

User-centered approach to Product Development

Industry view

UCI- June 1, 2016

Shri Jambhekar

Director, User Experience Design and Research, Ad Platform, YP.com

What will be covered

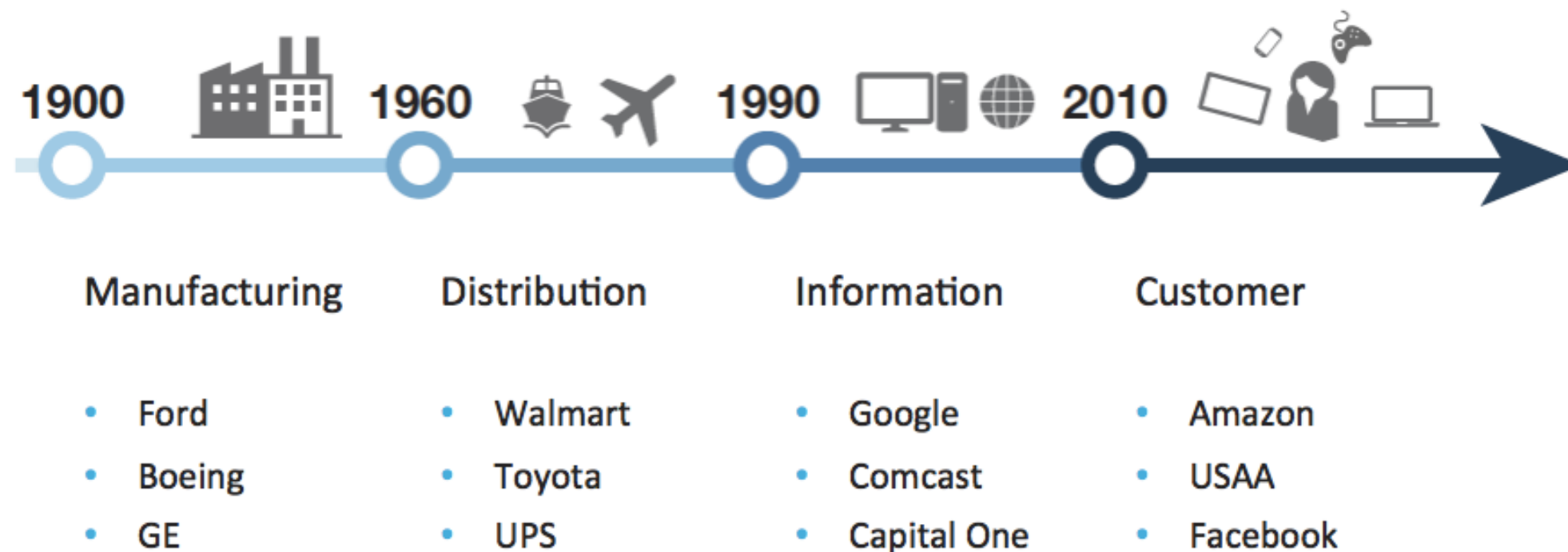
- User-centered product development approach
- Building empathy for our customers and why user research and usability testing matters
- Get cross functional teams on the same page when applied to product development process
- Examples from industry - few examples and tips

Everyday experiences

- What if you could know how to build great services - so our customers won't have the
 - Trader Joe experience (new chip cards)
- or
- DMV experience (multiple visits because documentation was incomplete)
- What if you knew ahead of time why you are building/
developing what you are building

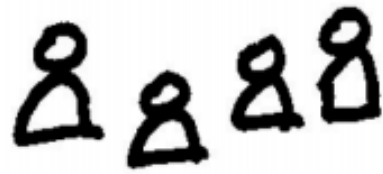
Age of the customer

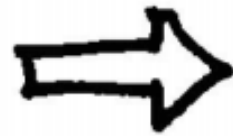
Figure 1 We Have Entered The Age Of The Customer



Age of the customer

Then and now...


anonymous
consumers




user + service
provider

Customer experience

“CUSTOMER EXPERIENCE IS THE NEW BATTLEFIELD”*



89% of companies expect to compete mostly on the basis of customer experience by 2016 – vs. 36% four years ago.

*Gartner Research, 2015



Poor customer experiences result in an estimated \$83 Billion loss by US enterprises each year because of defections and abandoned purchases.

Forbes, 2013



Customer power has grown, as 73% of firms trust recommendations from friends and family, while only 19% trust direct communication.

Forrester report: "Consumer "Ad-itudes" Stay Strong", 2012



86% of consumers will pay more for a better customer experience.

RightNow Customer Experience Impact Report, 2011

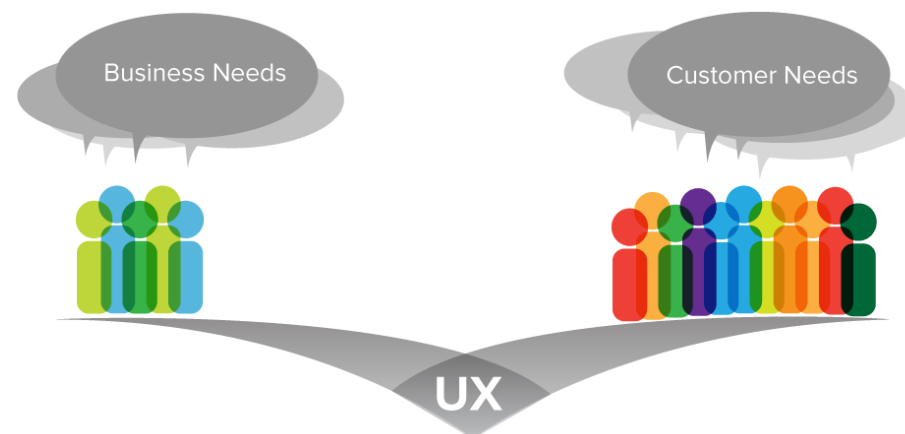
Customer Experience Design: why now?

In 2015 Uber, the world's largest taxi company owns no vehicles, Facebook the world's most popular media owner creates no content, Alibaba, the most valuable retailer has no inventory and Airbnb the world's largest accommodation provider owns no real estate.

