

# Technology

## 2018 Review

### Summary

- ▶ **GDPR:** On the 25th May 2018, General Data Protection Regulations (GDPR) came into force, significantly changing data protection law in Europe, strengthening the rights of individuals and increasing the obligations on organisations. Despite the advent of GDPR there were some very significant data breaches during the year, impacting on the confidence of consumers as to how their data was stored.
- ▶ **Artificial Intelligence (AI)** also 'came home' during the year with smart speakers (Amazon Echo, Google Home, Apple Home Pod) becoming ever more ubiquitous in homes across the country; demonstrating how commonplace AI is becoming all around us.
- ▶ **Company Valuations:** On a global level Amazon and Apple were the first companies to surpass trillion-dollar valuations.
- ▶ **Lending:** Strong demand continued in 2018, in line with 2017, with the main requirements being R&D, funding to expand into new markets and shareholder recapitalisations.
- ▶ **Wage Growth:** Irish recruitment company Morgan McKinley predicts salaries in the Technology Sector are set to rise 10% on average in 2019 as demand for candidates continues apace in project management, security architect and network engineering roles. They also state that in Dublin alone, there has been a 21% increase in the number of vacancies year on year. For more niche sectors, such as machine-learning and Artificial Intelligence, salaries could rise by as much as 20% for these in-demand professionals.

Technology sector increases are quite stark when compared to the Irish Government's forecast of 3% increase in wage inflation in 2019 from 2.4% in 2018. Ibec's HR Update Survey of 2018 stated that 80% of companies expect to increase basic pay in 2019, with the projected median pay increase of 2.5%.

- ▶ **Skills Demand:** The number of people at work in Ireland in 2018, rose to a record 2.27 million. The Central Bank of Ireland has predicted an unemployment rate of 4.9% in 2019, approaching what most economists equate to full employment. This continues to have downside pressures on the economy as availability of talent continues to contract. This is a particular challenge for Ireland's Technology Sector with growing demand for Software Developers, Web Developers and Network Engineers, as competition among firms has intensified leaving many roles unfilled. This trend is likely to continue for the foreseeable future.



### Bank of Ireland Funding in 2018

- ▶ **Overview of H2 Approvals:** The Software sector continued at a pace in 2018 with 55% of technology lending going into the sector. This was followed by Telecoms (22%) and Managed Services (18%). This follows the trend from previous years and further demonstrates the importance of the Software sector to Ireland's indigenous technology sector.
- ▶ This was further reinforced by William Fry's M&A report for 2018. While Business Services deals counted for the majority, TMT (Technology, Media and Telecoms) was the second most active sector in 2018 or 16% of total numbers, attesting to Ireland's strong reputation for technology businesses.

### H2 Investments and Acquisitions

- ▶ **Venture Capital :** The Irish Venture Capital Association recently published its Venture Pulse survey in association with William Fry confirming that funding into Irish technology firms fell by 25% to €739m in 2018. In particular Quarter 4 of 2018 showed a decline in funding of 35% to €115m. Quarter 4 did however display some positive results in relation to Seed Funding, rebounding strongly with the highest quarterly total of nearly €20 million across 50 companies. Average deal size in 2018 fell from €3.5m to €3.2m driven by a decline in larger investments of more than €10m. These were down 30% with only 12 companies raising more than €10m in 2018.

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Paul has over 20 years' experience in delivering transformational and innovative business opportunities. He has worked with leading technology-driven companies and institutions including TSSG (Waterford Institute of Technology) and the Adapt Centre (formerly CNGI), Trinity College Dublin, where he led technology commercialisation activities across both the indigenous and multi-national technology sectors. He has also worked closely with spin-outs and mentored new and established technology companies.

Paul managed the Consumer Technology portfolio for IDA Ireland (based in Boston), across New England and Eastern Canada territory; working with some of the world's biggest technology brands. Paul also completed a posting in the Middle East, based in Bahrain, assessing multi-million euro investment projects in the region. More recently he led business development for Eishtec across the North American market. A native of Waterford, Paul holds a Masters of Business (Hons) Internationalization from Waterford Institute of Technology.

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## 2019 Outlook

### Software as a Service (SaaS)

- ▶ Gartner predicts cloud application services – or software as a service (SaaS) revenues expected to grow by 17.8% to reach \$85.1 billion.
- ▶ Deloitte's global technology, media and telecommunications industry leader and US global technology sector leader, Paul Sallomi says that 2019 will be the year of 'everything as a service' (XaaS), enabling companies to speed up innovation and experimentation. XaaS now makes it cheaper and easier for users to access technologies and cutting-edge services they otherwise would not have access to acquire.

