



Advanced Resource Managers
Engineering Salary Survey 08/09

Contents

Introduction	2
Industry Descriptions	3
Manufacturing/Process	3
Rail	3
Automotive	3
Defence & Aerospace	4
Findings	6
Manufacturing/process salaries/rates	6
Rail salaries/rates	10
Automotive salaries/rates	11
Technology salaries/rates	13
Defence & Aerospace salaries/rates	16
Trend Analysis	18
Test Engineer	18
Six Sigma	20
Technician	25
Calibration Engineer	27
Systems Integration Engineering	28
Industry	31
Manufacturing in the UK	31
Rail in the UK	32
Automotive in the UK	33
Telecommunications in the UK	34
Defence and Aerospace in the UK	34
Conclusion	35
Sources	36

Introduction

The purpose of this salary survey is to provide an insight into engineering salaries around the UK. The survey should be used as a guide rather than a definitive overview.

All salaries have been divided by geographical regions namely: North, South, Midlands and London.

The "Engineering sector", such as it is, is extremely diverse and in employment/labour parlance can incorporate an overwhelming range of industry sectors and skills.

In order to provide measurable and concise information we have focused on five industries: Manufacturing/Process, Rail, Automotive, Telecommunications and Defence/Aerospace.

The jobs that have been chosen within each sector were those that our recruitment consultants found to be the most prevalent. However, we understand that the list is not exhaustive.

We will be assessing both permanent salaries and contract rates.

The latter section of the report carries out an in-depth analysis of particular skills and job roles across different sectors to examine geographical and industry-specific differences in salary.

We have used a number of recognised sources to produce this report; these are cited wherever necessary.

Where we cite "ARM" (Advanced Resource Managers) as a source, we have used a sample of the first 30 jobs (in each case) from our own CRM system to work out an average salary or rate.

Please note that numbers in brackets in this report such as: (152) ...signify the size of the sample in each case.

The report begins with a brief overview of each industry sector.

Industry Descriptions

Manufacturing/Process

The Manufacturing industry involves a multitude of disciplines, from skilled hands-on staff through quality, procurement and supply chain, production/manufacturing, engineering and associated management positions. The industry includes the production of Fast Moving Consumer Goods (FMCG) to consumer products such as toiletries, soap, cosmetics, detergents, and non-durables such as glassware, light bulbs, batteries, paper products and plastic goods. FMCG also includes include pharmaceuticals, consumer electronics, packaged food products and drinks.

Rail

The Rail Infrastructure market is arguably one of the most important markets in the UK. It is one of the largest by geographical coverage and, by virtue of its spread and influence in other markets, in terms of those who depend upon it.

It is heavily segmented and its complicated structure means that, on the whole, it is both nationalised and privatised. It operates underground and over-ground, bypassing roads and water, serving leisure, freight and public transport needs.

The UK rail network provides links to the continent; it connects all major cities, and reaches remote, sparsely inhabited villages.

It consists of an immense list of assets: stations, track, permanent way, signalling, comms, power, public areas, access and transit functions to name a few.

The most familiar life cycle in this industry consists of: demand, to feasibility, to design, to construction/production/installation, to handover, and finally to maintenance.

The core spend and activity is in the maintenance field (with the exception of a handful of major construction projects) and is funded by government and public spend.

Automotive

The UK Automotive industry serves to provide new products, and the delivery of ideas from concept to production, for a vast range of concept and production wheeled vehicle systems.

The engineering arena is mainly split into OEMs (original equipment manufacturers), consultancies and 1st tier component suppliers.

Although research is sometimes government funded, this is a retail-funded industry, meaning its sustainability depends on the public and businesses (including the defence sector) buying vehicles.

In recent years, whilst production has suffered and relocated to foreign shores, the engineering sector of the Automotive industry has flourished in the UK, establishing it as one of the best locations in the world for innovation, quality and delivery.

The Midlands is still the hotbed of UK automotive engineering, with many of the local education centres aligning their curricula and facilities with this market and creating

alliances with local industry. Consequently there is a “colonial” tradition of automotive engineering talent that is likely to educate, employ and fuel the local populace and economy for many years to come. For this reason the UK hotbed will most likely remain the Midlands, above other emerging locations.

Telecommunication

From Cable and Wireless’s first transatlantic cable and clunky Bakelite telephones to a galaxy of integrated and sophisticated communications and data technology, telecommunications has evolved rapidly.

The telecoms industry provides a range of engineering work in diverse specialist fields. Established technologies such as mobile phones and the internet are providing gateways for a range of technologies that are newer to market, from circuit switched pabx to packet switched intelligent networks.

Convergence of voice data and internet technologies means that both network providers (fixed and mobile) and equipment manufacturers have embraced a variety of multi-media technologies to enable consumers to access voice data and infotainment services.

This arena employs a broad variety of specialists: ASIC design engineers design the chips at the heart of MPEGA-enabling mobile phones; project managers oversee the installation of new fibre networks, and software engineers develop user interfaces for devices such as PDAs or device drivers for VoIP (voice over IP) modems.

Wireless technology includes infrared microwave, radio, satellite, wire and fibreglass as well as the internet (including intranet and extranet), telephone systems, WANs and LANs.

Wireless Network refers to any type of computer network that is wireless and is commonly associated with a telecommunications network whose connections between points is implemented with some type of system that uses electromagnetic waves, such as radio waves.

Defence & Aerospace

Defence & aerospace are rapidly growing and interrelated industries.

Avionics is a key branch of both industries and includes the design and production of navigation, communication, radar, auto-flight, Identification Friend or Foe (IFF), and electronic warfare (EW) to name a few.

The aircraft sector relates to aircraft systems, aircraft structure, components, primary flight controls, missile fin actuation and more.

This is an extremely hands-on industry, providing excellent opportunities for engineers of various skills and disciplines.

Below are just some of the areas and skills within the industry:

Communications

System Studies, Designs and Prototypes – Communication Systems and Digital Battle-

space – Networks – Signal and Data Processing – Propagation Modeling – Radio Coverage Surveying

Human Factors

Human Performance Modeling – Training – Command and Control – Maintainability and Support Systems – Human Factors Integration – Situational Awareness – Task Analysis – Sensors and Displays – Mental Modeling

Information and data processing

Computer Aided Support for Design and Manufacture – Automation for Non-Destructive Testing – Automated/Mechanised Assembly – Autonomous Navigation and Sensing Experimental Research – Modeling of Electromagnetic Propagation in the Atmosphere and System Modeling – Image Analysis – Multi-Source Data Fusion

Mathematical modeling

Electromagnetic Modeling – Aero/Fluid Dynamics – Structural Dynamics & Vulnerability – Engineering Process Technologies

Materials sciences

Composites – Structural Health Monitoring – Device Fabrication – Spectroscopic Techniques – Microsystems – Experimental Impact Studies – Surfaces & Interfaces and Lasers

Optics and lasers

Photonics – Electromagnetic Technology – Infrared Prediction – Non-Contact Measurement Techniques – Optical Signal and Data Processing – Lasers and Electro-Optic Systems – Miniature Displays

Sensors

Antenna Design and Evaluation – Electromagnetic Modeling – Microwave Systems and Components – Radar Systems and Techniques – Target Detection and Recognition – Control Systems

Stealth

Measurement of Materials Properties – Performance Prediction and Modeling – Radar Cross Section Reduction – Radar Absorbing Materials – Radar Transparent Materials – Noise and Vibration Reduction

Findings

Manufacturing/process salaries/rates

Job title	Type	North	South	Midlands	London	Source
Test (Digital, Analogue, RF, ATE)	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£40,000 to £50,000	Jobserve
	Perm	£32,000	£30,000	£31,000	£40,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£20-£30 p/h	£30-£40 p/h	Jobserve
Approvals Engineers (EMC, LVD, Safety, Electrical Test)	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve
Supply Chain Controllers/Managers	Perm	£18,000	£22,000	£30,000	£29,000	Salary Track
	Contract	£20-£30 p/h	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Import/Export/Shipping/Logistics	Perm	£28,000	£25,000	£30,000	£30,000	Salary Track
	Contract	£30-£40 p/h	£20-£30 p/h	£20-£30 p/h	£30-£40 p/h	Jobserve
Warehouse Managers	Perm	£30,000	£30,000	£35,000	£30,000	Salary Track
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve
Prototype Wiring (Panel, 19" racks etc)	Perm	£25,000 to £30,000	£30,000 to £40,000	£25,000 to £30,000	£30,000 to £40,000	Jobserve
	Contract	£10-£20 p/h	£10-£20 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve & ARM
Production Engineers/Managers	Perm	£30,000	£30,000	£30,000	£31,000	Salary Track
	Contract	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	Jobserve