Product or Service = User Experience

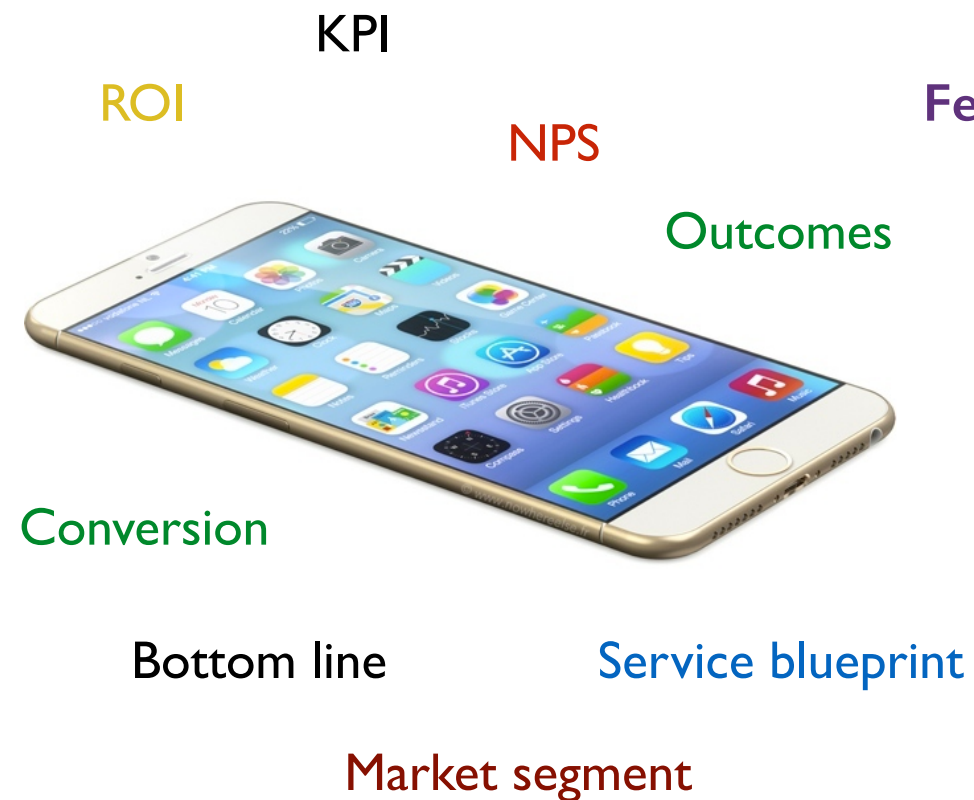


Value exchange



Effort: Benefit

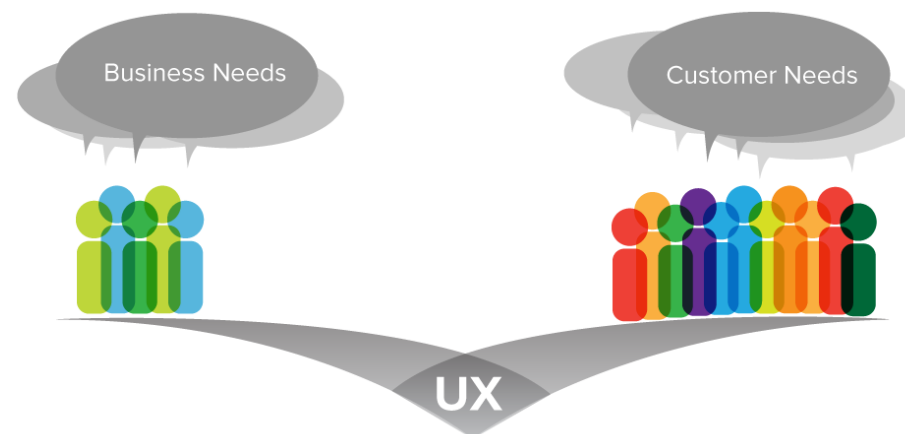
Product or Service = User Experience



Features

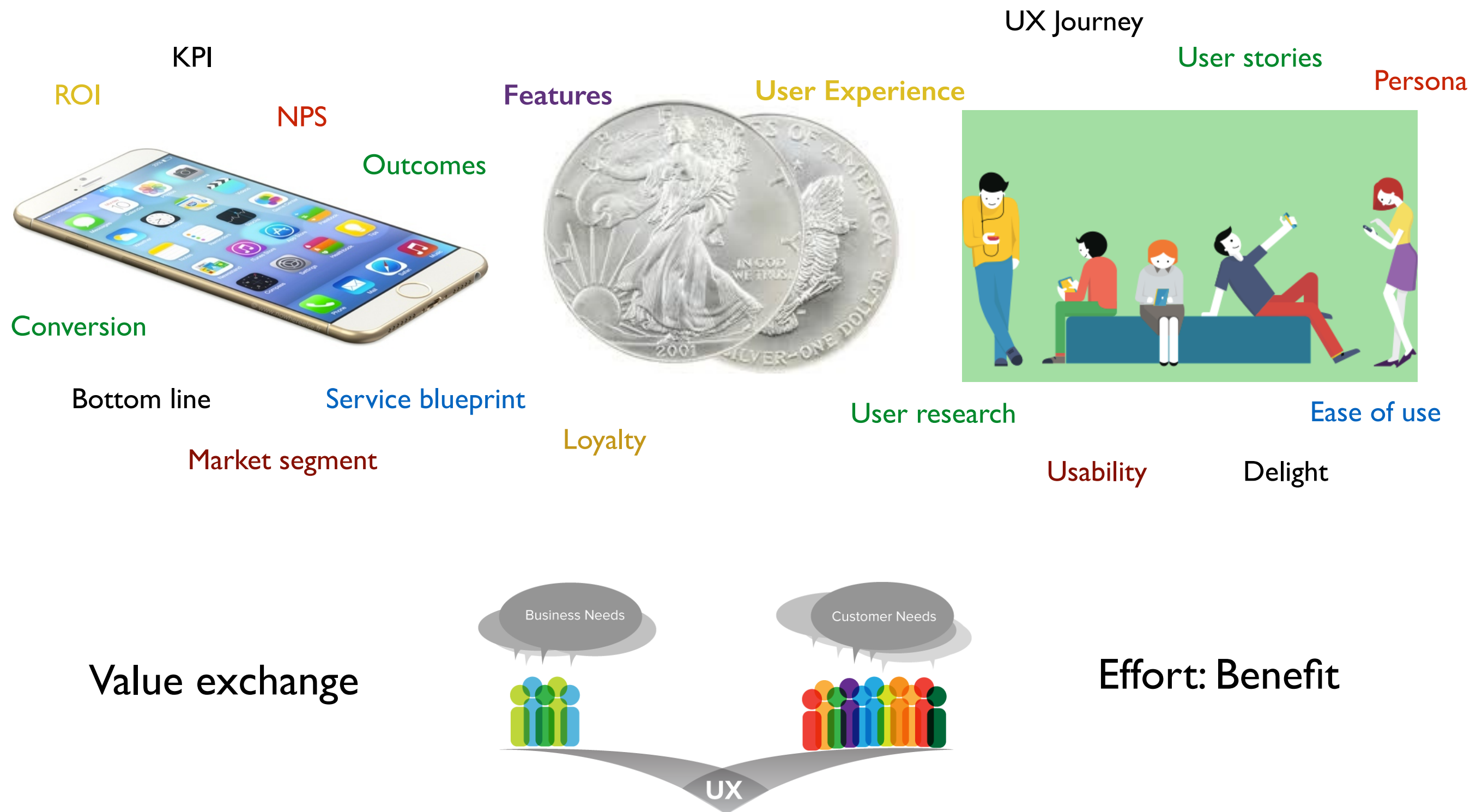


Value exchange



Effort: Benefit

Product or Service = User Experience



User-centered approach

Any product/ service or design effort is ultimately judged by how successfully it meets the needs of both the product user and the organization that wants to make it.

To be successful we need:

1. Detailed knowledge of the user you are designing/ developing for
2. The constraints of the problem
3. The business or organizational goals driving these activities

What is User Experience?

Empathy toward target users

"User experience" encompasses all aspects of the end-user's interaction with the company, its services, and its products.

Nielsen Norman Group

"User Experience (UX) refers to a person's emotions and attitudes about using a particular product, system or service. User experience includes the practical, experiential, affective, meaningful and valuable aspects of human-computer interaction and product ownership"

