Prototyping, Evaluation, & Iteration

Lecture 09 of *Researching People-Centred Design* with Tim Maciag

University of Regina | Faculty of Engineering and Applied Science

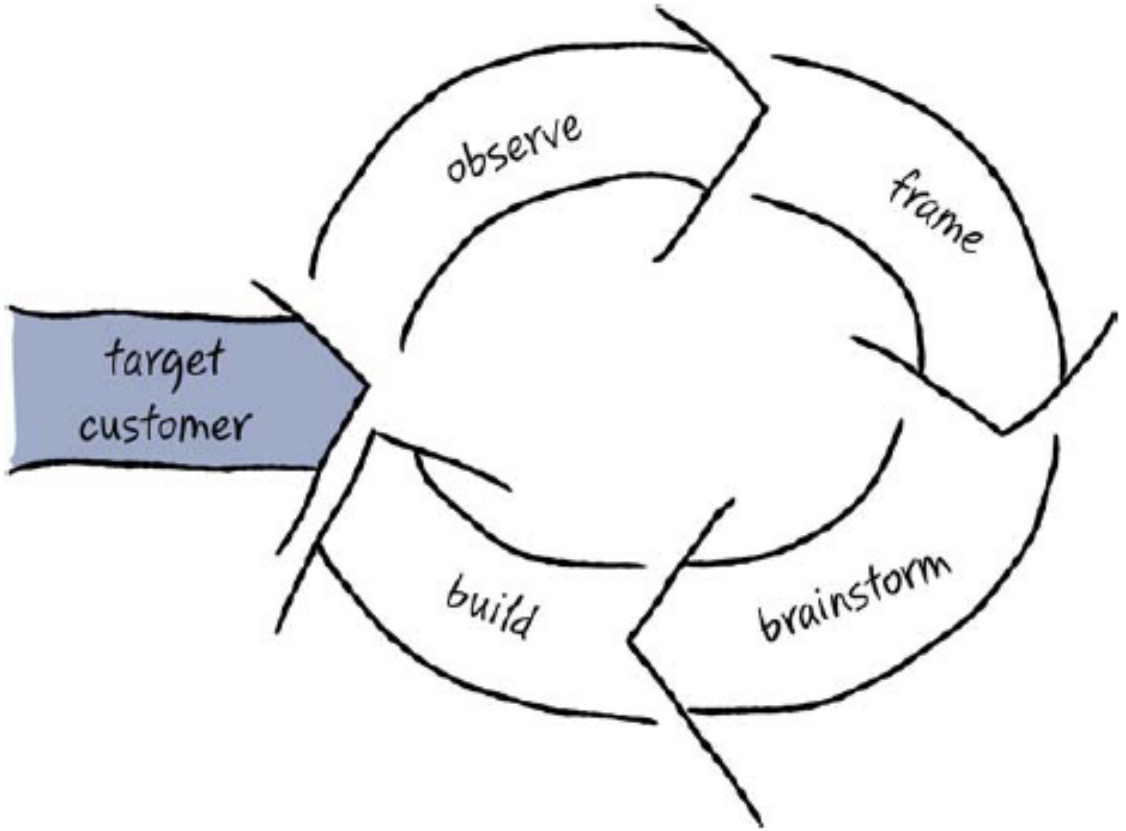
Outline

- Fast Feedback Cycle, up to now
- Experimentation
- Rapid prototyping
- Observing customers and testing
- Research ethics

Fast Feedback Cycle, up to now...

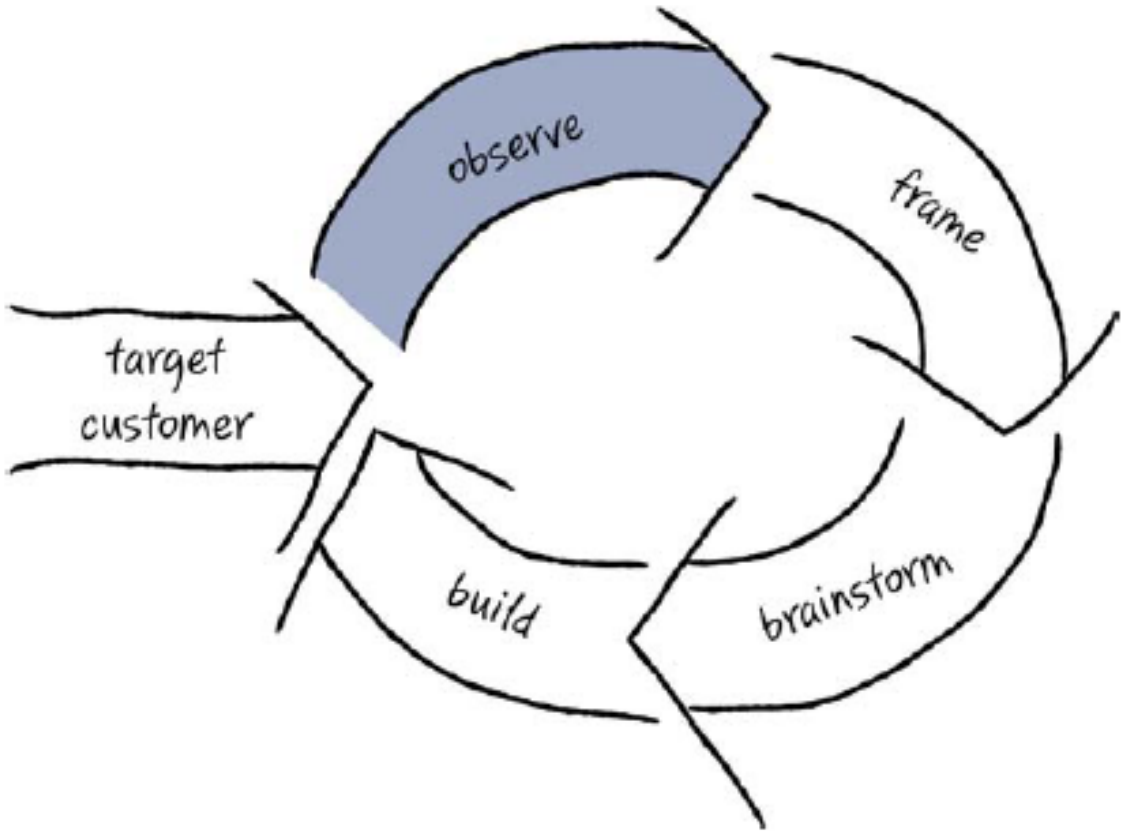
Fast Feedback Cycle, up to now...

