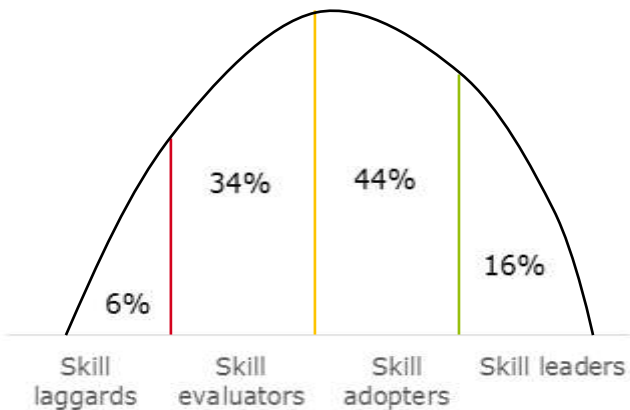


# Digital Transformation Skills Index 2017

The IT department's position in the business is evolving, and employees within it need to adapt to stay afloat. A lot is being asked of them, but ultimately it is critical that they continue to acquire new skills as well as perfecting existing ones. By ensuring that the IT department is highly skilled, organisations will be able to move away from the IT department serving only its traditional purpose, to a transformative one, as so many organisations are trying to do.

Some organisations are ahead of the curve when it comes to skills and development, but a significant proportion are behind. Respondents of this research have been plotted into personas where their answers to relevant questions have been used to calculate whether they do or do not value skill acquisition and learning, as per the below:

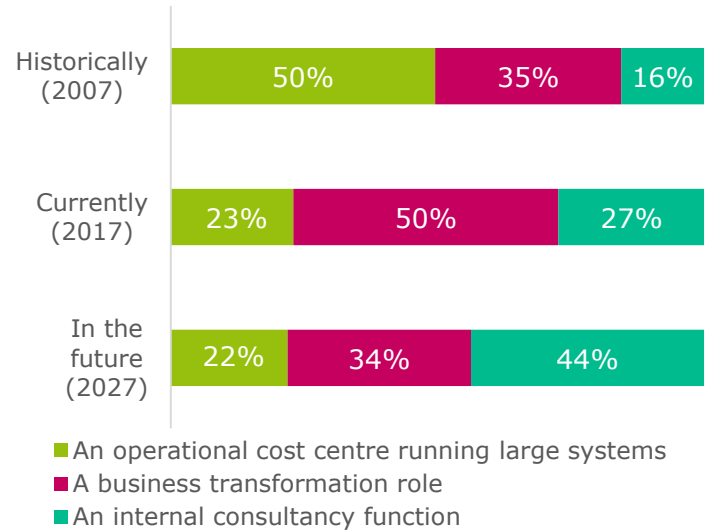
- Skill laggards place the least value towards skills and learning, with their organisations missing the most skills and doing the least to rectify it
- Skill evaluators and their organisations do not tend to value skills and learning, but show some interest in assessing how they could improve
- Skill adopters show more appreciation to skills and learning, with their organisations likely to attempt to move forwards in this area
- Skill leaders place a high value on skills and learning, with their organisations likely to have the right skills in place currently, as well as strong plans for the future



**Figure 1:** Analysis of respondents' answers to skills based questions to assess their value of skills and learning, calculated using all respondents (630 respondents)

Around one in twenty (6%) respondents fall into the negative end of the index and are skill laggards, while 16% are at the other extreme and are considered as skill leaders. The majority fall in the middle, being either skill evaluators (34%) or, the slightly more preferable, skill adopters (44%).

