

P / REFERENCES OF DESIGN



ENHANCING WELLBEING: EMPOWERING INDIVIDUAL AND COMMUNITY NEEDS FOR SHARED IMPACT.

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ABSTRACT | *How can we ensure that individual and community needs are effectively empowered to generate a shared impact on optimizing wellbeing?*

Today, the health and care sector has technologies and methods at its disposal that could change it for good and improve the quality of life of millions of people with physical and cognitive disabilities, whether temporary or permanent. The integration of new technologies, ranging from digital fabrication to advancements in machine learning and AI, offers unprecedented opportunities to revolutionise how we approach solutions in various domains. Particularly in the realm of affective computing, where machines can interpret and respond to human emotions, the potential for adaptation and personalization is profound.

This intersectionality presents a unique avenue for addressing fragility, embracing pedagogy, accommodating disabilities, and fostering collaborative design. By harnessing these technologies, we can create tailored solutions that cater to individual needs and circumstances, thereby mitigating fragility by providing targeted support.

Moreover, in the realm of pedagogy, personalized learning experiences can enhance educational outcomes by catering to diverse learning styles and abilities. For individuals with disabilities, technology can serve as a powerful tool for empowerment, enabling greater independence and participation in various aspects of life. Additionally, collaborative design processes enriched by technology facilitate inclusive decision-making, ensuring that diverse perspectives are incorporated from the outset.

Thus, by leveraging these technological advancements, we can not only make solutions more efficient but also more inclusive and impactful, addressing the multifaceted challenges of our time.

However, by addressing the multifaceted challenges posed by disabilities and other complex issues, it becomes increasingly evident that technology alone cannot provide comprehensive solutions. Instead, the importance of employing a collaborative approach such as co-design emerges as paramount. Co-design stands as a methodology through which customized solutions are crafted and tailored precisely to meet the unique needs of the stakeholders involved. By bringing together a diverse array of participants, including designers, manufacturers, developers, healthcare professionals, and individuals with disabilities alongside their caregivers, co-design ensures a holistic and inclusive process. This collaborative effort fosters innovation, empathy, and a deep understanding of the nuanced requirements, ultimately leading to more effective and impactful solutions.

The Glifo project exemplifies the convergence of co-design and technology, showcasing both the collective achievements and the potential for collaborative impact. Created in collaboration with the TOG Foundation, Glifo, in English Glyph, is a customized writing aid that helps children with a complex neurological disorder to write and draw.

A purposeful sign, lightweight, adjustable, washable, and, thanks to 3D printing, a customizable writing tool. It was born from the joint planning of makers, designers, therapists, and families of children with disabilities to help children with complex neurological pathologies to write and draw independently.

Today, it is available via open-source 3D printing documentation.

Create positive impact on
real needs with
empowerment of all actors through
shared innovation.

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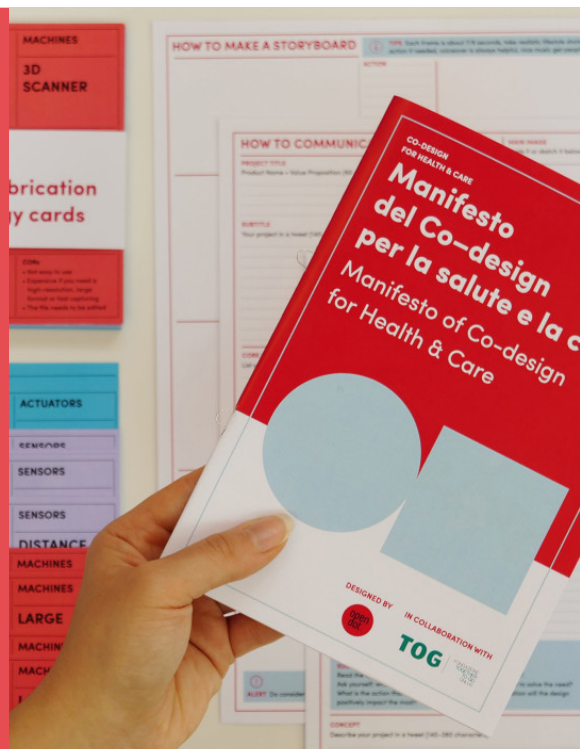
Fragility, pedagogy, disability
and collaborative design - it is
no longer 'design for all' but
'each and everyone'.

*How can we ensure that
individual and community needs
are effectively empowered to
generate a shared impact on
optimising wellbeing?*

An **approach** centred on social good to create real change through shared and open innovation.

A **goal** based on real needs, from macro-level impact to providing effective solutions for individual needs.

A **methodology** based on a human-centred design approach, aiming for relevant and impactful design created by all stakeholders.



Manifesto of co-design for Health & Care

3 Speak the same language

Break down the wall of anglicisms and technical jargon, in favor of a common language that everyone can understand.

6 Materialize the idea

The production of a first prototype allows us, thanks to software, digital fabrication technologies and rapid prototyping, to touch, explore, and test the idea. And last but not least, customize it.

1 Listen and observe

Co-design means creating a space where all opinions, competences and experiences count and are useful, it means to enact a process based on listening.

4 Share the real needs

The goal is to solve a real need, no matter how small or big, what really matters is focusing on the reason. The "how" comes after.

7 Prototype, prototype

The prototyping phase is a spiral process in which projects improve by increasing versions, and through continuous dialogue on how to perfect the object.

2 Teach and learn

We are all experts in something and reciprocal training is fundamental: doctors, designers and individuals with disabilities, experts in their condition, sharing knowledge and competences, intersecting them.

5 Think and design together

Moments of sharing, exchange and collective design guide the group towards the final idea, stimulating everyone's creativity when it comes to devising new and innovative solutions able to address real needs.

8 Replicate, scale, share

A well designed project on its own could be useful and replicated to also respond to others' needs. Here is where the value of the open source philosophy comes into play: sharing the process and the final solution is a way to enrich the project and to amplify its social impact.



The design process is a **laboratory!**

A journey from the realms of **digital fabrication** to the frontiers of **machine learning** and **AI** including the intersections and complexity of **affective computing**.

A lightweight, adjustable, washable and custom-made writing support thanks to **3D printing**.

Born from the **co-planning** between **makers**, **designers**, **therapists** and families of **children** with disabilities, to help children with complex neurological pathologies to write and draw independently.





Manuale mobile



Ensuring a domain where fluid communication between **care-receivers, families, and children** becomes possible.

An eye tracking-based software that allows people with complex neurological diseases to communicate through eye movement.

TOP! Together to Play is a videogame suite to improve therapy for kids with complex neurological disorders.

The suite offers rehabilitation and **learning sessions** based on videogames and interactive activities, thanks to **eye-tracking technology**.



Empowerment through Open-Source

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P/REFERENCES OF DESIGN

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Conference Website

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