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

EXPERTISE
- Recruiting sector expertise from industry
- External analyst research
- Research with UCC and TCD

EARLY-STAGE SUPPORTS
- Startlab Accelerator
- Workbenches
- Startup Gathering

EQUITY
- Delta and Kernel Seed Funds
- BDO Development Capital Fund

BANK UNDERSTANDING
- Sectors Team approach
- Regular sector updates

SUPPORT SECTOR
- ISA pricing workshop
- Irish Software Awards
- Predict Conference
- Mobile Monday

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

Key Trends in Bank of Ireland Lending Activity

- H1 2015 lending approvals double those of FY2014
- Impact of hardware life-cycle: businesses reinvesting as underlying legacy systems no longer supported
- Greater data volume and requirement to deliver across digital driving need for analytics, ERP and mobile solutions
- 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
- 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
- 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
- Post-2009 seed fund investee companies now taking on debt
Bank of Ireland and InnovFin

- Bank of Ireland is the sole Irish bank approved to participate in InnovFin (launched September 2015)
- InnovFin is a European Investment Fund (EIF) risk-sharing instrument with a 50% guarantee on debt between €300k and €7.5m
- Bank of Ireland agreement with EIF provides for a total of €100m funding to innovative companies in Ireland over the next two years
- 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
- 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
Irish Technology Sector Insights
2015
Survey Highlights

- **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 drives the focus on growth.

- **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.

- **Top challenge:** gaining more customers is the top challenge for businesses in the sector at 29%.

- **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.

- **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?

- Licence: 15%
- Subscription: 8%
- Contract: 14%
- One-off payment: 13%
- Hybrid: 26%
- Freemium: 18%
- Managed Services: 5%
- Other: 2%

The profile of the sector has remained similar over the past ten years, dominated by smaller companies with revenues <€2.5m.

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 access to debt funding.

How have revenues performed in 2014 compared to 2013?

- Increased significantly: 58% (2013), 71% (2014)
- Increased marginally: 20% (2013), 25% (2014)
- No charge: 13% (2013), 15% (2014)
- Decreased marginally: 7% (2013), 9% (2014)
- Decreased significantly: 2% (2013), 3% (2014)

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

- Revenue: 42.6% (2013), 27.7% (2014)
- Profit: 19.8% (2013), 19.8% (2014)

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Revenue

What was the business’s revenue figure for 2014?

- 35% had revenue <€250k
- 38% had revenue €250k - €2.5m
- 27% had revenue ≥€2.5m

What was the business’s EBITDA for 2014?

- 71% had EBITDA <€250k
- 23% had EBITDA €250k - €2.5m
- 6% had EBITDA ≥€2.5m

- 17% of businesses had revenue ≥€5m, while 35% of businesses had revenue <€250k
- 8% have an EBITDA of €1m+ or more
**Investment**

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

- **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.

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

- **Research and Development**
- **Sales and Marketing**
- **Technical Staff**

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Sales

What percentage of sales are from the following regions?

- 85% of businesses sell domestically, however, only 24% generate 80-100% of their sales in Ireland
- The domestic market is used to gain initial references
- 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.

- Increase number of broad based accelerators/incubation units: 26%, 29%
- More accelerators focused on specific industries: 35%
- Change in tax incentives for investors: 47%
- Increase in number of venture capital funds: 29%

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

- Increase number of broad based accelerators/incubation units: 20%, 16%
- More accelerators focused on specific industries: 22%
- Change in tax incentives for investors: 27%
- Increase in number of venture capital funds: 29%

- Supports towards building up sales & marketing function: 22%
- Supports towards hiring technical staff: 29%
- Supports building organisational capability in HR/Finance/Law: 29%
- Change in tax incentives for investors: 30%
- Increase in number of venture capital funds: 14%

- Supports towards building up sales & marketing function: 22%
- Supports towards hiring technical staff: 20%
- Supports building organisational capability in HR/Finance/Law: 17%
- Change in tax incentives for investors: 17%
- Increase in number of venture capital funds: 14%

- Supports towards building up sales & marketing function: 29%
- Supports towards hiring technical staff: 16%
- Supports building organisational capability in HR/Finance/Law: 15%
- Change in tax incentives for investors: 14%
- Increase in number of venture capital funds: 16%

Tax incentives are a key priority for both established and early-stage businesses.

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?

- Growing headline revenue - 35%
- Enter a new market - 28%
- Increase profits - 27%
- Introduce a new product service - 25%
- Diversify into another business area - 27%

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

- Access to adequate capital - 34%
- Gaining more customers - 37%
- Regulation requirements - 21%
- Ensuring a skilled technical workforce - 27%
- Competition - 45%
- Increasing costs - 29%
- Other - 6%

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

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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
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.

Incubators and Accelerators

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

- Be more specialised and tailored on specific market segments which different businesses are in (e.g.: health, travel, etc) - 21%
- Have more generalised business advice - 13%
- Greater emphasis on dealing and challenges - 7%
- Greater access/links to funders (banks, venture capitalists etc) - 32%
- Better use of a mentor system - 19%
- Other - 8%

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.

