

How to fail at building websites

[and a lot of other things]

by

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Url of the Presentation Links & Slideshare

<http://goo.gl/oFCahL>

DRAGNET



"The Presentation You Are About To See Is True.

The Names Have Been Changed To Protect The Innocent"

“Success represents the 1% of your work
which results from the 99% that is called
failure.”

– Soichiro Honda

Failure

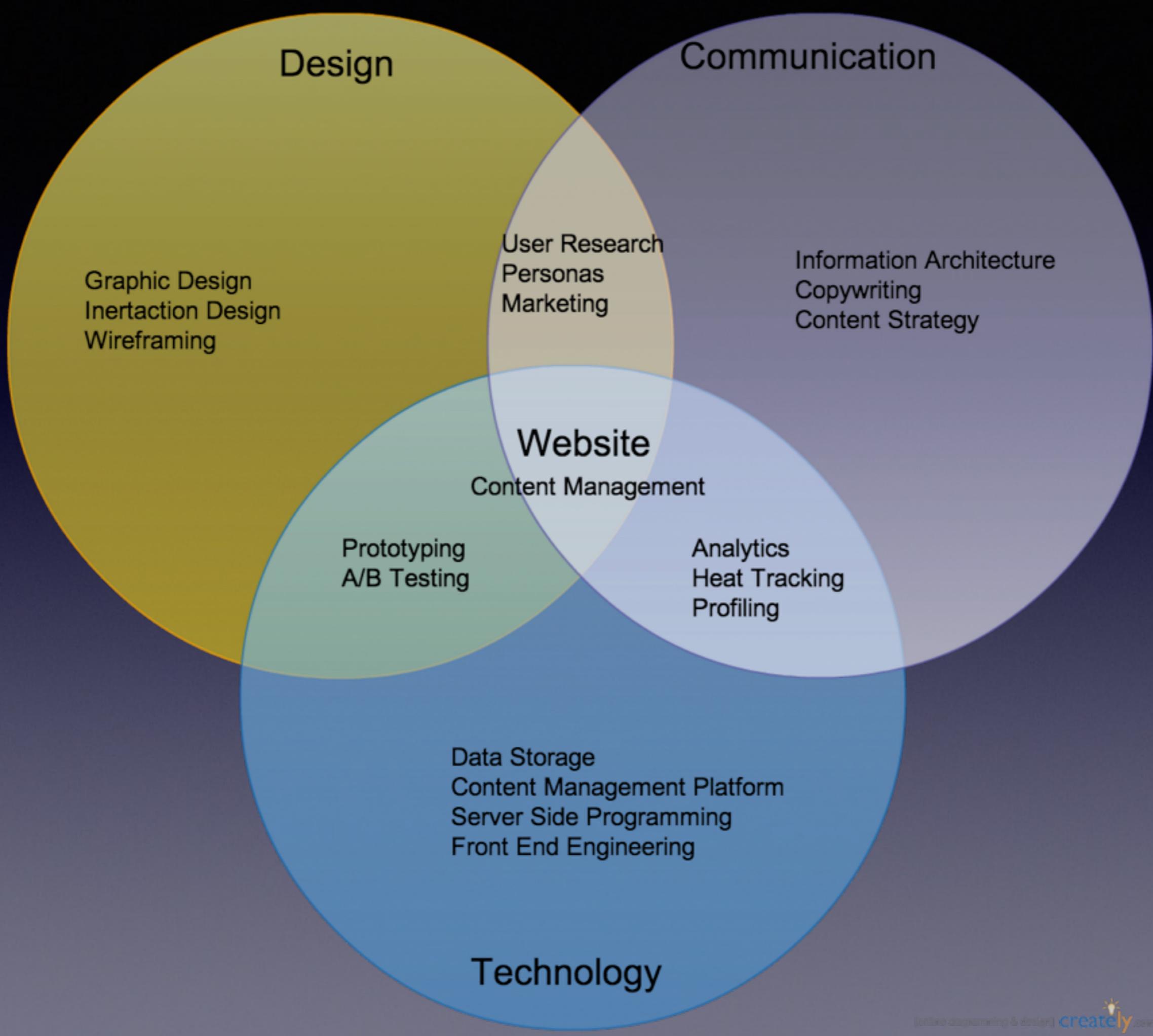
- Why do web projects fail?
- Why does failure happen?
- How do we mitigate failure?
- How do these apply to web projects?

