

# Towards a More Conscious Use of Prototypes in Mobile UX Design

Thorsten Hochreuter, M. Sc.

Prof. Kirstin Kohler

Mareen Maurer, B. A.

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Designing in Mobile Application Developement  
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# Let's start easy:

LO-FI



## Which fidelity is this?

# Another one...

The screenshot shows the 'Design 'Move' Manipulation' screen in the Tynker interface. On the left, there's a sidebar with categories like 'Manipulation' (selected), 'Touch Interaction', and others. Under 'Manipulation', there are three items: 'Move' (selected), 'Rotate', and 'Scale'. The main area is titled 'Movement-Behaviour' and contains two sliders: 'Percentage of horizontal movement speed, relative to finger movement' set to 75% and 'Percentage of vertical movement speed, relative to finger movement' set to 9%. Below these are buttons to 'Define the objects' movement area. The next section is 'Flick-Behaviour (Physics Animation)', which includes a radio button for 'The Object decelerates' (set to 'time-based') and a field for 'Deceleration factor' (set to 25 cm/s<sup>2</sup>). A note says 'a low value means softer deceleration' and 'a high value means stronger deceleration'. At the bottom, there's a checkbox for 'Keep Object on Screen during physics animation' which is checked.

Design 'Move' Manipulation

Save and Close

Manipulation

Move

Rotate

Scale

Movement-Behaviour

Percentage of horizontal movement speed, relative to finger movement:

75%

Percentage of vertical movement speed, relative to finger movement:

9%

Define the objects movement area

Flick-Behaviour (Physics Animation)

The Object decelerates

time-based

distance-based

fixed

Deceleration factor

25 cm/s<sup>2</sup>

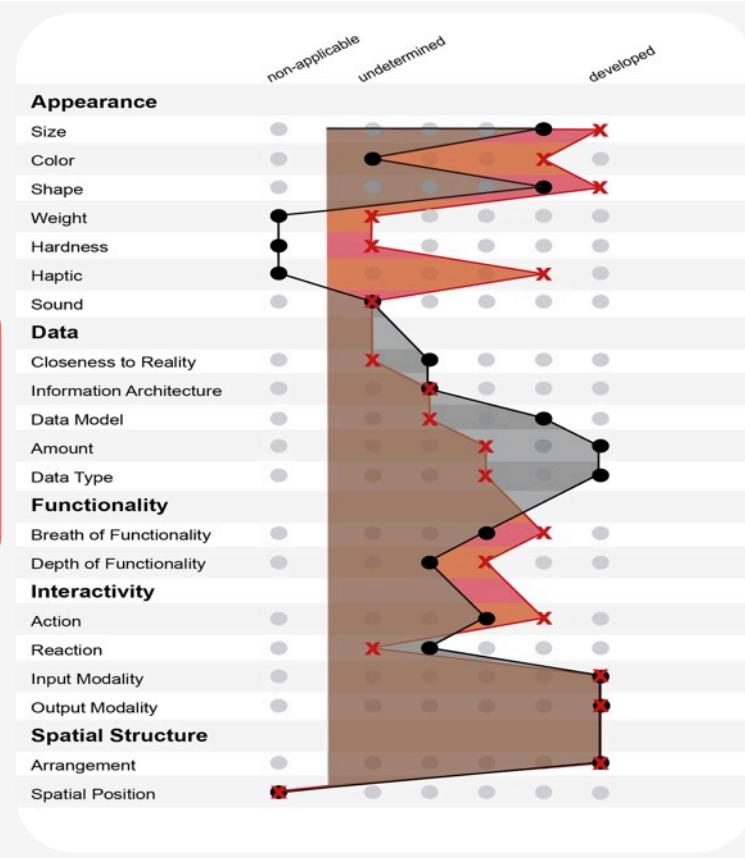
a low value means softer deceleration  
a high value means stronger deceleration

Keep Object on Screen during physics animation:

What about this?

