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# digital transformation and planning

**Peter Jones** and the late **Daphne Comfort** look at some of the initiatives driving the digital transformation of planning and reflect on the development of a digital planning system

The stellar attraction of the digital technologies that are reshaping large swathes of economic and social life seems to be drawing planning into its orbit. Future Cities Catapult, part of the UK government's innovation and research application arrangements (recently relaunched, in combination with the Transport Systems Catapult, as the Connected Places Catapult), has argued that 'over the past decade, digital technologies have transformed the way that people live, work and play – and yet, over the same period, the planning system has remained relatively unchanged', and that 'planners are using 19th century governance, and 20th century tools to tackle 21st century problems'.<sup>1</sup> It has further claimed that 'the current tools and processes used for planning are cumbersome and out of date', that 'making decisions is a time consuming, costly and error strewn process', and that 'at the moment there is no single repository for information, and no convenient or timely way to gain an overview of a site'.<sup>2</sup>

In the *Planning for the Future* White Paper the government emphasised that it would be 'harnessing digital technology to make it much easier to access and understand information about specific planning proposals'.<sup>3</sup>

This article examines some of the initiatives driving the digital transformation of planning and offers some reflections on the development of a digital planning system.

## Digital transformation

Digital transformation is the adoption of digital technologies, replacing analogue or manual processes. While digital transformation may have become a buzz-phrase in recent years, Menear<sup>4</sup> suggests that its origins date back to the first half of the 20th century, and Schallmo and Williams<sup>5</sup> claim that the idea of digital products and services was well understood in retailing and advertising from the 1990s onwards. At the general level, digital transformation involves the integration of digital technologies in all areas of an organisation's activities, and it is widely seen to have the potential to revolutionise the way that the organisation

operates and delivers services and value to its customers and clients. Digitised information is also seen as making established ways of working simpler and more efficient.

However, digital transformation involves cultural as well as technological change. Indeed, Tabrizi *et al.* go as far as to claim that 'digital transformation is not about technology' and that 'if people lack the right mindset to change and the current organizational practices are flawed, [digital transformation] will simply magnify those flaws'.<sup>6</sup> Media group CMS Wire has argued that 'the reality [...] is that digital transformation isn't about software or technology – it's about organizational adaptability. To keep pace with the change driven by digital transformation, organizations must be agile and adaptable, and organizational culture is crucial to the success of any digital initiative'.<sup>7</sup>

## Digital planning initiatives

When first issued, nearly a decade ago in 2012, England's National Policy Planning Framework (NPPF) made no reference to digitisation, although in the 2019 revised NPPF it was suggested that plans should be 'accessible through the use of digital tools to assist public involvement and policy presentation'. That said, a number of digital planning initiatives have emerged in recent years.

In 2016 Future Cities Catapult published a report on the future of planning<sup>8</sup> which explored how design, data and digital tools could update the way that planning is conducted, and drew on illustrative case studies of the successful introduction of digital innovations in Bristol, Plymouth, and Newcastle upon Tyne. In the same year, in calling for government investment 'to prototype the planning system of the future', Future Cities Catapult argued that 'big data, artificial intelligence, and visualisation are transforming the way that people process and interpret information', but that 'the methods used by many cities to plan new developments creak with age and smack of desperate inefficiency'.<sup>9</sup>

In 2019 the organisation reported<sup>10</sup> that it had been looking into how digital technology might

improve the planning system since 2016, and that such work had enabled it to create 'a detailed vision [...] of what a fully digitised end-to-end planning system might look like'. It suggested that there were 'five critical elements' to making such a system a working reality, namely:

- creating a digital standard for planning applications;
- creating machine-readable planning policies;
- linking planning policies to their evidence base;
- automating the development management process; and
- validating planning assumptions and measuring impact.

