"A democracy of our own devices"? Cultivating the role of citizen participation and open governance in the civic development of the Internet of Things.

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Abstract. Phil Howard (2015) argues that we need purposeful civic engagement with government and businesses developing the Internet of Things (IoT), to help build what he terms 'a democracy of our own devices' (2015). Based on an eighteen-month ethnographic study into IoT development in the UK, this paper argues that increasingly democratic forms of development are emerging through the many ways in which citizen engagement with experts, civil servants, consultants and business people are being cultivated within this setting. Central to this is the purposeful interconnection between positive, online political communication and concrete forms of participation, such as design workshops and direct access to prototype-technology. However, this paper cautions that despite many steps towards a more open or 'citizen-centred' approach towards IoT development, many doubts and uncertainties remain about its continual viability into the future, due to both existing organisational structures and the broader political consequences of 'Brexit', cyberwarfare, and rising populism that are affecting the UK Government.

This paper's empirical focus is on a government-funded connected and automated vehicle (CAV) public-trial project, and the supporting role of key government innovation organisations. Insider interviews with key personal, observations of public participation in action, and an analysis of media strategies and materials are used to support my theoretical claim: that the cultivation of citizen engagement with this project, and the government organisations behind it, be understood as forming 'democratised networks' within IoT development. Based upon contemporary approaches in Political Communication and Science and Technology Studies, and driven by the need for "more empirically valid understandings of the factors shaping the Internet" (Dutton, 2013), democratised networks are a conceptual understanding of power, and an empirical tool that describes how actors enact democratic forms of interaction distributed within situated, relational, and complex arrangements of political action. I argue the fluidity of this concept is an effective way of understanding the uncertain, but widely desirable, role of citizen participation and open governance in the civic development of the IoT. Moreover, the central focus on power-relations within this conceptualisation responds in particular to concern raised by Gaventa (2006) about the transformative potential of participatory spaces. Crucially, in this sense, it highlights how standardised IoT practices and applications are emerging, evolving and crystallising. Such developments are crucial in shaping the uncertain future of digital political communication, but must be as clearly understood as possible to assess the viability of 'citizen-centred' approaches to political interaction more generally.