Job title	Type	North	South	Midlands	London	Source
Quality Engineering/ Managers	Perm	£28,000	£40,000	£26,000	£31,000	Salary Track
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Estimating/Costing/ Expediting	Perm	£35,000	£35,000	£35,000	£45,000	Salary Track
	Contract	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	Jobserve
ESA Technicians	Perm	£25,000 to £30,000	£25,000 to £30,000	£25,000 to £30,000	£25,000 to £30,000	Jobserve
	Contract	£10-£20 p/h	£10-£20 p/h	£10-£20 p/h	£10-£20 p/h	Jobserve
Materials Planning/Schedulers	Perm	£26,558	£20,000	£25,000	£25,000	Salary Track
	Contract	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	£40-£50 p/h	Jobserve
Materials Managers	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£50,000 to £75,000	Jobserve
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Production Planning/Control	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£40,000 to £50,000	Jobserve
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Condition Monitoring	Perm	£30,000 to £40,000	£30,000 to £40,000	£25,000 to £30,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Facilities Management	Perm	£25,000	£30,000 to £40,000	£25,000 to £30,000	£36,000	Jobserve & Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve & ARM
Maintenance	Perm	£35,024	£34,356	£33,210	£36,825	Total Jobs
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£50-£60 p/h	Jobserve

Job title	Type	North	South	Midlands	London	Source
Outsourcing and interim assignments	Perm	£40,000 to £50,000	£50,000 to £75,000	£50,000 to £75,000	£50,000 to £75,000	Jobserve
	Contract	£40-£50 p/h	£40-£50 p/h	£50-£65 p/h	£50-£65 p/h	Jobserve
Buyers	Perm	£30,000	£28,000	£30,000	£32,000	Salary Track
	Contract	£23 p/h (avg)	£23 p/h (avg)	£28 p/h (avg)	£52 p/h (avg)	ARM
Project Planning	Perm	£35,000	£40,000	£40,000	£45,000	Salary Track
	Contract	£50-£65 p/h	£30-£40 p/h	£40-£50 p/h	£40-£50 p/h	Jobserve
Project Engineering	Perm	£35,000	£32,000	£32,000	£38,000	Salary Track
	Contract	£40-£50 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Purchasing/Supply Chain Management	Perm	£40,000 - £65,000	£40,000-£65,000	£40,000 – £65,000	£40,000 – £65,000	ARM
	Contract	£53 p/h (avg)	£50 p/h (avg)	£51 p/h (avg)	£53 p/h (avg)	ARM
Service Engineers	Perm	£25,000	£25,000	£25,000	£27,000	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Six Sigma	Perm	£35,000	£35,000	£35,000	£50,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£50-£60 p/h	Jobserve & ARM
Directors	Perm	£55,000	£50,000	£60,000	£65,000	Salary Track
	Contract	£50-£70 p/h	£50-£70 p/h	£50-£70 p/h	£50-£70 p/h	Jobserve & ARM
Interim Management	Perm	£32,000	£40,000	£40,000	£40,000	Salary Track
	Contract	£40-£50 p/h	£30-£40 p/h	£40-£50 p/h	£40-£50 p/h	Jobserve

Job title	Type	North	South	Midlands	London	Source
Contracts Management	Perm	£35,000	£35,000	£40,000	£45,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Designer	Perm	£46,058	£41,698	£39,765	£48,318	Total Jobs
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£30-£40 p/h	Jobserve
Food Production	Perm	£33,737	£33,926	£34,788	£33,946	Total Jobs
	Contract	£30-£40 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve

Rail salaries/rates

Job Title	Type	North	South	Midlands	London	Source
Civil Engineer	Perm	£55,104	£43,508	£45,000	£46,050	Total Jobs & ARM
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Programme Managers	Perm	£65,000	£65,000	£65,000	£65,000	Salary Tracker
	Contract	£50-£70 p/h	£50-£70 p/h	£50-£70 p/h	£50-£70 p/h	Jobserve & ARM
Project Directors	Perm	£55,500	£50,000	£60,000	£70,000	Salary Tracker
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Project Managers	Perm	£50,000	£50,000	£50,000	£50,000	ARM
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Project Controls	Perm	£34,000	£30,000	£35,000	£40,000	Salary Tracker
	Contract	£30-£40 p/h	£40-£50 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Designers	Perm	£30,000	£31,000	£30,000	£35,000	Salary Tracker
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Project Engineer	Perm	£35,000	£32,000	£32,000	£38,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£40 p/h	£40-£50 p/h	Jobserve
Engineers	Perm	£30,000	£30,000	£30,000	£35,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Technicians	Perm	£22,000	£22,000	£21,000	£25,000	Salary Tracker
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve

Automotive salaries/rates

Job Title	Type	North	South	Midlands	London	Source
Automotive & Automotive Engineering	Perm	£34,210	£35,888	£34,731	£33,853	Total Jobs
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Design Engineers (CAD, all software systems)	Perm	£36,592.26	£38,472.04	£35,387.68	£43,272.31	Total Jobs
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
CAE Engineers (FEA and CFD)	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
NVH Engineers	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Test Engineers	Perm	£28,000	£30,000	£30,000	£32,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Development Engineers	Perm	£30,000	£30,000	£30,000	£40,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Calibration Engineers	Perm	£30,000	£25,000	£20,000	£25,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Project Managers & Engineer	Perm	£45,000	£40,000	£45,000	£55,000	Salary Tracker
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Programme Manager	Perm	£65,000	£45,000	£45,000	£65,000	Salary Tracker
	Contract	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	40-£50 p/h	Jobserve

Job Title	Type	North	South	Midlands	London	Source
Manufacturing Engineering	Perm	£30,000	£30,000	£30,000	£33,000	Salary Tracker
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Quality/ Supplier Development (SQA) Engineering	Perm	£30,000	£30,000	£28,000	£30,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Software Designer	Perm	£30,000 to £40,000	£30,000 to £40,000	£25,000 to £30,000	£30,000 to £40,000	Salary Tracker
	Contract	£30-£40 p/h	£30-£40 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve
Electrical/ Electronic	Perm	£35,782	£38,149	£35,320	£38,767	Total Jobs
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Sales Marketing & Business Development	Perm	£35,000	£35,000	£35,000	£40,000	Salary Tracker
	Contract	£30-£40 p/h	£50-£60 p/h	£20-£30 p/h	£65-£80 p/h	Jobserve
Purchasing	Perm	£30,000	£20,000	£19,000	£22,000	Salary Tracker
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Homologation Engineer	Perm	£30,000 to £40,000	£30,000 to £40,000	£25,000 to £30,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£20-£65 p/h	Jobserve

Telecoms salaries/rates

Job Role	Type	North	South	Midlands	London	Source
Billing	Perm	£20,649	£27,022	£16,999	£46,642	Total Jobs
	Contract	£40.78 p/h	£47.15 p/h	£45.92 p/h	£55.07 p/h	ARM
Cable/Cabling	Perm	£27,811	£47,167	£36,430	£49,169	Total Jobs
	Contract	£10-£20 p/h	£10-£20 p/h	£24.50 p/h	£40-£50 p/h	Jobserve & ARM
CCNA	Perm	£39,140	£44,605	£41,604	£41,249	Total Jobs
	Contract	£20-£30 p/h	£41.50 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve & ARM
Cisco	Perm	£36,405	£53,309	£40,769	£52,551	Total Jobs
	Contract	£30.00 p/h	£30-£40 p/h	£30.20 p/h	£50-£65 p/h	Jobserve & ARM
Consultant	Perm	£37,505	£47,541	£32,619	£52,551	Total Jobs
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£50-£65 p/h	Jobserve
Customer Support	Perm	£20,055	£34,251	£28,814	£40,305	Total Jobs
	Contract	£10-£20 p/h	Below £10	Below £10	£10-£20 p/h	Jobserve
Design	Perm	£36,366	£48,349	£43,796	£51,734	Total Jobs
	Contract	£20-£30 p/h	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	Jobserve
Director	Perm	£39,444	£52,315	£38,582	£56,241	Total Jobs
	Contract	£32.00 p/h	£40.00 p/h	£43.87 p/h	£50.00 p/h	ARM

