



Make internal mobility your code of practice

Reskilling the workforce to become digitally relevant is a necessary and overdue response to the skills gap

Introduction

“We are a technology company,” declared the **CFO** of JPMorgan Chase in a video address to startled investors. It was no idle boast: the global investment bank had an army of 40,000 digital workers, including 18,000 software developers, “creating intellectual property”.

That was in 2016. Four years on, some financial institutions still have to bite the bullet. In January, after yet another breakdown of its mobile banking systems, the CEO of **Wells Fargo** remarked ruefully: “We need to be a technology company.” Its struggle to update archaic systems was landing it in hot water with the regulators and angering its customers.

The Internet of Things is forcing other sectors to rethink who and what they are. One of the world’s leading lift operators, **Thyssenkrupp**, has 100,000 elevators in the US connected to the cloud, with sensors transmitting terabytes of maintenance data. For Thyssenkrupp, the digitization of its operations means a cultural shift away from pure – engineering as maintenance personnel is slowly making way for data scientists and software writers.



In a world where everything is also a piece of software, every company is also a technology company.



Financial institutions are fighting a war on two fronts. With fintechs snapping at their heels, they are spending billions to become more “agile” only to face another existential threat of digital colossi such as Amazon and Google morphing into banks. By the middle of the new decade, consumers are expected to do most of their saving, investing and borrowing through non-finance platforms.

But if a bank is no longer quite a bank but also a technology company, who are the bankers? What becomes of them as financial institutions adapt to technological disruption?

We shall turn to this question next.

What automation is doing to the workforce

Technology has always destroyed jobs. The steam engine laid waste to the English textile industry as cheap cotton from India flooded the market. The mass-produced automobile destroyed the business model of the blacksmith. In the technological revolution going on right now, digital is convulsing the financial sector. The US cash equities trading desk at Goldman Sachs, which at the turn of the millennium employed 600 traders, now numbers just two – you read that right as – algorithms do the work.



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Creative destruction will continue to destroy. As the technologies of AI and the Internet of Things come of age, automation is set to wipe out many more jobs, particularly in manufacturing where robots could “displace” 20m livelihoods. The preferred term for these estimates is that jobs are displaced, not lost, as digitization is expected in the long run to create more jobs than it destroys – just as the steam engine and the automobile were drivers of economic growth.

As we saw, financial institutions are far from immune. McKinsey estimates that over the next two to three years, “digital” will be capable of doing roughly a third of what banks routinely do. That is not to say that a third of all bank staff is soon to be displaced, to stick to the euphemism, but clearly major and ongoing job restructuring is unavoidable.

The opposite, or parallel, concern for financial institutions is that digital is creating too many jobs – more than the workplace can currently supply. The blogs and analyses that endlessly exhort banks and other financial institutions to integrate their systems, to “forge” data ecosystems and “delight” their customers with innovation seem to assume there is a bottomless supply of skilled developers to deliver these transformations. This is far from being the case.

In the next section, we shall explore the extent of the skills gap and how it is holding back digital transformation.

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Digital transformation and the skills gap

The **CFO** of a global bank read the thoughts of many of his peers when he said: “I know that 50% of my digital transformation spend is wasted. I just don’t know which 50%.”

This the dilemma. Businesses know they have to invest in digital transformation, but they also know they could do so more efficiently. However, they are undeterred: global spend on digital transformation is expected to reach almost \$2 trillion by **2022**.

In 2019, McKinsey took a snapshot of where businesses believe they are in their digital journey. After revenue acceleration, the top priority was Improved agility and faster time to market, as you would probably expect.

The unexpected finding was that businesses were disappointed by the agility outcomes of their cloud migrations – and uniformly so, regardless of how much of their workload they had moved to cloud platforms.

Businesses identified “talent gaps” as by far the biggest constraint to delivering agility outcomes. Another frustration was the perceived failure of management to grasp the potential of digital transformation or to understand the value at stake.

To put it crudely, no matter how much money you throw at digital transformation, without the right culture and the right spread of skills, you only get so far. And no further.



