Skills Planning Model

Our Vision
A Scotland that values skills, realising the potential of its people and businesses to build a competitive and resilient economy.

Top 5 Priorities
- Foundation Apprenticeships embedded into curriculum
- Increase number of Modern Apprenticeships > 30,000pa
- Expansion of school careers service to include P7-S3
- Development of Graduate Apprenticeships
- Equality of access to SDS programmes

Making skills work for Scotland
Skills Development Scotland

Individuals
Have skills to secure good work and progress in careers with equal opportunities for all

Employers
Have a highly productive workplace and can access the right skills at the right time

Strategic Planning & Analysis
Working with partners, we lead on skills planning and support

2020
UK Chemical & Pharmaceutical Industry

- Large industry, 160,000 directly, many more indirectly.
- Globally significant (top ten producer).
- 20% of all manufactured exports, £52bn (largest sector).
- Value added £20bn, £75m per day.
- Energy intensive – largest industrial user; reduced energy input per unit output by 35% 1990-2010. Lifecycle considerations.
- Research intensive £600m in Chemicals R&D, £4.2bn in Pharma.

As at January 1st 2014
The Scottish Chemical Industry

- Over 200 Companies.
- Turnover £8.7bn.
- Exports £3.8bn.
- Value Add £1.9bn.
- > 12,000 employees.

current size and value of the manufacturing parts of the life and chemical sciences

<table>
<thead>
<tr>
<th>Area</th>
<th>Business Units (no)</th>
<th>Turnover (£M)</th>
<th>Employees (no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Technologies</td>
<td>240</td>
<td>1053</td>
<td>8500</td>
</tr>
<tr>
<td>Pharma/Fine Chemicals (part of both life &amp; chemical sciences)</td>
<td>30</td>
<td>656</td>
<td>3300</td>
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<tr>
<td>Basic/ speciality chemicals</td>
<td>200</td>
<td>8700</td>
<td>9000</td>
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<tr>
<td>Industrial Biotech</td>
<td>40</td>
<td>189</td>
<td>1100</td>
</tr>
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</table>
Transformational projects

Chemical Sciences Scotland is 1 of 15 Industry Leaderships groups in Scotland aimed at shaping and delivering Scotland’s economic ambitions.

“sustain a vibrant and competitive Scottish chemicals industry, ...... Within this, we have ambition to increase manufactured exports by 50% by 2020.”

| Grangemouth | • Scotland’s largest industrial complex  
| • Be amongst key EU locations for chemical manufacturing |
| Industrial Biotechnology | • National Plan for IB Launched 2013  
| • Innovation centre IBIOIC launched 2014 |
| Skills Investment Plan | • Skills Investment Plan launched October 2014  
| • Collaborative programmes under development |
| Manufacturing strategy | • Manufacturing Strategy Launched September 2015  
| • 5 themes lead by experienced Industry figures. |
Chemical Science Skills Investment Plans

- Skills gaps and shortages can have impacts on company growth
- Emphasis from employers (and in policy) on better aligning skills investment with the needs of the economy
- We invest c £1.3bn in post-16 education

- Based on evidence and consultation:
  - Quantitative and qualitative research with numerous businesses
  - Carried out 20+ individual meetings to discuss action plan
  - Tested and endorsed by Skills groups
  - Chemical Sciences SIP launched October 2014
Common Themes

- **Inspiring and preparing the future workforce** to engage with the career opportunities provided in the sector (i.e. sector attractiveness)

- **Creating and investing in pathways** to enable people to enter and build their skills in the workforce (i.e. entry routes, MAs, FE and HE provision)

- **Providing support to address immediate workforce development needs** (i.e. tactical projects to fill short term gaps and transition training)

- **Stimulating change in the skills system to better align provision with the needs of employers** and the economy (i.e. right content, right place, right time)
Inspiring and Preparing the Future Workforce

Internship programme

- Proposed in response to industry concerns that University graduates are not adequately prepared for the world of work.

- 12-week placements, 50% funded by SDS.

Master classes

- Industry provide insights into diverse roles in the sectors.

- Commercial R&D, Proof of Concept / Prototyping, Market Analysis /Industry Need, Quality, Regulatory, Design for Manufacture, Manufacture including GMP, Product Launch and Sales and Marketing.

Placement for HND/C students

- Placement running at a number of Chemical companies

Scottish Graduate Fair 2014 and 2015

- >5,000 students attended the event

Students have greater awareness of careers and industry needs
Providing Support to Address Immediate Needs

Lab skills project
• Industry endorsed course to run at Edinburgh Napier University
• The course is feeding into the new Biosciences general accreditation degree

Transition training
• Automation course developed with industry and FVC

Further Upskilling courses being developed

Target gender balance
• Women returners programme
• To bring qualified women back into work in STEM occupations after extended leave, contributing to the alleviation of skills shortages in the STEM sectors

Continue to listen to the needs of the employers
Vision: A Supply Chain from Education into the Workplace

Applying interventions across the Career Pathway

**Primary & Secondary Education**
Contextualise / bridge transition

**Academic Staff**
Career Advisors / Influencers
- Parents
- Teachers
- Media
Develop curriculum pathways

**Academia**
Ensuring curriculum development / delivery is aligned with Industry need

**Individuals**
Providing access to relevant information, services & resources to create opportunities & pathways into employment

**Employers**
Providing access to relevant information, services & resources to support skills / workforce development

**Sustainable work ready**
- Skills
- Capacity
- Talent
Examples of Scottish industry

- Manufacturing processes

Root Vegetables

Cellulose

Curran

Draff/Pot ale

Fermentation

Biobutanol
A career in science

- Have an impact on key challenges, energy, environment, healthcare, water.
- Work across disciplines.
- Global network.
- Starting point for a diversity of career options (think of other sectors)
- The requirement to continually learn.

Differentiate from the rest

• Experience
• T-Shaped person
• Network (hidden job market)
• Seek advice from careers service
RSC Trends in Remuneration Survey Report 2013

Remuneration Medians by Location

- Scotland: £42,200
- North West: £44,100
- Northern Ireland: £34,800
- Republic of Ireland: £56,200
- W. Midlands: £43,000
- Wales: £44,600
- South West: £43,400
- Northern England: £46,400
- W. Yorks: £47,000
- S. Yorks & Humberside: £41,000
- E. Midlands: £42,000
- East Anglia: £44,000
- Greater London: £51,000
- South East: £49,400

Outside of British Isles: £72,600
In the field: £58,000

Published October 2013
For more information visit our website: www.rsc.org/trends