

IS 214 Design and research

September 4, 2008

What is a 'new product'?

New-to-the-World Products

Polaroid camera, in-line skates, Kevlar,
word-processing software

New Category Entries (New to the company)

Hewlett-Packard PCs, Hallmark gift items,
Discover Card

Additions to Product Lines

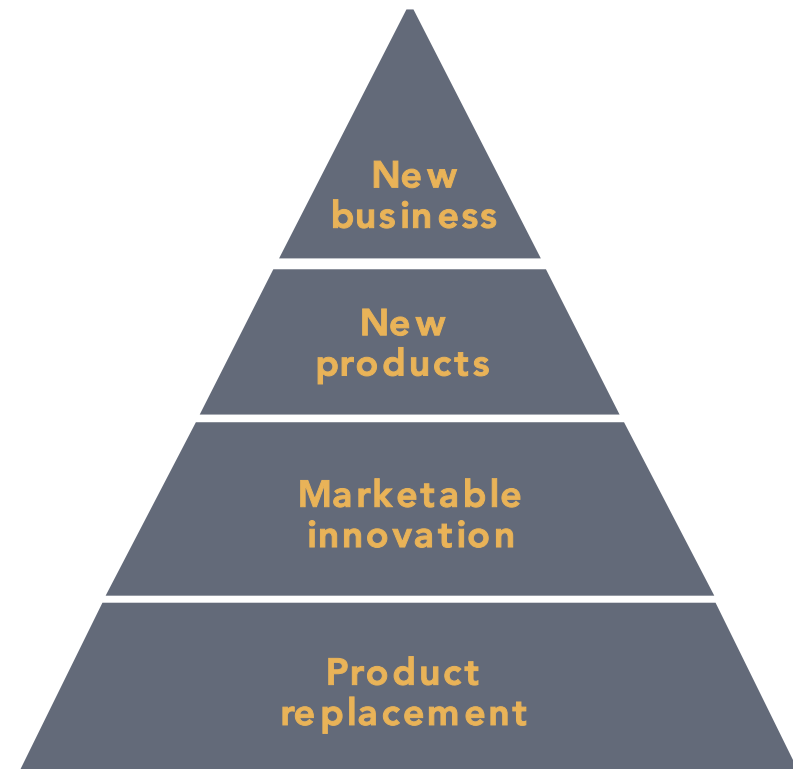
Line extensions or flankers

Product Improvements

Frozen yogurt, Miller Lite, Windows 98,
plain-paper fax

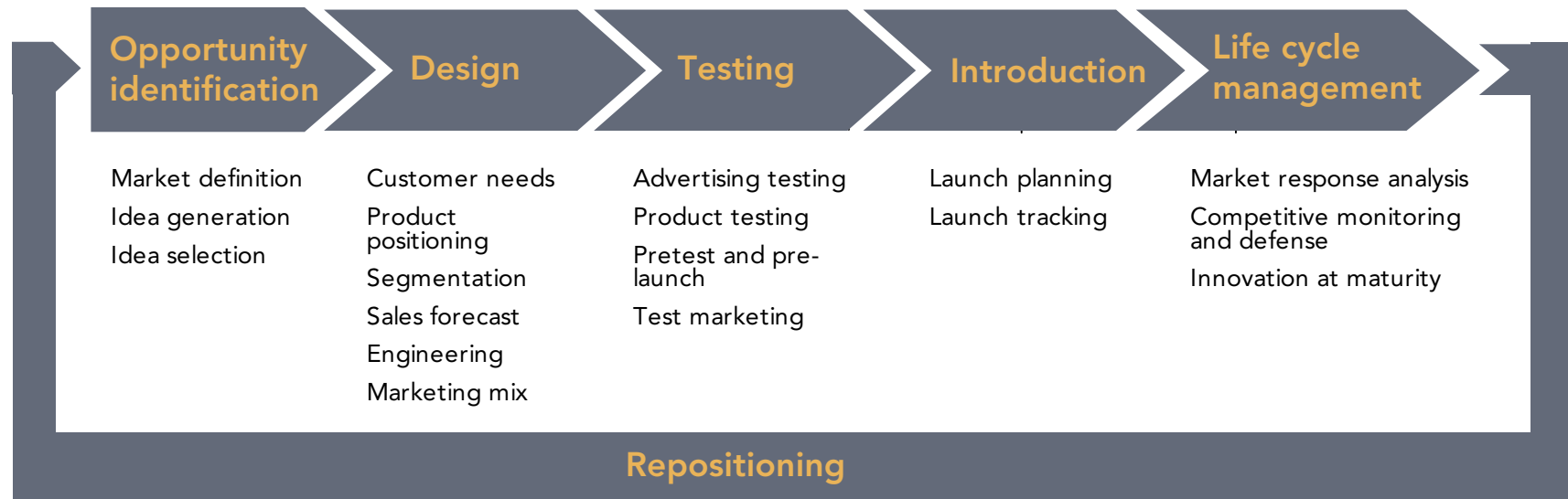
Repositionings

Arm & Hammer baking soda



Alice Agogino, Sara Beckman, Nathan Shedroff : Sustainable Product Development

Product development process



