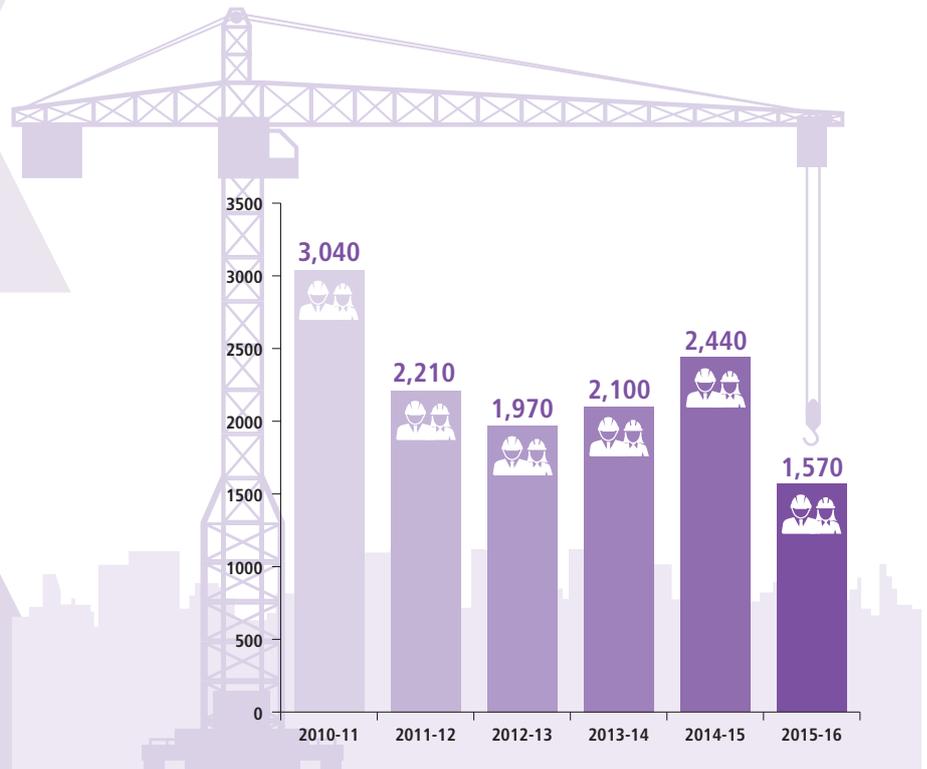


## London's Successful Growth Skills and Diversity

A skills shortage occurs when the requirement for civil engineering skills begins to outstrip supply. In London, significant investment in infrastructure has led to an increase in demand for civil engineers, but there are not enough new entrants into the industry to meet this need.

London currently has a construction workforce of 108,800, but will require 15,700 extra skilled workers by 2020.<sup>1</sup> An ageing workforce means that the UK could face a 'skills cliff edge' as those in the industry move to retirement with around 30% of workers aged over 50 and 700,000 set to retire in the next 10 years.<sup>2</sup>

Not only will new entrants into the labour market be required, but those currently in the industry will need to adapt to changing technologies and methods. This means civil engineers will need to have greater understanding of digital technologies like BIM, be prepared for automation and AI and have 'soft skills' to engage more effectively with members of the public and decision makers.<sup>4</sup>



Apprenticeship starts in Construction, Planning and the Built Environment in London.<sup>6</sup>

### How do we prevent the skills gap?

We can only prevent the skills gap by investing in Science, Engineering, Technology and Maths (STEM) subjects and by showing school children why civil engineering is such a great profession. An ageing workforce makes this all the more imperative.

