

Discovery Projects

Strategies for Defining the Opportunity

Tom Martin

Senior Technology Consultant



METAL TOAD

The What

What is a Discovery Project?

What is a Discovery Project?

A Small Project to Define the Big Project

- Planning
- Gathering Goals & Requirements
- Generating a Project Roadmap
- Narrowing Estimate Ranges
- Creating Alignment
- Earning Trust

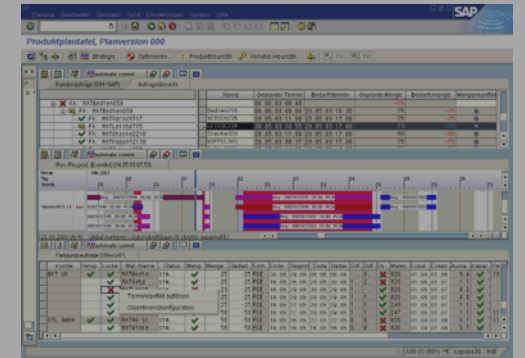


**Discovery
Project**

**The Actual
Project**

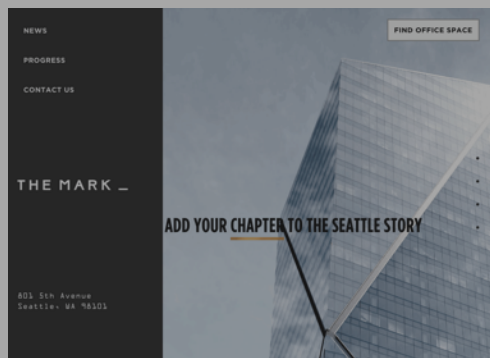
What is a Discovery Project?

Discovery Project “Goldilocks Zone”



ERP

Complexity



Brochureware

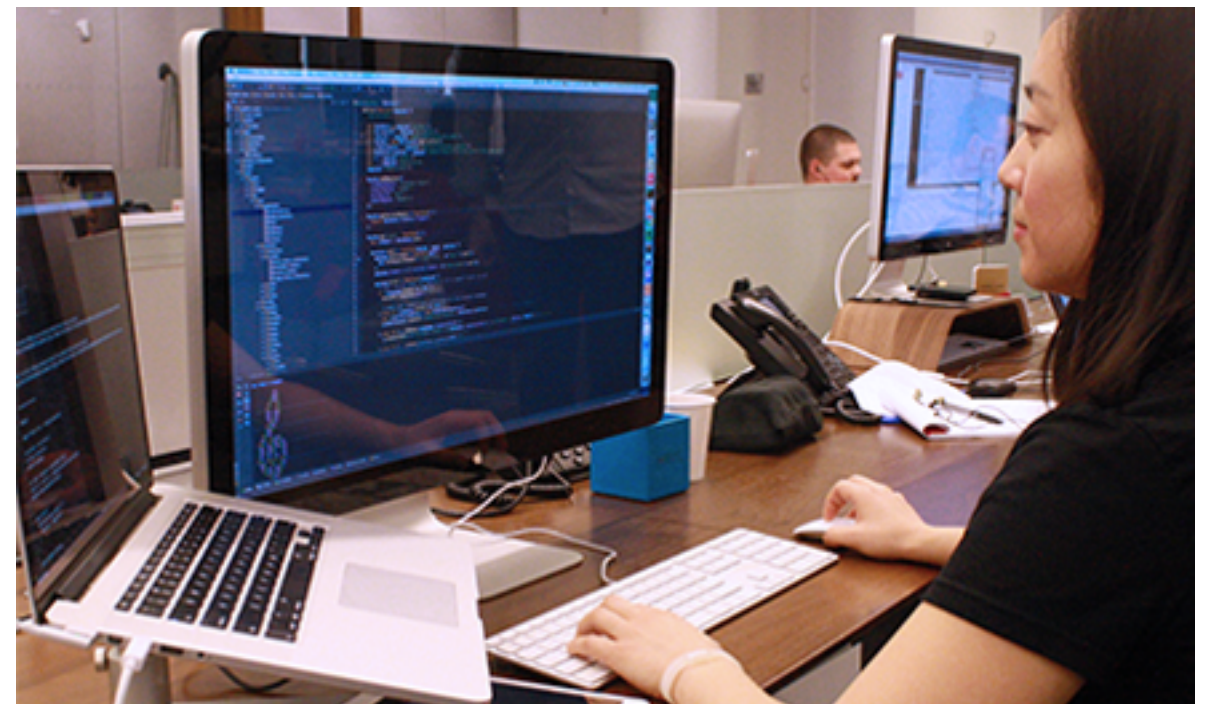
What is a Discovery Project?

Lessons From Animators

Animation



Development



Lessons From Animators

“If I had three days to animate a scene...

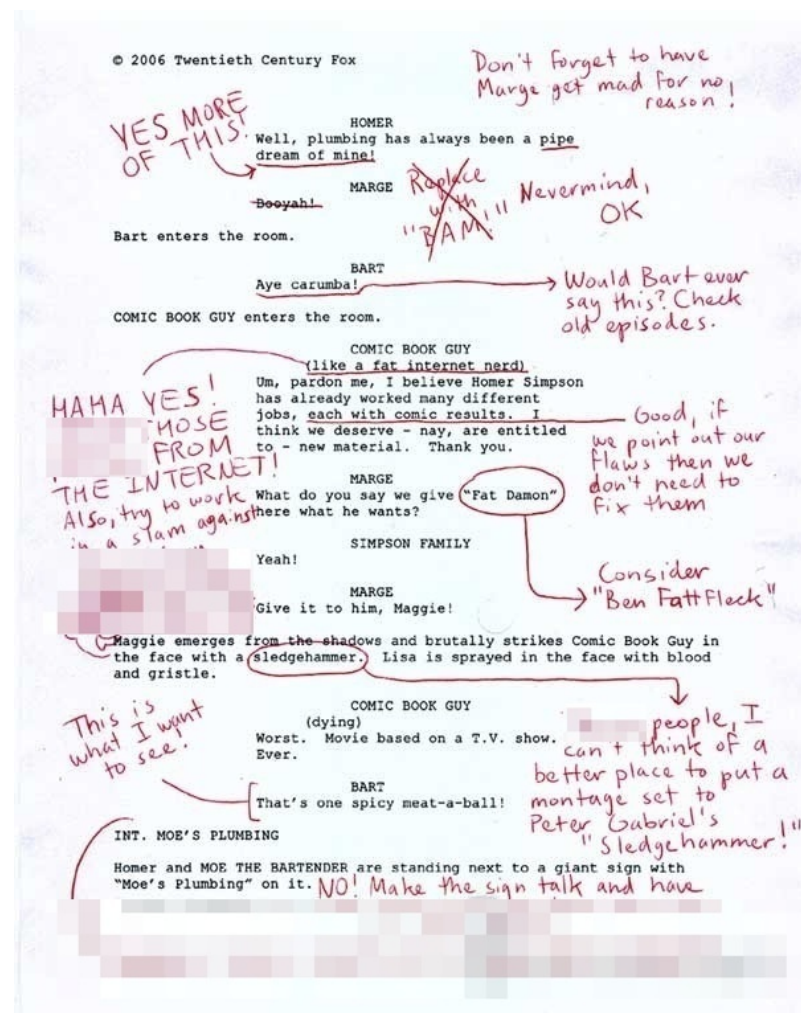


...I'd take
two days to plan
and
one day to animate
it”

