bcs

The
Chartered
Institute
for IT

UK PROFESSIONAL CERTIFICATION MARKET RESEARCH

BUSINESS, TECHNOLOGY AND CAREER-BASED TRENDS DRIVING THE TRAINING CERTIFICATION MARKET

Making IT good for society

INTRODUCTION

WHICH TECHNOLOGIES AND TRENDS ARE DOMINATING LEADERS' MINDS TODAY AND WHAT WILL DISRUPT BUSINESS TOMORROW? AND WHAT QUALIFICATIONS, CERTIFICATIONS AND SKILLS ARE SET TO BE THE ROUTE TO MEETING THE CHALLENGES WE FACE IN THE IT WORLD? THIS RESEARCH PAPER DELVES INTO THE MINDS OF IT PROFESSIONALS TO UNDERSTAND JUST THAT.

ORGANISATIONS ARE UNDER HUGE PRESSURES FROM CUSTOMERS AND STAKEHOLDERS TO DELIVER DEFINED BUYING JOURNEYS AND DIGITAL EXPERIENCES. THE PRESSURE TO DEVELOP AND EVOLVE PROCESSES, PRODUCTS AND PEOPLE IS HIGH.

In addition to this, we have the influx of burgeoning technologies like artificial intelligence, blockchain and augmented reality as forces with the potential to disrupt whole industry sectors.

To grow and to embrace the disruption, organisations need people with the right skills, up-to-date knowledge and evolving experience. Of course, training and certification are central to ensuring that our people are prepared to meet the challenges of today and tomorrow and are ready to exploit new technologies in the future.

It's because of this rapid change that BCS created this report: *professional certifications market research 2019*, focusing on the trends driving the training certification market.

It provides top-level insights into the training, qualification and certification market and what macro-level forces are going to change IT.

I believe that BCS is ideally placed to share what is going on in the IT industry and the current and future challenges we are set to face. As an organisation, we have been involved in shaping the IT profession and defining what it means to be an IT professional for over 60 years. During that time, we have helped create an educational and career pathway that runs from the classroom right through to chartered professional status. I hope you find this document interesting and insightful.

Paul Fletcher

CEO. BCS, The Chartered Institute for IT

CONTENTS

1. MEETING THE IT SKILLS GAP

57%

SAID THAT SKILLS QUALIFICATIONS ARE VERY IMPORTANT TO THEM

BCS' *professional certifications market research 2019* explored how training and certification is perceived by professionals from across the IT industry.

The goal of the research conducted was to provide BCS and its partners with valuable market insight across several key markets. The aim was, among other things, to demonstrate our knowledge of niche vertical markets and to provide insight for product development. We asked a number of professionals who work in the areas of business analysis, IT service management, software testing and information security.

Key findings were:

› 57% of participants indicated that skills qualifications are very important to them and a further 36% said they are quite important

› 48% of respondents claimed to be very likely to study for a certification over the next three years and 37% are quite likely

› Among those likely to take a qualification over the next three years, 59% would like a digital option for their learning

› Among those likely to take a qualification over the next three years, 71% would prefer a training course with certification (i.e. with an exam at the end), 23% would prefer a training course without certification and 6% had no preference

› Among those likely to take a qualification over the next three years, 51% would prefer to take their exam online from a remote location (e.g. home), 26% would favour a classroom digital exam and 23% would opt for a classroom paper-based exam

› Among those likely to take a qualification over the next three years, nearly three-quarters (74%) indicated that their organisation would pay for their certification

1.1 Inside the skills gap

Along with data and understandings from BCS' *professional certifications market research 2019*, this report also draws on BCS' *insights report 2019* which was released at the inaugural Insights event in London on the 6th June 2019. It focused on some of the most pressing issues facing the IT industry today.

Key trends were:

› 88% of organisations do not have enough resources for success in 2019

› 74% of IT leaders would use upskilling or on-the-job training to address the capability gap

› When asked to single out their number one priority for 2019, 22% chose business transformation and organisational change

› The technologies that organisations are prioritising for 2019 are cloud (53%), cyber security (52%), automation (36%), IT governance (34%), and agile methods (also 34%).

An interesting link between the *insights report 2019* and this *professional certification market research report* shows some cross over in opinions about resources and skills.

71%

WOULD PREFER A TRAINING COURSE WITH A CERTIFICATION

Looking at the *insights report*, we can see that 88% of organisations do not have enough resources for success in 2019. This reflects tellingly in a comparison to the *professional certifications report*, whereby 41% of respondents expressed that keeping up with changes and technology and therefore skills, is one of the key challenges facing the industry over the next 12 months.
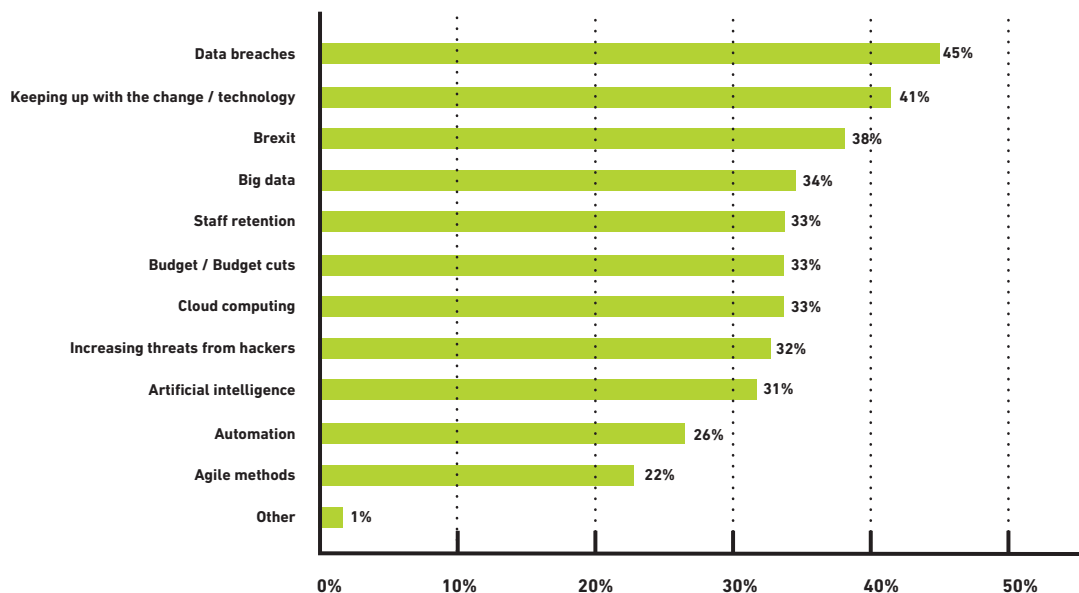
It's also interesting to note more of the similarities in the trends facing organisations over the next 12 months. Automation and agile methods were reported in similar numbers on both reports as key trends for the next year.

