



Information Architecture

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What makes a web site good?

- *"...proper WWW site design is largely a matter of **balancing the structure and relationship** of menu, home pages, and individual content pages..."*
- *"...**build a hierarchy of menus and pages that feel natural and well structured to the users...**"*
- *By Lynch, P.J. (1995) WWW Style Guide*



Experience first, pay later...

- *" Usability has assumed a much greater importance in the Internet economy than it has in the past... "*

The equation is simple:

- *In product and software design customers **pay first** and **experience** usability **later***
- *On the web, users **experience** usability **first** and **pay later***

It's very clear why usability is important for web design"

- By Nielsen, J. (1999) Designing Web Usability



Architecture analogy

- A building must:
 - Look good
 - Be usable (for working, living, playing, etc.)
 - Stand up
- A web site must:
 - Look good
 - Be usable (e.g., information must be findable)
 - Stay up (i.e., not crash)

Art vs Engineering

- Combination of art vs. engineering



- Same for I.A.

Crumbles...

- Buildings crumble...



- Web site crumble
 - When you last encountered a broken link?

Pretty but unsable


- Building




- Web sites

- <http://www.cocacola.it/>

So what you think IA is?



I drew a site
Map, I'm doing
IA



Usability testing?
Yep! We all think
it works great!



We surveyed what
our users
want!



I use Visio...
I'm an Information
Architect

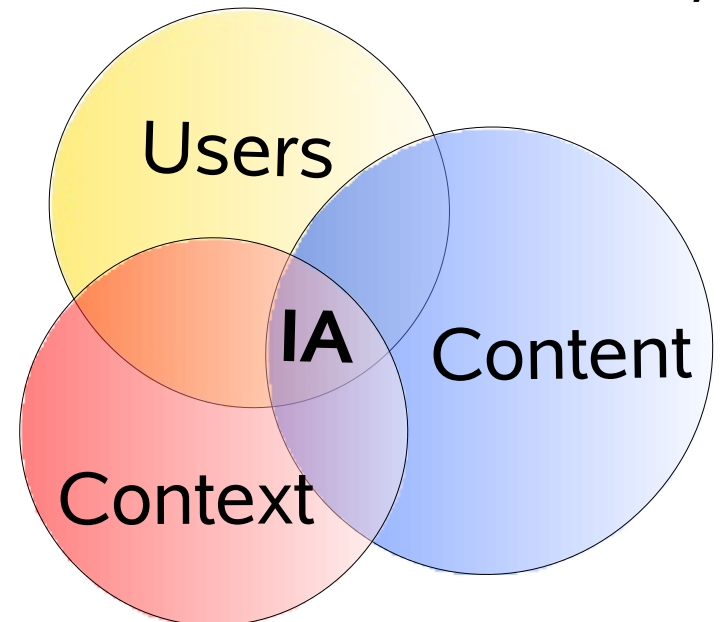


What IA is NOT

- **Information Architecture is not:**
 - Simply drawing up a sitemap
 - Simply pumping out masses of “wireframes”
 - Designing for ourselves
 - Only navigation
 - Frivolous expense for “Big Projects” only
 - A wish list item
 - A kind of database design

Information Architecture is ...

- *“the art and science of structuring, organizing and labeling information to help people find and manage information”*
 - By Louis Rosenfeld, Peter Morville, “Information Architecture for the World Wide Web”, 3rd edition, November 2006.
- Balances the characteristics and needs of **users, content, context.**





Information Architecture is ...

- The practice of designing, for a website or intranet, the:
 - Site structure
 - Navigation
 - Labeling
- Sometimes is used as synonym for “User Centered Design”, which involves:
 - Understanding users and their needs
 - Designing with those needs in mind
 - Validating design decisions with user involvement

Basic design questions

Where I am?



Welcome - Already a member? [Sign in](#)

[My Itineraries](#) | [My Account](#) | [Customer Support](#) | [Feedback](#)

Search Expedia

Go

Home

Flights

Hotels

Cars

Vacation Packages

Cruises

Activities

DEALS & OFFERS

Maps

Business Travel

Rewards

Build Your Trip



Flight

Hotel

Car

Cruise

Activities

Book together & save!

Flight + Hotel

Flight + Car

Flight + Hotel + Car

Hotel + Car

Trip information:

Roundtrip One way Multiple destinations

My dates are flexible (policies vary by destination)

Leaving from:

Going to:

Departing:

Returning:

Time:

Adults (19-64):

Seniors (65+):

Children (0-18):

1

0

0

Additional options:

[Airline, first or business class, nonstop only](#)

Search for flights

Save on Top Travel Deals

Leave at the
last minute
and save!

Hotels Start
at just **\$29**

Book now and save



Orlando on sale! Hotels from **\$47**

California Sale: Hotels from **\$44**; Trips from **\$265**

Holiday flights from **\$105+** roundtrip

Find Your Perfect Trip

Explore by Destination



Location info

Las Vegas | Los Angeles | San Francisco

San Diego | Miami | Chicago | Hawaii | Mexico

Find a new

See all destinations

Get up to **\$100** off
when you book on Expedia*

Learn more and apply

*See details





More questions...

- How can I find something?
- What's available on this site?
- I know what I want, how can I find it?
- What happens now?
- How can I restart from scratch?
- I know what I want, how can I browse to reach it?
- ...

