

**Leadership and Management  
Skills Challenges within Life and  
Chemical Sciences Sectors**

**Final Report for**

**Scottish Enterprise**

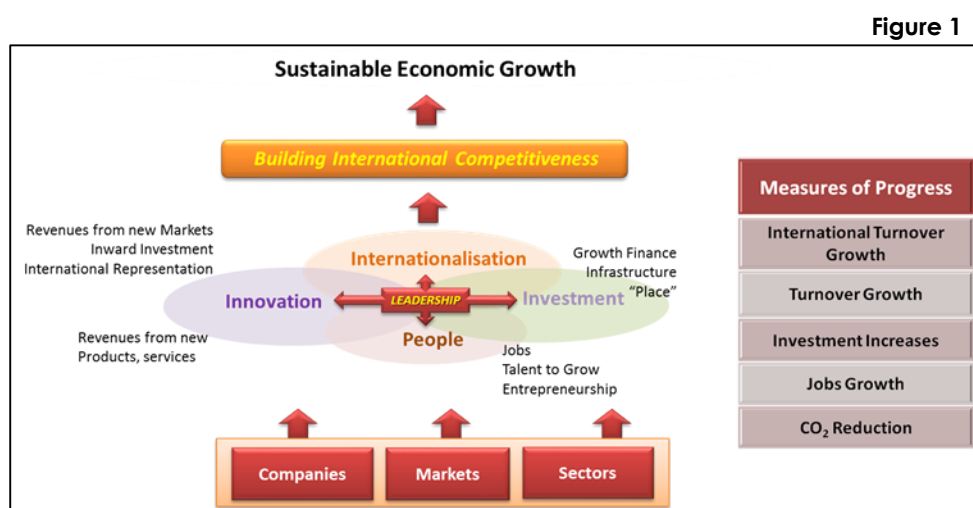
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## 1 Introduction and Background

The emphasis on leadership and management could not be clearer in Scotland with leadership sitting at the heart of Scotland's Economic Strategy and being cited as a key enabler in helping to realise 'sustainable economic growth'.

Improved leadership development is seen as central to building Scotland's international competitiveness, and leadership development remains a key strategic priority for Scottish Enterprise (SE).<sup>1</sup> Moving towards 2018, leadership will become one of the main drivers of SE's key themes which include internationalisation, innovation, investment and people. As part of this, leadership will become key to SE's engagement activities – with companies and sectors reflecting its position in helping to achieve their strategic purpose, as evidenced in **Figure 1.1**



This renewed focus on leadership will require a greater understanding of the benefits of developing leaders across Scotland's business base and SE has highlighted their intent to:

- **further build momentum** in creating a culture of leadership within companies and sectors to develop confident, ambitious leaders who can lead their people, organisations and industries to increase long term growth
- **develop a global mind set** in the leaders of ambitious and innovative Scottish companies which will lead to growth from increased internationalisation<sup>1</sup>

The **challenge** for SE going forward includes:

- **significantly increasing the number of growth companies investing in developing their leaders**, raising global ambitions and the appetite for innovation, and thereby significantly accelerating growth
- **strengthening leadership within sectors** to enable Scotland to derive maximum value from its asset base<sup>1</sup>

The following report presents the findings from a study commissioned by SE to help understand the current leadership and management skills gaps within two of their priority sectors – life and chemical sciences. The findings from this research will help inform and shape future approaches to improving and implementing leadership products as part of the SE offering to companies within these sectors.

<sup>1</sup> Scottish Enterprise. (2014). Development of leaders - maximising the impact: *An Integrated Approach to Leadership Development 2015-2018*

## 1.1 Method of work

Our **method of work** consisted of:

- **desk review** – to set the context and evidence current thinking on leadership and management skills gaps within life and chemical sciences and from a broader perspective
- **in depth interviews** – to capture what the current leaders and specialists working within the sector believe to be the current gaps and challenges

The in depth interviews included both face-to-face and telephone interviews with questions focused on four key work packages which included:

- **work package 1** – suitability of current leadership and management training products for the life science (LS) and chemical science (CS) sectors
- **work package 2** – the potential next generation of leaders/managers required to grow the LS and CS sectors
- **work package 3** – the needs of leaders/managers of Scottish sites of global organisations
- **work package 4** – support for the progression of company leaders to become recognised leaders within their industry sector

A total of **35 interviews** were conducted with:

- industry groups and representatives
- organisations across life and chemical sciences
- Scottish Enterprise (SE)
- Skills Development Scotland (SDS)

A table showing the organisations and individuals interviewed against each work package can be seen in Appendix 1. Some interviewees represented multiple work packages.

## 1.2 Background

The role of good leadership and management in helping achieve sustainable economic growth has been emphasised by industry and government across the UK.<sup>2</sup>

The UK Commission for Employment and Skills' reported that **the UK will need 544,000 new managers by the end of the decade**. It has been highlighted that management skills are critical to ensuring high performance working and business success. Organisations with a more qualified management workforce and a dedicated programme of management development perform better and have higher quality product and market strategies.<sup>3</sup>

In Scotland, research and stakeholder feedback has suggested that while there are good managers, **there is a lack of recognition of the importance of good leadership and management**. The feedback also highlights that the lack of recognition has resulted in limited demand for leadership and management development, and as a result, good leadership skills and strong organisational ambition are not seen as 'the norm'.<sup>4</sup>

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<sup>2</sup>[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/32327/12-923-leadership-management-key-to-sustainable-growth-evidence.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32327/12-923-leadership-management-key-to-sustainable-growth-evidence.pdf)

<sup>3</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/298510/working-futures-2012-2022-main-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298510/working-futures-2012-2022-main-report.pdf)

<sup>4</sup> <http://www.gov.scot/Topics/Education/skills-strategy/making-skills-work/utilisation/FrameworkforAction>

## 2 Desk Review

The following section provides outputs of a desk review to set the context and evidence current thinking on leadership and management skills gaps within life and chemical sciences and were used as a basis to inform the areas of exploration across each work package interview.