Adapted from Pradeep K. Chintagunta
faculty.chicagogsb.edu/pradeep.chintagunta/teaching/37400/Session4/introductionstrategy.pdf

User-centered design

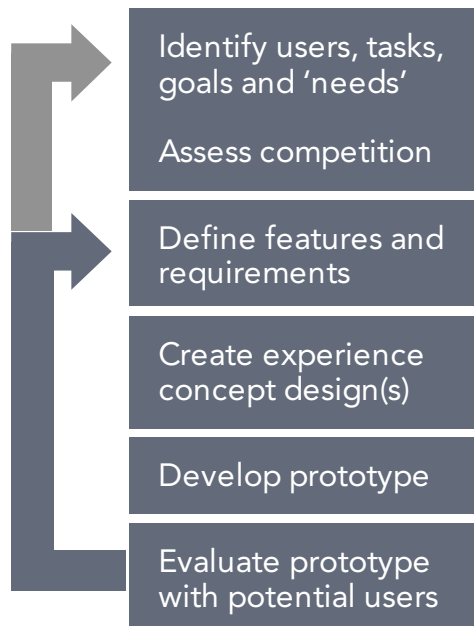
Opportunity
identification

Design

Testing

Introduction

Life cycle
management



User-centered design puts the desires and experiences of users at the heart of the design process by *systematically* engaging with them

User-centered design

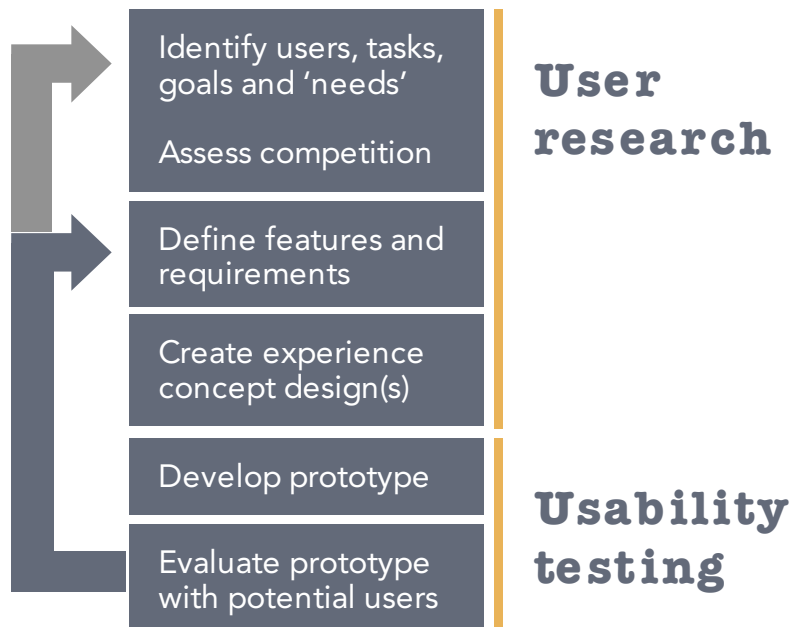
Opportunity
identification

Design

Testing

Introduction

Life cycle
management



A list of UCD iterative design tasks

Set goals:

What do you plan to design, for whom?

