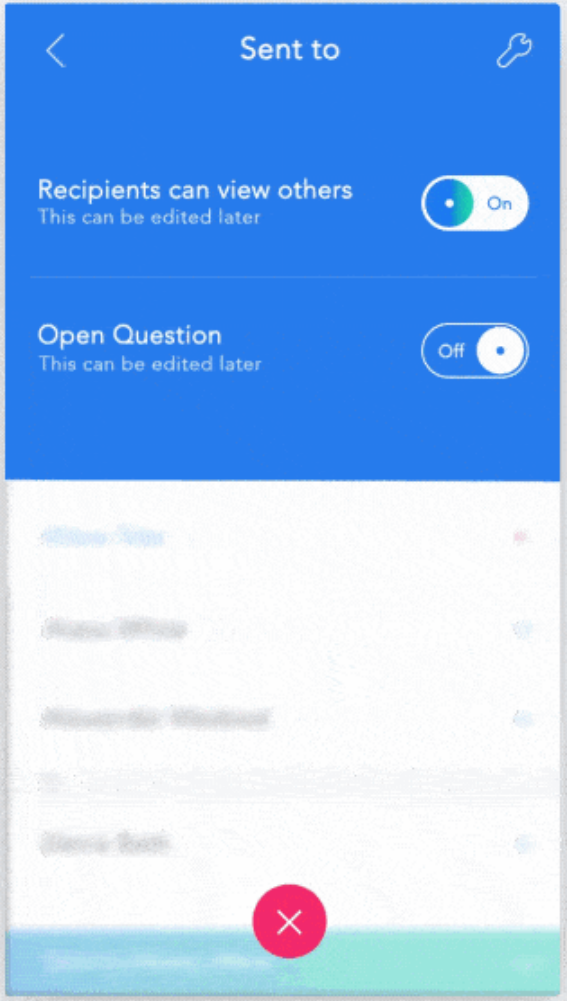
IDI – Mobile Interaction Design

Professors IDI
ViRVIG Group – UPC



Motivation

Mobile devices have different requirements for design:

- More personal
- The environment where users use them competes for their attention
- Entering data is difficult
- Small screen sizes

Motivation

Desired features for mobile UIs:

- Quick find what they intend to
- Minimum cognitive load for interaction
- Information presented in small chunks

User Interface and Interaction Design different from desktop

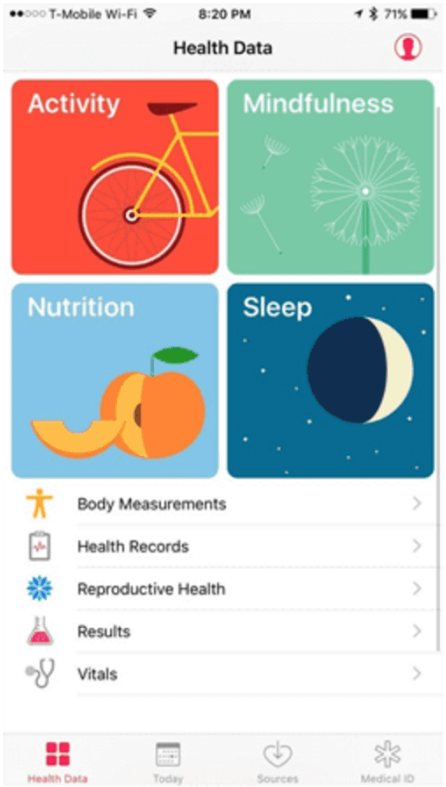
Design Guidelines

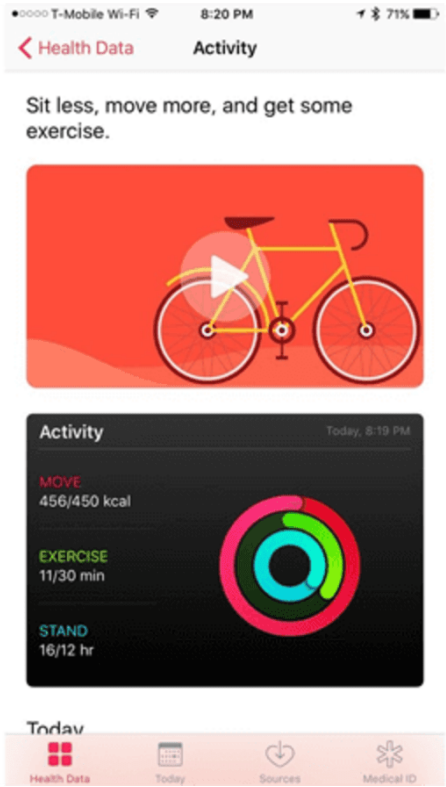
Keep navigation simple

- Ensure navigation feels familiar
- Design good information architecture
- Navigation should not grab user attention
- Ensure users know their location
- Strive for consistency
- Clear path to objectives
- Clear visual hierarchy

