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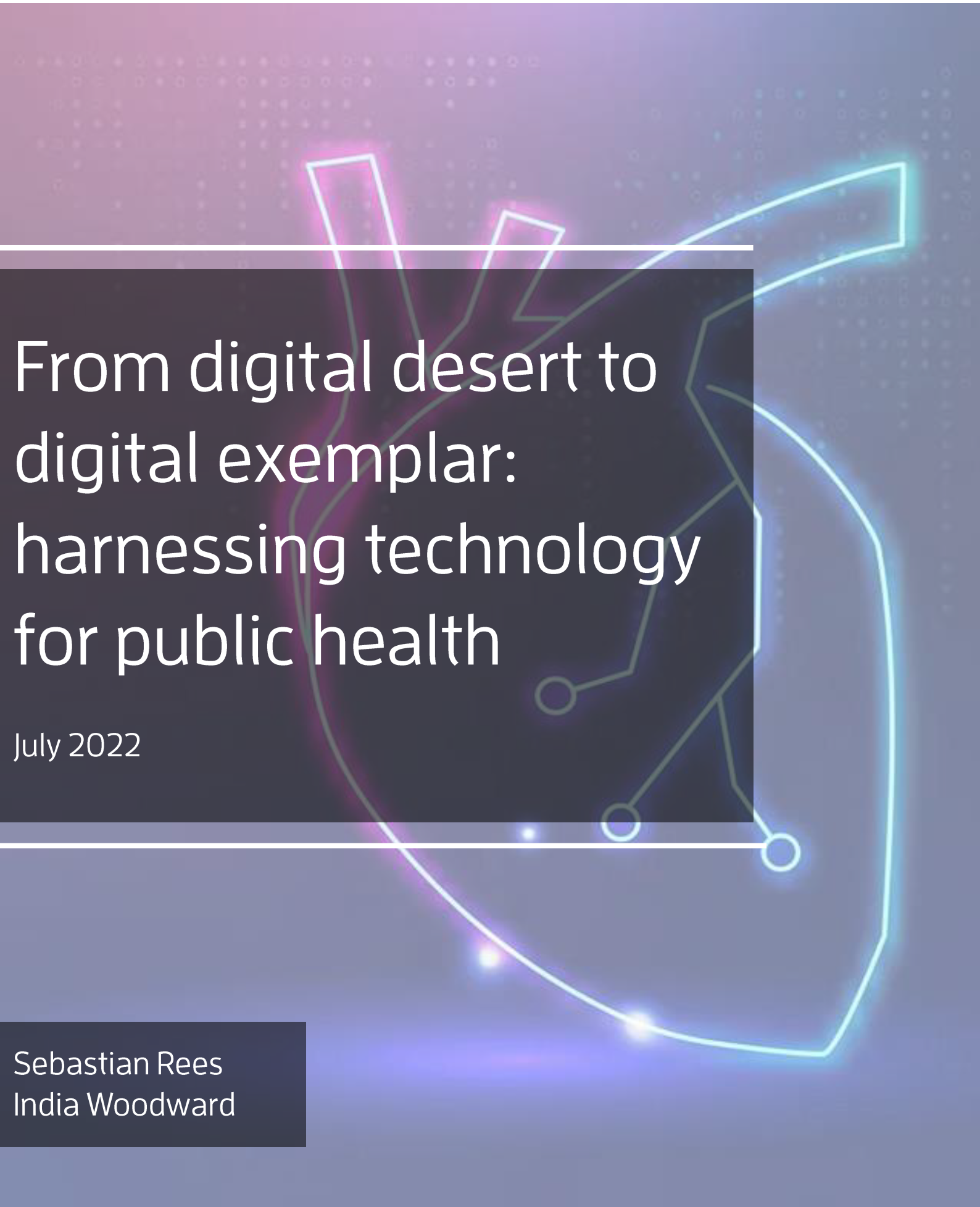

From digital desert to digital exemplar: harnessing technology for public health

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Reform was delighted to host a policy roundtable on harnessing technology to boost public health in July 2022, in partnership with Imperial College London's The Forum. The discussion was introduced by Professor John Newton, Director of Public Health analysis at the Office for Health Improvement and Disparities and Professor Jennifer Quint, Professor of Respiratory Epidemiology at Imperial College London.