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Key Findings

- **Sustained and increased revenue growth**: the number of businesses growing their revenue increased to 71% in 2014, up from 58% in 2013

- **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

- **Capital structure**: retained earnings, at 65%, are the most used source for established companies

- **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

- **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
- 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

<table>
<thead>
<tr>
<th>Age of Business</th>
<th>% of Sample</th>
<th>Sector Type</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2 years</td>
<td>18</td>
<td>Software</td>
<td>43</td>
</tr>
<tr>
<td>2-4 years</td>
<td>22</td>
<td>Hardware</td>
<td>12</td>
</tr>
<tr>
<td>5-10 years</td>
<td>21</td>
<td>Professional / Consulting</td>
<td>18</td>
</tr>
<tr>
<td>11 years +</td>
<td>39</td>
<td>Managed Services Provider</td>
<td>9</td>
</tr>
</tbody>
</table>

Location and Employee Numbers

<table>
<thead>
<tr>
<th>Location</th>
<th>% of Sample</th>
<th>Number of Employees</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cork</td>
<td>9</td>
<td>1 - Self employed</td>
<td>7</td>
</tr>
<tr>
<td>Dublin</td>
<td>61</td>
<td>2 - 4</td>
<td>19</td>
</tr>
<tr>
<td>Galway</td>
<td>4</td>
<td>5 - 9</td>
<td>26</td>
</tr>
<tr>
<td>Limerick</td>
<td>9</td>
<td>10 - 20</td>
<td>15</td>
</tr>
<tr>
<td>Rest of Country</td>
<td>17</td>
<td>21 - 49</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50+</td>
<td>15</td>
</tr>
</tbody>
</table>
### Recent Technology Trends

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

Market Expectations

Other Sources of Funding

Technology Trigger
Heightened Expectations
Proof Period
Market Development
Market Maturity

Services and Products

Bank of Ireland active across all life stages of a technology business

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What Bank of Ireland Looks At

**TECHNOLOGY**
- Barriers to Entry
- IP Protection
- Competitive Dynamics
- Technology Life-cycle

**MARKET**
- Risk Mitigants
- Strategy
- Sales Cycle
- External Validation

**TEAM**
- Track Record
- Industry Relationships
- Capital Structure
- External Supports (Enterprise Ireland, etc.)

**FINANCIAL MODEL**
- Historic Performance
- Projections
- Cash Flows
- Debtor Quality
## Sector Metrics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Hardware/Devices</th>
<th>Perpetual Licence model</th>
<th>Managed Service Provider (MSP)</th>
<th>Software as a Service (SaaS)</th>
<th>E-Commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long development cycle</td>
<td>Small amount of high-value customers</td>
<td>Relatively labour intensive</td>
<td>Typically requires large number of customers with a relatively simple ongoing need</td>
<td>Role of network effects</td>
</tr>
<tr>
<td></td>
<td>High R&amp;D spend</td>
<td>References are key</td>
<td>Market consolidation</td>
<td></td>
<td>Heavy marketing spend</td>
</tr>
<tr>
<td></td>
<td>Outsourced manufacturing</td>
<td>High barriers to entry</td>
<td>Customers looking for capability around cloud, security and digital</td>
<td></td>
<td>Focus on business model innovation</td>
</tr>
<tr>
<td></td>
<td>Typically Irish hardware / devices are non-consumer</td>
<td>Long sales cycle</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metrics</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patents held</td>
<td>Pipeline conversion</td>
<td>Customer satisfaction</td>
<td>Cost of customer acquisition</td>
<td>Conversion / bounce rate</td>
</tr>
<tr>
<td></td>
<td>Understand technology lifecycle</td>
<td>Historic margin</td>
<td>Workforce utilisation</td>
<td>Lifetime value of customer (LTV)</td>
<td>Organic vs paid search</td>
</tr>
<tr>
<td></td>
<td>Industry / scientific background of promoter</td>
<td>Support and maintenance level</td>
<td>Service level agreements</td>
<td></td>
<td>App retention</td>
</tr>
<tr>
<td></td>
<td>Annual recurring revenues</td>
<td></td>
<td>Partner certification</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risks</th>
<th>Hardware/Devices</th>
<th>Perpetual Licence model</th>
<th>Managed Service Provider (MSP)</th>
<th>Software as a Service (SaaS)</th>
<th>E-Commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long sales cycles with large corporates / government customers</td>
<td>Customer concentration</td>
<td>MSP can have a thin margin</td>
<td>High upfront costs with long thin revenue tail</td>
<td>Search engine optimisation (SEO)</td>
</tr>
<tr>
<td></td>
<td>Competition with larger-scale competitors</td>
<td>Debtor quality</td>
<td>Growing footprint of telcos in IT services</td>
<td>Critical to monitor customer attrition</td>
<td>Affiliate costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Product not mobile optimised</td>
<td>Threat of lower-cost larger players</td>
<td></td>
<td>Low barriers to entry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Born on internet’ SaaS competitors</td>
<td></td>
<td></td>
<td>Data security</td>
</tr>
</tbody>
</table>
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Bank of Ireland
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Tel: +353 (0) 87 276 0308

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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