Usability Testing

LP IAM : 2020-2021

Commonality of usability definitions

- A *user* is involved
- That user is *doing* something
- That user is doing something with a *product, system, or other thing.*

User Centered Design

- Focus on users' needs, tasks, and goals
- Invest in initial research and requirements
  - Identify your target audience and observe them
  - Let users define product requirements
- Iterative design process
- Observe real target users using the system

What is usability testing?

- is a technique used to evaluate a product by testing it on representative users.

- test users will try to complete typical tasks while observers watch, listen and takes notes.

Can usability be measured?

- Using usability metrics
- Most common metrics:
- Effectiveness – being able to complete a task
- Efficiency – amount of effort required to complete a task
- Satisfaction – degree to which the user is happy with his/her experience

5 E's of usability

- **Effective:** How completely and accurately the work or experience is completed or goals reached
- **Efficient**: How quickly this work can be completed
- **Engaging**: How pleasant and satisfying it is to use
- **Error Tolerant:** How well the product prevents errors and can help the user recover from mistakes
- **Easy to Learn:** How well the product supports both the initial and continued learning

When to usability test
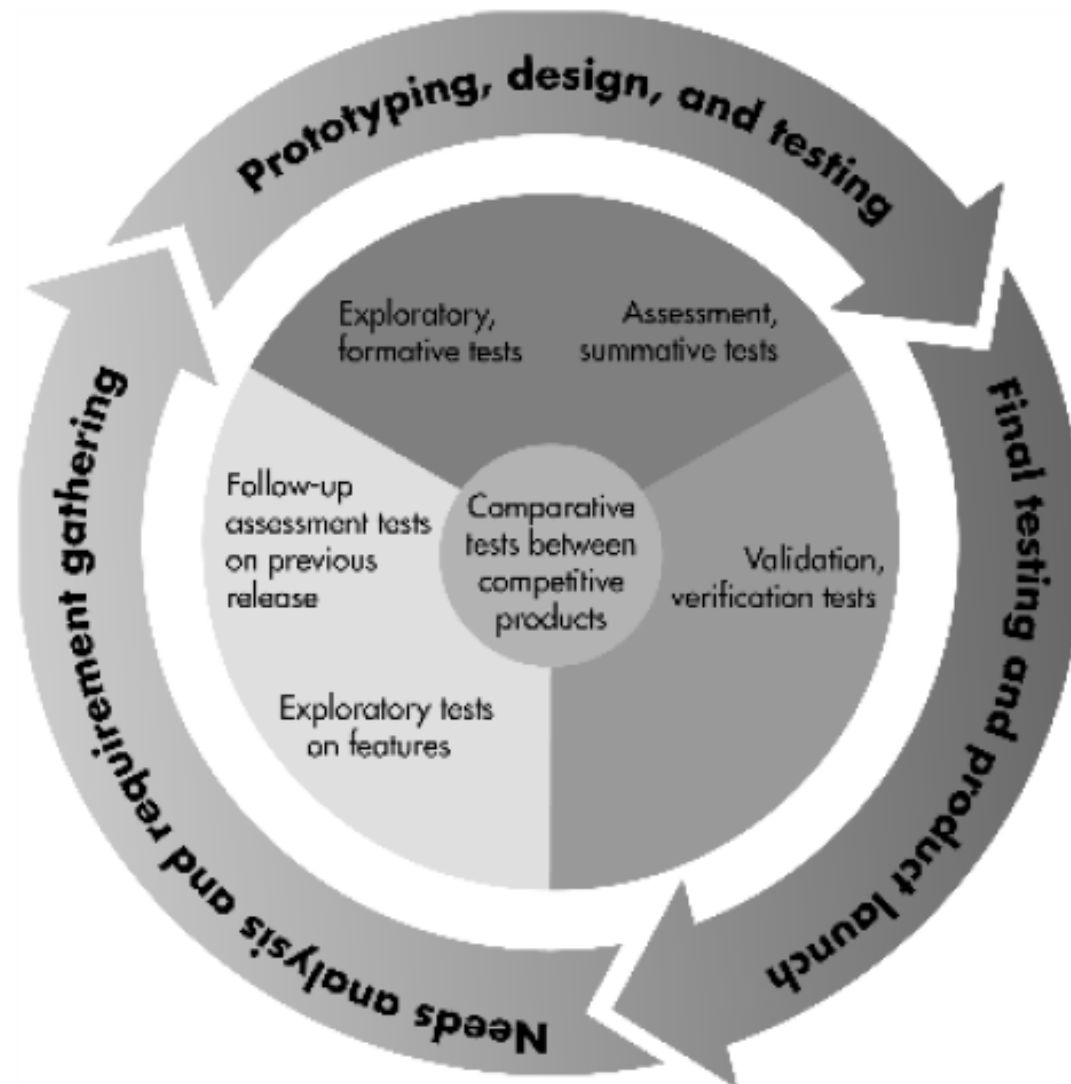
Agile / Usability Testing process
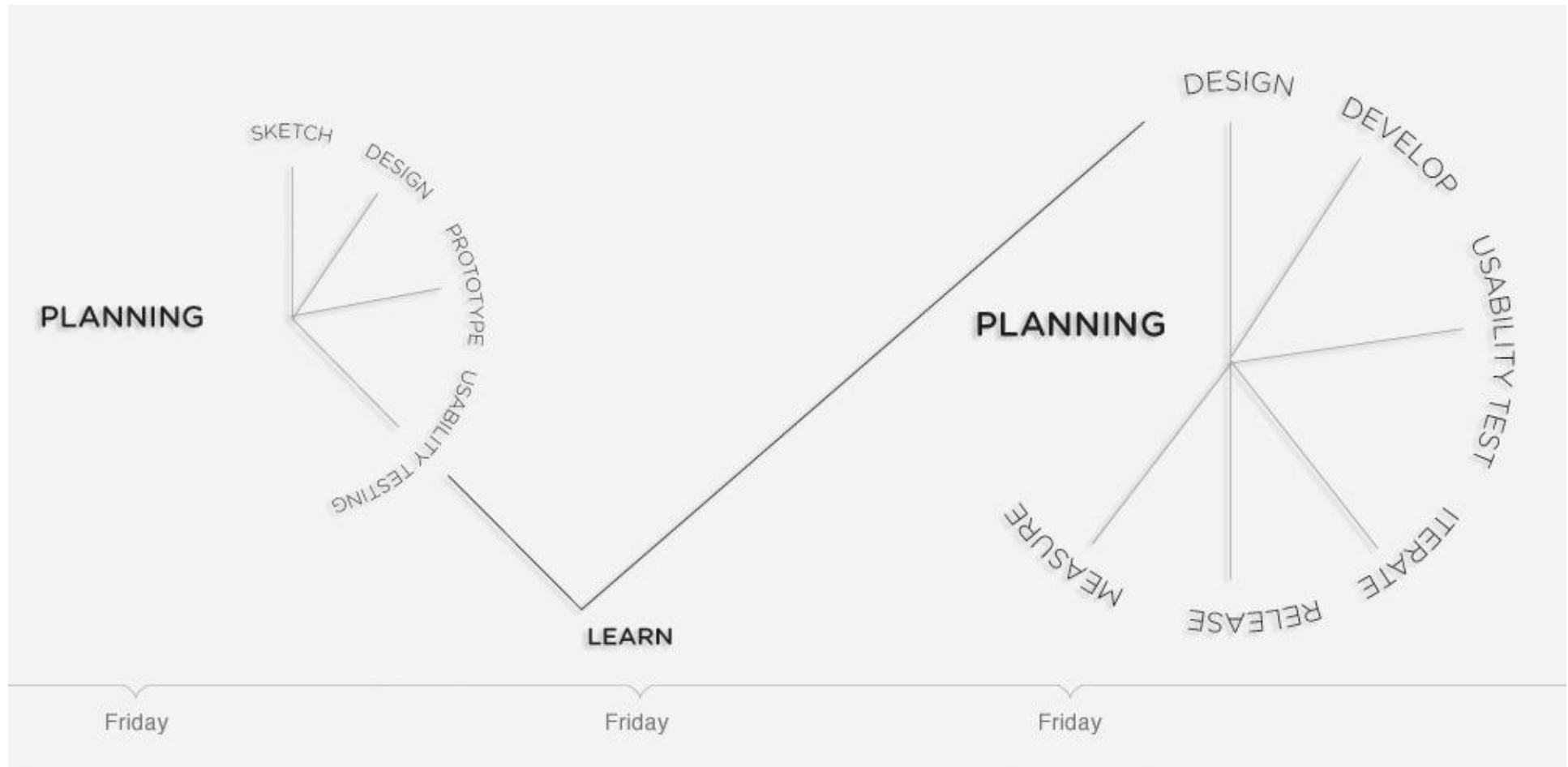
Usability test types