- Target customer



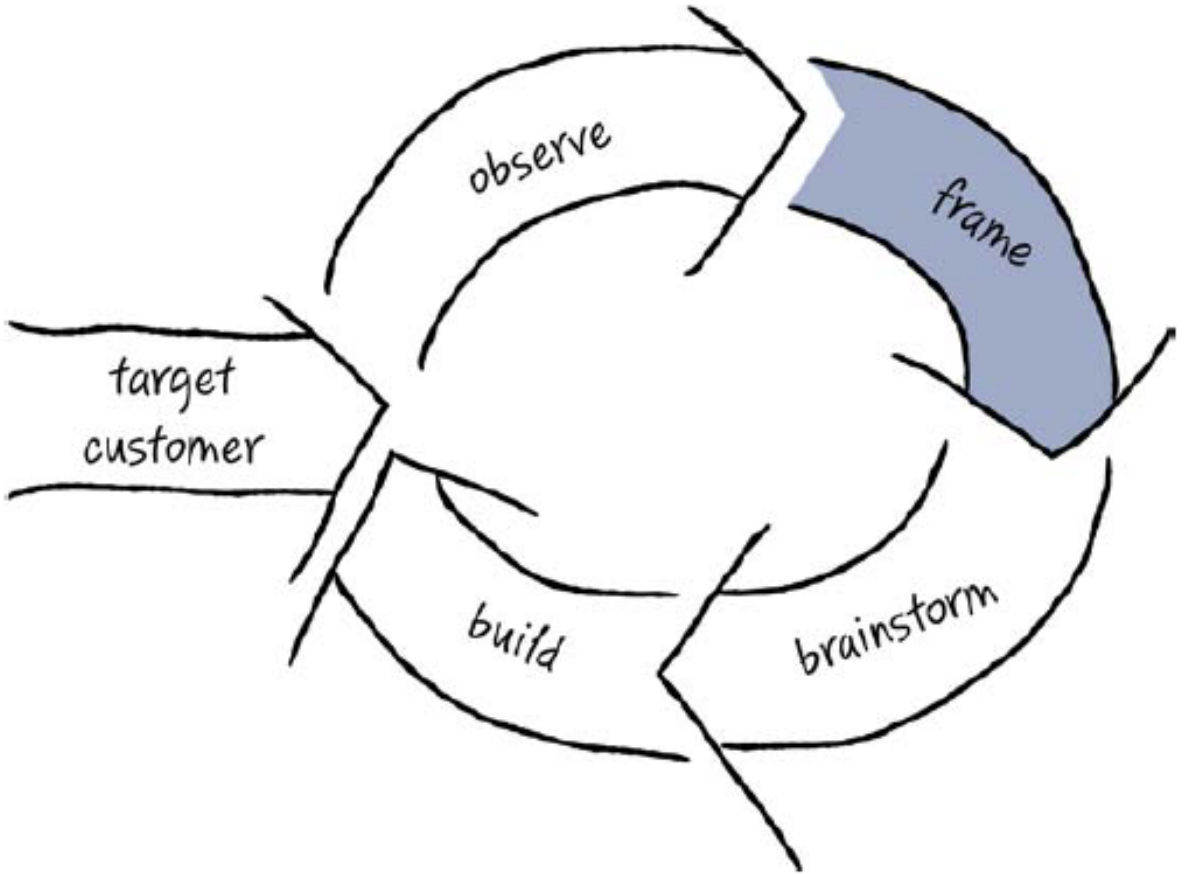
Fast Feedback Cycle, up to now...

- Target customer
- Observe



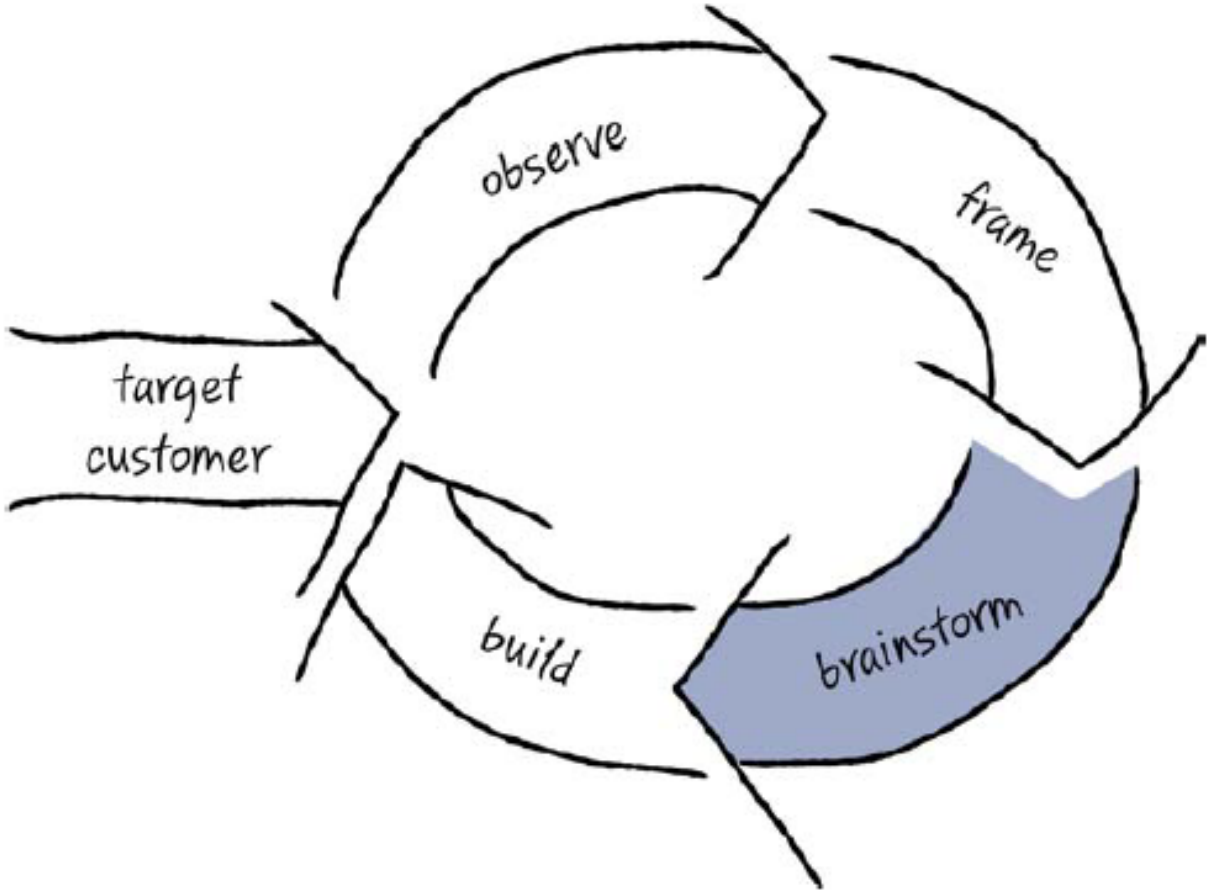
Fast Feedback Cycle, up to now...

