



Co-Creating a City-Scale Digital Strategy and Framework: A Systems and Co-production Approach

Benefits to national government, local governments in cities, towns, counties and combined authorities, public and private sector digital/technology/information officers, 'Smart' and 'Digital' city consultants, infrastructure owners and operators, local enterprise partnerships

"When focused on facilitating positive experiences that are city-led, applied technology can produce better social outcomes and inclusive growth. As long as people are at the heart of the solution, digital technology has the potential to address intractable challenges within the city"
- Marvin Rees, Mayor of Bristol, 12 September 2019.

Summary

Digital technologies have the potential to unlock major social and economic change for the World's rapidly growing urban populations, creating value through more liveable, healthy and environmentally sustainable cities. However, this can only happen if city leaders are empowered to make intelligent and informed strategic choices governing how digital systems are commissioned, installed and operated. This pilot study has investigated how collaborations between public authorities, private business and other city stakeholders may be used to enhance and share the benefits of digital transformation across UK towns and cities. Through a mix of interviews, workshops, and attendance at working group meetings, we've investigated how government in the UK's cities, towns and counties are planning for digital transformation and the challenges they face.

Key Findings

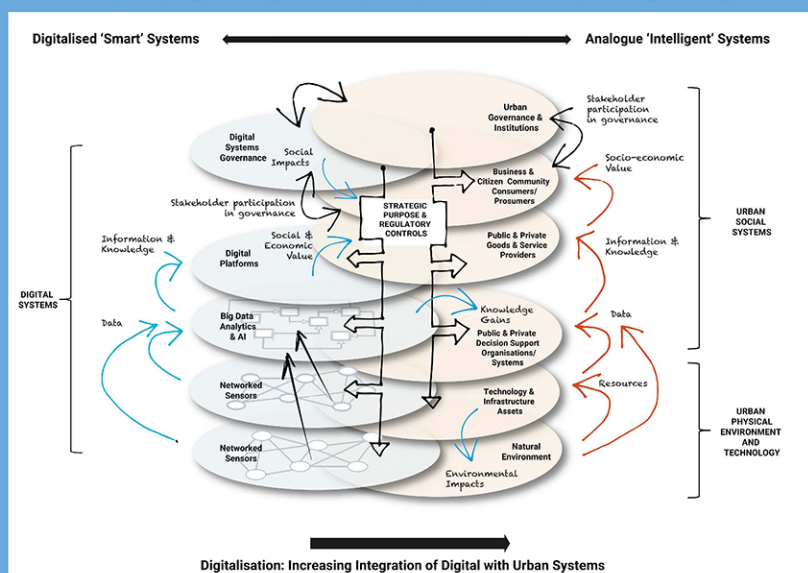
- Co-creation of digital strategies: effective digitalisation strategies emerge from strong, engaged local networks including public-private partnerships and community groups.
- Conceptual framework for digital transformation: digitalisation requires layers of sensors, data analytics, digital platforms and governance to be integrated with existing 'analogue' city systems. Opportunities to create value and manage risks arise at the interfaces between layers. Successful digitalisation requires a balanced progress across all layers.
- Maturity models indicate strategic planning is evolving, with significant variations in capacity and organisational readiness of local authorities to lead and shape digitalisation
- Long-term, spatial transformation of UK cities and towns: as 'smart' technologies are scaled, digitalisation will transform the social and physical organisation of towns, cities and rural areas. Business models that prioritise digitalisation of areas with only the highest commercial returns risk 'cherry-picking' and entrenching socio-economic inequalities.
- Privacy, security, public acceptance and trust: not just issues of regulatory compliance, but are a strategic challenge when setting service levels, accessibility and digital inclusion. A related challenge is to deliver 'socially responsible' innovation to cities and towns.
- Sharing digitalisation gains: a new 'digital social contract' could be developed that balances the rights of technology businesses to profit from digitalisation, with the need to develop digital public goods, e.g. open data portals, new digital governance and sensor networks.
- Challenges local authorities face include: 1) public sector deficit in digital skills; 2) gaps in science and data adversely impacting trusted leadership; 3) weaknesses in capacity of public-private leadership networks to co-create a shared vision tailored to local needs, assets and opportunities; and additionally 4) insufficient access to investment and technologies outside major cities.

Next Steps

- Develop toolsets to support and integrate digital planning into programme management and operational activities, including coproduction skills.
- Investigate potential for more formalised research, learning and knowledge-sharing institutions and practices, focussed on provision in follower towns, counties and rural areas.
- Investigate policy options around concept of a new 'digital social contract' between private enterprise, public authorities and citizens.

Impact and Value

- Improved understanding of challenge areas and barriers Local Authorities face to planning and co-leading on the digitalisation of cities and towns;
- Creating more liveable and sustainable urban areas by aligning digitalisation with community needs at all scales from city to local neighbourhoods;
- Opportunities to harness and realise socio-economic and environmental benefits of digitalisation, including human health and well-being and planetary health;
- Increased public trust and confidence in digital transformations through co-produced strategies.



Long-term Vision

- Digitalisation of urban areas is challenge-led, focused on citizen and planetary health needs.
- Cities and town authorities have developed and trusted digital governance.
- A 'digital social contract' balances rights of businesses to profit from digital technologies with need to resource digital public goods.
- Digitalisation and technology adoption is integral to city-wide strategic planning and supported by 'living laboratory' approaches and city testbeds.
- Developed networks within urban areas facilitate collaborative innovation between businesses, public sector, citizen groups and communities.
- Strong city-to-city and city-to-town networks facilitate knowledge exchange on digital transformation and sharing of innovation risks.

Research Acknowledgements

Freyja Lockwood (Bristol City Council), Julie Snell (CEO, Bristol is Open), Dr Neil Carhart, Dr Helen Manchester and Dr Lyndsay Grant (Co-Investigators, University of Bristol)