### 2.1.1 Characteristics of a good leader

A recent internal SE report provided some insight into the characteristics of a good leader; this included having a clear vision of the company direction, creating a positive culture, valuing employees, instilling a sense of collective responsibility and shared decision making, positively embracing change, humility, being a good listener, and flexibility in delivering the vision for the business.<sup>5</sup> Other characteristics include the ability to take a broader perspective, i.e. “*take off one’s company hat*”; being a leader across sectors and subsectors – outside one’s subsector – with wider sectoral and geographic experience, knowledge and perspective and being able to see linkages across sectors. Specifics include:<sup>6</sup>

- focus on achievement of sector objectives
- well-connected and influential across industry and globally
- broader, systems-based perspective across the industry
- positively engaging with others across the industry
- aware of wider context: economic, political, public sector

We note that while this report interviewed a large number of people across SE supported sectors only three belonged to life and chemical sciences and as such this research was commissioned to validate these findings with a larger group.

### 2.1.2 Key challenges and gaps

**A shortage of key skills** – research by CMI (2012) highlight that a shortage of skills was cited by managers as their number one issue faced in trying to meet business objectives.<sup>2</sup> In Scotland, skills were highlighted as being a second order challenge by business managers behind cash flow, attracting and retaining customers and the downturn in the economic climate.<sup>7</sup> In addition, many organisations had recruited from outside Scotland due to a lack of required skills amongst the local labour force and the largest skills gaps were reported in general business and commercial skills.<sup>7</sup> Other research indicates that more emphasis should be placed on the softer skills rather than technical knowledge as “*nowadays leaders face more and more challenges related not to knowledge itself but rather social competence*”.<sup>6</sup>

**Failure to apply skills strategically** – evidence suggests that it is not just about developing the right leadership and development skills but it is also about deploying these skills within the organisation effectively.<sup>2</sup> Research by BIS (2012) indicates that UK provision of leadership and management training tends to be ad hoc rather than strategic.<sup>2</sup> CMI and BIS (2012) highlight the importance of embedding leadership and management development into working life. This is mirrored by Bailey *et al* (2015) who state that new managers can be positioned to become effective as leaders if they are properly developed from the beginning. Bailey *et al* (2015) further state that forward-looking executives are starting to recognise that developing new leaders is vital to

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5 Scottish Enterprise. (2014) The 8 Principles of Outstanding Leadership (Internal document)

6 <https://www.spencerstuart.com/research-and-insight/leadership-in-life-sciences-casting-a-wider-net>

7 Life Sciences Scotland. (2011). Scottish life sciences employer skills survey 2010

keep up with the pace of change in the business world, and to address the leadership skills gap emerging as boomers retire.<sup>8</sup>

Finally, Bailey *et al* (2015) suggest that leadership training requires that new managers understand their connection to their organisation's strategy and gain the skills and experience to help them use that knowledge to inspire and focus their teams.

**Employer concern around the relevance of training** – some organisations report that much of the leadership training available is not suitable for their organisation because it is inflexible in both content and delivery. This issue is particularly true for SMEs who struggle to release staff for training due to a lack of cover and or limited training budgets.<sup>2</sup>

**Perception that leadership and management skills are picked up on the job** – many managers are often chosen based on their technical capability despite this being less important in senior roles and they often receive little leadership and management training.<sup>2</sup> Discovery Consulting (2011) point out that within life sciences most leaders begin their careers as scientists, and this requires a shift in mind-set and values as well as in behaviour, altering one's identity from that of scientist to that of a leader.<sup>9</sup> They further claim that this transition can be reinforced and accelerated through structured learning and coaching activities.<sup>9</sup>

### 2.1.3 Women in leadership and management roles

In 2011, BIS published an independent review into female representation on UK corporate boards by Lord Davies of Abersoch. The report recommended that all FTSE 100 companies should aim for a minimum of 25% female representation in the boardroom by 2015. McKinsey's report "Diversity Matters" revealed that the most gender-diverse companies were 15% more likely to outperform the least diverse. Four years on from the Lord Davies review, the number of female directors has doubled – and **in July 2015, the FTSE 100 companies reached their target of 25% female directors**<sup>10</sup>. In the same month, the Prime Minister announced plans to require UK firms to publish gender pay audits in a bid to end the gender pay gap "in a generation"<sup>11</sup>. However, while retail companies have 1 in 3 female boards, pharmaceuticals and health care, technology, and engineering companies average 1 in 4 female boards<sup>10</sup> above.

The Women on Boards: A Life Sciences' Perspective study of 417 senior executives revealed that more than **1 in 4 boards had no female representation at all**. Life sciences was also reported to be no worse or better than other industries. While senior life science executives agreed that balance and diversity make for better boards, and recognise that women bring different, much needed skills to the boardroom, they commented that culture and life choices determined boardroom balance and quotas were not the answer. Rather, better management and staff development through flexible working, proactive mentoring, greater transparency in recruiting and leaderships endorsement could help to achieve a better balance in the boardroom<sup>12</sup>.

The September 2014 briefing from the Knowledge Exchange<sup>13</sup> focused on the provision of science, technology, engineering and maths (STEM) skills in the UK. It identified the **lack of diversity in the STEM workforce as one of the biggest challenges** to be

<sup>8</sup> <http://smartblogs.com/leadership/2015/04/30/new-managers-as-leaders-closing-the-skills-gap/>

<sup>9</sup> <http://discoveryconsulting.net/blog/becoming-a-life-sciences-leader-%E2%80%93-challenges-and-solutions-to-making-the-transition-from-scientist-to-leader>

<sup>10</sup> FTSE 100 firms appoint more women to their boards (2015) BBC News

<sup>11</sup> Worst sectors for boardroom diversity: Women joining FTSE 100 boards but mining lags far behind retail industry as Conservatives push to end gender pay gap (2015) City AM

<sup>12</sup> Women on Boards: A Life Sciences' Perspective (2012) RSA

<sup>13</sup> Building STEM skills in the UK (In focus), Idox Information Service 2014

addressed, with women underrepresented in STEM-related fields, particularly at the most senior levels. CaSE (2014) reported that the proportion of women reduces significantly at each successive level in academia and also across STEM industry<sup>14</sup>.