Exploratory Research	Benchmark Metrics	Diagnostic Evaluation	Summative Testing
Understand users and context	Establish baseline metrics	Find and fix problems	Measure success of new design
Early in project	Early in project	During design	At end of process
How often: once	How often: Once	Done iteratively	How often: Once
			:
• 6-12+ users	• 8-24 users	• 4-8 users	• 6-12+ users
• Blend of interview and observation	• Focus on metrics for time, failures, etc.	• Less formal	• More formal
• May use competitive products	• Tests current process or product	• Focus on qualitative data	• Metrics based on usability goals
			• Users unassisted

Usability testing : why ?

- Identify and rectify usability deficiencies prior to product release
  - Intent to create products that:
    - Are useful to and valued by target audience
    - Are easy to learn
    - Help people to be efficient and effective
    - Are satisfying (delightful) to use
- Eliminating design problems and frustration
  - Demonstrate that goals and priorities of customer are important
  - Release a product that customers find useful, effective, efficient and satisfying
- Improving profitability
  - Minimizing the cost of service and support calls
  - Increasing sales and the probability of repeat sales
  - Acquiring a competitive edge
  - Minimizing the risk

Usability testing : who , how many ?

- "Many usability tests are worthless. Researchers recruit the wrong kind of participants, test the wrong kind of tasks, put too much weight on people's opinions, and expect participants to generate design solutions."