Whereas in the *insights report*, cyber security and cloud were the trends that respondents cited as most important, data breaches and keeping up with technologies and changes were the top trends reported in the *professional certification report*.

We can surmise from this that the industry is concerned about the skills required for a more digital and technological working world and that keeping up with these trends and gaining the skills necessary to stay up-to- date is of vital importance.

Figure 1:

WHAT ARE THE UPCOMING TRENDS AND CHALLENGES THAT ARE FACING YOUR ORGANISATION OVER THE NEXT 12 MONTHS?

Trend	Percentage
Data breaches	45%
Keeping up with the change / technology	41%
Brexit	38%
Big data	34%
Staff retention	33%
Budget / Budget cuts	33%
Cloud computing	33%
Increasing threats from hackers	32%
Artificial intelligence	31%
Automation	26%
Agile methods	22%
Other	1%

Source: Professional Certification Market Research 2019 - UK

2.
UNDERSTANDING PERSONAL MOTIVATION

Why do professionals take training and choose certification? BCS explores what really drives practitioners from different specialisms to invest time and money in training and accreditation.

What can we learn about practitioners' aspirations and how they believe training and certification may allow them to achieve their professional goals?

The desire to push forward in a career may be a natural driver in seeking certification, but when it comes to understanding the market, intuition is never as good as the data we receive.

89%

INDICATED THAT CAREER PROGRESSION IS IMPORTANT TO THEM

We looked across business analysis (BA), IT service management (ITSM), software testing (SWT) and information security (INFOSEC) and noted that 89% of all participants indicated that career progression is important to them. This compares to a slightly lower 87% last year (2018), which shows a 2% increase in importance on career progression.

Of all the specialisms explored, IT service management professionals reported themselves as those who see their career progression as most important with 67% saying it is very important. They also aspired to occupy the top jobs.

Whilst a small number were happy to continue without further training and certification, the majority had a strong drive to progress in their career.

3. DRIVING YOUR CAREER FORWARD

When asked 'how high do you want to progress in your career?', most were looking to develop into senior, 'head of' or director level status within their business. Business analysts were looking to progress to senior manager or director level. Software testers were most interested in becoming the 'head of' their function, and those in IT service management and information security wanted to progress to director level. This shows a clear appetite for progression and a need for ongoing training and learning across the industry.

Looking at data from last years' *professional certification research*, there has been a jump in where respondents want to progress. Last year, senior management was cited as one of the main aspirations for those who took the survey, whereas this year, it has jumped up to the 'head of' function, director or C-level. This shows a desire for even further progression than first reported back in 2018, again presenting a clear need for ongoing training and certification.
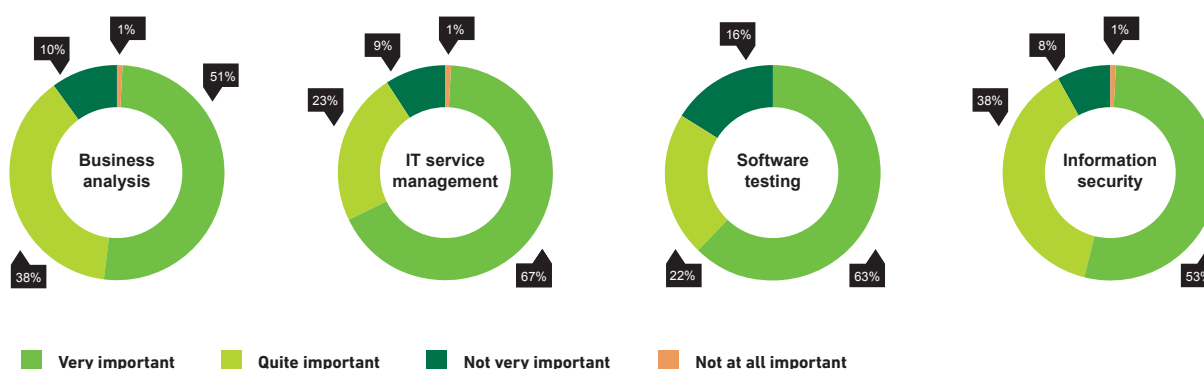
85%

ARE LIKELY TO STUDY FOR A QUALIFICATION IN THE NEXT 3 YEARS

Across all these career paths, we found that 85% of participants were likely to study for a qualification over the next three years. This figure was the highest for those working in service management at 93%. Also, note that there has been an increase since last year in how likely professionals are to take a qualification in the next three years. In 2018, we reported that 32% of professionals thought it was 'very likely' they'd take a certificate in the next three years: this year, that number has increased to 48%.

This shows a real need to develop market relevant certifications and training to provide for those who wish to study.
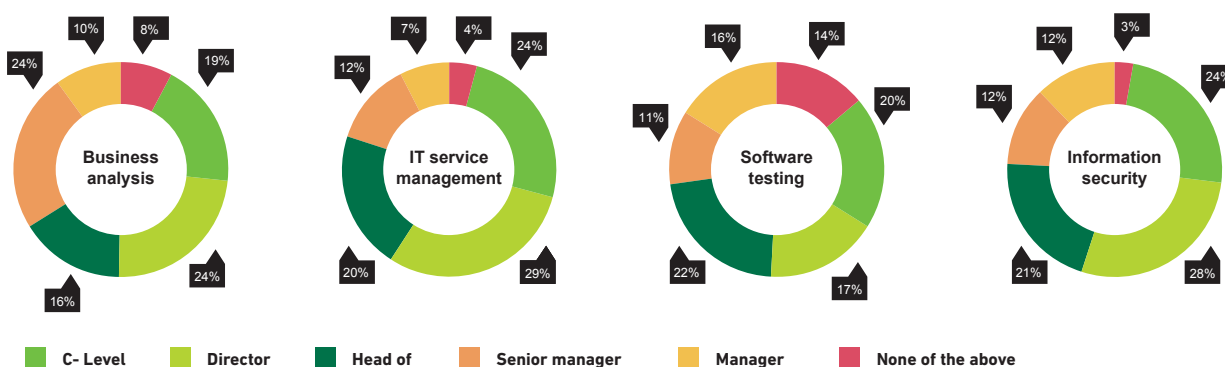
Figure 2:

HOW IMPORTANT IS CAREER PROGRESSION TO YOU?

