search results via the settings.

## COST

The ROXi box with one mic and all necessary cables is around £100 and comes with a one-year premium music pass. After a year, you will have to pay £52 for a new 12-month subscription or contend with adverts. The Sky version – which wasn't tested here – includes a free 30-day trial then monthly cost of £6.99.

# CYBERSECURITY THREATS IN LOCKDOWN

As COVID-19 continues to bite and force many businesses to work from home, how are threat actors using the new-look landscape to their advantage? We speak with the experts

Words: Alistair Hardaker

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## IS IT BUSINESS AS USUAL?

In makeshift home offices across the UK, many newly remote workforces appear to have achieved something close to 'business as usual'.

But that's not true of the cybersecurity landscape, where new threats have arisen, from coronavirus phishing scams to less visible disruption in how workforces connect.

Devices have changed, communication has been disrupted and security schedules have been put on ice or sacrificed entirely for the sake of continuity.

The experts believe cybersecurity blind spots caused by the pandemic, and the temptation to consider lockdown a temporary measure, could pose a huge risk.

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## IS THERE AN INSIDER THREAT?

Chris Woods, CEO of Midlands firm CyberQ Group, has 22 years of experience in cybersecurity, beginning his career at Fujitsu as penetration tester before becoming cybersecurity director at HP and working with the likes of GCHQ.

His firm, which has 33 employees across the UK, Manila and the US, does dark web scanning, digital human reconnaissance and security testing for big business and enterprise clients.

Among the new threats Woods has identified since the start of the year

is an increased risk of 'insider threat' - cybersecurity attacks carried out at least in part by employees. The motivation for these attacks is mainly financial gain through the sale of intellectual property and business data on the dark web.

Woods said the dark web is not as mysterious as is often described. These marketplaces have adapted to meet customer needs in much the same way as Amazon or eBay.

Dark web customers still want a good user experience, and dark web sellers still need good ratings. The only difference in these marketplaces is the legality of the products on sale: they include drugs, weapons and counterfeit products.

Woods says there has been an "explosion" in the sale of stolen intellectual property and sales spreadsheets on these marketplaces. During a scan of the dark web for a client, his firm found its entire sales database - headed with the name of an employee - and including potential customers' details and turnover figures.

"[The named employee] didn't put the document on the marketplace. He was playing five-a-side football with one of his mates, who asked if he wanted to earn additional revenue," he explains. "He said 'yes' because he wanted to take his kids to Florida and he thought this would be a very easy crime to commit."

The employee sent his friend the document, who put it on the dark web marketplace in exchange for bitcoin. Woods says it is not often employees who instigate such a data sale, but they are the first chapter of a more complex attack.

Many individuals organise the sale of business data for a cut of the profits, he adds. "The insider threat, particularly in the current economy with people being made redundant, is a potential area of growth," he warns.

"Someone working for a company may think that they haven't got important data, but a database of sales can be very useful to competitors.

"I think most people will know if their employer is in bad shape. If they get an opportunity to raise additional money by selling some information, that could be a valid option for them if they are desperate. It's something that all organisations should be aware of."

Holly Grace Williams, MD of Manchester-headquartered cybersecurity firm Secarma, agrees. "People might think of insider threat as people who are inherently malicious," she says. "[But] it could just be people who are under duress: someone at risk of losing their job or someone who is financially restricted."

Williams points to an AT&T attack in which employees were reportedly bribed to plant malware in the firm's systems, helping cyberattackers gain access to locked devices.

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## ARE EMPTY OFFICES A RISK?

Williams spent the first seven years of her career in defensive security for the military before completing a masters and moving into penetration testing. She describes pen-testing as "breaking into computers and buildings for living".

While working from home isn't necessarily more dangerous than the office if the right systems are in place, according to Williams, an empty office does pose problems.

"There are a lot of organisations out there whose offices are entirely unattended now and have been for months," she says. "It means that the location of staff members could vary."

**"Someone working for a company may think that they haven't got important data, but a database of sales can be very useful to competitors."**

Network or Wi-Fi access points left unattended for long periods of time could be taken advantage of. "That could be a simple fix. If you have an office that you know isn't going to be used or is only going to be used during certain times, you could disable those ports, you could implement network access control, you could disable Wi-Fi," she suggests.

"But for some companies, that isn't at the forefront of what they're currently dealing with, and it's just something that's been missed."

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## WHAT ABOUT BYOD?

While Williams says this threat isn't necessarily new, its priority in the long list of potential threats has moved. So too has the notion of 'Bring Your Own Device'.