The 3 pillars of IA (1/2)

Structure



Welcome - Already a member? [Sign in](#)
[Itineraries](#) | [My Account](#) | [Customer Support](#) | [Feedback](#)

Search Expedia

Home Flights Hotels Cars Vacation Packages Cruises Activities **DEALS & OFFERS** Maps Business Travel Rewards

Build Your Trip

Labeling

- Flight
- Hotel
- Car
- Cruise
- Activities
- Flight + Hotel
- Flight + Car
- Flight + Hotel + Car
- Hotel + Car

Trip information:

Roundtrip One way Multiple destinations

My dates are flexible (popular US routes only)

Leaving from:

Going to:

Departing:

Time:

Returning:

Time:

mm/dd/yy

Any

mm/dd/yy

Any

Adults (19-64):

Seniors (65+):

Children (0-18):

1

0

0

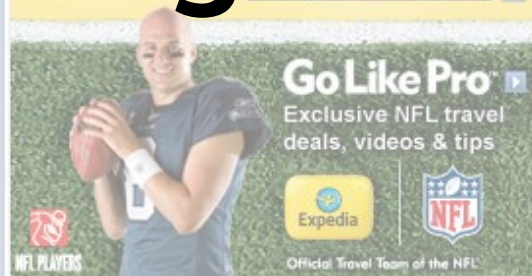
Additional options:

[Airline, first or business class, nonstop only](#)

Save on Top Travel Deals

Leave at the
last minute
and save!

Hotels Start
at \$99



Orlando on sale! Hotels from **\$47**

California Sale: Hotels from **\$44**; Trips from **\$265**

Holiday flights from **\$105+** roundtrip

Find Your Perfect Trip

Explore by Destination



Location Info

City Hotels

Las Vegas | New York | Orlando | San Francisco
San Diego | Miami | Chicago | Hawaii | Mexico

Get up to **\$100 off**
when you book on Expedia*

*See details





The 3 pillars of IA (2/2)

- **Site Structure**

- Categorization
- Classification
- Hierarchy

- **Navigation**

- Accessing the site structure
- “Findability”

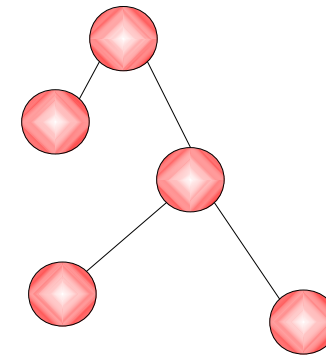
- **Labeling**

- Naming sections, links, navigation, etc.

IA components (1/3)

■ Structure




- The main organization of the site content (taxonomies)



■ Navigation

- Site-wide navigation
 - Where I am?
 - Where I can go?
- Local navigation
 - Navigation inside a web site section



Activities by location	Activity deals	Overnight excursions
 Las Vegas 24/7 fun and entertainment	 Walt Disney World® Tickets Golf: Book a tee time Ski Vail: Epic Season Pass LA Clippers Tickets Las Vegas: Le Reve NYC: <i>Chicago</i> The London Pass from \$66 Disneyland® Resort Tickets Maui: Molokini Snorkel SFO: Food & wine tour	 Southern Italy coast tour (2 days/1 night) Discover the Loire Valley (2 days/1 night) Memories of Normandy (2 days/1 night) Mini Italian art tour (4 days/3 night) Niagara Falls Excursion (2 days/1 night)



IA components (2/3)

- **Navigation** (continued...)

- Breadcrumbs

- Site Map / Summary

- Summary of the site content and link to site sections and subsections
 - Usually in form of taxonomic schema

- Site Index

- Links in alphabetical order

- Site guide

- Offers specific information about specific site aspects

IA components (3/3)