# What we propose:

## Filter-Fidelity- Profiles



# Related Work

*„[...] the distinction is especially difficult to make when an artifact is particularly well developed in one area but not in others.“*

**McCurdy et al. 2006**

Mixed fidelity

# Related Work

**Lim et al. 2008**

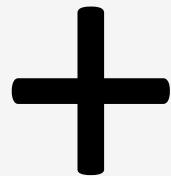
*„Prototypes are filters that traverse a design space and are manifestations of design ideas that concretize and externalize conceptual ideas.“*

Prototypes as Filter

# What do we have?

Mixed fidelity

McCurdy et al. 2006

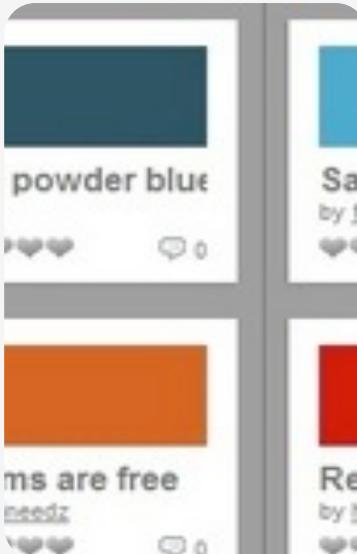


Filter

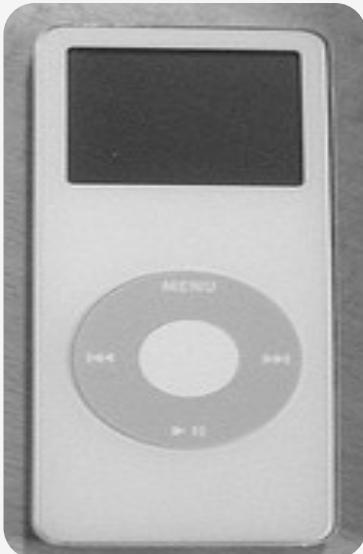
Lim et al. 2008

# 5 Filter-Dimensions

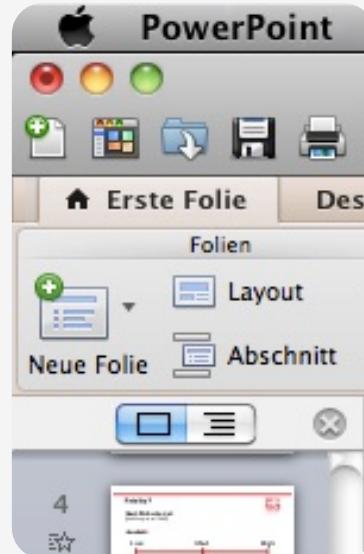
Appearance



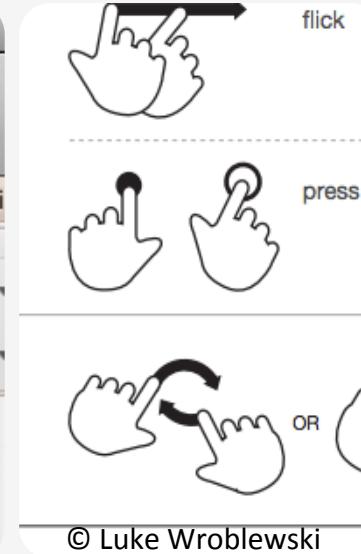
Data



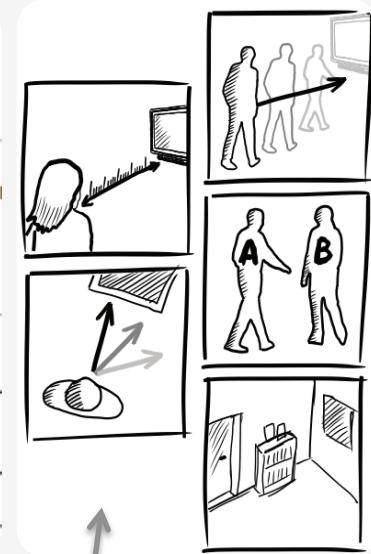
Functionality



Interactivity



Spatial  
Structure



(cf. Lim et al., 2008)

(cf. Greenberg et al., 2008)