Caveat

- Failure is relative to the observer.
- You may look at something and think it is an absolute disaster, where some one else may view it as a first class win.
- <http://www.lingscars.com/>

Why are websites so
prone to failure?

Websites are at the intersection
of design, communication and
technology.



Why do web projects fail?

- Unrealistic or unarticulated project goals (Expectations)
- Inaccurate estimates of needed resources (Human Error)
- Badly defined system requirements (Communication)
- Poor reporting of the project's status (Communication)
- Unmanaged risks (Design)
- Poor communication among customers, developers, and users (Communication)

continued...

- Use of immature technology (Design)
- Inability to handle the project's complexity (Leadership)
- Poor project management (Leadership)
- Stakeholder politics (Communication)
- Commercial pressures (Expectations)
- Sloppy development practices (Human Error)

Types of failure in web design & development

- Communication
- Expectations
- Leadership
- Cultural
- Design & Planning
- Human Error

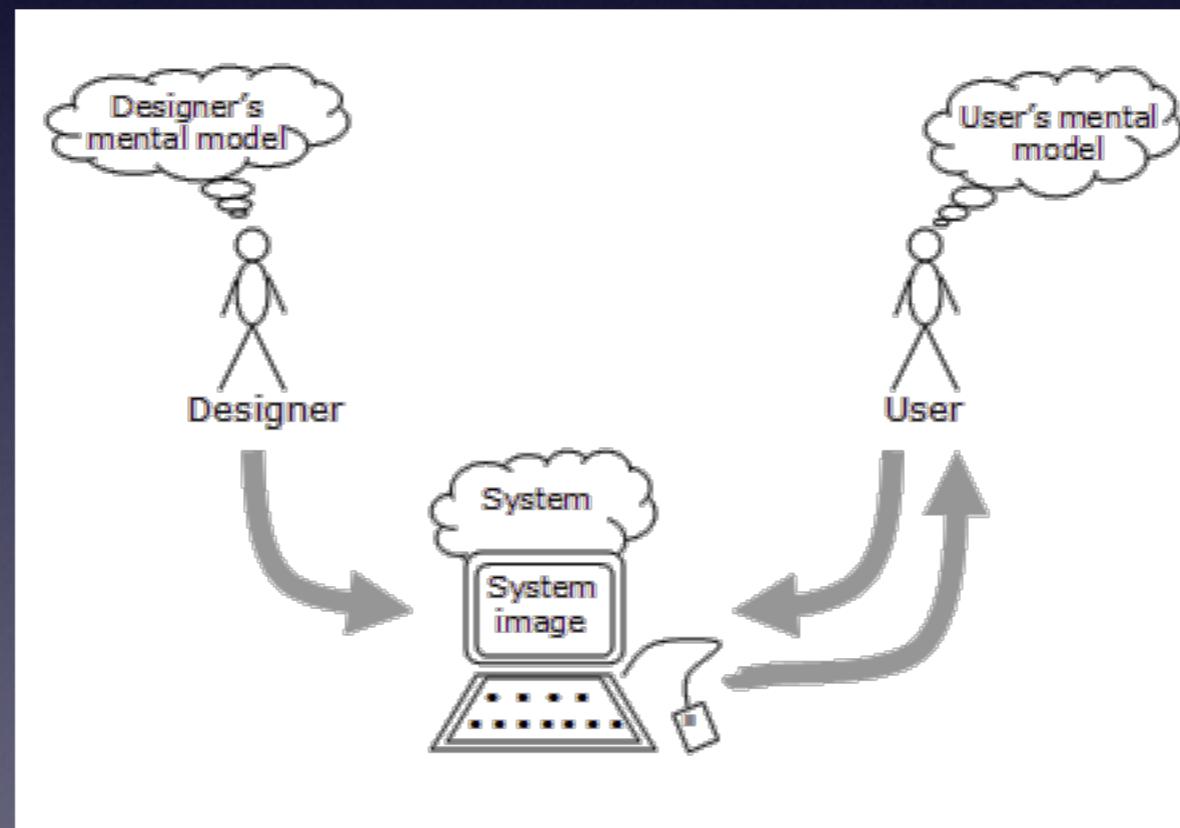
Anti-Social

- Committees
- Dictators
- Toxic Managers & Co-Workers
- Office / Department Politics



Psychology of Failure

We use mental models to understand our world.