Design Guidelines

Keep navigation simple: Communicating the current section of the app





Design Guidelines

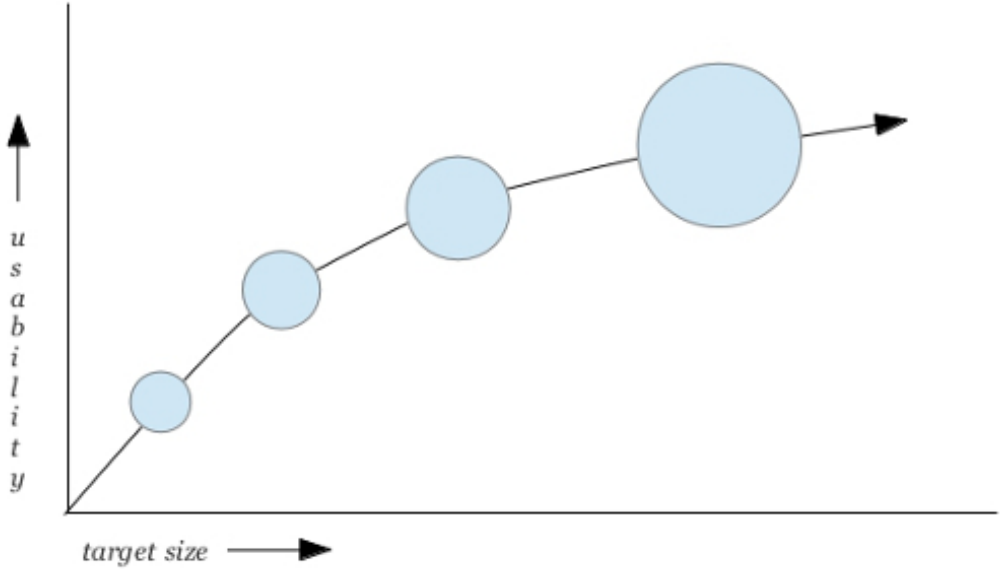
Finger-friendly tap targets

- Around 10x10mm minimum
- Keep good spacing between elements

Design Guidelines

Finger-friendly tap targets

Predicted usability of a button according to its size



Design Guidelines

Finger-friendly tap targets

For mobile take into account the thumb zones

- Consider Fitts only within the operation range of the thumb
- Outside elements require extra effort

Design Guidelines

Progressive disclosure and cognitive load reduction

Cognitive load: amount of brain power required to use the app

- Keep amounts of information (required to remember) low
- Progressively show new features or tasks
- Helps simplifying UI

Design Guidelines

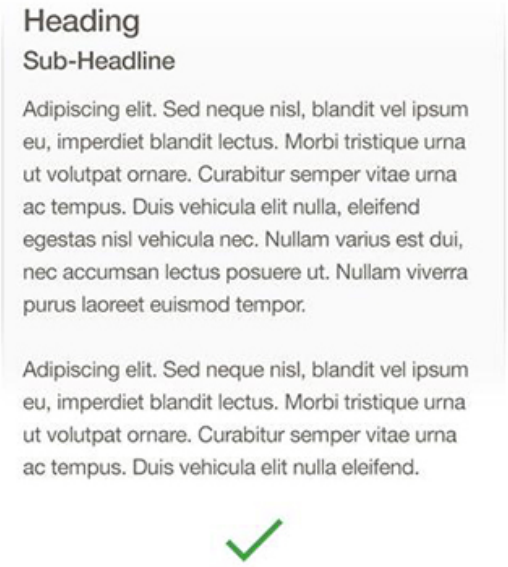
Design Guidelines

Make text legible

- Choose typeface that works well in multiple sizes and weights
- Use legible font sizes: at least 11 points
- Use adequate contrast
- Correct vocabulary