Test participants

- Participant's background and abilities should be representative of your product's intended user
- ***user profile*** – person with the relevant behaviour, skills, and knowledge who will use your product.
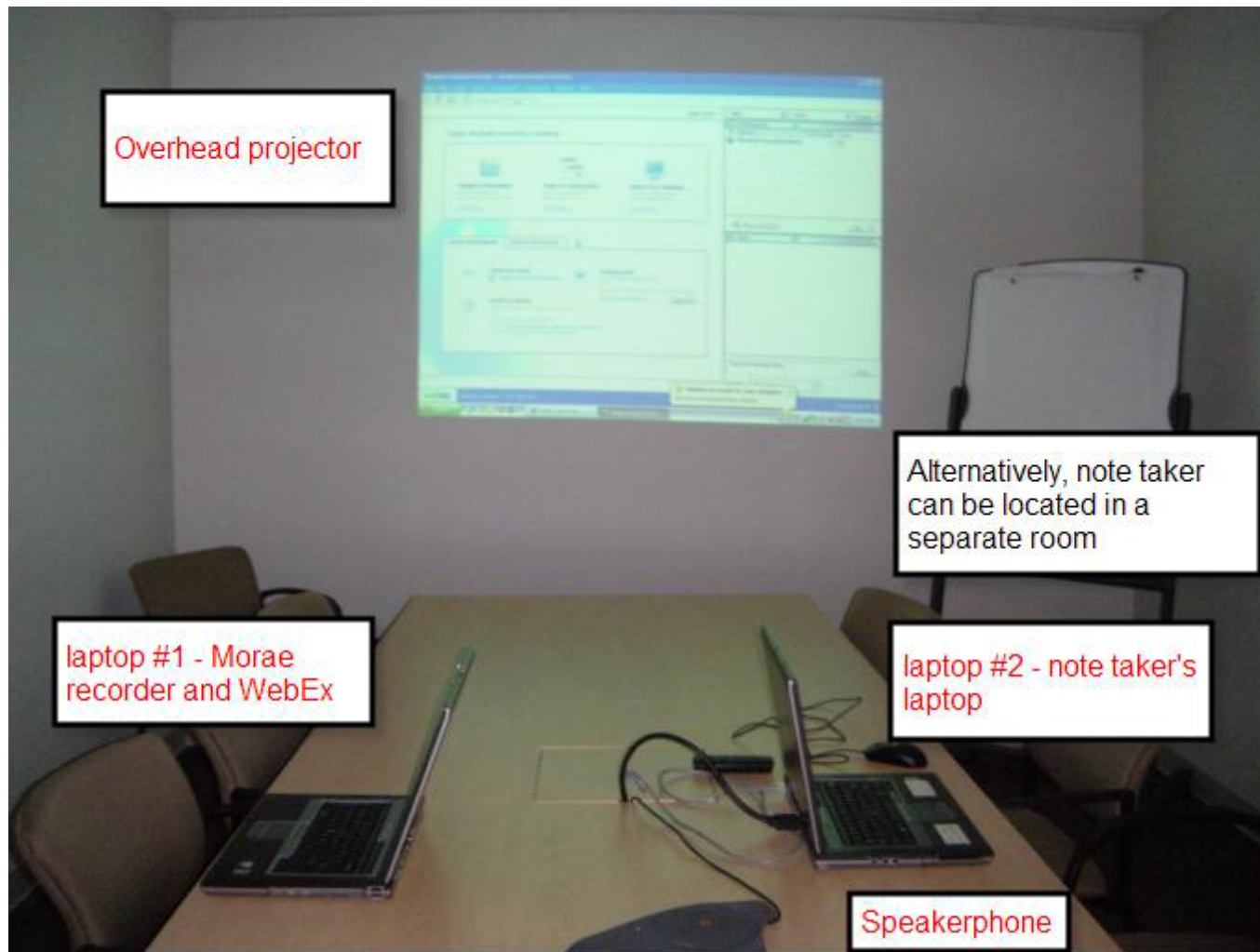
Testing locations

- Lab
- Office
- café
- remote testing

# Usability lab

Informal usability testing

Remote testing requirements

- Moderator / Note-taker
  - Screen sharing: WebEx or web conferencing tool
  - Recording: Camtasia
  - Speakerphone
- Participant
  - High speed internet access
  - Speakerphone or headset telephone
- for more info, go to Remote Testing Presentation http://bit.ly/7RYwSO