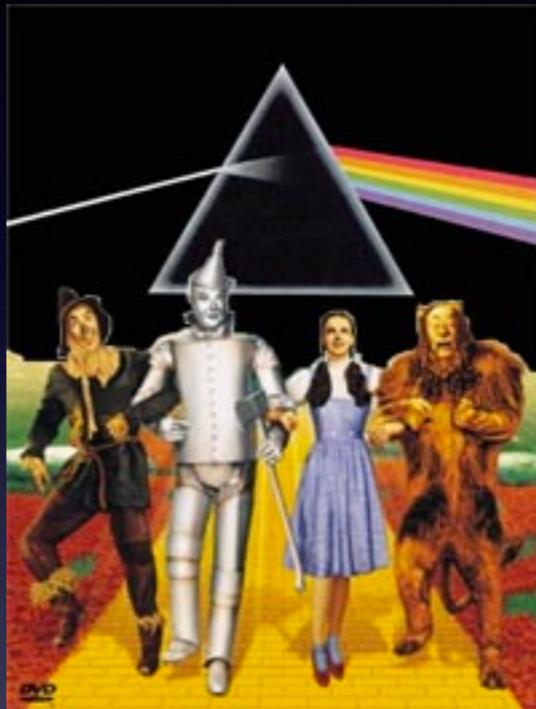


Mental models are
flexible and therefore can
adjust for failure.

Pattern Recognition

Our Brain is Wired to Recognize Patterns

False Patterns



Dark Side of The Moon & Wizard of Oz

<http://vimeo.com/46671351>

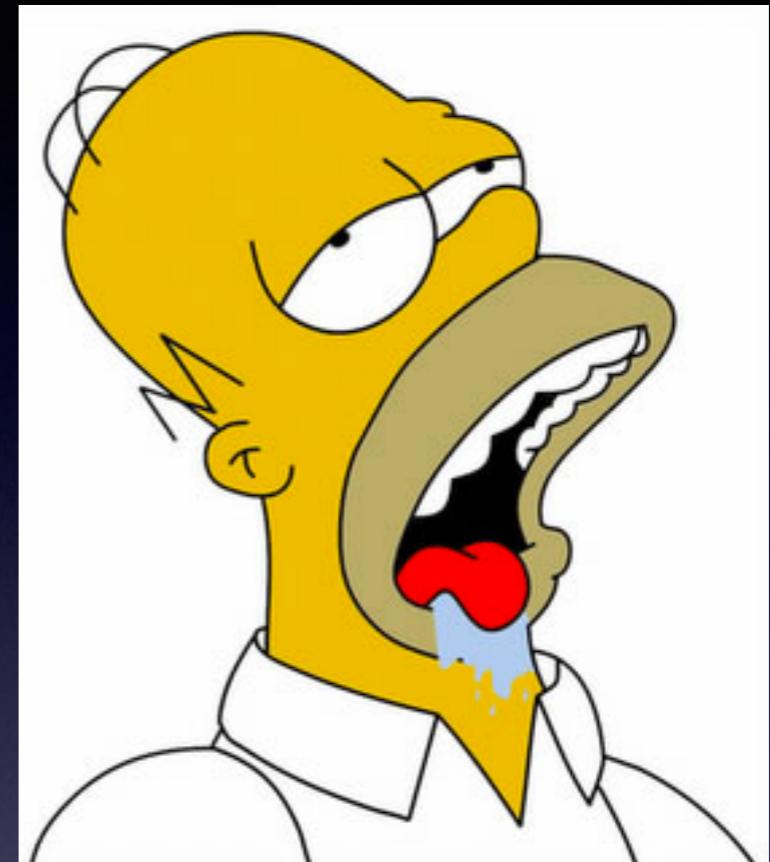
Abridged Version Highlighting Synchronicities