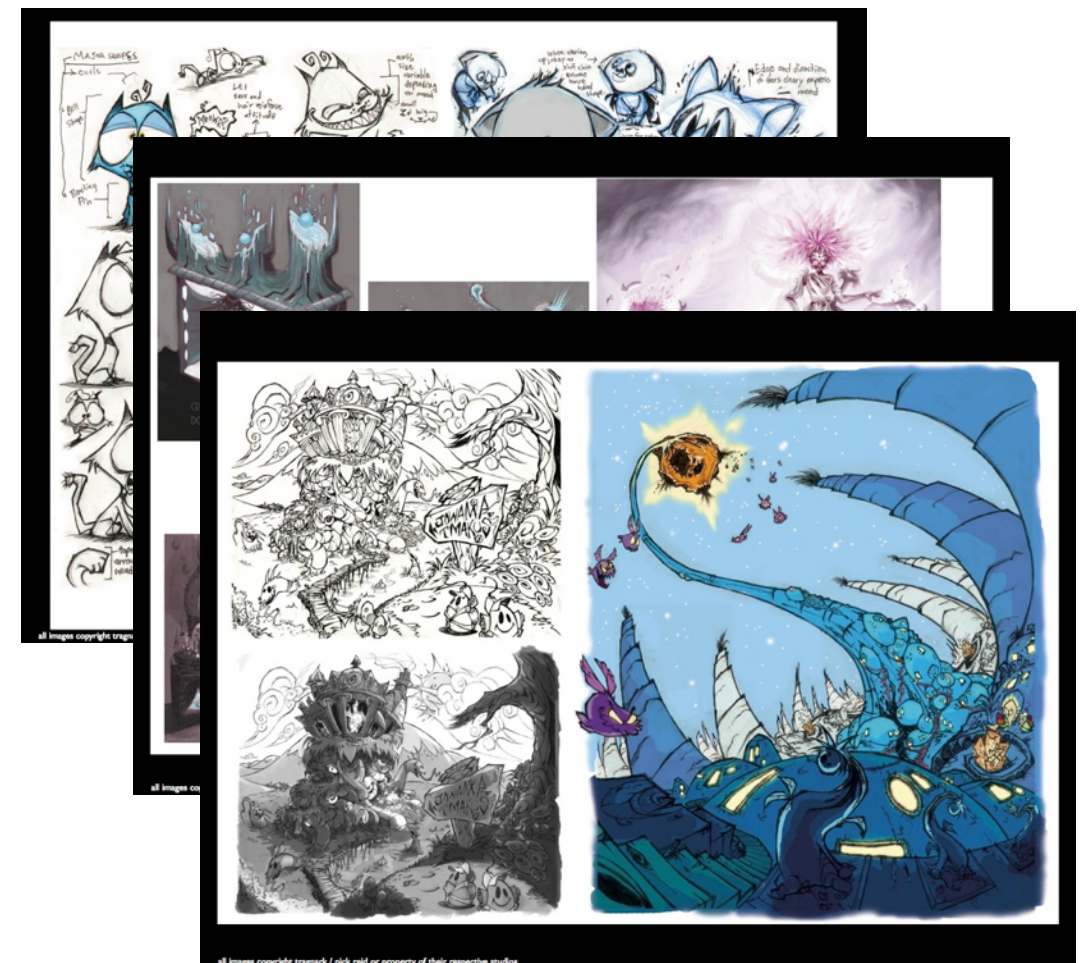
- Eric Larson

Lessons From Animators

1: Script

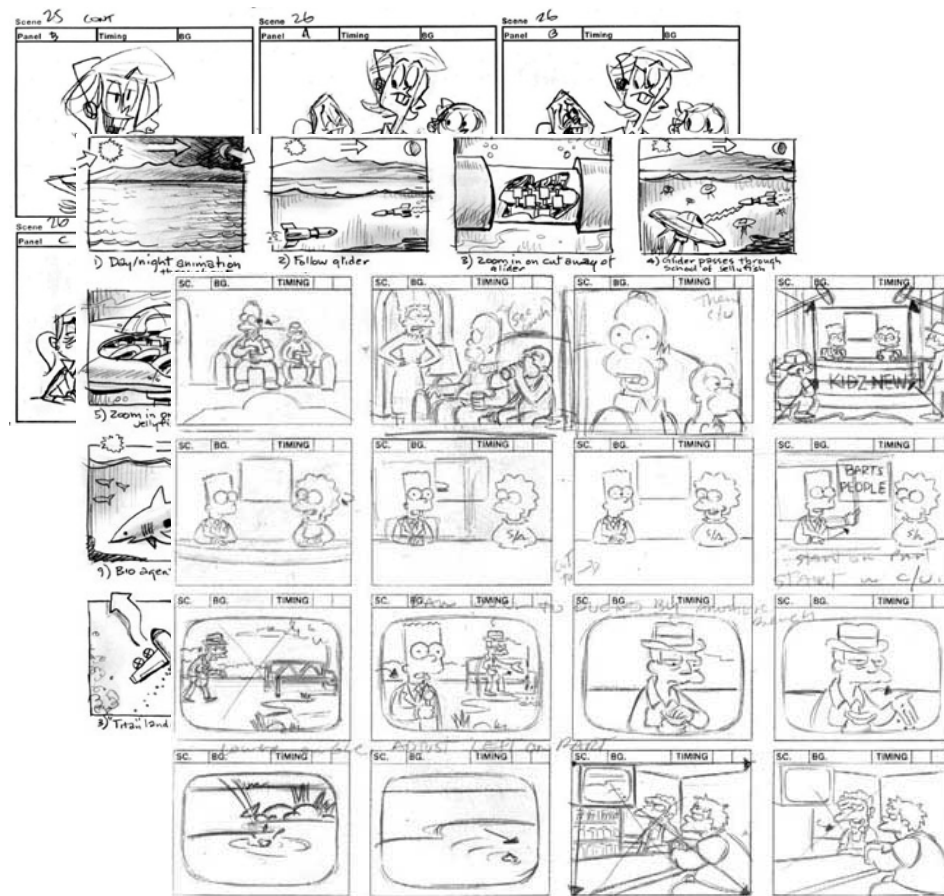


2: Design



Lessons From Animators

3: Storyboarding



4: Animatics



Lessons From Animators

What Can **WE** Do to Plan?

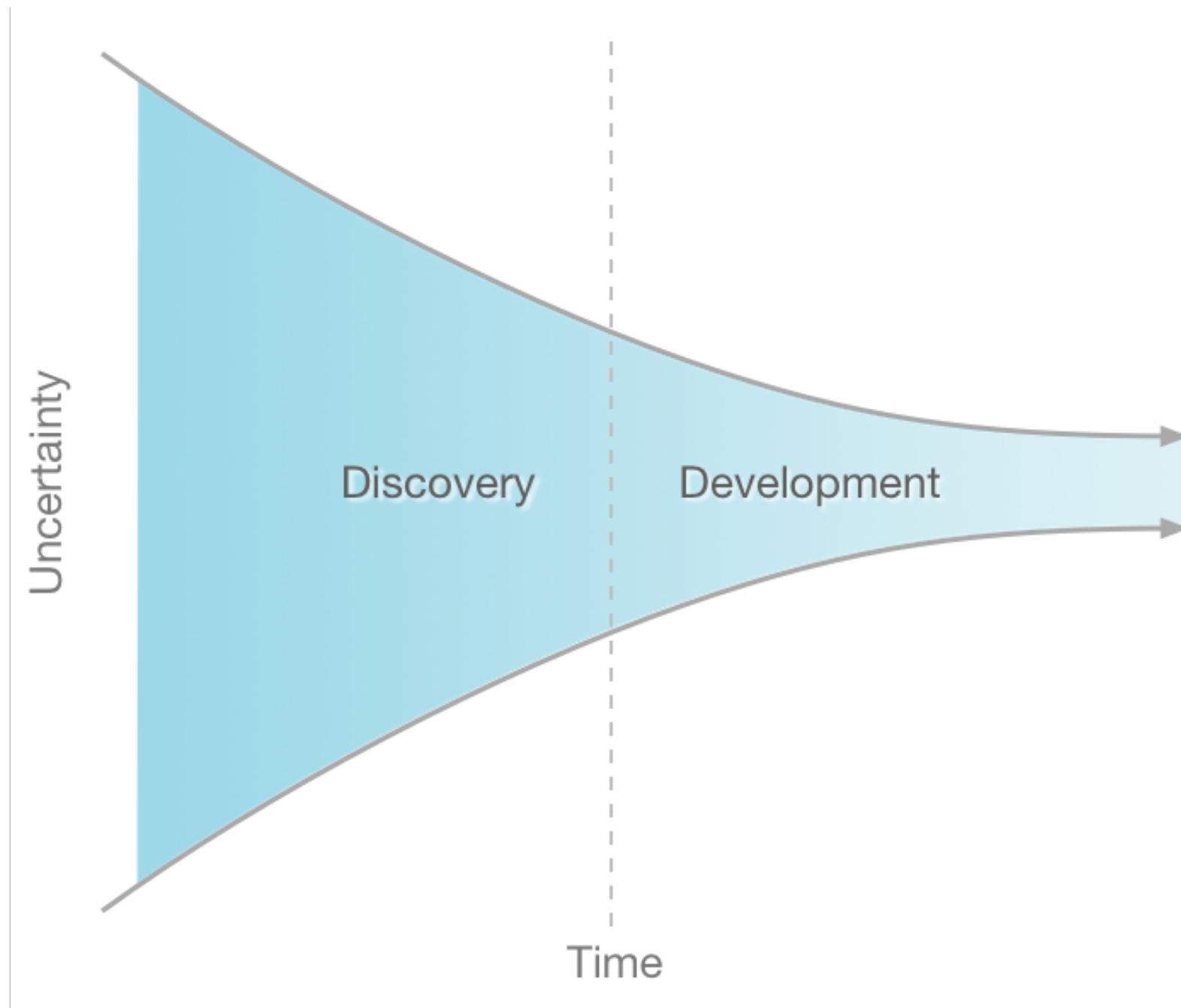
Data Models Architecture Diagrams Project Plans
Whiteboarding System Maps Process Flows
Proof of Concepts Architecture Frameworks QA Planning
Discovery Interviews
UML Diagrams Prototypes
Integration Maps Decision Trees **User Stories**
API Contracts Permissions Matrices
Tech Specs Brainstorm
Ecosystem Maps RML Diagrams Information Architecture
Estimates Interactive Wireframes **Wireframes**
User Experience Planning Risk Assessment

The Why

Why Do a Discovery Project?