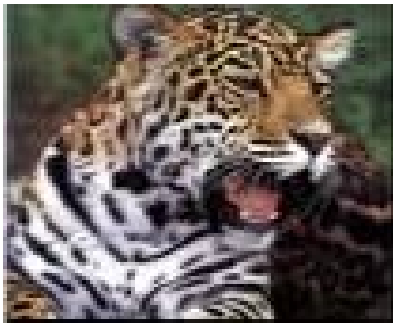
■ Labeling

■ Controlled vocabularies

- Domain specific terms

■ Thesaurus

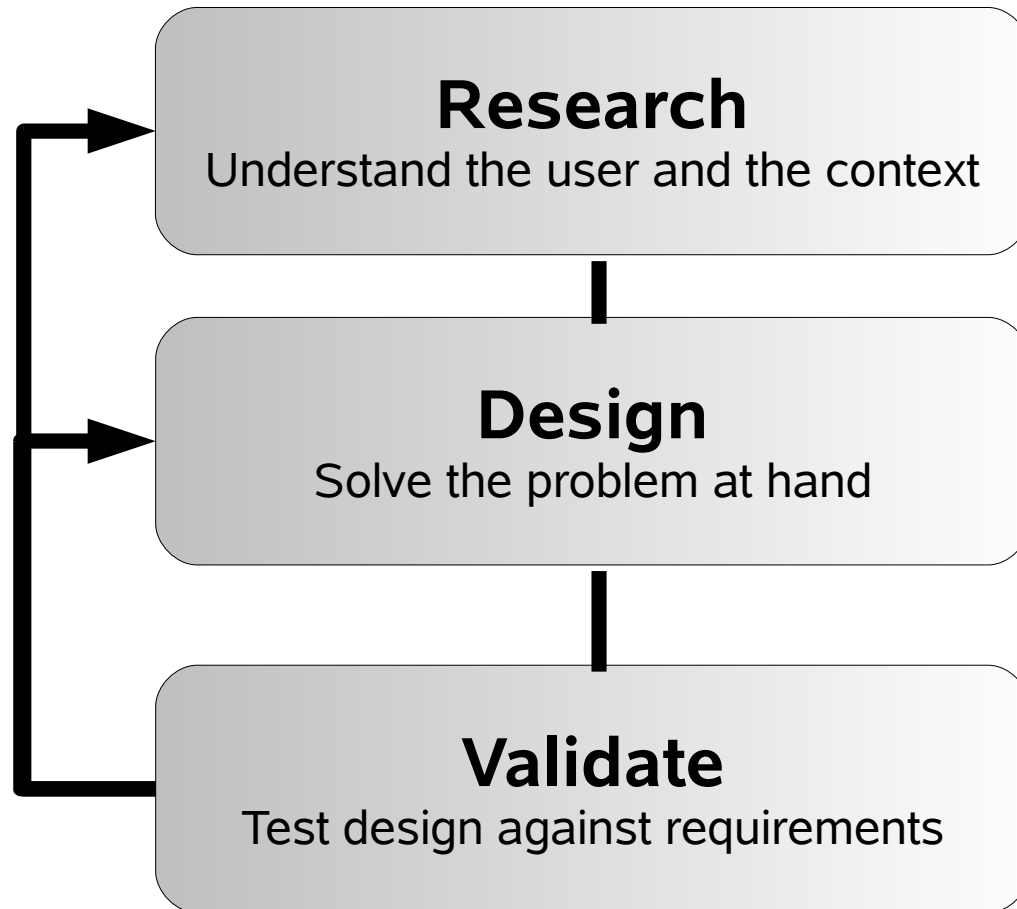
- Term descriptions
- Links between terms: synonyms, antonyms, meronyms, etc.



Jaguar?



General IA process (1/3)





General IA process (2/3)

■ Research

- User research
- Business objectives
- Conventions and best practices (de facto standards)

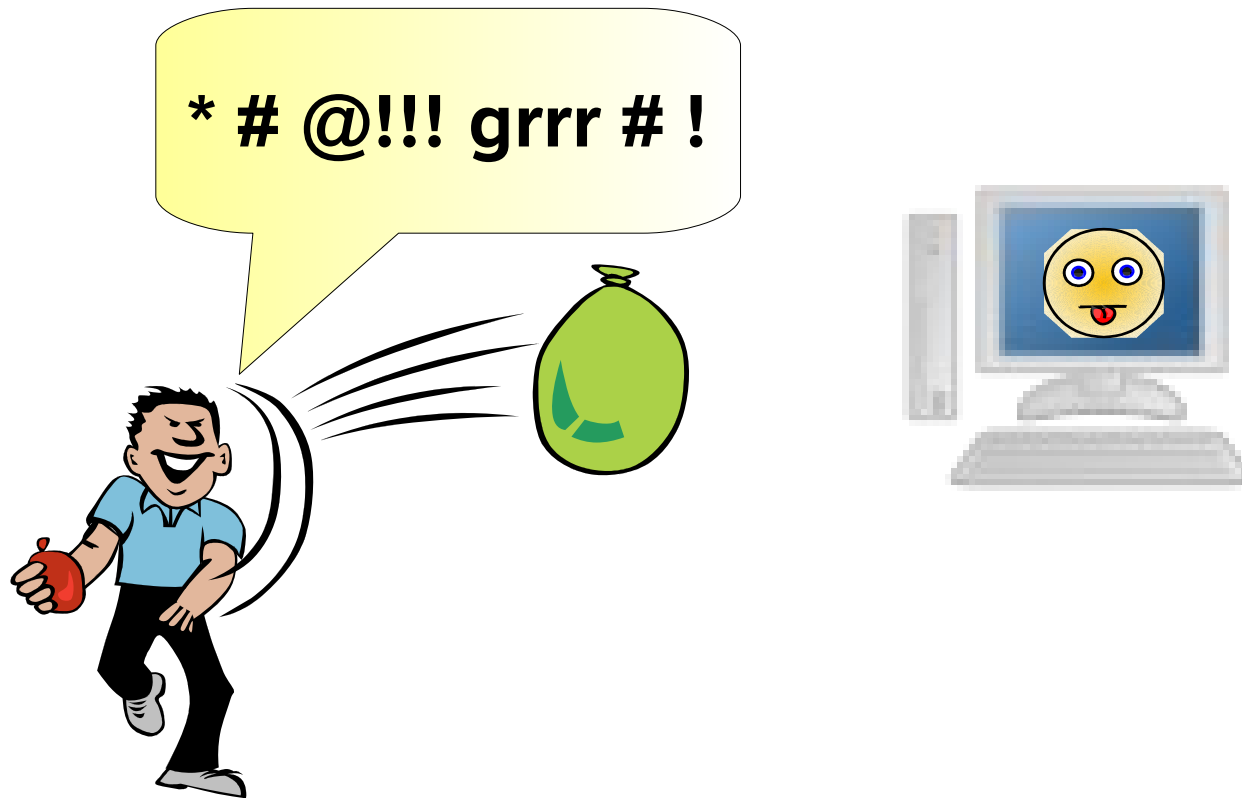
■ Design

- Use knowledge of users
- Involve them in the process
- Balance user needs, business objectives and possible content