Business analysis — 51%, 38%, 10%, 1%
IT service management — 67%, 23%, 9%, 1%
Software testing — 63%, 22%, 16%
Information security — 53%, 38%, 8%, 1%

Legend: Very important · Quite important · Not very important · Not at all important

Source: Professional Certification Market Research 2019 – UK

Figure 3:

HOW HIGH DO YOU WANT TO PROGRESS?

Business analysis — 19%, 24%, 16%, 24%, 10%, 8%
IT service management — 24%, 29%, 20%, 12%, 7%, 4%
Software testing — 20%, 17%, 22%, 11%, 16%, 14%
Information security — 24%, 28%, 21%, 12%, 12%, 3%

Legend: C- Level · Director · Head of · Senior manager · Manager · None of the above

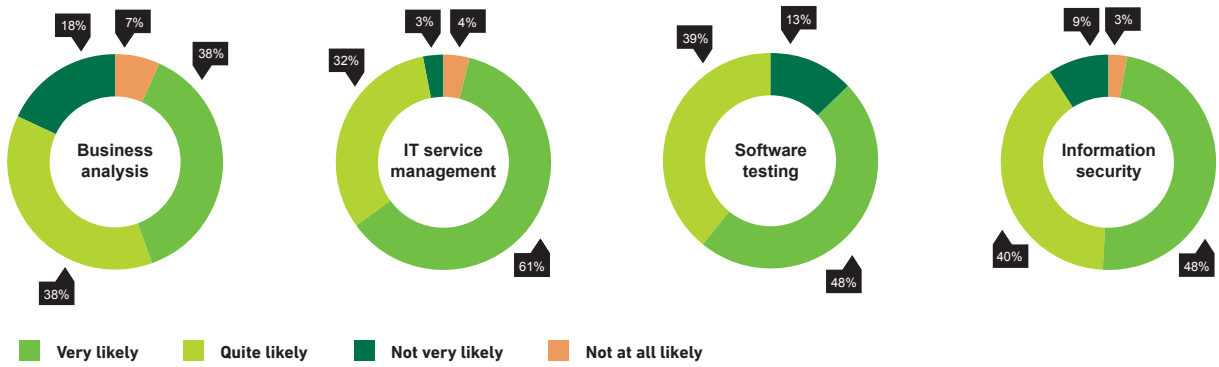Source: Professional Certification Market Research 2019 – UK

Figure 4:

HOW IMPORTANT TO YOU PERSONALLY ARE SKILLS QUALIFICATIONS?

Business analysis — 6%, 2%, 49%, 43%

IT service management — 9%, 24%, 67%

Software testing — 39%, 6%, 55%

Information security — 3%, 1%, 37%, 59%

- ■ Very important
- ■ Quite important
- ■ Not very important
- ■ Not at all important
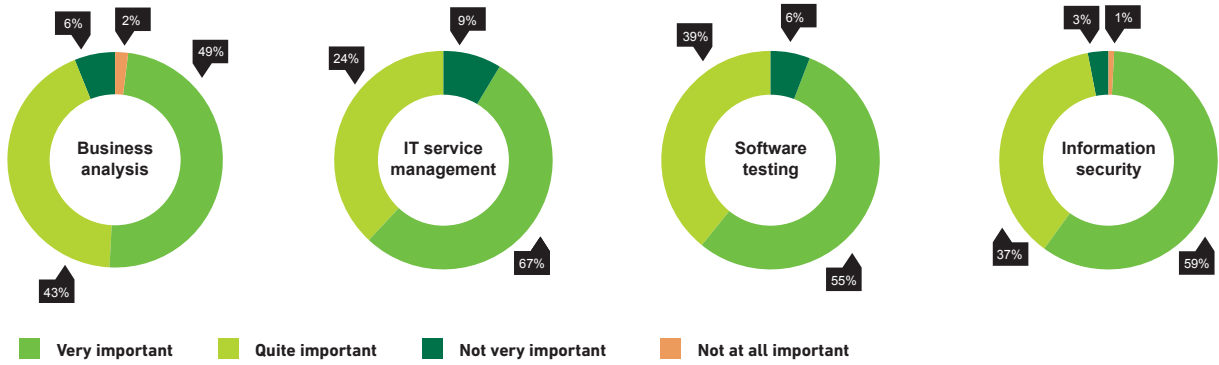
Source: Professional Certification Market Research 2019 - UK

Figure 5:

HOW LIKELY ARE YOU TO STUDY FOR A SKILLS QUALIFICATION OVER THE NEXT THREE YEARS?

Business analysis — 18%, 7%, 38%, 38%

IT service management — 3%, 4%, 32%, 61%

Software testing — 39%, 13%, 48%

Information security — 9%, 3%, 40%, 48%

- ■ Very likely
- ■ Quite likely
- ■ Not very likely
- ■ Not at all likely

Source: Professional Certification Market Research 2019 - UK

4. LEARNING STYLES AND BUYING PREFERENCES

How do professionals prefer to learn and how do they select that training? Like other markets, is digital disrupting the training qualifications market? Or do traditional modes still have their place?

The specialisms explored, reported at 85% that they would be very or quite likely to study for a certification in the next three years. Based on this, how will these people look to access their training, education and the certificates that enable them to move their career forward? What do they consider during this 'buying' process and what is the most important thing they contemplate to find a solution?

Looking at learning styles, it's interesting to see the split in how individuals like to be taught and how they digest their information. As with anything, everyone is different, but it is interesting to see that IT service management (28%), software testing (27%) and information security (31%) professionals all cited online learning with recorded material as their preferred learning method.

Business analysis professionals cited classrooms with a tutor as their preferred process (29%). This could indicate that there is still a need and a desire to have traditional classroom-based learning as an option. However, at 59%, the majority of professionals asked cited that they would prefer a digital option of some kind for their learning.

With a salary increase (26%) and promotion (36%) as the main goals of taking certification, it only makes sense that 71% would prefer a training course with a certification (i.e. with an exam at the end). This way, they have tangible evidence of their commitment and expertise in their area of study.

59%

PREFER A DIGITAL OPTION FOR THEIR LEARNING

When looking at what type of exam a professional would like to take for a certificate, 51% would prefer to take their exam online from a remote location, 26% would favour a classroom digital exam and 23% would opt for a classroom paper-based exam. So, mostly digital-based exams are favoured with a minority who still prefer classroom-based exams.