Cybersecurity procedures for employees who want to work on their own device are well established, she says, but these procedures are less likely to have been properly carried out during the rush to keep workers at home.

"Have companies moved to BYOD very quickly? Have they moved under duress or with good change management?" she asks.

"Have organisations considered the fact that the perimeter may have moved? A lot of organisations consider everything within their network perimeter as the thing they're worried about."

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## HOW DO YOU DEFINE 'PERIMETER'?

Harman Singh, director of Altrincham-based Cyphere, agrees with this new approach to thinking about a company's 'perimeter'.

"It's not a physical boundary, it's a logical one. In traditional networks, we have a firewall protecting the entire company which the traffic goes in or out of, and you can keep an eye on which to allow," he explains.

"The advent of cloud and mobile computing is outpacing everything else. We now have all sorts of freedom for the vendors and employees to work from home or bring their own devices to the office networks, or use SaaS platforms. This is adding to the complexity of the whole challenge."

Adding new products into the business infrastructure can also pose new threats, he says, even if these products are intended to help mitigate cybersecurity risk.

While he is not against bringing new products into the office infrastructure to help with cybersecurity, he suggests a focus on 'security hygiene' instead.

"Products are being breached. During the pandemic, all the big vendors have big critical vulnerabilities being exploited," he says. "If you keep accumulating products, these spit out data and data gets out of control, and that's what ends up on the internet. That could be the end of a business."

"You don't have control over all your assets, but you can have control of who is coming into your network. You can have appropriate policies or restrictions in place to make sure your risk appetite is already determined and in place, so if anything goes wrong you know how to contain those."

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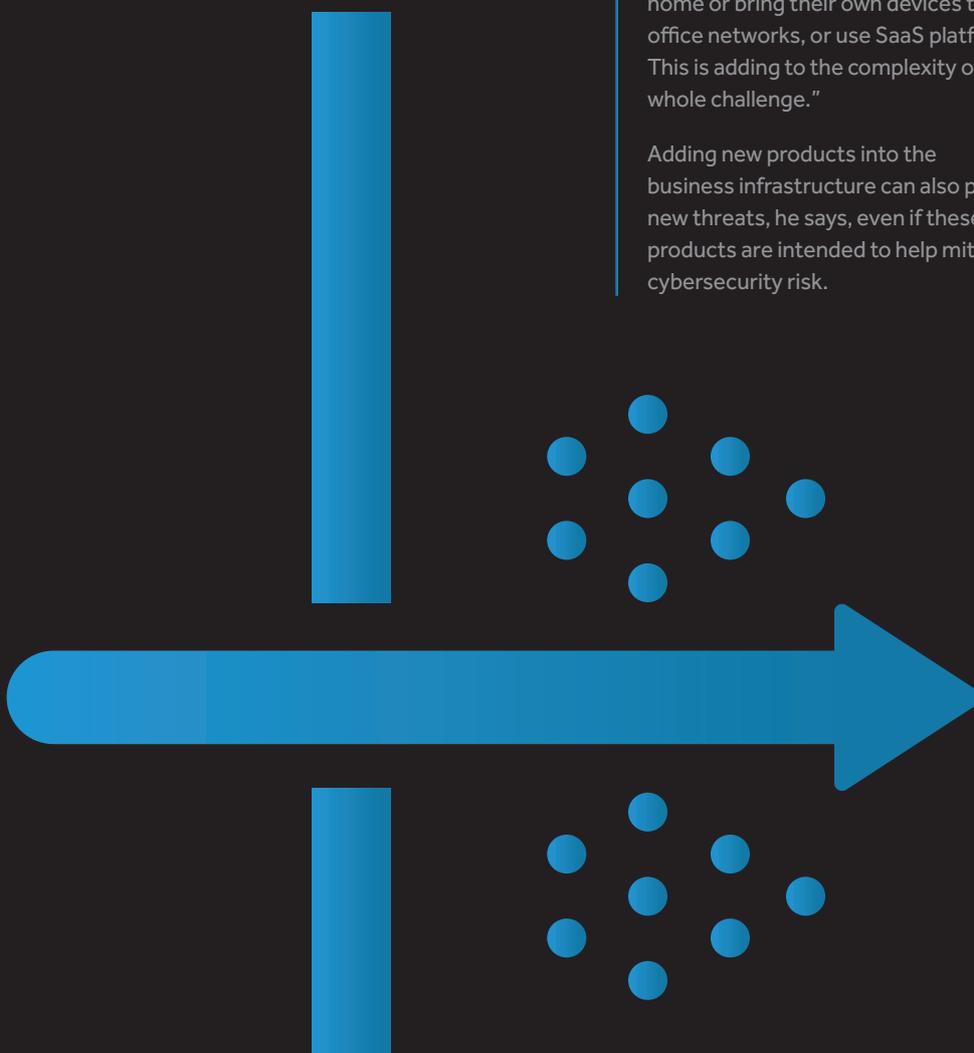
## HOW CAN EMPLOYEES HELP?