Job Role	Type	North	South	Midlands	London	Source
Fibre	Perm	£31,707	£43,547	£50,892	£45,749	Total Jobs
	Contract	£20-£30 p/h	£30-£40 p/h	£35.00 p/h	£36.00 p/h	Jobserve & ARM
GSM	Perm	£27,187	£47,822	£57,499	£57,953	Total Jobs
	Contract	£35.00 p/h	£80-£160 per day	£22.00 p/h	£320-£400 per day	Jobserve & ARM
Installation	Perm	£28,472	£36,722	£30,311	£42,222	Total Jobs
	Contract	£160 - £240 per day	£160 - £240 per day	£60-£160 per day	£160 - £240 per day	Jobserve
Manager	Perm	£30,671	£41,961	£36,064	£48,754	Total Jobs
	Contract	£30-£40 p/h	£40-£50 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Mobile	Perm	£31,087	£44,541	£33,522	£51,316	Total Jobs
	Contract	£30-£40 p/h	£50-£60 p/h	£30-£40 p/h	£50-£60 p/h	Jobserve & ARM
Product Manager	Perm	£47,499	£57,915	£42,000	£57,195	Total Jobs
	Contract	£30-£40 p/h	£40-£50 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Project Management	Perm	£36,279	£47,642	£46,131	£53,393	Total Jobs
	Contract	£30-£40 p/h	£40-£50 p/h	£50-£60 p/h	£50-£60 p/h	Jobserve
Sales	Perm	£26,698	£41,347	£36,430	£45,272	Total Jobs

Job Role	Type	North	South	Midlands	London	Source
SDH	Perm	£42,499	£37,499	£43,381	£43,194	Total Jobs
	Contract	£37.30 p/h	£37.30 p/h	£37.30 p/h	£50-£65 p/h	Jobserve & ARM
Voice	Perm	£35,622	£48,785	£37,046	£51,744	Total Jobs
	Contract	£39.00 p/h	£50-£65 p/h	£50-£65 p/h	£50-£65 p/h	Jobserve & ARM

Total jobs: Both eastern and western locales of the North & South region have been considered when working out the average salary.

ARM (Advanced Resource Managers): to work out an average from this source the first 30 jobs in our internal CRM system were used.

Defence & Aerospace salaries/rates

Job Title	Type	North	South	Midlands	London	Source
Aerospace & Aeronautical	Perm	£35,390	£39,081	£34,256.12	38,489.05	Total Jobs
Defence	Perm	£39,881	£42,006	£41,591	£43,526	Total Job
Systems Engineer	Perm	£30,000	£35,000	£30,000	£38,000	Salary Track
	Contract	£20-£30 p/h	£20-£30 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Validation & Verification Engineer	Perm	£28,000 p/h	£30,000 p/h	£30,000 p/h	£35,000 p/h	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Safety Engineer	Perm	£35,000	£37,000	£30,000	£40,000	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
RAMS Engineer	Perm	£30,000 to £40,000	£30,000 to £40,000	£25,000 to £30,000	£30,000 to £40,000	Jobserve
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£20-£30 p/h	Jobserve
Human Factors	Perm	£40,000	£40,000	£30,000	£45,000	Salary Track
	Contract	£30-£40 p/h	£30 £40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve
Cost Engineers	Perm	£25,000	£30,000	£32,000	£45,000	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£50-£65 p/h	Jobserve
Configuration Managers	Perm	£30,000 to £40,000	£35,000	£28,000	£50,000	Jobserve & Salary Track
	Contract	£30-£40 p/h	£40-£50 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve

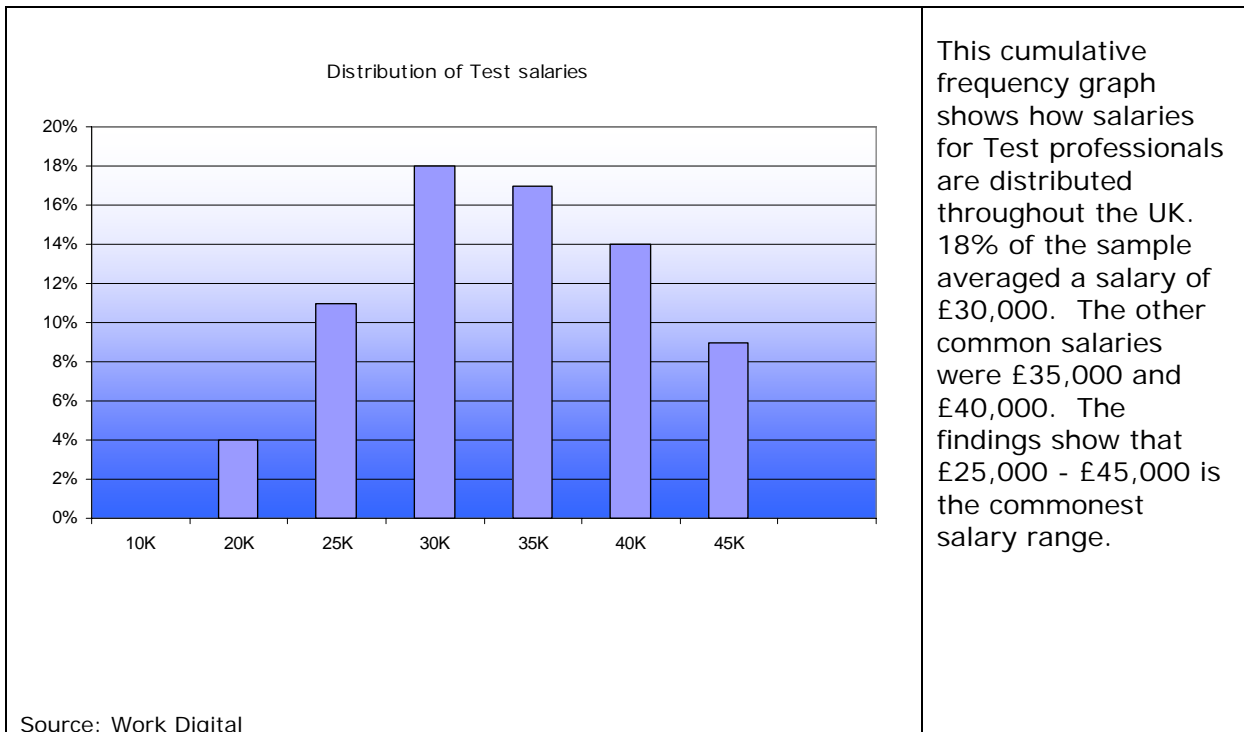
Job Title	Type	North	South	Midlands	London	Source
INFOSEC Engineers	Perm	£30,000 to £40,000	£42,000	£30,000 to £40,000	£40,000	Jobserve & Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & Salary Track
Requirements Engineers – (DOORS, RDD100, CRADLE)	Perm	£30,500	£40,000	£32,500	£38,500	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£30-£40 p/h	£50-£65 p/h	Jobserve
ILS Engineers	Perm	£25,000	£34,000	£45,000	£35,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve & ARM
Reliability Engineers	Perm	£30,000	£25,000	£27,000	£35,000	Salary Track
	Contract	£20-£30 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Electronics Systems Engineers	Perm	£28,000	£26,000	£28,500	£28,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Systems Test Engineers	Perm	£28,000	£30,000	£30,000	£30,000	Salary Track
	Contract	£30-£40 p/h	£30-£40 p/h	£20-£30 p/h	£40-£50 p/h	Jobserve
Simulation & Modelling Engineers	Perm	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	£30,000 to £40,000	Jobserve
	Contract	£30.00 p/h	£30-£40 p/h	£30-£40 p/h	£40-£50 p/h	Jobserve

Trend Analysis

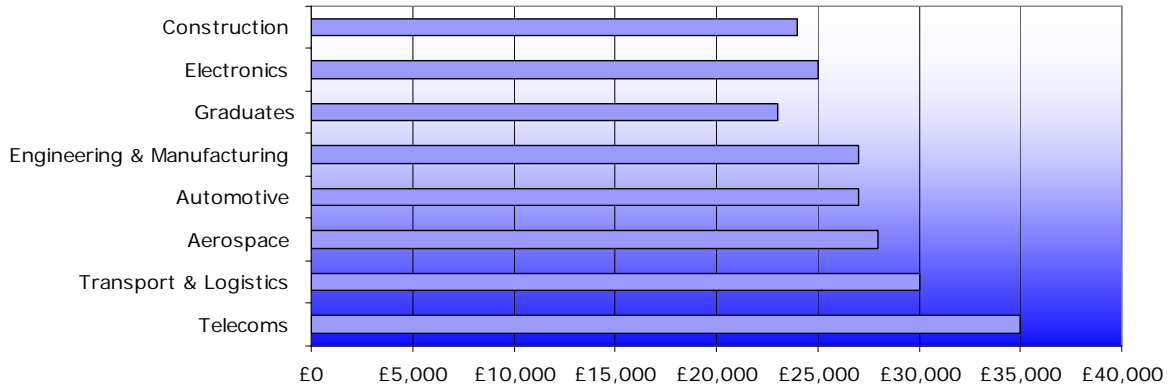
In this section of the survey we will analyse a number of jobs and skills across different regions in order to examine geographical and industry-specific differences in salary.

We have focused upon the highest- and lowest-paying regions in order to provide a balanced view of what the market is offering to jobseekers. We also consider what various sectors offer for the same roles – that is to say, roles that can cross the boundary from one sector to another, such as test engineers, who can work in telecommunications, aerospace and other sectors.