Benefits of prototyping

- Prototyping is generative.
- Communicates using show and tell
- Reduces misinterpretation
- saves time, effort and money
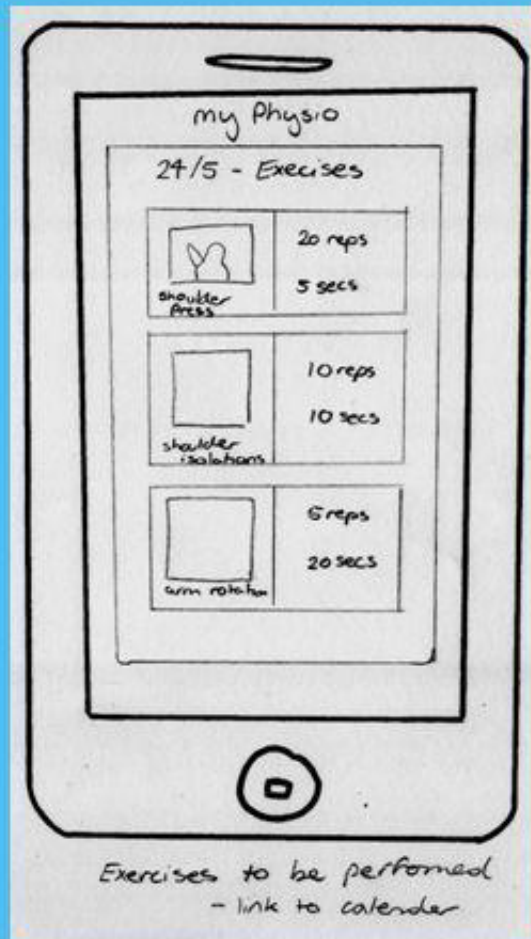- creates a feedback loop, which ultimately reduces risk
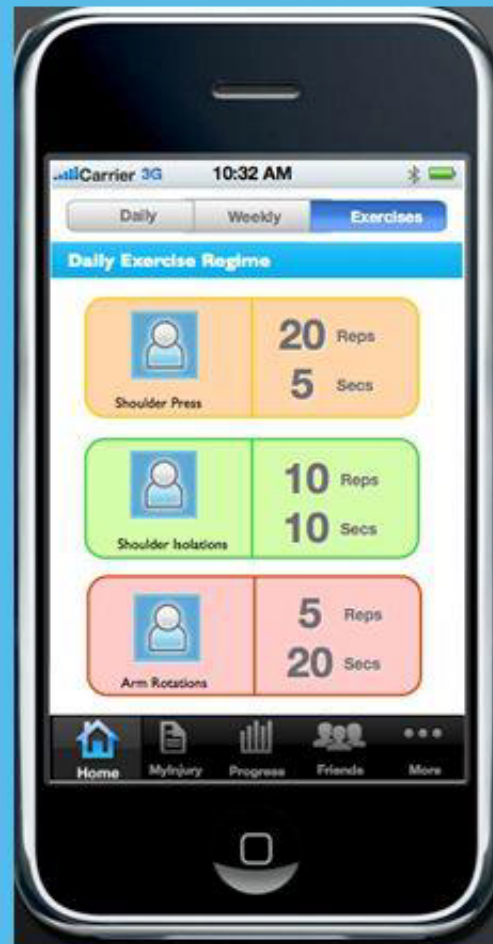
Dimensions of fidelity
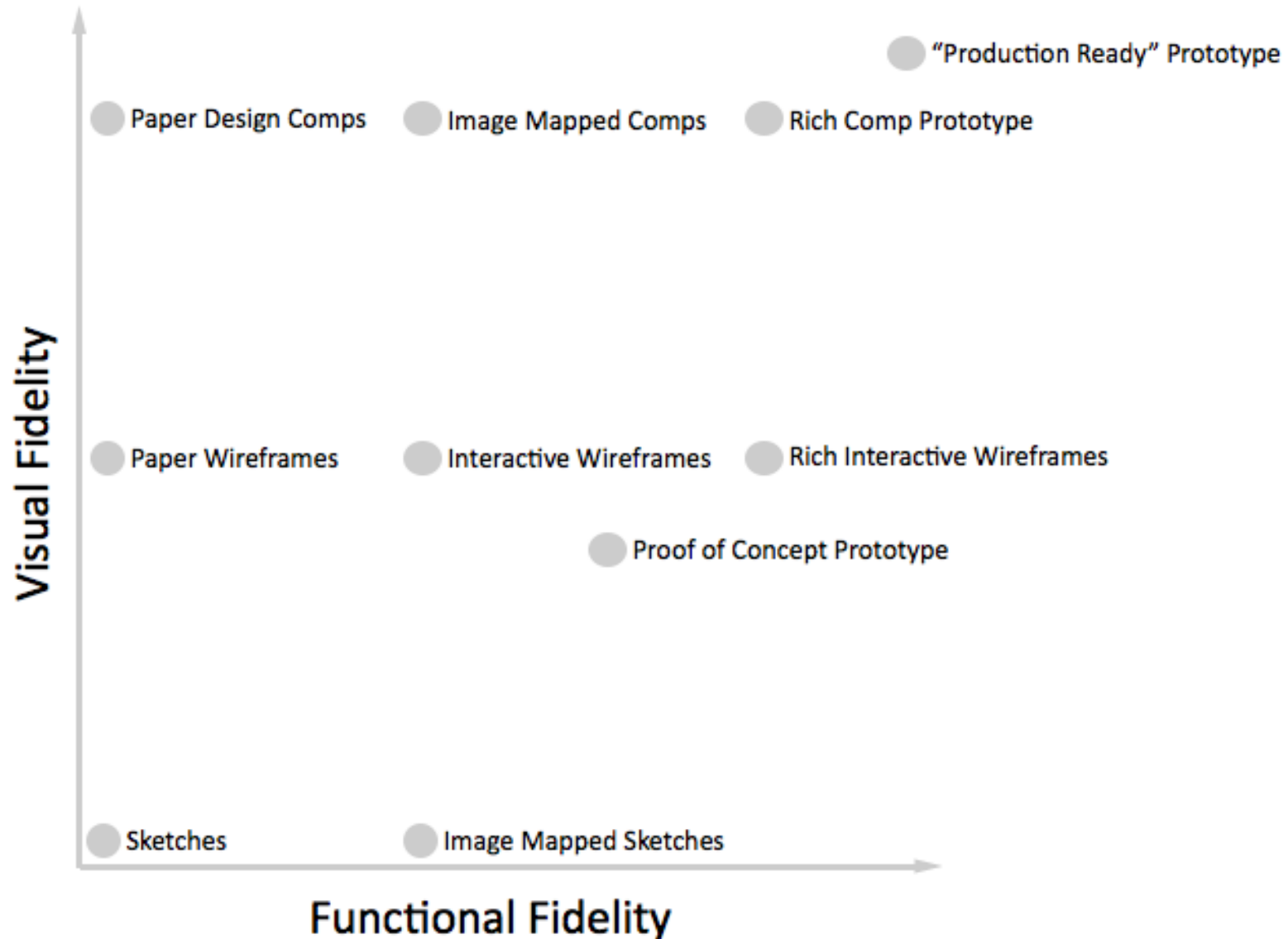
Appropriate Fidelity