In looking to create a single digital standard for planning applications, for example, Future Cities Catapult emphasised<sup>10</sup> that the 450,000 planning applications made each year, along with their accompanying drawings, tables and analysis, could be submitted directly into a national and accessible-to-all digital database. In advocating the automation of the development management process, the organisation argued that local planning authorities are burdened with 'low-value, resource-intensive tasks, from validating planning applications to collating consultation comments and filing decision notices', but that many of such tasks could 'be designed out or fully automated'. It emphasised the need to address each of the five critical areas 'so we can quickly start evolving our slow, alienating and overly politicised planning system into one that is more agile, transparent and certain, and, most importantly, delivers better homes and infrastructure where most needed'.

In 2018, the Ministry of Housing, Communities and Local Government launched a Digital Land Policy team, with the aim of leading the creation of 'a data-led, digitally enabled' planning system, in the belief that 'greater access to land, planning and housing data, along with modern digital tools will enable a more productive planning and housing system'.<sup>11</sup> In looking to work towards the 'digital transformation of the planning system', the team has focused on, among other things, 'treating planning applications as data rather than documents', 'transforming planning notices', and 'planning back office software'.<sup>12</sup>

In making the case for digital transformation, the *Planning for the Future White Paper*<sup>3</sup> effectively claimed that the existing planning system was no longer fit for purpose, and promised 'a radical digital-first approach to modernise the planning process', and asserted that 'this means moving from a process based on documents to a process driven by data'. Typically, the White Paper emphasised that 'the COVID-19 pandemic has highlighted the need for modern digital planning services that can be accessed from home'.

In June 2021, Housing Minister Christopher Pincher announced a £1.1 million fund to test the

use of digital tools and data standards across a number of local authorities, including Birmingham City Council, the London Borough of Hounslow, Ashford Borough Council, and East Suffolk Council.<sup>13</sup> The focus is on local authorities using the fund to implement a pathfinder programme to test the use of digital tools in the planning process and to examine how such tools can be employed to make planning proposals more accessible and interactive.

While the Westminster government seems set on a digital future for planning, initial changes in planning policies for England announced in 2020 and 2021 made only limited reference to digital transformation, and here Scotland seems ahead of the game. In November 2020, the Scottish government issued *Transforming Places Together: Scotland's Digital Strategy for Planning*,<sup>14</sup> which argued that 'we need to do things differently, to look at how technology and data can help us make the best use of our resources, delivering a streamlined, efficient and high-performing planning system'. The strategy's vision is 'for Scotland to have a world leading digital planning system that helps people connect with their places to deliver a prosperous, green and fair country'.

The claim is that the digital transformation of planning in Scotland will generate a wide range of benefits for central and local government and public sector organisations, for citizens and communities, and for business and industry. A benefits case study of 'green Scotland, environment and climate change', for example, argues that 'digital transformation, through cloud hosting which enables significantly more place-focused data, [...] has the potential to significantly improve the evidence base available to planners to promote good planning that supports sustainable development'.<sup>14</sup> In a similar vein, a benefits case study of prosperity and economic growth claims digital transformation will bring more productive land use, increased land values, and the better matching of employment land to sector needs.

## Reflections

Within England, central government's enthusiasm to digitally transform the planning system will lead local planning authorities to try to adopt a more digital approach to both plan-making and development control over the coming years. However, a number of issues merit reflection and discussion.

First, in many ways the digital drivers can be seen as more about the role of planning in increasing the housing stock rather than about planning per se, or about tackling a wide range of land use and environmental issues. On many occasions, making it easier for a housebuilding companies, both large and small, is cited as part of the rationale for adopting a digital planning system and in suggesting the benefits that such a system will deliver.

Secondly, the Planning White Paper argued that digital transformation of planning will play an



**Central government's enthusiasm for a digitally transformed planning system is not without some significant issues**

important role in making the planning process more democratic, and that it will increase the currently very low levels of civic engagement with Local Plans and make it easier for people to understand planning proposals and visualise their impact. However, the continuing digital divide, defined as the gap between those who have good access to the internet and those who have no, or at best limited, access, seems likely to pose a continuing challenge to digitally enhanced public engagement. Here, digital exclusion still exhibits a marked urban-rural contrast, reflecting the difficulties in providing good connectivity in upland terrain and the unattractive economics of provision for sparsely distributed populations in rural areas. Furthermore, socio-economic factors also affect access to the internet, with lower-income households generally having lower levels of – and poorer quality – access.

