The Fourth Industrial Revolution (4IR) is reshaping local government through advanced technologies such as AI, IoT, and big data. These technologies enable more efficient service delivery, improved decision-making, and enhanced citizen engagement. Local governments can utilize smart city initiatives to manage resources better, optimize traffic, reduce energy use, and improve public safety. However, the transition poses challenges including significant investment requirements, the need for digital literacy, and concerns over privacy and security. Additionally, there's a risk of widening the digital divide between different demographic groups. Adapting to these changes requires local governments to innovate, collaborate, and prioritize inclusivity in their digital transformation strategies.

The Fourth Industrial Revolution is reshaping local government, especially with the advancement in Artificial Intelligence (AI) and Big Data. The implementation of these technologies will help to create a more efficient service delivery and improved decision-making, especially in Adult Social Care, which has an annual cost of £20.5bn in the UK (UK Parliament 2024) and is expected to grow exponentially with the challenge of an aging population. The introduction of AI in local government could help to address inequalities that exist, especially within Essex, where 123,000 people live in the 20% most deprived areas despite having low levels of deprivation as an average across the county (Essex County Council 2019).

However, there are concerns on the implementation of such technologies in the local government and the public sector. Huge investments costs are likely to be needed to achieve improvements in service delivery, a cost that is likely to be passed onto the taxpayer. Furthermore, the ethics behind using AI and Big Data is extremely important, particularly when it comes to using sensitive personal information in local government. Transparency and Explainability between the council and the public is vital, whilst avoiding biasness in the data to achieve fairness and inclusivity.

UK Parliament (2024) ‘Funding for adult social care in England’ Available at: <https://commonslibrary.parliament.uk/research-briefings/cbp-7903/#:~:text=In%202022%2F23%2C%20local%20authorities,care%20(net%20current%20expenditure)>. [Accessed on: 11th May 2024]

Essex County Council (2019) ‘Indices of Multiple Deprivation 2019’ Available at: <https://cmis.essex.gov.uk/essexcmis5/Document.ashx?czJKcaeAi5tUFL1DTL2UE4zNRBcoShgo=5azu9GA4lYYXqmgLLgSHGVrjb%2F9k4X1b1ASspI5mcrYSES%2Fl32goyw%3D%3D&rUzwRPf%2BZ3zd4E7Ikn8Lyw%3D%3D=pwRE6AGJFLDNlh225F5QMaQWCtPHwdhUfCZ%2FLUQzgA2uL5jNRG4jdQ%3D%3D&mCTIbCubSFfXsDGW9IXnlg%3D%3D=hFflUdN3100%3D&kCx1AnS9%2FpWZQ40DXFvdEw%3D%3D=hFflUdN3100%3D&uJovDxwdjMPoYv%2BAJvYtyA%3D%3D=ctNJFf55vVA%3D&FgPlIEJYlotS%2BYGoBi5olA%3D%3D=NHdURQburHA%3D&d9Qjj0ag1Pd993jsyOJqFvmyB7X0CSQK=ctNJFf55vVA%3D&WGewmoAfeNR9xqBux0r1Q8Za60lavYmz=ctNJFf55vVA%3D&WGewmoAfeNQ16B2MHuCpMRKZMwaG1PaO=ctNJFf55vVA%3D> [Accessed on: 11th May 2024]