- Target customer
- Observe
- Frame



Fast Feedback Cycle, up to now…

- Target customer
- Observe
- Frame
- Brainstorm



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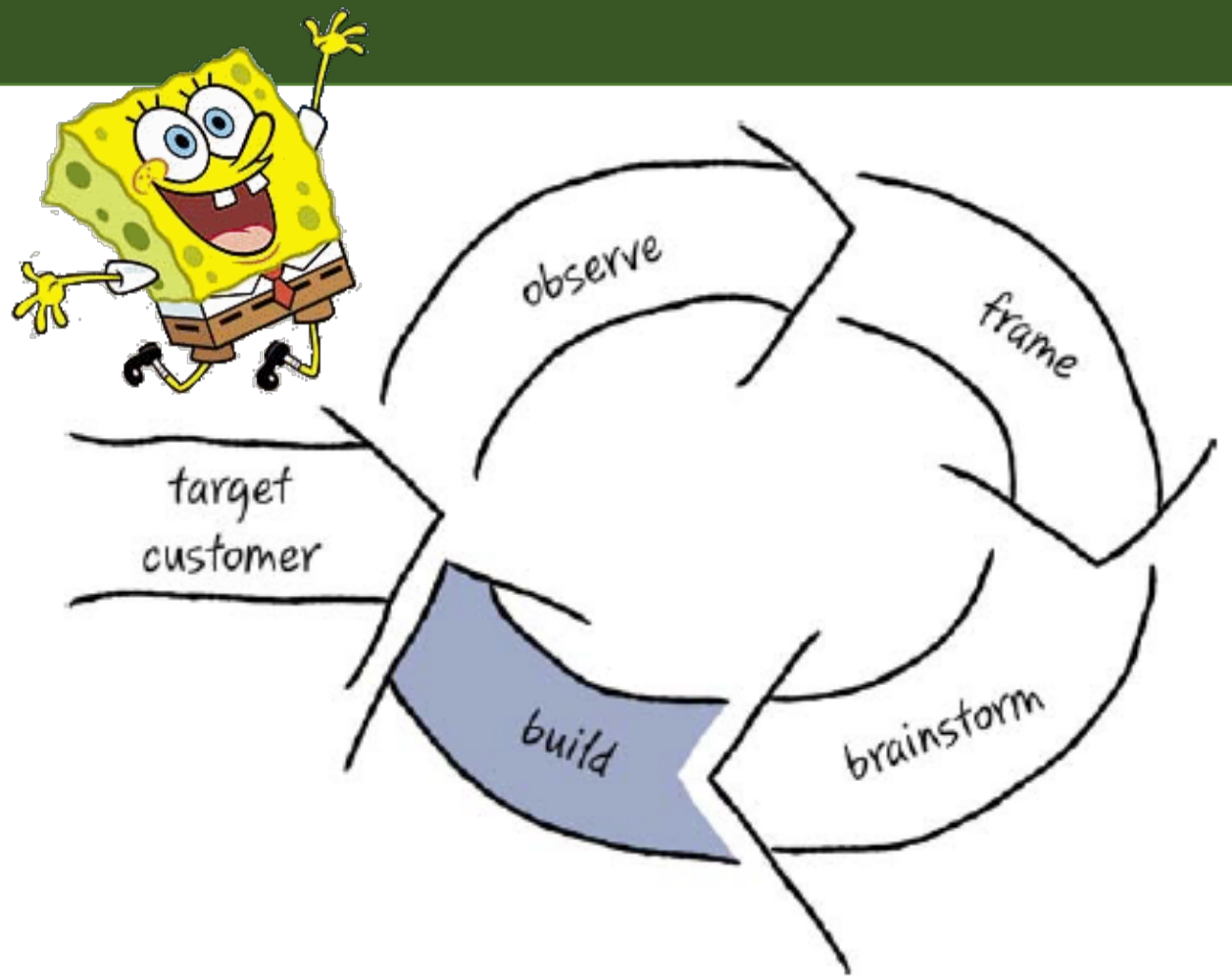

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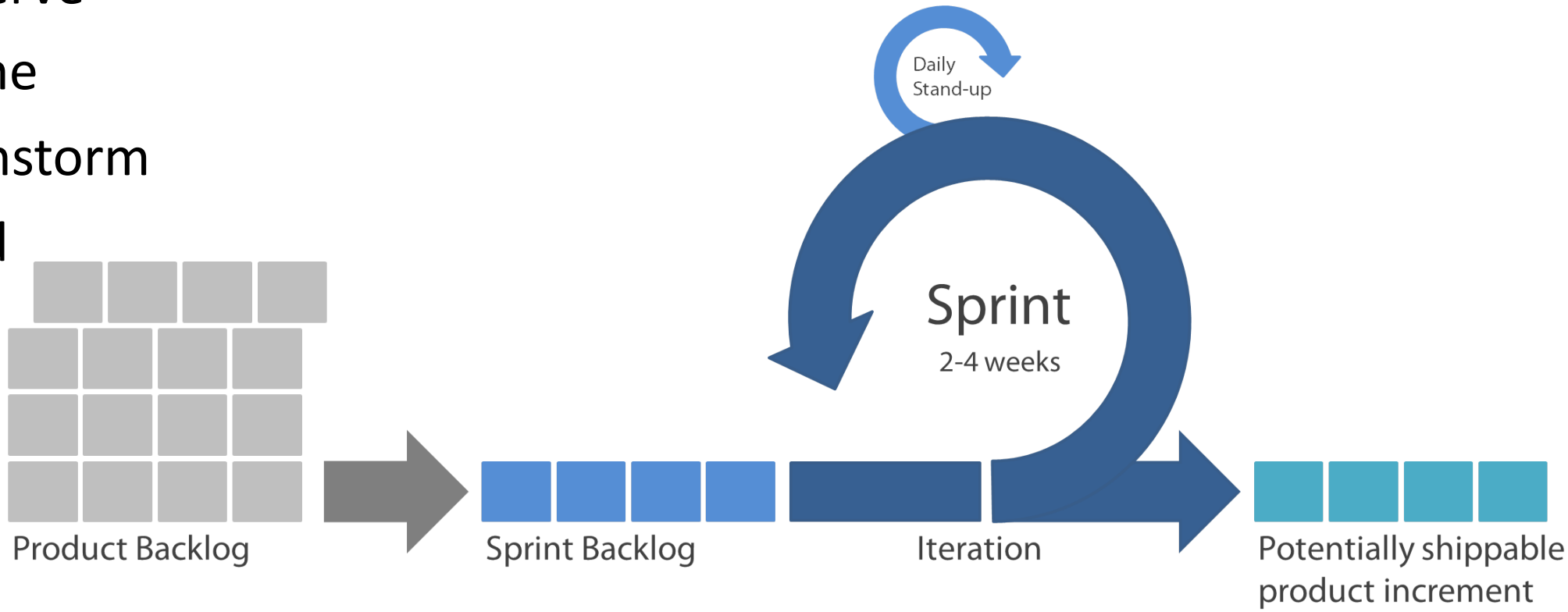

