J.E.M.H. van Bronswijk, D.G. Bouwhuis, J.L. Fozard, H. Bouma. Gerontechnology's basics. Gerontechnology 2008; 7(2): 80. Gerontechnology as a defined scientific field has been known since the nineties of the last century[1]. It views technology as an indispensible environment for providing a good life up to a very high age. This includes options to fulfil ambitions of later life and the prevention of chronic disease, but also enhancement of weakened functions, assistive technologies and the support of care for individuals in their dwellings. Just like other multidisciplinary or interdisciplinary fields, gerontechnology as a scientific activity is in need of a sound theoretical and methodological founding, based on the relevant monodisciplines. In this study its basic outlook and monodisciplinary foundations are addressed. **Methods** The 5 volumes of the 'International Journal of Technology & Aging' (1988-1992), the first 6 volumes of 'Gerontechnology' quarterly journal (2001-2007)[2], and the abstracts and proceedings of the International Conferences in Eindhoven (1991), Helsinki (1996), Munich (1999), Miami (2002) and Nagoya (2005) were assessed to extract the basic characteristics of the domain in time. **Results and discussion** Technology to serve the aging society appears to be the broad aim of the gerontechnology domain[3]. In time it evolved from ergonomics for the 3rd age and assistive technology in the 4th age aiming at health only, to all technology serving health, comfort and interests of persons up to the highest age possible: successful aging in the broadest sense. Gerontechnology as an interdiscipline shows the common difficulty of all interdisciplinary and multidisciplinary endeavours: a low acceptance by the monodisciplines. Scientific foundation and applications have been summarized in 2 matrices, one showing the cross-fertilisation of gerontology and technology monodisciplines, and another one describing technology's impact on life domains. Scientific theories underpinning gerontechnology as a science are taken from physiology, medicine, psychology, social psychology and sociology on the one hand and technological disciplines including robotics, business managements and design on the other (*Table 1*). Unfortunately, studies taking the relevant theories into account are not yet widespread. Much of what has been published is still of the nature of case studies, even when relevant theories would have been helpful for the generalisation of the results. **Conclusion** Basic to gerontechnology is its outlook on the role of technology in the complete human life span from 1st to 4th age encompassing prevention as well as intervention, all directed at the ambitions and aspirations in the 3rd and 4th age. Research could benefit from a more intensive use of relevant theories from the constituting monodisciplines.

References

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Table 1 Basic theories of Gerontechnology

Monodiscipline	Theory
Business management	Targeted marketing
Design	Inclusive design
Medicine	Compressed morbidity
Physiology	Cells, tissues, organs
Psychology	Situated learning
	Temporal discount of benefits
Social psychology	Persuasive Technology
	Technology acceptance
Robotics	Biorobotics
Sociology	Technology generation
	The 4 ages of a life span