Addressing the Skills Shortage in the Water Industry
Skills Shortage in the Water Industry

Kelda’s approach to addressing the skills shortage in the Water Industry

- Strategic Planning
- Strategic Analysis
- Kelda People Strategy – 2025
- Strategic Themes & Priorities
- Immediate Targeted Action
- Appendices – The Yorkshire Region
Our strategic planning cycle

• Reviewing our long term strategy is part of our usual strategic cycle

• We are currently at ★ in the cycle
**The approach – rational strategic planning model**

- **Stage 1** – Analysis: Fully understand and quantify the scope and scale of the challenges and opportunities to be faced from 2020 onwards. Use of the latest relevant internal and external evidence to ensure the strategy is based on best available information.
- **Stage 2** - SWOT: A refinement of the analysis phase to understand the key elements and evidence of relevance in informing the strategy; summarised into a SWOT analysis; strengths and weaknesses from an internal perspective, opportunities and threats from an external perspective.
- **Stage 3** - Scenarios: a range of scenarios generated using the results from stages 1 & 2 which have then been refined during Board and KMT workshops.
- **Stage 4** – Formulate the strategy: Define and document the strategy, including refining the scenarios and testing appetite with the Boards.
- **Stage 5** – review strategic vision: The vision, mission, values, objectives and direction for PR19 tested in light of the emerging strategy.
Strategic Analysis – the external environment

- The environment in which Kelda operates.
- What are the constraints that limit what we might do?
- What influence do we have over these?

Sustainability mega-trends
Competitive & commercial insight
Customer & stakeholder insight
Government & regulator insight
Water industry of the future
Strategic Analysis – the **internal** environment

- The organisation and its capabilities which will determine what we *can* do
- What are our own internal constraints?

**Our asset risk position**

**Our AMP6 (Blueprint) ambitions**

**Our performance**

**Our people profile, competence and capability**

**Our financing**

**Board views**
There is an imperative for change

Assets
Finance
Government
People & skills
Energy
Customers
Technology
Climate
Affordability
Environment
Population
Resources
Affordability

Temperature
+1.2°C to +3.6°C
Sea levels
+10 cm to +40 cm

Customer expectations

Assets fit for purpose

Temperature
Sea levels
Collate and understand the evidence base.
Understand interrelatedness of issues and impacts, and their prioritisation.
What is the scale of and uncertainty associated with the challenge?
What are the implications? What are the risks and opportunities?
What questions does this present?
What’s the evidence base?

- Companies have dealt with people and skills issues in a variety of ways. Some have reduced the workforce, some have increased use of contractors, and some have brought more work in house. All have been looking for more efficient operations.

- Looking ahead, an ageing workforce, and growing competition for scarce technical skills will drive up costs. Eg, AWS: more than 70% of workforce born before 1980; 6% are over 60; YWS: 16% over 55, 5% over 60.

- Rising customer expectations and more innovative treatment processes will increase skill levels we require of our people.

- Workforce is predominantly white and male: AWS, 96% white and 70% male; YWS 83% white, 77% male.

What are the potential implications?

- We need to recruit and train new employees to meet our future needs.

- We may need to re-train our existing employees to ensure they have the skills required in the future.

- We should encourage a more diverse population to study STEM subjects, which may help address the skills shortage.

- Other challenges such as energy and resource costs mean the skills in our future workforce may not be the same as the skills in our existing workforce.
What are the key questions?

• How do we identify and grow the skills our workforce and supply chain will need in the future?

• Will addressing the diversity imbalance help reduce the skills shortage?

• How do we ensure the water industry is an attractive sector for young people to build careers?

• Will an influx of new employees and a change of the workforce demographic revitalise the industry leading to fresh ideas and new ways of working?

• How do we leverage the digital skills and understanding of our Generation Y employees to improve efficiency and modernise service?
Strategic themes & priorities

Increasing our future talent pool

• Inclusive approach to attract more diverse talent of all communities, abilities
• Innovation recruitment practices - more flexible routes
• Inspiring youth through Schools, Colleges, UTC’s and Universities

Maximising investment in Skills

• Apprenticeships and Graduates
• Leveraging the Levy
• Ensuring consistent industry assessment
Strategic themes & priorities

Anticipated Skill gaps & shortages

- Improve workforce planning intelligence to tackle regional pressure points
- Retaining and upskilling talent by professionalising the workforce, higher level skill
- Workforce mobility, multiskilling and transferability of skills
- Improve quality of training provision
Immediate targeted action

- Development of People Strategy
- Development and implementation of Competency Framework (Behavioural and Technical)
- Standardising assessments, assurance and governance
- Aligning Technical Authorities to internal standards i.e. Principal Engineers
- Attracting Apprentices and Graduates in targeted disciplines i.e. Engineering
- Opportunities to optimise Levy through development programmes
- Achieved National Equality Standard and building on this further
Appendices - The Yorkshire Region
The rise in migration is propelled by other trends including increasing affluence in the UK, ageing population (both of which provide job opportunities in the service sector), growth in marriage migration and some in flow from EU accession countries.
Implications for the region include: Challenge for the region to improve educational attainment towards or above England average. Higher level skills vital, but gap between the region and England average projected to rise without major change. Geographic variation continues, but with gaps in GCSE attainment flattened to some extent. Cities and attractive towns/districts with good transport links do best in attracting working age people with high
In the majority of areas in Yorkshire and Humber, the population is ageing as birth rates remain low and life expectancy continues to rise: by 2030 the region will have over 400,000 residents over 80.