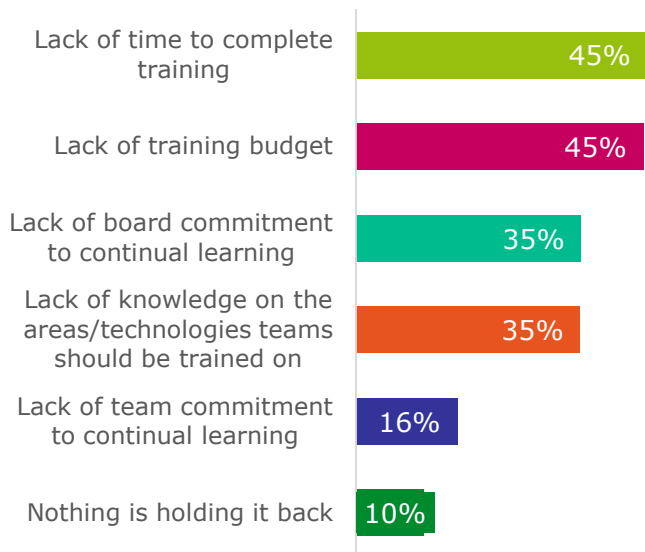
The skills required to work in IT are always changing and the traditional role of the IT department is becoming less pertinent. Half (50%) of interviewed IT decision makers (ITDMs) report that the role of the IT department was historically an operational cost centre running large systems, whereas currently, it is much more likely to have a business transformation role (50%).



**Figure 2:** "Which of the below best describes the role of the IT department, historically, currently and in the future?", asked to all respondents (630 respondents)

The IT department's purpose is developing into a more strategically central role, meaning that the skills needed run from the traditional background knowledge for IT maintenance, all the way to innovation and skills associated with the future of technology such as AI. However, such skills - even the very basic ones - are not always a priority. Only 15% of respondents' time is being spent on learning new skills, on average, with this being even lower (10%) for skill laggards and steadily increasing through skill evaluators (14%) and skill adopters (16%), up to skill leaders (19%). However, in an ideal world, respondents cite that they would spend just over a fifth (22%) of their time learning new skills, on average.

The IT department must overcome barriers to skills development. The vast majority (90%) of those surveyed state that there are constraints holding back skills development in their organisation's IT department. A lack of time (45%) and budget (45%) are the most likely, but just over a third (35%) cite that a lack of board commitment is a restriction.



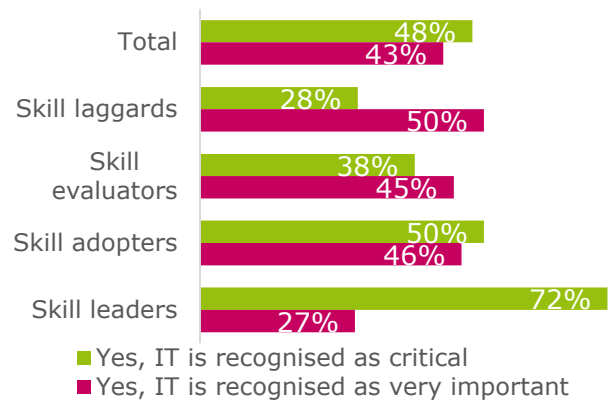
**Figure 3:** “What are the constraints holding back the skills development of the IT department in your organisation?”, asked to all respondents (630 respondents)

Organisations seem to be struggling, in particular, with time as a resource when nurturing the skill sets that they desire, and this in turn is having significant impact on organisations. Outdated skills (24%) and a lack of skills altogether (21%) are issues that are likely to prevent organisations’ IT departments from delivering on current business demands immediately.

Having outdated skills is more likely (36%) to be an issue for skill laggards (skill evaluators 29%, skill adopters 22% and skill leaders 17%), suggesting that are struggling to nurture their team’s required skills.

Despite these challenges, around nine in ten (91%) of those surveyed recognise that the IT department is very important or critical to enabling organisations to innovate and grow. This is much more likely to be the case among skill leaders, with nearly all (99%) who say that it is very important or critical, including 72% who believe it is critical.

Slightly fewer than four in five (78%) skill laggards report that this is very important or critical, with only 28% who report it as critical. The proportion who believe that IT is critical rises in line with respondents’ valuation of skills: skill evaluators (38%), skill adopters (50%) and skill leaders (72%). This suggests that skill leaders have a more visionary approach and see the wider role that the IT department can play within organisations.