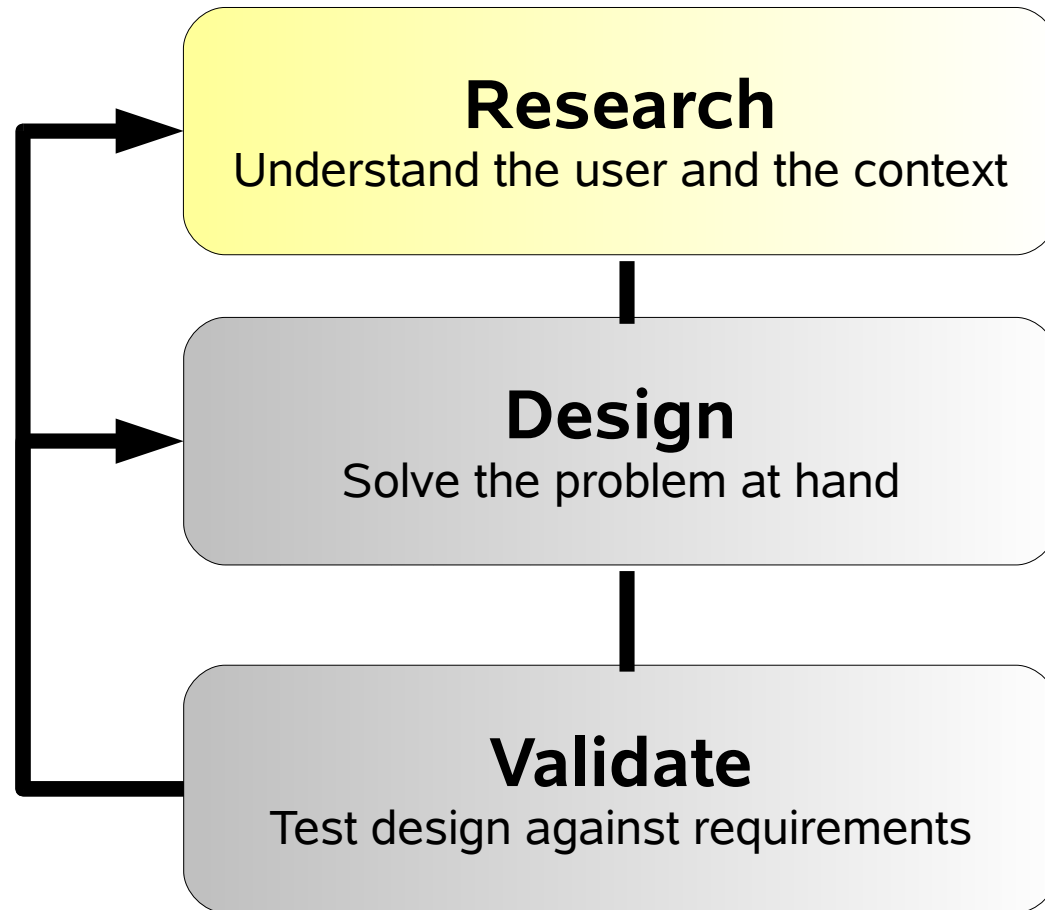
General IA process (3/3)

■ Validate

- Usability testing and iterative design



General IA process



Research

- Get out and understand your users
 - What do they need?
 - What do they want?
 - How do they use technology?
 - How might they use your web site?
 - What information they need?



User Research Techniques (1/2)





User Research Techniques

- Many activities
 - Interviews, expert review, heuristic review
 - Surveys, focus groups and other market research techniques
 - Competitor analysis, best practice review
 - Ethnographic activities such as contextual inquiry (site visit) and diary studies
 - Web analytics, search engine logs, CRM (Customer Relationships Management), sales data analysis

Something about...

I want to do some sightseeing

I need to go to Dayton for a conference

I need to book the flight and the hotel

I don't know what the city has to offer



Lucy



Lucy...

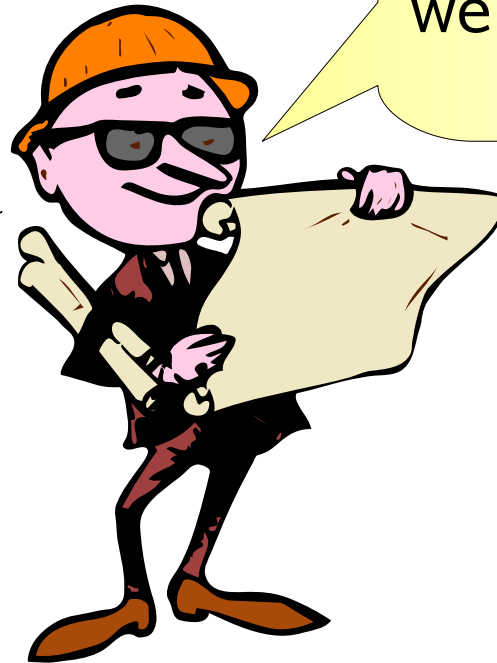
■ **User research**

- we meet Lucy
- Lucy is in the target audience for a travel web site (e.g., [ww.expedia.com](http://www.expedia.com))
- Lucy is a young researcher in biology
- Lucy uses the web a fair bit

And...