Williams says a review of every employee's home office is necessary in order to stay secure, and employee concerns should include not just technical changes but physical security too – including who can see your screen.

"If you have staff that live in a studio apartment, for example, and there are four roommates working from the same room, then there is a security concern there," she says.

Singh adds that workers who opt to work somewhere more public – lockdown-willing – should still be on guard, even if the world is less busy than usual.

"If you are at a public café and you're using a device for work purposes, 'shoulder surfing' is a very common issue in transport or public places where people can see what you're typing," he clarifies. "You need to be extra careful in terms of making sure that you're doing your best for your organisation, just like you would for personal security."



Woods says it is also important to be mindful of every device connected to a home network, not just laptops and mobiles – even connected cameras and doorbells could be a way in.

“You may be able to control a laptop, but if you’ve got other devices that could be a weakness for them to get into your networks in your home network,” he says, adding that even children could cause a problem. “I’ve got two daughters who constantly trying to put Minecraft on my work laptop, and goodness knows what else!”

“If you are at a public café and you’re using a device for work purposes, ‘shoulder surfing’ is a very common issue in transport or public places where people can see what you’re typing. You need to be extra careful in terms of making sure that you’re doing your best for your organisation, just like you would for personal security.”



## The Experts



**Chris Woods,**  
CEO,  
CyberQ Group



**Harman Singh,**  
director,  
Cyphere



**Holly Williams,**  
managing director,  
Secarma

# COVID-19 exposes flaws in bank lending models



Sean Hunter, CIO at OakNorth, says traditional risk models are outdated and banks must harness portfolio diagnostics to reflect the true picture

When it comes to commercial lending, banks rely on risk models to make decisions.

These models have been built up internally over decades of lending across thousands, if not tens of thousands of loans, but COVID-19 has exposed unexpected flaws in them.

The first issue is that these models are based on historic data which doesn't adequately reflect the unique situation we now find ourselves in or take into account the future challenges that the world will be facing as it enters into the worst recession in three centuries.

The second issue is that they make broad assumptions about entire sectors rather than developing an understanding of the portfolio at the granular loan level and taking into account the individuality of each business.

Look at the retail clothing sector, for example: a luxury boutique which specialises in made-to-measure gowns will likely see its revenues obliterated as occasions where a gown would be needed – such as weddings and red-carpet events – will have been cancelled or postponed.

Contrast that with the experience of an eCommerce business that specialises in yoga wear, which may see a substantial increase as customers order more online and take up yoga under lockdown.

Making assumptions about entire sectors ignores the diverse business models and cash flows of individual sub-sectors, which are all impacted differently by lockdown.

The third and final issue is that these models don't take into account how quickly the situation is changing.

Take a residential property developer for example – during the first UK lockdown in March, construction sites were forced to close which means entire projects will have been delayed. If you look at the second lockdown, it was a very different picture as construction sites – along with schools and universities – were allowed to stay open.

So even making credit assumptions based on what we saw in the previous lockdown doesn't work.

The only way to course-correct for “the new normal” is to take a fundamentally different approach to commercial lending than what's been done for decades.

In the future, banks are going to have to combine backward-looking data with a forward-look view, as well as take a granular, loan-by-loan approach rather than an overall portfolio or sector-level approach to credit analysis.

They are also going to have to conduct reviews on an ongoing basis, rather than annually; update parameters to reflect the ever-changing situation; and use alternative data such as foot traffic to inform their models.

In order to manage credit risk within our own UK bank, OakNorth, and support our various bank partners around the world, we combine dynamic data sets, auto-analysis capabilities, cloud-computing and state of the art machine learning to undertake portfolio diagnostics.

This enables us to rate loans from 1-5 based on their vulnerability to the new economic environment, with 1 being least vulnerable, and 5 being most vulnerable. The ratings are based on multiple factors including liquidity, debt capacity, funding gap and profitability, and can be dynamically customised to reflect the lender's credit risk criteria and appetite.