<http://www.youtube.com/watch?v=MDz2cNL1vuM>

Type 1 vs Type 2 Errors



Type 1 Error: False Positive



Type 2 Error: False Negative

Adaptive Bias

- We are hardwired to reduce the cost not the number of cognitive errors.
- The costs of a "false positive" or "false negative" error dramatically outweighs the cost of the alternative type of error
- The greatest effect is seen when
 - When the decision process is ambiguous
 - The decision is related to survival of the fittest e.g. life vs death, reproduction

- Is the sandwich safe to eat?

- Type 1 error

- Homer doesn't eat the sandwich and doesn't get sick, but he misses out on eating the sandwich.

- Type 2 error

- Homer eats the sandwich and maybe he gets sick, but he does not miss out on eating the sandwich.



Cognitive Bias

A cognitive bias happens when someone makes a bad choice that they think is a good choice based on beliefs or cognitive wiring in our brain.

Types of Cognitive Bias

- There are over 100 identified cognitive biases
- http://rationalwiki.org/wiki/List_of_cognitive_biases



Confirmation Bias

Confirmation bias is the tendency of people to favor information that confirms their beliefs or hypotheses. People display this bias when they gather or remember information selectively, or when they interpret it in a biased way. The effect is stronger for emotionally charged issues and for deeply entrenched beliefs.



Status-Quo Bias

We like to stick to our routines, political parties, and our favorite meals at restaurants. Part of the perniciousness of this bias is the unwarranted assumption that another choice will be inferior or make things worse.



Optimism Bias

The systematic tendency to be over-optimistic about the outcome of planned actions.

It's About Time: Optimistic Predictions in Work and Love

- 13% of subjects finished their project by the time they had assigned a 50% probability level; [Best Case]
- 19% finished by the time assigned a 75% probability level; [Standard]
- 45% finished by the time of their 99% probability level. [Worst Case]

<http://www.tandfonline.com/doi/abs/10.1080/14792779343000112#.U0qkGOZdVz4>



Negativity Bias

People tend to pay more attention to bad news — and it's not just because we're morbid. Social scientists theorize that it's on account of our selective attention and that, given the choice, we perceive negative news as being more important or profound.



Gambler's Fallacy

We tend to put a tremendous amount of weight on previous events, believing that they'll somehow influence future outcomes.



Illusory correlation

Inaccurately perceiving a relationship between two unrelated events.

Mitigating Bias & Error

Learning & error
correction rely on
feedback loops.

Scientific Method

Scientific method refers to ways to investigate phenomena, get new knowledge, correct errors and mistakes, and test theories.

SCIENTIFIC METHOD

PURPOSE

State the problem.

RESEARCH

Find out about the topic.

HYPOTHESIS

Predict the outcome to the problem.

EXPERIMENT

Develop a procedure to test the hypothesis.

ANALYSIS

Record the results of the experiment.

CONCLUSION

Compare the hypothesis to the experiment's conclusion.