We need to drive traffic to the destination X

What content do we already have?



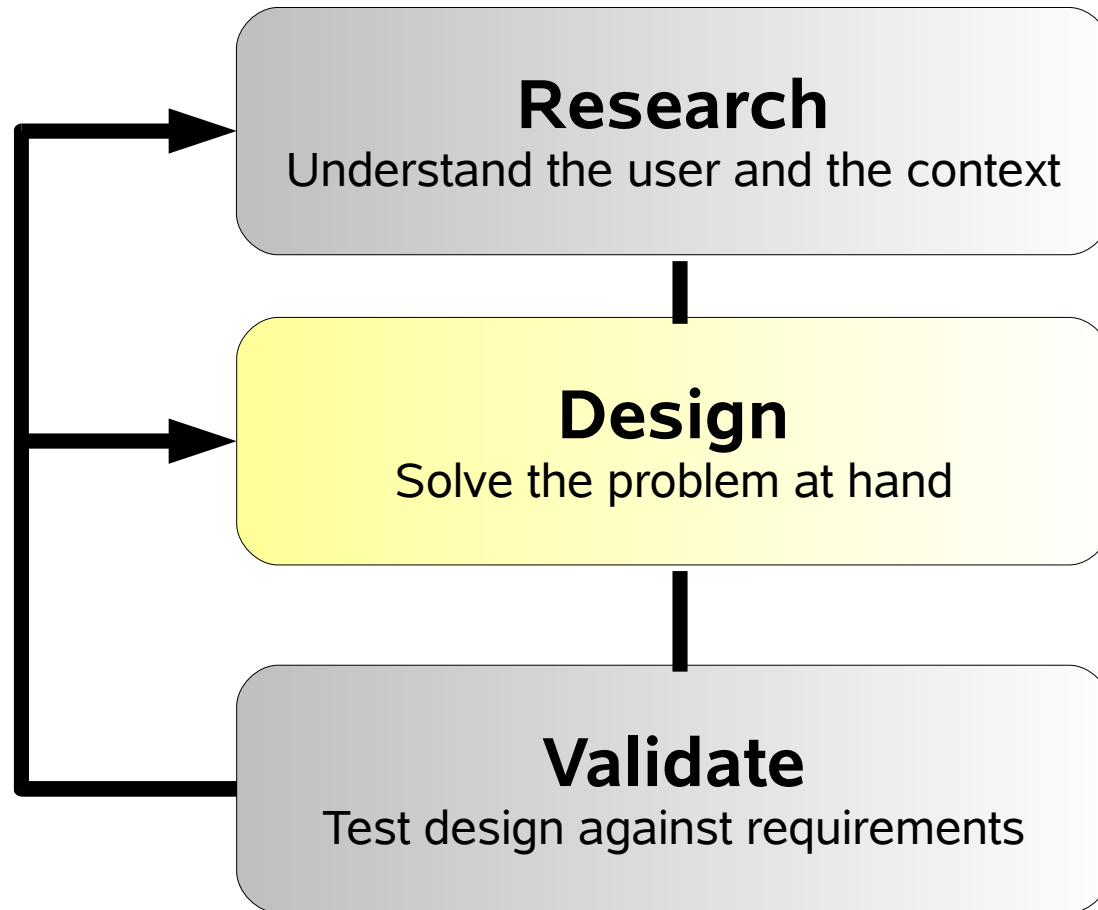
Craig



Other research tasks

- Need to consider more than users
 - Business Stakeholders (as Craig)
 - Business Objectives
 - Web site goals
 - The context we have to design in:
 - Content inventory
 - Already deployed solutions
 - **avoid the re-build from scratch temptation!**

General IA process





Design

- Inputs:

