

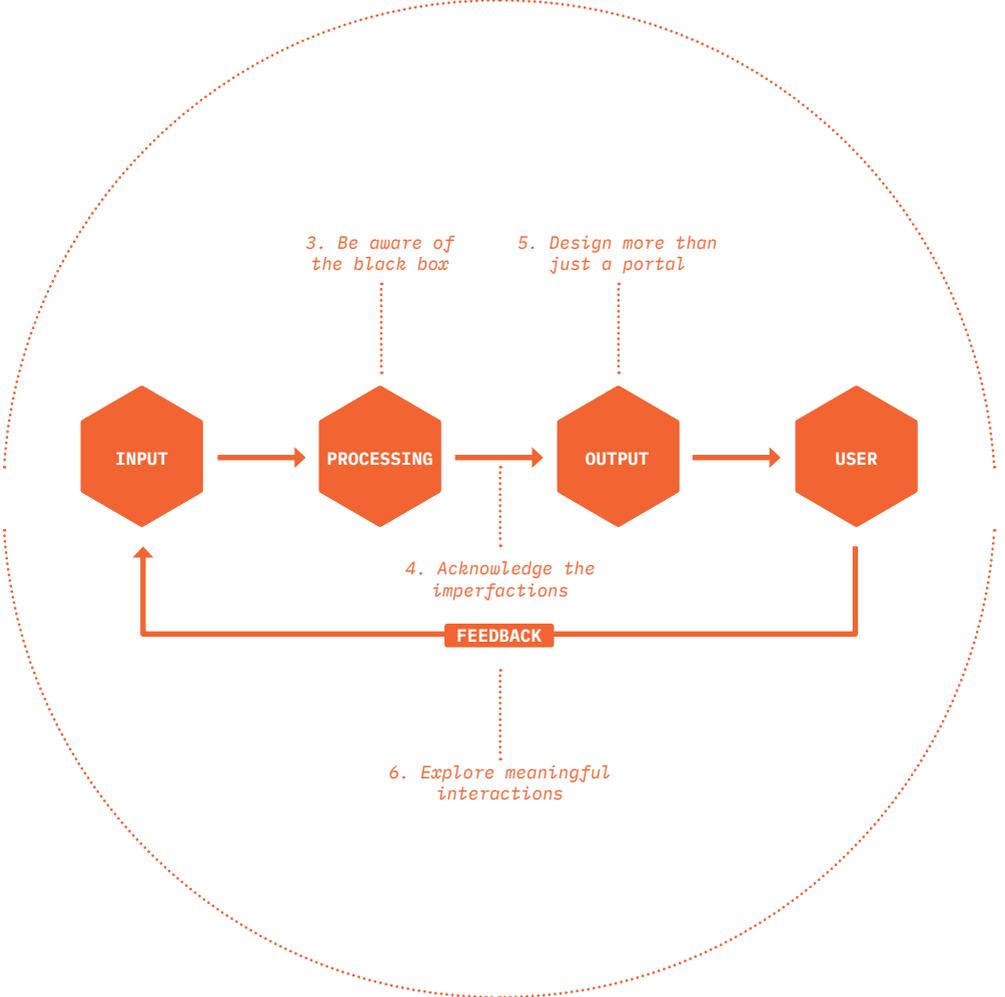


**ARTIFICIAL
INTELLIGENCE**
TRAINING CENTER

M A N U A L

DESIGNERS GUIDE FOR
ARTIFICIAL INTELLIGENCE

1. Frame 'Intelligence' accordingly



3. Be aware of the black box

5. Design more than just a portal

INPUT

PROCESSING

OUTPUT

USER

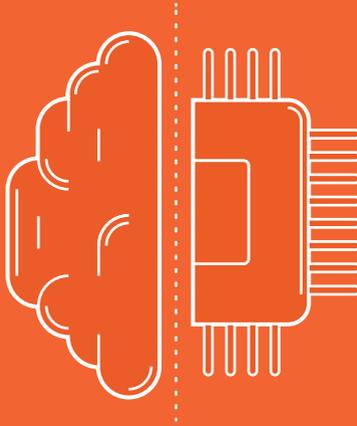
FEEDBACK

4. Acknowledge the imperfections

6. Explore meaningful interactions

2. Consciously position the user

1. Frame 'Intelligence' accordingly



AI/TC MANUAL

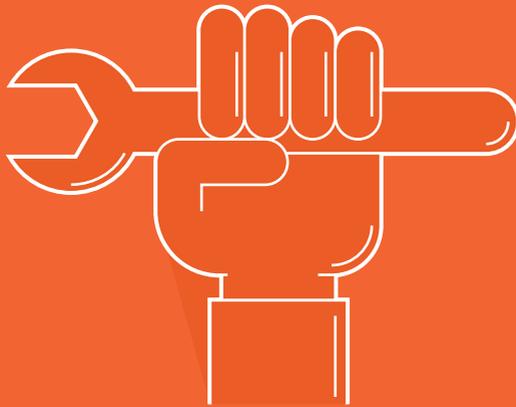


The design does not provide clear limitations of the AI

The design provides a clear scope of the AI functionality

The term 'Artificial Intelligence' raises assumptions about how intelligent an AI actually is. How an AI-driven product of service is positioned either emphasizes or debunks these assumptions. By framing them in relatable contexts and objects, it becomes easier to assess what the AI-component is actually doing. Providing clear contours of its capabilities acknowledges that AI are narrow: they are highly specialized but cannot do much else besides this specializations. This provides clearer expectations for the user and allows them to reflect on how intelligent AI actually is, helping them to optimize their input and value the output of these systems.

2. Consciously position the user

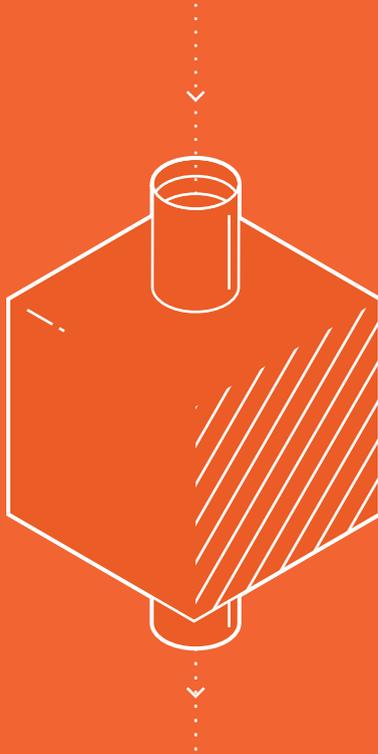


The employed AI is fully optimized and hidden from the user

The user is empowered to interact with and manipulate the AI

AI allows for the automation of decision making processes that shape the user experience. How much the user is made aware of these process is a consideration that needs to be made during the design process. The AI component can be completely hidden and isolated from the user, but this denies the user any agency towards the AI component. On the other side of the spectrum the user is given full agency and empowered to inquire into the process that turn input into output, embed values into the model and ascribe meaning and value to the output.

3. Be aware of the black box



AIITC MANUAL



The design neglects to protect the user

The design offers leverage to the user

To an extent users are always vulnerable to the whims of an AI. As long as a product or service does what it is supposed to do people generally don't care how it does it. However, when it fails to meet expectations the underlying machinery becomes subject to scrutiny. The opaque nature of AI technologies such as machine learning brings limitations to the amount insight that can be derived from this. Thus, a certain degree of trust in the system is required from the user. In order to meet this vulnerability the design should empower provide the user with leverage whenever this trust is not lived up to.