**Figure 4:** “Do you feel that the IT department is recognised within your organisation as important to enabling the organisation to innovate and grow?”, asked to all respondents (630 respondents)

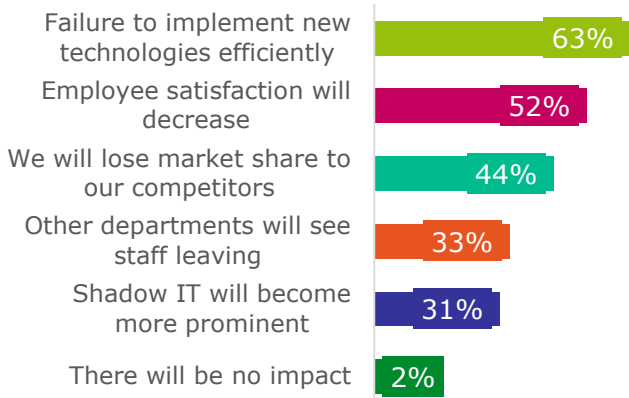
These challenges could be even more prominent in the future. Almost half (47%) of respondents admit that hiring IT staff with the right skill set will be more difficult in 10 years’ time. This is more likely to be the case in skill laggards (64%) than skill leaders (35%), which suggests that skill laggards are far more unprepared for the future of the IT department, whereas those who value skills are prepared – whether that be through the packages and pay they offer their staff, or the effort they will put in to attract the right staff in the first instance.

Skill adopters (47%) should be more confident in their ability to hire, but it is actually skill evaluators (50%), although only marginally, who are more optimistic about future hiring. This may demonstrate a naivety in those who have the importance of skills on their radar – they believe that simply thinking about it, will mean they have a smoother ride in the future.

An ongoing change in the skills that are required to be successful within IT is creating uncertainty about the future job market. Hiring the right IT staff in the future is a concern for the vast majority (92%) of respondents’ organisations. While this is slightly lower among skill leaders (83%), it demonstrates that even when skills are highly valued and therefore planned for and invested in, hurdles to the best IT staff will still be present.

For the majority (54%), the biggest limitation is having a lack of talent to choose from, with skill evaluators (60%) and skill adopters (53%) being prime examples of this.

Organisations are right to be concerned about hiring the right talent in the future. Almost all (98%) respondents state that there will be an impact if their organisation is unable to secure the right talent in the IT department. Consequences are likely to be severe: not being able to implement new technologies efficiently (63%), a decrease in employee satisfaction (52%) and even losing market share to competitors (44%).

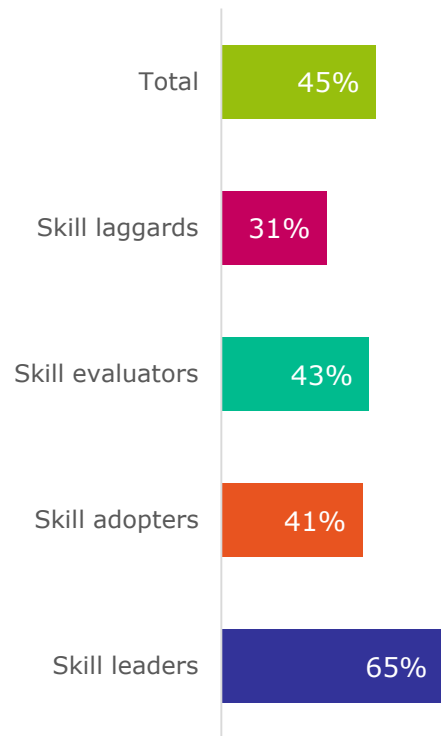


**Figure 5:** “Which of the following could be impacts to your organisation if it’s unable to secure the right talent in the IT department?”, asked to all respondents (630 respondents)

Luckily for organisations, there are ways to close the skills gap, and a desire to do so. Around two thirds (67%) of those surveyed state that they would spend more on training within their organisation to close the skills gap, if money was no object. This aligns with skill evaluators (65%) and skill adopters (68%), who are the most likely to be in the stages of acquiring the right skills and preparing for the challenges of the future. More than half (55%) say they would create more opportunity for additional qualifications in their organisation. In addition, around two in five (43%) say that they would invest in their country’s education system, demonstrating that many organisations recognise that skills nurturing needs to begin much sooner.