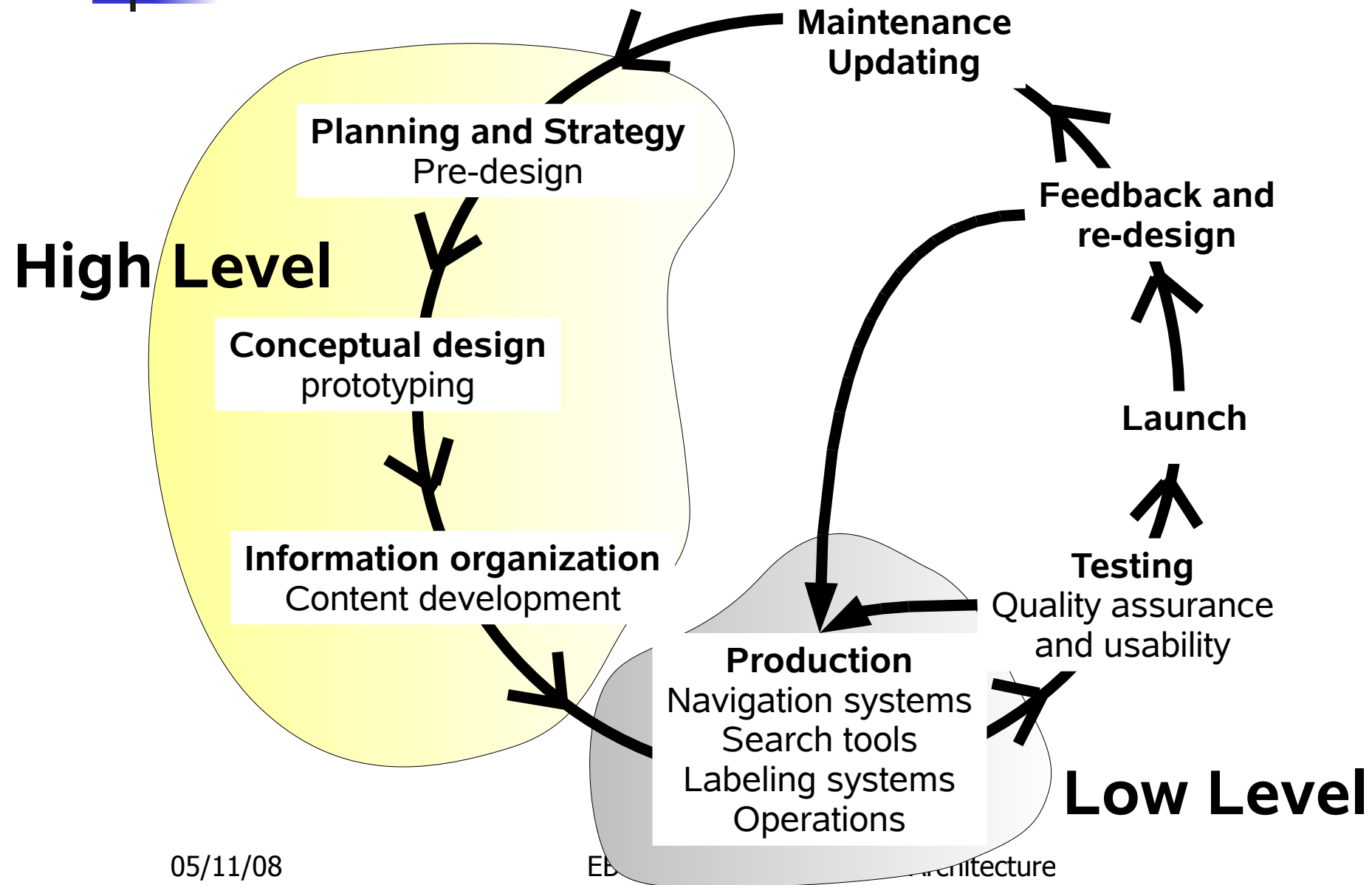
- Existing knowledge

- Categorization schemes (e.g., alphabetical, chronological, geographical, by subject/topic)
 - Conventions (e.g., search box on the top right)

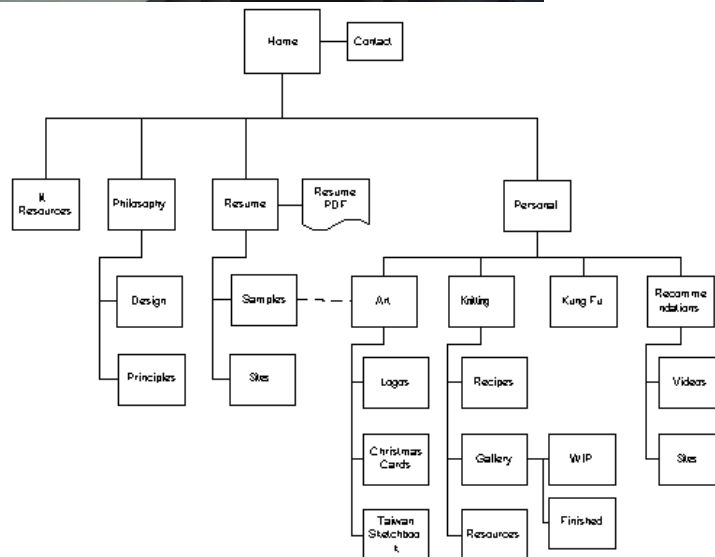
- Research outcomes

- Needs and behavior of audience
 - Practical limitations on content and technology
 - Business drivers and requirements

Two main levels in IA design



High Level design



- Many approaches
 - A site map is most common output of high level design
 - Card sorting is one of the most adopted techniques
 - It's a cross-border task between research and design

Designing the travel web site...

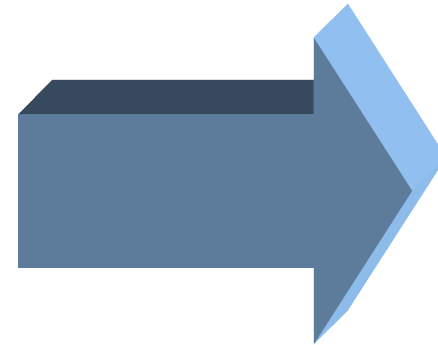


I need to go to Dayton for a conference

I want to do some sightseeing



We need to drive traffic to the destination X



- Home
- Guides
 - International Vacations
 - Domestic Vacations
- Packages
- Book now
 - Are you also interested in?



Designing the travel site

- Existing knowledge
 - Categorization schemes (alphabetical, chronological, geographical, by subject/topic)
 - Travel content → geographical
- Input from Research
 - Needs and behavior of the target audience
 - Results of card sorting
 - Business objectives and political drivers
- Draft information architecture

Low level design

Page notes

This section contains all the information which staff would need as employees of XYZ.

This is a first level intermediate page. Its purpose is to guide, direct and funnel staff towards the content they need.