# Profiles and Variables

Appearance

Size  
Color  
Shape  
Weight  
Hardness  
Haptic  
Sound

Data

Closeness to Reality  
IA  
Data Model  
Amount  
Data Type

Functionality

Breadth  
Depth

Interactivity

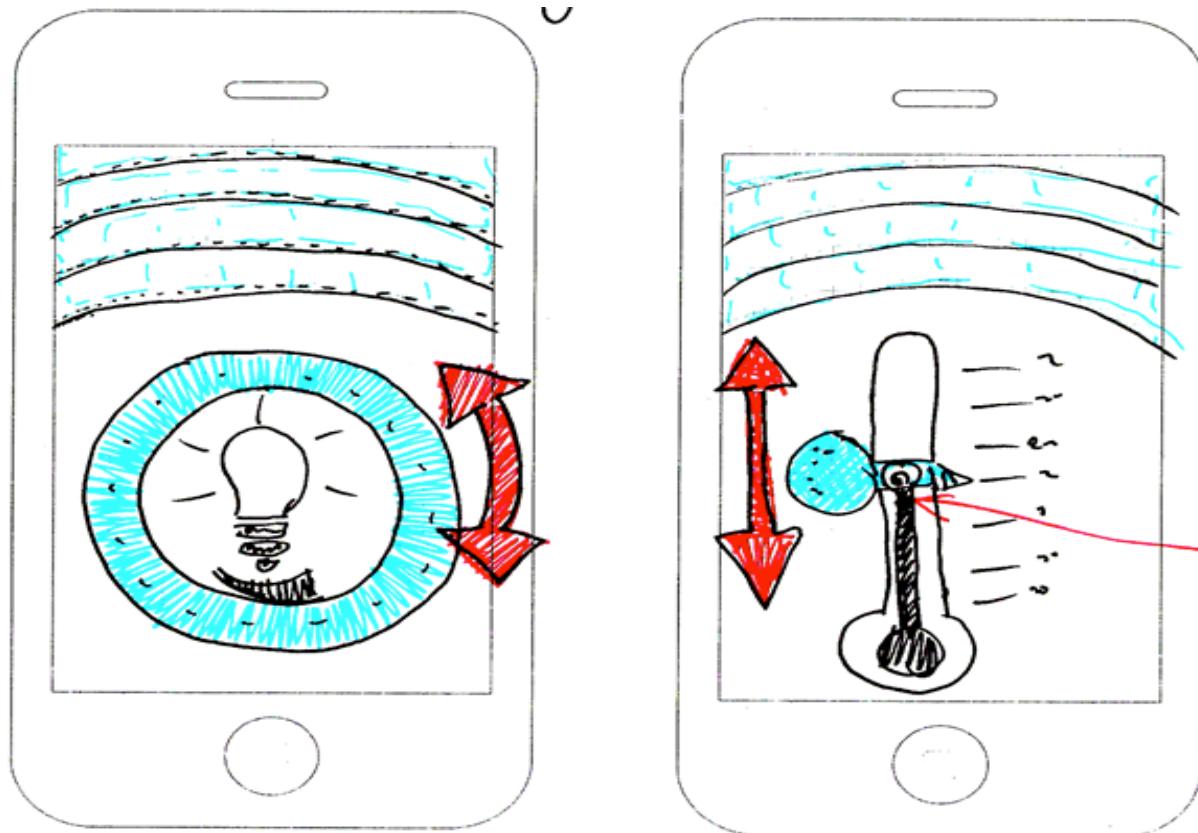
Action  
Reaction  
Input Modality  
Output Modality

Spatial Structure

Arrangement  
Spatial Position

Closer definition proposal, please see Workshop-Paper.  
Also cf. Hochreuter et al., 2013.