Wikipedia



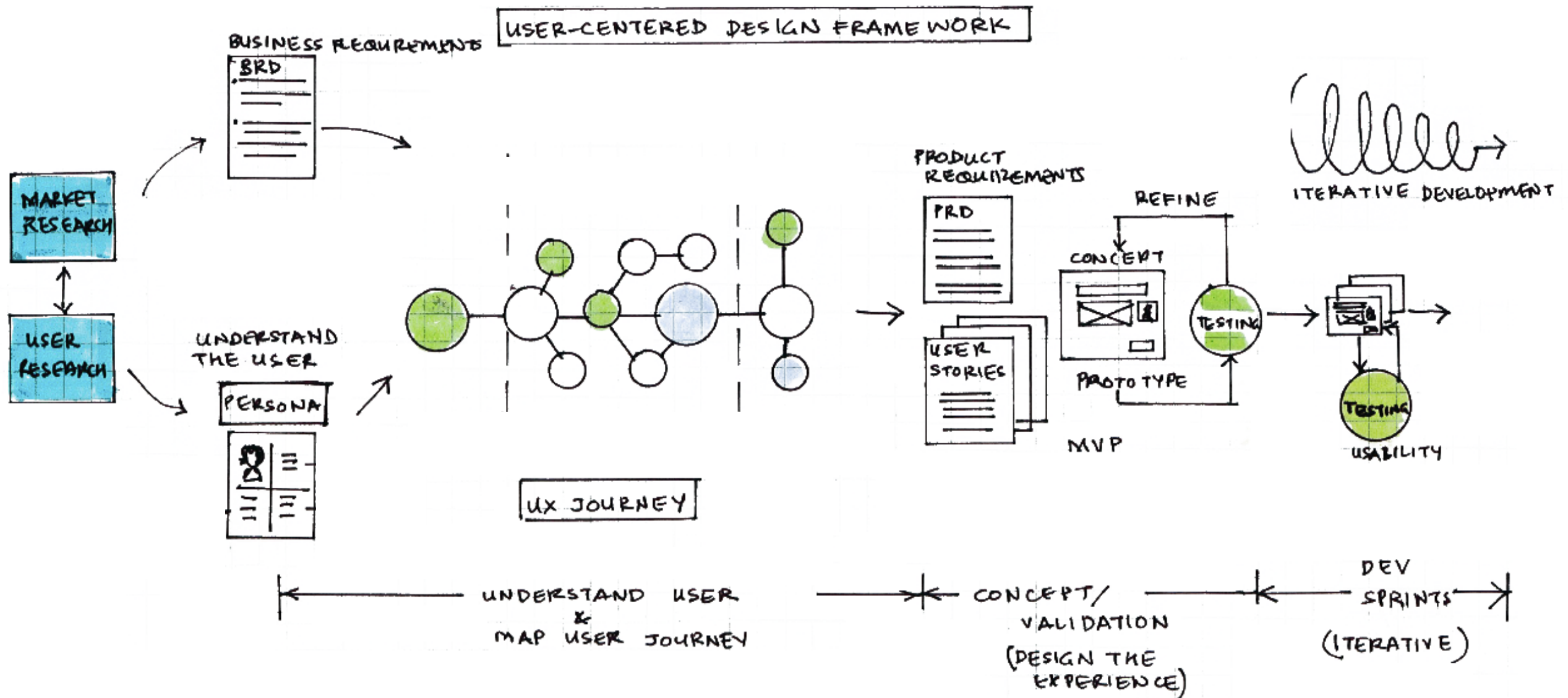
User-centered product development

User-centered product development

Co-define Co-design Co-develop

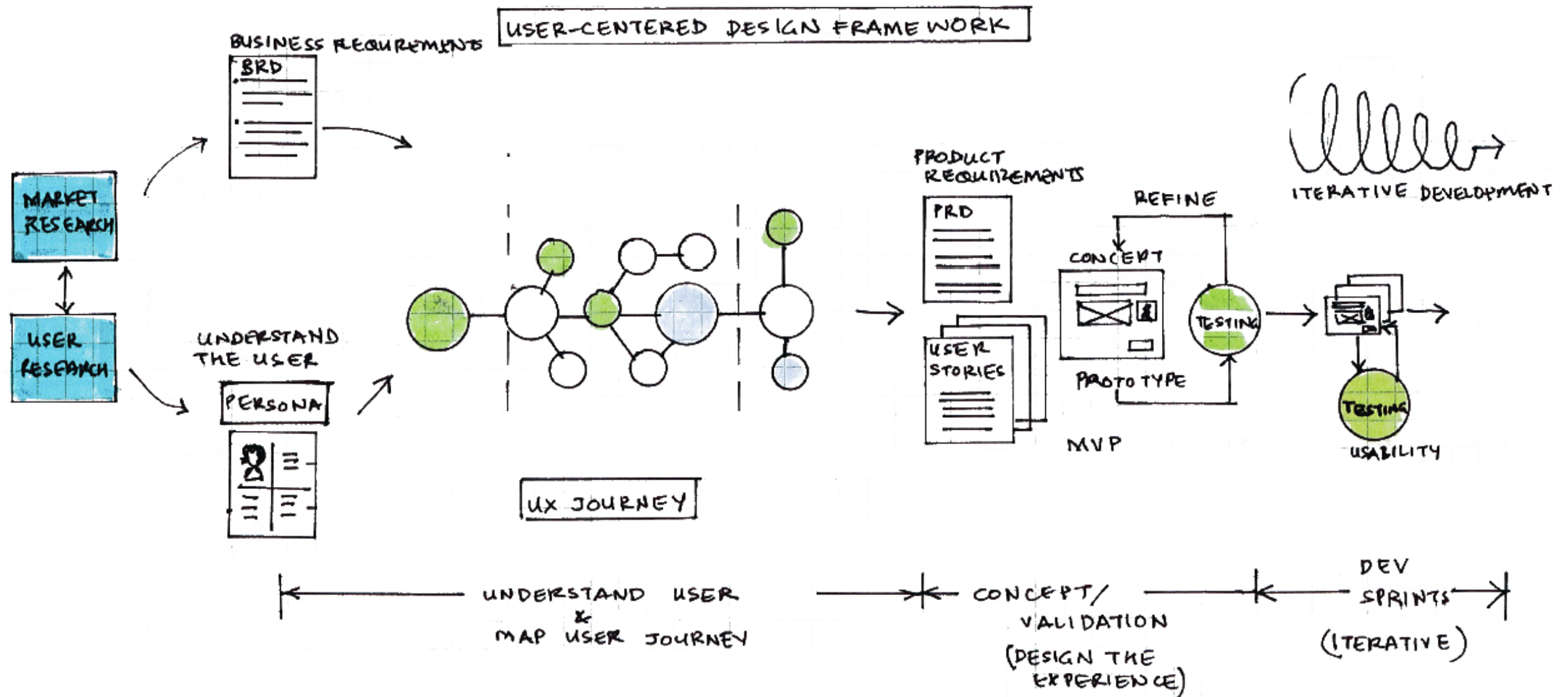
User-centered product development

Co-define Co-design Co-develop



User-centered product development

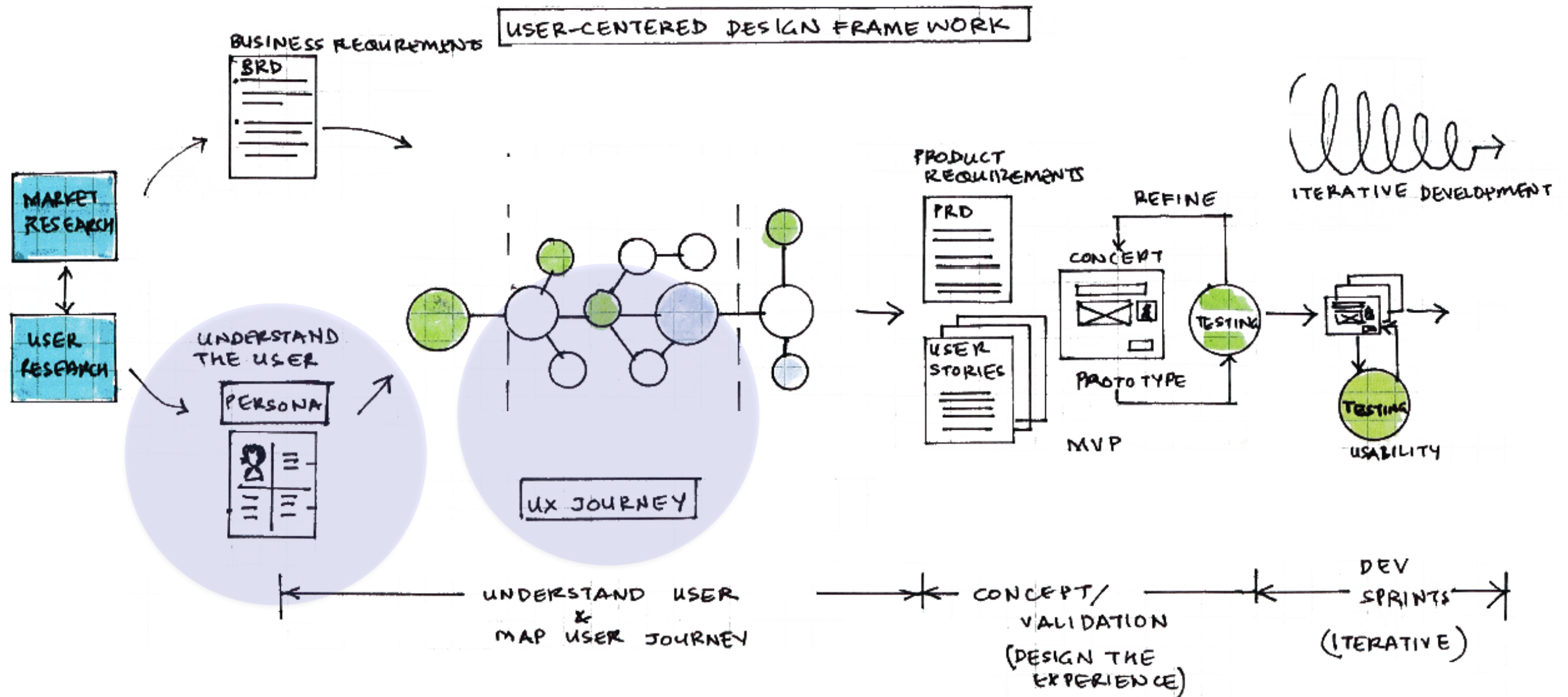
Co-define Co-design Co-develop



Informing what we build through user empathy

User-centered product development

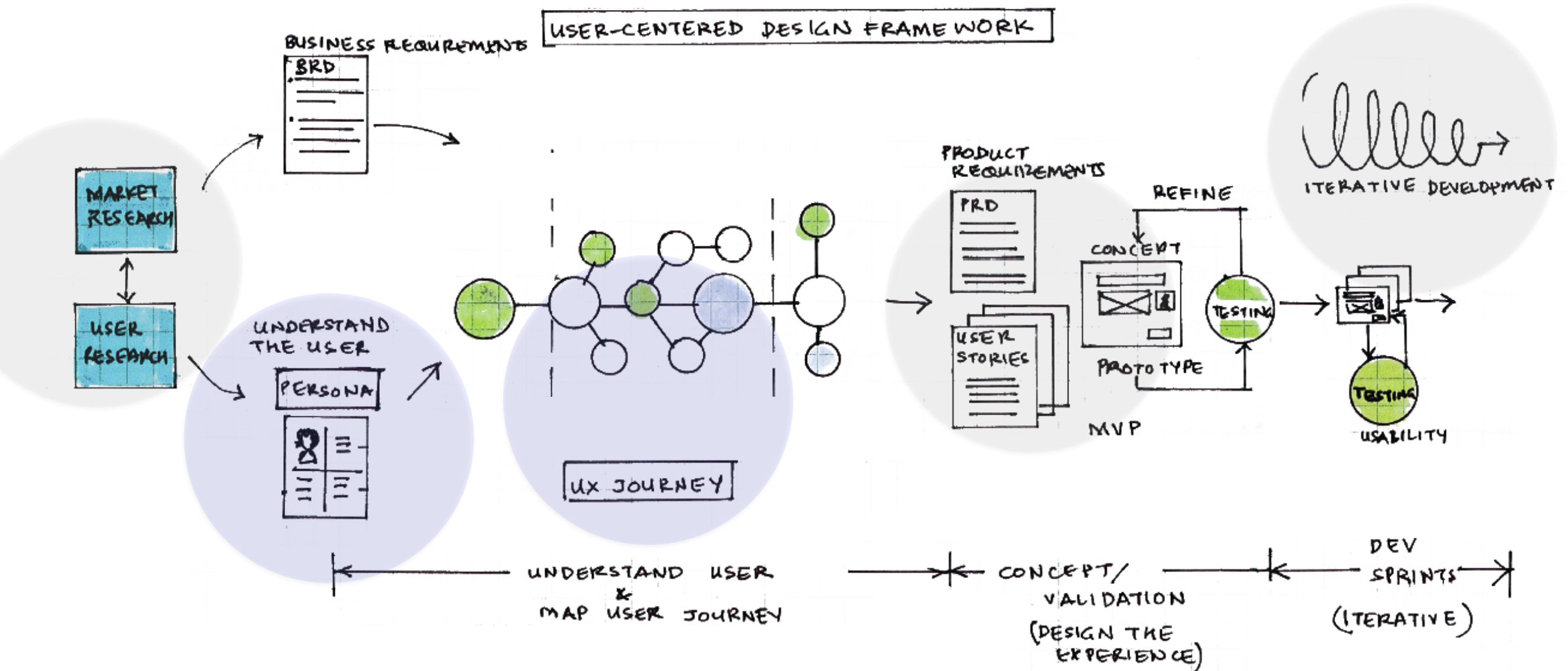
Co-define Co-design Co-develop



Informing what we build through user empathy

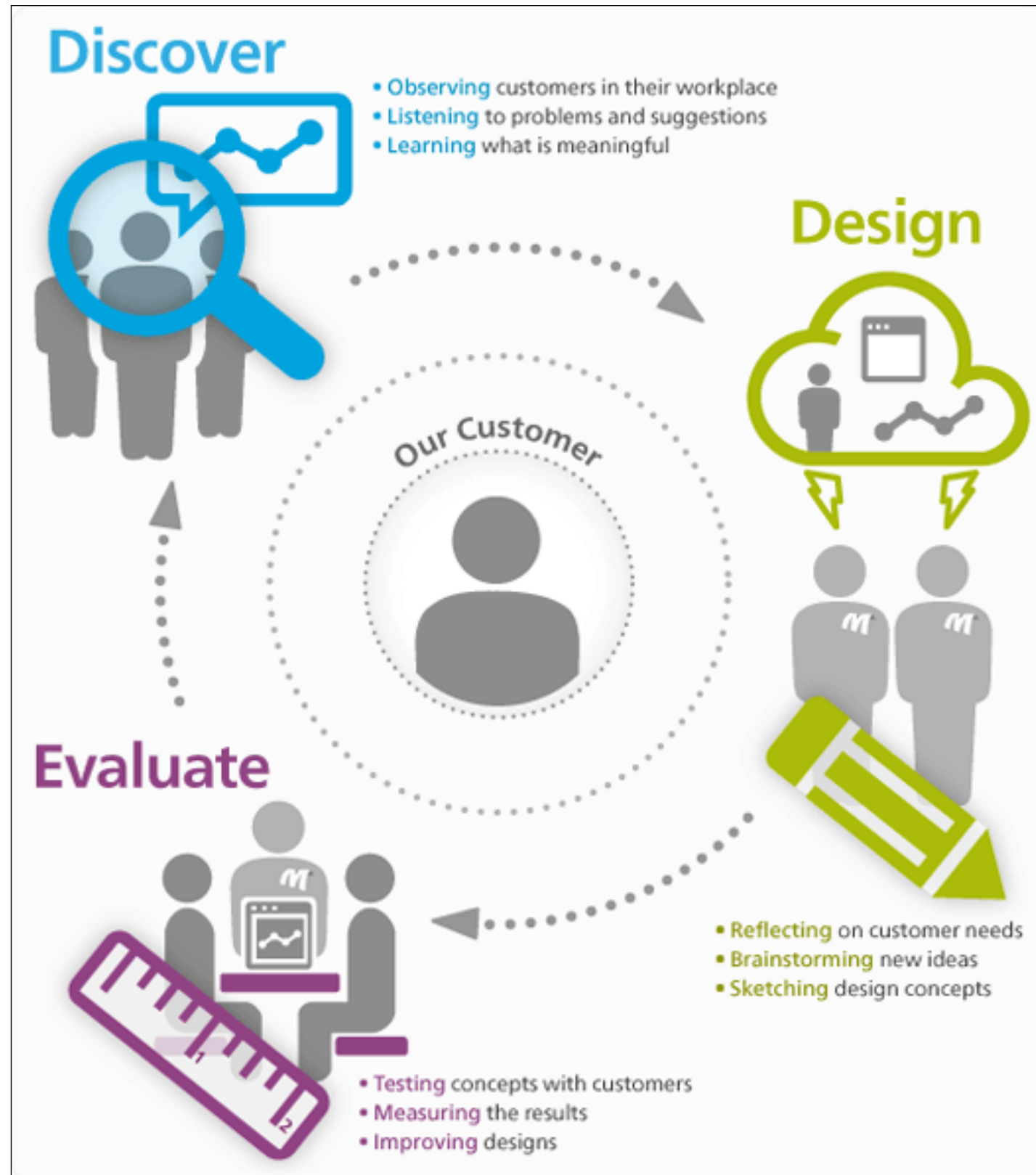
User-centered product development

Co-define Co-design Co-develop



Informing what we build through user empathy

User-centered approach



Modeling the USER

Market segmentation

The purpose is to identify different groups (segments) of customers within a market so that it is possible to target particular products, services or marketing messages.

Based mainly on quantitative research

- Demographics (gender, age, income, tech savvy etc.)
- Purchase Behaviors/Buying
- Preferences and Patterns
- Affiliations

Market segments are based on demographics, distribution channels, and purchasing behavior.

User centered design

beyond statistics...

Putting customer at the center requires genuine understanding of the customer

Statistics can be misleading

For example, take two people - both born in 1948 in UK, married, successful, 2 kids, love dogs and the Alps

User centered design

beyond statistics...

Putting customer at the center requires genuine understanding of the customer

Statistics can be misleading

For example, take two people - both born in 1948 in UK, married, successful, 2 kids, love dogs and the Alps



User centered design

beyond statistics...

Putting customer at the center requires genuine understanding of the customer

Statistics can be misleading

For example, take two people - both born in 1948 in UK, married, successful, 2 kids, love dogs and the Alps



Yet they are different - so to create value for each of them requires understanding their individual service experience and their disparate mindsets

Usability research/ testing

- Usability Research – Objective measure of what you do
- Answers the question: Does the product fit the intended user?