- Depends on
  - where you are in the product development cycle
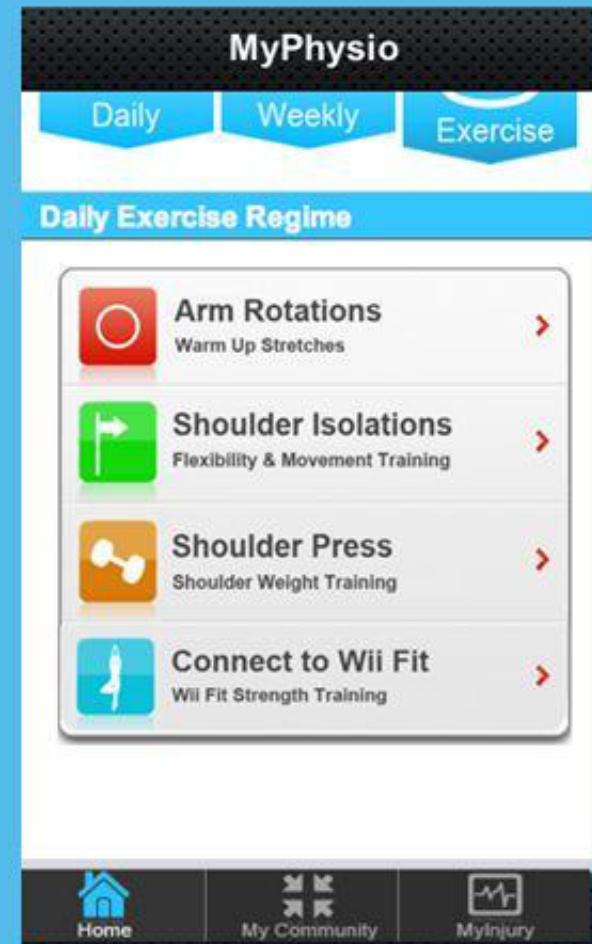 - your goals and your audience