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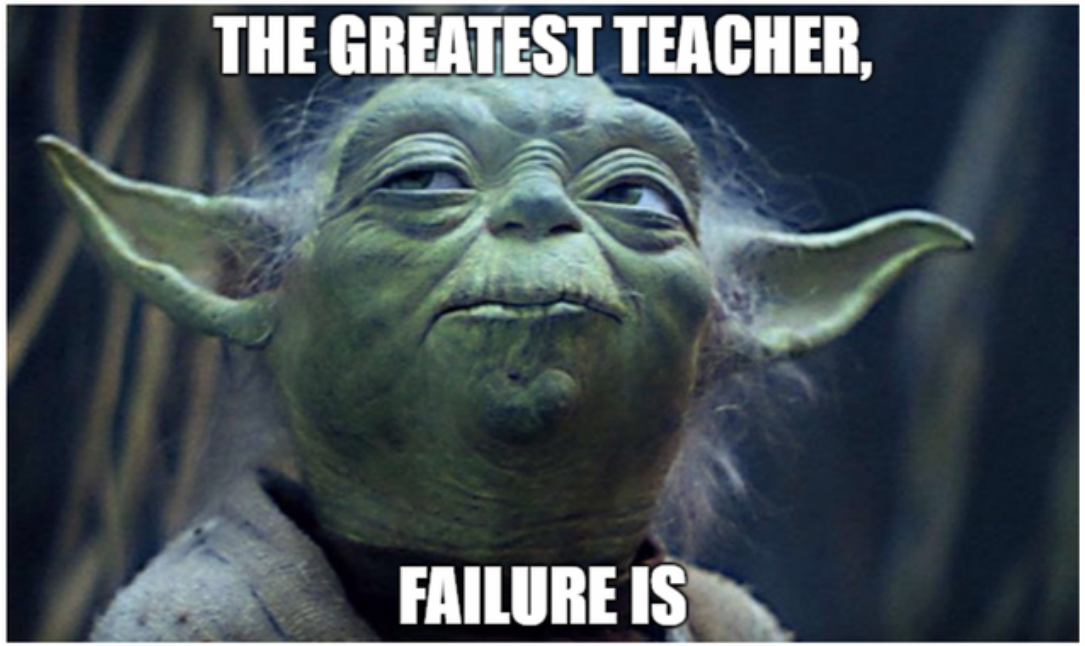
Experimentation

- Failure is ok!



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Experimentation

- Failure is ok!
- Fail-safe vs. safe-fail
  - Fail-Forward fast/PDCA (Lean)
  - Aside: Systems thinking & complexity thinking

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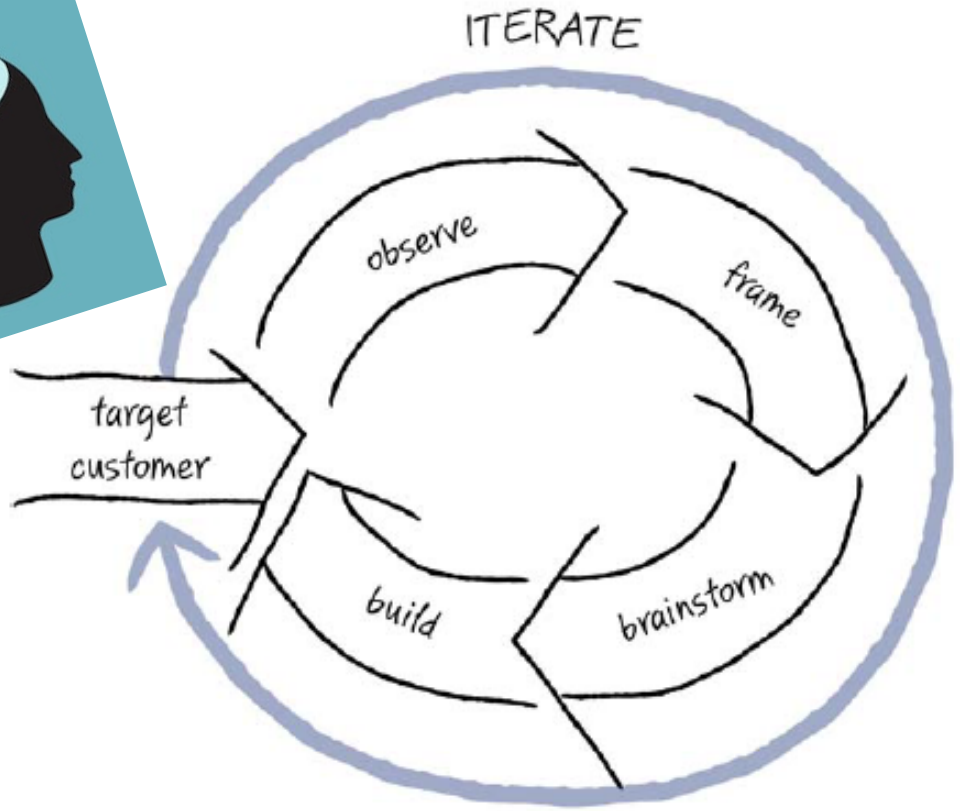
Experimentation

- Failure is ok!
- Fail-safe vs. safe-fail
  - Fail-Forward fast/PDCA (Lean)
  - Aside: Systems thinking & complex thinking
- Making data-driven decisions
  - It's the Fast Feedback Cycle's *jam*
    - All about iteration!
  - Mindshift



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Rapid prototyping

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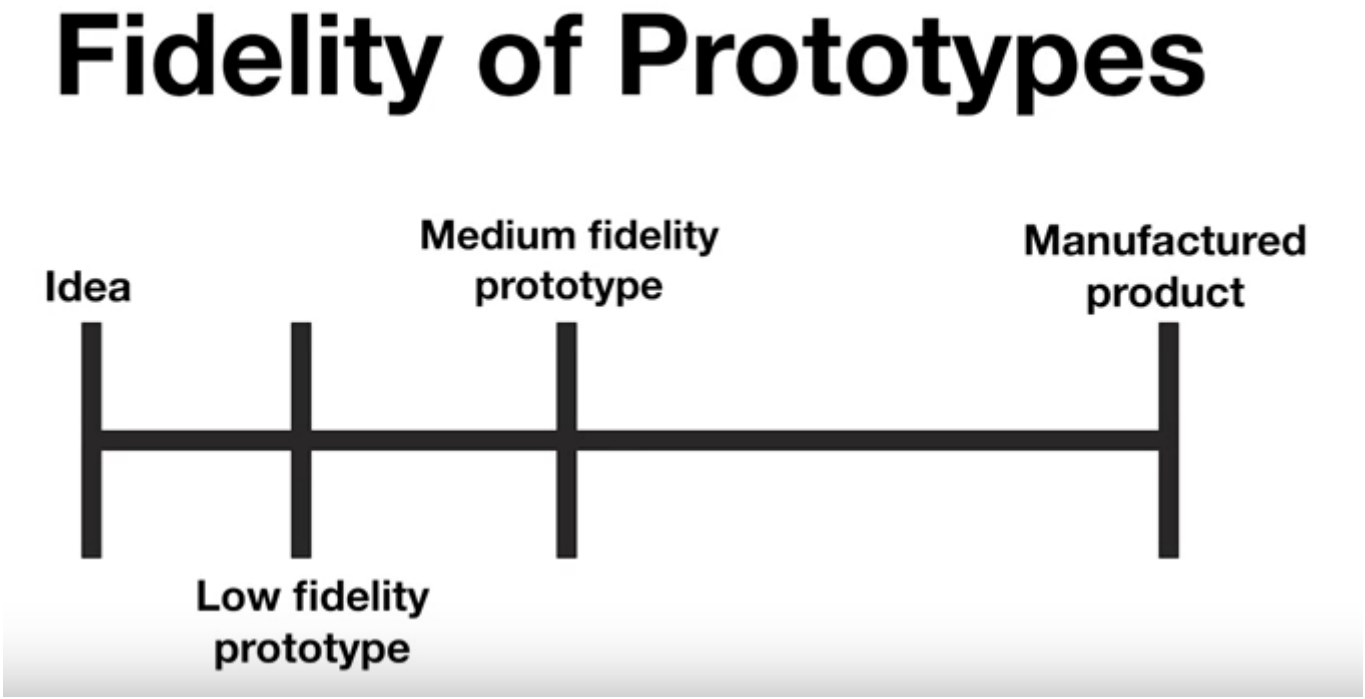