At the same time, the desire to create a single, standard format for planning applications may also pose a challenge to local democracy, in that it seems more in tune with a desire to bring planning under a more centralised national framework; and it certainly stands in sharp contrast to the comparative localisation of responsibility for planning in England under the Labour government between 1997 and 2010. While some commentators argued that localised planning would deliver agreement around local decisions, Gallent has warned that 'without investment, in mediation the planning process will continue to serve a dominant set of (private) interests and leave others – outside the dominant set – feeling disenfranchised'.<sup>15</sup> At the present time, the digital standardisation of planning applications will strike a powerful chord with housebuilding companies, which are continuing to digitise their own business operations, but there are concerns that it may serve the interests of the housing industry and of central government more than those of the general public.

Thirdly, the move to a digital planning system has a number of implications for local planning authorities – and here the financial and professional resource implications loom large. On the one hand, in Scotland it is estimated that digital transformation

will generate estimated savings of up to £20 million. The Planning White Paper suggested that digital innovation will reduce English local planning authorities' costs, but did not estimate the scale of such savings. On the other hand, past experience of change within local authorities suggests that the digital transformation of the planning system, initially at least, will generate additional costs for planning authorities, who have been facing spending cuts for some years, which could potentially delay implementation.

However, the White Paper argued that 'the cost of operating the new planning system should be principally funded by the beneficiaries of planning gain – landowners and developers – rather than the local or national taxpayer'.<sup>3</sup> As part of the continuing 'commercialisation in local authority planning',<sup>16</sup> this might be seen to call into question the role of planning system in promoting general public, rather than specific private, interests. At the same time, and more practically, it also remains to be seen whether local planning authorities will have the financial resources to attract the professional expertise needed to rise to the challenge that the digital transformation will pose for the operation of the planning system.

Fourthly, there are issues relating to sustainable development. The White Paper re-iterated that 'the achievement of sustainable development is an existing and well-understood basis for the planning system, and we propose that it should be retained'.<sup>3</sup> However, digital technologies present a number of environmental problems – including carbon dioxide emissions from data centres and the networking equipment used to drive the digital technologies, and the environmental impacts associated with the mining of rare earth minerals required in many digital devices and the disposal of electronic waste.

At the same time, Cowie *et al.* have suggested that, while the current criteria used to determine sustainability were relatively transparent and open to challenge, 'with the digitization of the planning system it is highly likely that these criteria for judging sustainability will become hidden within black-box planning decision systems, often developed by third

party providers and therefore protected from scrutiny by intellectual property rights'.<sup>17</sup>

Finally, there are more general arguments, grounded in radical political economy, which seek to expose the continuing concentration of power within society driven by digital transformation. Prainsack, for example, has argued that 'digital data is becoming an increasingly important element in the production of knowledge, wealth and power', and raised the spectre of such data being harnessed to 'increase power and profits for the privileged', rather than looking to ensure that 'digital data contributes to justice and the wellbeing of people and societies'.<sup>18</sup> Some of the issues raised earlier, including the aim of increasing the housing stock, making the planning process more democratic, and a single, standard format for planning applications, all seem to reflect deeper political concerns about the digital transformation of the planning system.

## Conclusion

The practice of, and the political context for, town and country planning in the UK has changed considerably since the basis for the current system was formally introduced in 1947, but the move towards a digital planning system perhaps heralds a major new change in both the practice and the outcomes of planning. Planners in local authorities and private practice will play a major part in driving that change, but they will also need to maintain a monitoring brief not only on its impact, but also on if, and how, it is changing the nature of the planning system.

On a final, personal level, big data, artificial intelligence, visualisation, and the digital transformation of the planning system seems a long way away from the paper-based 'Development Information Folders' that one of the authors used to file when working in Lancashire County Council's Divisional Planning Office in Ormskirk, back in the early 1970s. Nostalgia ain't what it used to be!

● **Peter Jones** works in association with the School of Business at the University of Gloucestershire, as did the late **Daphne Comfort**. The views expressed are personal.

## Notes

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