Test Engineer



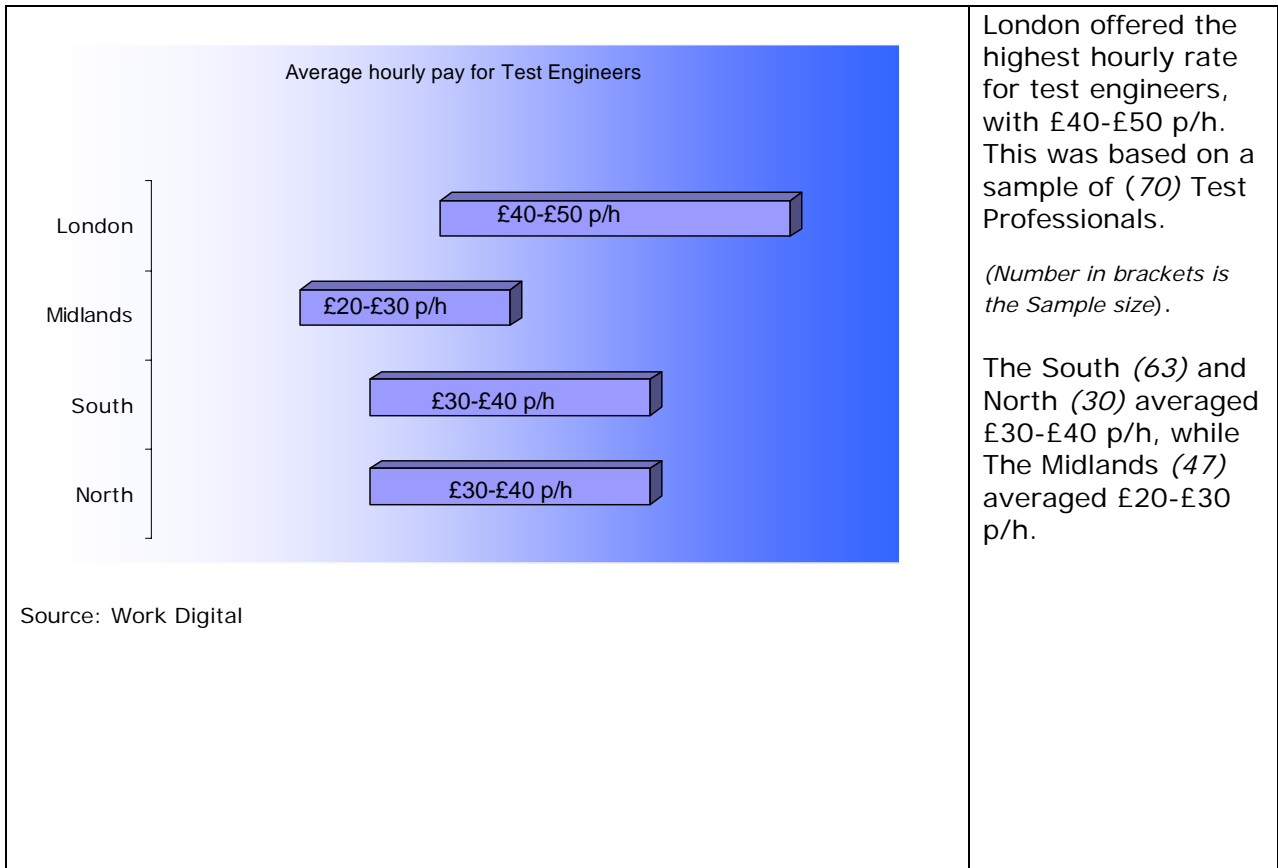
Average salary of Test roles in different sectors



Source: Work Digital

According to the graph the Telecoms sector offers the best pay for professionals pursuing a career in a Test role (£35,000). Transport and Logistics offers £30,000, while Engineering and Manufacturing averaged £27,000.

Electronics and Construction complete the lower end of the salary scale with £25,000 and £24,000 respectively. The national average for a graduate Test role is £23,000.



Source: Work Digital

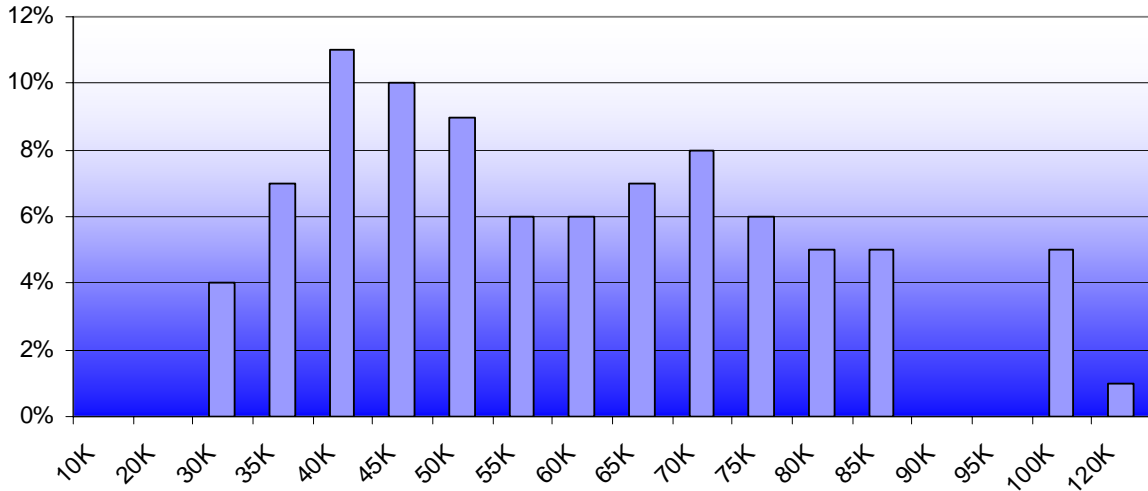
London offered the highest hourly rate for test engineers, with £40-£50 p/h. This was based on a sample of (70) Test Professionals.

(Number in brackets is the Sample size).

The South (63) and North (30) averaged £30-£40 p/h, while The Midlands (47) averaged £20-£30 p/h.

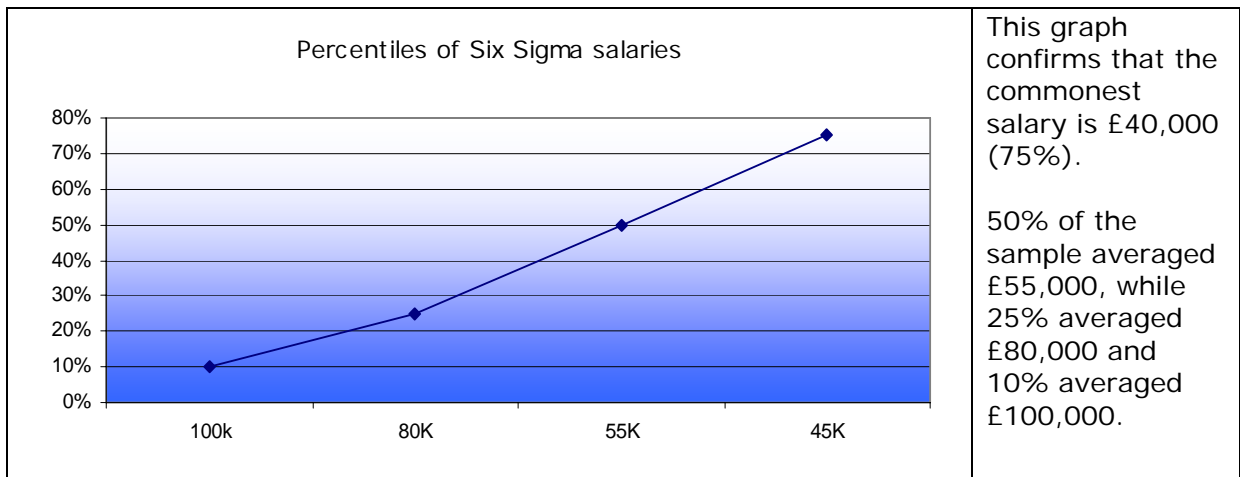
Six Sigma

Distribution of Six Sigma salaries

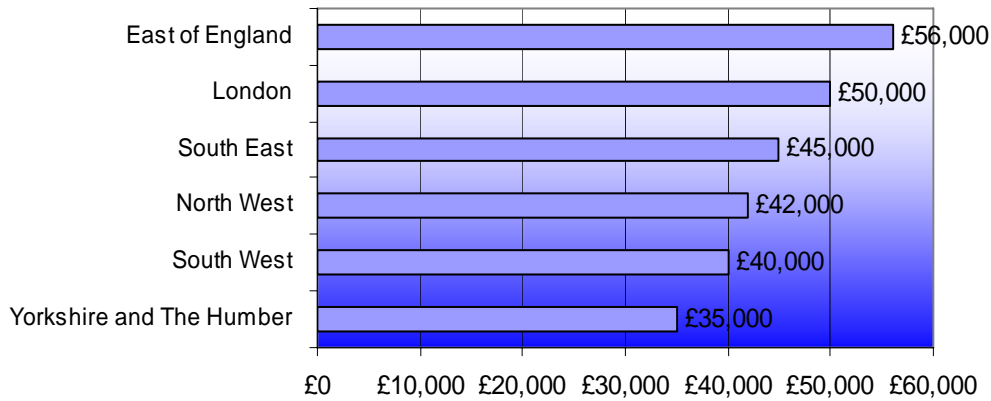


Source: Work Digital

The graph shows the wide variation of Six Sigma salaries, from £30,000 to £120,000. Although no data was found for salaries of £90,000 it is reasonable to assume that this is due to the sample size. The commonest salary was £40,000, or 11% of the sample. This was closely followed by £45,000 (10%). 5% of the sample averaged £80,000, £85,000 and £100,000. 1% of the sample averaged £120,000.



