ZOOM

CARING TECHNOLOGY

King Baudouin Foundation
Working together for a better society

TECHNOLOGY FOR HEALTHCARE AND SUPPORT

It is impossible today to think of any healthcare or personal support that does not resort to technology. Think, for instance, about the sensors to prevent people falling, video-consultations, wearables that monitor the parameters of your body and the various applications used for your health and well-being.

Digital technology modifies both a person's healthcare and support as well as our behaviour and the manner in which healthcare professionals and the public communicate with each other.
All of these technological tools and support aids collect data about the user, patient or client. But who does what with the data collected in this way?

What about personal privacy? With which principles must the technological innovations of today and tomorrow comply? How can we anticipate and prepare for these developments, instead of simply sustaining one wave of technology after another?

The Fund Dr Daniël De Coninck and the King Baudouin Foundation assembled stakeholders from various horizons to consider the « Teckno 2030 » project. The participants developed a framework to be used for technologies relating to personal healthcare and support. Eight guiding principles form the basis of this framework: the Caring Technology Principles.
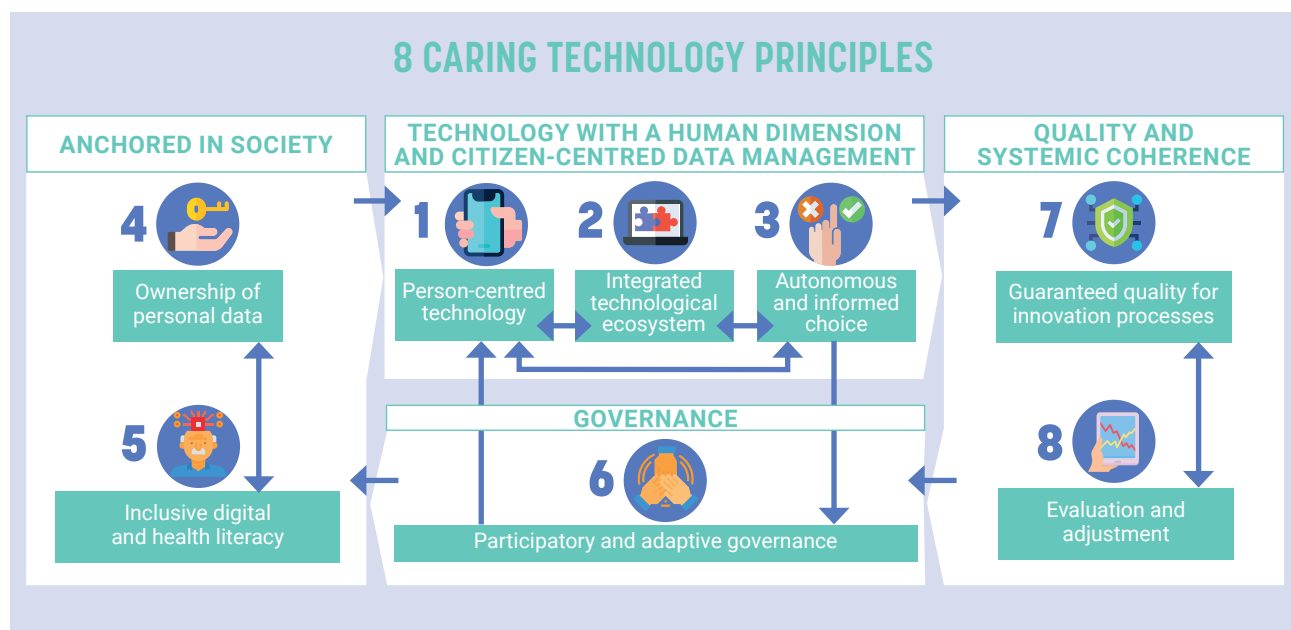

OVERVIEW

Eight guiding principles

The Teckno 2030 group has developed eight guiding principles for use in technological innovations aimed at improving health, well-being and day-to-day quality of life.

It is important that citizens, patients and clients can make autonomous choices about innovations in the field of health and personal support.

However, such autonomy stands or falls on the provision of

information that is honest, comprehensible and transparent. It is only when citizens and patients have ownership and custody of their personal data that they will have confidence in datascience and innovation in matters of health.