CaSE makes a series of recommendations, including:

- appointing and training a science 'subject leader' in every English primary school by the end of the next term of government
- making diversity a central consideration in the development and implementation of all government policy making for STEM, including apprenticeships, teacher training, university funding, curriculum reform and careers advice
- engaging with the Equality Challenge Unit's Race Equality Charter Mark to uncover and address barriers to access, progression and success for staff and students

However, **initiatives aimed at attracting girls to study physics have reportedly had the opposite effect**, and it has been suggested that teachers should do more to dispel stereotypes about scientists and explain the opportunities available to parents and pupils<sup>15</sup>.

It has also been suggested that the **lack of gender diversity in STEM is the result of perceptions and biases combined with the impracticalities of combining a career with family**<sup>16</sup>. The Women in Scientific Careers sixth report for the House of Commons recommends that:

- diversity and equality training should be provided to all STEM undergraduate and postgraduate students, and should be mandatory for all members of recruitment and promotion panels and line managers
- the government should work with the higher education sector to review the academic career structure and increase the number of longer-term positions for post-doctoral researchers; and the government should monitor the effects of its policies on cutting and 'mainstreaming' diversity funding

While recruitment of women into STEM is an issue, this affects mostly chemistry, engineering and medical technologies. For life sciences, it is an issue of progression, as reported in the Equalities in Scotland's Growth Economic Sectors report<sup>17</sup>. The report also noted that "*engineering, energy and chemical sciences are all seen as male dominated – and that this will make it less likely that women will consider a career in these sectors.*"

#### 2.1.4 Sector specific issues

An internal SE report which looked at the characteristics of outstanding leaders highlighted the following across life and chemical sciences. Within **life sciences** there is a need for: 5

- speeding up the development of new leaders due to current leaders of the sector retiring
- more active leaders across the sector, with a wider vision
- new leaders to develop sector-specific knowledge outside their own subsector, together with a global perspective

14 Improving diversity in STEM (2014) A report by the Campaign for Science and Engineering (CaSE) May 2014

15 'Sticking bananas in liquid nitrogen doesn't work' (attracting girls into studying physics) In Times Educational Supplement, No 5127 2 Jan 2015, p12-13

16 Women in scientific careers: Sixth Report of Session 2013–14 (HC 701) House of Commons Science and Technology Committee

17 University of Glasgow Training and Employment Research Unit (2015) Equalities in Scotland's Growth Economic Sectors report

- people from more diverse roles/perspectives
- more people who are global ambassadors
- need for more networking among sector leaders
- need for strategic input from SE



Within **chemical sciences** there is a need for: 5

- more active leaders across the sector, with a wider vision
- leaders to develop sector-specific knowledge outside their own subsector, together with a global perspective
- more people with more diverse roles/perspectives, e.g. skills
- more networking
- development of individuals in a group context, depending on the situation of the group: e.g. early stage, or particular challenge
- learning from other sectors
- leaders with an interest in looking to the future – not just the present day
- leaders who can deal with uncertainty
- leaders with the ability to speak on behalf of the industry confidently – leaders need to be empowered
- leaders to be encouraged to see their role as facilitating

### 3 Use and Acceptance of SE Leadership and Management Skills Training (WP1)

Work package one focused on the use and acceptance of current leadership and management skills training products available from Scottish Enterprise (SE). The following section is based on interviews with **12 individuals** across companies and SE staff, including account managers, who work directly with companies.

#### 3.1 Characteristics of a good leader/manager

Characteristics of a good leader/ manager was perceived as one who was capable of having both a **strategic and operational view of their organisation** and possessing a wide skillset. These included:

- clarity of strategic direction, vision and insight and putting in place an action plan to allow the company to achieve
- understanding their personal limits and a willingness to seek external support, where required
- ability to create an attractive working culture and environment
- having a breadth of knowledge that encompasses both technical and commercial skills to be equipped to respond to any aspect of the organisation e.g. from sales to accessing funding to human resources

#### 3.2 Current uptake of SE leadership and management skills training products by companies in the LS and CS sectors

SE staff commented that **uptake of leadership and management skills training products was dependent upon the size and business stage of the company**. Some examples included:

- organisational and board development support for larger more established companies to yield efficiencies in people management and generate a dynamic working environment
- commercial and business development training for smaller companies to address the skills gaps among many companies who often have strong technology knowledge and understanding but weak or no business knowledge
- human resources and organisational development support for early stage companies to examine the management team and recruitment process, and produce growth plans

While many companies had accessed SE products at some stage, few interviewees had direct experience, therefore, it was not possible to present a direct company view.

#### 3.3 Usage and perception of SE products including 'fitness for purpose'

**The type of support accessed by companies differed dependent upon the stage, type and size of business.** There was no single product that was sought above all others from companies.

There was **high praise for a range of SE products** including the Saltire Foundation<sup>18</sup>, International Manager for Hire, MIT, the Enterprise Development Programme, general HR and OD support and wider master class provision. The **GlobalScot network for mentoring was viewed to be excellent** but could be "hit or miss" until the company

<sup>18</sup> Scottish Enterprise is no longer involved in the delivery of The Saltire Foundation programmes

was matched with the right contact. SE staff added that within the last year, the OD product range had been reviewed and reprocurd, and this was perceived as an improvement.

Account managers also commented on the **difficulty of broaching the subject of leadership and management support with companies**. There was a perception that companies do not believe that support is required and/or that companies would be unwilling to invest in the time away from the business to develop themselves.

While products are generally well perceived by companies and those who undertake SE support, **companies reported a general lack of awareness of the SE product range** and welcomed wider promotion and targeting of services. There is no marketing for account managed products. Account managers remain the gatekeepers of access and knowledge for companies around such products. Therefore, it is critical that account managers broach conversations around leadership and management support with companies.

On the whole, **the SE product offering and toolkit is perceived to be fit for purpose**. It was broadly regarded that there is enough flexibility in the eligibility criteria and guidelines to allow account managers to assist the vast majority of their companies, with the exception of a minority of companies who did not meet the criteria. However, it was noted that there is **inconsistent service delivery brought about by the varying personalities of service providers**. As a result of this variance it was reported that SE products will work for some, but not others. Companies themselves commented that while SE provided a good range of external consultants, **the inability to choose a consultant most suited to the needs of the company often resulted in a consultant mismatch and poor outcomes**. Companies added that this was an issue of personality rather than quality.