Source: University of Leeds, Yorkshire & the Humber 2030 population projections: age and ethnicity, Yorkshire Futures, 2006
Employment sectors

<table>
<thead>
<tr>
<th>Percentage of graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and social work</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Other business activities</td>
</tr>
<tr>
<td>Retail trade</td>
</tr>
<tr>
<td>Public administration and defence</td>
</tr>
</tbody>
</table>

The region has seen severe reduction in primary industry in the last 20 years, and traditional industries have been replaced by strong financial and legal sectors.

Manufacturing is still important in the region. Approximately half of working students graduating from institutions in the region (49.4%) were working in Yorkshire and the Humber six months after graduating, with one in eight crossing the Pennines to the North West, and the East Midlands.

Table A shows that the health and social work sector is, again, a key employer of new graduates in the region. Education and other business activities - covering much of the new financial and legal occupations in Yorkshire - also show strongly.

(Data Source: http://ww2.prospects.ac.uk/cms/ShowPage/Home_page/Labour_market_information/Graduate_Market_Trends/Regional_perspectives_on_graduate_destinations__Spring_05_/p!empildi#Yorkshire and the Humber)

Table A: Top five employment sectors for graduates who went to work in Yorkshire and the Humber
Graduates (Yorkshire and the Humber)

- Chart B looks at those graduates who moved from other regions to work in Yorkshire. The most significant contributors are the North West, supplying just under a quarter of migrants (just over 900 in total), and the East Midlands, who provides one in five graduates moving to the area.

- Chart B: Home regions of graduates who moved to work in Yorkshire and the Humber
This highlights that the majority of students studying within Yorkshire and Humber remain within Yorkshire once they have completed their studies. This combined with the net inwards migration of students to study inside Yorkshire means that there is a healthy and growing student Graduate market within Yorkshire and Humber which will also raise the qualification levels across the counties.
Key Comments

• The challenges we face are typical of the region
  – Ageing population
  – Diverse population
  – Future skills shortages

• We need more accurate “as is” information and data about our people particularly their qualifications and experiences
## Education

### Percentage of 16 to 64 year olds with NVQ L4+ qualifications by region / county

<table>
<thead>
<tr>
<th>Year</th>
<th>North East</th>
<th>North West</th>
<th>Yorkshire and The Humber</th>
<th>East Midlands</th>
<th>West Midlands</th>
<th>East of England</th>
<th>London</th>
<th>South East</th>
<th>South West</th>
<th>Wales</th>
<th>Scotland</th>
<th>Northern Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2004-Dec 2004</td>
<td>21.80</td>
<td>23.20</td>
<td>22.60</td>
<td>23.10</td>
<td>22.60</td>
<td>25.00</td>
<td>32.00</td>
<td>29.20</td>
<td>25.90</td>
<td>23.70</td>
<td>30.20</td>
<td>22.80</td>
</tr>
<tr>
<td>Jan 2005-Dec 2005</td>
<td>21.30</td>
<td>24.00</td>
<td>22.70</td>
<td>24.50</td>
<td>23.80</td>
<td>24.90</td>
<td>35.20</td>
<td>30.30</td>
<td>27.20</td>
<td>24.20</td>
<td>32.20</td>
<td>23.10</td>
</tr>
<tr>
<td>Jan 2006-Dec 2006</td>
<td>24.30</td>
<td>25.30</td>
<td>23.80</td>
<td>25.00</td>
<td>24.70</td>
<td>26.00</td>
<td>37.40</td>
<td>30.70</td>
<td>29.00</td>
<td>25.40</td>
<td>33.10</td>
<td>24.90</td>
</tr>
<tr>
<td>Jan 2007-Dec 2007</td>
<td>23.90</td>
<td>27.00</td>
<td>26.60</td>
<td>25.70</td>
<td>24.90</td>
<td>27.30</td>
<td>39.70</td>
<td>32.60</td>
<td>29.10</td>
<td>27.30</td>
<td>33.90</td>
<td>25.50</td>
</tr>
<tr>
<td>Jan 2008-Dec 2008</td>
<td>25.50</td>
<td>28.70</td>
<td>26.50</td>
<td>27.10</td>
<td>26.00</td>
<td>28.50</td>
<td>41.80</td>
<td>33.90</td>
<td>31.50</td>
<td>28.30</td>
<td>35.00</td>
<td>27.00</td>
</tr>
<tr>
<td>Jan 2009-Dec 2009</td>
<td>26.50</td>
<td>28.90</td>
<td>27.50</td>
<td>28.40</td>
<td>26.30</td>
<td>29.20</td>
<td>45.90</td>
<td>36.20</td>
<td>32.90</td>
<td>29.30</td>
<td>37.20</td>
<td>25.70</td>
</tr>
</tbody>
</table>