4. Acknowledge the imperfections



The design positions AI as infallible

The design allows for detection of and inquiry into mistakes

Like any computational model, AI is always an abstraction of reality. This means that during the process of development values, assumptions and incongruities will always be embedded in the system. These aspects shape the output and thus the influence of AI on real experiences. Often, users are left unaware of this (see principle 3) making it difficult to properly ascribe value to the output. By allowing the user a degree of insight into the input and output it becomes possible for the user to become aware of how assumptions and misinterpretations resonate throughout the decision making process of AI. The degree of insight needed should be weighed and taken into account during the design process.

5. Design more than just a portal



AI/TC MANUAL

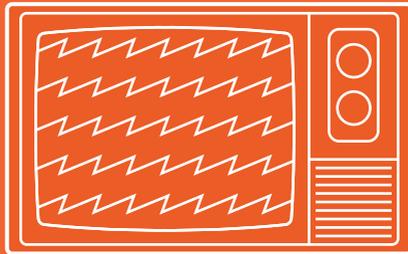


The design
disconnects AI from
physical reality

The design explains
the functionality of
the AI

Often products and services that utilize AI merely serve as a portal to magically summon data from cyberspace. In these cases the aesthetics of the design bare little to no relationship to its functionality, effectively disembodimenting the AI and disconnecting the output from physical reality. Communicating the functionality and purpose of AI through recognizable and relatable aesthetics makes it easier for users to understand that an AI component is present and interpret its purpose.

6. Explore meaningful interactions



The interaction
does not enrich the
users understanding

The interaction
helps the user make
sense of the AI

Interacting with AI is often done by either text or speech interfaces. In other cases the interaction with AI is not even made explicit and its output magically appears without users being aware that they have provided input in the first place, totally obscuring how AI was involved in shaping the experience. This narrow view neglects the rich interaction possibilities that could be leveraged to convey meaning to the user. By designing interactions that relate to the functionality of the AI component users are enabled to (physically) manipulate it, bringing a certain degree of control and agency that users are otherwise deprived of.

