The 'KBS-FDDC AUDIT Ingediende Projecten' by E. Van der Hulst against the backdrop of the Eight Caring Technology Principles

Walter Daems*

June 2023

Abstract

In 2018, the Fund Dr. Daniël De Concinck (FDDC, managed by the King Baudouin Foundation) launched a project call regarding *technology for a warm care at home* (Technologie voor een warme zorg thuis), aimed to assist people in need of care and their care takers in finding their way to the use of technology. The submitted projects made the FDDC conclude that there was a need for a framework to inspire new projects and to help to assess them. This call and its submitted projects were the direct impetus for the FDDC to start the development of the *Eight Caring Technology Principles* [1]. At the very start of this process the FDDC asked for an audit of the project call [2]. We analyze this audit to unlock it for an English audience and to compare its findings with the *Eight Caring Technology Principles*.

1 Introduction

The King Baudouin Foundation is a philanthropic institute that operates from Belgium but is active throughout the world. The Fund Dr. Daniel De Coninck of the Foundation focuses on the challenges posed by an aging population and rapid technological developments. As such the Fund opened a call for projects on *technology for a warm care at home*. The goal was to support people in need of care and their care takers in finding their way to the use of technology for their benefit. It started from the paradigm that technology can help to address their complex needs and to improve the care quality. The explicit goal of the call was to surpass the mere technical assistance and strive for a warm, more inclusive care setting at home.

However, the jury that had to decide on the funding for these projects did find itself in disarray when having to judge the multitude of proposals submitted. The call resulted in 39 proposals, some of them good, but many of them with serious weaknesses. In addition, it proved difficult for the jury to find consensus. FDDC could not but conclude that (1) the submitters of the proposals were missing some clear guidelines to inspire them and to help them to assess the right issues, and that (2) the jury was in need of a clear framework to make comparison and judgment fair and objective.

As a first step the FDDC asked Eric Van der Hulst to execute an audit of the project call [2]. As a second step the FDDC started an elaborate framework drafting process by gathering a wide variety of stakeholders to co-create the envisaged framework. The project labeled 'Teckno 20230' gathered 26 participants with diverse backgrounds. In a series of workshops, this group composed the framework of the *Eight Caring Technology Principles*. It is not the goal of this paper to explain these in detail, nor the process that gave birth to them. For that we'd like to refer you to [1]. However, as they are referenced later, the reader can find them in the appendix.

In this paper, we will analyze the project call [3], its audit [2] and compare these with the eight principles [1].

*Faculty of Applied Engineering, Cosys-lab, University of Antwerp, Groenenborgerlaan 171, Antwerp, Belgium. The author can be contacted via mailto:walter.daems@uantwerpen.be.

2 The project call

The project call [3] addressed individuals and institutions active in the field of home care, doctors acting collectively, patient organizations, communal groups, social profit organizations, universities and university colleges and hospitals. Commercial organizations could not apply, but could act as a partner. The projects had to run in Belgium.

It called for *implementation projects use care technology to aid a warm care at home that better addresses the complex needs of people in their home situation with a focus on care quality*.

The call stated that priority would be given to partnerships and collaboration from multiple perspectives: persons in need of care, care professionals, companies and researchers.

The selection criteria listed were:

- Contribution to the quality of care, both for the person in need of care at home as for the care giver
- Motivation to embed the project into a broader policy focused on warn and inclusive care at home
- Willingness to address ethical issues
- Attention for a systematic action target to participation and collaboration
- Inclusiveness (with special attention for vulnerable stakeholders)
- Robustness of the quality control and impact assessment
- Cost effectiveness
- Quality and reliability of the partnership
- Attention to interoperability of the technologies used
- The possibility to scale up the technology (for wider use)

The silent criterion, of course, was that the projects must involve technology. This is quite an extensive list, yet it provided sufficient freedom to operate.

