T★LENT 2030

DASHBOARD REPORT 2015

THE TALENT 2030 DASHBOARD

Talent 2030 is a national campaign which encourages more young people, especially 11-18 year old girls, to pursue further study in subjects that relate to careers in engineering and manufacturing.

We undertake outreach to schools, work with universities and employers and also use social media to engage with young people directly. Our key messages, based on research of what women said would encourage them to look more seriously at engineering and manufacturing are to flag potential earning, the green and sustainable side of the industry and highlighting women role models.

THE DASHBOARD

The purpose of the dashboard is to set out serious targets over a credible timeline which we will monitor every year from 2012-2030. Failure to start improving the way in which girls and young women are encouraged to study in subjects like physics, mathematics and engineering reduces the size of the talent pool and potentially jeopardises the international competitiveness of engineering and manufacturing in the UK.

THE TARGETS

To ensure the future of UK Engineering and Manufacturing, by 2030 we need to see:

25% of Engineering and Technology **Postgraduates** in the UK to be women

30% of Engineering and Technology **Undergraduates** in the UK to be women

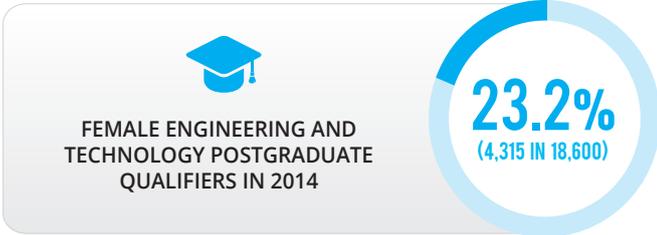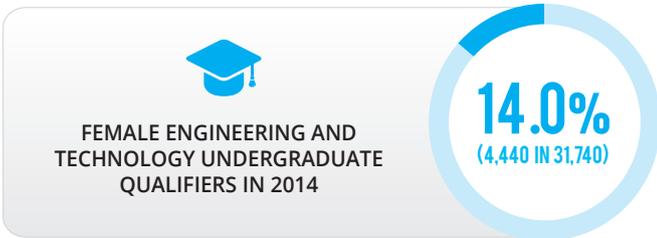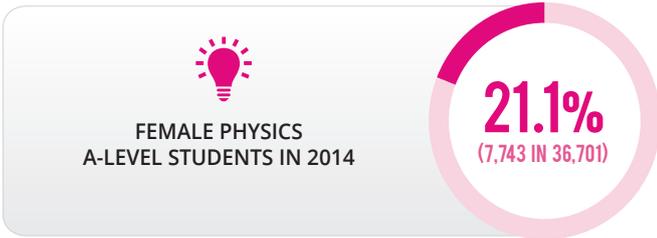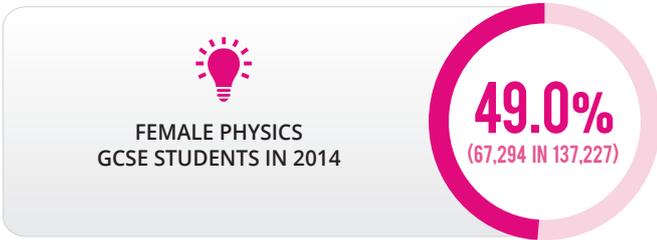**30%** of **A-Level** Physics Students to be girls

