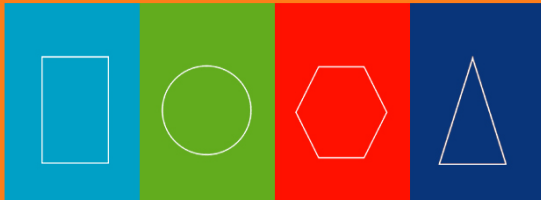


Appendix A. Recruitment Agency Survey October 2016: detailed results

Industry

Managers	<ul style="list-style-type: none"> production planning managers in high tech manufacturing (mostly in biopharma); technology transfer managers managers/directors of quality (knowledge of quality systems and regulatory/compliance, e.g. QC managers in pharmaceuticals (GLP/GMP & EU regulatory compliance) human resource managers (with specialist industry knowledge, e.g. biopharma, with project management skills) digital/ecommerce manager (B2B, affiliate marketing and interface optimisation) supply chain managers, especially with inventory control/planning/ERP skills, APICS, and IIPMM
Engineers	<ul style="list-style-type: none"> production and process engineers, automation & system control (e.g. process optimisation utilising software control systems, lean manufacturing), CSV (computer validation system / system requirement) engineers, control & instrumentation engineers, and process safety engineers (esp. Chemical Process Hazard Analysis (with HAZID, HAZOP, FTA, ETA SIL, PHA actions etc.), OPEX engineers quality control and assurance (including standards and regulatory compliance), validation (e.g. Six-Sigma Black-Belt, CQE certification - Statistical Engineering) and CQV engineer roles design and development engineers - especially for medical devices sector and associated R&D activities as well as electrical design engineers (power generation & transmission, LCC design, electrical safety engineer (medical electrical safety testing and design assessments in MedTech) chemical engineers (production process & supply chain planning and integration for roles in biotech/pharmaceutical industry) mechanical engineers including maintenance/reliability specialist (e.g. preventative maintenance, asset/capacity/reliability/process optimisation); injection moulding engineer
Scientists	<ul style="list-style-type: none"> chemical and biological scientist, research and design scientists analytical scientists and quality control analysts, mostly for roles in biopharma and MedTech scientists for niche areas (pharmacovigilance scientists - legislation and processes specialists), food scientists, validation & process scientists
Supply chain	<ul style="list-style-type: none"> specialist roles, in trade and distribution usually requiring both technical (e.g. e-Sourcing solutions, SAP, supplier relations management, inventory control with ERP systems, etc.), and business skills and relevant industry certification (e.g. APICS) demand planning & forecasting (APICC cert. & MRP logic) supply chain administrative roles for supporting supply chain activities, e.g. EDI/SAP administration with languages, freight forwarding etc.
Accountants	<ul style="list-style-type: none"> industry experts in specific ERP System & Reporting Tools including Oracle, Hyperion, OBIEE: business and financial management accountants (including interaction of financial management with IT systems e.g. Oracle Financials Applications; ORACLE/ERP migration to SAP)
Technicians	<ul style="list-style-type: none"> especially biotech technicians (e.g. computerised processes, SOPs/EWI and GMP Engineering systems technicians, and 'cleanroom' technicians) and extrusion technicians, usually for MedTech/medical devices
Skilled trades	<ul style="list-style-type: none"> toolmakers, butcher/deboner, TIG/MIG (Tungsten/Metal Inert Gas) and ARC welding, heat and ventilation engineers, electricians with specific skills (e.g. electrical maintenance, computer based industrial control systems - PLC & SCADA programming & fault-finding) and mechanical maintenance fitters
Operatives	<ul style="list-style-type: none"> CNC and SMT/PTH Rework operators, forklift drivers (with VNA and/or turret license; Reach Truck, Stand-up and Electric Pallet Jack operators)



Wholesale and retail

<ul style="list-style-type: none"> Limited to highly specialised roles in sales and marketing and in procurement/management of purchasing operations in retail
<ul style="list-style-type: none"> Fork lift operators/drivers (niche areas - VNA/turret/Reach truck)