So it's essential that they are able to determine which link to follow next.

Get straight into it

Intermediate pages should be kept free of 'happy talk'. Text that introduces a section or gives instruction is a waste of space and will probably never be read. A better strategy is to craft categories and navigation so that users are able to quickly and easily find their way to the content they need.

Information scent

To help staff decide which path to follow (which category to click on) keywords are placed under each category on these route pages. These keywords should reflect the key tasks or concepts which staff associated with each category.

At times the hierarchy represented here may not adhere to the company's official structure or areas of responsibility, but that's precisely the point. The categorisation shown here reflects a view shared by most staff.

Category names have been chosen to deliberately move away from the names of departments within Canon.

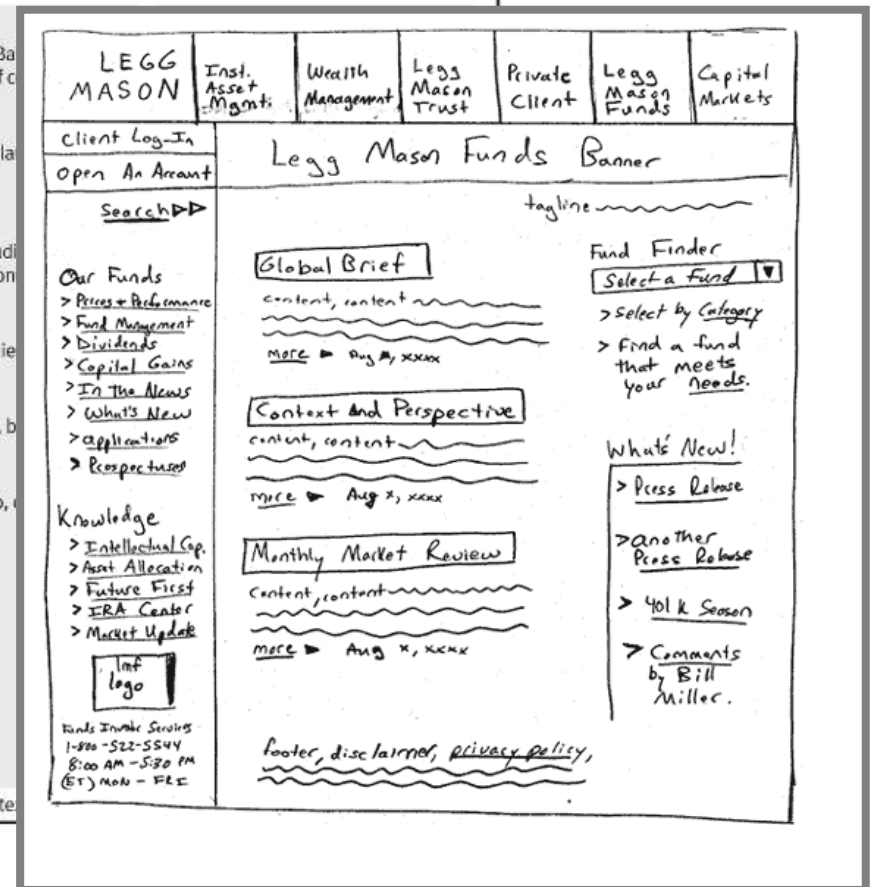
Alternative approach

Many staff requested one place for forms and would primarily look for a form in that spot. This is alongside those staff who would look for a form according to the subject/topic it relates to (which is facilitated by the links above).



Information for staff

- » [HR and payroll](#)
Holidays, annual leave, remuneration, performance review, Ba Scorecard, superannuation, jobs @ XYZ, recruitment, code of c
- » [Learning and development](#)
Welcome session, training courses, Personal Development Pla Your Future, iLead
- » [Health and Safety](#)
OH&S, incident report, emergencies, recycling, workplace audi safety induction, OH&S Committee, hazards and risks, environ
- » [Building and facilities](#)
office locations, floor plans, security, cafeteria, leisure facilitie
- » [News and events](#)
Canon news, calendar, Friday Flash, Insight magazine, press, b
- » [Culture and community](#)
San-Ji Spirit, keys, awards, iCelebrate, iThankyou, social club, e
- » [Employee purchases](#)
- » [IT and computers](#)
Laptops, desktop PC, Oracle, tips and guides
- » [Finance and accounts](#)
Expenses, Concor, iProc
- » [All forms and templates](#)



