



# Design Rationale: Making Design Decisions

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# Design Rationale

From Concept  
To Wireframe

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<https://www.flickr.com/photos/mroach/5196150893>



Design rationale is articulation and **analysis** of  
**tradeoffs** of different **alternatives** to guide design



**Goals:** To understand the design options, their pros and cons, and to make principled decisions about which design options to pursue.

# Questions, Options, Criteria

A feature is represented by multiple possible **options** which answer a particular **question**

**Criteria** help articulate their tradeoffs and guide the choice of which option(s) to go with



# Questions

- Provide structure to the design space
- Help uncover and define alternatives



# Example questions

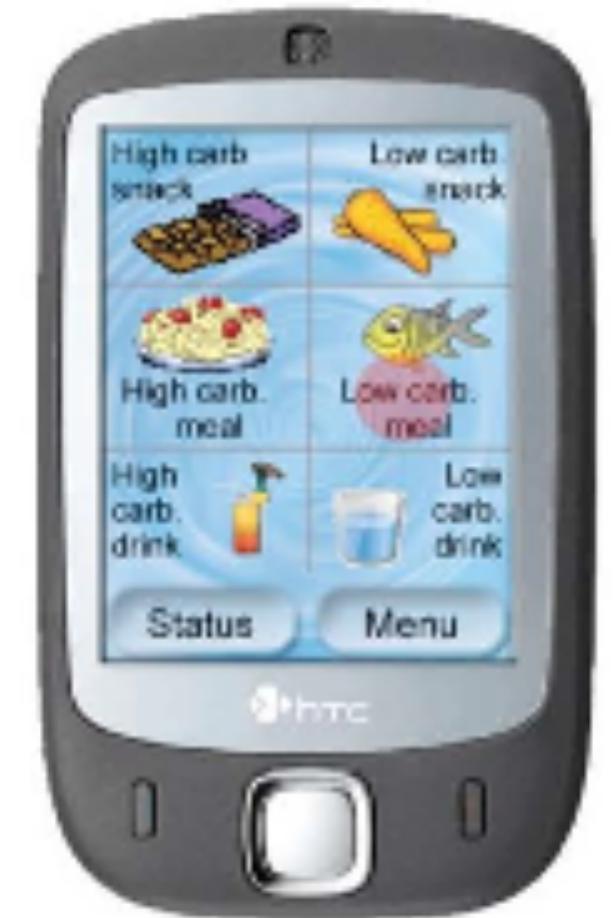
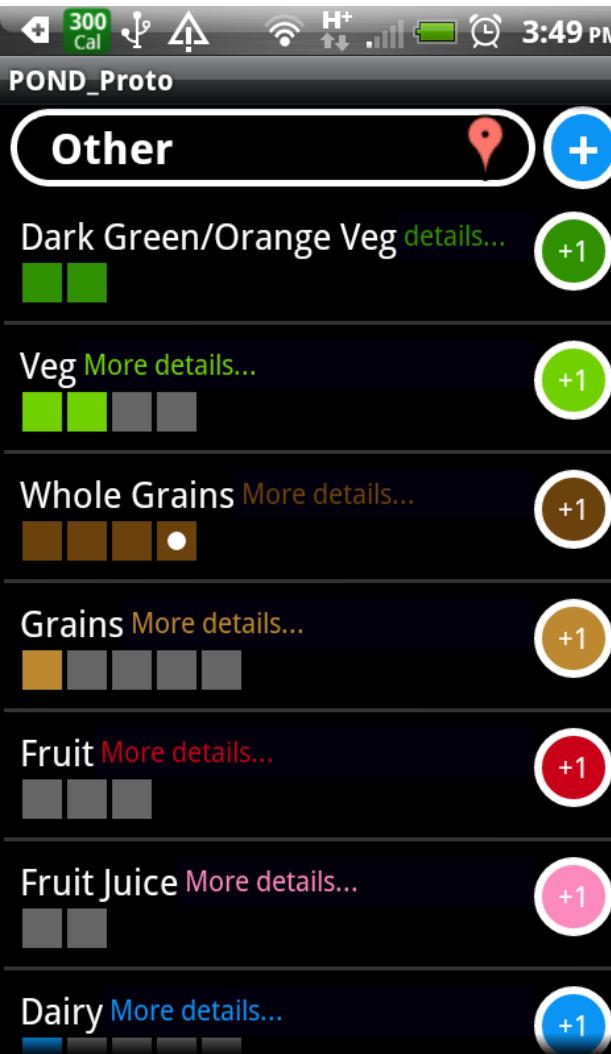
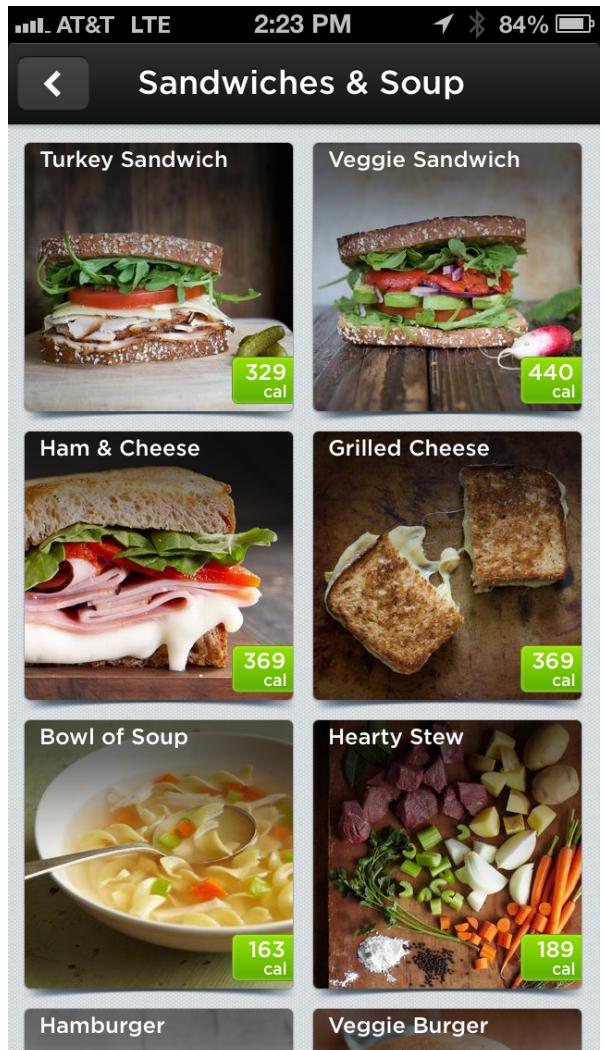
- How should consumed food be entered into the food log?
- What kinds of food should be tracked?
- At what granularity should food be tracked?
- ...