### 3.4 Views on the requirement for tailored support

Companies and SE staff agreed that the **requirement for tailored support differed from company to company**. On the whole, it was commented that while generic courses were suitable for some, tailored support was crucial for others. The provision of support to companies should relate directly to the individual business to fully deliver organisational and economic benefits.

SE staff commented that some SE products do not require tailoring; the Leadership for Growth Programme was cited as an example as the skillsets were viewed as generic. The Strategy and International Strategy workshops were also commented as being suited to their generic format while coaching and mentoring were cited as examples of tailored support.

The ability to tailor support remains an important feature in the SE product range. **While generic support is suitable for some companies, tailored support was viewed as critical to fully address and support the needs of the majority of companies**.

### 3.5 Benefits and outcomes that could be achieved if uptake was increased

SE staff and companies commented that if uptake of SE products was increased, this could lead to:

- younger, earlier stage companies moving forward in their business quicker than their current rate of progress
- an improvement in timelines and access to market
- cost savings brought about by greater efficiencies
- more companies moving from an inward view of their business to a wider strategic external view

Ultimately, **increased uptake would lead to an improvement within the company base.**

### 3.6 Improvements that could be made to increase outcomes or take up by companies

SE staff stated that some products are short, sharp interventions – a workshop or a session – and with these products, the follow on could be improved. It was suggested that **re-engagement to explore the extent to which the new learning and development was being followed through would be beneficial.**

SE staff also mentioned that at times **the process to access support for companies can be “arduous” and “complicated”.** While there is broadly a good degree of flexibility within the product range, some products could be “quite rigid” depending on which supplier was used. As a result, account managers described having “to think creatively” if they wanted to use another supplier. **Having greater flexibility to choose a supplier that was most suited to the specific needs of a company was therefore cited as a further area for improvement.** Companies confirmed that they would prefer to choose a specialist most suited to their organisational needs rather than one selected for them. However, SE is obliged to follow recruitment requirements, and therefore, while the style and content of the provider could be addressed, flexibility of provider appointment is limited. In addition, while tailored and bespoke support is available within SE, **there may be an issue regarding how front facing SE staff communicate the product range to customers.**

Evaluation and review of SE products and services was also reported as an area that would help to yield greater outcomes. SE staff felt that understanding **what worked for which companies and why, to evidence outcomes and impact would be beneficial** – to do more of the right things and identify those that do not work. They also commented that case study examples of success stories to showcase SE service support would be useful as marketing material. While SE products are evaluated every three years, the depth and breadth of quantitative evaluation may still pose as issue and warrant further clarification.

Finally, SE staff highlighted that there needs **greater communication of SE products** internally and in a timely manner to allow account managers to target companies efficiently. A centralised bank or calendar incorporating all SE products and training over timelines was suggested. Companies stated that they would be interested in learning more about the SE product range.

### 3.7 In summary

The **key messages** are summarised as:

- characteristics of a good leader/manager was perceived as one who was capable of having both a strategic and operational view of their organisation and possessing a wide skillset
- SE staff believed that uptake of leadership and management skills training products was dependent upon the size and business stage of the company
- companies and SE staff agreed that the requirement for tailored support differed from company to company; SE confirmed that there was a wide range support available however internal communication could be improved
- if uptake was increased interviewees believed this would lead to improvement across the company base
- improvements that could be made to increase outcomes or take up by companies include improved follow-up, ability to choose the supplier, greater evaluation and review and improved communication of SE products

## 4 Characterisation of the Next Generation of Leaders/Managers and Their Skills Needs (WP2)

Work package two focused on the characterisation of the next generation of leaders/managers and their skills needs within the life and chemical science sectors. A total of **22 individuals** provided their views on the characteristics of current and future leaders and managers.

### 4.1 Profile of the next generation of leaders/managers

#### 4.1.1 Roles/positions currently held

Interviewees felt that the **next generation of leaders and managers currently hold roles that are more technical rather than business orientated**. Specific positions highlighted by interviewees included:

- department manager
- site manager
- health and safety roles
- engineering roles

Some interviewees stated that the balance between the technical, operational and strategic elements of a position is dependent on business size, type and the overall role of the site if part of a larger organisation.

#### 4.1.2 Skills perceived as essential within current role profiles

The majority of interviewees highlighted that the **current skill profile is largely technical and that it is a balancing act between the technical and leadership aspects of a role**. One interviewee highlighted that:

*"We have too many scientists and not enough leaders/managers that are focused on doing the actual job of leading and managing."*

A range of skills were highlighted by interviewees as being essential within both current and future role profiles these included:

- ability to manage change, operational excellence and business risk
- strategic vision, true market knowledge and how to sell the big picture stuff
- people skills, team working skills
- performance management
- broader project management skills i.e. ability to manage multiple projects at once
- practical skills including finance, employment law
- investment skills and knowledge of funding mechanisms

A few mentioned that the **level of these skills would depend on the type and size of the business**. For example, one interviewee stated that:

*"The above are all gaps in some way depending on the sector and the company."*

### 4.1.3 Representation of women in the talent pool

Almost all interviewees believed that **there could be better representation of women within the talent pool and sectors overall**. Some also felt that there were more women within life sciences with some highlighting that chemical sciences was less representative and male dominated commenting that:

*“Less women in top chemistry jobs than in top biology jobs.”*

*“Life sciences attracts more women at the outset than chemicals, which leads to potential for more in the top jobs.”*

A few interviewees highlighted that the way to improve representation of women in the talent pool is to **recruit more females into science at school age** stating:

*“Although there are some strong women in roles here it goes back to getting more women into science from school/college age.”*

*“It seems that it has to be a deep seated change in culture at school.”*

One interviewee highlighted if **there were more women in leadership roles then this in turn would attract more women into the sector**, and that for women to move into leadership positions, they need more coaching and support.