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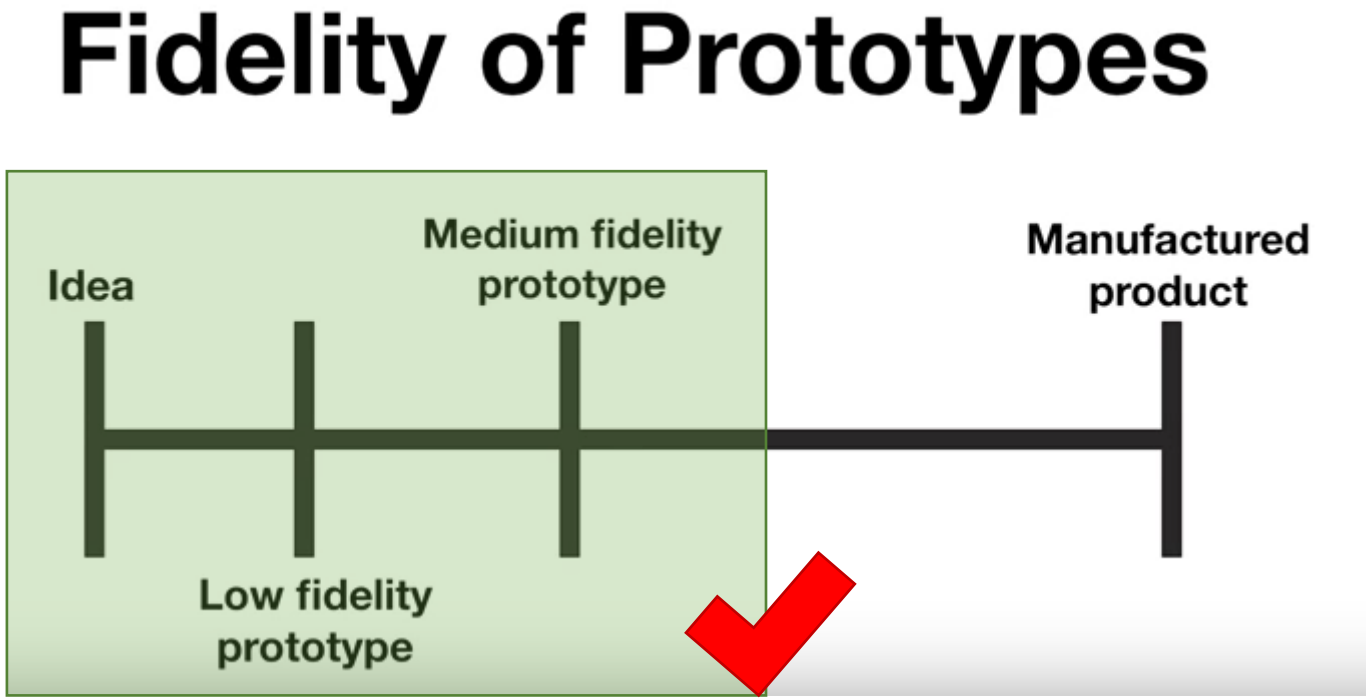
  - “Pretotypes” (#wat)



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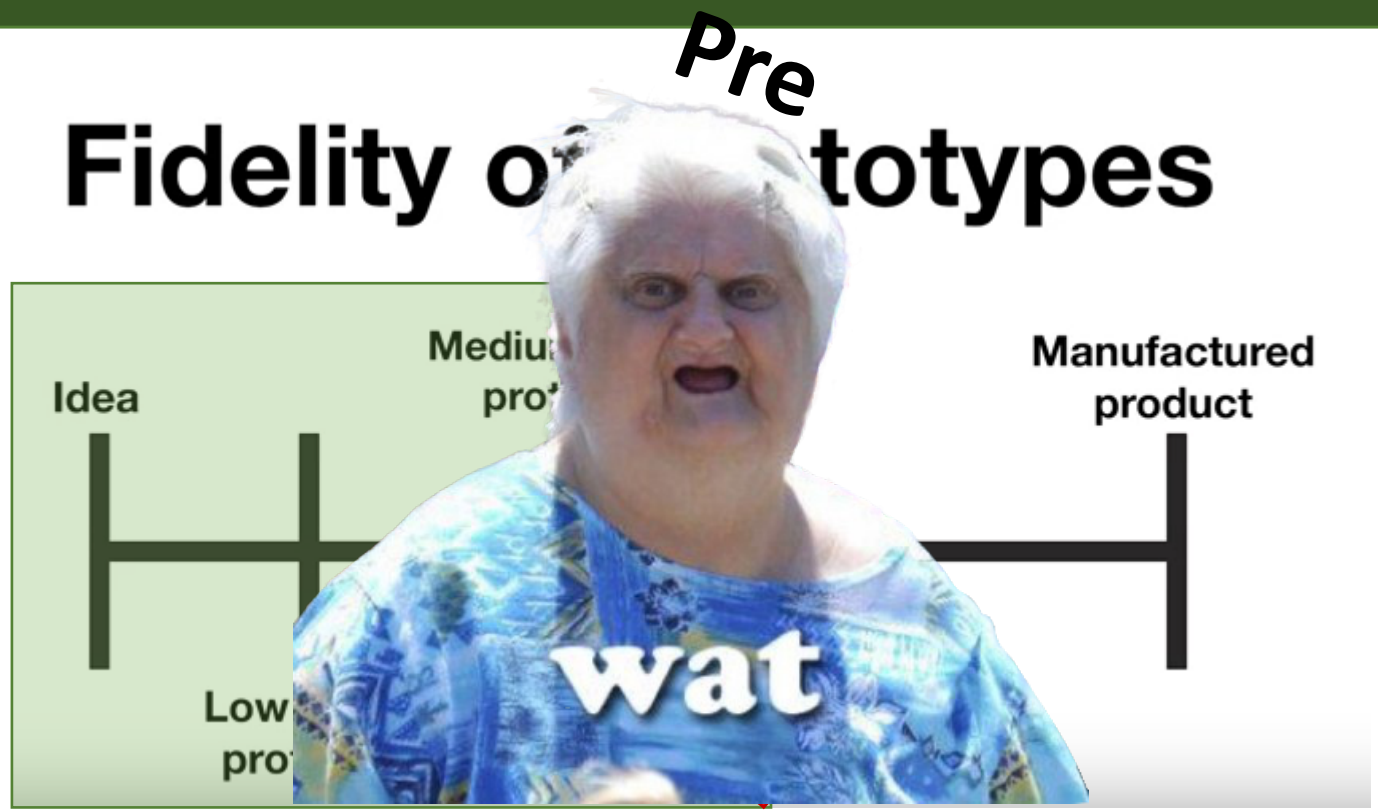
  - Paper
  - Wireframe
  - Wizard of Oz
    - E.g. Netflix gestures
  - Mock-up
  - Partially coded
    - To be avoided?