Requirements (preferences, etc.)

“Needs” assessment

Summarize findings and decisions

Design a prototype


Evaluate, report

Implement changes

Evaluate, report

...and repeat as needed

But there are many processes...



[Search Images](#)
[Search the Web](#)
[Advanced Image Search Preferences](#)
[Moderate SafeSearch is on](#)

Images Showing:
Results 1 - 20 of about 567,000 for [user centered design process](#). (0.09 seconds)

[View all web results for user centered design process](#)



User Centered Design
 350 x 255 - 19k - jpg
www.emagination.com



... a user-centered design process ... The user-centered process places the user at the center of the design process.
 297 x 286 - 13k - jpg
www.cognetics.com



307 x 302 - 7k - gif
iit.bloomu.edu



What is People-Centered Design?
 450 x 360 - 46k - gif
www.lids.com



User-Centered Design Process Diagram
 481 x 272 - 14k - gif
usability.msu.edu



... "Human-Centered Design Process ... a human centered design process ...
 520 x 756 - 55k - gif
www.mitsue.co.jp



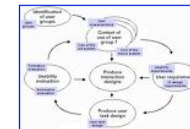
... a human centered design process ...
 480 x 250 - 13k - jpg
www.upassoc.org



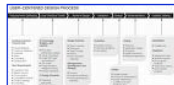
... user-centered design process is ...
 425 x 475 - 57k - gif
www.upassoc.org



Insight-Driven™ User-Centered Design ...
 600 x 378 - 35k - gif
www.paperandpencil.info

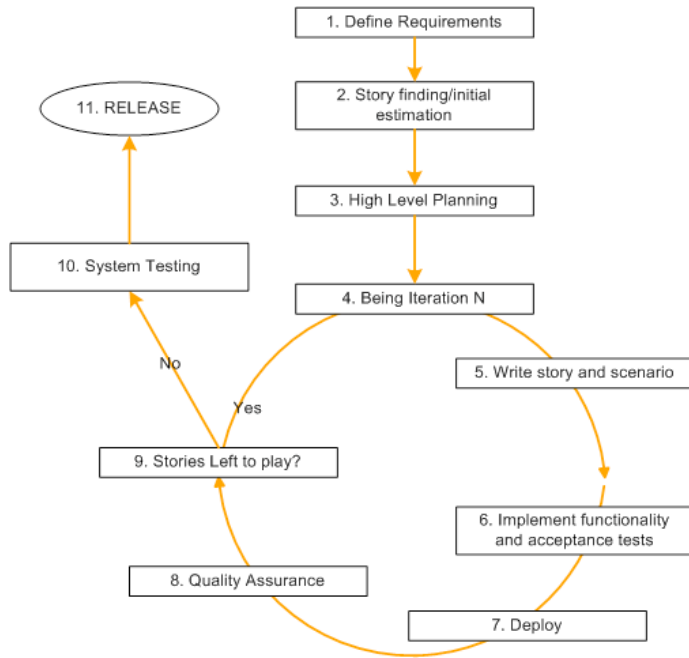


The user-centered design process ...
 463 x 318 - 199k - jpg
www.infotech oulu.fi