Can people use it and make sense of it?
- Given a concrete task people respond with – great! Loved it!
- Identifies errors and where they occur
- Measures objective performance
- Measures behaviors using a concrete tasks – how did you do?
- We are looking for patterns of behaviors – what they are using is driving their behavior that you are seeing?
- What is your success criteria

Market research

- Market Research– has to do with what you think or how you feel
- Answers the question: Is the concept something that customers will like, want and buy? How much will they pay for it? How do you feel?
- Market analysis & market intelligence
- Demographics (Age, gender, income, cohort, tech savvy etc.)
- Trends
- Measures affective responses (feelings)
- Asks to predict future behaviors (iffy data)
- Acceptability, price point

Why user testing?

- Confirm design decisions (validate assumptions developers build into designs)
- Identify user errors & problems areas
- To see if the product works with customers in the same way the design team envisioned
- To avoid “surprises” when you’re finished
- Because you (the Designer) are not the user!
- You are too close to your work so you cannot be objective
- Compare multiple design options (version 1.0 vs version 2.0); compare with competition

Additional reasons for user testing

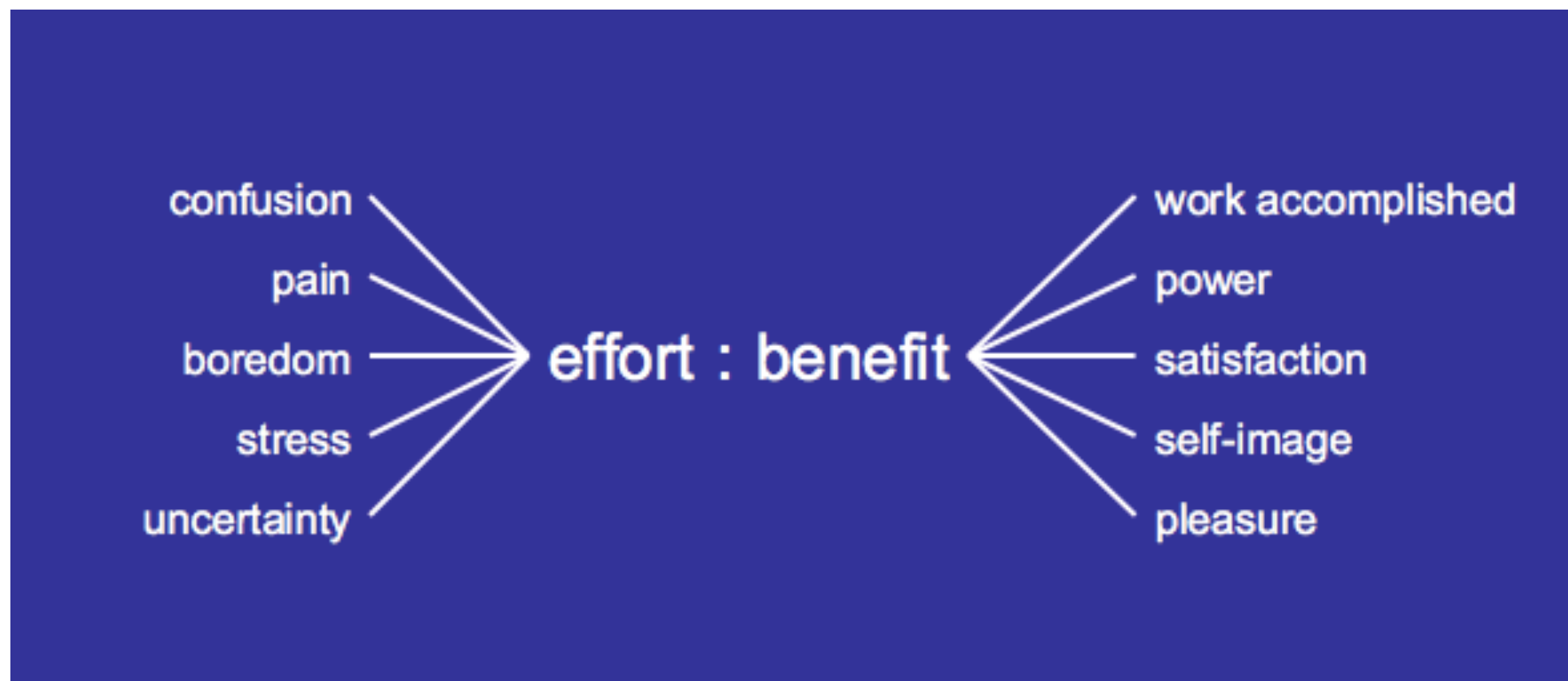
- As a performance baseline for future versions (MVP).
- It takes argument out of the realm of personal opinion and discussion – it is hard to argue with people who pay your bills
- Political reasons:
 - Gain project support & funding
 - Stop a project so you don't waste \$\$\$
 - Win industry reviews
- In some applications the ramifications of errors could be fatal –
Return to Salute - hatch example

Usability testing - Data is your friend

- One point of data - the C level executive
- Taking argument out of the conversation
- Senior executives always want to see numbers
- They also like external validation
- Get out of the lab - talk to real users
 - Self referential design (you acting as a user)

Usability also defined as - Effort:Benefit

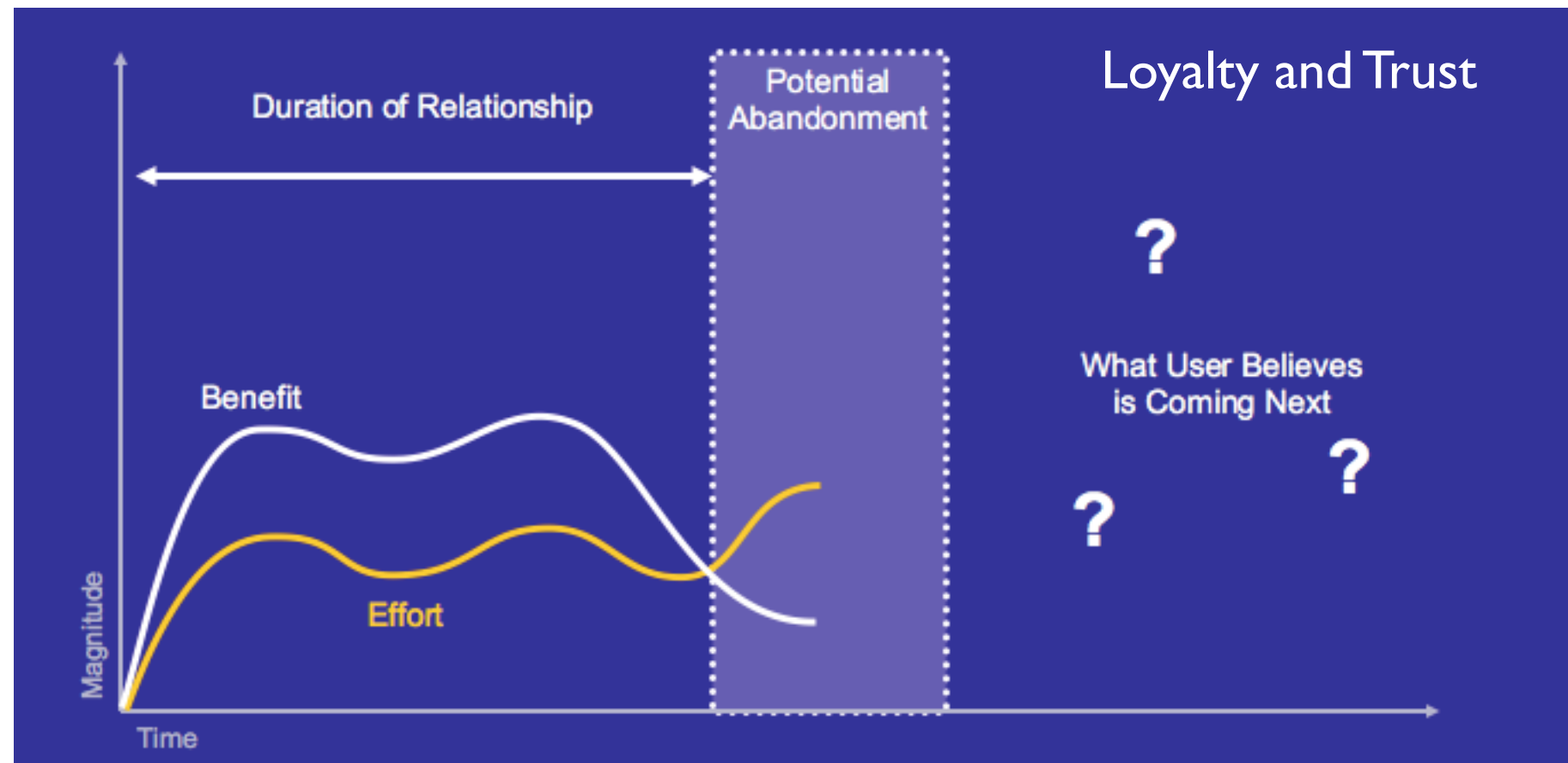
Its a ratio, It is subjective, and it changes over time
 $\text{effort}:\text{benefit} = \text{value}$



