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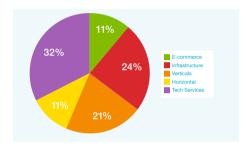
Sector Snapshot

Key Trends in Bank of Ireland Lending Activity

- Greater data volume and requirement to deliver across digital driving need for analytics, ERP and mobile solutions
- O IT services: cloud adoption and expansion into UK
- Business to business (B2B) software dominates (travel, payroll, EdTech, HR)
- Software as a Service (SaaS) competition: established software companies investing to upgrade their products to compete with 'born on internet' businesses
- O Telecoms: growth of software defined networking (SDN)
- Internet of Things: enabling silicon chips, gateways and antennas

Sector Structure and Growth

 Estimated size of industry is 1,100 businesses across software, digital marketing, infrastructure and e-commerce



- O 70%+ export focused with revenues of €2bn+
- Indigenous software revenues growing at c.10%
- Core running costs dropping on average 30% p.a. as a result of increased usage of cloud and open source software
- Larger addressable markets and more stable revenues through SaaS
- O Post-2009 seed fund investee companies now taking on debt



Bank of Ireland Strategy for the Technology Sector

BANK UNDERSTANDING

- O Sectors Team
- Regular sector updates



SUPPORT

- SECTOR

 O ISA pricing workshop
- O Irish Software Awards
- Predict Conference
- O Mobile Monday

LENDING

- 2x increase in approvals
- o €100m InnovFin Fund
- O Includes: Version 1, S3 Group, VSware, MicksGarage, Milner Browne

ADOPTION

- Engaged with 90+ indigenous technology businesses
- Increased adoption of Irish technology

EARLY-STAGE SUPPORTS

EXPERTISE

Recruiting sector

External analyst

Research with

- O Startlab Accelerator
 - O Workbenches
- O Startup Gathering

FOUITY

- Delta and Kerne Seed Funds
- O BDO Development Capital Fund



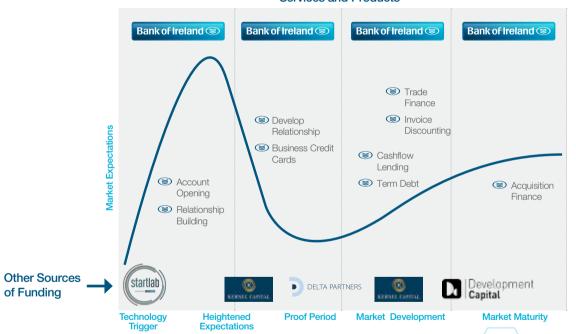
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Where Bank of Ireland Fits

Services and Products



Bank of Ireland active across all life stages of technology businesses





Bank of Ireland and InnovFin



- O Bank of Ireland is the sole Irish bank approved to participate in InnovFin (launched September 2015)
- O InnovFin is a European Investment Fund (EIF) risk-sharing instrument with a 50% guarantee on debt between €300k and €7.5m
- O Bank of Ireland agreement with EIF provides for a total of €100m funding to innovative companies in Ireland over the next two years
- O Scheme developed to improve access to debt finance for innovative SMEs. Bank of Ireland is committed to supporting growth businesses, and participation in InnovFin will further assist the Bank in lending to innovative SMEs in Ireland
- O EIF eligibility criteria focus on new / improved product development, R&D spending, company age and growth. Bank of Ireland is responsible for validating eligibility under these criteria
- The first loan under this scheme has been approved to support a scaling software company established in 2013







For small steps, for big steps, for life

What Bank of Ireland Looks At

LINOLO

- O Barriers to Entry
- O IP Protection
- O Competitive Dynamics
- O Technology Life-cycle

- O Risk Mitigants
- a more winganto
- O Chalegy
- O Sales Cycle
- O External Validation

- O Track Record
- Industry Relationship
- O Capital Structure
- O External Supports (Enterprise Ireland, etc.

- O Historic Performance
- Projections
- Cash Flows
- O Debtor Quality

EINANCIAL

EAN







Sector Metrics

	Hardware/Devices	Perpetual Licence model	Managed Service Provider (MSP)	Software as a Service (SaaS)	E-Commerce
Characteristics	Cong development cycle High R&D spend Outsourced manufacturing Typically Irish hardware / devices are non-consumer	 Small amount of high-value customers References are key High barriers to entry Long sales cycle 	O Relatively labour intensive O Market consolidation O Customers looking for capability around cloud, security and digital	O Typically requires large number of customers with a relatively simple ongoing need	 Role of network effects Heavy marketing spend Focus on business model innovation
Metrics	O Patents held O Understand technology lifecycle O Industry / scientific background of promoter	 Pipeline conversion Historic margin Support and maintenance level Annual recurring revenues 	O Customer satisfaction O Workforce utilisation O Service level agreements O Partner certification	O Cost of customer acquisition O Lifetime value of customer (LTV)	O Conversion / bounce rate O Organic vs paid search O App retention
Risks	Cong sales cycles with large corporates / government customers Competition with larger-scale competitors	Customer concentration Debtor quality Product not mobile optimised 'Born on internet' SaaS competitors	 MSP can have a thin margin Growing footprint of telcos in IT services Threat of lower-cost larger players 	High upfront costs with long thin revenue tail Critical to monitor customer attrition	O Search engine optimisation (SEO) O Affiliate costs O Low barriers to entry O Data security