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8 CARING TECHNOLOGY PRINCIPLES

ANCHORED IN SOCIETY

4 Ownership of personal data

5 Inclusive digital and health literacy

TECHNOLOGY WITH A HUMAN DIMENSION AND CITIZEN-CENTRED DATA MANAGEMENT

1 Person-centred technology

2 Integrated technological ecosystem

3 Autonomous and informed choice

GOVERNANCE

6 Participatory and adaptive governance

QUALITY AND SYSTEMIC COHERENCE

7 Guaranteed quality for innovation processes

8 Evaluation and adjustment

FUTURE SCENARIOS AS STEPPING STONES TO THE GUIDING PRINCIPLES

During the Teckno 2030 project, **exploring the future** was used as the methodology to develop the eight guidelines for caring technology. This technique enables participants in a discussion to go beyond current limits and to develop ideas about consequences related to today's political choices for society.

Participants were asked to describe **four possible worlds in the year 2030** and to explore, with unfettered imagination and creativity, the role of technology in supportive care in these worlds. The task was not one of imagining a desired future, but rather of examining what was plausible and relevant.

FOUR PLAUSIBLE FUTURES WITH TECHNOLOGY FOR CARE AND SUPPORT

Common (concerted) societal objectives – Public interest ("common good")

STAYING HEALTHY IS THE NEW 'NORMAL'
Our world has seen the balance between curative healthcare and **preventative care** turned upside down. Digital, data-based technology, is now enabling individual and collective adjustments to be made through education and coaching, but also by 'nudging', a subtle means of developing people's behaviour towards a healthy and protective lifestyle.

People have few problems with this because they are somewhat passive and, in their eyes, **technology is a 'black box'**, about which they understand very little. Their lives are spent mainly in supportive residential neighbourhoods and blocks, where they find it agreeable to live.

BETTER AGEING FOR HEALTHY LIVING AND DYING (BEAGL)
Data, algorithms and technology are considered to be a **public good**. With maximal accessibility, they are shared in a transparent manner, for everyone's benefit. Open source is obvious, our **privacy is a thing of the past**. Technology and innovation answer real needs and serve the common good.

However, everything can be improved. This is why BEAGL is a **society of learning**. Political choices are refined thanks to new knowledge and a progressive vision. **Citizens participate** in every level of decision-taking. People are eager to learn because they want to make informed choices. Everyone feels to be in the same boat and is willing to take the helm.

Passive citizens Submissive, resigned, technology a "black box"

Active citizens Empowering, participatory, technology as a "dashboard"

Personal objectives (individualism, corporatism)

DOMINOS, OR SOMETHING LIKE THAT...
Individuality predominates, but the people are not very active and have no power. And **government is absent**. Healthcare has been privatised. Insurance companies have become partners with data companies and commercial service providers. These powerful conglomerates are constantly launching new technological products destined for health and well-being, but what they offer only partially meets people's real needs. Large private stakeholders monopolise the market ... and day-to-day life.

Citizens are above all considered as consumers, even in the fields of health and care. Technology and data exploitation deepen the **health gap**. Those who have digital skills hold their own, whilst those who are vulnerable and stumble find it difficult to get back on their feet.

DAR-WIN OR LOSE
'**The winner takes all**' could well be the mantra for this society. In our hyper-connected world, driven by technological innovation, a new type of capital has emerged: **data have become a new currency** and a **personal asset**. Citizens who are aware of this and well-informed do not shy away from commercialising their data.

However, this world is not without a certain form of solidarity. It manifests itself at micro level (**micro-solidarity**) and is supported by crowd funding and loans. People who have common needs or skills make themselves known and contact each other through global networks and communication platforms. They take initiatives themselves and **work to find solutions** that meet their needs or the needs of others. Even though not everyone has the soul of a technician, people know how to introduce technological innovations into their lives.

EIGHT EFFECTIVENESS PRINCIPLES

Wherever technology is used to improve people's health-related quality of life in their daily lives and their wellbeing, the effectiveness principles set out below can offer guidance on how we should act:

PROMOTE HUMANE TECHNOLOGY AND CITIZEN-CENTRED DATA MANAGEMENT

1 Ensure that the role of technology and use of data always facilitate and support people and that they remain at the service of people and society. Maximise opportunities for citizens to make their own decisions based on their care needs, support requirements and health-related wishes.

2 Encourage ongoing collaboration among all the actors involved, through the creation of an integrated technological ecosystem in which interoperability, standardised protocols and open-source (basic) technology are all self-evident. Support patients and citizens to allow them to participate optimally in the development and adoption of this ecosystem.

3 Provide honest, reliable, transparent and easily understandable information about innovations in care and health. Make sure people are able to make choices in a truly informed and independent way (true consent) by objectively representing the usefulness, scope, pros and cons of innovations so that people can have confidence in the products they choose.

ANCHORED IN SOCIETY

4 Improve trust between people and organisations in regard to the use of data and data-driven innovations, by allowing them to have ownership of their own data. Support citizens to share these data safely and use it to leverage their own personal well-being and promote the public interest.