Average Six Sigma salaries by region

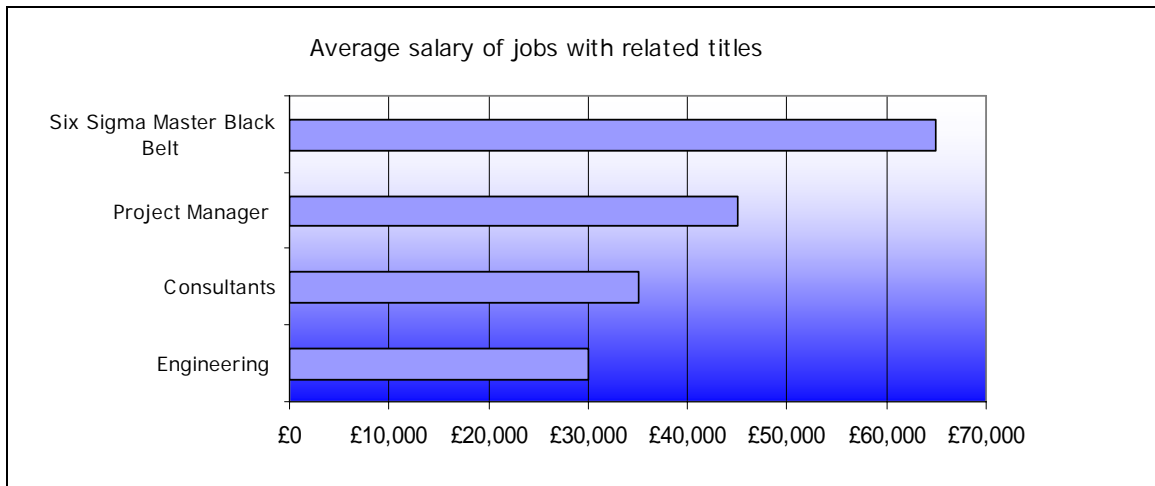


Source: Work Digital

£56,000 was the highest average Six Sigma salary in the East of England. The capital offers £50,000, (average) while the South East averages £45,000. Yorkshire and The Humber averaged the lowest salary of £35,000.

The regional differences for Six Sigma salaries are not as pronounced as for some skills.

The national average Six Sigma salary for Engineering and Manufacturing is £45,000.

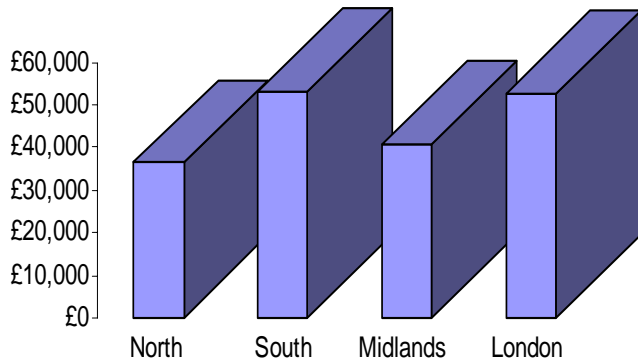


Source: Work Digital

Demand for Six Sigma professionals exists across a number of sectors. Six Sigma Master Black Belts can average £65,000 per year. Project Managers average £45,000, while Consultants and Engineers average £35,000 and £30,000 respectively.

Cisco

Average Cisco salary by region



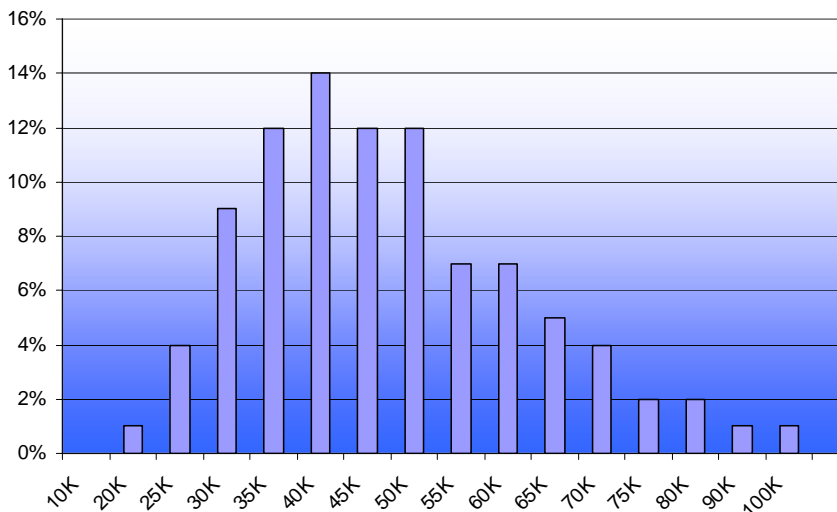
The graph shows that the South offers the highest average salary for Cisco experts, with £53,309. (80). London offers £52,551 (144), while the Midlands (14) and the North (14) averaged £40,769 and £36,405 respectively.

The average hourly rate for Cisco professionals showed little variation except in the disparity between London and elsewhere. The North, South and Midlands averaged £30-£40 per hour. The capital averaged £50-£65 per hour.

(Numbers in brackets are sample size)

Source: Total Jobs

Distribution of Cisco salaries

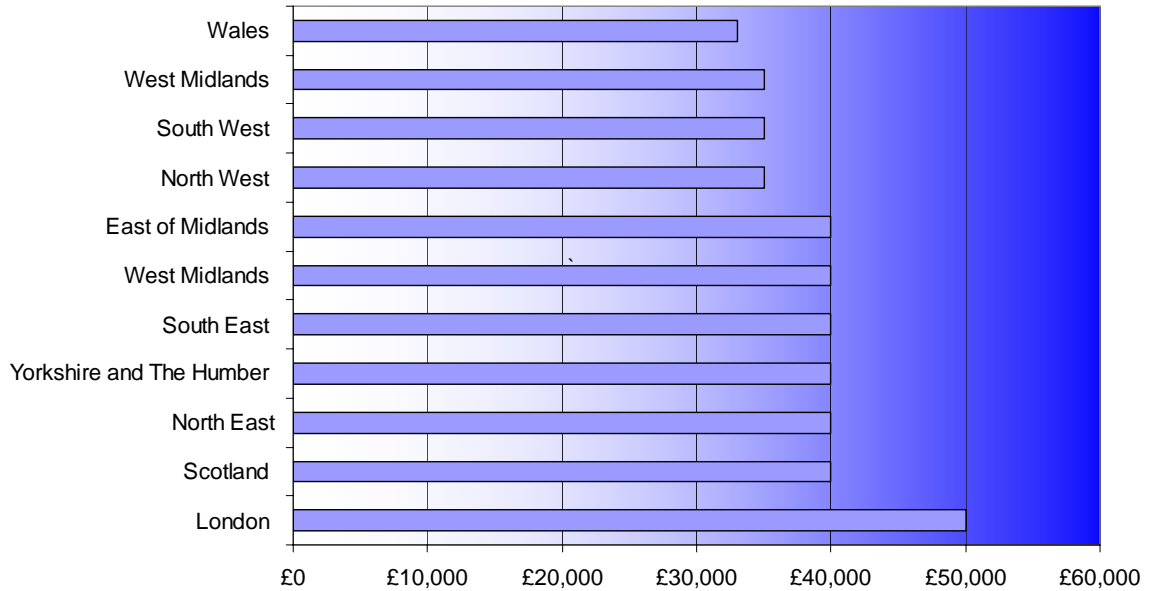


The findings in this graph from Work Digital are consistent with Total Jobs which shows that the most common Cisco Salary is £40,000 (14%).

