[School] UCL Institute for Digital Innovation in the Built Environment

[Byline] Dr Claire McAndrew & Professor Tim Broyd

[Bio] Dr Claire McAndrew is Director of Research at the UCL Institute for Digital Innovation in the Built Environment. Professor Tim Broyd is Director of the UCL Institute for Digital Innovation in the Built Environment and President of the Institution of Civil Engineers 2016/17. @UCL_iDIBE

[Headline] Welcome to the post-digital city

[Standfirst] The newly-formed UCL Institute for Digital Innovation in the Built Environment operates at the interface of digital engineering, computer science and human experience.

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'Post -screen' or even 'post -platform' are often cast as hallmarks of a near-future that might be described in its entirety as 'post-digital'. That's not an antagonistic position – not 'anti-digital' – but rather envisions a time where technology is so deeply interwoven within the architectural fabric and our practice in design, engineering and construction that flickers of digital nothingness are sensed more acutely than its being (Negroponte, 1998). It speaks to a future where the building blocks (or bits) of the city are designed with social product in mind.

Nicholas Negroponte alluded to some of these qualities in a thought-piece for *Wired* back in 1998. Pre-dated, of course, by his 1970 book *The Architecture Machine*, which bore the tagline 'Toward a more humane environment'. The closing chapter of his *Soft Architecture Machines* published five years later imagined computers as more than aids for architects and urban planners with which to design buildings – but as part of architectural form itself. Today, we sit on the cusp of such trailblazing possibilities.

The UCL Institute for Digital Innovation in the Built Environment was established in 2016 at a time when provocative ideas around the design and use of new technologies are starting to shape not only the way the built environment is created, sustained and managed, but how it is experienced. Drawing on digital advances such as Building Information Modelling (BIM), smart cities, big data and the Internet of Things, we are dedicated to improving process and cost-efficiencies, promoting sustainable futures and enabling social and cultural transformations.

As this digital landscape starts to extend beyond the screen, the sentient potential entrenched in everyday objects and even materials for fabrication, looks set to present radical opportunities for change in the city. At the UCL Institute for Digital Innovation in the Built Environment, we are leading the charge: interrogating digital innovation as it strives to enhance the design, construction, operation and experience of buildings, systems and cities.

These shifts look set to disrupt not only our built environment as it is lived, but how it is practiced. Our new postgraduate taught programmes in development, embody this commitment to a collaborative and integrated digital future. Designed to move beyond digital silos in architecture, construction, engineering, asset and facilities management, they will offer a more integrated process of practice.

This could not be more timely given the UK government's recent announcement of the melding together of their smart cities and BIM programmes into Digital Built Britain. Professor Tim Broyd's role as President of the Institution of Civil Engineers in 2016/17 provides further signal of the city's evolving digital relationship. The UCL Institute for Digital Innovation in the Built Environment is committed to finding progressive, forward-thinking solutions to how we can engineer a digital future that transforms people's lives and brings economic prosperity.

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