Sample Bank of Ireland Transactions



Overview:

S3 Group is a technology company that provides products, software solutions, and professional services to TV operators, OEMs, semiconductors and healthcare providers.

BOI Funding:

Provided finance to support the growth of the business.

Key Insight for BOI:

S3's value proposition across three distinct high-value and high-growth segments.



Overview:

With over 700 employees, Version 1 is one of the fastest growing IT services companies in Western Europe.

BOI Funding:

Provided acquisition finance to support the growth of the business.

Key Insight for BOI:

Version 1's ability to scale and integrate acquisitions while retaining exceptional employee engagement.



Overview:

MicksGarage was founded in 2003 by brothers Michael and Ciaran Crean in Mayo. Starting off with 3,000 product listings, MicksGarage now lists over 5.6m products and ships to over 120 countries worldwide.

BOI Funding:

Provided finance to support the overseas expansion of the business.

Key Insight for BOI:

MicksGarage's development of a proprietary logistics and technology platform that distinguishes them from their competitors.







Sample Bank of Ireland Transactions (continued)



Overview:

Phorest specialises in computer software for hairdressers, spas, and beauty salon owners. The software is used in more than 2,000 salons in ten countries around the world.

BOI Funding:

Provided finance to support the growth of the business.

Key Insight for BOI:

The way that Phorest excelled at the SaaS delivery model.



Overview:

Milner Browne provides business management software, support and services to over 350 small to mediumsized companies.

BOI Funding:

Provided finance to support the growth of the business.

Key Insight for BOI:

The way that Milner Browne is innovating on the SAP platform to create new products.



Overview:

VSware is a design-led, cloud and mobile-based school administration platform, which handles all core school data including attendance, assessments, and behaviour.

BOI Funding:

Provided finance to support the expansion of the business into Europe.

Key Insight for BOI:

VSware's ability to deliver their software via the cloud and so significantly reduce the complexity cost of ownership for their customers.







Recent Technology Trends

	Trends	Transactions / Events	Ireland
Infrastructure and Telecommunications	 Greater use of software over physical equipment in telecoms networks and datacenters (SDX) Mobile operators focusing on customer retention Enterprise cloud adoption seeing convergence of storage and servers 	 Nokia purchase of Alcatel Lucent for \$16.5bn Deutsche Bank / HP cloud deal Dell purchase of EMC for \$67bn 	 O Huawei purchase of Amartus O Brite:Bill wins €10m contract with Sprint
Hardware / Connected Devices	O Semiconductor maker M&A O Internet of Things (IoT) demand driving new chips and services	O Dialog purchase of Amtel for €5bn	O Davra / Cisco and Ersúles / Intel partnershipsO Movidius raises €40m
Enterprise Applications	 Network security breaches Analytics for SME market Hadoop and Node.js hits mainstream App Development 	O Cisco purchase of OpenDNS for \$635mO Permira acquires InformaticaO IBM acquires StrongLoop	O Adaptive MobileO Milner Browne use of HANAO Expansion of nearFormO FeedHenry sold for €63.5m
Vertical Applications	Maturing of 'born SaaS' players Human capital management (HCM) investment up 47% to \$2.8bn in 2015 year to date	O Workday expansion O Zenefits raises \$500m	O Phorest growth in US market O Hirelab / Induction Manager / Arthion growth
E-commerce / FinTech	 ○ E-commerce optimization ○ Speed / Transparency of transfer ○ Cost of ad blocking estimated at €21.8bn 	 PayPal acquires Xoom for \$890m 43% of Kenyan GDP processed through mobile M-PESA platform 	 O Clavis and Channelsight fundraises O CurrencyFair raises €10m+ O PageFair growth
IT Services and BPO	 IT Services acquiring more specific (cloud / media / digital) capabilities over developing in house Consumer technology businesses increasing emphasis customer experience 	Accenture acquire digital business Brightstep	O Accenture acquire S3's TV Technology unit O Voxpro growth

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Irish Technology Sector Insights 2015