This was followed by £35,000, £45,000 and £50,000 (each constituting 12% of the sample).

Source: Work Digital

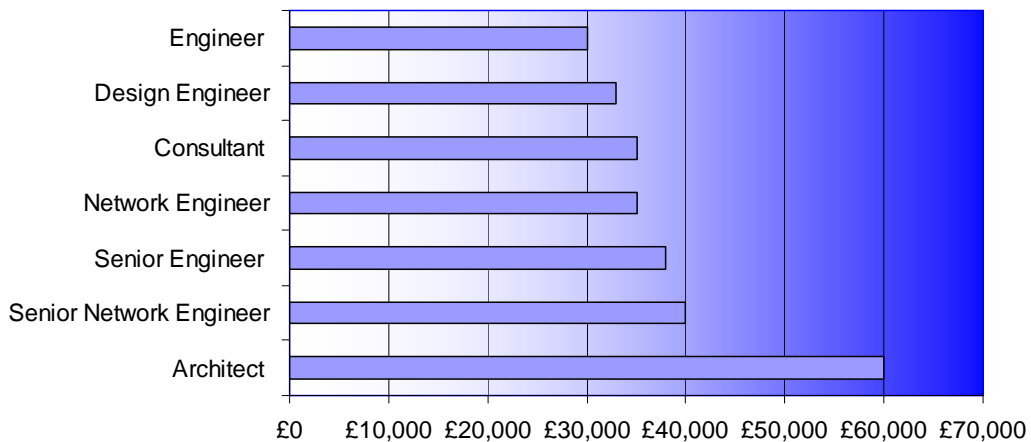
Average Cisco salaries by region



Source: Work Digital

The graph reveals a more extensive break-down of Cisco salaries by region. It shows the capital's average Cisco salary is £50,000, with a number of other regions averaging £40,000 namely: East of Midlands, West Midlands, South East, Yorkshire and the Humber, North East and Scotland. The West Midlands, South West and North West averaged £35,000, while Wales averaged the lowest salary of £33,000.

Average salary of jobs with related titles

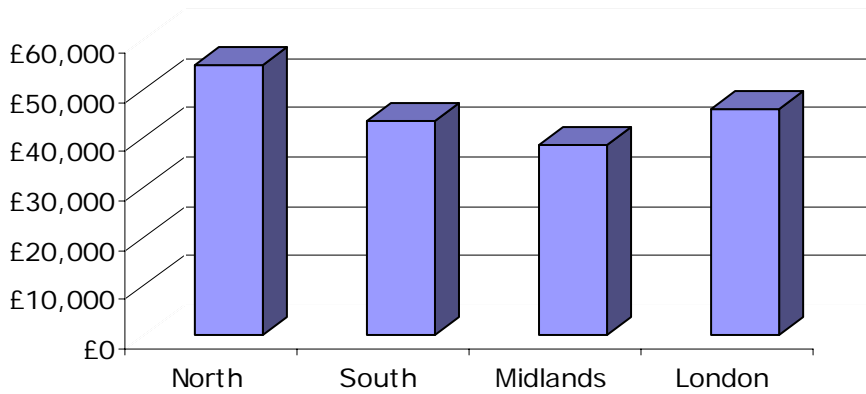


Source: Work digital

Cisco Engineers working in Architecture average £60,000 per annum. This was the highest average salary for Cisco-related roles. Other job titles paid considerably less, ranging from £30,000 to £40,000 per year.

Civil Engineer

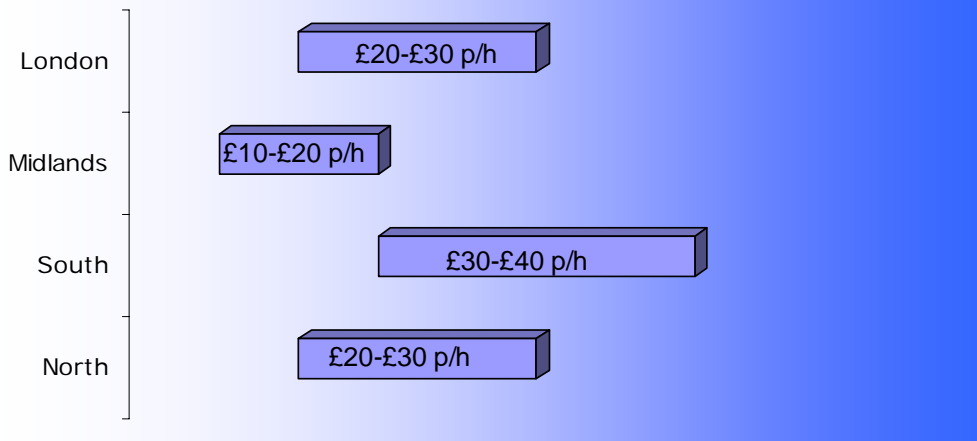
Average Civil Engineer salary by region



Source: Jobserve

The graph shows that The North offers the highest salary for a Civil Engineer (£55,104). London averages £46,050, while the South and Midlands average £43,508 and £38,000 respectively.

Average hourly pay for Civil Engineers



Source: Jobserve

The South (352) offered the highest hourly salary. London (145) and the North (131) averaged £20-£30 per hour, while the Midlands (70) averaged £10-£20 per hour. (Numbers in brackets indicate sample size).

Technician

Average Technician salaries by region



Source: Work Digital

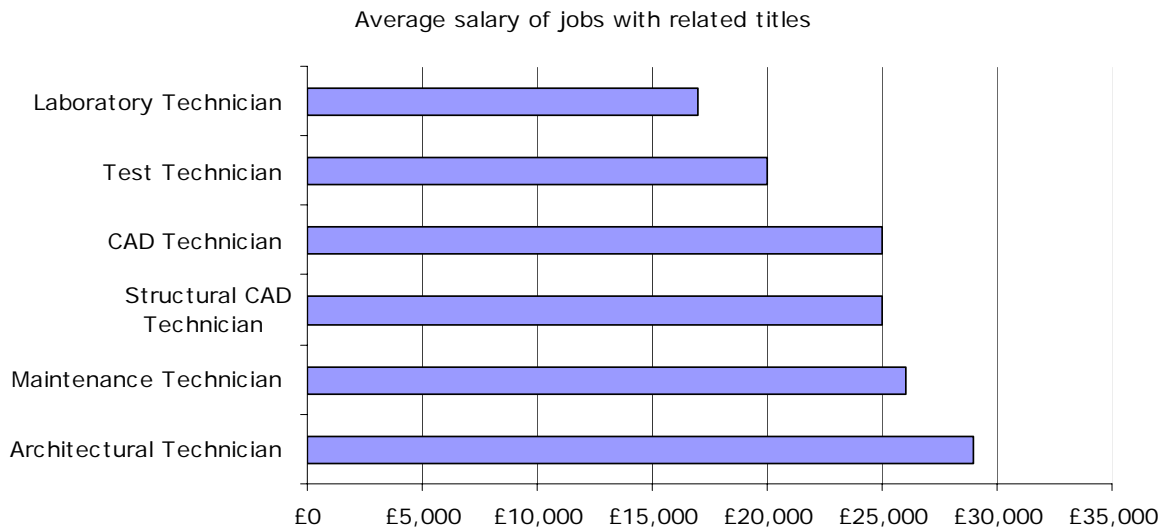
The above graph shows that London averages the highest salary for a Technician (£26,000). This was closely followed by Scotland which averaged £24,000. Six other regions averaged £22,000, while East Midlands and West Midlands averaged £21,000. Northern Ireland offered the lowest average salary (£20,000).

Average technician salaries by sector



Source: Work Digital

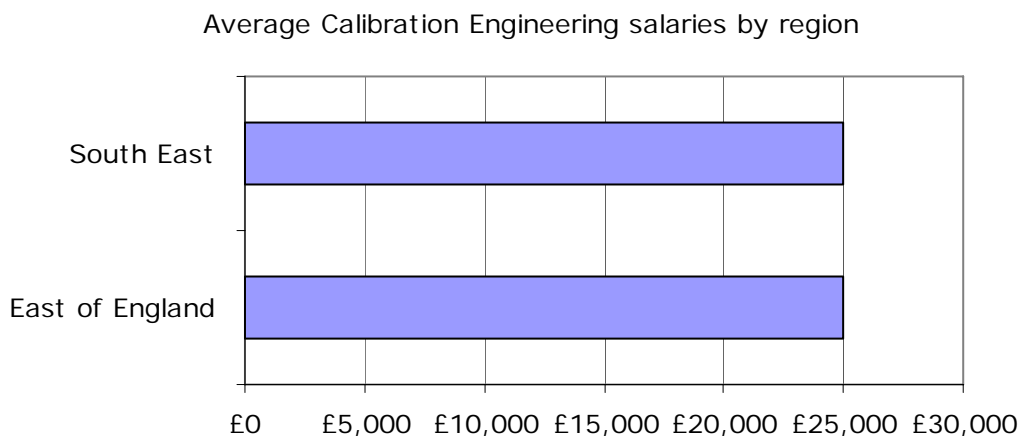
The Transport/Logistics and Construction sectors offer the highest average salary for a technician (£25,000). Engineering/Manufacturing and Telecomms averaged £24,000, while Electronics and Automotive averaged £22,000. Graduates seeking a career in this role can expect to start on £19,000 depending on region.