### Cloud

- ▶ Cloud-based, flexible consumption business models are seen as indispensable to companies seeking to transform their business models and operations in 2019. Cloud-based solutions remove the need for traditional investment in servers, networking and storage and instead can enable companies to leverage the investments and expertise of some of the world's biggest technology companies, without the associated risks and costs of acquiring scarce expertise.
- ▶ The fastest-growing segment of cloud, infrastructure as a service (IaaS) is forecasted to grow 27.6%.
- ▶ As companies come to terms with the task of migrating to cloud, it is likely that the Hybrid cloud model offers a solution; mixing on premise infrastructure with public and private cloud services.
- ▶ Companies will have to manage more and more applications in the cloud which will make automation inevitable to manage different processes, saving costs and time and eliminating time consuming manual processes.
- ▶ Revenues in the business process as a service category (BPaaS) are expected to grow by 7.9% to \$50.3 billion.
- ▶ In general cloud computing growth continues to accelerate as all industries and company sizes are acknowledging the benefits it brings to their businesses, through efficient deployment, scalability, flexibility and cost savings; essentially providing small companies with the capacity to look and feel like a big company.
- ▶ Globally, Gartner predicts that by 2021, revenue for the entire cloud industry will total \$278 billion which clearly demonstrates the trust that businesses have in the technology.

**Table 1. Worldwide IT Spending Forecast**  
(Billions of U.S. Dollars)

	2017 Spending	2017 Growth (%)	2018 Spending	2018 Growth (%)	2019 Spending	2019 Growth (%)
Data Center Systems	181	6.4	192	6	195	1.6
Enterprise Software	369	10.4	405	9.9	439	8.3
Devices	665	5.7	689	3.6	706	2.4
IT Services	931	4.1	987	5.9	1,034	4.7
Communications Services	1,392	1	1,425	2.4	1,442	1.2
Overall IT	3,539	3.9	3,699	4.5	3,816	3.2

Source: Gartner (October 2018)

### Global Outlook for the sector in 2019

- ▶ Worldwide IT spending is projected to total \$3.8 trillion in 2019, an increase of 3.2% from expected spending of \$3.7 trillion in 2018, according to the latest forecast by Gartner, Inc. They go on to say that it is the shift from ownership to service that is sending ripples through every segment of the forecast; signalling more use by enterprise of cloud services. See table 1.
- Worldwide spending for devices — PCs, tablets and mobile phones — is forecast to grow 2.4% in 2019, reaching \$706 billion, up from \$689 billion in 2018.

### Looking ahead

- ▶ **Security:** many commentators contend that cyber-attacks such as malware and phishing are likely to continue throughout 2019 from multiple sources. As the use of various devices become ever more pervasive with cloud technologies continuing to increase, so too is the potential of further attacks where consumers access content/ applications from unregulated sources.
- ▶ **Artificial Intelligence (AI):** it is likely this year will see significant deployment of AI to support automation of business processes, particularly in areas of customer service such as chatbots. Similarly it is likely we'll see increased deployment across manufacturing where robotics can produce products faster and more efficiently. That said, according to Forbes it seems the fear of robots replacing humans appears to be way off, for now. They contend that machines will be used to focus on mundane and

predictable activities and instead, enterprises will continue to focus on people and soft skills and human abilities as true capital and competitive advantage.

- ▶ **HealthTech:** as wearable technology becomes more pervasive we are also likely to see more advancement in the deployment of sensors in a clinical setting among patients, through monitoring their health and well-being by connected devices. We may also witness augmented reality becoming more common place in advancing precision surgery.

### Bank of Ireland

- ▶ We recognise that we have a unique opportunity to support our customers and to enable Irish businesses and the communities we jointly serve, to thrive.
- ▶ Our proven financial capabilities and appetite, combined with comprehensive sector expertise, provide us with a strong platform to meet the funding requirements of Irish technology companies.
- ▶ We are delighted to have provided various facilities to some of Ireland's best known technology brands across various sectors. It is our intention to grow further during the coming year and to this end we are delighted to announce the appointment of a designated Technology team to deliver on our agenda to be the Bank of Choice for Ireland's Indigenous Technology Sector. With the experience, the knowledge and most of all an understanding of your business, talk to our Technology Team to see how we can help you grow your business.