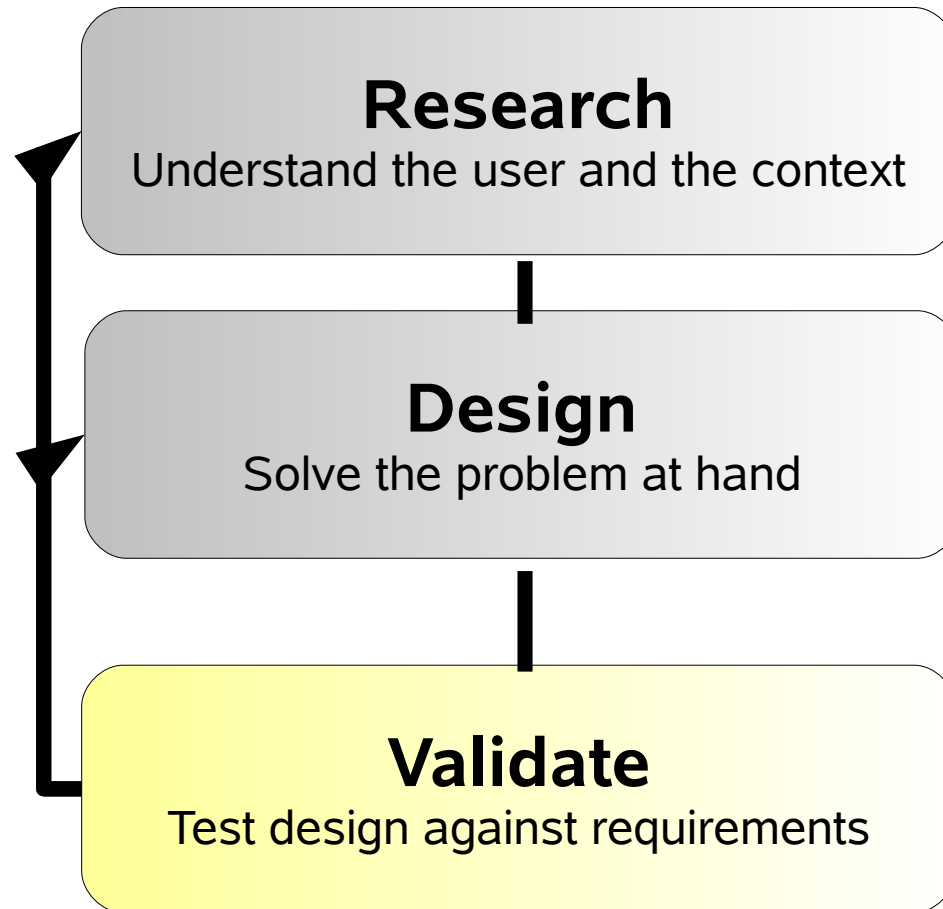


Low Level IA activities

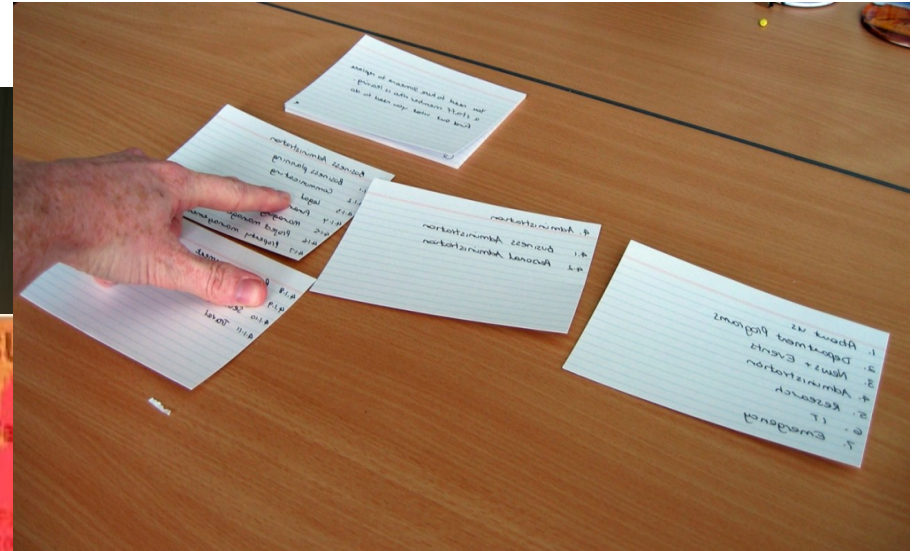
- Many approaches to design
 - Wireframes are the most common
 - Conventions
 - Design patterns may be useful
 - Strength and weaknesses of the adopted platform shall be taken into account
 - ...



General IA process



Validate





Usability evaluation (1/2)

- Realistic user groups
- Well defined tasks
- Observation of user behavior
- Questionnaires
- Think aloud
- **It's a very complex discipline!**

Usability evaluation (2/2)

The image shows a screenshot of the Expedia website interface. At the top left is the Expedia logo. A navigation bar contains links for Home, Flights, Hotels, Cars, Vacation Packages, Cruises, Activities, and DEALS & OFFERS. The main content area is divided into several sections:

- Build Your Trip:** A section with icons for flight, hotel, car, and cruise. It includes radio buttons for selecting travel components (Flight, Hotel, Car, Cruise, Activities) and a "Book together & save!" section with options like Flight + Hotel, Flight + Car, Flight + Hotel + Car, and Hotel + Car. Below this is a "Trip information:" section with options for Roundtrip, One way, and Multiple destinations, a checkbox for flexible dates, and input fields for departure and return dates and times. It also includes dropdown menus for the number of adults, seniors, and children.
- Save on Travel Deals:** A section featuring a cartoon illustration of a woman with blonde hair sitting on a chair, reading a book. A yellow speech bubble points to her with the text "Like it!". Below the illustration are promotional banners for travel deals, such as "Orlando on sale! Hotels from \$47" and "California Sale: Hotels from \$44; Trips from \$265".
- Explore by Destination:** A section with a world map and a list of destination cities: Las Vegas, New York, Orlando, San Francisco, San Diego, Miami, Chicago, Hawaii, and Mexico. It includes buttons for "Find a map" and "See all destinations".
- Get up to \$100 off when you book on Expedia:** A promotional banner with a "Learn more and apply" button and a Citi credit card image.