**Reflective Activity – Ethics in Computing**

The digital age is consistently presenting opportunities to create value in the form of efficiency, reach and integration of services core to everyday life. With this innovation comes a responsibility on IT professionals to ensure that digital transformation is managed responsibly whilst negating any possible harms (Nulli et al., 2018). This reflection focuses on increasing benefit and minimising harm of digital financial services as well as insights into the ethical responsibilities of the IT professionals that deliver these services to the public.

The introduction of digital financial services, for example mobile banking applications, can enable the financial inclusion of populations that are traditionally underserved (Patwardhan, 2018). The benefits of financial inclusion can be seen by individuals, service providers and even governments (Ozili, 2018). For individuals, financial inclusion is key to reducing instances of poverty through enabling access to products for economic growth as well as making it easier to manage financial risks. For service providers, it is an opportunity for business growth and can be reputationally beneficial through showing corporate social responsibility. For governments, wider financial inclusion can uplift gross domestic product, reduce the circulation of counterfeit money and even help to control inflation. Lack of financial inclusion impacts both developed and developing nations, and the responsible provision of digital financial services to manage this challenge can lead to efficiency and stability in the world economy.

As a cyber security professional working for a financial services provider, I have a responsibility to protect the confidentiality, integrity and availability of digital financial services (Jibril et al., 2020). Completing this role in a competent manner not only protects customers from potential risks, such as data breaches and lack of access to services, but it also improves the perception of banks as a trustworthy institution with which people can safely manage their finances. This trust built with consumers can enable wider use of digital financial services and is therefore likely to support wider financial inclusion amongst the population (Ozili, 2018). Examples of ways in which I can incorporate this responsibility to customers into my daily role include appropriately managing cyber security risks in line with internal processes and ensuring my skills remain up to date in line with the threat landscape (Deloitte, 2016). I have also encountered opportunities to step outside of my daily role in order to support customers. For example, I previously volunteered in bank branches, talking to customers directly about their security and fraud concerns in order to ensure they are equipped with the information they need to make secure decisions about their money and use of digital financial services.

In addition to my responsibility to both the actual and perceived security of consumer services, I have the opportunity to share my IT skills with the community through community initiatives, such as free digital skills training for the general public (Lloyds Banking Group, 2020). Those lacking digital skills, due to age or lack of access to technology for example, cannot reap the benefits of digital financial services as readily as other consumers and therefore digital inclusion is also key to avoid financial exclusion (Ozili, 2018). To compound these challenges, traditional in-person banking services are being actively reduced in favour of more efficient and cost effective digital options, leading to possible further financial exclusion. Ensuring digital inclusion is in the interest of the general public and is therefore core to professionalism according to codes of conduct applicable to IT professionals, including that of The Chartered Institute for IT (BCS, 2021).

Digital inclusion does not just cover access to technology and the accompanying skills, it can also come in the form of accessibility. Accessibility for vulnerable groups, such as senior citizens and those with disabilities, must be incorporated into the design and delivery of digital financial services to ensure even broader digital inclusion (Raja, 2016). This accessibility principle applies to end to end customer journeys and therefore includes the need for accessible security, such as authentication mechanisms compatible with assistive technologies. As a cyber security professional in financial services, I have a responsibility to ensure that the accessibility needs of the population are considered when designing security features, including ensuring customer acceptability testing is completed with a diverse customer group. Due consideration to accessibility ensures that digital services can act as an enabler for the disabled population as opposed to an additional obstacle.

Financial services in the UK are heavily regulated and there are regulations in place to cover various topics covered in this discussion, including privacy, underpinned by the EU’s General Data Protection Regulation (GDPR) and accessibility, underpinned by the Equality Act 2010 (UK Finance, 2018). Therefore, it is in the best interests of financial service providers to ensure these challenges are satisfactorily addressed to avoid associated financial penalties or sanctions. In addition, protecting the welfare of consumers can give a competitive edge to businesses providing financial services. Whilst a lot of the work I do is driven by regulatory and legal requirements for security, both regulations and legislation often fail to keep up with the sheer pace of technical innovation. Therefore, professionalism also entails understanding ethics and making sound decisions for customers in the absence of the regulation or legislation that will likely follow digital innovations (Miller et al., 2012).

In conclusion, digital financial services can bring significant benefit to underserved populations as well as the wider public if implemented and operated with due attention to the needs of the population. Furthermore, the benefits of both digital and financial inclusion extend far beyond the individual involved. It is clear that, as a cyber security professional in financial services, I have both responsibilities and additional opportunities to benefit the public interest through my general and specialist IT skills. Both the actual impact and perception of my actions can impact the public and I therefore have a responsibility to internalize professional and ethical guidelines in order to make ethical decisions in my computing career and beyond.

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