DIGITAL-BASED LEARNING AND EXAMS ARE THE PREFERRED METHOD OF DELIVERY FOR THE MAJORITY OF IT PROFESSIONALS.
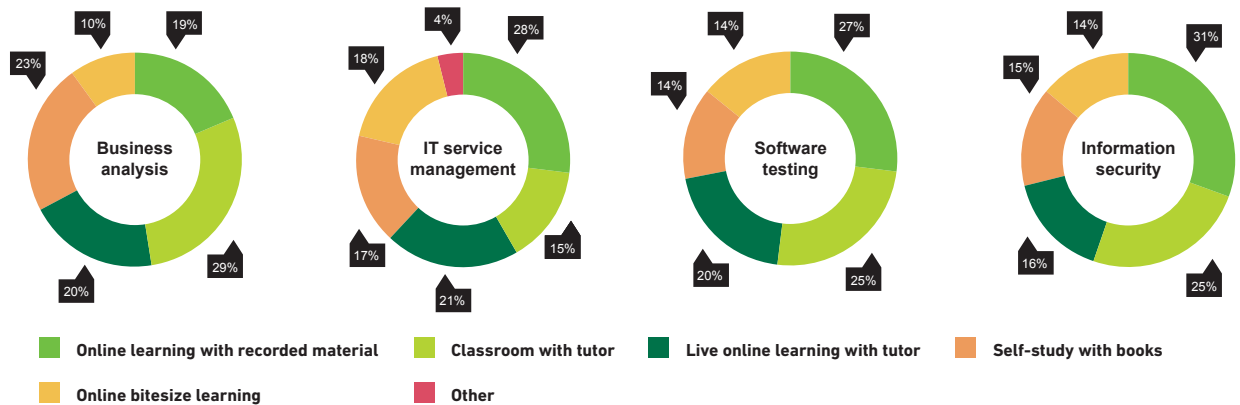
5. HOW TO FIND TRAINING

Word of mouth always wins. Recommendation is the key winner when it comes to finding the right training. 72% of respondents reported that they depended on recommendations from a friend, colleague, or manager to find a training provider. Therefore, it is of vital importance that the experience a candidate or employer receives from all parties involved is a positive one so that their recommendations follow. It's interesting to note that despite online learning being a popular choice for taking a certification or exam, using an online search to find training compared relatively poorly at 26%.

Although cost was marked as the most important factor when looking at taking a certification at 35%, nearly three quarters (74%) of respondents indicated that their organisation would pay for their certification. This was followed by course type (classroom, online etc.) at 22% and location of the training at 15%. It is interesting to note that cost was cited as the most important factor, regardless of whether the individual or their company would pay for the training.

Figure 6:

THINKING OF YOUR LEARNING STYLE AND TIME ALLOWANCE, WHICH OF THE FOLLOWING TRAINING COURSE OPTIONS WOULD SUIT YOU BEST?

Business analysis: 19%, 29%, 20%, 23%, 10%

IT service management: 28%, 15%, 21%, 17%, 18%, 4%

Software testing: 27%, 25%, 20%, 14%, 14%

Information security: 31%, 25%, 16%, 15%, 14%

- Online learning with recorded material
- Classroom with tutor
- Live online learning with tutor
- Self-study with books
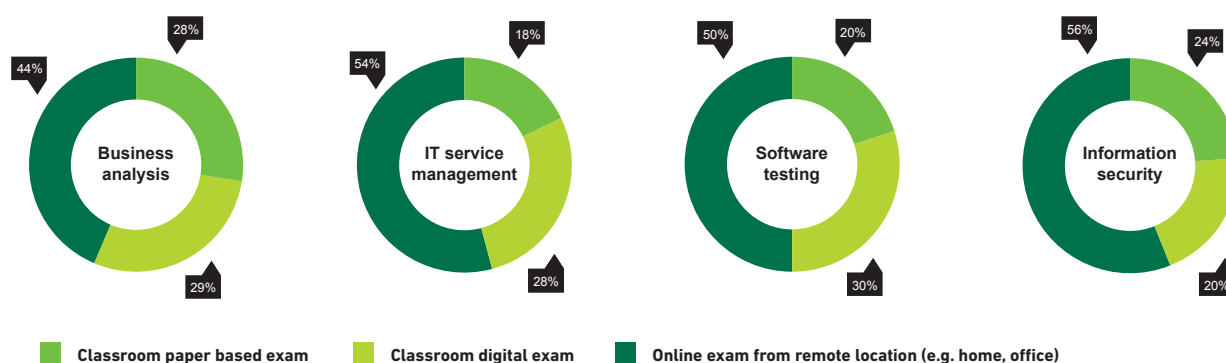- Online bitesize learning
- Other

Source: Professional Certification Market Research 2019 - UK

72%

OF IT PROFESSIONALS RELY ON RECOMMENDATIONS OR ADVICE FROM A MANAGER OR EMPLOYER TO FIND A TRAINING PROVIDER.
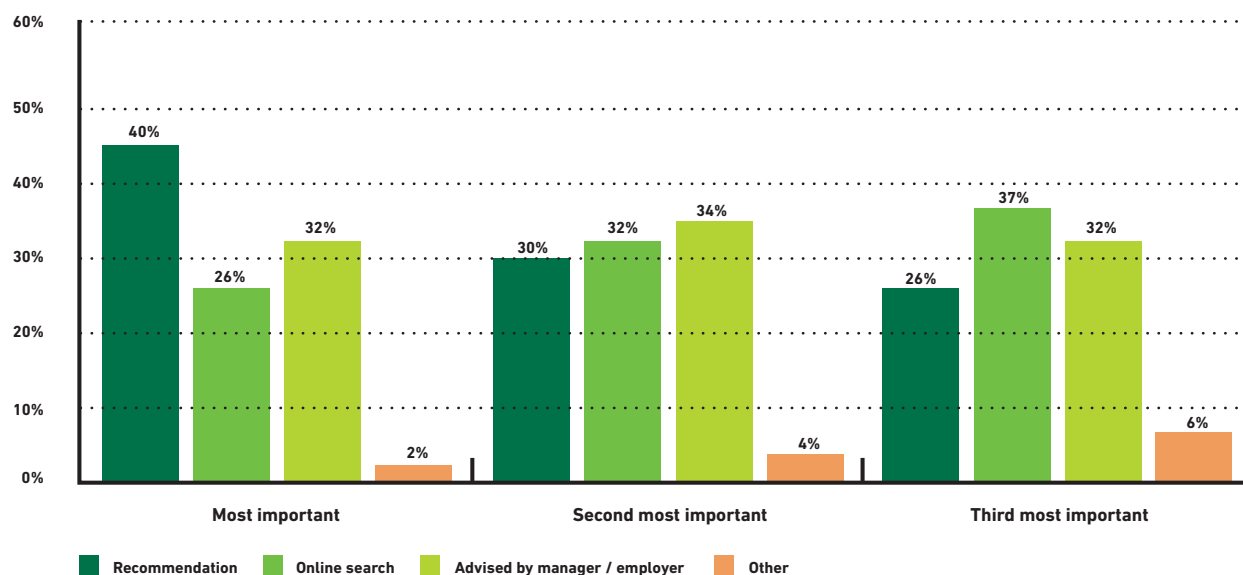
Figure 7:

WHICH TYPE OF EXAM WOULD YOU PREFER TO TAKE?