There are several components to this:

**Instant Credit Analysis** enables faster decision-making and consistent analysis across new credits, periodic reviews of existing cases, or detailed re-underwrites. For new potential borrowers OakNorth Credit Science Suite analyses the business' financial data, as well as dynamic data sets for sectors, geographies and macroeconomic trends, instantly delivering basic credit analysis on that business

**Instant Financial Analysis** provides standardised models for each of the sub-sectors in our taxonomy, pre-configured stress-scenarios, automated vulnerability scoring and presentation of capital structure

**Real-time Sector Insights** allows you to see industry insights that drive borrower performance tailored for over 100 sub-sectors

**Automated Peer Comparison** uses machine learning to surface up to 20 peer companies to consider in your credit analysis, allowing you to make comparisons with the borrower

**Continuous Monitoring** of Active Credits helps you turn monitoring into a real time process and lets you focus on relationships not admin. The platform monitors billions of data points to detect anomalies in your loan book. This gives relationship managers all the information they need and more for check-ins or annual reviews with their customers

**Portfolio Diagnostics** generates a forward-looking view with sub-ratings on Liquidity, Debt Capacity and Business Profitability using scenarios specific to the sector and country of the borrower

 @OakNorth

Email [jonathan.symcox@businesscloud.co.uk](mailto:jonathan.symcox@businesscloud.co.uk) to contribute to our 'On the Money' Insights section

# DEATH SHOULDN'T BE TABOO

Words: Alistair Hardaker



When a loved one passes, the process of 'closing down' their life is becoming increasingly fractured. Tech start-up Biscuit Tin is helping people tie up loose ends during this most emotional of periods



Brits are not practised in the art of talking about death. We often lack the emotional stamina to consider a hypothetical funeral, let alone the dull responsibilities inherited after the initial shock.

The taboo around death means conversations often fall short of pragmatic. Which clothes would you like to be buried in? What are your passwords? Which subscriptions need cancelling? It was the lack of answers to these types of questions which made Sheila Hogan's life much tougher after her father's passing.

"The thing that I tortured myself about most was what would he want to wear in his coffin for his last journey. Does he want to look smart, or does he want to be comfortable in his cardy?" she tells BusinessCloud. Hogan, an only child who had already lost her mother, spent three days looking through her father's wardrobe before she was able to decide how to dress him.

And the unexpected echoes of his life wouldn't stop there. Even two years on, new surprises arose: an unexpected Reader's Digest subscription and a letter from the Post Office requesting that an overpaid pension be returned.