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- Another mindshift

Next up!

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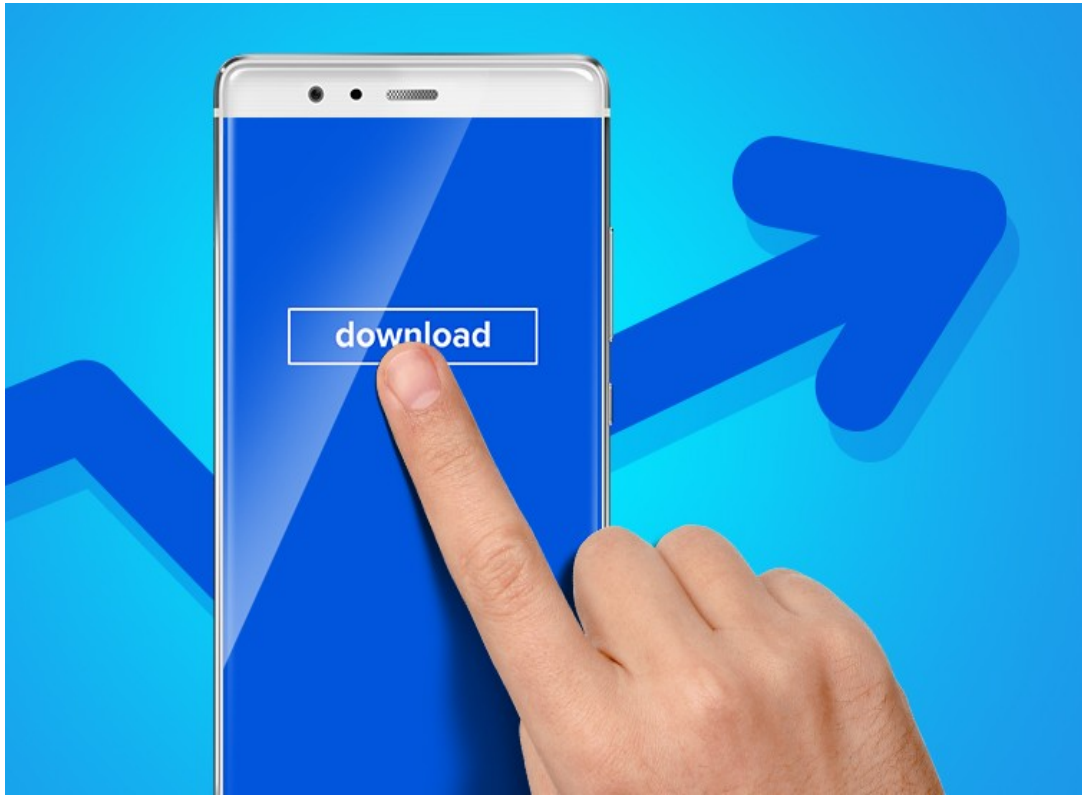

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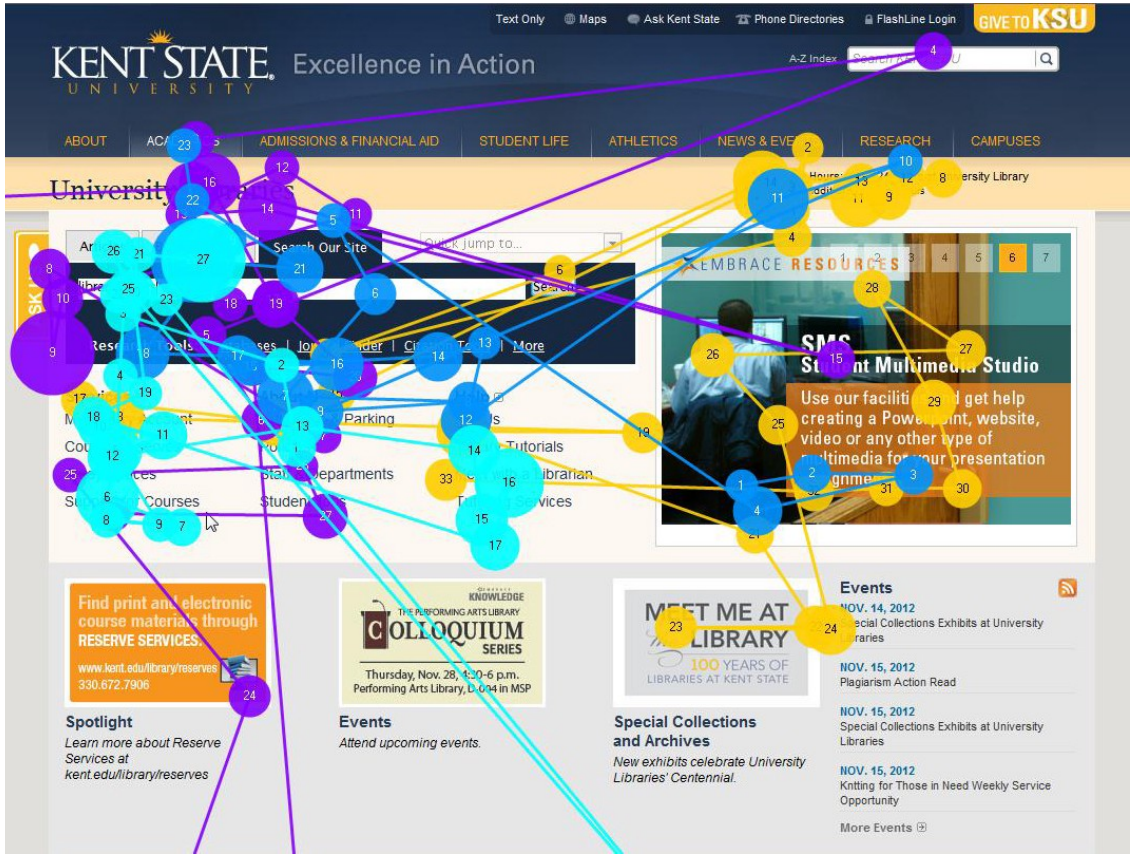

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Likert Scales

Please fill in the number that represents how you feel about the computer software you have been using