Despite an overall feeling by interviewees of under representation of women in the talent pool and sectors, **there were a few that also believed that women were well balanced in the sector** commenting that:

*“Women are well balanced in the sector and it is less discriminatory than it used to be but as always we could do more and overall a gender imbalance is still likely to be there.”*

*“[Gender representation is] generally the same across all sectors. Perhaps it is a historical preconception that we just need to break down. Women may need to be more vocal.”*

## 4.2 Skills required by future leaders/managers within the 5 – 10 years

Interviewees indicated a range of skills required by future leaders and managers, including the ability to:

- keep up with changes in the sector, adapt to new ideas and meet the needs of the market
- see the big picture and respond accordingly
- capitalise and respond quickly to investment and funding opportunities
- manage company finances
- manage risk and take products to market
- manage people and conflict

Interviewees also highlighted that **leaders and managers should be flexible and motivated and have the right balance of technical and commercial skills** with a broader experience at a larger company or international level. Areas that interviewees highlighted as being harder to fill or support were more aligned to technical areas rather than management and leadership and included:

- quality assurance and quality control positions
- qualified engineering roles

- downstream processing within the IB sector

#### 4.2.1 *Changes to the skills infrastructure to meet future demand*

When asked about any changes to the skills infrastructure required to meet future demand, interviewees suggested:

- a focus on improving commercial and entrepreneurial skills
- funding companies appropriately but holding them more accountable for funding received
- extra training and development for new areas such as biotech where specific sectoral knowledge alongside commercial skills are required
- deeper engagement from SE to communicate the level and types of support available
- helping leaders and managers to gain broader big company and international experience

Some interviewees stated that **improving commercial and entrepreneurial skills and helping leaders and managers to gain international or big company experience would help them** to step up to the job. One interviewee highlighted that

*“Leaders and managers need to understand not only their own position but everyone in the organisation so that they have a broader picture, as those that have a silo mentality don’t progress well in the leadership role.”*

Another stated that:

*“Essentially we need people who are happy to manage risk, have the right motivation, can be flexible and with a mix of technical and commercial/investment experience and knowledge.”*

In addition, deeper engagement by SE/ SDI was seen by some interviewees as being vital to ensuring that the relevant support mechanisms are in place and that there is a forum for the sector to come together to discuss the issues but also to make sure businesses are vocal in the debate. It should be noted that forums for the sector to come together do exist such as LiSAB and the skills sub groups within the industry leadership groups, therefore, this may be an issue of communication and awareness raising.

#### 4.2.2 *Knowledge and access to skills infrastructure for potential leaders and managers within SMEs*

While there were few comments regarding this topic most felt that **in general SMEs do have the knowledge and access to the skills infrastructure.**

One interviewee claimed that SMEs are a subset of the overall sector and that managers within smaller companies may have a broader base but the skills required are the same. Another highlighted that SMEs may struggle to find a good balance between the right people at the right cost because they are often more financially restrained.

One interviewee highlighted that SMEs can benefit from the leadership products offered through SE and SDS if they are account managed and it just depends on whether they are capable of taking advantage of this.

Others states that SMEs were not aware of the infrastructure and were more focused on general leadership and technical skills.





### 4.2.3 Diversity of talent pool

Interviewees discussed diversity from a number of different perspectives including disability, sexual orientation and ethnicity.

Views on whether diversity of the talent pool reflected the Scottish populations was mixed. Some felt that that they **did not know enough about the numbers to say for definite it was an issue. Others believed that in terms of ethnicity and sexual orientation the talent pool reflected the Scottish population:**

*"I would say that 3-5% of our workforce are from overseas and we have a number of people in civil partnerships etc. We believe that our workforce is representative of the Scottish population in general and we believe in choosing the right person for the job. I suspect if you picked us up and moved us to London, Birmingham or Manchester for example than the diversity of our workforce would change in line with the populations within those communities."*

**Disability was seen as more problematic by interviewees who felt that this group was under represented within the talent pool.** Interviewees believed that some of the problems arise from the practical nature of sciences and the health and safety implications of some positions across the sectors particularly chemical sciences. However some interviewees also felt disability at a leadership and management level should be less of an issue. For example interviewees stated:

*"Thinking about the talent pool in terms of disabled applicants I can see that at technician supervisor level then it can be difficult due to health and safety regulation, but in other areas this shouldn't be a problem and CS companies should not try hide behind the H&S regulations."*

*"Don't know is the answer. With disabilities the risks can be high if you are working in a lab, for example you cannot under any circumstances work within the plant area at Grangemouth if you are in a wheelchair as it is too dangerous, just like if you were in the army you would struggle to be in the field. However for leadership and management roles this is more of a cop out as majority of these types of roles are office based. I think ethnicity is well represented."*

One interviewee felt that **more could be done to encourage disabled people to apply for posts**, while another pointed out that if the sectors enter a period of expansion the talent pool will become less representative and that more should be done to nurture middle managers to help them develop the required leadership skills so that they can progress.

Our discussion with interviewees on disability focussed on the physical aspects of disability alone. As disability can be framed as long term health issues, including mental health, the answers may represent a general lack of awareness of the broadness of the term.

#### 4.2.4 Size and quality of the talent pool

There was a general belief among interviewees **that the size and quality of the talent pool is insufficient to meet demand across both life and chemical sciences.**

In terms of **quality**, interviewees highlighted:

- a lack of individuals with the required combination of people skills, commercial and strategic experience
- a lack of individuals with the business acumen to set up and establish new companies
- graduates are coming out of university with little or no practical skills for the technical aspects of the job and little knowledge of the business and commercial aspects of working in industry
- gaps between the technical skills and the ability to think strategically
- the need for improved skills development, leadership training and funding to do this

In terms of **size**, interviewees highlighted:

- many people are being lost to the oil and gas sector; we note this has reduced more recently but was still viewed as an issue
- good numbers of university students that do not filter through to industry; either move into other sectors or stay as 'underemployed' remaining in jobs that they worked at while studying
- some roles as being harder to fill because there are less people with the required skill set
- harder to fill roles and specialised skill sets are creating unmet demand that is driving up salaries that many companies within the sector cannot compete (i.e. the majority are SMEs) as a result these people are lost to the contracting market
- provision in schools and colleges is not good enough
- perception by some that you need to leave Scotland to be successful; the importance then is attracting them back
- we are not producing and developing enough home grown people with interest in the sector

One interviewee noted that **some people that have technical degrees often want to stay in these positions and as such do not want to run companies or take on leadership roles.** This interviewee claimed that individuals within the sector need to think more about career planning so they do not get stuck in middle management if they want to become a leader, and as such should take charge of their career.