Business analysis — 44%, 28%, 29%
IT service management — 54%, 18%, 28%
Software testing — 50%, 20%, 30%
Information security — 56%, 24%, 20%

■ Classroom paper based exam   ■ Classroom digital exam   ■ Online exam from remote location (e.g. home, office)

Source: Professional Certification Market Research 2019 – UK

Figure 8:

WHEN LOOKING FOR TRAINING, HOW WOULD YOU GO ABOUT RESEARCHING THE OPTIONS AVAILABLE TO YOU?

	Most important	Second most important	Third most important
Recommendation	40%	30%	26%
Online search	26%	32%	37%
Advised by manager / employer	32%	34%	32%
Other	2%	4%	6%

■ Recommendation   ■ Online search   ■ Advised by manager / employer   ■ Other

Source: Professional Certification Market Research 2019 – UK

Figure 9:

WHAT'S THE BIGGEST FACTOR WHEN LOOKING AT TAKING A QUALIFICATION?
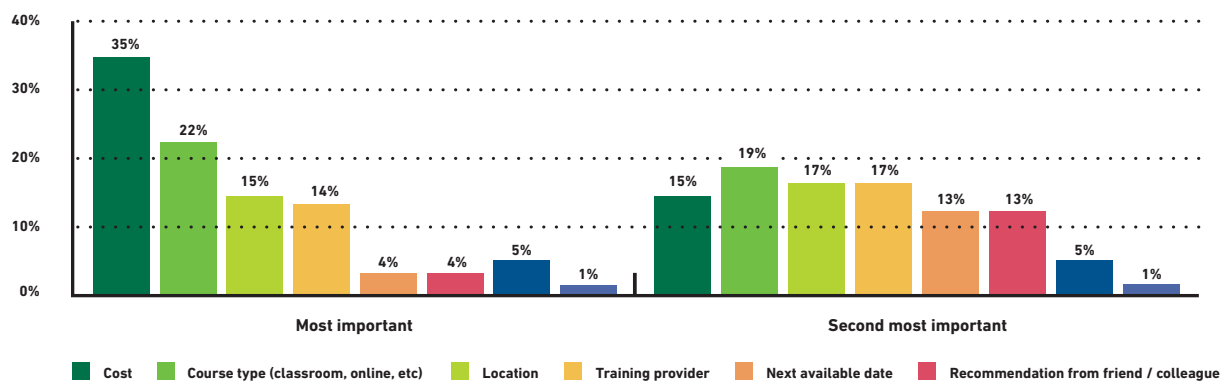
Source: Professional Certification Market Research 2019 - UK

6. THE QUALIFICATIONS LANDSCAPE

How do professionals and their employers regard qualifications and what factors motivate them to embark on a journey toward qualification?

Across our cohort of respondents, service management, (including DevOps professionals) were the most likely to hold a professional certification at 87%. Information security (including data protection and compliance) was second at 79%, with software testing professionals and business analysts third and forth with 70% and 69% respectively.

Professionals from across all four specialisms – BA, IT service management, software testing and information security, are all then, likely to possess a qualification. But what motivates people to study for and achieve a qualification in their field?

It appears, according to the data, that the desire for career advancement is the strongest motivator for attaining a qualification in their field. The highest rated driving factor was; 'it made my CV better' (41%), 'it was worth the effort' and 'I received more responsibility' came joint second (both 36%) in this list of reasoning.

Which providers are - in the view of the survey's respondents – the best? Out of those polled, 21% suggest that PMI were the best at providing qualifications for BA's, closely followed by BCS and the IIBA (both 19%). Within IT service management and information security, both cited BCS as the best provider.

6.1 Awarding bodies

When it comes to qualifications, there are a huge number of institutes and awarding bodies. Some of these bodies operate in other sectors of course. Across all specialisms being researched, BCS was the most widely recognised name. The information below shows the percentage of respondents who reported that they'd heard of BCS.

› Business analysis: 51%

› IT service management: 44%

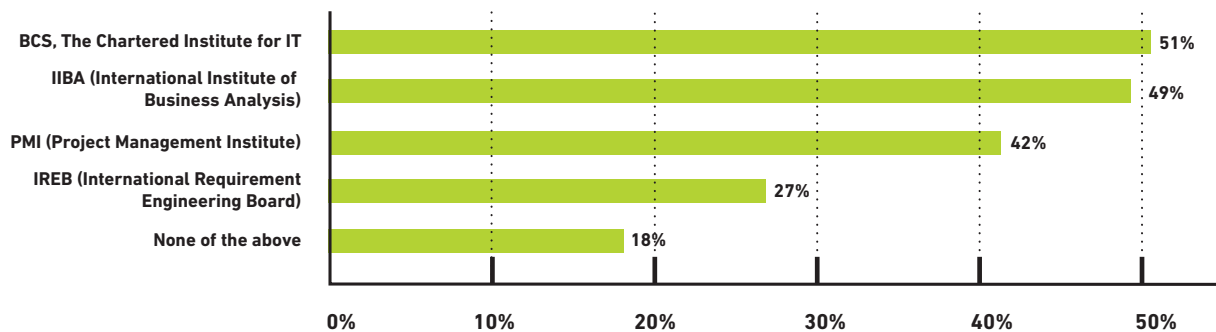› Software testing: 39%

› Information security: 59%

Across business analysts, service managers and software testers, around 44% of those asked were a member of a professional body. When it came to information security professionals, the figure jumped up slightly to 55%.