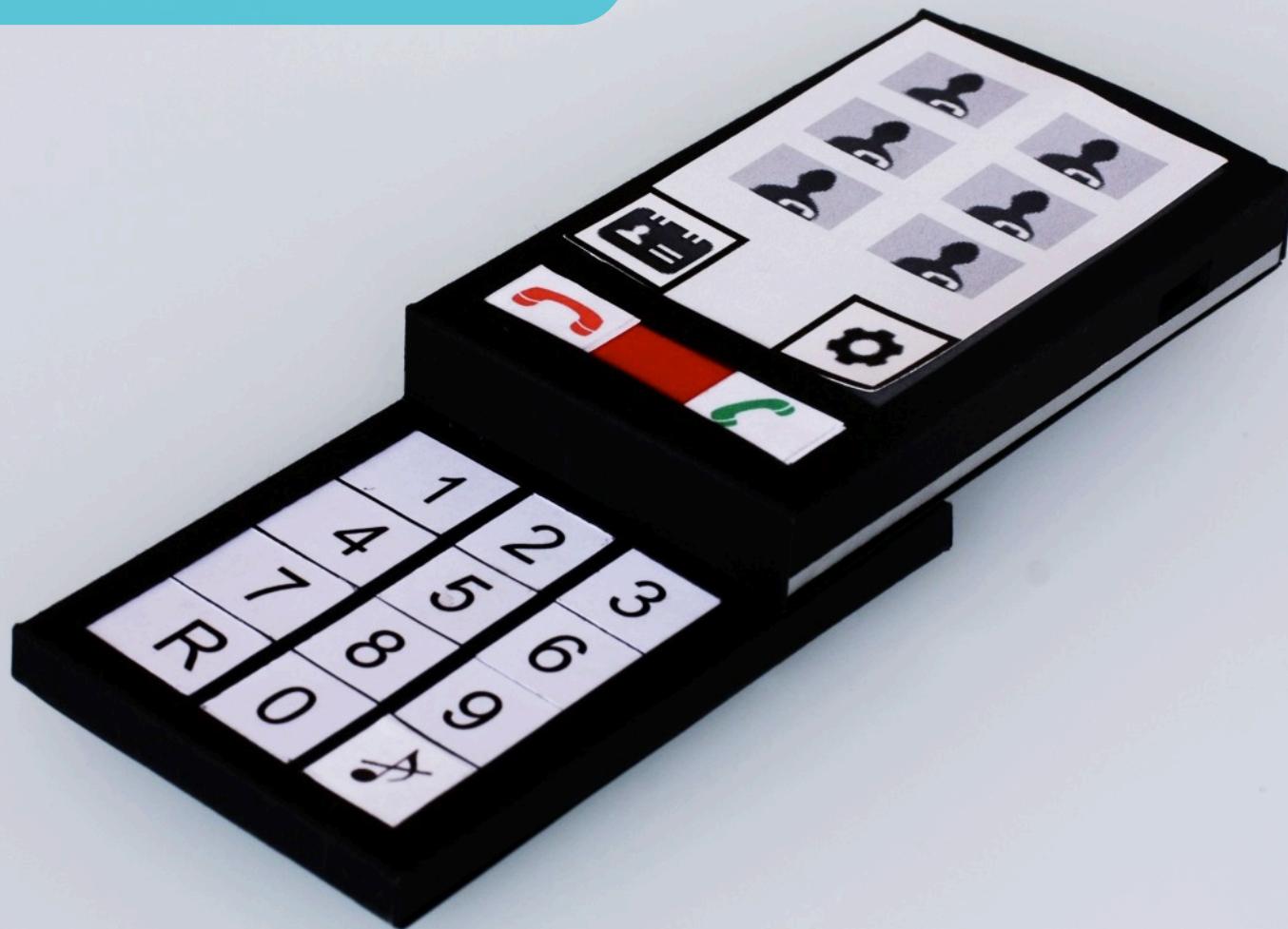
# Interactivity - Actions

