

## Technology Futures Roadmap For Ageing Societies

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Ageing populations are driving a considerable and growing proportion of world economic activity. In 2020 estimated to generate nearly £11 trillion worth of economic activity<sup>2</sup>. There is considerable interest in this Longevity Economy, especially emerging digital technologies that would bring living 'longer' closer to living 'well'. While the promise of such technology is inspiring, research reveals that older people are rarely included and consulted in development, which is limiting and unethical. Instead, we must acknowledge the inherent duality of the ageing populations, with the majority of older people having diverse functional capacity, and only a minority being disabled. In the UK, 58% of people above state pension age have diverse functional capacity<sup>6,7</sup>, and 52% across the EU<sup>4</sup>. Acknowledging this inherent duality requires age-friendly design in the development of mainstream digital technologies<sup>9</sup>. So, moving beyond medical products at points of crisis to aspirational age inclusive design. However, this requires a better understanding of the relationship between emerging digital technologies and the current and future needs of older people. We therefore considered Technology Futures to better understand the potential of emerging digital technologies for preferable Ageing Societies. Specifically, age inclusivity through an enhancement model for the development of mainstream digital technologies<sup>8</sup>. So, offering enhancement for all ages with diverse functional capacity, which will also inherently provide support for those with differing ability resulting from age or disability. Furthermore, being part of the development of mainstream popular technology would ensure economies of scale, also widespread social acceptance of enabling-technologies, minimising the potential for stigmatisation. We then identified emerging digital technologies significant to the inherent duality of the Longevity Economy. We present this in the form of a Technology Futures Roadmap, based upon Gartner's Hype Cycle model<sup>5,10</sup>, sharing our understanding and insights of the emerging technology landscape for our future selves.

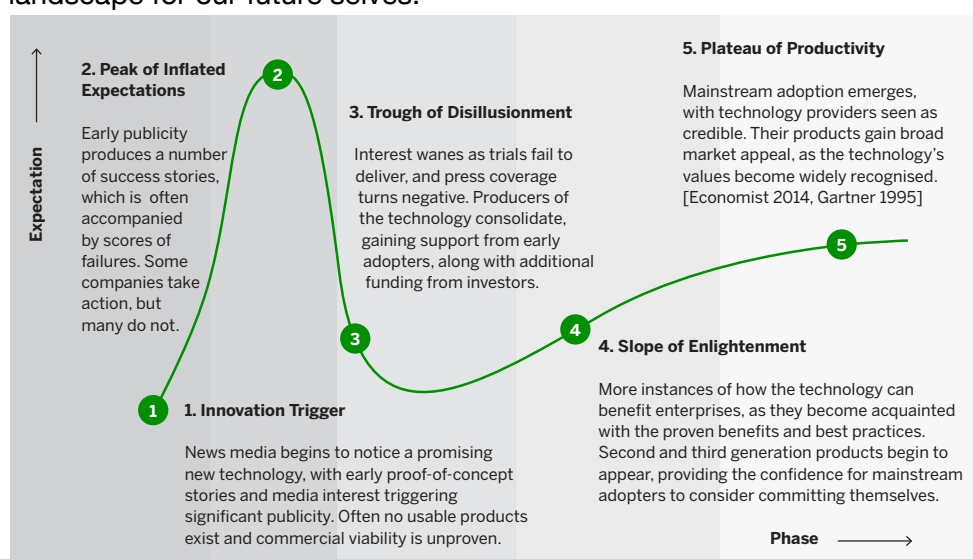


Figure 1. Hype Cycle Explainer<sup>3,5</sup>

### References:

- [1] Bresciani, S. and Eppler, M.J. (2008) Gartner's magic quadrant and hype cycle. Università della Svizzera italiana. Available at: [https://ssl.lu.usi.ch/entityws/Allegati/pdf\\_pub4063.pdf](https://ssl.lu.usi.ch/entityws/Allegati/pdf_pub4063.pdf).
- [2] Coughlin, J. (2017) The longevity economy: Unlocking the world's fastest-growing, most misunderstood market. Hachette.
- [3] Economist (2014) 'Divining reality from the hype'.
- [4] Eurostat (2019) Disability statistics - elderly needs for help or assistance.
- [5] Gartner (1995) Understanding Gartner's Hype Cycles. Gartner.com.
- [6] ONS (2013) 2011 census: Detailed characteristics for England and Wales.
- [7] ONS (2014) Disability prevalence estimates 2002/03 to 2011/12.
- [8] Parra, C. et al. (2014) 'Information technology for active ageing: A review of theory and practice', Foundations and Trends in Human-Computer Interaction, 7(4), pp. 351-448.
- [9] Rothwell, N. (2017) Harnessing technology to meet increasing care needs. Council For Science And Technology.
- [10] Steinert, M. and Leifer, L. (2010) 'Scrutinizing Gartner's hype cycle approach', in Picmet 2010 technology management for global economic growth. IEEE, pp. 1-13.

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