Source: Work Digital

There are a number of different types of technician, with contrasting salaries. Architectural Technicians can earn up to £29,000. A Maintenance Technician averages £26,000, while a Structural CAD Technician averages £25,000. The lower end of the salary scale was completed by Test and Laboratory Technicians, averaging £20,000 and £17,000 respectively.

Calibration Engineer



Source: Work Digital

The salaries for the South East and East of England were the same: both regions averaged £25,000.

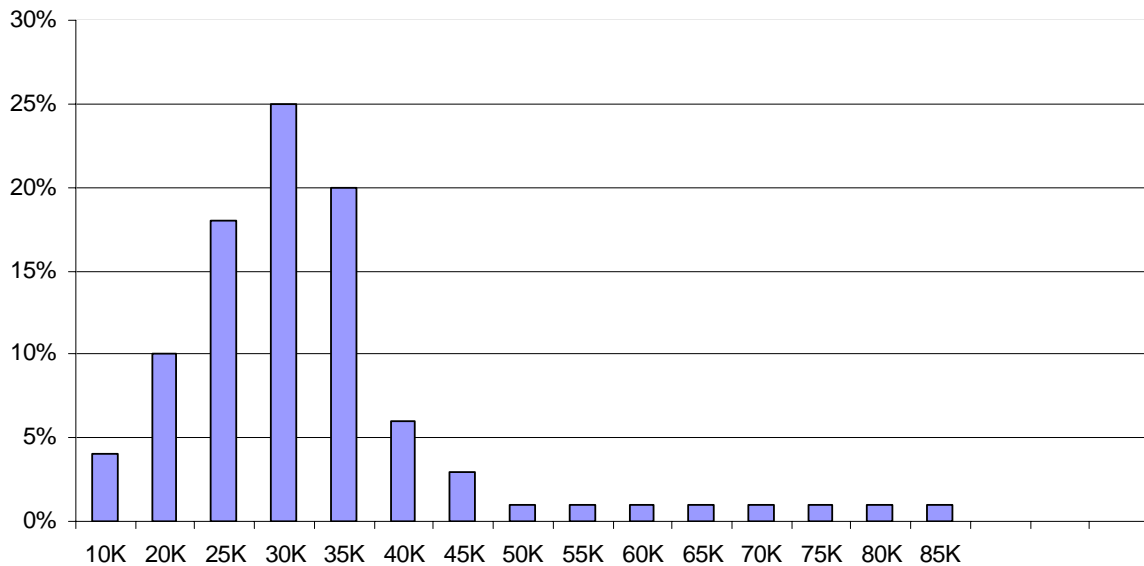
Engineering and Manufacturing sectors offer £25,000 per annum for Calibration Engineers.

The table below shows the average salary of Jobs with Related Titles.

<u>Title</u>	<u>Salary</u>
Project Manager	£45,000
Logistics Manager	£36,000
Consultant	£35,000
Engineer	£30,000
Recruitment Consultant	£24,000
Logistics Co-ordinator	£20,000
Administrator	£19,000

Systems Integration Engineering

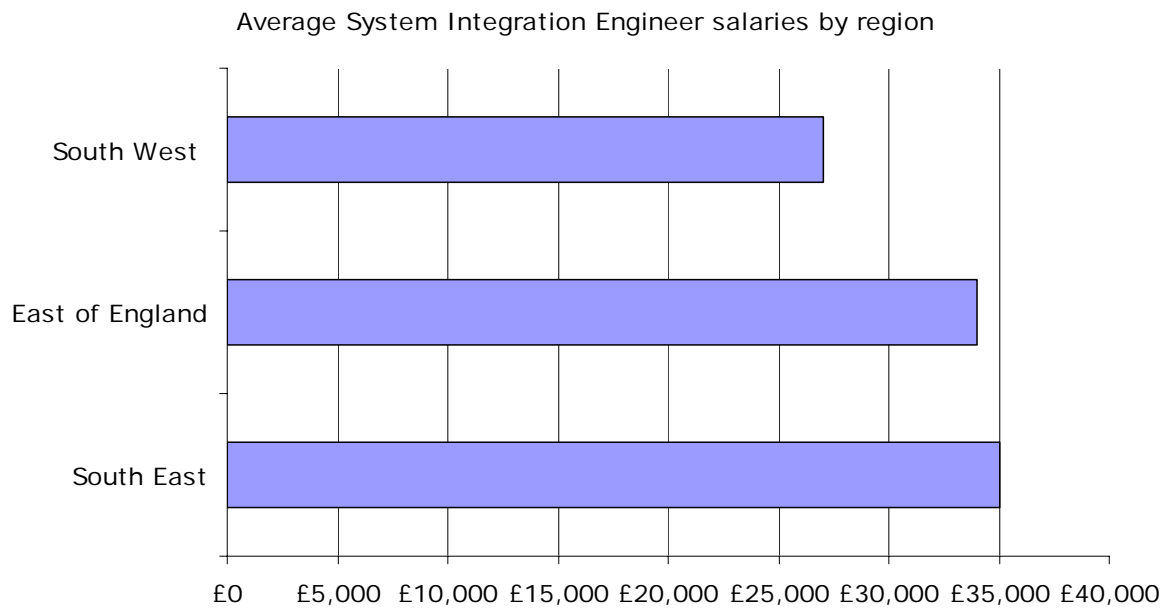
Distribution of Systems Integration Engineer salaries



Source: Work Digital

The findings show that the most common salary for Systems Integration Engineers is £30,000, with 25% of the sample averaging this. £35,000 was the second most common salary, followed by £25,000.

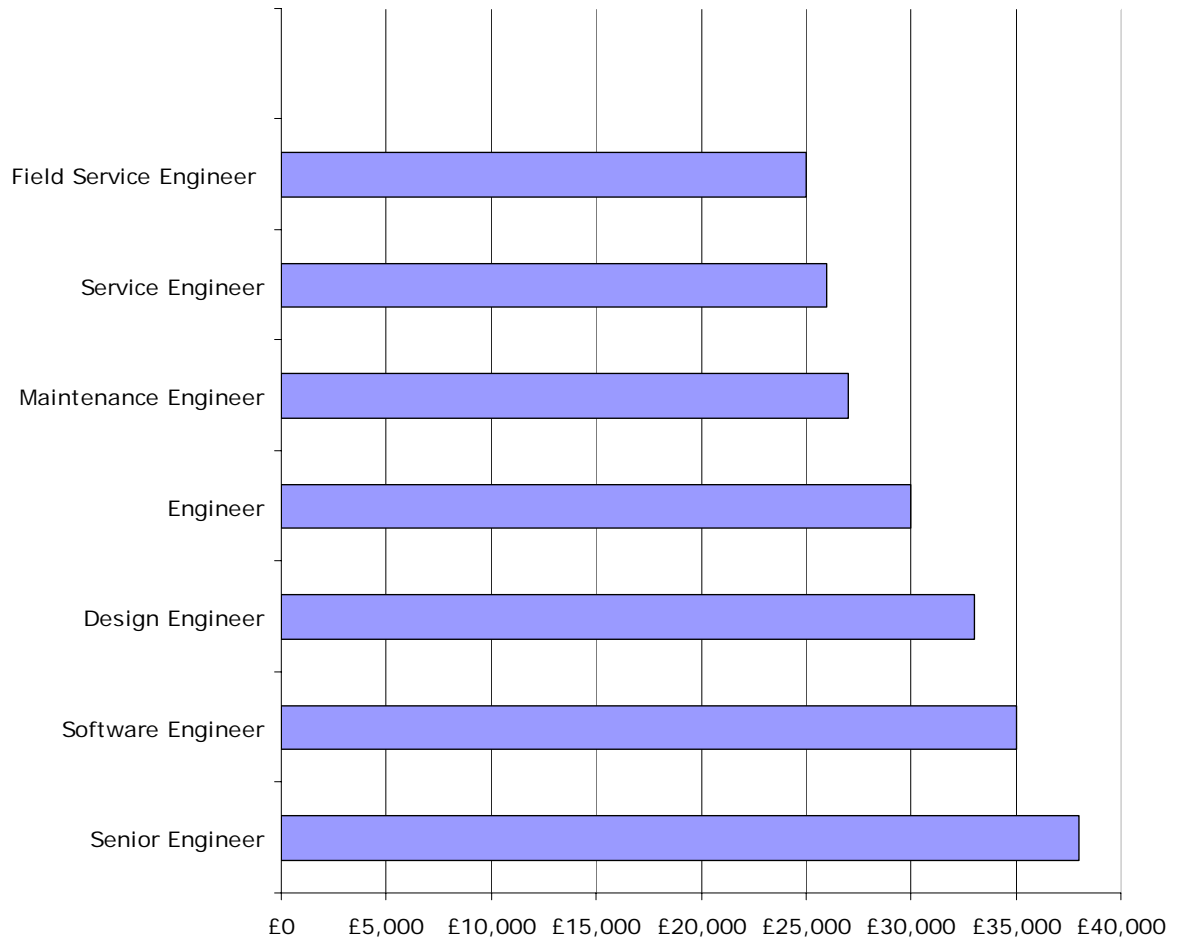
The majority of salaries range between £25,000 and £35,000, however, evidence suggests that there is the potential to earn up to £80,000 within this role.