Usability defined as - Effort:Benefit

Examples:

- Weight loss
- Credit card - Amazon
- Benefit should be immediate or transparent (even when in the future)
- Hard to learn - Efficient to use



Focus on core problems

- Featuritis - you can get distracted
- Including marginal use cases and outliers
 - It can make things difficult to use
 - The 95-5 rule - points of interest example
- Prioritize the key problems you want tackle (MVP)

Example:

Challenges:

Fix Return rate (34%)
Move to new Platform
ID cycle time (many SKUs)
Development time
Can't change UX logic
Need for competitive offering

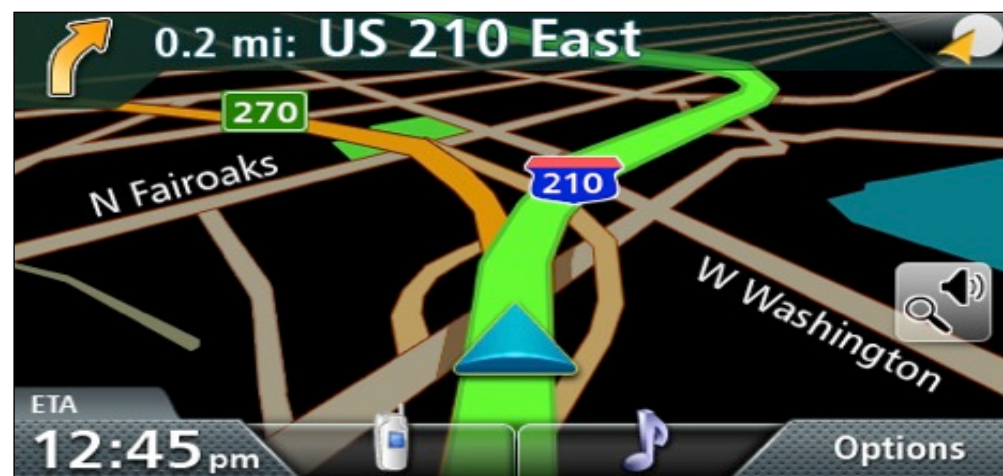


Tactical solution:

Analyze CS Calls
Fixed top 5 UX issues
Return rate down to 4%
Modified logic (targeted)
Graphical refresh
New ID

Optimize!

Magellan GPS device - day and night map color optimization



Optimize!

StubHub:

Outcomes/ KPIs - navigation, conversion, reduce customer calls

The screenshot shows the StubHub 'Review listing' page for Denver Broncos Playoff Tickets. The page is divided into several sections: Ticket info, Payment info, How you'll deliver, and Upload PDFs. A progress bar at the bottom indicates the current step in the listing process.

StubHub! SUNDAY 19 Jan 2014 Denver Broncos Playoff Tickets 1:00 p.m. Sports Authority Field at Mile High, Denver, CO

Welcome, Api_UK_sell_buyer20_FIRST! Sign out | Customer

Review listing

Ticket info [\[edit\]](#)

2 Tickets
Upper reserved center 228
Row 23
Seats 1, 2
[Ticket details](#)

Payment info [\[edit\]](#)

Payout per ticket	\$184.00
Price per ticket	\$214.00
Buyer sees	\$236.00

[Pricing details](#)
We'll pay you via PayPal at email@provider.com
5 business days after the buyer receives the tickets.
[\[edit\]](#)

How you'll deliver [\[edit\]](#)

Upload PDFs by 3/23/15
Listing expires on 01/25/14 at 11:59 p.m. MST

[←](#)