Prototypes

Sketch

Mock-up Prototype

Final Prototype

Low Visual and Low Functional Fidelity

- can be made swiftly, changed without repercussion, and still help visualize a concept.
- answering large structural questions:
  - Does the system have all the features required to support the user's goals?
  - Does the workflow make sense at a high level?
  - Which UX concept works best?
  - Coming to consensus on a UX concept with stakeholders

MASON | Asset Mgmt. | Wealth Management | Legg Mason Trust | Private Client | Legg Mason Funds | Capital Markets

Client Log-In
Open An Account

Search ▶▶

Legg Mason Funds Banner

tagline

Our Funds
> Prices + Performance
> Fund Management
> Dividends
> Capital Gains
> In the News
> What's New
> applications
> Prospectuses

Knowledge
> Intellectual Cap.
> Asset Allocation
> Future First
> IRA Center
> Market Update

[Inf logo]

Funds Investor Services
1-800-522-5544
8:00 AM - 5:30 PM
(ET) MON - FRI

Global Brief
content, content
more ▶ Aug x, xxxx

Context and Perspective
content, content
more ▶ Aug x, xxxx

Monthly Market Review
content, content
more ▶ Aug x, xxxx

footer, disclaimer, privacy policy,

Fund Finder
Select a Fund ▼
> Select by Category
> Find a fund that meets your needs.
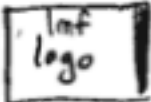
What's New!
> Press Release
> another Press Release
> 401k Season
> Comments by Bill Miller.

If the user pointed to the "Fund Finder" drop down menu, the full menu (below) would be presented.

Fund Finder
Select a Fund ▼
American Leading
Balanced Trust
Cash Reserve
Classic Valuation
Emerging Markets
Europe Fund
Financial Services
Focus Trust
Global Income
High Yield
Int'l Equity
Opportunity Trust
Value Trust

Low Visual and High Functional Fidelity

- **interactive, HTML interactive wireframes**
- Evaluating the usability of proposed designs for new systems
- Exploring isolated interactions as a proof-of-concept
- Validating UX design direction with stakeholders
- Validating the implementation of requirements with stakeholders
- Supplementing printed documentation for development teams
- Performing remote testing

Prototyping tools

- Paper
- Visio
- PowerPoint
- Dreamweaver
- Adobe XD
- Justinmind
- Ilustrator
- Balsamiq

