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**Purpose** A recognised digital divide exists between younger and older people in terms of their use of the internet and new digital technology. However, these average statistics mask a diversity of technology use in older people, many of whom use technology more than some younger people. Indeed, we believe there is an unrecognised digital divide within the older population, akin to the distinction between the younger-old and older-old in gerontology. At one end of the spectrum are digitally unengaged older people who seldom use the internet or the client devices that go with it, and at the other end are digitally engaged older people who use the internet frequently from a variety of devices. Discussions about inclusive design of technology for older people often gloss this distinction and focus instead on the provision of ‘assistance’ at the interface of conventional technologies designed for younger people. For example, they recommend help with the degrading effects of ageing on eyesight, manual dexterity, cognitive abilities and so on. In this paper, we argue for a more radical and positive approach to inclusive design which treats older people as a diverse market in their own right, and endeavours to include a diversity of older people themselves in a user-centred and participatory design process. **Method** We report two attempts to do this in Brazil and the UK in university research teams considering how to support aspects of memory using mobile apps running on smartphones or tablets. Each case study, illustrates the various techniques that can be used to engage a diversity of older users in the design process, and the issues that are thrown up by doing so. For example, in Brazil a combination of interview surveys, focus groups and a field trial was used to refine ideas for a note taking app called Eldernote, to help older people schedule events and remember to do things across a week. Certain, ‘assistive technology’ features such as large buttons and font size were used throughout, but the more important decisions were about functionality<sup>1,2</sup>. These were steered from user input. In the UK, a new co-design method was developed called Focusgroup+<sup>3</sup>, involving the re-design of a concept for a reminiscing app called MyStory. Re-design was done by digitally engaged and digitally disengaged older people in separate groups. **Results & Discussion** This resulted in the divergence of solutions for each group. Common challenges from both design exercises were to consider diversity in the recruitment of participants in design studies, to create opportunities for all voices to be heard, and to accommodate different design trajectories for different groups of older people. This last recommendation is perhaps the most challenging to current practice in inclusive design which usually seeks to simplify design-for-all. Our experience suggests that an alternative strategy of niche design-for-some may be required, whenever the diversity of skills and interests in a user population is so great that it needs to be segmented into different user groups.

### References

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