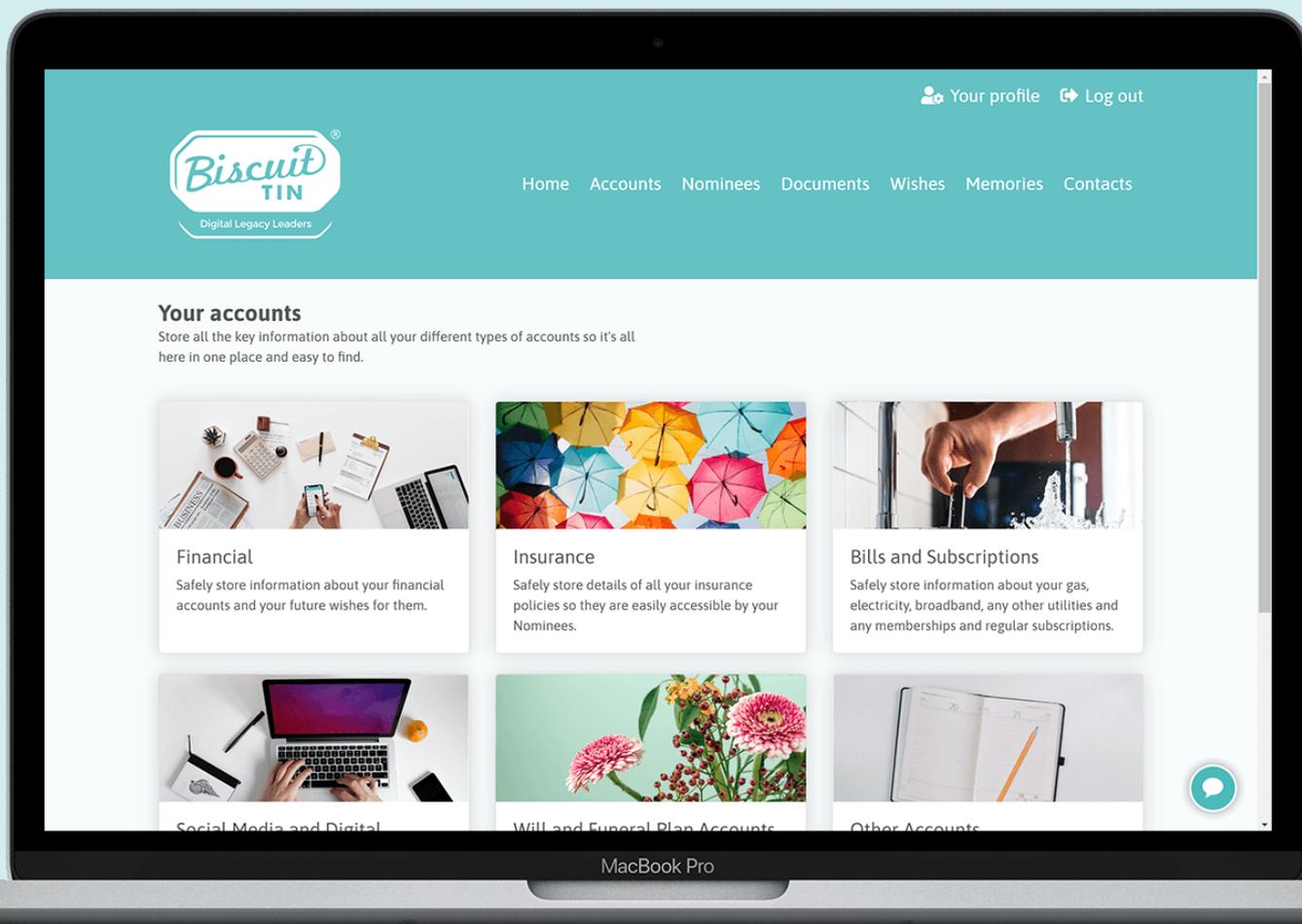
A successful business architecture consultant working with large corporates, and former President of the Association of Scottish Businesswomen, Hogan's practical mind led her to wonder why - in a digital age - there wasn't a way to manage all these threads of life in one place. She launched Biscuit Tin in Edinburgh in November 2019.

## DEATHTECH

Billed as the UK's first 'digital legacy vault', the platform is part of the growing 'DeathTech' sector which hopes to break through taboos and ultimately make the lives of people dealing with a death easier.

"We think we're going to last forever, but if we don't plan, or at least leave some direction, then the people left behind have to do it all and pick up the pieces when they are emotionally distressed," she says.

The execution of the will is only the beginning. Biscuit Tin, named after the container of odds and ends in every household, is designed to store a wealth of information to help those left behind. It differs from simply backing up these documents on a hard drive or USB stick because users have control over what is



seen, when, and how the information is structured.

Importantly the data stored on the cloud-based service is encrypted and the platform is both GDPR-compliant and ICO-registered. "We're more secure than the banks at the moment with the kit that we've got and the way the data is encrypted," she says.

## HOW IT WORKS

Users nominate up to five people who can access the account, who can view certain items before the user passes, such as care instructions in the case of a critical illness. It is currently working with London ID firm Yoti on further improving identity checks for both the user and nominees before accessing important information.

Its features include an account hub, where information from social media to mortgage and utility accounts is stored. This is becoming increasingly important as people's growing online presence is leading to a more complex digital after-life.

Hogan recalls seeing automated anniversary notifications for friends

on social networks who had passed away years before. "Their loved ones don't know how to close these down - or don't even know it's there," she says. "Every relationship that we create in our lifetime has to be tied up and closed down somehow."

There is also a section which stores a list of key contacts as well as copies of important documents such as a will, marriage certificate, National Insurance number and power of attorney documentation.

## LIFE CLOSE-DOWN PROCESS

The hope is that with all the information in one place, family or friends can more painlessly carry out what Hogan calls the "life close-down process".

But it's not just admin inside the platform. It also serves as a time capsule via its memories section, which stores photos, videos, messages to be delivered after death and even secret recipes. "If you haven't extracted that history from those people, it's lost forever. I would

love to know what my mum and dad's favourite film, book or meal was," she confides.

The final section of a Biscuit Tin account is the 'wishes' section, which prompts users to answer the types of questions Hogan never got answers to. Through an increasingly 'gamified' process, it will ask users about their final wishes - funeral arrangements, organ donation, what should happen to pets and belongings.