The digital skills gap affects all sectors and all economies but is difficult to quantify. The UK **Department** for Digital, Culture, Media & Sport recently published two extensive pieces of research into the demand for digital skills in the UK job market. Although billed as “a call to action” both papers decline – sensibly perhaps – to put a number on the shortfall.

The **Open University** was less coy. In its survey of UK business, it found that 9 in 10 struggled with a shortage of digital skills, and that this was “already having a significant negative impact on productivity, efficiency and competitiveness”.

The policy group Coalition for a Digital Economy argues that Brexit is exacerbating the situation and calculates that the British economy will hit a shortfall of 800,000 digital workers in 2020 – that is to say, right now. Neither Open University nor the Coalition for a Digital Economy are unbiased observers, but even if we take this huge figure of 800,000 with a huge pinch of salt, it is still difficult to see how the UK can find the skilled digital workers it needs. Its universities are currently producing just shy of 30,000 computer science graduates a year – a drop in the ocean. And even this (inadequate) number could be optimistic.

¹ CIOs were asked to self-score on a range of parameters. Most companies struggled to get above 5 out of 10 a score that did not improve for companies with a higher rate of cloud adoption



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Last summer's GCSE results for England, Wales and Northern Ireland showed a worrying drop of more than 40,000 in the numbers sitting for a qualification in either computing or information and communications technology (ICT).

A university degree is not the be-all and end-all, of course, and businesses are generally loath to hire graduates fresh out of college. The sweet spot is the software engineer with a degree and three to five years' experience. Tech firms such as IBM, Google and Paypal are growing more relaxed about the need for a degree and increasingly tempted to take a "code first" approach to fill tech positions.

Whichever way you look at it, filling those positions is becoming increasingly problematic, which is driving up salaries as well as the cost of recruitment. It is difficult to pin a number on the total cost of finding and employing the right software developer: one "back of an envelope" calculation lands on a sum of **\$50,000**, which includes the cost of training and relocating a new hire. An extreme scenario perhaps, but one that concentrates the mind because businesses routinely underestimate recruitment costs.





The hiring headache is compounded by the restlessness of many tech workers. Again, we do not have reliable figures for overall turnover rates for software developers but **LinkedIn** found that the sector with the highest churn is the software industry.

The median tenure at Google is just 1.1 years – and it is even less at Amazon. Neither are what you might call digital slouches.

Poaching is rife across all sectors. A generation of “digital nomads” has grown up with the idea that careers are not stable, and that it is as easy and natural to move from one job to another as it is to switch from Spotify to Tidal.

Just at a time when businesses are rediscovering the importance of loyalty and culture in their digital progress.

The role of internal mobility

Company culture and legacy was long seen as the enemy of digital transformation. Financial institutions longed to wipe out the past and become pure technology just like the startups that were beginning to undermine their market dominance. Of course, this was impossible – and so began the hard

slog to connect “legacy” systems and long-winded business processes with apps and data sources in the cloud. Understandably, the focus was on technology because the threat was technological from fintechs unencumbered by the past.

Some 10 years into the process, businesses have regained some of their poise – as well as the initiative. The battle against the startups is not nearly as one-sided as we once thought. Hierarchy and corporate structure are not fuddy-duddy but a necessary strategic and operational tool. Businesses are weaponizing data that they did not know they had as digitization unfolds. Equally, the work and life experience of a diverse workforce is not an obstacle slowing you down, but a valuable source of innovation and renewal. And like all resources, something to be leveraged, something to be cherished.



Financial institutions have realised that by making digital transformation just about technology, they were in danger of throwing out the baby with the bathwater.

Company culture may be hard to define, but when it is gone, the business is diminished. And with every employee displaced because of digital transformation a piece of that culture is lost.

Digitization can never mean that you replace a diverse but “analogue” workforce with a younger, “leaner” digitally skilled team – even if there were enough software engineers to go around. A recent article in *The Banker* describes how financial institutions are exploring ways to kill two birds with one stone and re-skill and re-motivate employees to drive digital change. The “agility” that businesses are told they need to be relevant cannot be delivered by a rigid workforce. Financial institutions know this and are looking to implement bold and flexible people strategies.