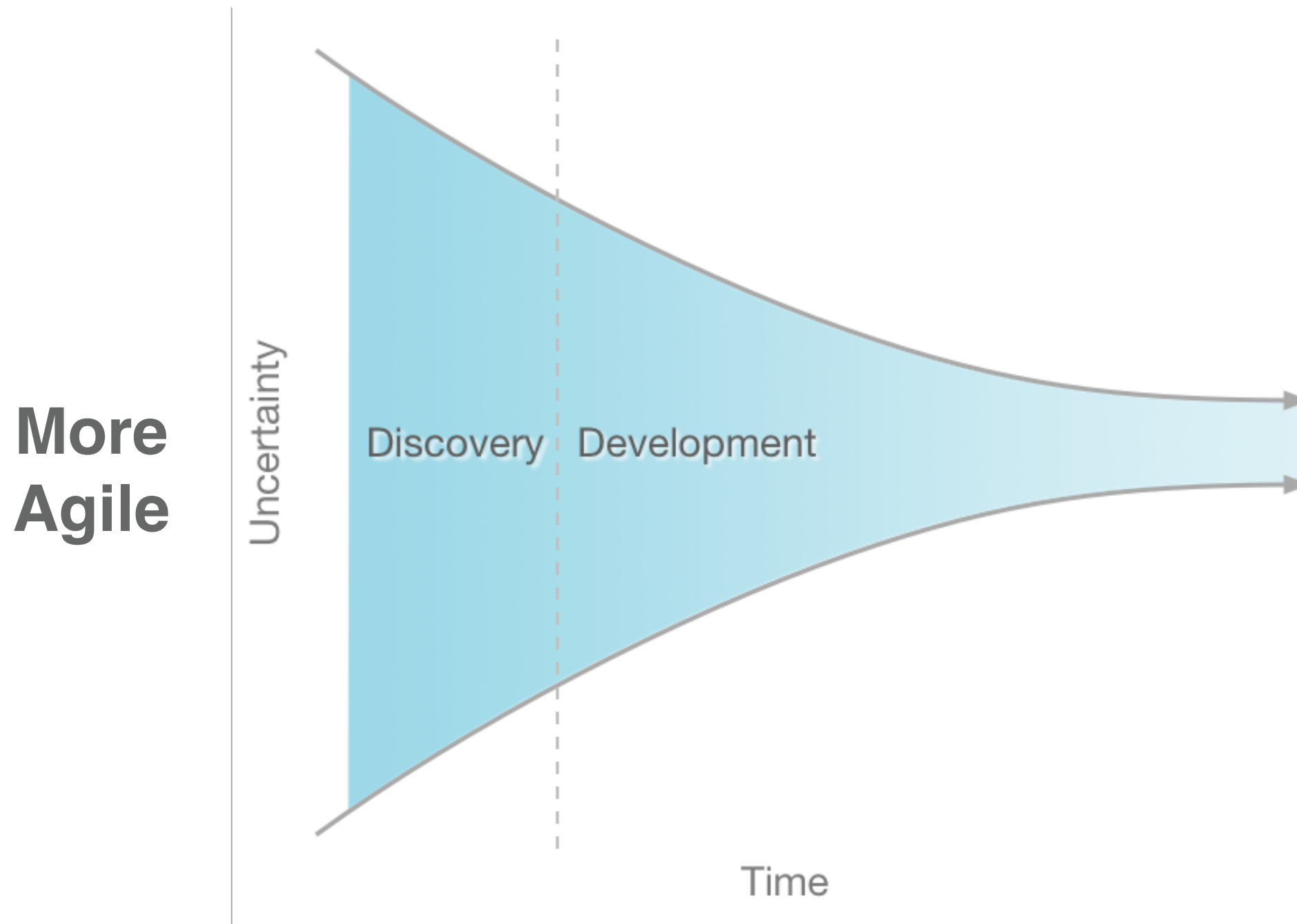
Why Do a Discovery Project?

Narrow the “Cone of Uncertainty”



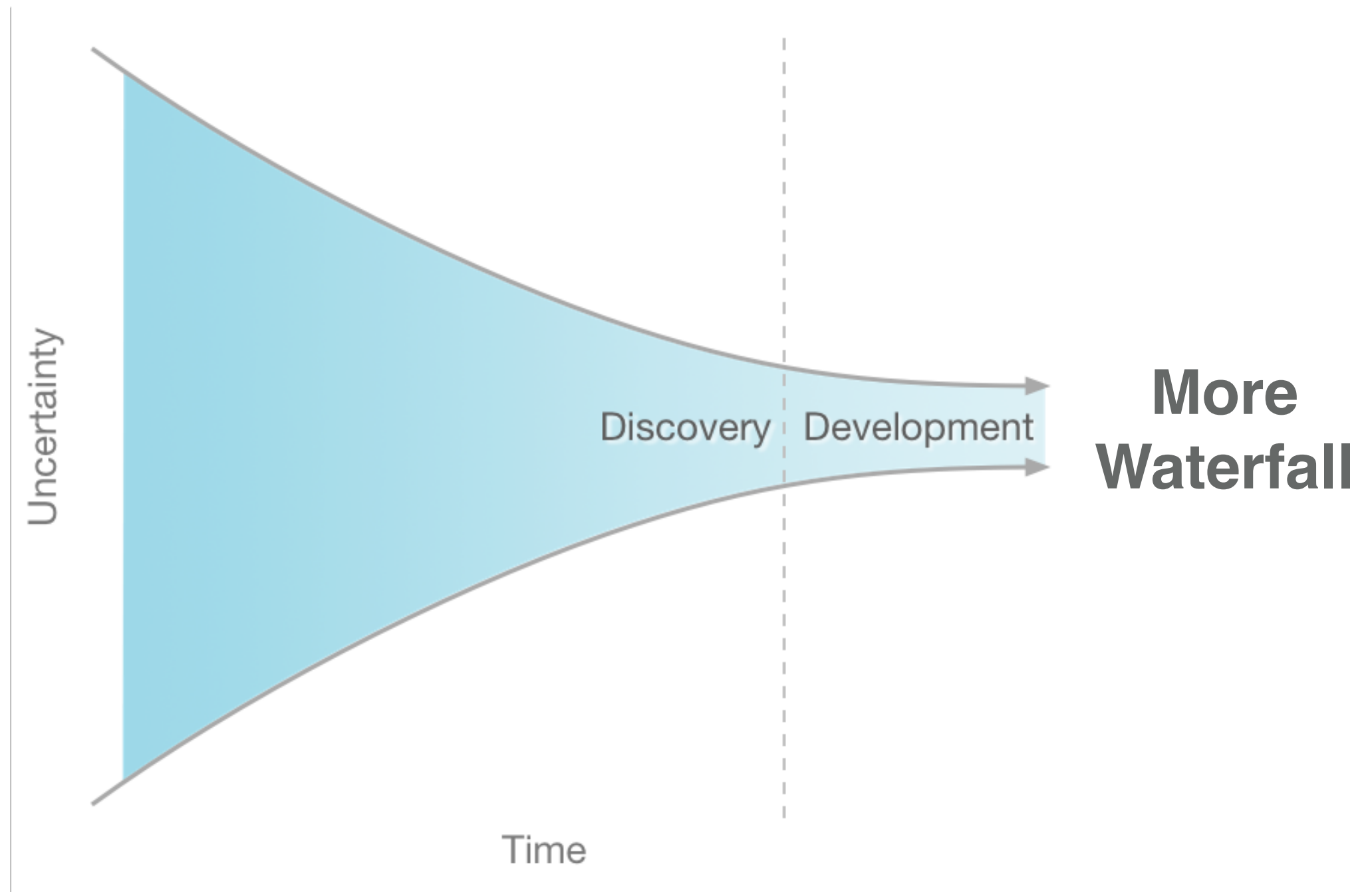
Why Do a Discovery Project?

Narrow the “Cone of Uncertainty”



Why Do a Discovery Project?

Narrow the “Cone of Uncertainty”



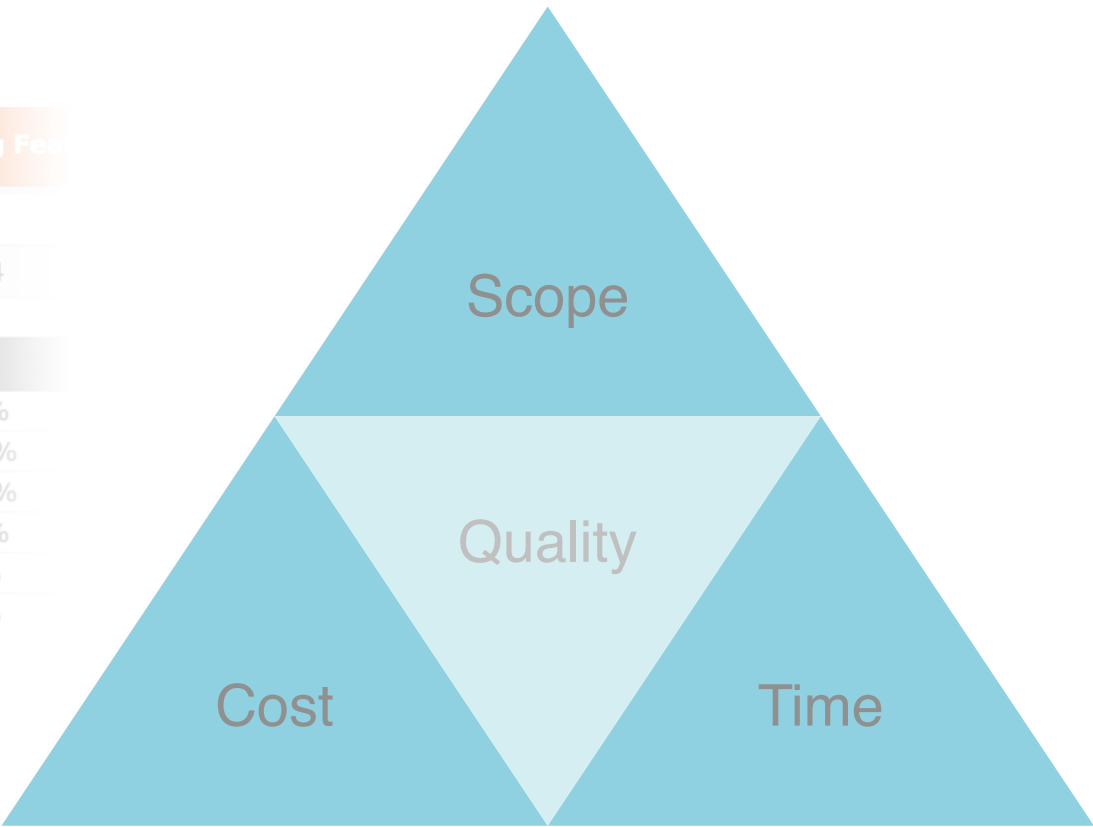
Why Do a Discovery Project?