The way future technology plays out will be pivotal to the skills that are required for the future, with 39% who think that AI skills will become crucial in 10 years’ time. However, technology skills more relevant to today (such as cloud computing (52%) and cyber security (48%)) are also perceived as crucial to the future, as well as softer, less measurable skills such as the ability to innovate (50%) and manage a team (40%). Overall, the number of skills that organisations will expect of their staff is high – seven on average – with this being nine for the skill leaders.

The importance of having skills in AI will be felt across the IT department. Almost half (45%) of those interviewed report that AI will have a big impact on the role of the IT department in the next 10 years. This is far higher (65%) for skill leaders than for skill evaluators (43%) and skill adopters (41%), with skill laggards being even further behind (31%). This suggests that skill leaders have a greater foresight of the skills that will be required.



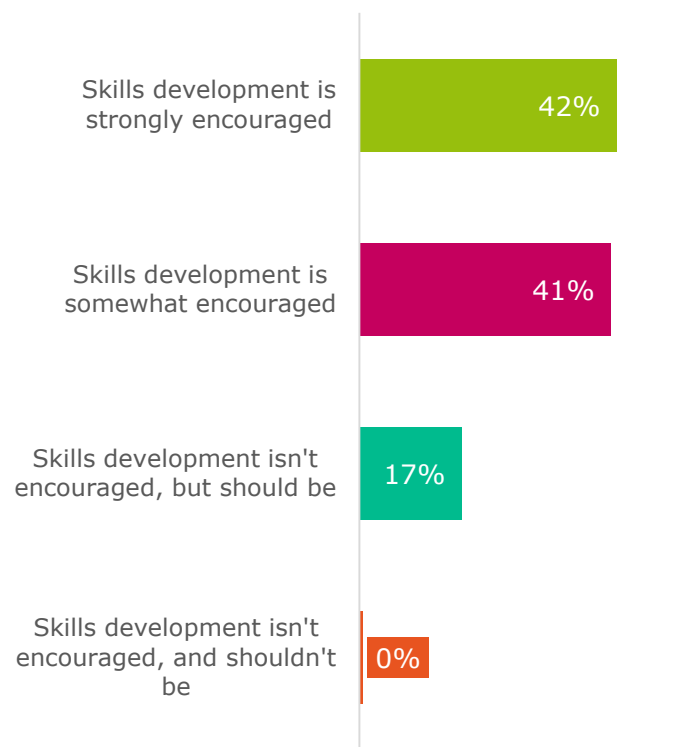
**Figure 6:** “What technologies do you see having the biggest impact on the role of the IT department in the next 10 years?”, showing those who selected AI, asked to all respondents (630 respondents)

The ability to work alongside AI could be crucial to job security, as more and more roles are altered through the appeal of AI. Three in five (60%) respondents believe that the role of desktop support in their organisation will be replaced by AI within 10 years. Additionally, half (50%) say the same for software testers and just over two in five (41%) report this when considering network engineers. IT staff are more likely to develop skills to allow them to slot into an AI world, than to upskill themselves so they are irreplaceable, with the most likely (56%) skill needed to keep a job in an AI world being AI related skills.

AI is also likely to replace parts of our own respondents’ job roles. Most commonly, upgrading software (42%) is a responsibility that will be replaced, at least in part, by AI in the next decade. However, AI could also replace forward thinking activities such as strategy planning (24%).

While a variety of abilities are required to be successful in IT, around four in ten respondents report that knowledge (41%) or technical skill (38%) are the most important requirements. Only around two in five (22%) say the same for curiosity. However, skill laggards are more likely (36%) to cite curiosity as important to success than both knowledge (33%) and technical skill (31%). On the other side, skill adopters (40%) and skill leaders (43%) value technical skill above all else.