Construction

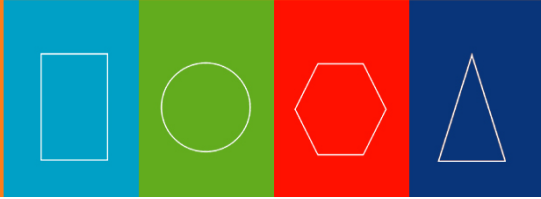
Project managers	<ul style="list-style-type: none"> niche areas, with specific skill set and relevant experience
Professionals	<ul style="list-style-type: none"> quantity surveyors, structural/site engineers
Skilled trades	<ul style="list-style-type: none"> steel fixers, steel erectors, pipe layers, shuttering carpenters
Operatives	<ul style="list-style-type: none"> tower crane operator / banksman, site dumper truck drivers

Accommodation and food

Management	<ul style="list-style-type: none"> restaurant manager, sales & marketing roles (e.g. hotel sales director, hotel revenue manager, operations managers in hospitality) bar managers
Administrative	<ul style="list-style-type: none"> financial admin: sales account managers and sales executives
Chefs	<ul style="list-style-type: none"> Head chefs, chef du partie, pastry chefs etc.

Information and communication

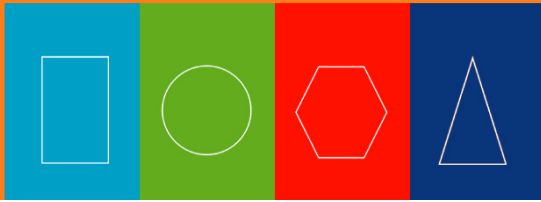
IT specialist managers	<ul style="list-style-type: none"> project managers digital marketing (e.g. customer acquisition & engagement via SEO/SEM, email marketing, social media) recruiter/consultant IT team lead/IT business development manager
Programmers and software designers and developers	<ul style="list-style-type: none"> web applications (e.g. Java, Summit, JavaScript and CSS); object oriented AD client computing (JSP, Ruby on Rails, FLEX, and PHP); web development, design and publishing (e.g. CSS, HTML), open source scripting language specialists for web applications (especially Python), front end/user online experience (UX) and user interaction (UI) related applications IT software development: .net c sharp java; .NET 4.0/4.5; .NET WPF apps; with front-end/UI technologies, SDLC (e.g. ASP skills complemented with JSP, AJAX, Jscript, HTML), .Net MVC Developer (ASP skills complemented by HTML, CSS, JavaScript, JQuery) database/data warehouse architecture - for financial services/business analysis - extraction, transformation, and loading (ETL) tools (e.g. ORACLE ETL design/tools, SQL, MSSQL; PL/SQL developers, data migration and management and related infrastructure solutions) data analyst/business intelligence roles: (BI solutions, Oracle OBIEE, ODI, ETL Design), big data analysts (e.g. Hadoop & MapReduce), Micro Strategy Specialist (e.g. Websphere); demand remains strong for analysts with programming, modelling, and DB skills, including big data and real-time web applications (e.g. SQL, Hadoop, NoSQL, Cassandra, Storm, Node.js, R); ORACLE apps (e.g. Oracle Process Manufacturing Modules, Oracle EBS SQL loader, etc.); metadata management; niche area of interest is big data visualisation for web/web application/mobile eCommerce) cloud developers and related (SaaS - software as a service, but also web-based services and APIs (e.g. RESTfull and SOAP) IT solutions architect including cross-sectoral solutions (e.g. financial software technology environment: MS.Net technologies (Visual Studio, C#, ASP.Net), mobile e-commerce solutions) DevOps developers - distributed computing architecture, interoperability, workflow-enabled applications, DevOps tools (Ansible, Chef and Puppet, Docker, OpenStack) and Virtualisation (vMware,Proxmox) as well as .NET Framework / SharePoint, and interdependence of software