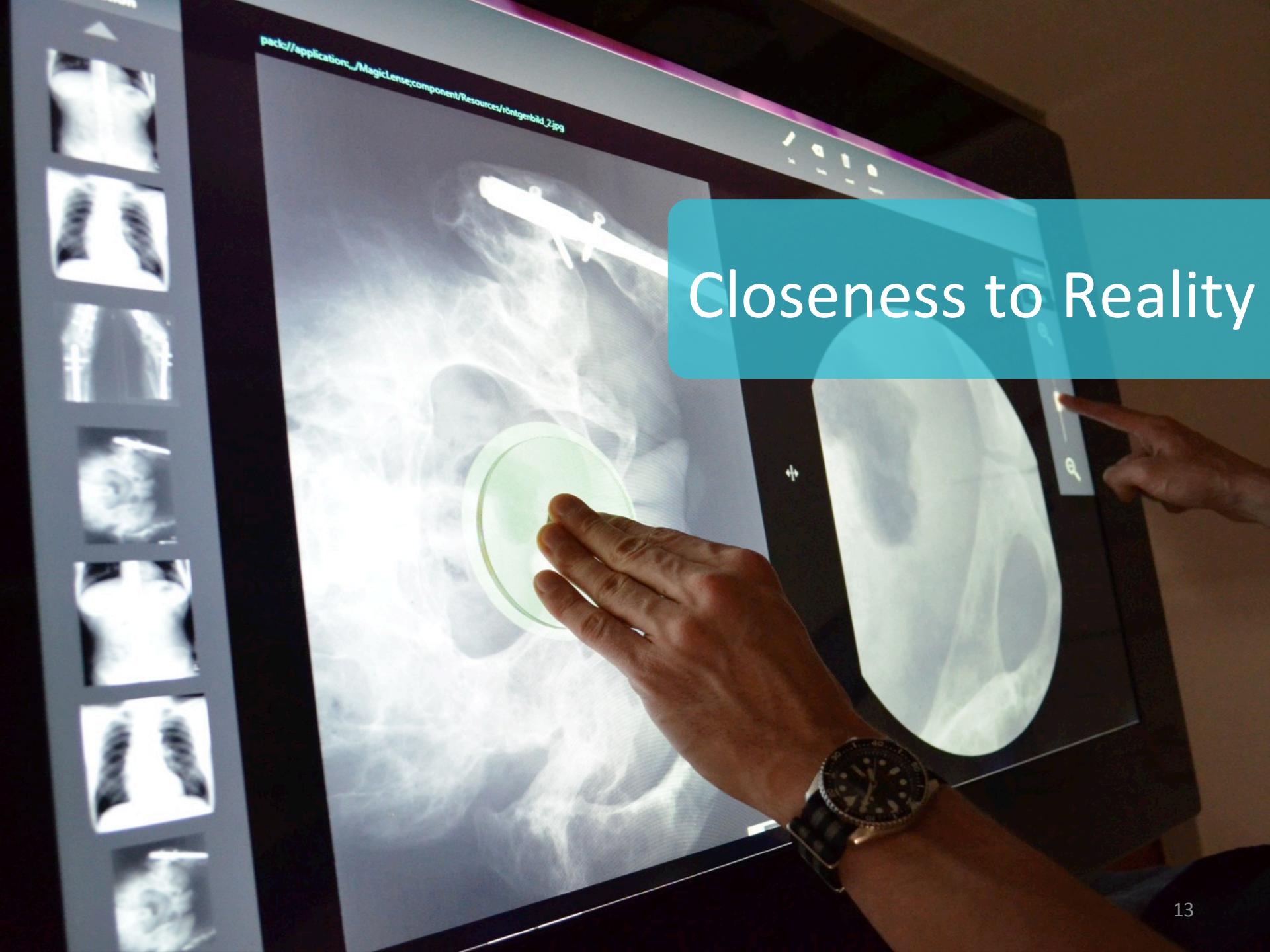


Interaction Vocabulary, see Diefenbach et al., 2010.