While businesses recognise a skills gap and pertain to have a desire to change it, are they actually encouraging employees to develop themselves? Just over four in five (83%) surveyed ITDMs state that taking time out of the working day to learn and develop new skills is encouraged in their organisation, with 42% who say it is strongly encouraged.



**Figure 7:** "Is taking time out of the working day to learn and develop new skills encouraged in your organisation?", asked to all respondents (630 respondents)

Despite organisations showing commitment to encouraging learning new skills, almost three in five (57%) respondents admit that their organisation's board see the process of gaining additional knowledge and skills as a cost to the business. Similarly, 44% agree that skill acquisition is not seen as valuable as it should be by their organisation's board.

Furthermore, the amount of time given to learning new skills is often negligible. Respondents report that three hours per week is allocated to themselves and their team for learning and skills development, on average. Almost one in ten (9%) report that they do not allocate themselves any time at all, and only slightly fewer (6%) say that no time is allocated to their team.

The lack of action being taken should be a huge concern. Half (50%) of respondents agree that a move towards digital transformation is leading to a loss of fundamental IT systems knowledge, but this is much less (20%) of a concern among skill leaders than it is for skill laggards (72%), with skill evaluators (51%) and skill adopters (57%) falling in-between. Additionally, around half (51%)

agree that the rapidly changing skills needed in the IT department means that they will struggle to have the right skills in 12 months' time. The loss of these fundamental skills and the continual change in the skills required could mean that those who do not value skills will fall behind their competitors regarding digital transformation, which can result in a struggle to attract new customers (55%) or a loss of market share (49%). For 39%, there is a fear that their IT staff will leave.



## In summary

Many organisations are attempting to move their IT department away from its traditional role, but a lack of skills, and the time to learn those skills, may restrict them. This can severely hamper IT departments and could be a major contributor as to why they cannot meet business demands.

This skills gap is only likely to get worse and organisations need to act now. By not having the right staff and skills in place, organisations put themselves at risk of falling behind their competitors and losing customers. Despite not really supporting skill nurture, it is organisations' boards who will come knocking when the bottom line drops.

IT staff need to be aware of new technologies and the skills required to be successful in the future workplace, and they need to apply pressure to learn those skills – whether to themselves, or to the rest of the department. In a digitally transforming environment where traditional IT skills are dwindling, if employees can continue to upskill themselves on the latest technologies, then they will protect their current position and put themselves in place for career progression opportunities.

AI could revolutionise the skills that are required and the way that we work. AI is likely to replace a number of IT job roles and tasks, but, this doesn't mean the end for the IT department. Employees need to have the right skills to be in a position to work alongside AI and embrace its future impact, so that organisations can unleash its powers.

Organisations' boards will often dictate whether employees have the time and empowerment to develop their skills, but this is commonly where organisations do not have the right support. Many IT staff are losing basic skills, as well as falling behind on new ones, which will leave their organisation at huge risk. If organisations get it right at board level and allow for the right time and resource, then they will reap the benefits of highly skilled and engaged workforce.

## Methodology

During February and March 2017, 630 IT decision makers were interviewed for this research. Respondents came from across the globe:

- US – 200 interviews
- UK – 100 interviews
- Germany – 100 interviews
- France – 100 interviews
- Australia – 80 interviews
- Singapore – 50 interviews

To qualify for the research, respondents' organisations could be from any sector and their organisation had to have at least 500 employees.

IT decision makers were interviewed using an online methodology and a robust multi-level screening process was used to ensure only appropriate respondents participated in the project.

To calculate where respondents fall on the skills and learning index, respondents' answers to relevant skills-based questions have been used to score them depending on whether they do or do not value skill acquisition and learning. Using their total score, respondents will fall into one of four groups (skill laggards, skill evaluators, skill adopters and skill leaders), which puts them together with other like-minded respondents.

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