I am satisfied with it

1 Strongly Agree | 2 Agree | 3 Neither | 4 Disagree | 5 Strongly Disagree

It is simple to use

1 Strongly Agree | 2 Agree | 3 Neither | 4 Disagree | 5 Strongly Disagree

It is fun to use

1 Strongly Agree | 2 Agree | 3 Neither | 4 Disagree | 5 Strongly Disagree

It does everything I would expect it to do

1 Strongly Agree | 2 Agree | 3 Neither | 4 Disagree | 5 Strongly Disagree

I don't notice any inconsistencies as I use it

1 Strongly Agree | 2 Agree | 3 Neither | 4 Disagree | 5 Strongly Disagree

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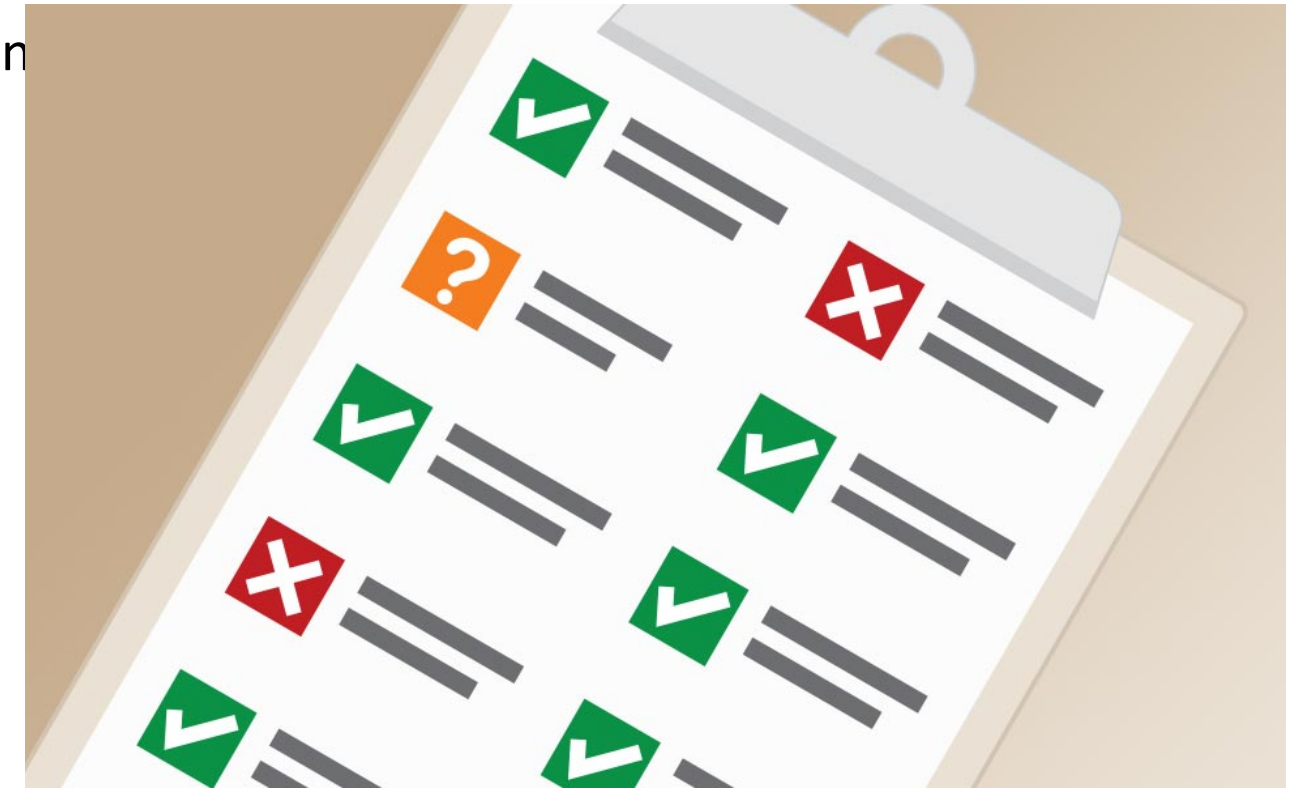

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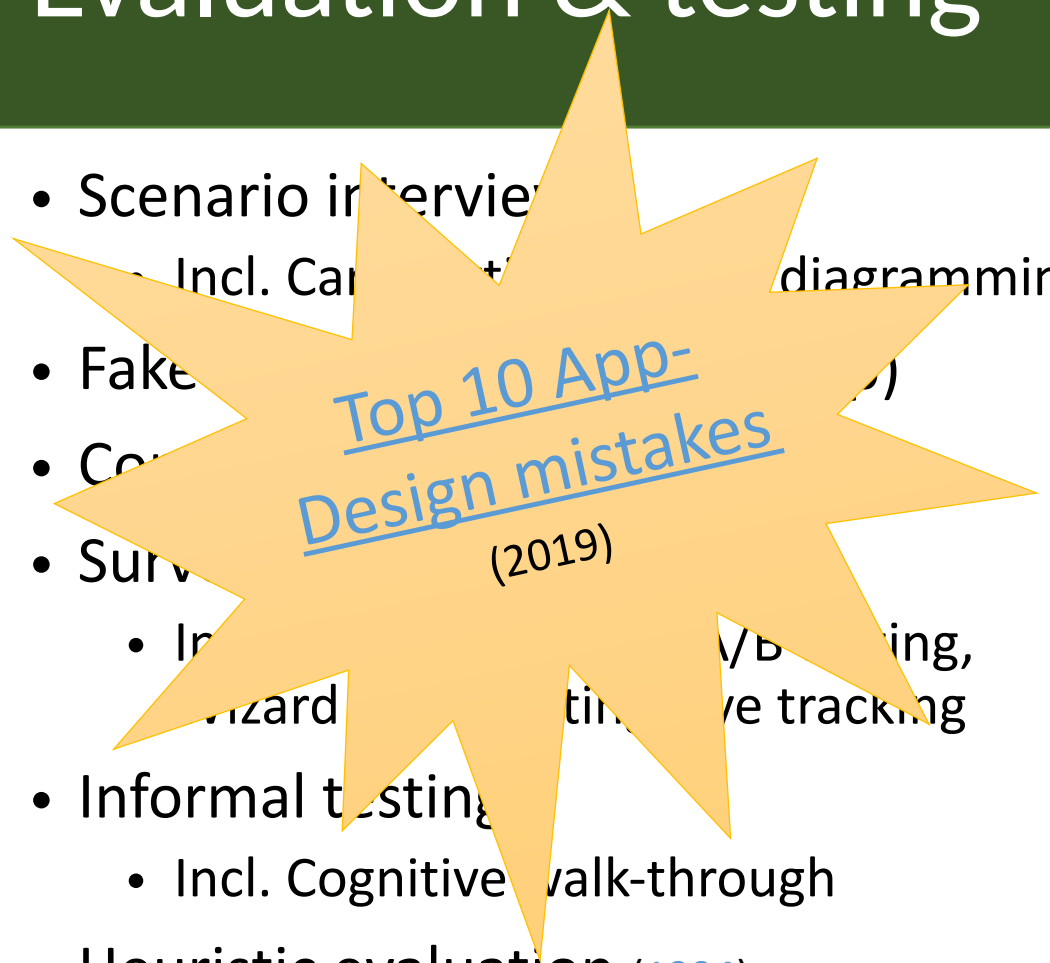

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- Any (university) research that involves humans requires ethics clearance
  - There is some debate otherwise. However,…

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- The importance of informed consent
  - (Usability) Study participants have a right to know how their data will be used
  - Risk – typically low (however, …job related questions)
  - Confidentiality vs anonymity

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  - Confidentiality vs anonymity
- Pre-task questionnaire
  - Demographics (sex, education level, job title, etc.)