Survey Highlights

- O Financial performance: 71% of Irish technology businesses reported growing revenue in 2014. 54% are profitable
- 2016 priority revenue growth: competitive dynamics of the industry and low marginal cost advantage drive the focus on growth
- O Investment focus: sales and marketing are becoming more important and driving investment decisions as 49% of businesses cite it as their main area for investment in 2016
- O Top challenge: gaining more customers is the top challenge for businesses in the sector at 29%
- O Support for the sector: both early-stage and established businesses cite a change in tax incentives for investors as a key priority in relation to outside support for the sector
- O Incubators / Accelerators: 46% have availed of incubator services or accelerator facilities and the main feature they consider could improve these offerings is greater access to capital funders



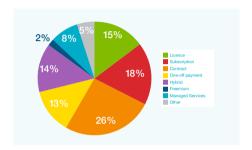






Sector Profile

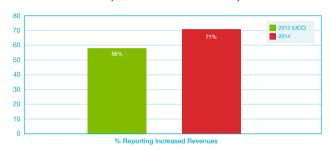
What is the primary source of revenue for your business?



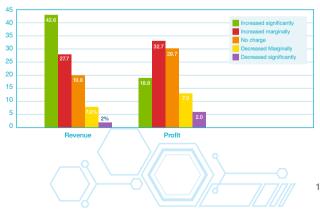
- The profile of the sector has remained similar over the past ten years, dominated by smaller companies with revenues <€2.5m</p>
- 54% of companies are profitable while 71% grew revenues. This is a reflection of the high level of R&D and the need to grow quickly in the face of global competition
- Industry costs have dropped dramatically with the advent of cloud and open source. In addition, the move to recurring revenue models (e.g. SaaS) provides higher potential for scale. These shifts also enhance suitability for debt funding

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How have revenues performed in 2014 compared to 2013?



How have the business' revenues and profits in 2014 compared with 2013?

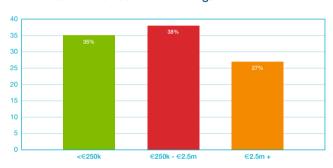




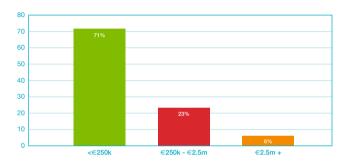


Revenue

What was the business's revenue figure for 2014?



What was the business's EBITDA for 2014?



- 17% of businesses had revenue ≥€5m, while 35% of businesses had revenue <€250k
 </p>
- S% have an EBITDA of €1m+ or more



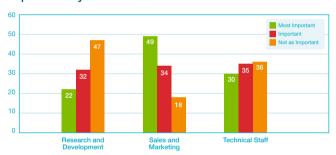




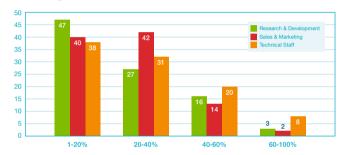


Investment

Which of the following investment areas are the most important to your business?



What percentage of turnover do you plan to invest in the following three areas in 2016?



- O Sales and Marketing is the area which will receive the highest investment with 49% citing it as their main area for investment
- Reflects ongoing professionalisation of sales in the sector and its pivotal role in scaling
- Bank of Ireland has seen this reflected in lending applications over the past 12 months with a key focus of funding applications on recruitment and sales and marketing capability



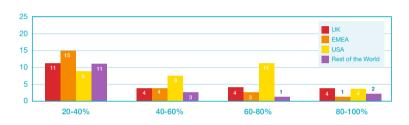






Sales

What percentage of sales are from the following regions?



- The domestic market is used to gain initial references
- 85% of businesses sell domestically, however, only24% generate 80-100% of their sales in Ireland
- Previous market studies have shown that 70%+ of sector services and products are exported
- US and UK remain key export markets

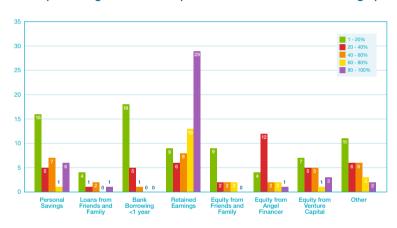






Capital Structure and Funding

What percentage of current capital is sourced from the following options?



- Retained earnings remain dominant in line with previous market reports
- 31% are planning to make an application for bank finance in the next twelve months
- Adoption of recurring revenue models and reduction in running costs are making bank finance more appropriate
- 78% believe the bank funding environment for technology businesses has improved or remained the same in the past year

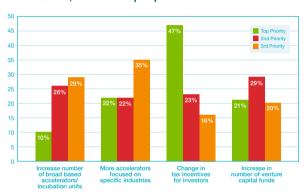




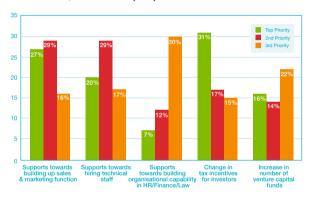


Priorities

In terms of outside support for early-stage technology businesses, rank the top 3 priorities.



In terms of outside support for **established** technology businesses, rank the top 3 priorities.