Providing new routes into the industry, through apprenticeships and technical qualifications is vital in meeting the challenge. However, London is falling behind the rest of the country and is the worst performing region for apprentices in the construction sector.<sup>5</sup>



**By 2022,**  
**UK companies will need**  
**1.82 million**  
**people with engineering skills.<sup>3</sup>**

### What effect will Brexit have?

Brexit presents an added layer of complexity to the issue, possibly risking the ability of migrant workers to plug the skills gap. 27% of construction jobs in London are currently filled by EU nationals but Brexit will create uncertainty as to their status and the UK's ability to attract talent in the future.<sup>7</sup>

The Brexit Infrastructure Group, a pan industry group led by ICE providing expert insight on the issue, set out a number of actions the Government must take to ensure the skills gap is not exacerbated:<sup>8</sup>

- Government should guarantee the status of existing EU nationals currently working in the UK. Securing the status of UK workers in the EU should also be a priority objective at the outset of the Brexit negotiations.
- Government and industry should collaborate to map the skills required to deliver the National Infrastructure and Construction Pipeline and prioritise them within any post-Brexit immigration system.



Female students make up only around **14%** of first degree students in engineering, and



**8%** of professional engineers once in the workforce.<sup>9</sup>

## How does diversity come into this?

The construction and engineering industries suffer from particularly low diversity levels. Women, black, Asian and minority ethnic (BAME) and lesbian, gay, bisexual and transgender (LGBT) groups are underrepresented in civil engineering companies.

Although female students are the majority at university, they make up only around 14% of first degree students in engineering, and 8% of professional engineers once in the workforce.<sup>9</sup>

Diversity is a good in itself, but it also has been shown to improve performance and outputs. The more diverse a workplace, the more inclusive and successful it tends to be. For every 10% increase in gender diversity, UK companies' earnings rise by 3.5%.<sup>10</sup>

Diversity also has a big role in helping to meet the skills gap by bringing those into the industry who may otherwise not have considered it. Getting new communities in the sector will not only be beneficial, but will be increasingly necessary if the skills gap widens.

part of their organisation. It can also act as a sounding board for the organisation to respond to a particular community's needs.

- **Increase diversity in high level positions:** Seeing a diverse group of senior leaders can help promote that organisation and industry to a wider selection of new entrants. It has been shown that diversity spurs more diversity, so that diverse leadership teams will have a direct effect on the whole organisation.
- **Tackle unconscious bias:** When there are homogenous groups, they can unconsciously select people that look, think and act like them. Making interviewers aware of possible unconscious biases, ensuring the language in job adverts is not targeted to one group and blanking out names, ages and genders on CVs can all help remove unconscious biases.

Crucially, increasing diversity does not mean creating preferences for people or positively discriminating. Instead, it is about ensuring that the playing field is fair and removing obstacles for people who have previously found it difficult to enter certain industries.



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## What is ICE London doing?

We regularly go into schools, universities and educational organisations to talk about civil engineering.

Our Diversity Taskforce has also been ensuring that engineers are more representative of the public they serve. They hold regular *Inspiring Engineers* talks and investigate how the sector can improve.

If you want to find out more about ICE London's skills and diversity work, email: [ice.london@ice.org.uk](mailto:ice.london@ice.org.uk)

## What is being done in London?

City Hall is setting up Skills for Londoners with the purpose of ensuring that London's skills system meets the needs of London's businesses while supporting all Londoners to access the skills they need to find and progress in work.

The body will set the strategic direction for London's skills system and drive up the quality of London's further education provision.

## What can the industry do to become more diverse?

There are lots of initiatives that engineering companies can put into place to improve the diversity of their teams:

- **Back to work schemes:** These retraining schemes allow those who have left the industry to re-enter. Often this benefits women who are looking to return to work after childcare activity.
- **Networks:** Setting up networks for different communities to meet and socialise can help individuals feel

1 National Infrastructure Plan for Skills, 2015

2 Brexit Infrastructure Group - Skills briefing, ICE, 2017

3 Engineering UK 2015: The State of Engineering, EngineeringUK, 2015

4 For more information see State of the Nation: Digital, ICE, 2017

5 Apprenticeships: an un-level playing field, London Assembly Economy Committee, 2017

6 Apprenticeships: an un-level playing field, London Assembly Economy Committee, 2017

7 Brexit Infrastructure Group - Skills briefing, ICE, 2017

8 Ibid

9 Engineering UK 2017: The State of Engineering, EngineeringUK, 2017

10 Why Diversity Matters, McKinsey, 2015