Ticket details & delivery

Pricing

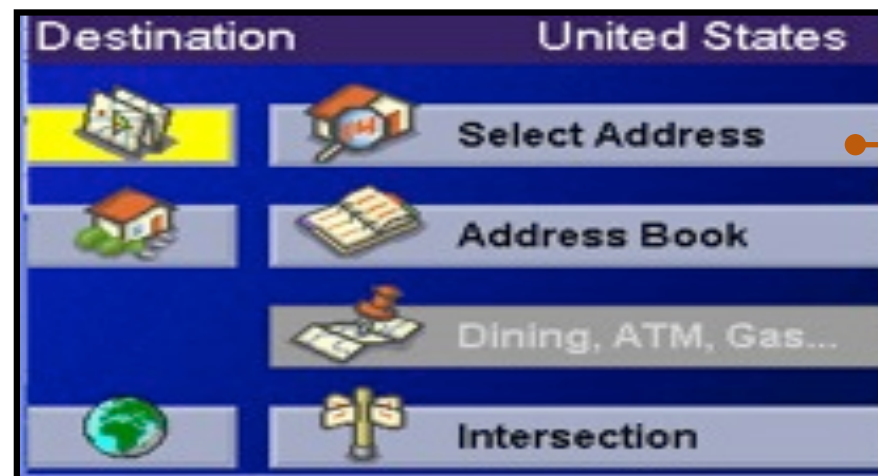
Getting paid

Review & list tickets

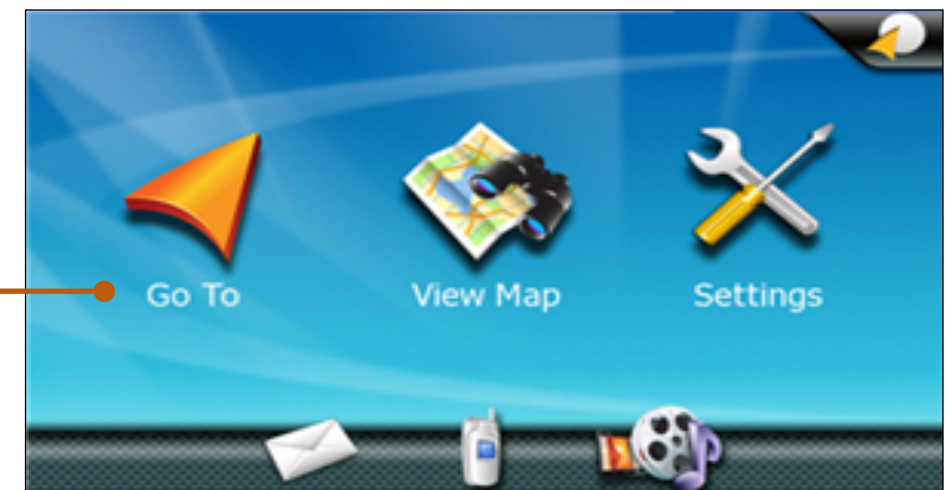
List tickets

Small things matter - labels

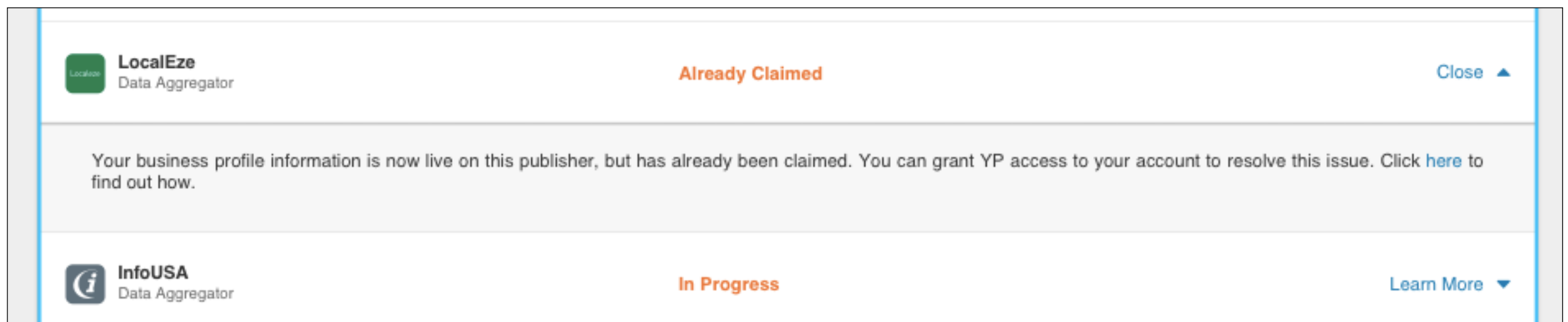
Another example



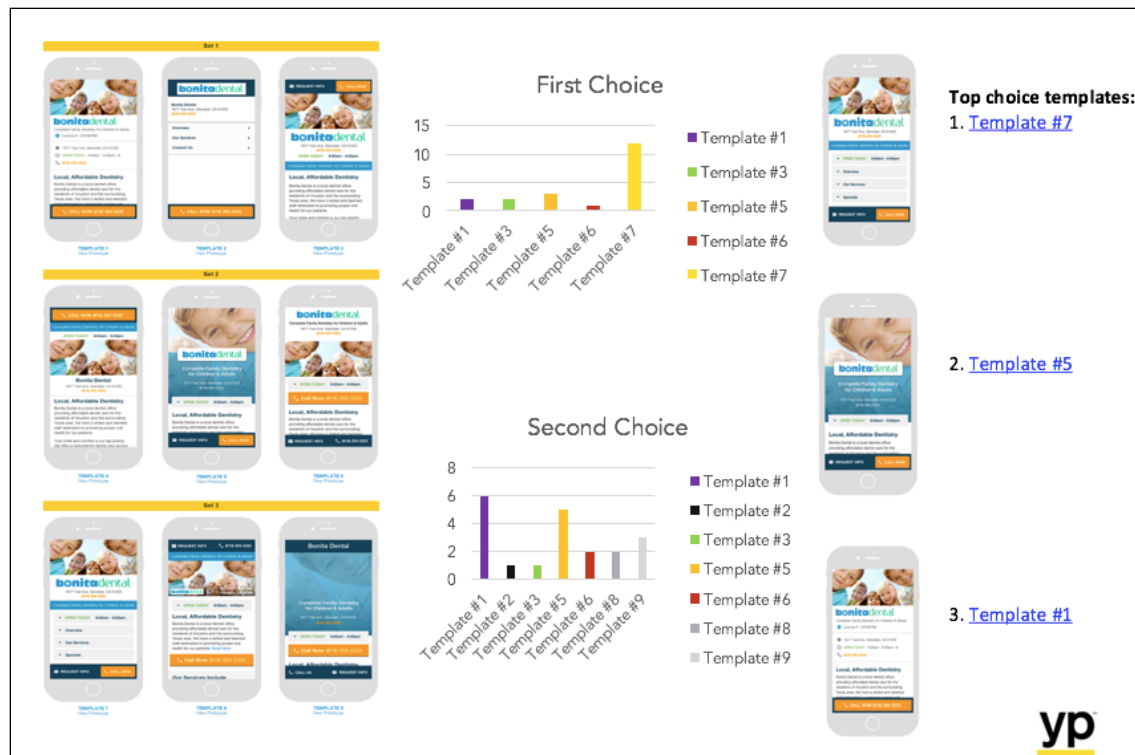
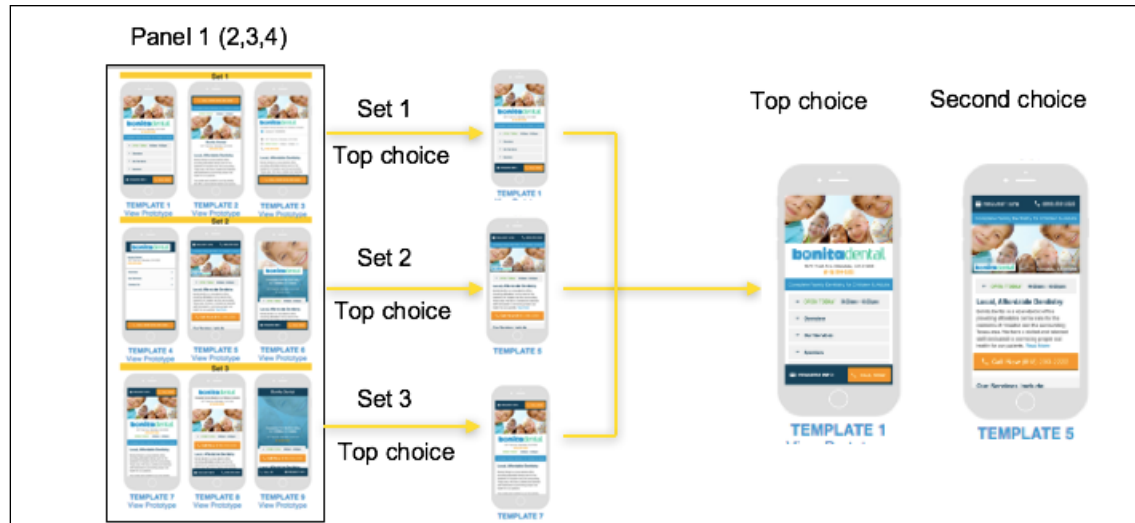
Label



YP Post-sale Scan status labels



UsabilityTesting sample



Top Choice

Why testers picked this design:

- Simple, clean, warm, friendly, clutter-free design
- All the important information regarding the business (such as logo, name, phone number, address, hours of operation etc.) is visible right away and is in one place
- Additional information about overview, services etc. can be accessed easily by expanding topics.
- However, they wanted to see if Insurance info. can be included (priority over payment type). Users did not like text heavy templates.
- They liked the photo (on top) that they can relate to - gives a warm/ fuzzy/ friendly feeling and feeling of trust (they suggested a family photo, since this design was for family dentistry services)
- Many liked access to 'Request info' next to 'Call now' (but also many didn't think they would use 'request info'. They liked the placement of call button at the bottom
- Some suggested/ expected directions (or map upon clicking address)

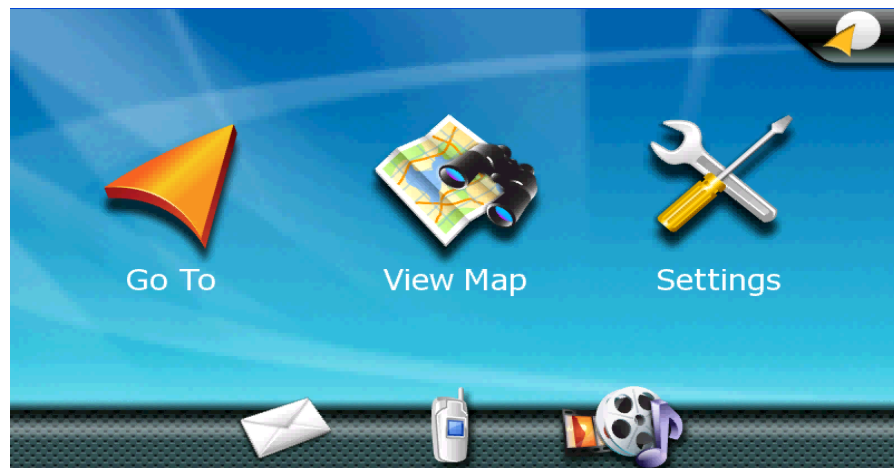
Play clip

yp

Template top choice

Small delights create huge impact

Magellan GPS device - 'One Touch' feature



Apple examples

- integrated apps and
- creating seamless experiences
- meeting user expectations - swipe (under 300 milliseconds)

Meeting user expectations - benchmarks

API

Swipe(el)

Create a swipe object for `el`. This should be a container element that wraps a list of several items. View `./example.html` for a working example.

.threshold(n)

Set the swipe threshold to `n`.

This is the factor required for swipe to detect when a slide has passed the given threshold, and may display the next or previous slide. For example the default of `.5` means that the user must swipe *beyond* half of the side width.

.fastThreshold(ms)

Set the "fast" swipe threshold to `ms`.

This is the amount of time in milliseconds which determines if a swipe was "fast" or not. When the swipe's duration is less than `ms` only 1/10th of the slide's width must be exceeded to display the previous or next slide.

.duration(ms)

Set the transition duration, defaults to 300ms.

.interval(ms)

Set the cycle interval, defaults to 5000ms.

Reference: <https://github.com/component/swipe>

Cultural context matters

- Case of the pebble shaped black phone for Asian market
- Stocks and stop lights

When usability is not enough

What Usability Can't Do

- Substitute for good UI design
- Create an elegant UI design
- Make-up for not understanding your customers
- Compensate for targeting the wrong users of your product

Example:

Lotus software - product was fine tuned after extensive and iterative usability testing

- the best usability testing can't compensate for fundamentally misunderstanding your customers' needs. This is an example of a well designed product that no one wanted.

Some tips - how many to test

Quantitative Tests

- 20+ users per condition
- Careful experimental design essential
- Reliability and validity

Qualitative

5-7 users will allow you to capture upwards of 85% of the problems
sometimes 13 (if user base is broad)

Interviews:

- Tell users they are being recorded - have them sign a waiver
- It is Ok to tell them that you are using a script for the interview to have consistency in results
- Always ask why they didn't like other options - not just what they liked
- Magic wand question

Some tips

Who to Test?

- People who represent your target users!
- A representative sample—NOT anyone who's handy!
- Test major subgroups separately
- Identify likely users ("but we want everyone to use our site!")
- Prioritize
- Find out who Marketing is primarily targeting

Recruiting Participants

Customer lists

- Market research firm (\$50-\$200)
- Temp firms, help-wanted ads
- Internal studies: management chain

Avoid super-users

User research

Research helps us
understand the gap
between the promise
and the actual delivery
of the service.