50% of **GCSE** Physics Students to be girls
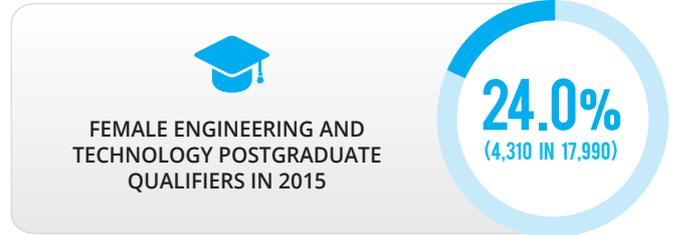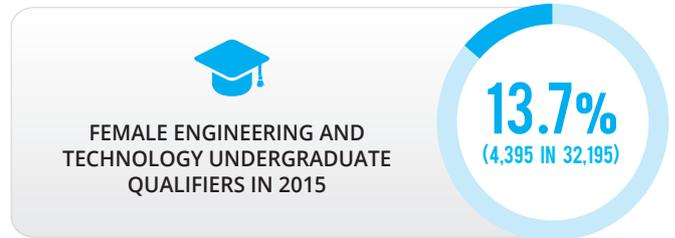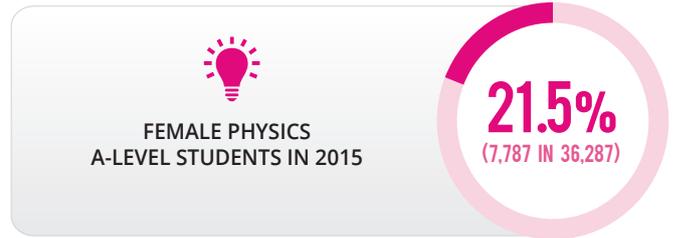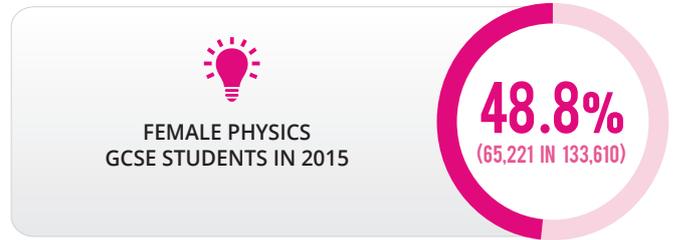
CONTACT US FOR MORE INFORMATION

www.talent2030.org   facebook.com/talent2030   @Talent_2030

PROGRESS REPORT
ENGINEERING PIPELINE

2014 DASHBOARD

FEMALE PHYSICS GCSE STUDENTS IN 2014
49.0%
(67,294 IN 137,227)

FEMALE PHYSICS A-LEVEL STUDENTS IN 2014
21.1%
(7,743 IN 36,701)

FEMALE ENGINEERING AND TECHNOLOGY UNDERGRADUATE QUALIFIERS IN 2014
14.0%
(4,440 IN 31,740)

FEMALE ENGINEERING AND TECHNOLOGY POSTGRADUATE QUALIFIERS IN 2014
23.2%
(4,315 IN 18,600)

FEMALE UK ENGINEERING PROFESSIONALS IN 2014
7.0%
(32,000 IN 459,000)

2015 DASHBOARD

FEMALE PHYSICS GCSE STUDENTS IN 2015
48.8%
(65,221 IN 133,610)

FEMALE PHYSICS A-LEVEL STUDENTS IN 2015
21.5%
(7,787 IN 36,287)

FEMALE ENGINEERING AND TECHNOLOGY UNDERGRADUATE QUALIFIERS IN 2015
13.7%
(4,395 IN 32,195)

FEMALE ENGINEERING AND TECHNOLOGY POSTGRADUATE QUALIFIERS IN 2015
24.0%
(4,310 IN 17,990)

FEMALE UK ENGINEERING PROFESSIONALS IN 2015
9.0%
(42,000 IN 468,000)

SUBJECT COMPARISON

FEMALE BIOLOGY A-LEVEL STUDENTS IN 2015
60.6%
(38,320 IN 63,275)

FEMALE MATHS A-LEVEL STUDENTS IN 2015
38.8%
(35,937 IN 92,711)

FEMALE MEDICINE AND DENTISTRY UNDERGRADUATE QUALIFIERS IN 2015
56.4%
(5,715 IN 10,125)