Define Boundaries

Agile

Find # of Sprints & Resources

| Sprint Name | Design Phase & Site Foundations | Design Finalization & Organic Groups | Video & Blog Feat |
|-----------------------|---------------------------------|--------------------------------------|-------------------|
| Sprint Number | 1 | 2 | 3 |
| Hours | 264 | 264 | 184 |
| Sprint Weeks | 2 | 2 | 2 |
| Resource Plan | | | |
| Technology Consultant | 10% | 10% | 10% |
| Senior Developer | 100% | 100% | 100% |
| Front-End Developer | 100% | 100% | 100% |
| Project Manager | 20% | 20% | 20% |
| Designer | 100% | 100% | 0% |
| QA Engineer | 0% | 0% | 0% |



Waterfall

Find the Iron Triangle

Why Do a Discovery Project?

The Selfish Reasons

- CYA - Cover Your... Assets
- Set your development team up for success!
- Proactively go into the unknown, turn over the rocks, look in the dark alleys, **find the dragons**



Why Do a Discovery Project?

The Better Reasons

- Helping the client better understand their own problem(s)
- Guiding the client towards the best solutions
- Making the client feel not only involved, but invested in the solution
- Earning the trust of the client, become a **partner**
- Break down barriers

Hold Up....

That Sounds Involved

That Sounds Involved

A Discovery Project is a *Project* : Get Paid!

- This is billable consultation
- Ratio of discovery cost to final project cost: 3-10%
- Can be a surprisingly easy sell for large corporations
 - They ❤️ planning & documentation
 - They ❤️ narrowing estimate ranges
 - They ❤️ minimizing risk

That Sounds Involved

The Process Scales

- A “discovery” can be as little as half a day to inform the SOW
- Small scale: we commonly do 2.5 -10 day discoveries for websites with migrations or complex functionality
- Large scale: we’ve done multi-month discovery engagements

The How

Step 1: Interview & Listen

INTERVIEW

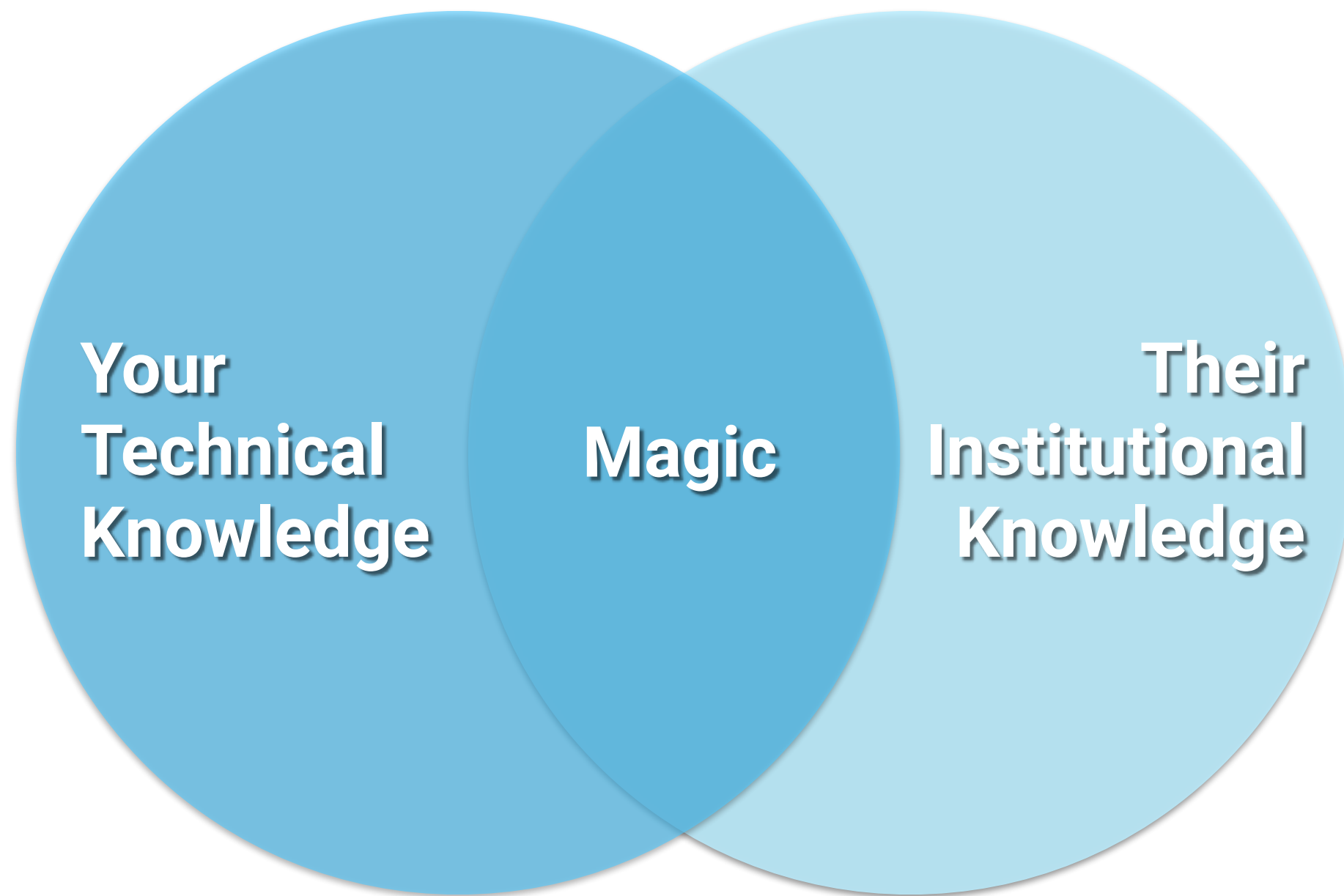
DELIVERY

DOCUMENT

HANDOFF

Discovery Project Timeline

The Interviews



The Interviews

Identifying Stakeholders

- Identify who is funding the project
- The management that will take ownership
- The people that do the day-to-day operations today
- The people that will actually use your solution

The Interviews

Choosing Communication Tools

- Never underestimate the power of body language!
- In-person is always best
- Video conference if you have to be remote
- Phone is a last resort
- Email is not even an option. No.

The Interviews

Putting the Stakeholders at Ease

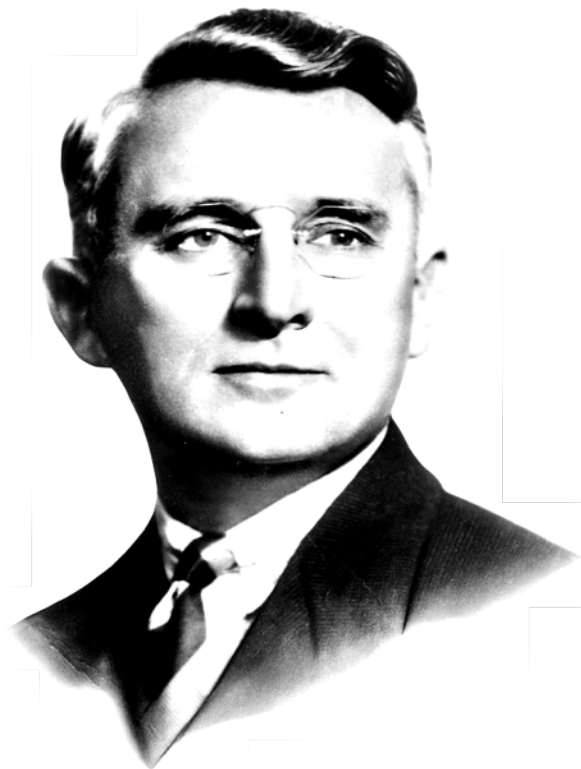
- Many have been burnt by a vendor in the past
- Some may be afraid that your process automation may replace the need for their jobs
- They may feel powerless in the face of the change that you and your solution represent
- Bring them along on the journey!