Internal mobility is not only a cultural gain, but an operational imperative as **McKinsey** recognises. The consultancy says: “Closing the skills gap requires not only firing and hiring – as there is no way to do so fast enough – but must include a combination of upskilling, reskilling and redeploying.”

One of the most obvious yet radical solutions is to train your workforce to become not only digitally literate, but truly skilled as software engineers. In this way, you would sidestep recruitment, avoid the pain and cost of redundancy while retaining your cultural capital.

Is this realistic?

Cracking the code

The software industry has a diversity problem. We already mentioned the decline in the number of students sitting a “tech” GCSE. Another disheartening statistic is that boys outnumbered girls by a factor of three to one.

The other barrier is age. Digital natives have a head start on colleagues who have reached the ripe old age of 35, but they are surely not innately better at coding. However, “older” workers have often internalized this preconception, and tend to regard coding as an intimidating, alien activity. Even workers who want to advance their skills and are intrigued by code sometimes assume that at 35 or 45, they have missed the boat. Like any prejudice, this does not stand up to reality, as any digital coach will tell you. Just as being a man, having a beard and drinking craft beer does not make you a talented software developer, so being 35 or 45 does not exclude you from becoming one.

This is not to say that everyone is a suitable candidate for reskilling. Companies are a poor judge of that. First of all, IT departments tend to hire or look for what already most resembles them – a bias that afflicts all recruitment. Secondly, workers are put in a box – or pigeonhole themselves. There is a lack of imagination, or a certain inertia, that prevents companies from “reading” the workforce correctly and exploiting its full potential. It bears repeating that the employees are often complicit in this and impose these limitations on themselves.



To think out of the box you sometimes need to go outside the box and seek outside help to “scan” the business for digital potential.



It may be that some workers in jobs at risk of automation can be re-skilled to join the digital team – but such one-on-one swaps are not always possible. Automation will lead to job losses, and financial institutions are increasingly offering digital training as part of their exit package. But flexible and imaginative redeployment is obviously the preferred option.



How long does it take to train a software developer to a point where he or she can be meaningfully deployed within the business – or outside it? A “bootcamp” syllabus of full-time instruction for a period of 15 weeks has been proven to be effective, but this timetable assumes the syllabus is there with the teaching methodology and infrastructure fully worked out. Financial institutions are wisely avoiding designing such a course themselves: it would take too long, corporate rigor mortis would set in, and anyway, when it comes to actually implementing these ambitious programmes of reskilling, the track record of most businesses is poor.

A full-time commitment may not always be possible, so the course has to be modular enough to allow for an agreed time frame. Naturally, the business has to have assurances that the course can achieve the desired outcomes, but external validation may be just as important, because as we saw earlier IT and corporate strategists are sometimes biased and self-referential in their evaluations.

A digital team is only as strong as the senior management that supports it. After the shortage of skilled software developers, the lack of collaboration and understanding between business and IT is the main reason why digital projects fail. The problem goes deeper than jargon, or fundamental technical challenges (although these play a big part). Business often lacks the rounded digital insight to fully grasp the implications or potential upside of a transformational IT project. Here it is doubly crucial that it is not IT itself that bridges these gaps in understanding, but someone coming at the issues from the outside.



Conclusion

Opening up a digital career path to a greater spread of workers will help close the skills gap and advance the diversity agenda of financial institutions and other sectors.

No one is pretending that internal mobility alone will end the skills shortage, but it needs to be part of the mix of approaches taken by financial institutions, an important part. In the past, businesses sounded off about employee engagement and training in their annual reports but often without any real commitment – or real budget. This is changing and changing fast as financial institutions desperately need the (re)skilled staff.

Internal mobility is the answer to another question: how to preserve the culture of your business as digital disruption threatens to dismantle it. The resilience of a business comes from its culture, and those that perpetuate it every day, the workforce.