# intermezzo

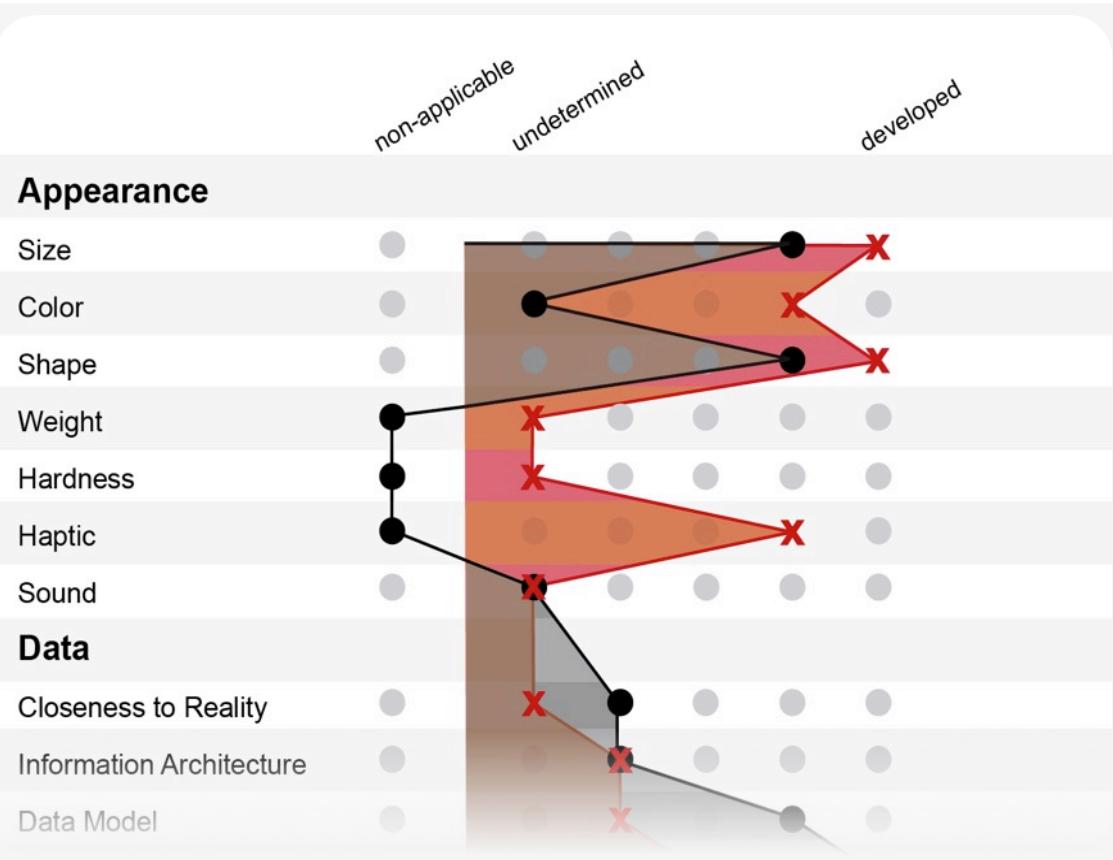
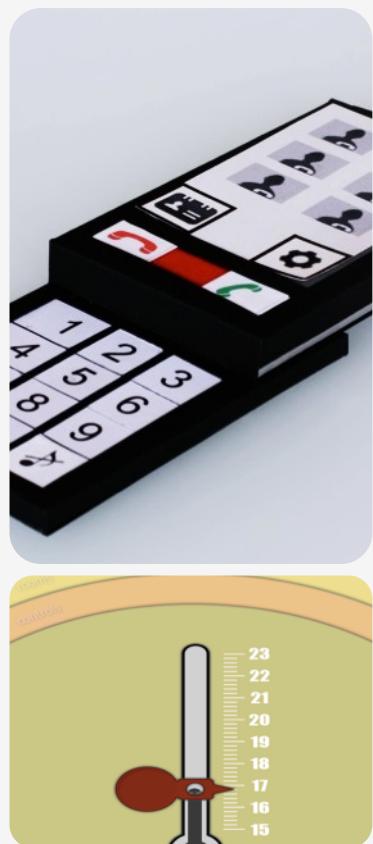
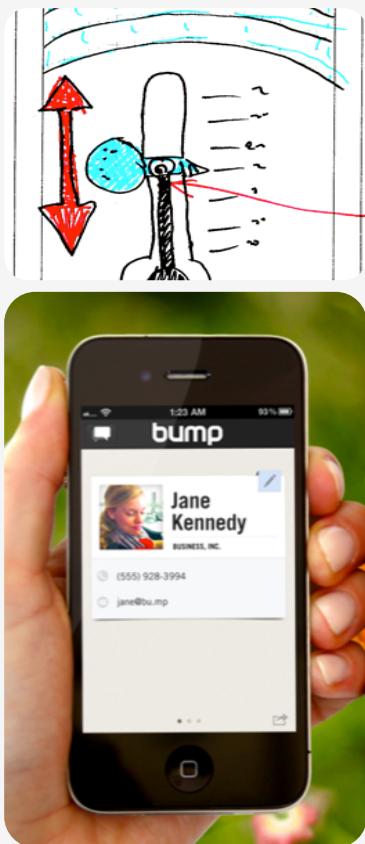
# Shape, Haptics, ...