The Interviews

The Critical Role of Listening

- Shhhhhhhhhhh.....
- *“And so I had him thinking of me as a good conversationalist when, in reality, I had been merely a good listener and had encouraged him to talk.”*

- Dale Carnegie



The Interviews

Asking the *Right* Questions

- A powerful question evokes clarity, action, discovery, insight or commitment
- A question should create greater possibility, new learning, or clearer vision
- Powerful questions are open-ended, do not elicit a simple yes or no response and yet do not ask 'why'

The Interviews

Have Them Demonstrate

- Walk through the current process from start to finish
- Have them point out things that they feel are slow, annoying, repetitive, or completely unnecessary
- Have them point out all of the things that work well
- Ask “why do they do it that way” ... a lot

The Interviews

Take a Step Back

- Look for common themes
- Corroborate stories

The How

Step 2: Document & Communicate

INTERVIEW

DELIVERY

DOCUMENT

HANDOFF

Discovery Project Timeline

Document & Communicate

Use All of Your Workbench

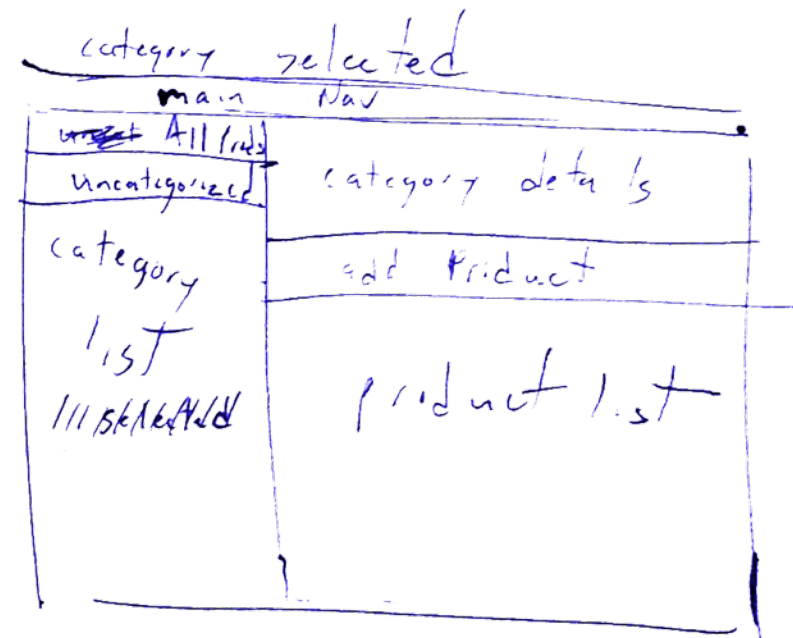
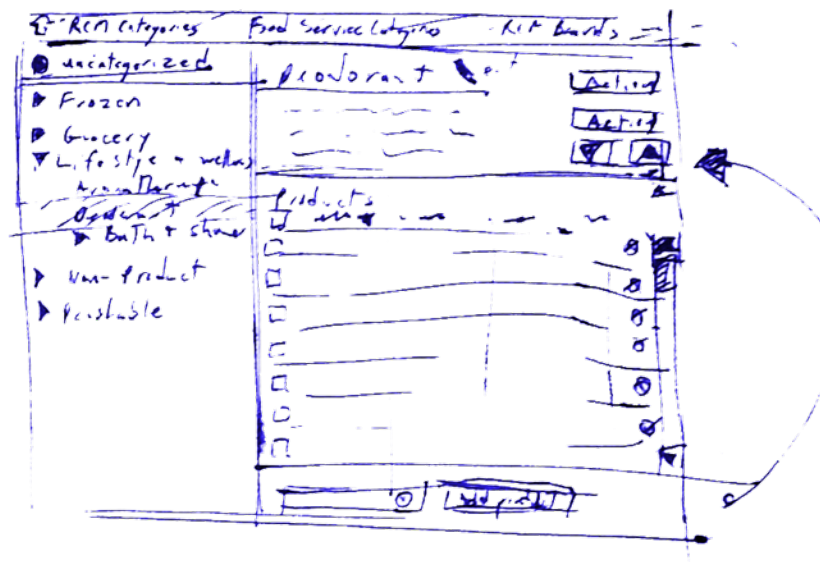
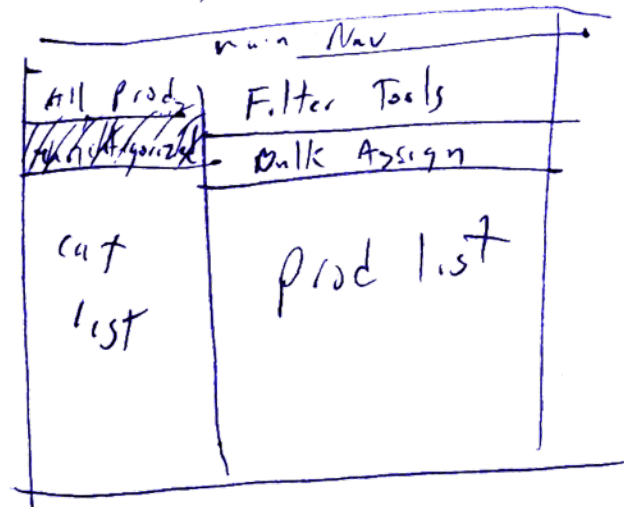
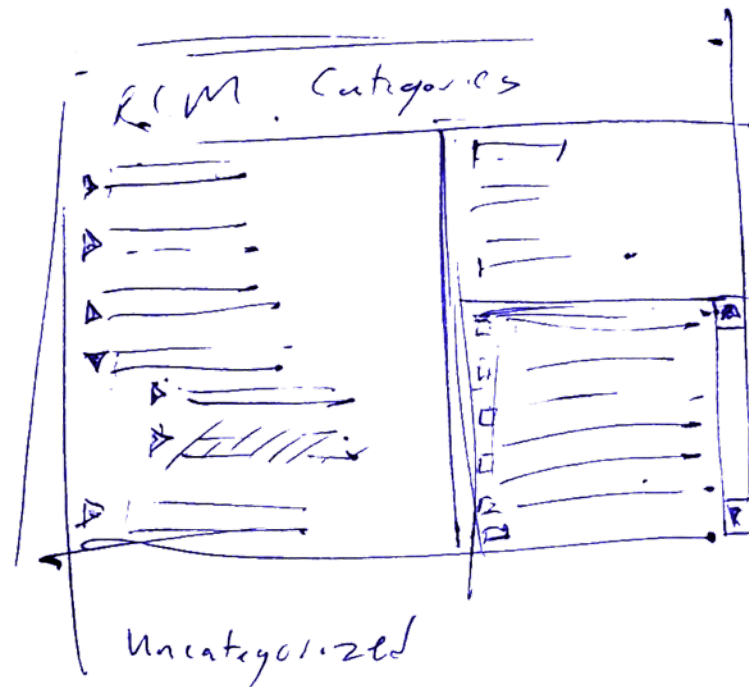


Architectural Frameworks

- TOGAF (The Open Group Architecture Framework)
- The Zachman Framework for Enterprise Architectures
- The Federal Enterprise Architecture
- The Gartner Methodology
- DoDAF (Department of Defense Architecture Framework)

Document & Communicate

Whiteboarding == Rapid Ideation



Document & Communicate

Diagrams

- UML, Process Flows, People Models, Data Models...
- Keep your audience in mind
- Find the fidelity sweet spot
- Diagrams should be meaningful and answer questions

Document & Communicate

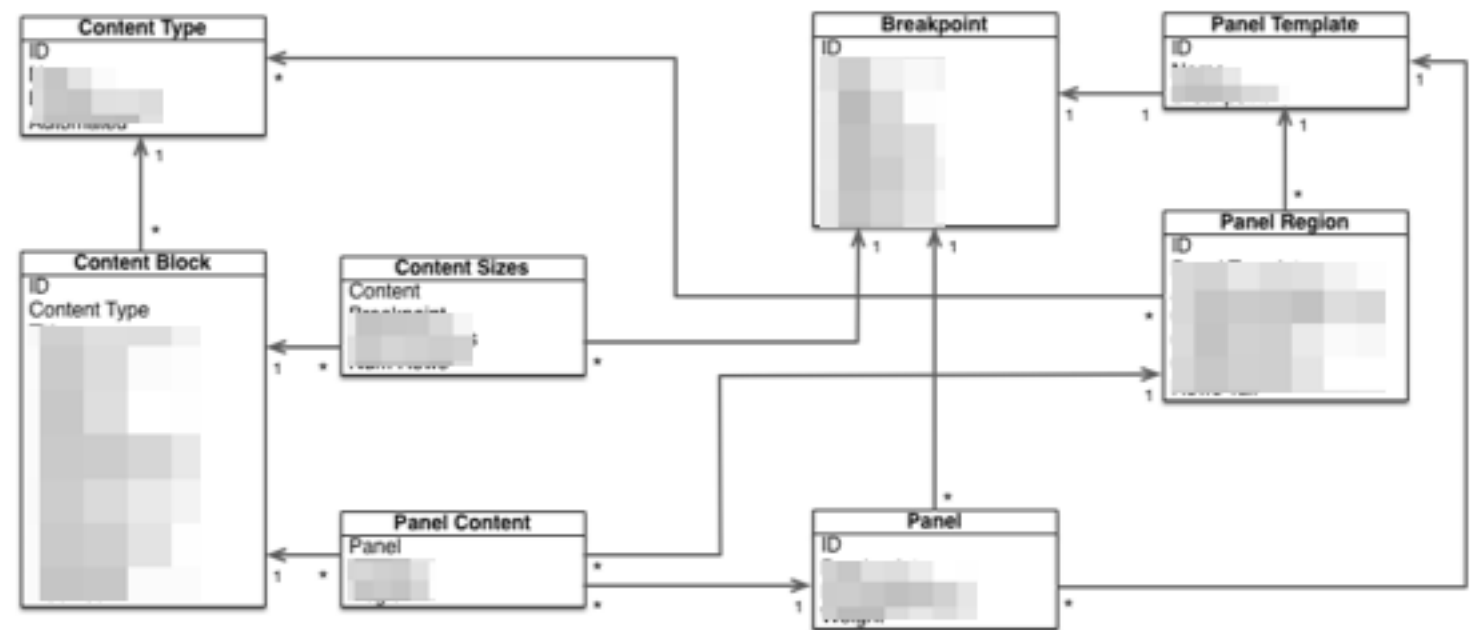
Diagrams: UML

Audience:

Highly technical,
developers, CTO

Use:

Standard way to
visualize a system



Diagrams: Process Flows

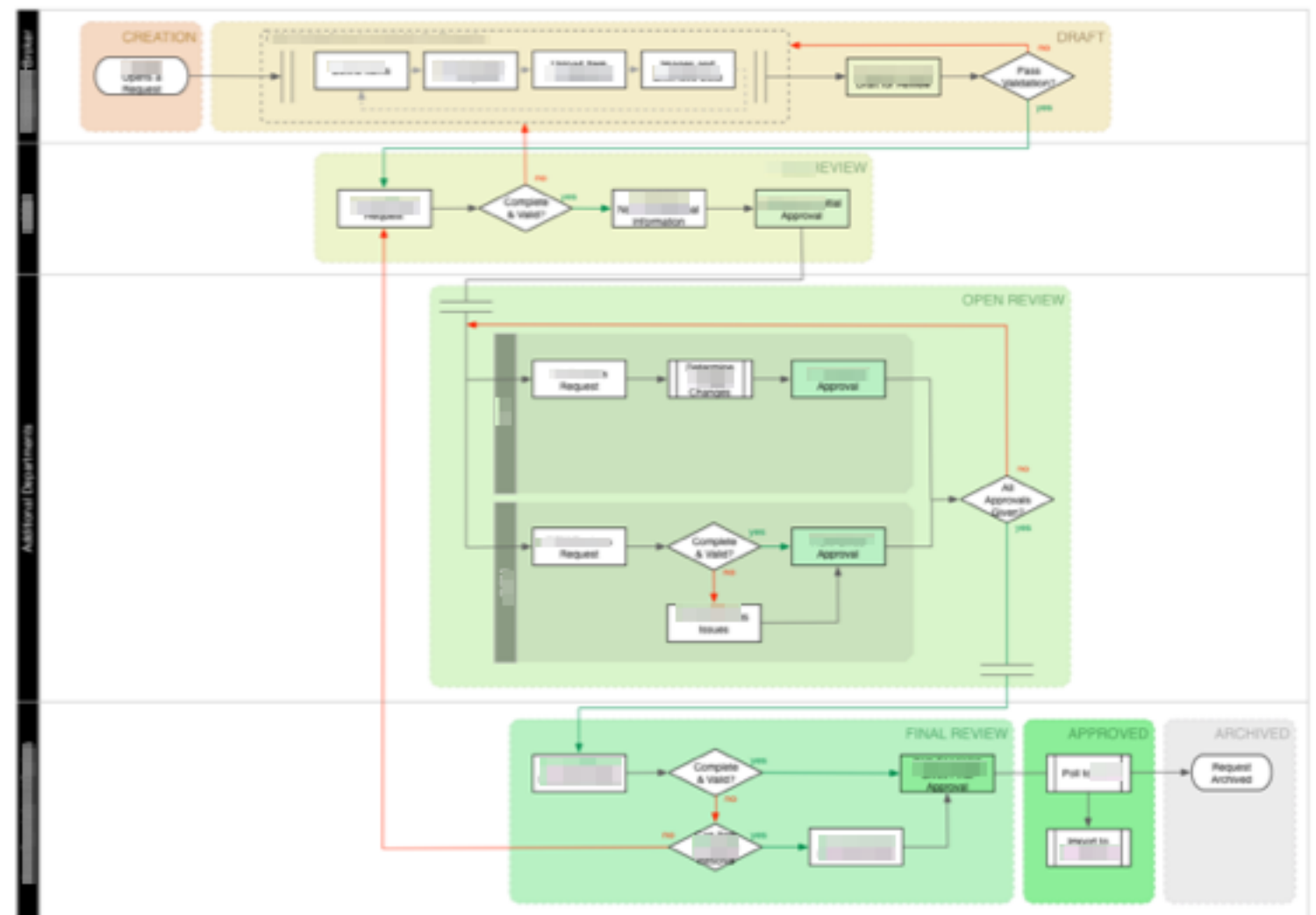
Audience:

Stakeholders, your team

Use:

Confirm that you understand the flow of actions across user roles.

When lots of user
interfacing is required.



Document & Communicate

Diagrams: Ecosystem Maps

Audience:

Stakeholders, client's IT, your team

Use:

Show how your system will sit within existing infrastructure



Document & Communicate

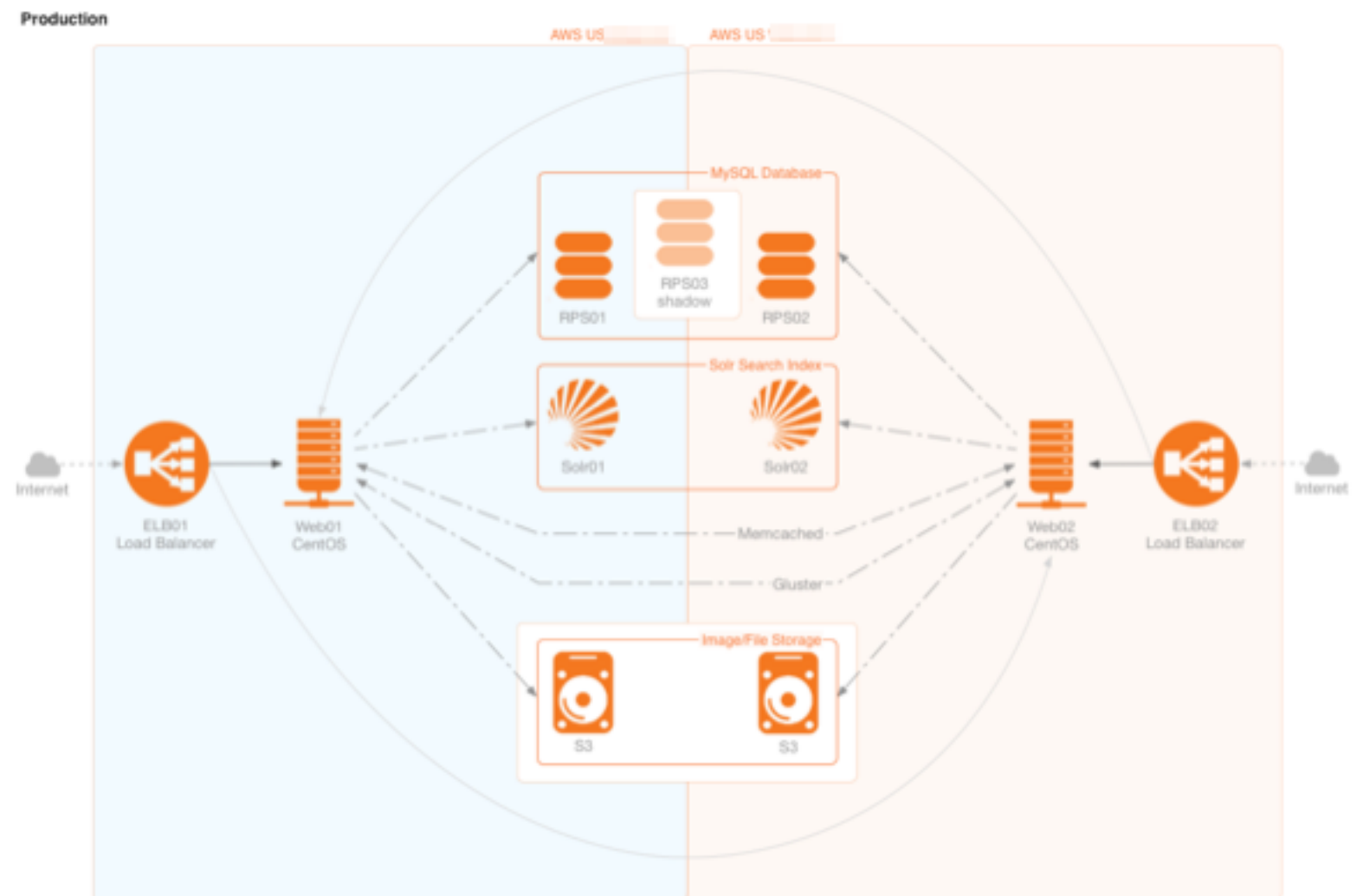
Diagrams: System Maps

Audience:

Stakeholders, client's IT, your team

Use:

Show the components of the proposed stack



Document & Communicate

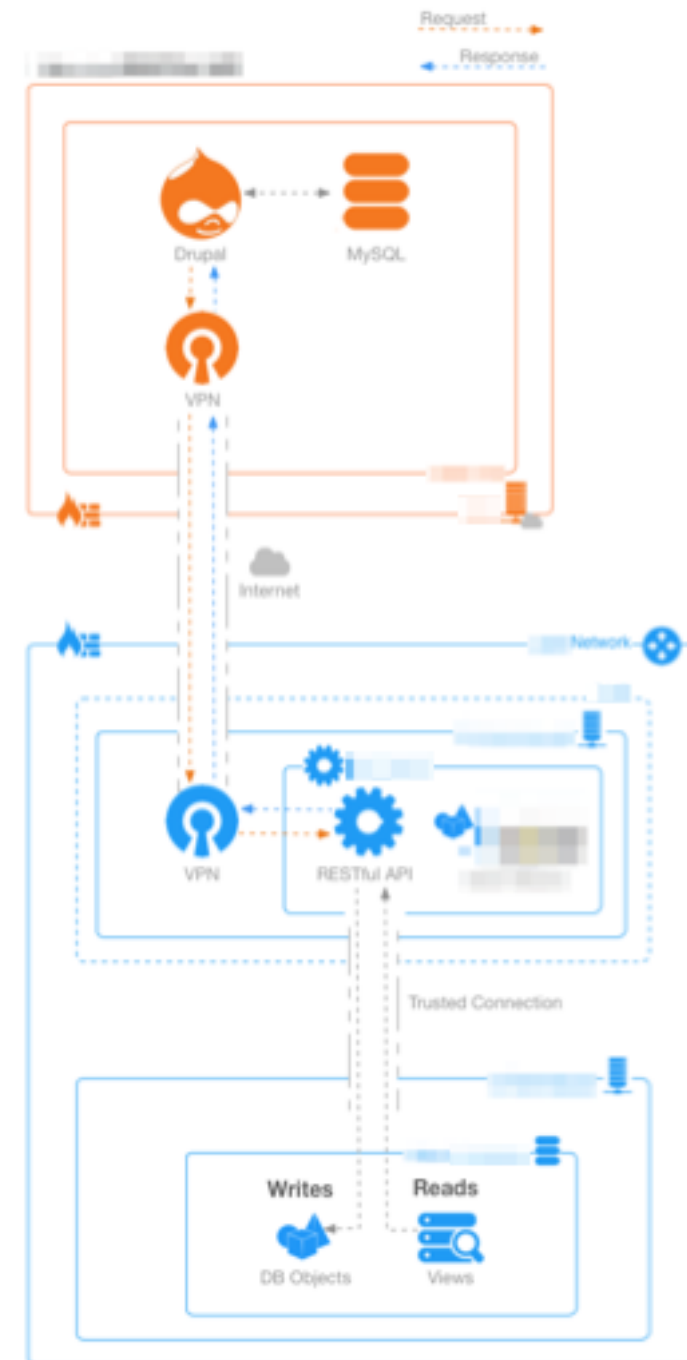
Diagrams: Integration Maps

Audience:

Client's IT, your team

Use:

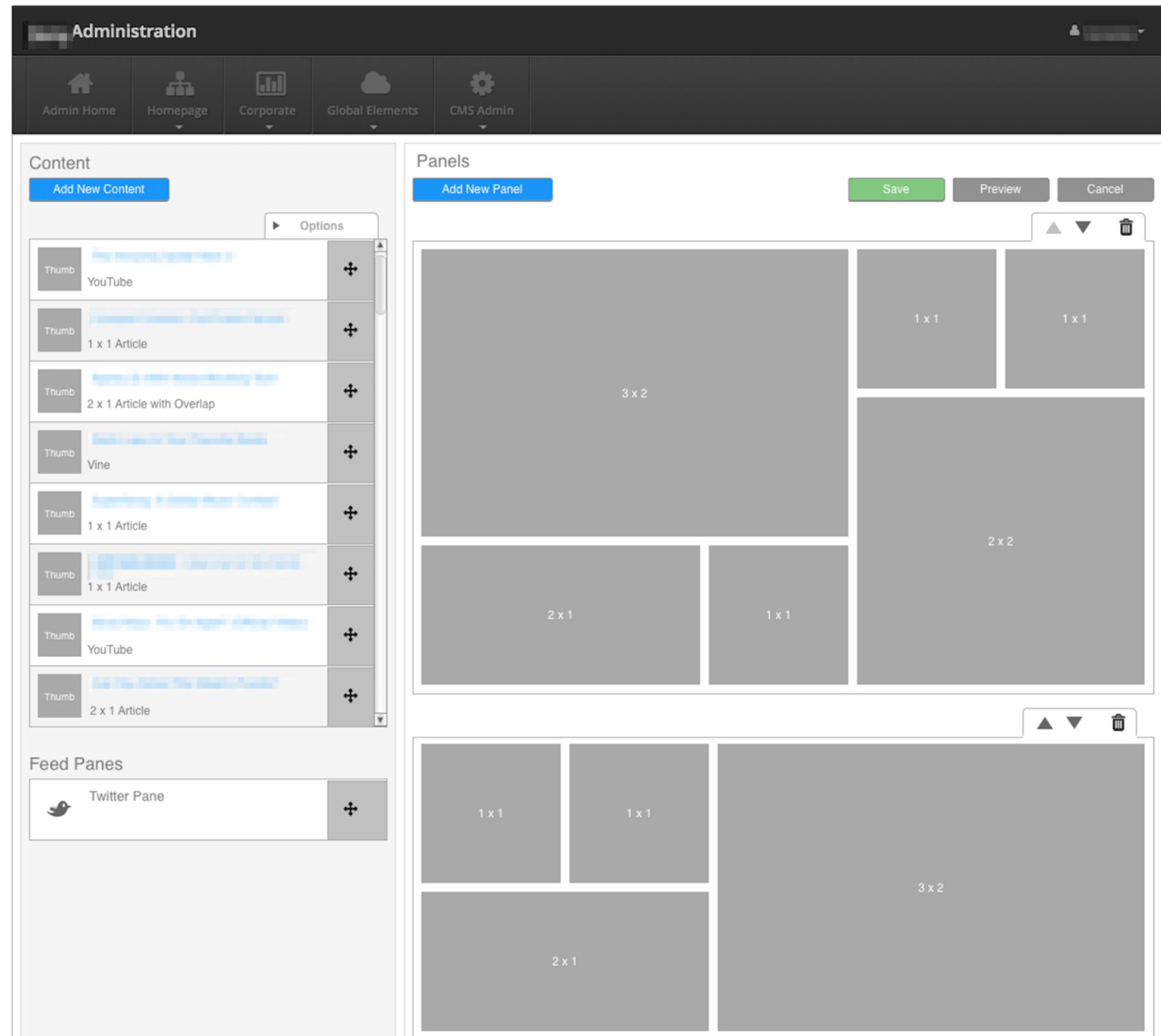
Show the specifics of how the proposed system will connect with their existing systems



Document & Communicate

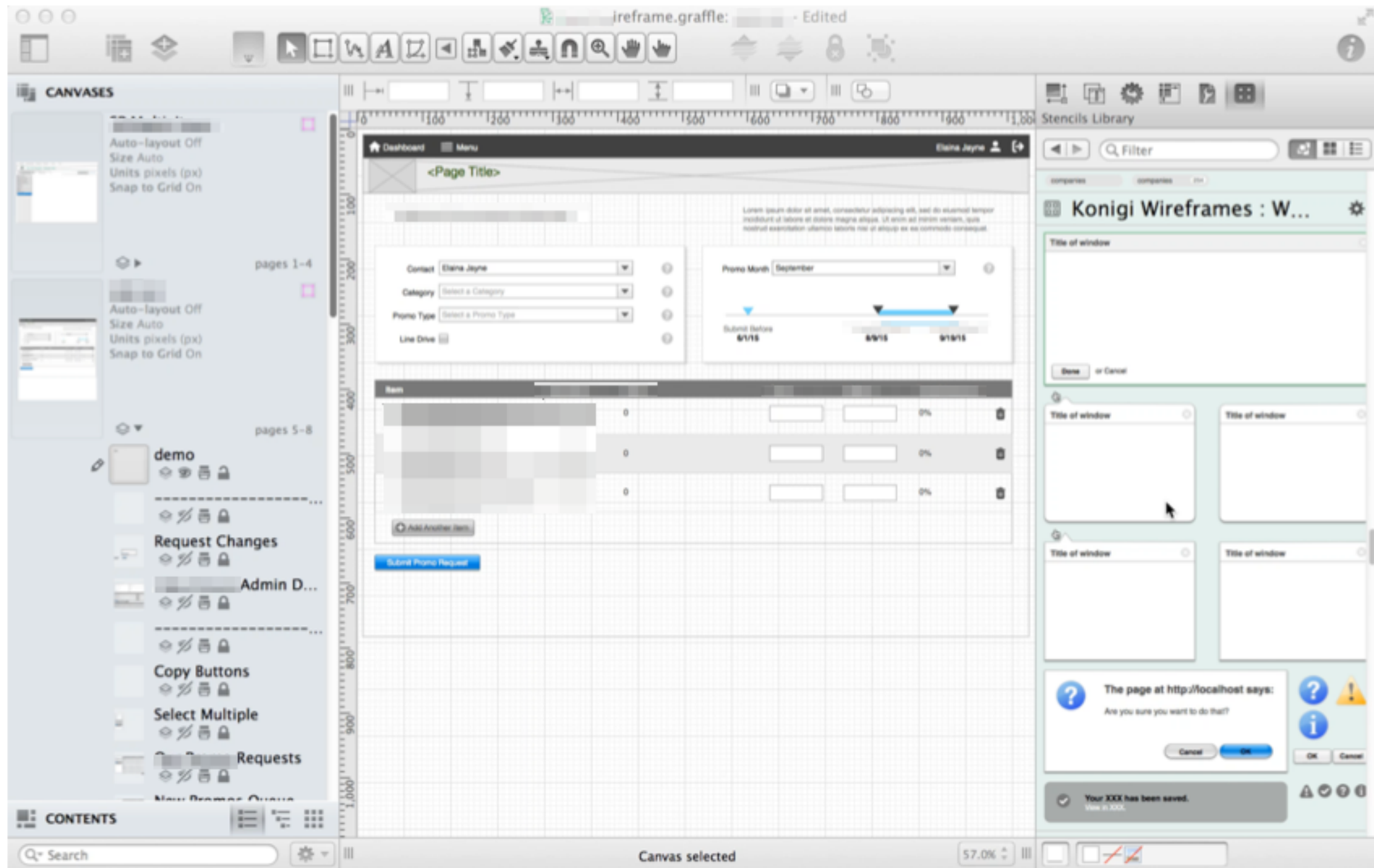
Wireframes

- Visuals speak louder than words
- Requires less imagination on behalf of the stakeholders