A digital first approach to public health

Successive governments have sought to harness advances in technology to transform the delivery of health and care services. From digitising patient records to helping patients manage chronic conditions, the value of technology in modernising our health system is clear to see.

However, digital transformation has been slower to make its mark in public health. As the Government and the NHS look to tackle growing health inequalities, shift away from treatment and towards prevention, and reduce demand on acute health services, there are valuable opportunities to leverage the power of data and technology to meet these aims.

Successfully linking and utilising health data from a range of public sector organisations can help us better understand the drivers of ill health and develop more effective interventions to target them. It would also allow us to evaluate progress over time and thereby devote resources to areas where they will most effectively boost the health of the population.

COVID-19: A burning platform

Participants reflected on the fact that effectively using data and technology to address public health challenges had been a policy focus before COVID-19. Before its dissolution, Public Health England committed to a 'Digital First Strategy' and through its Fingertips platform made comprehensive public health data available. An "intelligent", digitally-enabled approach to public health was a key plank of the 2019 Prevention Green Paper.

However, the pandemic has significantly accelerated this agenda. In the first instance, the importance of collecting, sharing and utilising real time public health data came to the fore. This was exemplified by the Government's COVID-19 dashboard which allowed the public and policymakers to track the spread of infection, vaccination rates and pressures on the health system in their local area.

Secondly, the last two years have shone a spotlight on deep-rooted health inequalities and poor underlying population health which left us particularly vulnerable to COVID-19. This has stimulated a welcome policy focus on shifting our approach to public health and given increased prominence to the role that data and technology can play in this area.

Getting the basics right

In the coming decades, the digital public health agenda will be transformed by innovative modes of data collection and processing and new techniques such as genomic sequencing. But attendees reflected on the fact that the greatest

opportunities exist in using the wealth of data that already exists to greater effect.

Doing so requires a relentless focus on getting the basics right: ensuring that data is high quality and accessible and that organisations are able to share data effectively; building a highly skilled health informatics workforce, particularly in local government; and establishing public trust in the use of data and technology.

High quality, accessible data

Having access to high-quality, secure data is the chief enabler of an effective digital public health strategy. The UK already possesses a wealth of high-quality health data, but there remain significant opportunities in this area. Attendees pointed towards the disparity between England's thorough approach to infectious disease surveillance and its less comprehensive monitoring of non-communicable diseases which make up the vast majority of the disease burden.

Attendees also argued that our understanding of health inequalities has been held back by poor data on ethnicity in the health system. Incomplete coding, inconsistent use of codes and systematic biases in data quality makes understanding links between ethnicity, health care utilisation and population health challenging.

Effective data sharing between organisations also remains a core challenge in the health system. This is particularly true when it comes to sharing data between the NHS and local authorities. Attendees argued that confidentiality and security were rightly key principles underpinning health data. However, unnecessary bureaucratic hurdles relating to access permission and linkage are hindering legitimate and high-value data sharing.

While progress is being made in speeding up data access through Trusted Research Environments (TREs), data linkage remains largely restricted to NHS organisations. Further, while TREs play a useful role in making data available to academic researchers for the purpose of evaluation, they do not provide real time insights to public health practitioners.

Directors of Public Health often express frustration at the fact that relevant data on hospital episodes, mortality and morbidity, and immunisation and screening rates are difficult to extract from the NHS in real time. Developing Trusted Practice Environments where linked data can be shared between health care practitioners and their counterparts in local authority public health teams should be a priority for government.

Building the workforce

Building a highly skilled informatics workforce is a critical requirement for making the most out of data and technology across our health system. The 2022 Goldacre review set out a roadmap for modernising and developing this workforce in the NHS, and attendees argued that formalising career pathways in this area would allow healthcare organisations to retain and nurture talent.

However, attendees raised important distributional questions about the health informatics workforce. Attendees argued that while the NHS had been relatively successful in building a data and digital workforce, insufficient attention had been paid to developing these capabilities in local authorities.