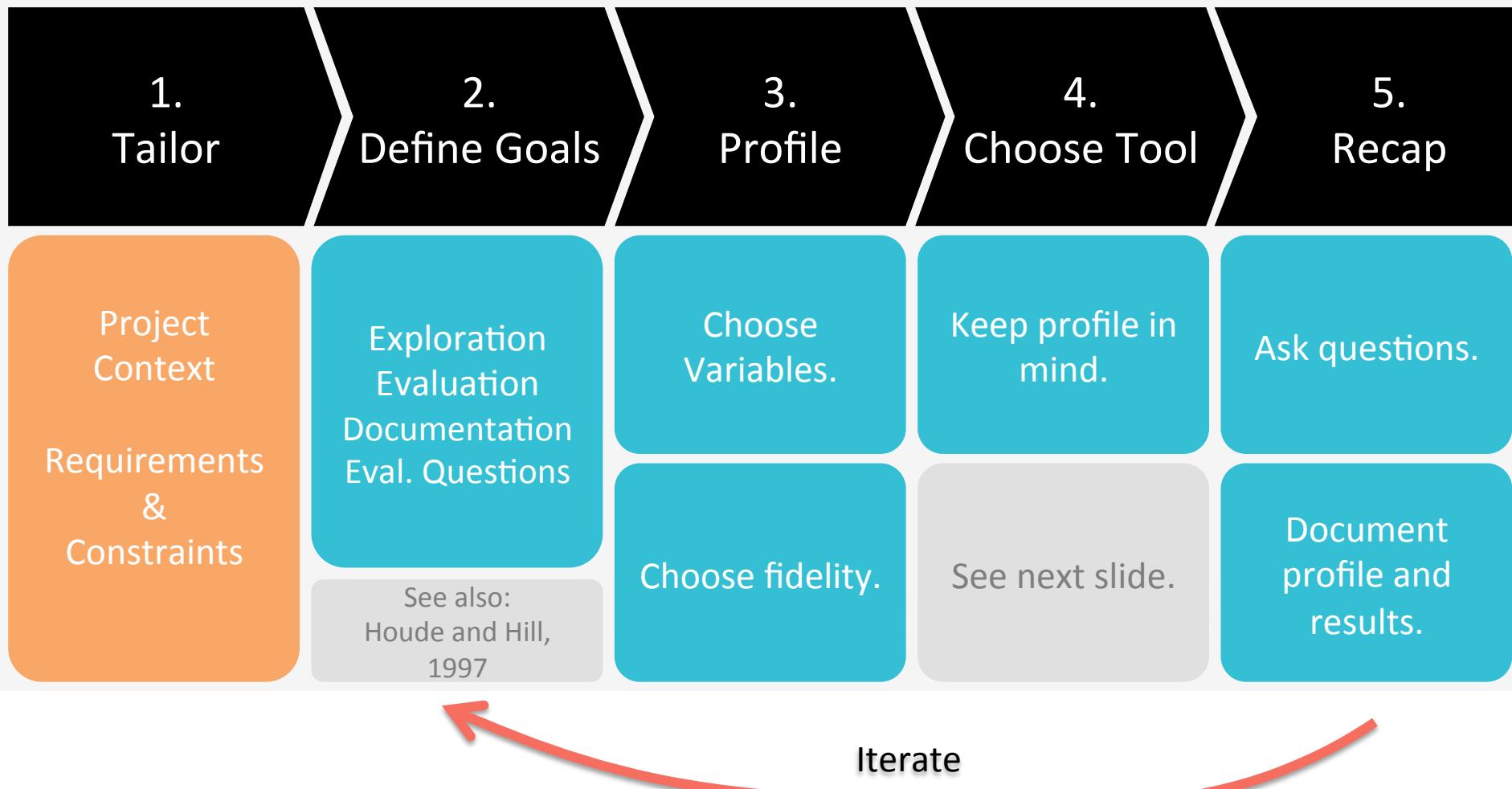
A photograph showing a person's hands interacting with a large touchscreen monitor displaying a digital X-ray of a human torso. A green circular cursor highlights a specific area in the upper left quadrant of the X-ray image. The person's right hand is pointing at the screen near the bottom right corner. The monitor is part of a larger kiosk or display unit, with a vertical column on the left showing thumbnails of other X-ray images. A blue speech bubble in the upper right corner contains the text "Closeness to Reality".

