Research Philosophy

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Foundational Pillars of Research Approach

I recognize that the heart of this PhD is the co-creation of a methodology to enable disabled communities to lead AI and XR-enabled technology development. Reflecting on how I would approach these research challenges, I believe my work will be guided by the following foundational principles.

- **Robustness of Framework:** Robustness was the central theme of my Master's thesis, and this specific temperament, combined with viewing situations as a normal distribution, is particularly useful in inclusive methodology research. When judging the effectiveness of a framework, I focus on identifying the circumstances under which it might fail. I often employ reasoning techniques such as the *"slippery slope fallacy"* and *"reductio ad absurdum"* to stress-test ideas. This helps me in identifying and prioritizing parameters and ensures that the methodologies developed as research outputs remain adaptable and leave room for evolution with future technological paradigms.

- **Scrutinizing Existing Methodologies:** This personal approach aligns closely with the TACIT project's goals. I am deeply interested in questioning central assumptions and parameters in existing methodologies. My intent is to identify and uncover inherent assumptions and test their validity in the current paradigm, searching for opportunities to refine or redefine them. My priority is always to understand the root causes of problems to ensure the validity of the problem statement, which prevents me from proposing solutions until I am certain that the focus is on addressing the cause, not merely the symptom.

- **Inspiration Blending:** I am particularly inspired by the principles of *Inventive Problem Solving (TRIZ 40)*, which I often use as a thinking framework to challenge my own creativity. My exposure to different disciplines also enables me to analyse situations through analytical lenses borrowed from other fields. I believe that a unique blend of such principles can be integrated into the co-design research process to both inspire and structure the development of a novel, inclusive design methodology.

- **Ethical Engagement and Layered Understanding:** I recognize that engaging directly with disabled communities requires deep ethical commitment and sensitivity. I am aware of the complex social dynamics involved in introducing new technologies and will ensure my research emphasizes genuine empowerment rather than mere assistance.

Research Concern

I am particularly reflecting on a challenge within TACIT's remit: the integration of XR (AR/VR) with visual impairment. The current physical design of the AR/VR has to be questioned. From a pure designer point of view, I wonder whether these current designs enable ergonomics and functional provision to include prescription glasses. I am tempted to think of a hypothetical technical fix using adaptive optics. This appears promising in the lab, yet their real-world value depends on cost, deployability, and how they are embedded into the existing pre-sold products.

Ethical and Social Considerations: On further reflection on the layered ethical and social questions, for instance, whether people with visual impairments are comfortable sharing optical configuration data, or whether a configuration might be perceived as intrusive or stigmatizing rather than empowering.

These exemplary reflections point towards the need for the development of a co-created design methodology. And also wondering about the efficacy of introducing the inclusion as a mandatory parameter in the house of quality used during the quality function deployment of the product development. My ambition is to move the focus from short-term assistive fixes toward frameworks, while being explicit about the contexts in which a method succeeds or fails.