	<p>and IT operations (Agile); dynamic programming language (e.g. Perl, Python, Ruby, etc.) and distributed monitoring (e.g. Sensu, Prometheus, Graphite, Statsd) solutions; DevOps big data for financial services (webscripting JA, Apache, noSQL/hive/Impala)</p> <ul style="list-style-type: none"> IT and business resource planning roles (ERP with SAP, Azure, CRM), CRM developer (Microsoft Dynamics CRM, Microsoft SSIS/SSAS); IT system accountant/analyst (e.g. ORACLE financial applications, ORACLE/ER migration to SAP, SAP Business Objects and SAP BPC) backend engineer - business/enterprise infrastructure software - application programming interface API (RESTful web services APIs - e.g. SOAP with JSON) internet/network protocols engineers - data centre operations, and network protocols - TCP/IP, Ethernet, inventory management, security, AWS); web filtering, vulnerability analysis, and anti-virus/malware (IDPS, SIEM, OWASP) software quality assurance/software testing engineers (security, malware, digital forensics, incident response); IT internal audit systems testing, performance & reliability testing of commercial/eCommerce software with Pearl, Bash and Python); IT systems QA - IT system testing of performance & reliability especially for commercial software applications telecom networks engineers/developers - embedded software developers, primarily for telecommunications (Java C/C++ for embedded software solutions for telecoms) Mobile technology applications - Apple iPhone iOS and Android platforms (Objective-C and xCode for OS X and iPhone applications and Java script & SenchaTouch/JQuery mobile//Java C++, PhoneGap & Eclipse for Android apps development) IT/ICT infrastructure - senior network engineers for telecoms (CISCO CCNP/CCIE and/ or SGSN, RCN, RAN)
Sales	<ul style="list-style-type: none"> telemarketing / telesales with languages (Nordic languages, mainly Danish and Swedish); lead generation with languages and basic DB related skills - updates of sales leads technical sales (software B2B and SaaS products)
Technical/customer support	<ul style="list-style-type: none"> often with both technical and language skills for supporting multinational operations (e.g. German / French Cloud apps related support roles, SAP on demand portfolio skills); IT platforms including network and server infrastructure support roles

Financial and insurance

Accounting	<ul style="list-style-type: none"> corporate finance (revenue management, internal audit/solvency, financial reporting experts e.g. qualified ACA, knowledge of IFRS, senior compliance /regulatory roles (e.g. AIFMD (alternative investment fund managers (European) directive)) actuarial specialists (risk/reserving/pricing) fund industry - accounting and administration related (financial accountants, fund accounting supervisory roles (e.g. NAV, transfer agency client services, etc.), and administrative and technical support roles for the fund industry
Other professionals	<ul style="list-style-type: none"> solicitors/corporate lawyers (M&A, taxation / AITI compliance) niche area: life insurance/assurance (compensation, benefits, and validation) senior compliance /regulatory roles (e.g. AIFMD (alternative investment fund managers (European) directive))
Sales/call centre roles	<ul style="list-style-type: none"> multilingual sales/customer support agents
Financial clerks	<ul style="list-style-type: none"> accounts payable/account management (with languages) debt collection - banking collection agent (arrears, consumer debt recovery, including multilingual roles in this area) payroll management
Management	<ul style="list-style-type: none"> deposit and treasury management roles senior lending roles (corporate & personal lending)



Health and social care

Medical doctors	<ul style="list-style-type: none"> specialists (e.g. general, emergency medicine, psychiatry) and non-specialists e.g. locum/NCHD doctors and registrars/SHO in general and emergency medicine, anaesthetists, and paediatrics); doctors for GP practices
Radiographers	<ul style="list-style-type: none"> clinical specialists; MRI and CT radiographers
Nurses	<ul style="list-style-type: none"> general nurses, especially for older people care (including nursing home managerial roles); advanced nursing practitioners in intensive care & operation theatre, especially cardiovascular care, but also in oncology care; roles in paediatrics, renal/dialysis, fertility, and intellectual disability care
Specialised medical technicians	<ul style="list-style-type: none"> cardiac technicians
Care workers	<ul style="list-style-type: none"> carers / home carers

Professional, technical and scientific

Accountants (ACCA/ACA)	<ul style="list-style-type: none"> corporate finance (audit, financial restructuring, and solvency), taxation and regulatory compliance (e.g. BEPS)
Professionals	<ul style="list-style-type: none"> experienced regulatory and compliance professionals (with skills in ALM, BAEL, MiFID, IAFID etc.)
Business/financial	<ul style="list-style-type: none"> debt collecting roles, including multilingual roles

Administrative services

<ul style="list-style-type: none"> recruitment consultants/specialist with industry knowledge, multiple channel sourcing, performance management and bespoke solutions
<ul style="list-style-type: none"> call centre, customer support, and CRM roles requiring European languages (Nordic, Dutch and German); contact centre customer support roles, requiring foreign languages and relevant product/service knowledge
<ul style="list-style-type: none"> business/financial and related - debt collecting roles, including multilingual roles

Transport and storage

<ul style="list-style-type: none"> limited to HGV drivers (with E+, CI licence)
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