Another interviewee claimed that there are good universities that do create good talent but it is about getting this talent into the market and getting them to understand the industry that is often the bottleneck.

Some interviewees also commented that in comparison to past generations, few from the emerging pool leaders possess the same level of grit, drive and determination to push for their own success, commenting that there is a "*sense of entitlement among the younger generation*".

### 4.3 In summary

The **key messages** are summarised as:

- the next generation of leaders and managers currently hold roles that are more technical rather than business orientated
- the balance between the technical, operational and strategic elements of a position is dependent on business size, business type and the overall role of the site
- future leaders and managers should be flexible and motivated and have the right balance of technical and commercial skills with a broader experience at a larger company or international level
- there could be better representation of women within the talent pool and sectors overall; it was noted that this was more problematic in chemical sciences where the starter pool had less women
- there is the perception that there are more women in life sciences than in chemicals sciences and as such an increased probability of having more women in leadership positions
- changes to the skills infrastructure required to meet future demand focus on improving commercial and entrepreneurial skills, funding companies appropriately but holding them more accountable for funding received
- need for deeper engagement from SE to communicate level and types of support that are available
- SMEs do have the knowledge and sufficient access to the skills infrastructure
- there is a perception that in terms of ethnicity and sexual orientation the talent pool reflect that of the Scottish population and as such is not underrepresented
- disabled people are seen as underrepresented within the talent pool and disabilities are perceived as being problematic due to physical, health and safety aspects of particular roles
- size and quality of the talent pool in Scotland at a management and leadership level is insufficient to meet demand across both life and chemical sciences

## 5 Support of Leadership/ Management at Scottish Sites within Larger Global Organisations (WP3)

Work package three focused on the support of leadership/ management at Scottish sites within larger global organisations. A total of **14 individuals** provided their views on work package three.

### 5.1 Do skills infrastructure/SE products provide sufficient support for management/leadership development within larger foreign based organisations

There were **mixed views as to whether the skills infrastructure provides sufficient support for leadership and management development** within larger foreign based organisations. Interviewees stated that:

- many foreign based and global organisations have their own internal leadership development programmes
- these programmes are aligned with company culture/structure and priorities so skills requirements are different for each company
- to a certain extent these companies do not necessarily need support
- programmes are usually delivered through a top down approach
- support on offer may be viewed as basic

Interviewees highlighted a number of **challenges in accessing support/products** which focused around:

- culture of having senior people working across global area so not based in Scotland and do not understand skills needs
- balancing expectations and behaviours from parent company and how this differs across locations e.g. US, EU, Asia
- difficulty in accessing training as generally led by HQ e.g. Scotland is mostly branch plants with specific functions
- losing good staff through management development as often move to different countries to further develop these skills
- budget cuts resulting in less development overall which is impacting on succession and growth

Interviewees stressed that **there needs to be more structure to the support provided so that there is more than just a single point of contact** so that leadership and management training can be developed over a longer period of time and go beyond the CEO. They suggested that it would be good to make more use of the GlobalScots to help in developing a broader understanding of the challenges in larger organisations.

Interviewees also suggested that for smaller companies, access to expert advice about what is possible in terms of leadership training would be good.

### 5.2 How Scottish leadership and management within global organisations can be promoted/supported to increase influence of parent organisations and enhance the prestige and presence of Scottish sites

There were mixed views on what can be done to promote and support Scottish leadership and management to increase and enhance the presence of Scottish sites to the parent organisations.

Some interviewees claimed that while the **Scottish site's influence on the parent organisation will vary from company to company it is up to the Scottish subsidiary to push through and be proactive.**

For example interviewees stated:

*"It is up to the satellite to really push what they can do. We have a role to be more proactive as highlighted above and show what we can do at a local level - needs the management at a local level to understand how they can develop their teams - they need to be ready for the challenge and be leaders themselves."*

*"If the Scottish subsidiary wants to access, they will find a way of making it happen."*

Interviewees highlighted that the way to promote Scottish sites is **to promote good business, through good operations, good planning, good regulation and good fiscal responsibility** and this is what will help promote Scottish leaders and managers.

Other interviewees claimed that **the parent company liked them getting support from SE** stating that:

*"The support helps us to find ways of doing things despite geographical difference."*

It was also highlighted that promoting skills transfer, enabling and encouraging people to attend training and master classes, and access mentoring are all useful as a way of promoting Scottish leaders and managers.

A few interviewees felt that the **parent company plays a crucial role in the extent to which leadership and management development is available with the culture of the company determining overall views on leadership development**. It was felt that ultimately this would determine uptake of leadership and management training with interviewees citing issues such as not having financial autonomy, and training being driven from company headquarters which would mean that they are not involved.

### 5.3 In summary

The **key messages** are summarised as:

- the parent company plays a crucial role in the extent to which leadership and management development is available
- company culture determines overall views on leadership development
- global organisations tend to have their own leadership and management development programmes meaning that they require less support and access to SE products
- leadership and management support should be offered at more than one point so skills can be developed over a longer period of time
- Scottish sites need to be proactive and promote themselves to the parent company
- support from SE was viewed as helpful in delivering bespoke programmes and taking into account of cultural and geographical differences which in-house programmes, as adopted from the parent company, may not take into consideration

## 6 Understanding the Progression from Company Leader to Industry/Sector Leader (WP4)

Work package four focused on understanding the progression from company leader to industry/sector leader and what support would enable the next generation of industry leaders. A total of **18 people were interviewed**.