Closeness to Reality

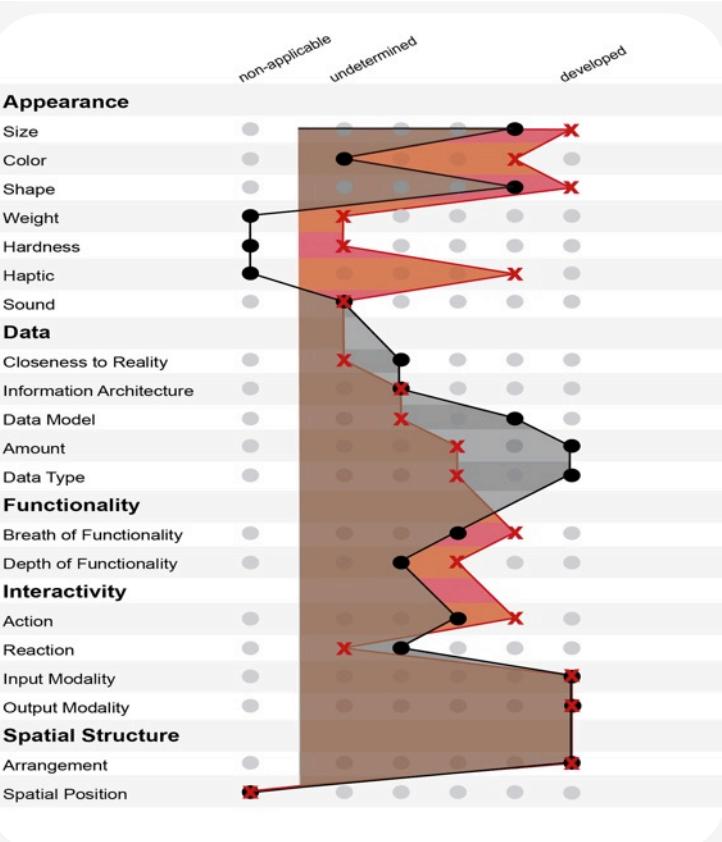
# So what do we do now?



# How to work with the Model?



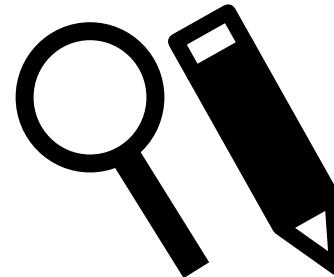
# Future Work



Tools

UX

UX-Layer



Evaluation Methods

Thank you for your attention.

# References

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**McCurdy**, M., Connors, C., Pyrzak, G., Kanefsky, B. & Vera, A. (2006). Breaking the fidelity barrier: an examination of our current characterization of prototypes and an example of a mixed-fidelity success. In Grinter, R., Rodden, T., Aoki, P., Cutrell, E., Jeffries, R. & Olson, G. (Hrsg.): Proc. of the SIGCHI 2006 (CHI '06). New York: ACM, S. 1233-1242.

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For further literature, see our Workshop-Paper.