### Percentage of population with 5 GCSE's A* to C including Maths and English

<table>
<thead>
<tr>
<th>Year</th>
<th>North East</th>
<th>North West</th>
<th>Yorkshire and The Humber</th>
<th>East Midlands</th>
<th>West Midlands</th>
<th>East of England</th>
<th>London</th>
<th>South East</th>
<th>South West</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/06</td>
<td>40.4</td>
<td>42.2</td>
<td>40.3</td>
<td>42.9</td>
<td>41.6</td>
<td>46.7</td>
<td>45.8</td>
<td>47.9</td>
<td>46.2</td>
</tr>
<tr>
<td>2006/07</td>
<td>41.9</td>
<td>44.7</td>
<td>42.5</td>
<td>44.4</td>
<td>43.3</td>
<td>48.4</td>
<td>48.4</td>
<td>49.4</td>
<td>47.2</td>
</tr>
<tr>
<td>2007/08</td>
<td>44.9</td>
<td>47.5</td>
<td>44.4</td>
<td>47</td>
<td>46.1</td>
<td>50.3</td>
<td>50.7</td>
<td>51.7</td>
<td>49.3</td>
</tr>
<tr>
<td>2008/09</td>
<td>48.1</td>
<td>49.9</td>
<td>47.3</td>
<td>49.9</td>
<td>48.5</td>
<td>51.9</td>
<td>54</td>
<td>53.7</td>
<td>51.8</td>
</tr>
<tr>
<td>2009/10</td>
<td>52.9</td>
<td>55.2</td>
<td>52</td>
<td>53.7</td>
<td>54.2</td>
<td>56</td>
<td>58</td>
<td>57.5</td>
<td>55.4</td>
</tr>
<tr>
<td>2010/11</td>
<td>56.8</td>
<td>58.4</td>
<td>54.6</td>
<td>57.1</td>
<td>57.4</td>
<td>59.1</td>
<td>61.9</td>
<td>59.6</td>
<td>57.9</td>
</tr>
<tr>
<td>2011/12</td>
<td>58.5</td>
<td>58.9</td>
<td>57.3</td>
<td>57.6</td>
<td>58.8</td>
<td>58.2</td>
<td>62.3</td>
<td>60.2</td>
<td>57.5</td>
</tr>
</tbody>
</table>
### Summary of labour force survey indicators (Yorkshire and Humber)

<table>
<thead>
<tr>
<th>People</th>
<th>All aged 16 &amp; over</th>
<th>Total economically active</th>
<th>Total in employment</th>
<th>Unemployed</th>
<th>Economically inactive</th>
<th>Economic activity rate (%)</th>
<th>Employment rate (%)</th>
<th>Unemployment rate (%)</th>
<th>Economic inactivity rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Aug-Oct 2013</td>
<td>YCHE</td>
<td>4,276</td>
<td>2,689</td>
<td>2,457</td>
<td>232</td>
<td>1,587</td>
<td>62.9</td>
<td>57.5</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>YCHR</td>
<td>4,299</td>
<td>2,692</td>
<td>2,501</td>
<td>191</td>
<td>1,608</td>
<td>62.6</td>
<td>58.2</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>YCJR</td>
<td>4,308</td>
<td>2,671</td>
<td>2,510</td>
<td>161</td>
<td>1,637</td>
<td>62.0</td>
<td>58.3</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>YCMR</td>
<td>4,325</td>
<td>2,677</td>
<td>2,507</td>
<td>170</td>
<td>1,648</td>
<td>61.9</td>
<td>58.0</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>HKMQ</td>
<td>4,333</td>
<td>2,675</td>
<td>2,510</td>
<td>165</td>
<td>1,658</td>
<td>61.7</td>
<td>57.9</td>
<td>6.2</td>
</tr>
<tr>
<td></td>
<td>YCNE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38.3</td>
</tr>
<tr>
<td>Change on quarter</td>
<td>8</td>
<td>-2</td>
<td>3</td>
<td>-5</td>
<td>10</td>
<td>-0.2</td>
<td>0.0</td>
<td>-0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Change %</td>
<td>0.2</td>
<td>-0.1</td>
<td>0.1</td>
<td>-2.9</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change on year</td>
<td>33</td>
<td>-17</td>
<td>9</td>
<td>-26</td>
<td>50</td>
<td>-0.9</td>
<td>-0.2</td>
<td>-0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Change %</td>
<td>0.8</td>
<td>-0.6</td>
<td>0.4</td>
<td>-13.7</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>