Design Guidelines

Make text legible

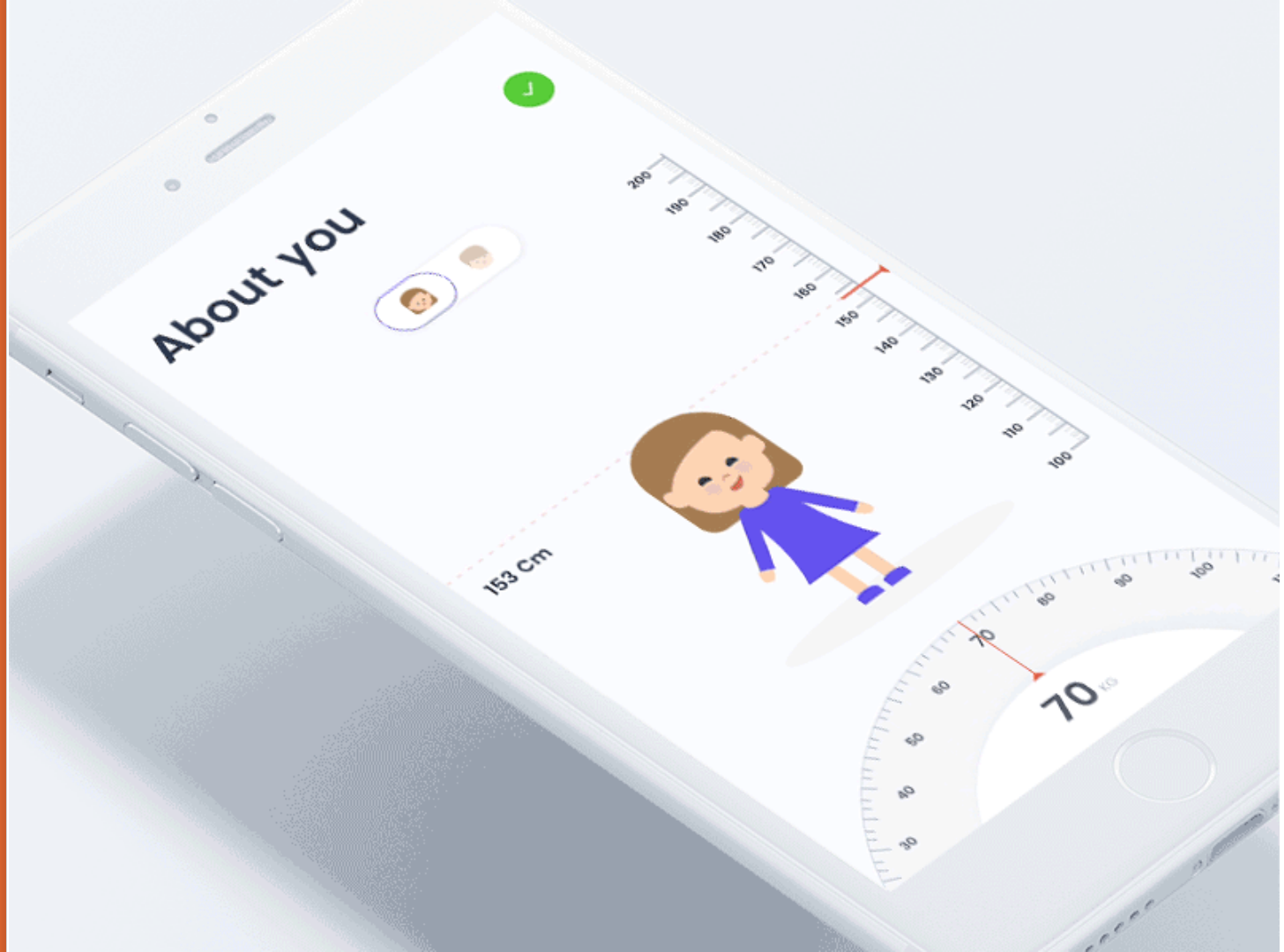


Design Guidelines

Provide feedback on interactions

- Use microinteractions if possible
- Add progress indicators when required

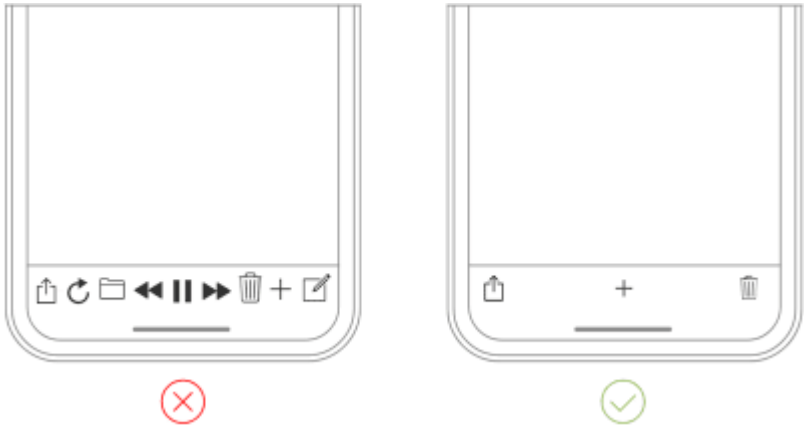
Design Guidelines



Design Guidelines

Reduce clutter

- Keep content to a minimum
- Keep interface elements to a minimum
- Alternatively, use progressive discovery
- Strive for minimalism