### 6.1 Key target areas where support is required

**Interviewees highlighted that company leaders and managers can progress to industry leader if they want to, and that it boils down to having the right mind-set.** They cited that often this is almost inherent within the individual like an entrepreneurial drive. Key areas highlighted as being required include having:

- a global outlook and international experience
- the ability to listen and to seek your own style and understand how these attributes will play out in a certain situation
- transferable skills are key to development of people based on a good science/engineering background
- support for self-motivation, confidence building
- networking and people skills
- the ability to sell not just products but big picture visionary stuff

**Mentoring was seen as key in helping leaders and managers to progress to industry/sector leaders. There is however a misconception among interviewees about the role of the mentor and availability of SE support.** While interviewees recognised the value in long term mentor support from existing industry leaders, most interviewees were unaware that SE currently provides mentor support for over a year on a regular basis for companies. There was also some confusion regarding the role of the mentor. In its strictest definition, the Chartered Institute of Professional Development describes mentoring as:

*"The long term passing on of support, guidance and advice...a form of apprenticeship whereby an inexperienced learner learns the tricks of the trade from an experienced colleague."*

Therefore, while most interviewees do consider the role of the mentor in its strictest definition, there were others who view mentoring support as short sharp bursts, offering assistance on specialist issues or problems.

Some interviewees suggested that companies should be able to **choose their own leadership and development programmes at this level** and access funding from SE to finance this.

For one interviewee, support went beyond skills to promoting determination and encouragement by taking advantage of skilled leaders and sharing their experiences with younger/up and coming leaders and managers so that we are showcasing our talent.

Interviewees highlighted that **much of the future support required would be company dependent.** From a sectoral point of view, one interviewee made specific reference to the biotech sector requiring specific support around its growing knowledge base to ensure that this is instilled in future leaders. Again mentoring was mentioned as being required long term.

## 6.2 Steps in progression

There were **limited views on the steps required to progress toward management and leadership roles** but the views provided highlighted that:

- there should be a natural progression from junior to middle to company manager and then on to industry leader – regardless of sector
- company leaders should be playing an active role in the sector to gain broader experience out with their own company to progress to industry leader
- progression should be considered from school age with government promoting technical education so that there is a pipeline of talent from school leavers to industry leaders
- there is a lack of development steps for small companies and the challenge is growing small companies to medium and large companies

## 6.3 In summary

The **key messages** are summarised as:

- progression from company leader to industry leader is about mind-set, drive and determination as much as it is about skills; these traits are seen as being inherent within individuals who are leaders or progressing to leader
- having a global outlook and international experience along with the ability to network and sell the big picture was seen as key to the role of an industry leader
- support required is centred on mentoring which should be long term and with someone who is already a leader
- there was a misconception among interviewees about the role of the mentor and availability of SE support
- steps in progression focused on junior to middle to senior and company manager and finally industry leader; this was regardless of sector



## 7 Conclusions and Recommendations

The conclusions and recommendations have been developed to align with the areas of exploration across the four work packages:

- **work package 1** – suitability of current leadership and management training products for the life science and chemical science sectors
- **work package 2** – the potential next generation of leaders/ managers required to grow the life science and chemical science sectors
- **work package 3** – the needs of leaders/ managers of Scottish sites of global organisations
- **work package 4** – support for the progression of company leaders to become recognised leaders within their industry sector

### 7.1 Suitability of current products (WP1)

**Uptake of leadership and management skills training products is dependent upon the size and business stage of the company.** While larger companies focus on organisational and board development, smaller companies often require a greater level of commercial and business development support, and early stage companies require more support for human resource and organisational development. An increased uptake of products was viewed as positively impacting on the company base across Scotland.

It was agreed that the need for tailored support also differed from company to company and this again most likely related to size and stage of business development. **Marketing, communication and follow up/review were all deemed to be in need of improvement to support increased uptake of current SE products.**

Account managers also commented on **the challenges of discussing leadership and management products with companies** reporting that companies were unwilling to invest the time required, and also commented that companies found it difficult to recognise the need for support.

#### **Recommendation:**

We suggest that SE look to **raise awareness of their tailored support product offering by ensuring that key front facing SE staff are well informed of the product range to maximise impact across the business base.** The product range should promote more generic support for those early stage companies who are likely to have less experience while tailoring to suit the needs of larger and more experienced companies. The ability to increase take up across both areas will require improved marketing and communication as well as increased review and follow up to demonstrate the benefits and encourage broader usage across and within the business base. It may also be valuable to **explore more widely with account managers the challenges experienced in broaching the subject of leadership and management support with companies,** and provide any subsequent training, where required.

### 7.2 The potential next generation of leaders (WP2)

The next generation of leaders and managers currently hold roles that are more technical, rather than business orientated. **At present, the balance between technical, operational and strategic roles are dependent upon business size, type and the organisational role, if a subsidiary.** Future leaders and managers must be flexible and motivated and have the right balance of technical and commercial skills while commanding breadth of experience from a large company or international level.

It was broadly agreed among interviewees that **there could be better representation of women within the talent pool and sectors overall**. There is also the perception that there are **more women in life sciences than in chemicals sciences**. This perception is confirmed in our desk review which revealed that there are more women studying subjects related to life sciences and currently working in life sciences, in comparison with chemicals sciences.

Changes to the skills infrastructure required to meet future demand **focus on improving commercial and entrepreneurial skills**, funding companies appropriately in addition to companies adopting a greater accountability for funding received to improve outcomes and impact.

There is a perception that in terms of **ethnicity and sexual orientation the talent pool reflects that of the Scottish population and as such is not underrepresented**. Disabled people are seen as underrepresented within the talent pool and disabilities are perceived as being problematic due to physical, health and safety aspects of particular roles. Across the board, it was viewed that the size and quality of the talent pool is insufficient to meet future demand across both life and chemical sciences.

#### **Recommendation:**

We suggest that SE **addresses the commercial and entrepreneurial skills gaps among leaders and managers** in addition to promoting programmes which allow international or large company experience to be gained. To improve the representation of women in the sectors, SE should **encourage local authorities to deliver school-based programmes aimed at promoting science as an area of interest and benefit for women** to positively impact recruitment figures among females into science at a school age. For women already employed in the sectors, SE should **support the growth of targeted coaching and mentoring support to move more women into leadership positions**.