87%

OF THOSE EMPLOYED IN IT SERVICE MANAGEMENT, HOLD A RELEVANT QUALIFICATION

Figure 10:

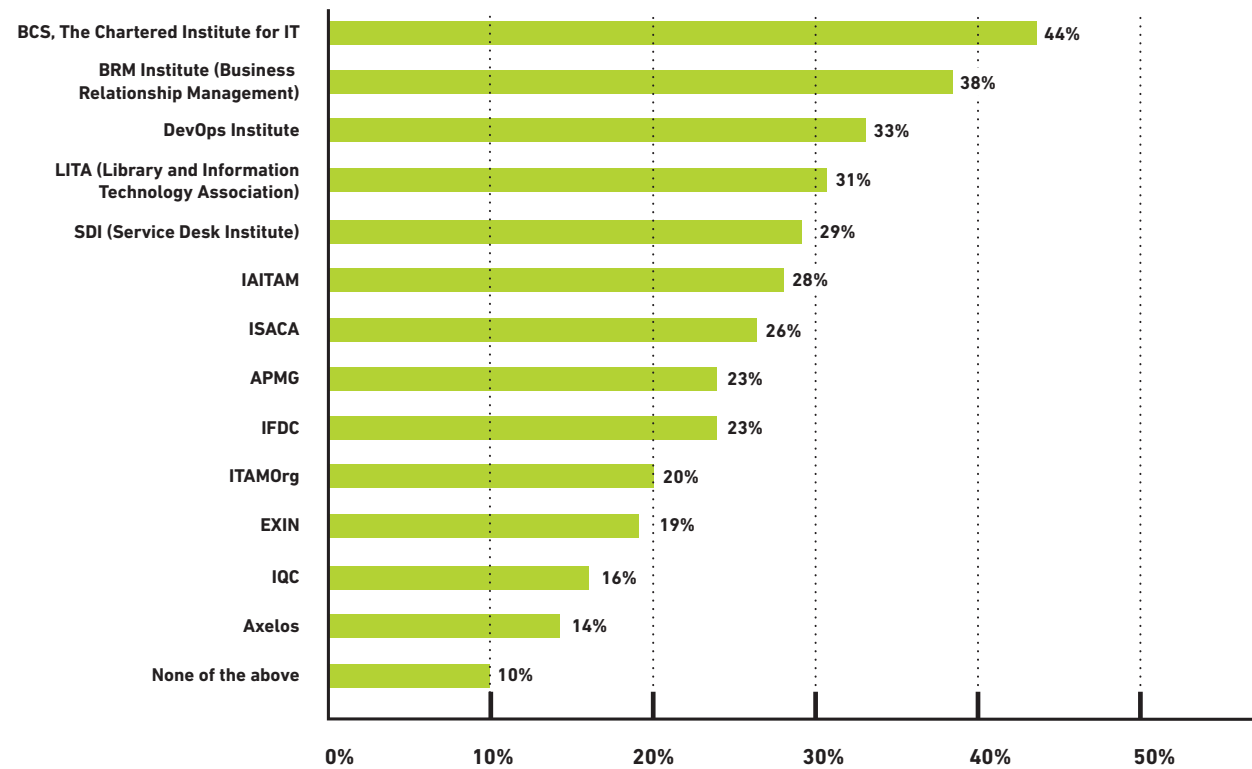WHICH OF THE FOLLOWING AWARDING BODIES HAVE YOU HEARD OF? (BUSINESS ANALYSIS)

Awarding Body	Percentage
BCS, The Chartered Institute for IT	51%
IIBA (International Institute of Business Analysis)	49%
PMI (Project Management Institute)	42%
IREB (International Requirement Engineering Board)	27%
None of the above	18%

Source: Professional Certification Market Research 2019 - UK

Figure 11:

WHICH OF THE FOLLOWING AWARDING BODIES HAVE YOU HEARD OF? (SERVICE MANAGEMENT)

Awarding Body	Percentage
BCS, The Chartered Institute for IT	44%
BRM Institute (Business Relationship Management)	38%
DevOps Institute	33%
LITA (Library and Information Technology Association)	31%
SDI (Service Desk Institute)	29%
IAITAM	28%
ISACA	26%
APMG	23%
IFDC	23%
ITAMOrg	20%
EXIN	19%
IQC	16%
Axelos	14%
None of the above	10%

Source: Professional Certification Market Research 2019 - UK

Figure 12:

WHICH OF THE FOLLOWING AWARDING BODIES HAVE YOU HEARD OF? (SOFTWARE TESTING)
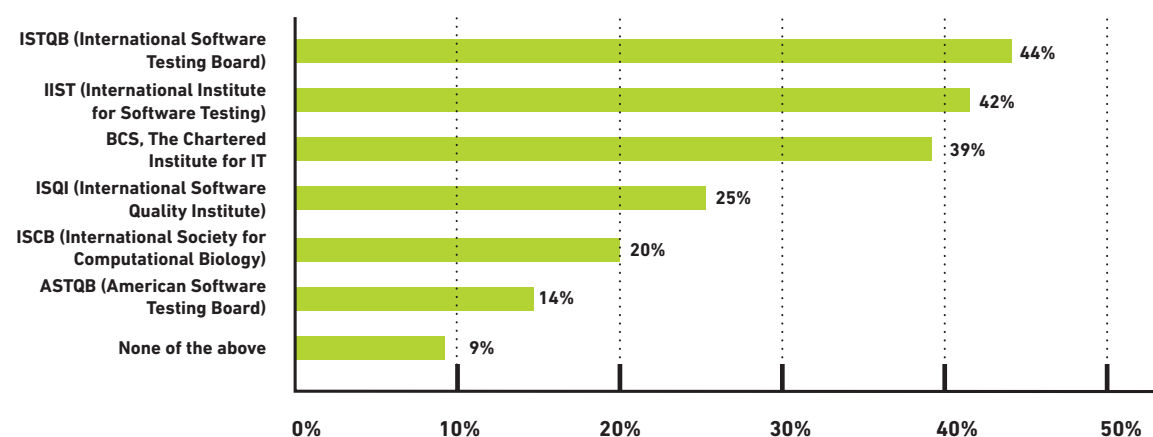
Source: Professional Certification Market Research 2019 - UK

Figure 13:

WHICH OF THE FOLLOWING AWARDING BODIES HAVE YOU HEARD OF? (INFORMATION SECURITY)
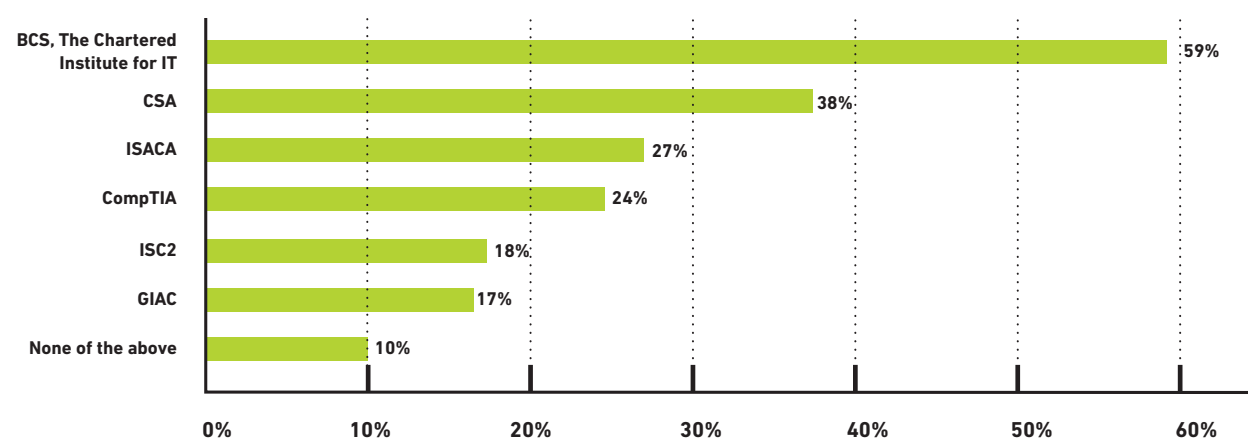
Source: Professional Certification Market Research 2019 - UK

OVERALL, 46% OF RESPONDENTS CLAIMED THAT THEIR ORGANISATION USES AI OR MACHINE LEARNING APPLICATIONS.