Promise

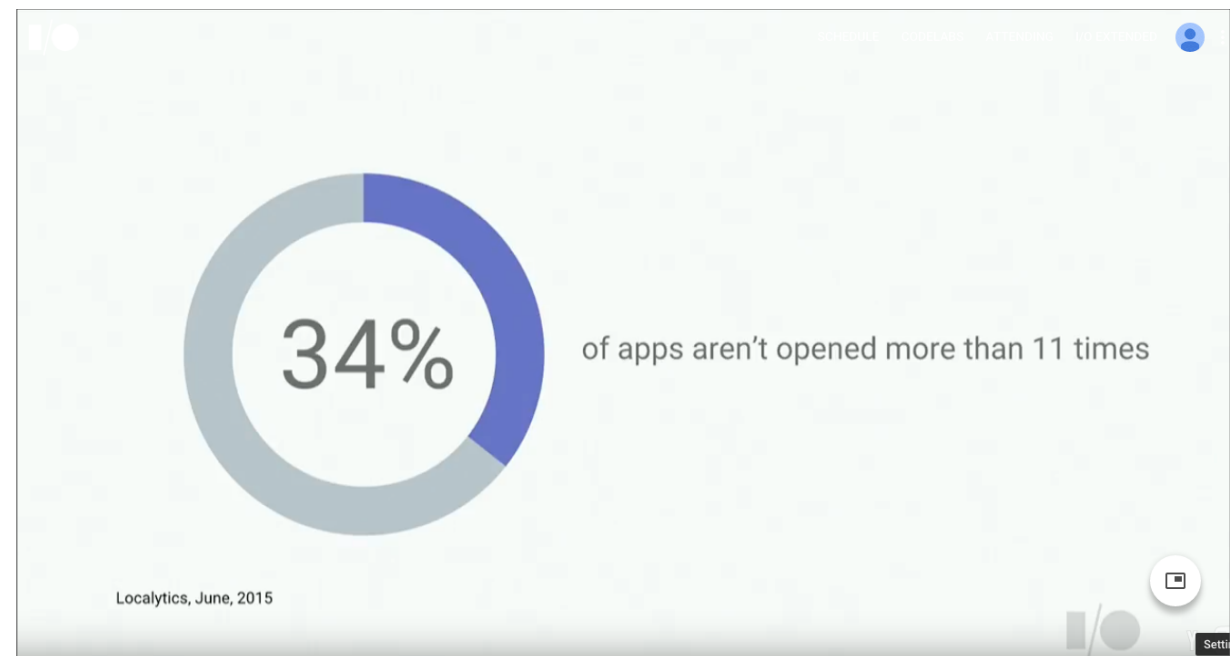
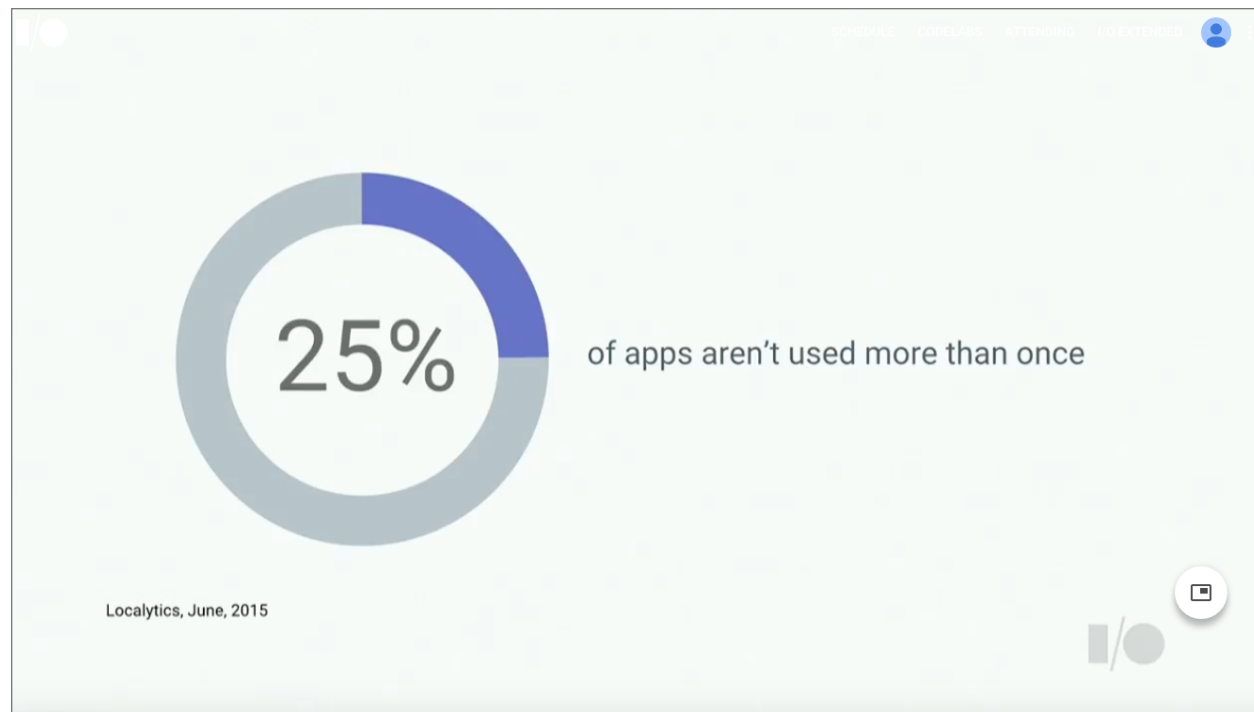


Reality



Helen's Journey
"Why can't anyone help me?"

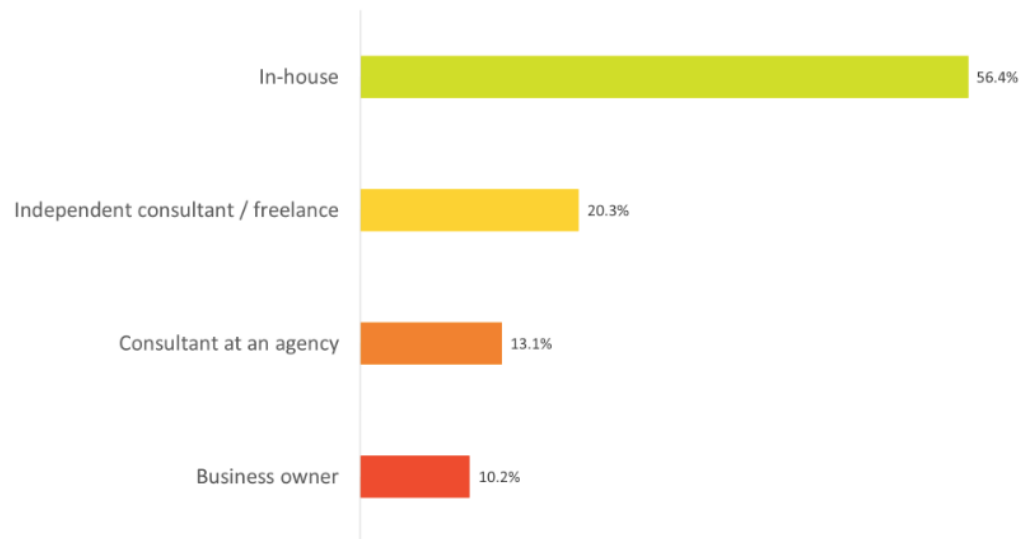
UX research trends - 2016 Google I/O



UX research trends - UserTesting 2015 survey

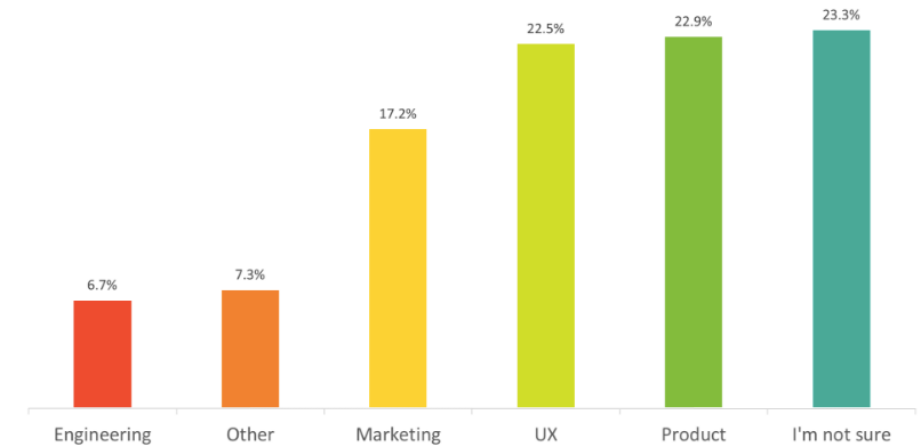
1) Which of these choices best describes your role?

Answered: 7374 of 7725



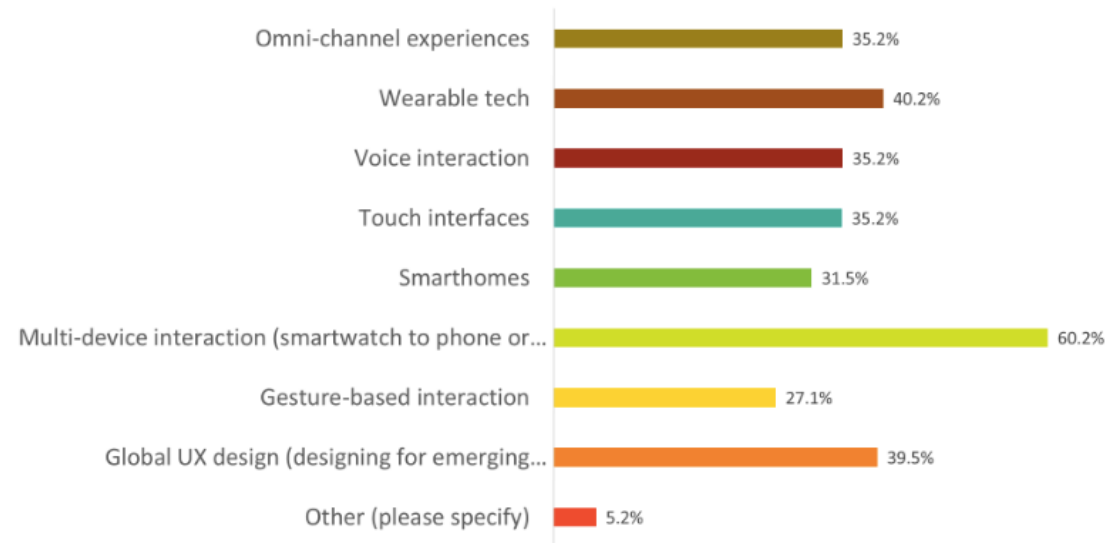
2) Which team in your company finds the most value in UX research?

Answered: 4693 of 7725



3) What do you think will be the most important online trends affecting UX research in the next 5 years? (Select all that apply.)