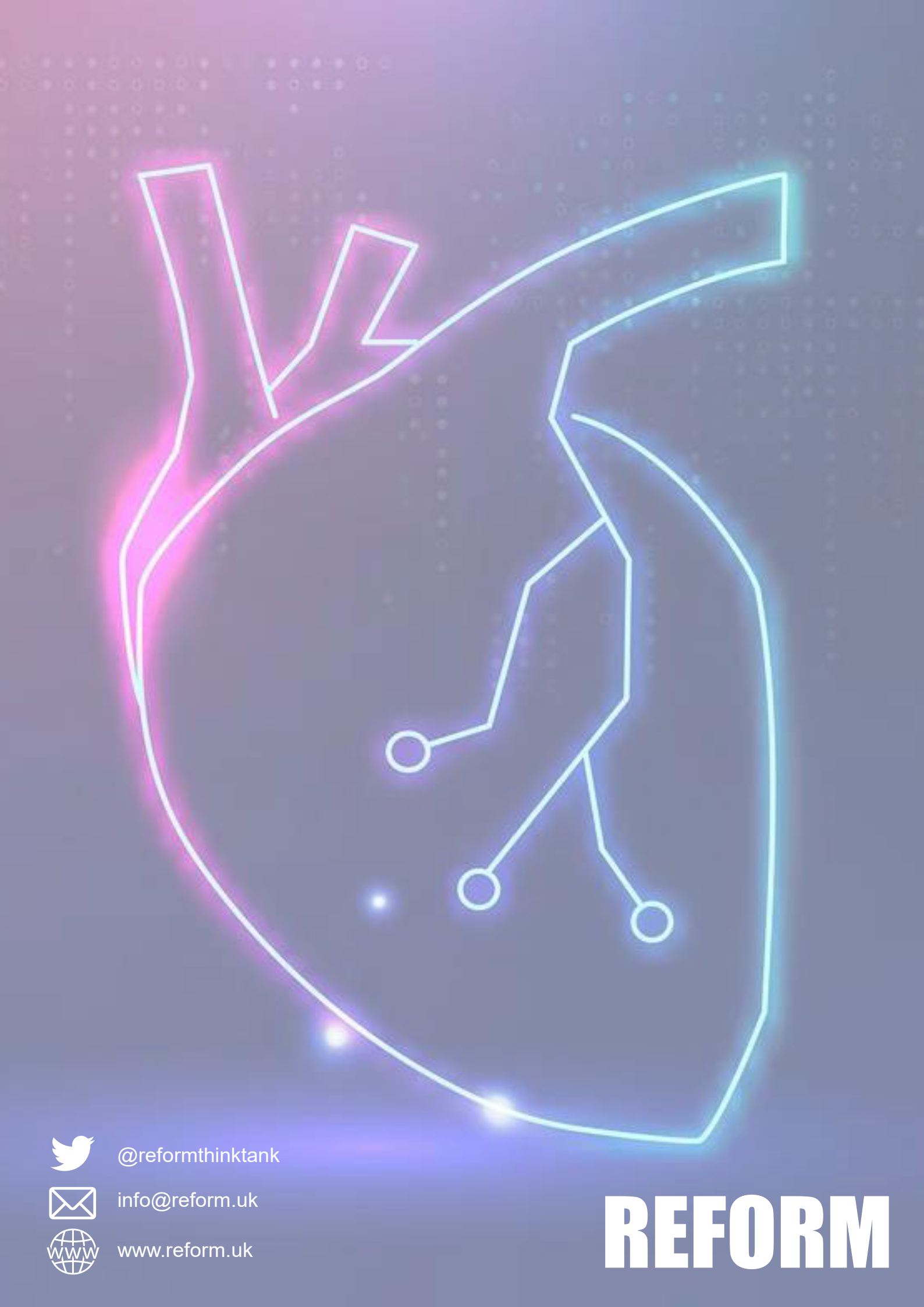
Given the crucial role that local government plays in tackling the drivers of ill health, this is a critical oversight and risks replicating the power imbalance that already exists in our health system between health care organisations and those responsible for tackling the social determinants of ill health.

Establishing Trust

A number of the barriers to realising the potential of digital innovation are technical in nature – from developing appropriate tools and applications to collecting and coding data at pace and scale.

However, building trust with the public over data security, confidentiality and appropriate usage is just as important. Attendees argued that poor public communication on proposals to share data had undermined progress towards digital transformation.

Strengthening data security must be a key long-term focus of healthcare organisations and their partners in central and local Government. Policymakers must ensure transparency in data collection, and utilisation, and focus on engaging the public before embarking on digital transformation projects. This will enable the buy-in necessary to build a cross-cutting approach to public health.



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