# Options

- Different potential design answers to the *same* question
- How should consumed food be entered into the food log?
  - By finding consumed food in a database
  - By logging its nutritional content (grains, fruits...)
  - By taking a picture of food
  - ...

## Design Rationale



Very little

A lot

# Criteria

- Required and desirable properties the design should satisfy
- Differ in importance and generality
- Help determine reasons for decisions

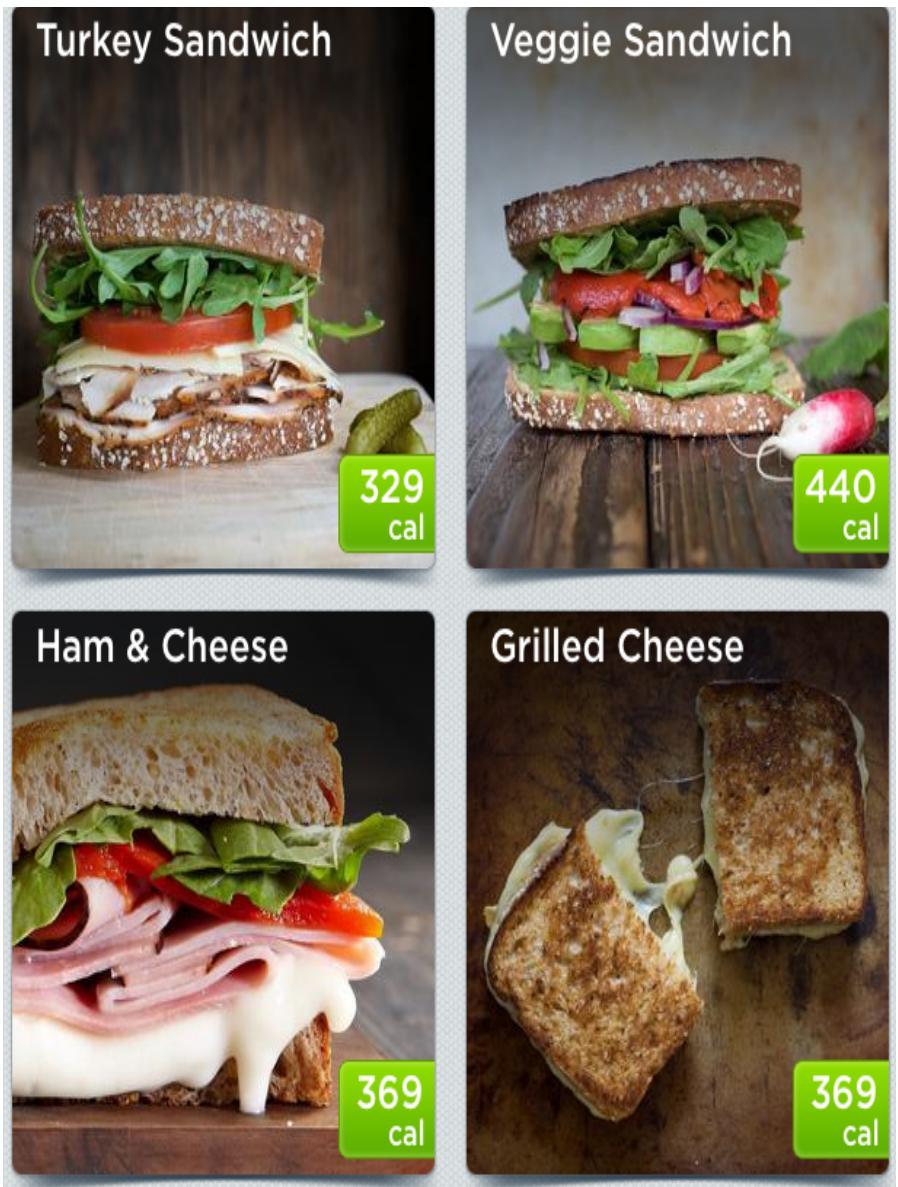


# Sources of criteria

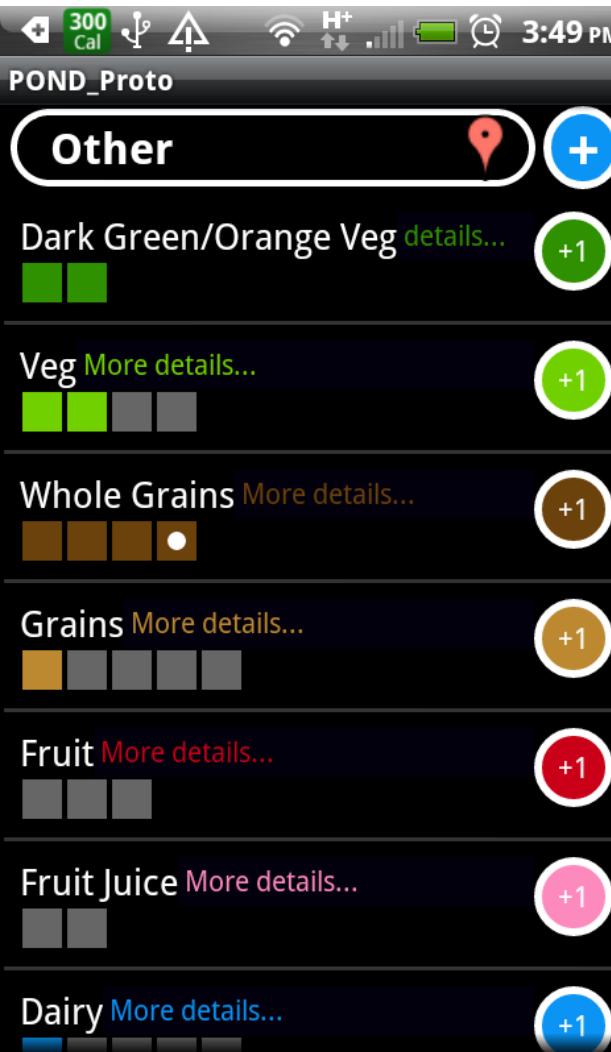
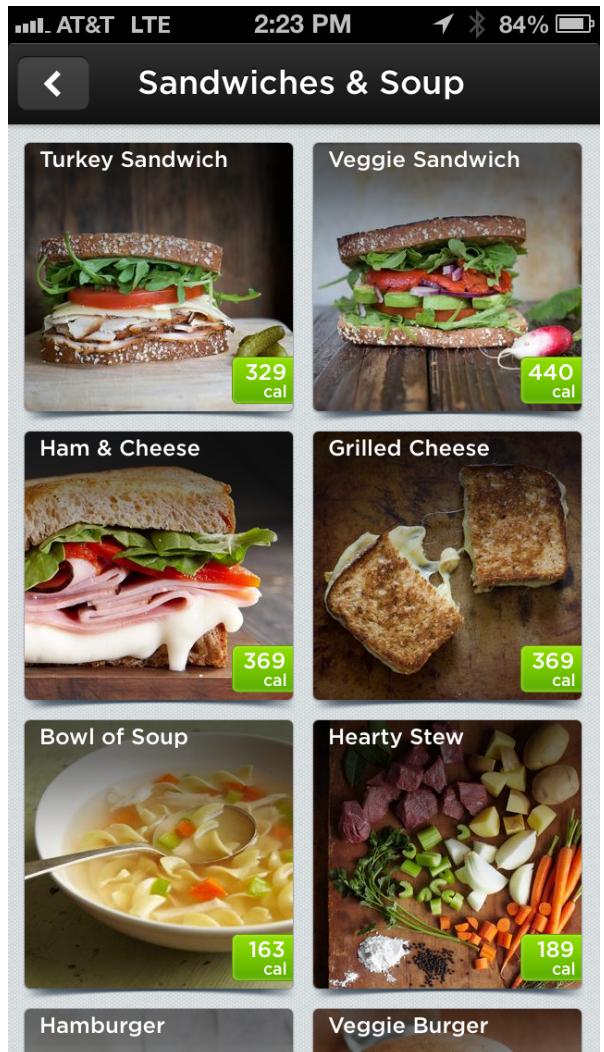
- Formative work with target users
- Usability broadly construed
  - e.g., integration with daily routines, privacy, social acceptability, user expectations, etc.
- Previous studies
- Behavioral theory
- Requirements from other parts of the design