To help keep the overview (for ease of comparison), we translated these criteria into a list of key factors:

A Technology-related
B Addressing complex needs
C Inclusive
D Quality-of-care
E Organizational embedding
F Multi-stakeholder perspective
G Impact-focusedness
H Cost effectiveness
I Collaboration in partnerships

3 The audit

The audit investigated the project call and the submissions it generated. All submissions were classified w.r.t. a number of criteria: whether they (1) targeted the creation of a platform or an app, (2) involved software (and the stage the software development was in), (3) involved first-line care and/or second-line care, (4) were pathology focused, (5) were limited to the first-line care, (6) targeted integrated care, (7) addressed case management, (8) took on educating the patients, (9) were heavily

material-reliant, (9) were regionally focused, and (10) were scalable and (11) could prove to reduce costs. The detailed results can be found in [2] (in Dutch). In addition, Van der Hulst made many remarks that uncovered the problems embedded in many of the projects.

Based on his analysis, we summarized these issues (subdivided in four categories) in the table below:

Identifier	Problem
	Limitation blindness
LB-1	More focused on the problem than on finding solutions
LB-2	Insufficiently multi-faceted / multi stakeholder
LB-3	Lack of insight in the limited expertise of the team
	Insular thinking
IT-1	Not well integrated into the broader pathology scene or existing care chain
IT-2	No drive for collaboration, communication, and outreach during the development
	Innovation Immaturity
II-1	Insufficient technology development skills/experience
II-2	Insufficient impact generation skills/experience
II-3	Insufficient project management skills/experience
	Business Immaturity
BI-1	Insufficient business-development skills/experience regarding budget effectiveness, scalability, penetration, sustainability
BI-2	Lacking pragmatism to pursue system integration solutions rather than full bottom-up development

The obvious question is whether KBS-FDDC could have anticipated these issues by formulating crisper criteria? To be able to answer this question, we made a comparison of the issues identified in the audit with the criteria outlined in the call. To keep the overview, we mapped the key factors identified earlier tot the list of issues in the table below:

	Factor								
	Technology-related	Addressing complex needs	Inclusive	Quality-of-care	Organizational embedding	Multi-stakeholder perspective	Impact-focusedness	Cost effectiveness	Collaboration in partnerships
Identifier	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
LB-1									
LB-2		•	•			•			
LB-3									
IT-1						•			
IT-2									•
II-1									
II-2				•	•		•	•	
II-3									
BI-1				•	•		•	•	
BI-2									

It is striking that many of the rows in the table are empty, i.e. these issues have not been addressed in the list of criteria in the call. However, most of these issues are not easily embedded in a project call without making it overtly condescending (e.g., LB1, LB-3, II-1, II-3, BI-2, …). And even when things are mentioned explicitly (e.g. the impact focusedness as requested by the call), the problem is *on a meta level*: you can tell applicants to be impact focused, but if they don't know what that truly means, they will never realize their shortcoming when writing the proposal.

Therefore, our conclusion is that the project call was not at fault: it listed relevant criteria. However, the applicants did not have a clear view on where the were falling short of being adequate, let be excellent.

4 Comparison with the 8CTP

Then, could the *Eight Caring Technology Principles* as a framework help to address these issues?

Most of the criteria of the call map perfectly to the 8CTP. We summarized the mapping below:

		8CTP							
		Person-centered technology	Integrated technological ecosystem	Autonomous and informed choice	Ownership of personal data	Inclusive digital and health literacy	Participatory and adaptive governance	Guaranteed quality for innovation processes	Evaluation and adjustment
	Factor	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
A	Technology-related	·	·	·	·	·	·	·	·
B	Addressing complex needs	•							
C	Inclusive	•	•			•			
D	Quality-of-care						•	•	
E	Organizational embedding						•		
F	Multi-stakeholder perspective	•	•				•		
G	Impact-focusedness						•	•	
H	Cost effectiveness								•
I	Collaboration in partnerships		•						•

Analyzing the 8CTP in detail also makes clear that they add some very specific guidelines that were not incorporated in the project call:

- activating all stakeholders to take responsibility in the problems and the targeted solutions
- striving for technological literacy and informed consent
- creating trust by ownership and participatory governance

- adaptation of policies based on experience, evidence and expertise
- …

Yet, the true added value of the 8CTP is that they are not obvious (even after multiple reads) and that they provoke thinking about them, hopefully triggering the awareness that no single organization or party can cover all these guidelines. Experts need to be gathered around the table to even understand the guidelines to their full extent, and even the experts need to discuss!