5 Promote technological literacy, health skills and participation among all citizens. Make lifelong learning for all a goal. Ensure that no-one is left behind, including vulnerable and underprivileged people and those needing special attention. Innovation should be focused on reducing both the digital gap and the health gap rather than further widening them.

STIMULATE PARTICIPATORY GOVERNANCE

6 Develop participative and adaptive governance for the innovation system. Encourage citizens and stakeholders to participate actively in this. Make flexible but effective adjustments to policy on the basis of new data, experience, evidence and growing expertise.

CONTROL QUALITY AND SYSTEMIC COHERENCE

7 Develop quality assurance systems for the whole innovation trajectory, i.e. cover the periods before, during and after the development and deployment of technology and the use of data. There must be controls on the content, safety, transparency of information, and on its traceability, usefulness and effectiveness. Knowledge gained through experience must have a place alongside scientific evidence. Introduce quality labels to communicate the results of these controls and assessments.

8 Monitor and evaluate to ensure that the actions taken remain coherent with health and care goals within wider frameworks of prevention, ethics and sustainability. Integrate sustainability objectives and appropriate ethical principles (e.g. human rights) in the innovation growth pathway.

"People must be able to make well-informed and autonomous decisions about data sharing. (...) This will call for a new type of collaboration, an innovative ecosystem with an adapted policy and the participation of all the stakeholders, including patients and citizens."
KBF, VITO, VPP, Domus Medica and Zorgnet-Icuro in a joint op-ed on VRT NWS.
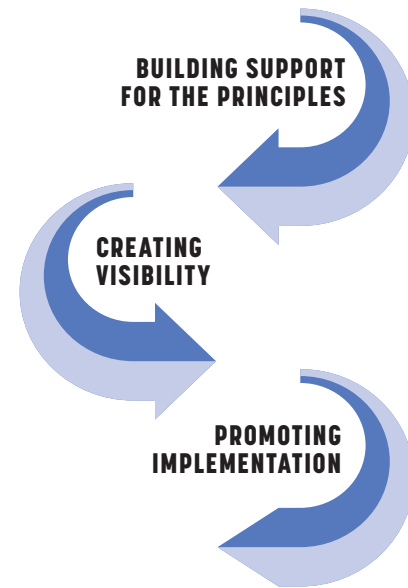
CALL TO ACTION

It is important that citizens can make autonomous choices with regard to innovations appearing in the field of health and personal care. Such autonomy is only feasible if people receive honest, easy-to-understand and transparent information and support for the development of their digital skills and for their health. This is why it is preferable to guarantee citizens/patients the ownership of their personal data.

In order to make this change possible, the Fund Dr. Daniël De Coninck would like:

• to generate widespread support for these guidelines by inviting individuals, organisations and stakeholders to endorse them and to use them in their everyday practices. (www.caringtechnology.be)

• to create a learning community of healthcare technology developers, researchers, users, healthcare providers, policy makers, those who fund research and other stakeholders. Within this community, the KBF and the Fund Dr. Daniël De Coninck will

encourage the application of these eight principles, with the aim of them being applied from the conception of any project, through the introduction, monitoring and evaluation of technological innovations in the fields of health and personal care.

The King Baudouin Foundation will also apply these guiding principles in the development of governance models for data of public interest in the field of care and health.

BUILDING SUPPORT FOR THE PRINCIPLES

CREATING VISIBILITY

PROMOTING IMPLEMENTATION

"From the point of view of artificial intelligence too, the eight principles seem universal to me. They lead us to creating a balanced and better relationship between man and technology in a modern and inclusive society. We will use these guidelines in our work."
Christophe Montoisy, Reseau IA Wallonia

"The eight principles ensure that everyone involved with innovation in healthcare always remembers that innovative solutions should be both new and ethical."
Azèle Mathieu, Lifetech, Hub Brussels

"Companies and citizens should manage their own data and decide who can see them."
Prof. Ruben Verborgh, IDLab UGent-imec

KING BAUDOUIN FOUNDATION

The King Baudouin Foundation's mission is to contribute to a better society.

The Foundation is an actor for change and innovation, serving the public interest and increasing social cohesion in Belgium and Europe. We seek to maximize our impact by strengthening the capacity of organizations and individuals. We also stimulate effective philanthropy by individuals and corporations.

The King Baudouin Foundation is a public benefit foundation. The Foundation was set up in 1976 on the occasion of the 25th anniversary of King Baudouin's reign.

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Where primary care matters
FUND DR. DANIËL DE CONINCK