# Food tracking criteria

- can be maintained long-term
- doesn't require deep nutritional knowledge
- fast to use
- easy to use from the beginning
- supports graphing and statistical analysis of data



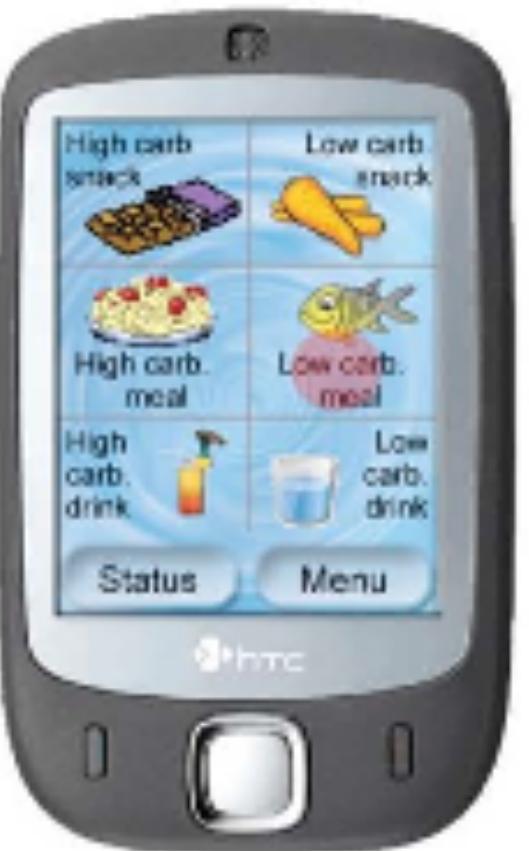
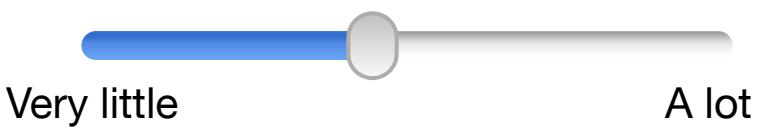
## Design Rationale



Very little

A lot

# Contenders





# Things to consider

- There might not be one clear answer
- It's important to know the most important criteria
- A design decision can affect many other aspects of the project
- Empirical data (from surveys, focus groups, small studies) can inform design decisions



# Summary

- Deciding which option to pursue is a key design activity
- Design decisions need to be intentional and reasoned
- QOC enables designers to make design decisions in a systematic way