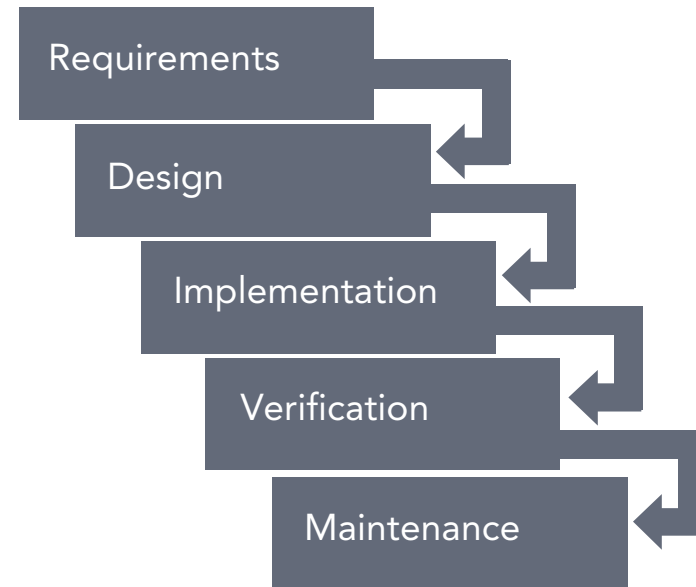
Research and software

Agile



dotnetjunkies.com/.../archive/category/I754.aspx

Waterfall



http://en.wikipedia.org/wiki/Waterfall_model

Stakeholders?

Stakeholders

Corporate managers

Product engineers

User research team

Product designers

Marketing team

Corporate partners/vendors

Customers / end users

Non-users

“Clients”

Stockholders

Advertisers

Etc....

User research

Who does it


- Research specialist(s) on a design team
- “Outsourcing” to specialized research group inside company
- Consultant hired on a project-by-project basis
- Designers with appreciation for user research

What is it called?

- | | |
|-------------------------|-----------------|
| Usability | Design research |
| Human factors | Ethnography |
| User experience | User research |
| “Voice of the customer” | |

Design intervention: communication

THE INFORMATION SPECTATOR



Rosa Cabrero
“ I need quick answers. How do you work in time for this stuff & still do everything else? ”

Rosa loves her job. She enjoys the ongoing challenge of finding answers to a wide variety of questions. She is always learning alongside her patrons and is deeply appreciative of the range of knowledge acquired in her daily work. In addition to desk reference, Rosa wears other hats in her work routine such as cataloging, collection development, programming, and teaching workshops.

Rosa is interested in how libraries use technology to provide top-notch services to their communities. Unfortunately, Rosa is unable to follow cutting edge developments as much as she would like. The majority of work is spent in public service at the reference desk and she doesn't have time to enrich her knowledge base with personal research. It's often a decision between keeping the library functioning and exploring career development. As expected, the former always wins out. Additionally, Rosa's manager is reluctant to justify extra time for personal career development when patrons and operations are immediate needs.

Rosa worries about her library staying current and relevant in the perspective of her community. She is aware of Web 2.0 tools and has heard of their application in libraries. She can see that there are advantages but remains cautious in her observations. She doesn't have time to explore the matter in-depth anyway and is resolved to keep an eye on big developments as she hears about them.

AGE: 41
EDUCATION: MLIS
OCCUPATION: Adult Services Librarian
WORKPLACE: Small- to medium-sized library in New England, population 15,000

GOALS

- To improve her productivity and abilities in handling a wide variety of work situations.
- The right answer for every question or problem.

WEBJUNCTION USAGE

- Referred by colleague through an email link.
- Joined in 2005.
- Visits site 2-4 times a month.
- Enjoys taking courses.
- Searches for articles on topics of interest and during "need to know" situations at work.
- Finds inspiration in consuming community features such as reading discussion boards.

NEEDS

- To quickly find helpful and accurate information when needed.
- To feel that she isn't wasting her time.

TECHNOLOGY

- Relies on computers to get her job done well.
- Utilizes internet and research databases on a daily basis.
- Minimal participation in social software.

CHALLENGES

- Overwhelmed by the idea that she has to use every tool or know everything in order to utilize new tools.
- Worried about her competence in learning and understanding new technologies.
- Frustrated at times with her inability to find or refine things on WJ.

DATA SOURCES

- Recordings of usability tests
- Stakeholder interviews
- SME interviews
- 2007 WebJunction Member Survey results
- WebJunction Discussion Board
- Bureau of Labor Statistics, Occupational Outlook Handbook, 2008-09 Edition, Librarians.

Before research identifying stakeholder goals and constraints

During research reporting initial results and building empathy

After research is completed:

writing requirements, feature documents, use cases, personas, and scenarios

building empathy for 'users' among designers/builders

representing user perspective to decision-makers

Design intervention: collaboration



Stakeholder “ride-alongs”
Interdisciplinary team
activities
Contributing design ideas