- Tax incentives are a key priority for both established and early-stage businesses
- O Established companies are looking for supports around sales and marketing



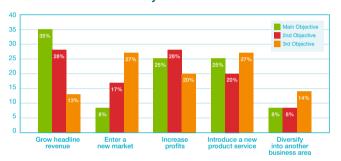




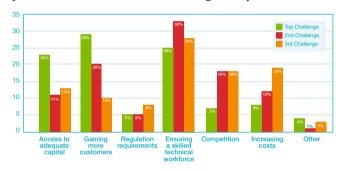


Goals and Challenges

Which objectives are the most important for your business to achieve in the next two years?



Which of the following are the three biggest challenges your business will face in the coming three years?



- O Growing headline revenue is the key priority, emphasising the need to acquire scale to deliver value given the typical high up-front costs and low marginal costs
- The top challenges for companies are gaining more customers (29%) and accessing capital (23%)









Expectations

Which two of the following are long-term goals for your business?



- Organic growth remains the key priority
- Reflecting the successful recent exits for Irish technology businesses (e.g. Realex / Storyful), being acquired is second choice
- IPOs are not a feature of the technology sector in Ireland

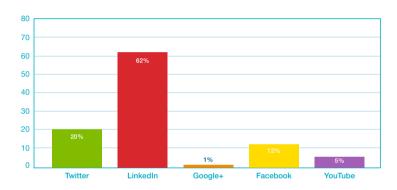






Social Media

If your business actively uses social media to generate sales, which is the most effective platform?



- LinkedIn is considered most effective social media platform with a 41% selection
- 38% cite that they either do not use social media or that it is not beneficial for sales generation
- This aligns with the predominantly B2B profile of the sector, where a higher value is placed on relationship-based sales



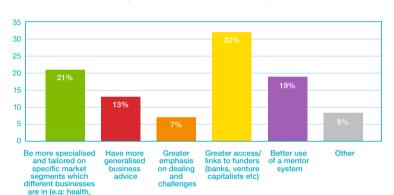


travel, etc)



Incubators and Accelerators

Which of the following should be the top priority to improve the incubator services and accelerator facilities?



- Incubators and accelerators remain popular with 46% of businesses using their services
- Service users cite the priority areas for improvement as greater links to funders, increased specialisation and better use of a mentor system







Key Findings

- Sustained and increased revenue growth: the number of businesses growing their revenue increased to 71% in 2014, up from 58% in 2013
- O **Profitability:** while 54% of businesses are profitable, growth is the main objective reflecting the competitive dynamics in the industry and the potential rewards of scale
- O Capital structure: retained earnings, at 65%, are the most used source for established companies
- O Bank funding: 78% believe the bank funding environment for technology businesses has improved or remained the same in the past year. 31% are planning to make an application for bank finance in the next twelve months
- O Sales channels: relationship-based sales remain key in this B2B sector with use of social media as a sales channel still relatively low
- Key priorities: within their businesses, sales and marketing is the main focus for investment while externally a change in tax incentives is desired









Methodology / Overview

- Objective: provide enhanced understanding of the Irish technology sector including capital structure and financing
- All respondents are indigenous technology businesses represented by owners / GMs / MDs / Directors across Services / Software / Digital / Online businesses
- O Survey was conducted online in August 2015
- Results are based on a sample of 101 from a database of 1.100 businesses
- Research was conducted by Trinity College
 Dublin on behalf of Bank of Ireland

Profile of Businesses

Age of Business	% of Sample	Sector Type	% of Sample
Up to 2 years	18	Software	43
2-4 years	22	Hardware	12
5-10 years	21	Professional / Consulting	18
11 years +	39	Managed Services Provider	9
		Distributor	3
		Systems	9
		Other	6

Location and Employee Numbers

Location	% of Sample	Number of Employees	% of Sample
Cork	9	1 - Self employed	7
Dublin	61	2 - 4	19
Galway	4	5 - 9	26
Limerick	9	10 - 20	15
Rest of Country	17	21 - 49	18
		50+	15







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Adrian joined Bank of Ireland in 2012 as Head of Technology supporting the Business Banking and Corporate Banking teams. Prior to joining the Bank, he worked with Daon, a global security software company, where he was a senior research analyst focused on market strategy and technology trends. Adrian has advised a number of indigenous technology companies, with prior experience including IT Project Management and as a researcher at UCD Centre for Business Analytics.

Adrian holds an MBA from Trinity College Dublin and postgraduate qualifications in Financial Management (ACCA) and Information Technology from UCD. He is a former chair of Information Security Ireland.



Sources

Bank of Ireland / TCD research Bank of Ireland / UCC research

Andreessen Horowitz Corum Group EIF Enterprise Ireland EY Gartner KPCB McKinsey PwC UCD

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Notes		







Notes		