Source: Work Digital

In the sample above, the South East averaged the highest salary for a Systems Integration Engineer (£35,000). This was closely followed by the East of England which averaged £34,000, while the South West offered £27,000.

Average salary of jobs with related titles



Source: Work Digital

The sample above shows Senior Engineers to average £38,000, closely followed by Software Engineers. Field Service Engineers earned the lowest average salary.

Industry

In this section we will provide a brief overview of the likely development of a number of key engineering sectors, based on government research.

Manufacturing in the UK

Manufacturing has been, and continues to be, critical to the success of the UK economy. Britain's strength as a prosperous trading nation over the past three centuries was built on manufacturing. Looking forward, a thriving modern manufacturing sector is central to the future success of the British economy.

A snapshot of the importance of UK manufacturing:

- The UK is the world's sixth largest manufacturer measured by output

Manufacturing contributes or constitutes:

- £150 billion per annum to the UK economy
- Half of UK exports
- It accounts for 50% productivity growth in the UK since 1997
- ..and 75% of business R&D in the UK
- It consistently features in the top rankings of high tech exports
- There is more foreign investment in UK manufacturing than any country apart from the USA

The UK outperforms every country in Europe in terms of attracting foreign direct investment to manufacturing, and is second globally only to the USA. In 2006, flows of foreign investment into the UK manufacturing industry exceeded £26 billion, compared to £15 billion in France and £3 billion in Germany.

Changes in the global economy present tremendous opportunities from new and growing markets. British manufacturing is well placed to succeed in the 21st century economy, with global connections providing ready access to global markets, a flexible labour force and light touch regulatory environment enabling quicker, more informed responses to changing demand.

It is estimated that modern manufacturing will demand an additional 324,000 scientists and engineers by 2014. In addition to this the transition to a low carbon economy will require a significant transformation in products, processes and organisations.

As manufacturers respond to higher energy prices by improving their energy efficiency and innovate to reduce their carbon emissions in line with national, EU and international targets, they face challenges in revolutionising their production processes and technologies. This will also create opportunities for jobs and growth as they build competitive advantage and respond to demand from businesses and consumers for low carbon and energy efficient products and processes.



The UK is already a net exporter of environmental goods and services, a sector that currently generates annual revenues of £25 billion in the economy. This could rise to over £45 billion by 2015 and create an additional one million jobs by 2030. The UK also has the largest clean technology venture capital market in Europe with a cumulative investment of €186 million since 2001, accounting for 30% of the European total.

BERR – Department for Business Enterprise & Regulatory Reform

“...for this government manufacturing not only has been, but remains, and will always be, critical to the success of the British economy”

Gordon Brown, MP

BERR – Department for Business Enterprise & Regulatory Reform

Rail in the UK

Over the coming months and years the Rail industry in the UK is going to be embarking on some of the largest projects undertaken in the UK.

First on the list is Crossrail, a £16 billion infrastructure scheme, which will see the design and build of an entirely new railway link from Maidenhead and Heathrow to the West of London right across to Essex and Kent on the East. The scheme will prove particularly challenging because its route will run right through the centre of the capital, even running underneath the existing London Underground network in places. This programme of work is due for completion in 2017 and will demand highly skilled professionals across a range of disciplines, from both a London Underground and Mainline rail background.

There has been positive news recently for the rolling stock sector, with the announcement of a new fleet of intercity Super Express trains. The £7.5 billion project will see an initial number of units constructed overseas before being shipped to the UK

for testing. Following successful tests the remainder of the units will then be built, with assembly taking place at a new centre in England.

The London Thameslink project is a £5.5 billion infrastructure project which will involve the overhaul of a number of stations on the Thameslink route including Farringdon, Blackfriars and London Bridge. The majority of works will be carried out over the next 4 years, with London Bridge likely to be finished around 2015.

Rail Staff

Automotive in the UK

The automotive industry is a pivotal part of the UK manufacturing sector. Automotive firms are leaders in global best practice in many areas of manufacturing and provide a key source of improvement for the UK manufacturing sector as a whole.

Automotive businesses are leaders in many areas of manufacturing, purchasing, product development and logistics. Major inward investors have brought with them world-best practice and the skills and knowledge of the industry provide a key source for improvement across the UK manufacturing sector as a whole.

The sector has two distinct parts: the manufacture of vehicles and components; and the motor trade (including retail, distribution and aftermarket services).

In the case of manufacturing, Britain leads Europe as the most diverse and productive vehicle manufacturing location and as a global centre of excellence for engine development and production.

More than 40 companies manufacture vehicles in the UK – ranging from global volume car makers, van, truck and bus builders, to specialist niche players. The industry is supported by a dynamic supply chain including many of the world's major component manufacturers, technology providers, design and engineering consultancies; and it benefits from a world-renowned knowledge base.

No other European country has anything like this range and volume of automotive expertise. The industry in the UK is characterised by significant foreign direct investment and high exports, equivalent to 11% of the UK's exports of goods. Overall, automotive manufacturing provides 194,000 jobs and contributes some £9.5 billion to the UK economy (6.2% of the total for the whole UK manufacturing sector). The companies based in the UK operate in Europe's third biggest automotive market with UK customers in 2007 accounting for the purchase of more than 2.4 million new cars – equivalent to 17% of European vehicle registrations.

Moreover, the UK offers a highly sophisticated retail and service/ maintenance sector, which last year generated some £22 billion value added to the UK economy. It comprises some 66,500 businesses employing 552,000 people.

BERR – Department for Business Enterprise & Regulatory Reform

Telecommunications in the UK

The UK is one of the leading locations in Europe for telecommunications. Its liberal telecoms regime and access to leading-edge technology has attracted the majority of telecommunications operators, service providers and manufacturers.

Over the last two decades the government has opened up the market to competition, moving away from the dominance of British Telecom (BT) to new fixed and mobile operators. The result is that the UK now has one of the most open and competitive telecoms markets in the world.

BERR – Department for Business Enterprise & Regulatory Reform

Defence and Aerospace in the UK

The UK's aerospace, marine and defence industries are key players in world markets, and major contributors to the UK economy, through manufacturing and research into new technologies.

The UK aerospace industry is a success story. Key strengths are:

- It is one of the primary assets of high value-added manufacturing, generating turnover in the UK in excess of £19.8 billion in 2006.
- It is one of the UK's largest exporters, with over £12 billion of export sales in 2006, contributing £2.25 billion to the balance of trade.
- It directly employs over 124,000 people, supporting a total of 276,000 jobs across the UK economy.
- Highly-skilled workforce: 34% of all employees in this sector have a university degree or equivalent, with average salaries of around £33,000 (43% higher than the UK average wage and about 32% higher than the average for manufacturing).
- It is a high investor in Research & Development (spending £2.54 billion in 2006). The DTI 2007 R&D Scoreboard showed that UK firms in the UK aerospace & defence sectors invested £2.4 billion, making it the latest sector in the UK 850.

BERR – Department for Business Enterprise & Regulatory Reform

Conclusion

This report has examined a variety of engineering salaries across a number of different regions and sectors in the UK. We have also analysed a variety of engineering jobs and skills in an effort to provide useful information to ARM's partners and stakeholders.

The findings are not exhaustive and are subject to change.

Under current economic conditions, salaries and indeed labour itself is subject to considerable flux and we should make no assumptions about the supply or demand of labour. We would recommend speaking to your consultant at Advanced Resource Managers before beginning negotiations with candidates.

Our consultants have excellent knowledge of the engineering market and can assist you to distinguish between real salaries and what may be used as a negotiation ploy.

Sources

1. www.totaljobs.co.uk
2. www.jobserve.com
3. www.workdig.com
4. Advanced Resource Managers – CRM
5. BERR - Department for Business Enterprise & Regulatory Reform
6. RailStaff.co.uk