46%

SAY THAT TECHNICAL SKILLS ARE NEEDED IN ORDER TO IMPLEMENT AI

7. CHALLENGES AND NEW TECHNOLOGIES

New for this year's *market research report*, we asked our respondents to think about the implications and challenges they face with the influx of artificial intelligence (AI) within the IT industry. We asked them to think about current and future uses of artificial intelligence within their organisation and the skills gap that may ensue.

When asked 'does your organisation use artificial intelligence currently?', across business analysts, software testers and information security professionals, 42% said that artificial intelligence was currently being used. However, in IT service management, this number was higher at 57%, which perhaps suggests that within this area, artificial intelligence is more prevalent.

Overall, 46% of respondents claimed that their organisation uses AI or machine learning applications.

When looking at uses for artificial intelligence within an organisation, there is a relatively even split across several areas.

See response below:

› Personalised customer experiences – 38%

› Augmentation of processes (e.g. AI to enhance safety) – 34%

› Marketing / advertising – 31%

› Predicating outcomes based on business data – 29%

› Automation of repetitive / mundane tasks – 28%

› Automating business decision-making – 28%

› Conversational interfaces – 28%

It's quite clear from this information that artificial intelligence is being used across a wide range of tasks within an organisation. As artificial intelligence is relevant to any intellectual task and has applications across every sector, including healthcare, automotive, finance, advertising, government and military, it is interesting to see this also reflected in this research.

Looking to the future, respondents were asked what areas of interest their organisations might have when it comes to implementing artificial intelligence.

Automation of repetitive and mundane tasks came top at 34%, closely followed by predicating outcomes based on data, automating business decision-making and personalised customer experiences at 33%.

It's also fascinating to see that 66% of respondents thought that artificial intelligence would be important in enabling their organisations' long-term goals.

Since more than half of our respondents agreed that artificial intelligence is going to be the way forward, the response to the skills gap in artificial intelligence is telling.

When asked 'which skills do you consider are missing from your business today in order to develop / implement AI?'
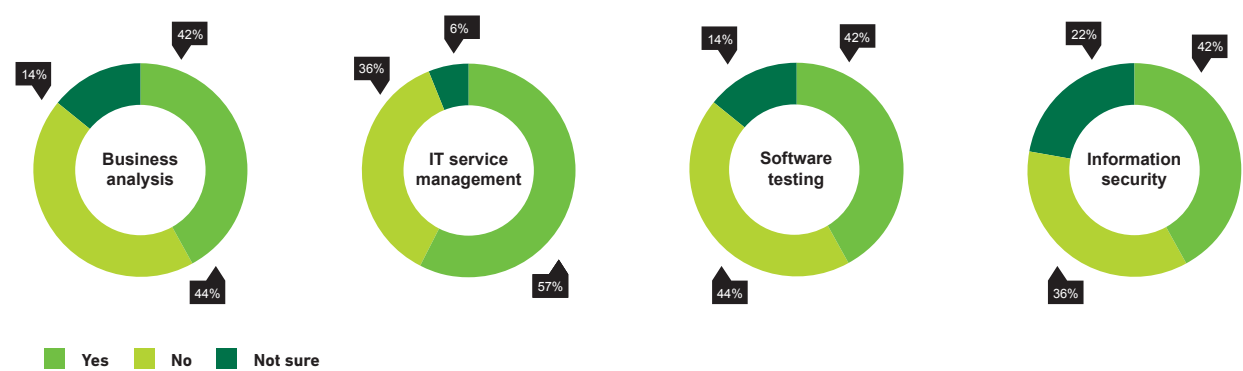
The respondents cited the following:

› Technical skills – 46%

› Data analysis skills – 37%

› Business skills – 32%

› Ethical thinking – 30%

› Integration to business processes – 29%

› Purchasing – 24%

So, it would be clear to say that there is a considerable skills gap when it comes to artificial intelligence and training in this area will become vitally important for business success.
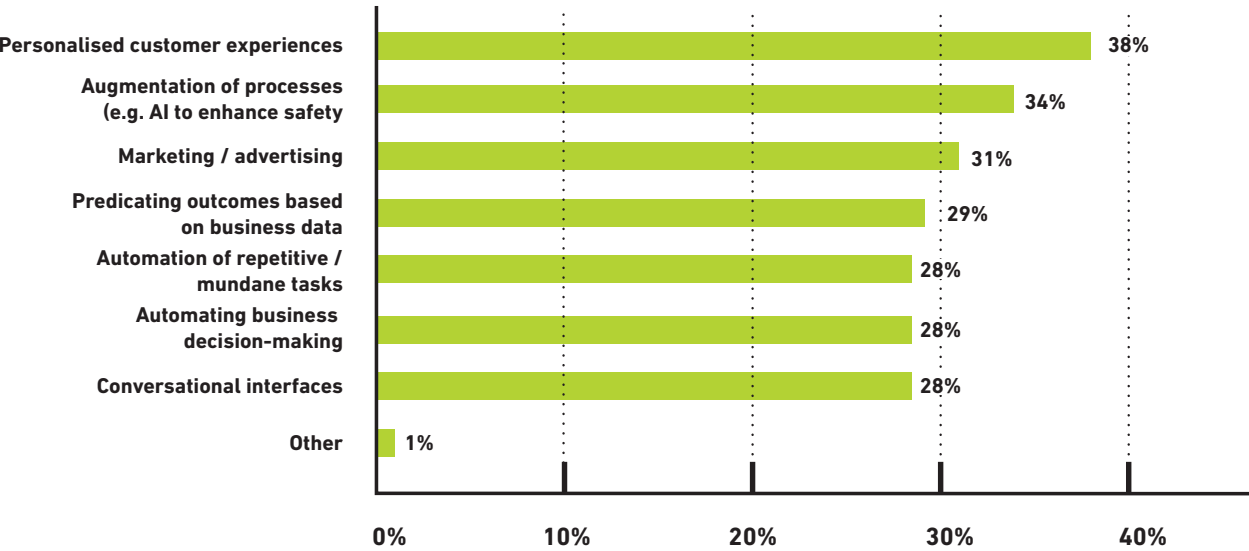
Figure 14:

DOES YOUR ORGANISATION CURRENTLY USE ARTIFICIAL INTELLIGENCE (AI) OR MACHINE LEARNING APPLICATIONS?