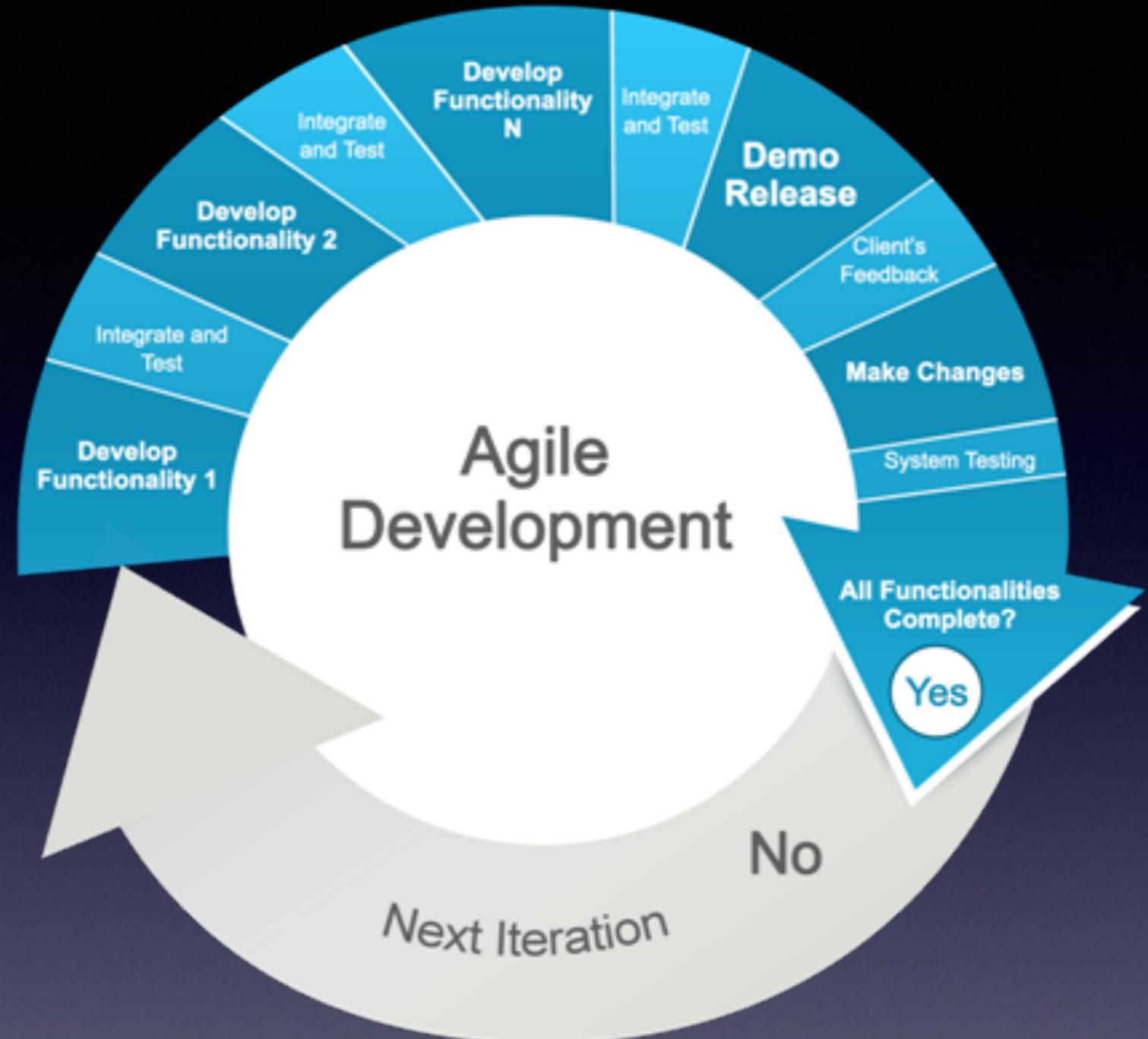
You wouldn't like me
when I'm angry...



Because I always back up
my rage with facts and
documented sources.

-The Credible Hulk

The scientific method is
designed to be self correcting
and remove bias and conjecture.