Hogan has been using this section to fill her account with any information her daughter might need when the time comes, including her funeral outfit. "I want to look glamorous. I want my hair and make-up done... I'm also adding things like my favourite food and films I've seen."

She adds: "The older I get, the more of that I will do. Things like how [my daughter's father] and I met. The type of thing that, much later on in life, you realise you'd like to know."



# MAKING YOUR FIRST HIRE

YOU'VE STARTED UP A TECH BUSINESS AND ARE READY TO SOURCE THE TALENT TO MAKE IT FLOURISH. BUT IN WHICH AREAS SHOULD YOU HIRE FIRST?



**Asif Mahmud, founder, Eruptive Brands**

"I would focus on sales or marketing. If I had to choose one, it would be sales: a business with a healthy, growing sales pipeline will have the confidence and finance to hire more staff to propel growth."



**Pauline Norstrom, founder, Anekanta Consulting**

"As the founder, you must be emotionally intelligent and define your own role clearly. You can then identify the talent you need to achieve your goals. Sales and marketing should be high on the priority list."



**Mohammad Afridi, founder, Delikart**

"A technical creative designer: you need a strong brand image to influence users' first impressions. The world is full of great ideas, but those with a beautiful design win the heart of the market."



**Kim Antoniou, founder, Auris Tech**

"Be clear on what you need to deliver and hire someone who has the skill base to provide it, even if they may be perceived as a threat to yourself. Always stand on the shoulders of giants!"



**Adam Pritchard, founder, Shopit**

"Be clear on whether you're hiring energy or talent, as getting both is either rare or expensive. No employee will care about your business as much as you, so modify your expectations."



**Valerie Moran, head of operations, Ecomm**

"When you're starting a business, you need that person who will drive your product so you can enter the market quickly. They have to provide value for the business and really take you to the next level."

# Everyone's Christmas technology wish-list



Self-confessed geek Gavin Wheeldon looks at the tech gadgets you should consider giving to your loved ones this Christmas

**Christmas time is going to be a little different this year – but we aren't letting it dampen our spirit. I've pulled together some top gadgets to satisfy even the hardest person to buy for!**

## 1. GAME & WATCH - SUPER MARIO BROS

Nintendo's line of vintage handhelds has come full circle in honour of Mario's 35th birthday. The 1985 Super Mario Bros. game has been brought to life on this crisp 2.36", LCD colour screen that lets you play games in mere seconds from start up – and also tells the time.

## 2. PHILIPS AMBILIGHT TV

Ambilight, essentially the inclusion of an LED array around the side of a television, projects colour on to the

wall behind a TV – which can follow video, audio or static light – to make the viewing experience more immersive. At less than £400 this is the best TV in its price range.

## 3. FIZZICS DRAFTPOUR BEER DISPENSER

In the UK it's now more difficult to get to pubs or bars – and Fizzics can provide an alternative source of draft beer. Its DraftPour dispenser works with any can or bottle, using micro-foam technology to pour through a tap before creating a dense, micro-foam head via the use of sound waves.

## 4. SISYPHUS

Sisyphus is a relaxing kinetic sculpture that doubles as a coffee table. Named after the legend of a Greek God who was sentenced to forever roll a boulder up a hill, a metal ball – via a magnetic, robotic arm – rolls silently through the sand, forever creating and erasing beautiful patterns.

## 5. OCULUS QUEST 2

The latest line of VR headsets produced by Oculus is ideal for those who don't have the budget for a PC-based VR set-up. The mobile headset offers high-quality virtual experiences at an affordable price of £299.

## 6. DREAM MACHINES P960RN

Choosing the right laptop for work and down-time can be difficult, but Polish-owned Dream Machines' P960RN may have solved the problem. Boasting a mighty Intel Core i7 9750H processor and a super-fast Nvidia GeForce RTX 2080 Max-Q graphics card, it is just 20mm thick and weighs only 2kg.

## 7. SONY WH-1000XM4 WIRELESS NOISE-CANCELLING HEADPHONES

Whether working at home or in an office, there are no shortage of distractions. These noise-cancelling headphones boast a number of new features including multipoint pairing, DSEE Extreme upscaling, conversational awareness and auto-play/pause using a built-in sensor.



@gavinwheeldon

# Attack is the best form of defence

## Cybercrime is on the rise

At Secarma we believe that all organisations should have the opportunity to do business with an understanding of the threats they face.

We understand that cybersecurity is a complex discipline and our approach is to guide an organisation through the process of securing their business with expert advice and education on best security practices.

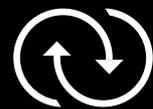
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