Of course, this also indicates that the 8CTP require translation to help people to use them effectively. However, the goal of such a translation is not to replace the 8CTP as an easier, clearer set of guidelines. The nature of the 8CTP in being rather abstract and complex is intended. It triggers thinking beyond one's own horizon.

5 Conclusion

The original KBS-FDDC project call was not flawed. It only uncovered the need for a framework to stretch the comfort zone of applicants and as such to trigger the conception of good projects. Those projects should consider innovation through technology from all angles, with sufficient depth and breadth, with a sufficient focus on sustainability and true impact.

The *Eight Caring Technology Principles* are a principles-based framework that can help applicants with inspiration and comfort-zone stretching, and that can help juries to judge what initiatives to support and what initiatives to give feedback such that they can improve on it.

Further development of tools and training of people to assist in using the framework is crucial in realizing its adoption.

References

[1] King Baudouin Foundation, Fund Dr. Daniël De Coninck, "Eight guiding principles for caring technology," 2021. [Online]. Available: https://www.fondsdanieldeconinck.be/en/initiative/caring-technology

[2] E. Van der Hulst, "KBS-FDDC audit ingediende projecten (in dutch)," *Audit ordered by KBS-FDDC (in Dutch)*, Jun. 2019. [Online]. Available: https://www.fondsdanieldeconinck.be/app/uploads/2023/10/KBS_FDDC_Audit_Oproep2018.pdf

[3] Fonds Dr. Daniël De Coninck, "Technologie voor een warme zorg thuis," *Projectoproep (in Dutch)*, Jun. 2018. [Online]. Available: https://www.fondsdanieldeconinck.be/app/uploads/2023/10/KBS_FDDC_Audit_Oproep2018.pdf

Appendix: The Eight Caring Technology Principles

	Principle	Description
	PROMOTE A HUMANE APPROACH IN TECHNOLOGY AND DATA MANAGEMENT	
1	Support users' needs and autonomy	Ensure that technology and data meet the needs of the users and serve people and society. Engage individuals and communities to gain insights in their care needs and health-related goals. Technology and use of data should always support users to make their own autonomous decisions.
2	Establish participation through integration	Establish ongoing collaboration among all stakeholders through the creation of an integrated ecosystem encompassing people and technologies. This can be realised by setting up interoperable technologies using standardised protocols and open-source formats. Support patients and citizens to participate fully in the development and use of this ecosystem.
3	Obtain true informed consent	Provide reliable, transparent, comprehensible, and accessible information about caring technologies. Empower people so that they are able to make choices in a truly informed and independent way. Disclose the practical advantages and disadvantages objectively to ensure users feel confident about the technologies they choose.
	SUPPORT SOCIAL ANCHORING	
4	Use data safely for personal health and public interest	Strengthen trust between people and organizations when using data and technologies. Allow citizens to own and manage their personal data or to delegate the management to a third party of their choice. Assist them in sharing and using their data safely to improve their personal health and well-being and to serve the public interest.
5	Reduce digital and health inequities	Improve technological skills and health literacy and commit to lifelong learning for all. Engage everyone to participate, including the vulnerable and disadvantaged, so that no one is left behind. Focus on reducing digital and health inequities, do not contribute to them.
	STIMULATE PARTICIPATORY GOVERNANCE	
6	Create participatory governance	Create participatory and adaptive governance for the caring technology ecosystem. Encourage citizens and stakeholders to participate actively in decision-making processes. Adjust policies based on data analysis, new evidence, experience, and growing expertise, making sure they remain effective and responsive to evolving needs.
	MONITOR QUALITY AND SOCIETAL IMPACT	
7	Implement quality assurance and control	Implement quality assurance systems for the entire process of innovation. Continuously evaluate the development and use of data and technology. Quality control should include content, privacy, security, transparency, traceability, interoperability, effectiveness, and inclusiveness. Knowledge should be built on both experience and scientific evidence. Introduce quality labels to disseminate the evaluation results and make them easily accessible to users.
8	Align innovation with wider societal frameworks	Monitor and evaluate the caring technology ecosystem for its impact on society within wider frameworks of health, democracy, prevention, ethics, and sustainability. Ensure technology aligns with fundamental international and democratic principles. Integrate a focus on prevention, ethical values, and sustainability objectives into the development of innovations.