FEMALE COMPUTER SCIENCE UNDERGRADUATE QUALIFIERS IN 2015
16.4%
(3,195 IN 19,480)
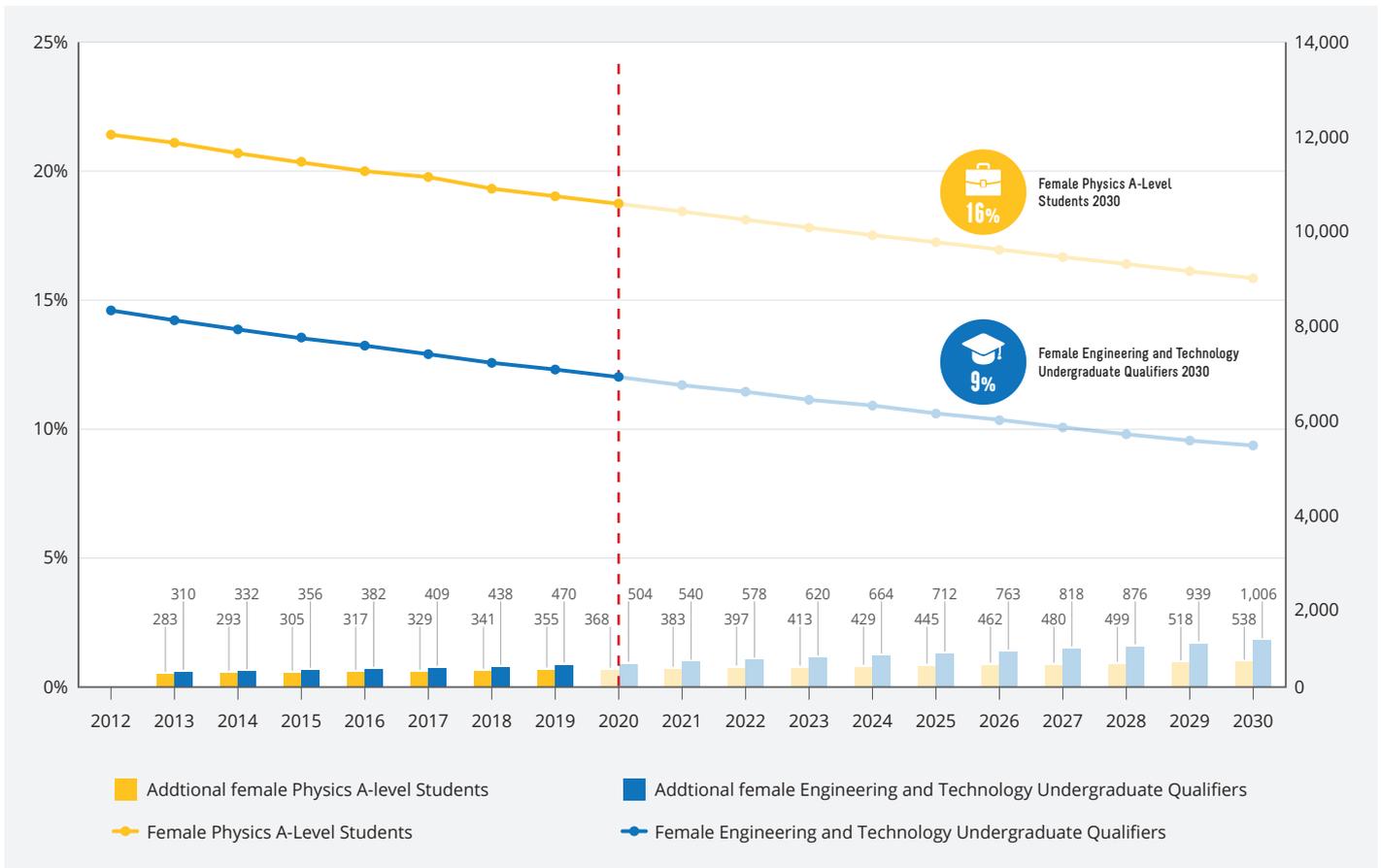
THE PROJECTIONS

To make a concentrated effort to achieve the 2030 targets, we need to see a steady and consistent increase in the numbers of female students in both A-Level Physics and undergraduate Engineering and Technology qualifiers (as show by the blue and yellow bars below).

We are **NOT** currently on track to achieve this.

The above graph shows linear projections for how many female A-Level Physics students and Engineering and Technology undergraduates we will have by 2030 based on the changes already seen in 2015 relative to 2012. The projections are downward sloping because, despite the increasing take-up of both these courses among female students, this is happening at a much faster rate for male students. Looking ahead at just the next five years, as shown by the red line, by 2020 we will be **2,500** female A-Level Physics Students and **3,000** female Engineering and Technology undergraduates **SHORT**. But it doesn't have to continue this way; we still have time to change the outcome and reach the targets for 2030, but only if we act **NOW**, not later.