Design Guidelines

Reduce user inputs

Simplify procedures: onboarding, logon…

Onboarding:

- Break in multiple steps
- Delay information retrieval
- Inform properly on the needs

Logon:

- Use one-time passwords or QRs when possible

Design Guidelines

Reduce user inputs: recommendations

- Keep forms as short as possible
- Provide input masks
- Use smart features such as autocomplete
- Dynamically validate field values
- Customize the keyboard for the type of entry
- When possible, substitute text entry for options

Design Guidelines

Design Guidelines

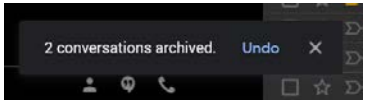
Manage friction

Some alternative to increase the size that improve usability:

- Visual stimulus, undo,..

Some “editing” actions must be dealt with care (send, upload, download, burn, share):

- Possibility of undoing (even temporarily)
  - E. g. Google’s mail



- Highlight relevant elements
  - E.g. Call To Action buttons (they guide users towards your goal conversion)

Design Guidelines

Manage friction

Design with friction to avoid mistakes. Rule of the thumb:

- Make destructive/delicate tasks more difficult
- Increasing the effort to prevent accidents
  - Buttons for non-destructive
  - Slides for destructive

Design Guidelines

Don’t make users wait for content

- Mobile connections are not stable: don’t present blank pages to the user
- Use skeletons, lower resolution images…
- Update as soon as possible

Design Guidelines

Use gestures prudently

Gestures can save space: they do not require visual representations

- Hard to remember and use
- Not currently standarized
- Make use of standard gestures
- Don’t use standard gestures for non-standard tasks

Design Guidelines

Continuous integrated experience

- When possible, synchronize app with desktop interaction (tasks can be continued on different devices)
- Do not replicate exact (web) experience on mobile
- Be consistent with users' expectations: in terms of visual elements, interactions…
- Don't open external web browsers to complete tasks
- Don't create dead end pages

Design Guidelines

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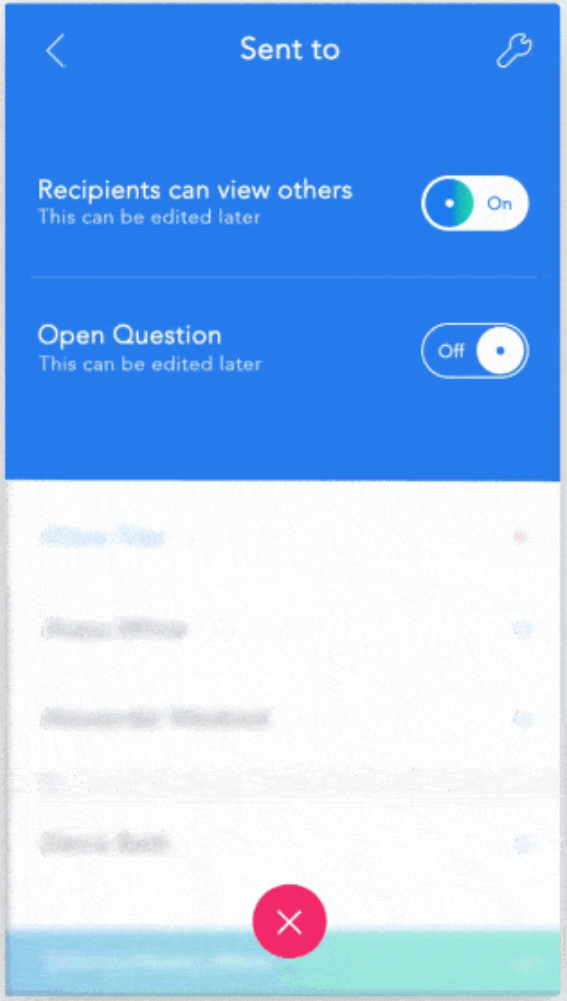
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