### **7.3 The needs of leaders and managers of Scottish sites (WP3)**

The **parent company plays a critical role in the availability of leadership and management development support among Scottish sites**. Organisational culture also influences the overall position on leadership development among companies. **Larger, global companies often have their own in-house leadership and management development programmes** developed at head office and cascaded down to subsidiary sites meaning that for many, **there is minimal requirement for SE product support**.

Where support is required, it was commented that this would have to be tailored as it would be very specific and likely to be used in conjunction with an organisation's own in-house programme. Interviewees added that leadership and management support should go beyond solely targeting the CEO, so that skills can be developed over a longer period of time among a greater volume of staff. However, leadership and management products are available for the whole management team, not exclusively for the CEO, as is believed by interviewees, and therefore, this issue of misled perception must be clarified.

**Support from SE was viewed as helpful in delivering bespoke programmes and taking into account of cultural and geographical differences** which in-house programmes adopted from the parent company may not take into consideration.

#### **Recommendation:**

We suggest that **SE target leaders and managers of Scottish sites to gain a deep understanding of their organisational requirements** and develop programmes tailored to their specific needs, addressing gaps that in leadership and management support that may not be addressed within their in-house programmes. **SE should also take action to communicate and clarify with companies that support is available for the wider company, and not exclusively for the CEO,** to help build the future pool of leaders and managers. GlobalScot could be used to help develop a broader understanding of the business challenges within larger organisations.

### **7.4 Support for progression (WP4)**

**Interviewees in general did not comment of support for progression,** but stated that progression from company leader to industry leader is about mind-set, drive and determination as much as it is about skills. These traits are viewed to be inherent within individuals who are leaders or progressing to a leadership role. Having a global outlook and international experience combined with the ability to network and sell the big picture was commented by interviewees as pivotal to the role of an industry leader. **The requirement for support is centred on mentoring which should be delivered long term by a mentor who is already a leader within the industry.**

#### **Recommendation:**

We suggest that **SE raise awareness of its mentoring support among companies and offer targeted, long term support to individuals who are already playing leading roles within industry.** The GlobalScot network could be invited to share their experience in a mentor role to support Scottish companies.

### **7.5 Wider observations**

In addition to the conclusions in the previous sections, we also draw the following observations:

- **women are underrepresented in the talent pool** – it was acknowledged that there is a general lack of women within the talent pool and sectors overall. It was perceived that life sciences was more representative with a broader mix of male and female at entry level though to junior management, however chemical sciences was perceived as male dominated. There was limited feedback on the difference in issues between women in life and chemical sciences more generally and it may be best to explore this further maybe through a series of issue based focus groups
- **people with disabilities are underrepresented in the talent pool** – disability was perceived as problematic due to the practical nature of sciences and the health and safety implications of some positions across the sectors but particularly within chemical sciences. This was also seen as a 'cop-out' and that at a leadership and management level this should be less of an issue. There may be benefit in working with account managers to encourage companies to sign up to the Business Pledge to demonstrate their commitment to fair and progressive business practices

- **quantity and quality of talent pool is not sufficient to meet demand** – this was cited for a number of reasons:
  - lack of graduates with the necessary practical skills and limited knowledge of the industry
  - loss of people to other sectors such as oil and gas
  - harder to fill roles and specialised skill sets that are creating unmet demand which is driving up salaries that many companies within the sector cannot compete
  - underinvestment by MNCs in leadership and management development for the rising stars
  - a lack of individuals with the required combination of people skills, commercial and strategic experience
- **SE should raise awareness of their leadership events to encourage knowledge sharing and support, and as an opportunity for current and future leaders to come together** – SE should actively identify, target and engage new and fresh faces from the chemical and life sciences sectors

## Frontline

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**Organisations and Individuals Interviewed**

## Appendix 1: Interview List

The following table presents the list of 35 interviewees by name, organisation and work package. Some interviewees were consulted on, across multiple work packages.

Ref	Company	Name	WP1	WP2	WP3	WP4
1.	Brown Donaldson	Geraldine Brown		x		
2.	Business Therapies	Kevin Moore		x		x
3.	Calachem	Neil Partlett		x		x
4.	Caledonian Solutions and Xanthella	Alan Wostenholme			x	x
5.	Celtic Renewables	Mark Simmers				x
6.	Charles River Laboratories 1	Brian Bathgate		x	x	x
7.	Charles River Laboratories 2	Doreen Davidson		x		
8.	Chemical Industry Association	Mike Lancaster		x	x	x
9.	Cogent SSC	Jenny Clucas		x		x
10.	Collagen Solutions	Stewart White		x	x	
11.	CXR Biosciences	Mary Ballantyne	x			
12.	Cyclacel	Gill Christie	x			
13.	Fine Chemical Consulting	Jan Ramakers		x		x
14.	GALVMED	Peter Jeffries	x			x
15.	GSK and CMAC	Clive Badman		x	x	x
16.	Hologic	Vikki Renwick	x	x	x	
17.	IBiolC	Jude Huggan		x		
18.	Ineos	Duncan McIntosh		x	x	
19.	Ineos (former)	Gordon Grant		x	x	x
20.	Lucite International & Business Therapies	Anne Marie Stannard			x	x
21.	McFarlan Smith	Helen Ogden		x	x	x
22.	Robertson Training	Derek Robertson	x			
23.	Royal Society Chemicals	Brian Hickmott		x		x
24.	SASOL	Bob Tooze			x	x
25.	Scottish Enterprise 1	David McNab	x	x	x	
26.	Scottish Enterprise 2	Helen Noble	x	x		
27.	Scottish Enterprise 3	Chris Cordon		x		x
28.	Scottish Enterprise 4	Nicola McMillan	x			
29.	Scottish Enterprise 5	Gerry McCarron	x			
30.	Scottish Enterprise 6	Gayle Cafferty	x			
31.	Scottish Enterprise 7	Mike Huston	x			
32.	Skills Development Scotland	Ronnie Palin		x		
33.	Syngenta	Andrew Tomb	x	x	x	x
34.	Toshiba	Ken Sutherland		x		
35.	Vascutek (former)	Roshan Maini			x	x