To do this, we need to see robust, innovative and ambitious intervention before we hit the red line of 2020. If we fail to do anything it will only get harder next year, and every year, until we miss our targets by a staggering 7,000 A-Level students and 10,000 undergraduate qualifiers in 2030. This means there will be fewer talented females in the pipeline to become the qualified engineering professionals that the industry needs, ultimately deteriorating the state of the engineering sector.

9% of Engineering and Technology **Undergraduates** in the UK will be women

16% of A-Level Physics **Students** will be girls

TALENT 2030 DASHBOARD
SOURCES OF EVIDENCE

Below are the definitions for the Dashboard according to official sources of data. They are used to update the Talent 2030 Dashboard annually and are freely available. Please note the 2012 dashboard relied on data sources that cannot be traced and thus cannot be updated in order to assess progress. Using official and periodical sources improves the robustness of the evidence and enables updates but it may imply that the baseline numbers change with respect to the previously published 2012 Dashboard. Therefore the 2013 and subsequent dashboards use figures for revised 2012 definitions, even if these do not coincide with the published 2012 Dashboard.

DEFINITIONS AND SOURCES

% FEMALE GCSE STUDENTS

Joint Council for Qualifications Results (Proportions Sat)

www.jcq.org.uk/examination-results/gcses

% FEMALE A-LEVEL STUDENTS

Joint Council for Qualifications Results (Proportions Sat)

www.jcq.org.uk/examination-results/a-levels

% FEMALE UNDERGRADUATES

HESA data reporting on Engineering and Technology, Medicine & Dentistry and Computer Science qualifiers (Table 10)

www.hesa.ac.uk/content/view/1897/239

% FEMALE POSTGRADUATES

HESA data reporting on Engineering and Technology qualifiers (Table 10)

www.hesa.ac.uk/content/view/1897/239

% FEMALE IN PROFESSIONAL ENGINEERING OCCUPATIONS IN UK LABOUR FORCE SURVEY

ONS Labour Market Statistics Quarter2: April-June published August; Table EMP04

www.ons.gov.uk/ons/rel/lms/labour-force-survey-employment-status-by-occupation/index.html

NOTES ON DEFINITIONS

GCSE and A-Level Students (either sat or passed levels) defined as Joint Council for Qualifications Undergraduate and Postgraduate qualifiers by gender not available for Engineering only. Using instead official statistics published by HESA on Engineering and Technology qualifiers. Moreover Postgraduates have ceased to be reported separately as Doctorates and Masters in publicly available official statistics. The new classification spans Postgraduate Research and Postgraduate Taught degrees, both of which include Doctorates and Masters. The new classification is obscure and less well understood by users so overall postgraduate qualifiers to be reported on dashboard instead.

Engineers in the Labour Force fill in occupations of varied nature. We are reporting strictly on 3-digit Standard Occupational Classification 2010 212: Engineering Professionals. This excludes technicians and associated professionals; e.g. plumbing and electrical engineers; building and civil engineering technicians and so on. These excluded occupations are predominantly male and therefore a bespoke definition to include them will most likely lower female proportions further down.

The graphs show full lines for our actual data between 2012 and 2015, followed by dashed lines for our projections to 2030. These linear projections are based on a comparison of the actual data for 205 relative to 2012 data as a baseline.

If the patterns already seen in the 2015 relative to the 2102 data were to continue into the next 15 years, we would not achieve the 2030 targets on the percentage of females studying A-Level Physics or the percentage of female Engineering and Technology undergraduate qualifiers. This is because while the shares for females grew by 2015 compared to 2012 in these domains, the shares for males in the same period grew at a faster rate.

A continuation in this trend – with a slower growth rate for females compared to males in these domains– would result in the shares of females gradually being overshadowed by the relatively faster growth in the share of males. It is worth noting that the linear projections are not expected to hold their validity for 15 years, but the 2020 projects are unfortunately expected.