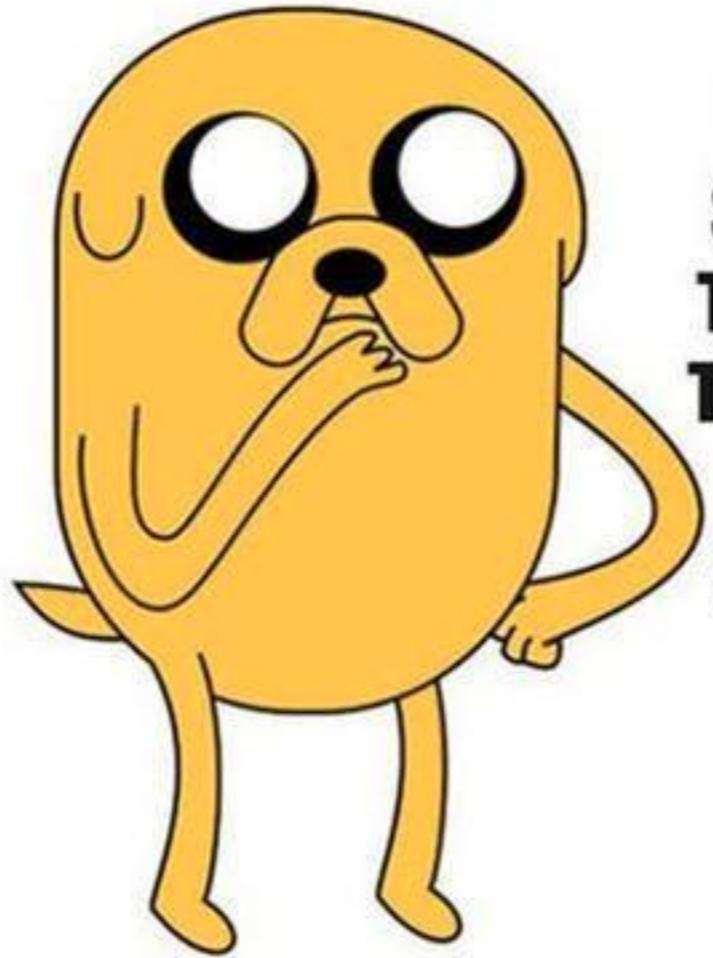
The iteration is a feed back loop

Error Correction mechanisms in Agile.

Continuous Improvement

“Kaizen”

- Identify sub-optimal processes & waste.
- Remove waste via small incremental change rather than radical changes.
- Improvement comes from inside.
- Change can be made to improve the output or the process as needed.
- Self & Team Introspection and reflection.



