

INTRODUCTION

The goal of this initiative is to inject the popular and widely accepted ICT Research Methods with a bit more emphasis on ethics/impact of technology and moral design. This is incredibly important in a world where we strive to create technology with a positive impact on society.

We have already discussed this before the holidays and decided to propose two changes:

1. Three new research cards;
2. Some changes to existing research patterns (later).

Both are in this document.

THREE NEW CARDS

We propose to try and find out if it is possible to add two new cards to the research methods. First we think a new card in the research method 'library' called human impact analysis will help immensely.

| WHAT | POTENTIAL NEW CARD |
|-------------|---|
| WHERE | LIBRARY |
| NAME | HUMAN IMPACT ANALYSIS |
| WHY? | Technology changes people and society. This means that creating technology often means that you make moral decisions. An analysis of potential (unintended) changes in people and society improves the chance for a technology with the intended (positive) impact and with that the acceptance of a technology as a whole. |
| HOW? | Identify the most important aspects of your intended technology on the impact on humans and how they interact. How is the identity of the (intended) users affected by technology? How does technology influence the users' autonomy? What is the effect of technology on the health and/or well-being of users? |
| INGREDIENTS | An genuine interest in the impact of technology on humans; Someone with experience on the relation between humans and technology; Frameworks like the technology acceptance model or the Theory of planned behaviour; Tools like tict.io or by the Center of Human Technology. |
| IN PRACTICE | A lot of projects create technology that is used <i>in</i> society <i>by</i> humans. More and more organisations understand that understanding the way technology changes humans improves the chance that the technology leads to the intended positive impact and the acceptance of the technology. |

Next is storytelling. A new card in the research method showroom.

| WHAT | POTENTIAL NEW CARD |
|-------------|---|
| WHERE | SHOWROOM |
| NAME | STORYTELLING |
| WHY? | Thinking about the future of your technology helps you to envision the impact. What if your product becomes wildly successful? What if 80% of all people use it? Or, what if your product is used in a way you did not intend? Estimating the future impact helps you to make design choices today. |
| HOW? | Use storytelling. Create personas. Put them in utopian and dystopian scenarios. Try to understand what that means for the design of your product. |
| INGREDIENTS | A willingness to immerse yourself into stories; A vivid imagination; Tools like a storytelling canvas, design fiction or tict.io. |
| IN PRACTICE | A lot of technology was designed one way and used in a different way with a different impact. Understanding this beforehand helps you to design for future impact. |

A third card is in 'field' and addresses the topic of new technology (AI) which comes with new desired research methods.

| WHAT | NEW CARD |
|--------------|---|
| WHERE | FIELD |
| NAME | ALGORITHMIC ANALYSIS |
| WHY? | New technological solutions desire new research methods. Technology that uses data to make algorithmic decisions requires special attention. A thorough understanding of the fundamental characteristics of data and algorithms is indispensable. |
| HOW? | Scrutinize the data that is used. Understand fundamental pitfalls like subjectivity of data and check what they mean for the underpinning data. Determine whether or not algorithmic decisions should be explainable and why. |
| INGREDIENTS | An understanding of the fundamental pitfalls of data; An understanding of the importance of explainable AI; A willingness to look critically at your data and algorithms; Tools like tict.io, DEDA and the AIA – framework; |
| IN PRACTICE | Making sure data and algorithms make a positive impact on humans and society is an insight that is gaining traction in law and practice. |