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  - There is some debate otherwise. However,…
- Ethics form and documentation
- The importance of informed consent
  - (Usability) Study participants have a right to know how their data will be used
  - Risk – typically low (however, …job related questions)
  - Confidentiality vs anonymity
- Pre-task questionnaire
  - Demographics (sex, education level, job title, etc.)
- Task/activity questions
  - Specific questions that test the functionality of a system

- Uregina ethics forms and assorted info: https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html (Accessed Oct.2018)

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- Example: Tim's PhD Thesis (Initial information gathering section)

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Testing a smaller set of users

- K. Whitenton (NN/g). ‘But you tested with only 5 users!’: Responding to Skepticism About Findings From Small Studies (2019). Online: https://www.nngroup.com/articles/responding-skepticism-small-usability-tests/ (Accessed Mar 2019)

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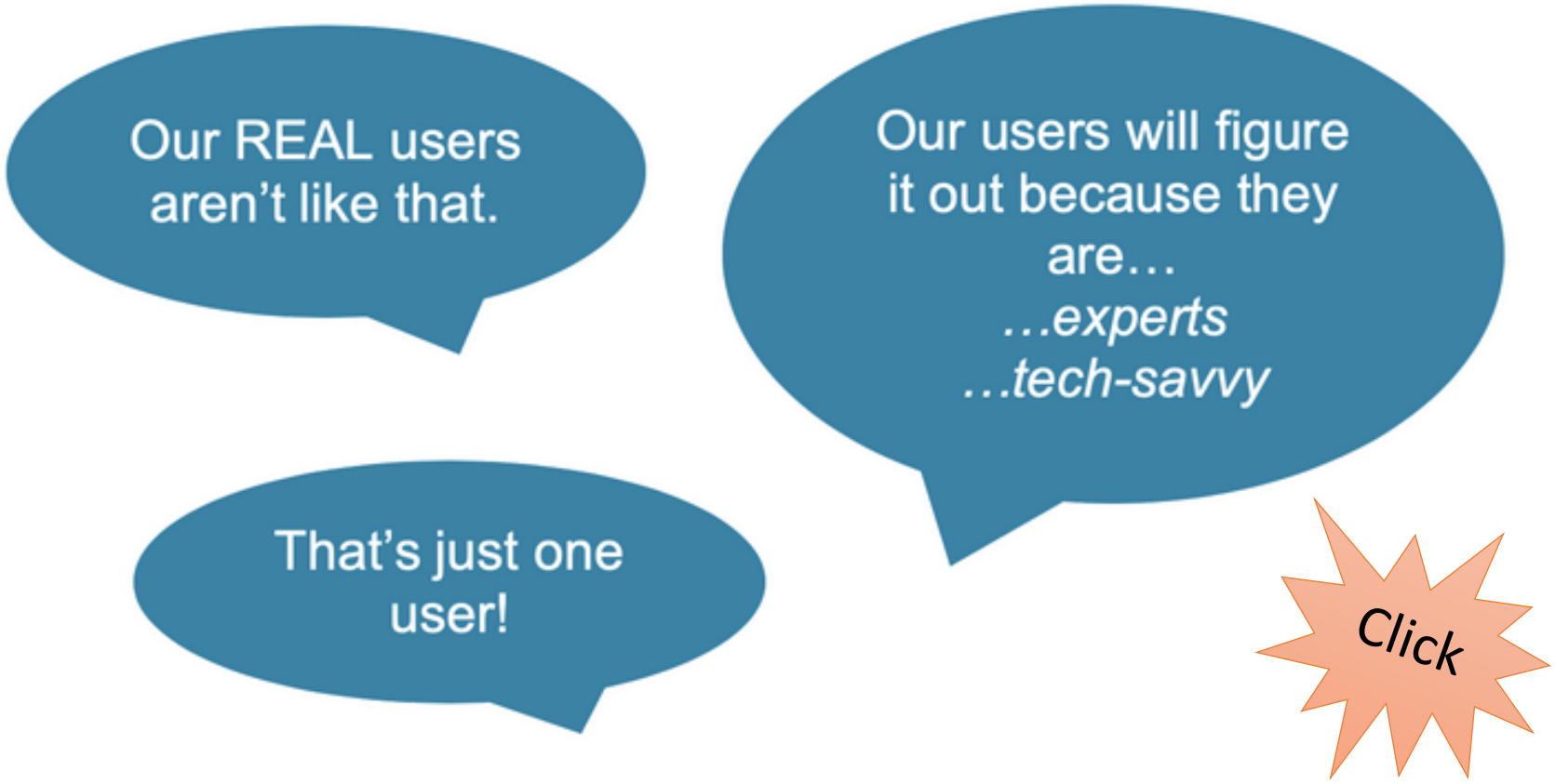

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Questions/discussions

- Safe-fail/fail-safe
- Rapid prototyping
- Heuristic evaluation
- Ethics
- Usability testing

Image refs

- Bob, https://i.gifer.com/6Sn6.gif
- Scrum, https://github.com/bounswe/bounswe2016group6/wiki/Scrum:-A-new-perspective-on-agile-development
- Failure, https://steemitimages.com/p/3W72119s5BjWMGm4Xa2MvD5AT2bJsSA8F9WeC71v1s1fKfGkK9mMKuc3LcvF4KigbWg9UsrpEPG4XZ8wjr7tHHVGLAGtHBW9XPTSVod7uC1p5iSQbyjckn?format=match&mode=fit&width=640
- Fail forward fast, https://www.zachdechant.com/wp-content/uploads/2018/11/try.jpg
- Mindshift, https://image.shutterstock.com/image-vector/thinking-shift-leverneutrally-positioned-brain-260nw-762424558.jpg
- WAT, https://i.imgur.com/sZvQ5mg.jpg
- Balsamiq, https://balsamiq.com/wireframes/
- Kramer, https://i.gifer.com/NcVa.gif
- Eye tracking, https://cdn-images-1.medium.com/max/1203/1*UdQoOLCiHzKyHyLhe2KpoA.jpeg
- Fake homepage, http://applianceus.com/wp-content/uploads/2016/05/buy-app-downloads-1024x512-1-1024x512.jpg
- Cogwalk, https://www.citizendeveloper.com/wp-content/uploads/2018/02/happy-developers-1.png
- Checklist, https://lhba.org/wp-content/uploads/2018/06/checklist-blog.jpg