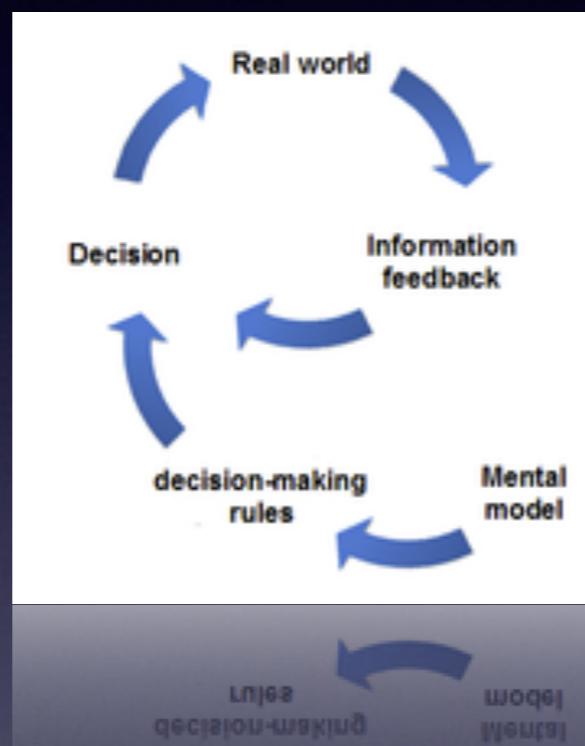
**“SUCKING AT
SOMETHING IS
THE FIRST STEP
TO BEING SORTA
GOOD AT
SOMETHING.”**

**— JAKE THE DOG
ADVENTURE TIME**

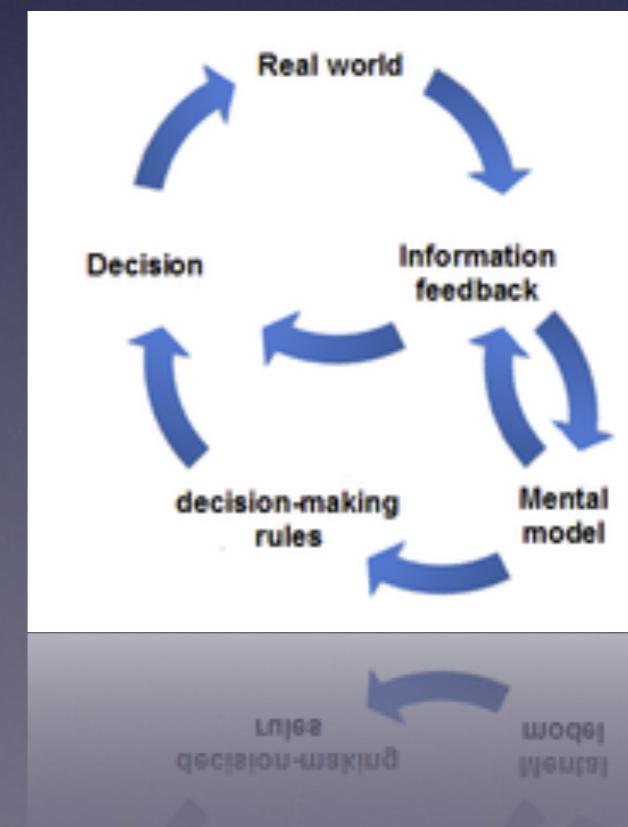
Good



Better



Best



Types of Feedback
and Learning

The retrospective.

- Stop doing?
- Keep doing?
- Start doing?
- End result is changing expectations and the workflow to handle change.

Communication Points

- Multiple Times / Day
 - Ad-hoc communication e.g. hallway meeting, chat, hangouts etc
- Every Day
 - Stand up / check in
- 1-2 time / iteration
 - Demos
 - Status meetings
- Less frequently
 - High Level Project planning
 - Major Course Corrections

Criticisms of Agile

- Lack of high level design
 - Many small iterations
- Scope Creep is embraced since customers / owners drive output
- Difficult to provide time estimates, but agile assumes estimates are flawed, but business want estimates.



Website Process Do's and Don'ts

Project Kickoff

- Don't invite every one to the first meeting
- Don't assume every one knows who does what
- Treat the kick off meeting as just another project
- Do define general roles and hats with the core do'ers first
- Do make a rough communication plan or responsibility wiki page
- Do start building support & passion for the project from the do'ers

Planning

- Don't gloss over the big picture and how the project fit's into the business strategy
- Don't ignore the end users.
- Don't plan with out a basic set of data and make conjectures
- Don't use research for user's needs, but rather just business / marketing objectives
- Do define the business goals and how a project will benefit the organization.
- Do survey or have conversations with current or expected users.
- Do Research, Research, Research and analyze.
- Do reconcile research with user's needs

Design

- Don't try to do design in one big ball or huge process
 - Don't let visual design lead IA
 - Don't discount Wireframes
 - Don't focus entirely on Design & Branding
 - Don't start each new page design from scratch
- Do divide each part of the design into separate actions.
 - Information Architecture
 - Wireframes
 - Design & Branding
 - Reconcile these phases if necessary
 - Do these steps in parallel
 - Do Create a digital style guide once the design is viable.

Build

- Don't wait until planning is on 100% done.
- Don't put more emphasis on the build than the design
- Don't rely on infrequent milestones and status updates to show the product
- Do start the website build as soon as the design & function is minimally viable.
- Do try to equalize the design and planning velocity to match or outpace build velocity
- Do demo every iteration whether internal or external to confirm the planning & design.

Deploy

- Don't deploy infrequently
- Don't focus on making deployments easier
- Don't let the technical team drive the deployment
- Do deploy as soon as features are ready - continuous deployments
- Do automate as many things as possible to eliminate human error - even if there is not a time ROI
- Do let the product / business owners drive feature deployments when ready

Embrace it

- Embrace change & Redefine failure
- Communicate more often than you think is necessary
- Check your assumptions against the data — feedback.
- Look for errors & bias in your mental model and conclusions.
- Make small changes to your workflow using feedback loops.

Thank You



Sources

- <http://spectrum.ieee.org/computing/software/why-software-fails>
- http://rationalwiki.org/wiki/List_of_cognitive_biases
- http://en.wikipedia.org/wiki/Type_I_and_type_II_errors
- http://en.wikipedia.org/wiki/Agile_software_development
- http://en.wikipedia.org/wiki/Mental_model