Usability test process
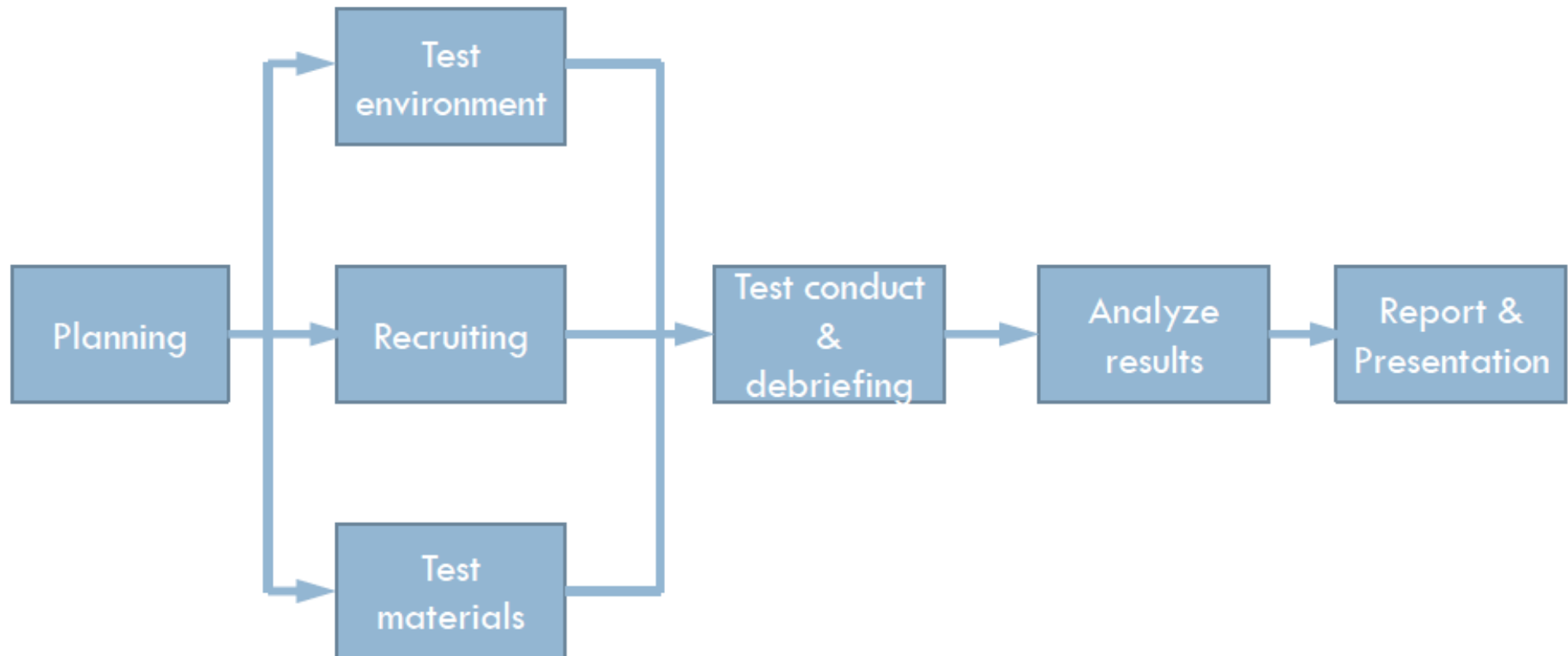
Planning your test

- Decide what to test
  - What are your objectives
  - What data will you collect
- Who is your target audience?
- Decide on test location
  - Remote, lab, conference room, coffee shop
- Write tasks that meet your objectives

Deciding what to test

- **Understand requirements**
  - What do **users** want to accomplish?
  - What does the **company** want to accomplish?
- **Determine the goals**
  - What tasks does the web site or application support?
- Decide on the **area of focus**
  - Tasks that have the most impact on your site
  - Typical tasks
  - Most critical tasks

Test plan

- Purpose, goals, and objectives
- Participant characteristics
- Method (test design)
- Task list
- Test environment, equipment and logistics
- Test moderator role
- Evaluation measures (data to be collected)
- Report contents and presentation

Recruiting users

- Recruit internally or outsource to agency?
- Sources of test candidates
  - Your own company's list of existing customers
  - Referrals from sales and marketing
  - Advertising on Craigslist
  - Company's web site or blog
  - Societies and Associations

Prepare test materials

- Orientation script

- Background questionnaire

- Pre-test questionnaire

- Data collection tools

- Task scenarios

- Post-test questionnaire

- Debriefing topics

Task types

- First impression questions
  - What is your impression of this home page or application?

- Exploratory task
  - Open-ended / research-oriented
  - e.g. Find a cellular phone plan for yourself

- Directed tasks
  - Specific / answer-oriented
  - e.g. Find contact information for customer support

Metrics

- Task success
- Task time
- Errors
- Efficiency
  - Number of steps required to perform a task
- Self-reported metrics
  - Likert scale
  - Do you prefer A or B?
  - Questionnaires

- Observe user behavior
- Listen to user feedback
- Facilitator stays quiet, observes, take notes
- Test one user at a time
- Mainly qualitative

Debriefing

- Exploring and reviewing the participant's actions during the test
- Goal – understand why every error, difficulty and omission occurred *for every participant for every session.*
- Debrief with observers too.