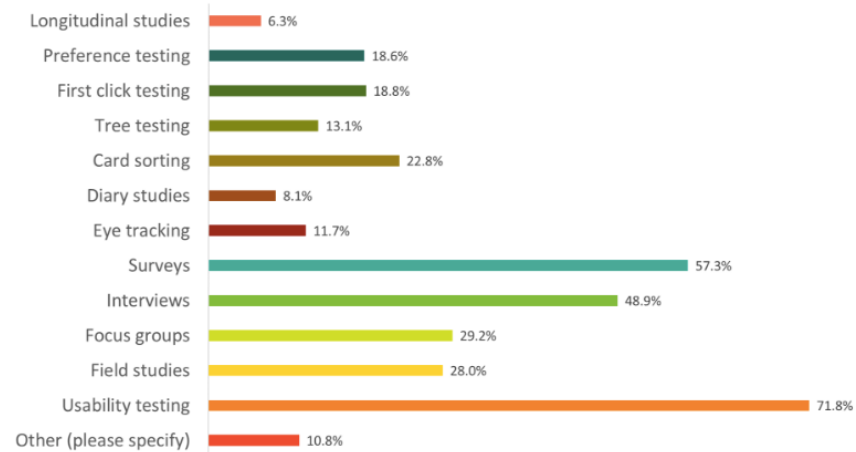
Answered: 4688 of 7725



UX research trends - UserTesting 2015 survey

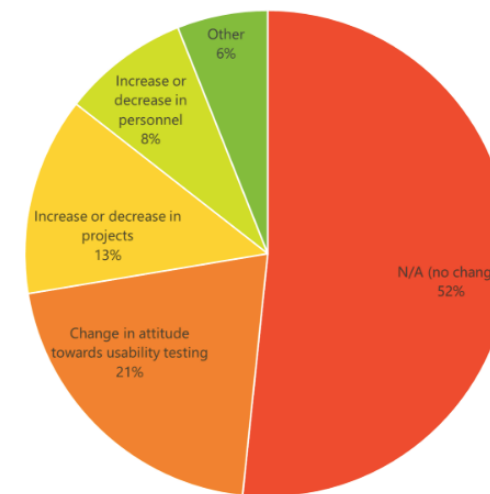
6) Out of the budget you just indicated, which of the following methodologies do you invest in? (Select all that apply.)

Answered: 4417 of 7725



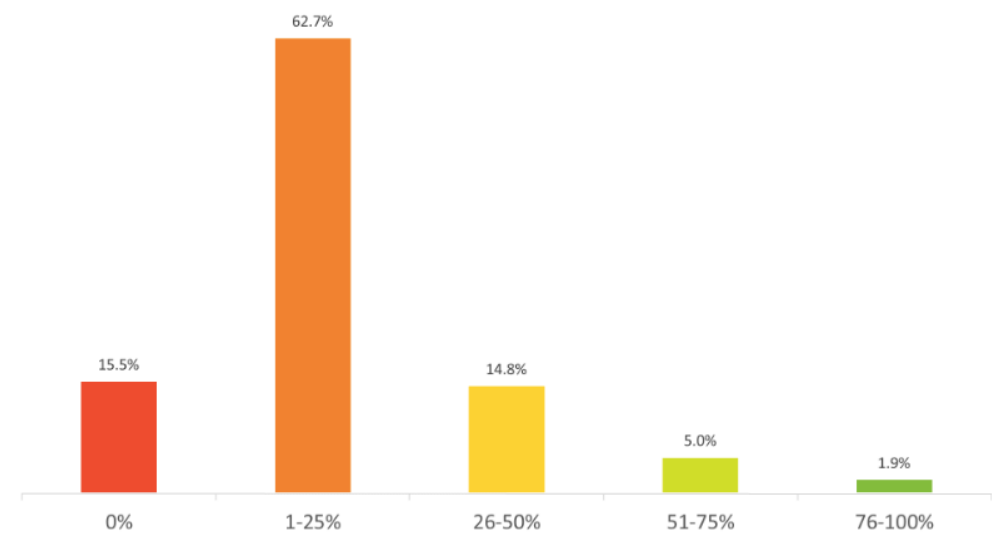
8) What was the reason for the change in your company's UX research budget?

Answered: 4557 of 7725



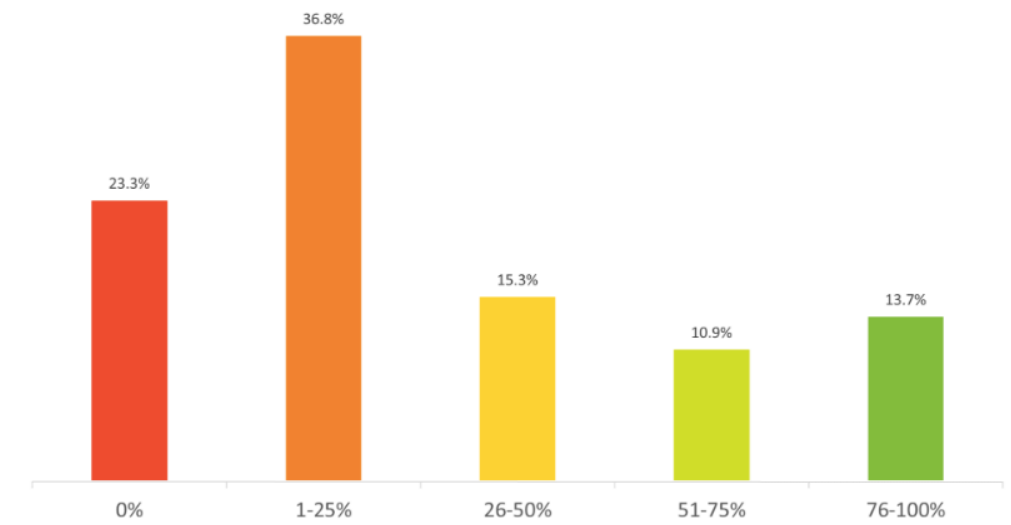
9) What percent of your time is spent conducting usability tests?

Answered: 4633 of 7725



10) What percentage of your company's usability testing is done in-person?

Answered: 4596 of 7725



UX research trends - UserTesting 2015 survey

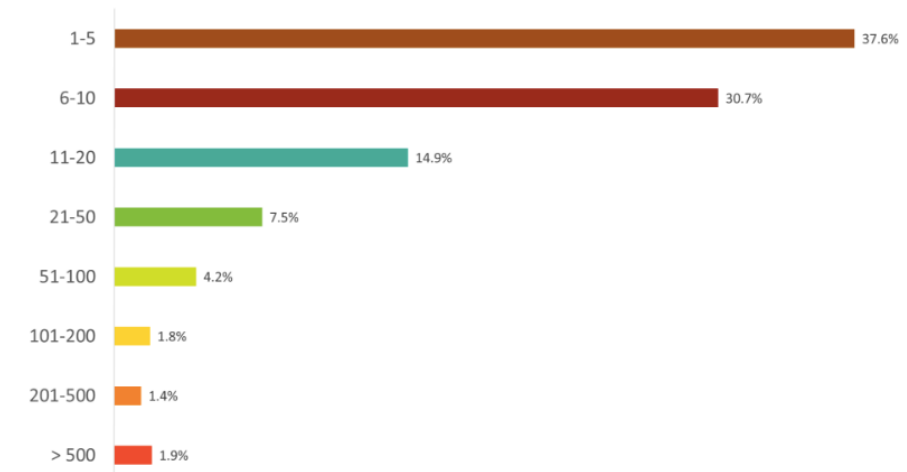
13) How does your company recruit participants for your usability testing? (Select all that apply)

Answered: 4477 of 7725



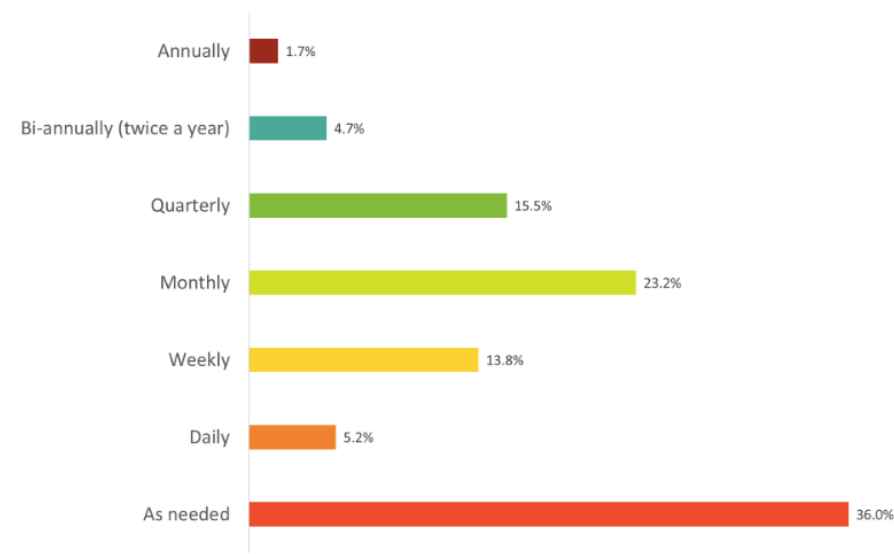
14) On average, how many users does your company recruit per usability study?

Answered: 7725 of 7725



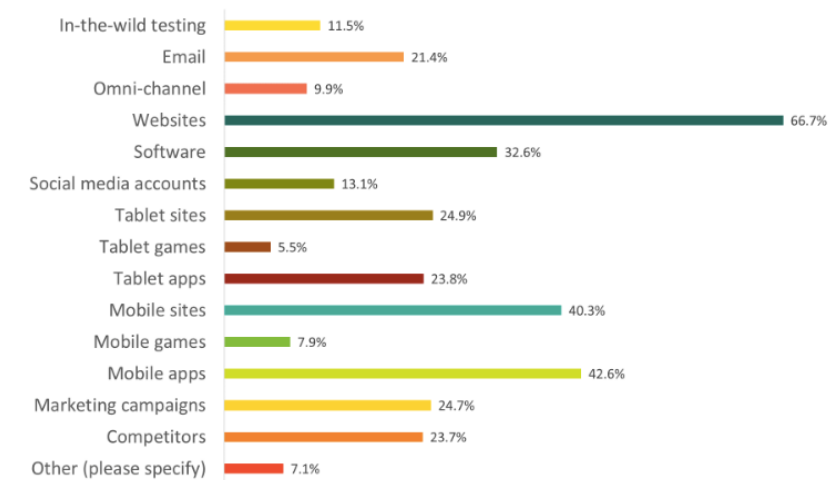
15) How frequently does your company run usability tests?

Answered: 3947 of 7725



22) What does your company currently run usability testing on? (Select all that apply.)

Answered: 3811 of 7725



Some useful resources

UsabilityTesting.com

UserZoom.com

UsabilityHub.com

<https://www.hotjar.com/>

<https://github.com/components>

Questions?

Thank you!

**YP.com does have internships
(data science, engineering, UX, and more)**

**for more info. connect with me at snjambhekar@gmail.com
or on LinkedIn**