Business analysis — 42%, 14%, 44%

IT service management — 6%, 36%, 57%

Software testing — 42%, 14%, 44%

Information security — 42%, 22%, 36%

■ Yes   ■ No   ■ Not sure

Source: Professional Certification Market Research 2019 - UK

Figure 15:

FOR WHICH OF THE FOLLOWING DOES YOUR ORGANISATION CURRENTLY USE AI APPLICATIONS?

Category	Percentage
Personalised customer experiences	38%
Augmentation of processes (e.g. AI to enhance safety	34%
Marketing / advertising	31%
Predicating outcomes based on business data	29%
Automation of repetitive / mundane tasks	28%
Automating business decision-making	28%
Conversational interfaces	28%
Other	1%

Source: Professional Certification Market Research 2019 - UK

Figure 16:

TO DEVELOP / IMPLEMENT YOUR AI SOLUTIONS, WHICH SKILLS DO YOU CONSIDER ARE MISSING IN YOUR BUSINESS TODAY?
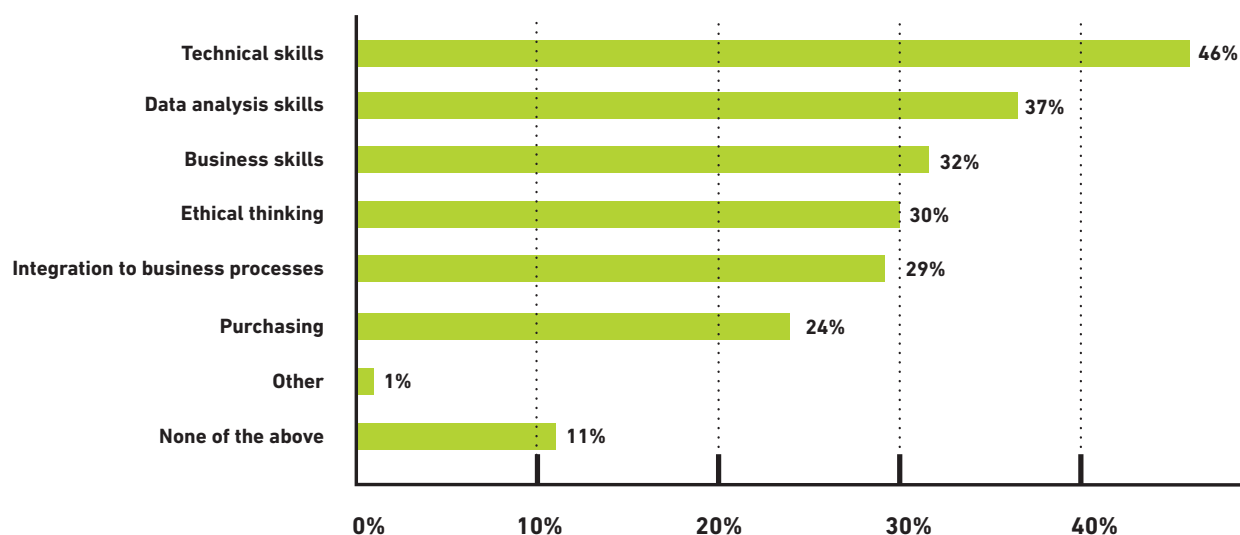
Source: Professional Certification Market Research 2019 - UK
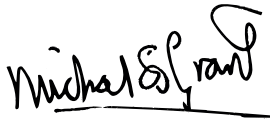
8. RESEARCH NOTES

Two survey-based reports were used to create this document. These were the *professional certifications market research 2019* and the *insights report 2019*, both compiled by BCS.

Professional certifications market research 2019 followed this methodology: 6-minute online survey questionnaire set up by BCS; survey sampling was conducted by Cint who was contracted to provide a panel of respondents who currently work in business analysis, service management, software testing and information security. Fieldwork ran between 23 May to 10 June 2019. The research is based on 364 completes in the UK.

IT leaders survey followed this methodology: online research conducted by BCS during the period 7 December 2019 to 14 January 2019. A total of 366 IT leaders took part in the survey.

"Our mission is to make IT good for society. We do this through supporting careers, sharing expertise, improving education, influencing practice and driving standards. Research papers like this show our expertise and knowledge of the IT industry as a whole and allow us to showcase to our partners what is shaping the industry in which we work."

Michael Grant

President. BCS, The Chartered Institute for IT

BCS, The Chartered Institute for IT, is committed to making IT good for society. We use the power of our network to bring about positive, tangible change. We champion the global IT professional and the interests of individuals engaged in that professional, for the benefit of all. The Institute fosters links between experts from the industry, academia and business to promote new thinking, education and knowledge sharing.

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9. NEW AND UPCOMING BOOK TITLES

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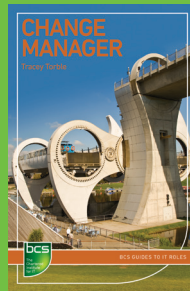
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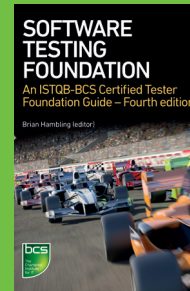
Software Testing Foundation

An ISTQB-BCS Certified Tester Foundation guide – fourth edition
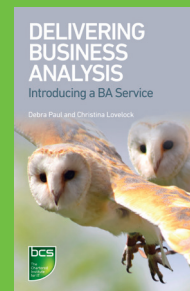
£39.99
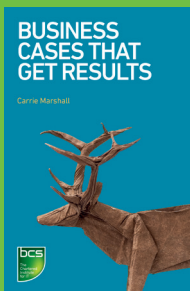
Business Cases That Get Results
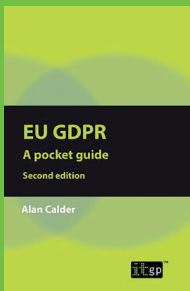
£9.99

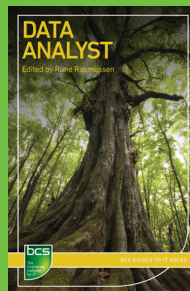**Digital Marketer**

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