Document & Communicate

Tools : OmniGraffle



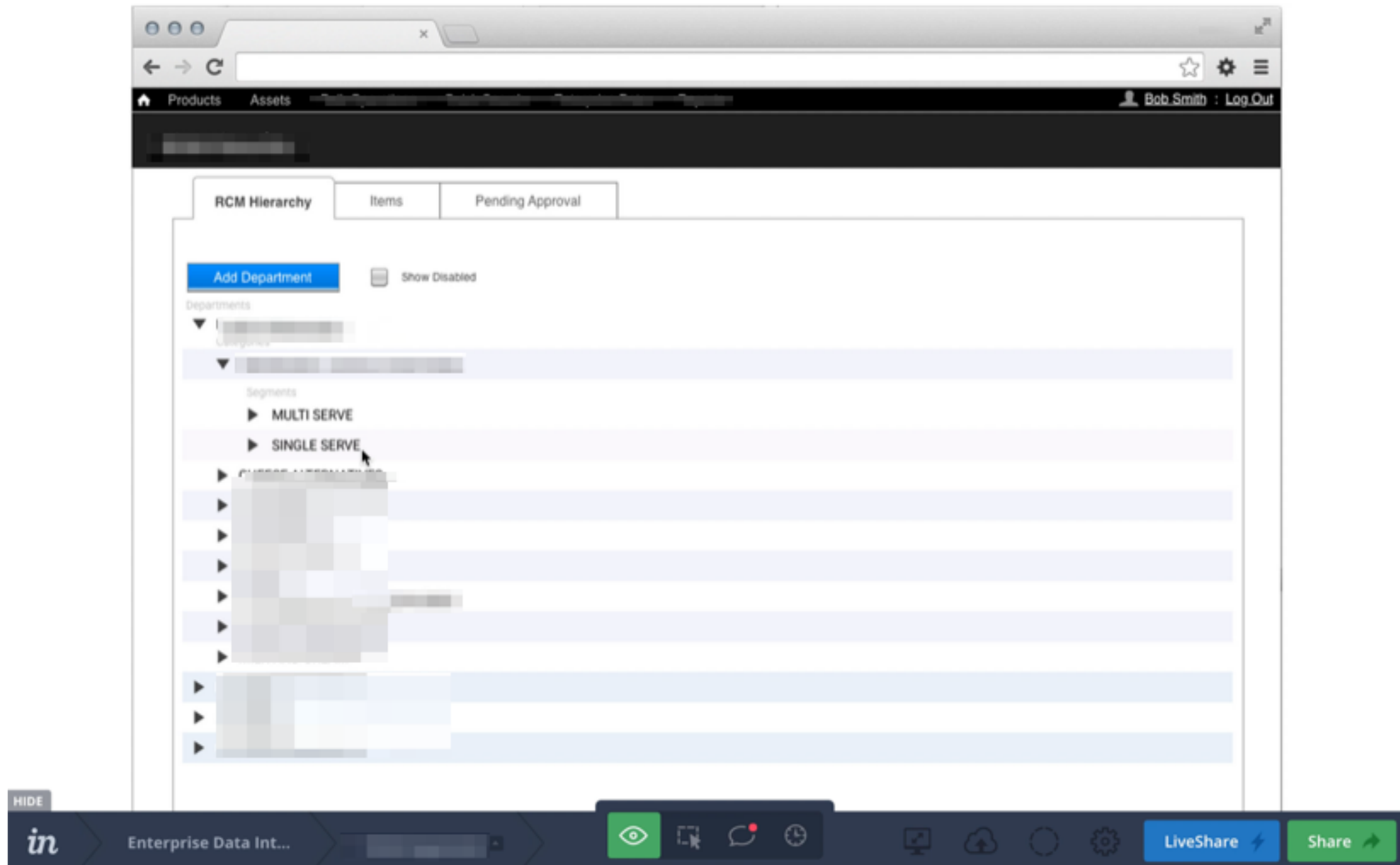
Document & Communicate

Proof of Concepts & Interactive Prototypes

- Can be working software that proves that a specific goal is achievable
- 70% confidence is good enough
- The goal may be to prove a workflow, concept, or user experience
- Can be used to secure funding

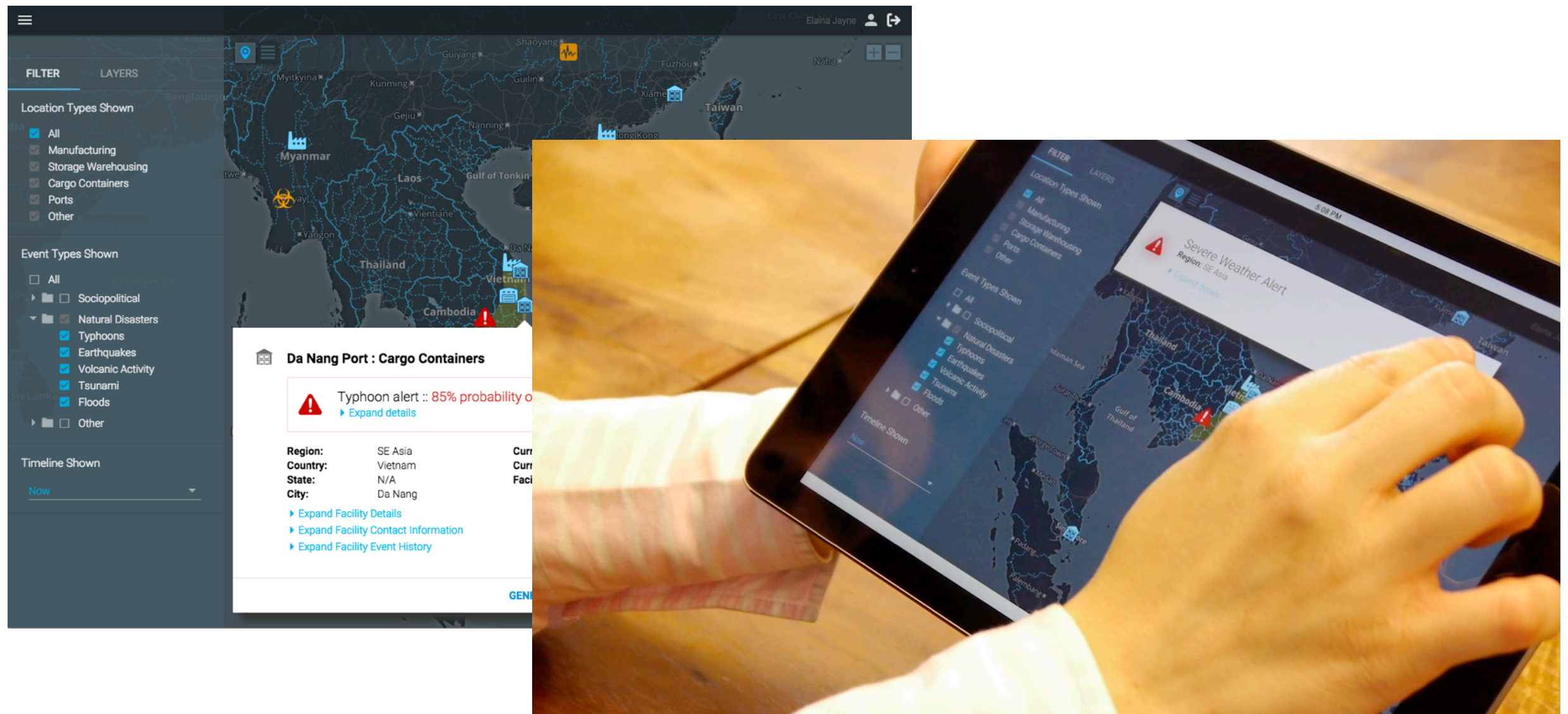
Document & Communicate

Tools: InVision



Document & Communicate

Prototype



Document & Communicate

Documents

Tools: Google Docs


Example v1.0 - Technical Discovery

File Edit View Insert Format Tools Table Add-ons Help


100% Normal text Arial 11

Additional User Roles & Permissions

Several new user roles with purpose specific permission sets will be added to support the new Example Data areas.



InVision : Changes to System Map
[Click Here To View](#)



E-Commerce Solution Comparison

File Edit View Insert Format Data Tools A

| Solution | A | L | M |
|--------------------------|----|-----------|--------------------------------|
| Solution | | Community | Support |
| Magento Community 1.9.x | C | D | |
| Magento Enterprise 1.9.x | D | A | |
| Shopify | D+ | B+ | |
| BigCommerce | D | B | A B B C+ A- B- A- B A- B+ B+ B |
| Volusion | F | C | D D B- C- B- B B D+ C- A- C+ B |

Share with others

Get shareable link

Link sharing on [Learn more](#)

Anyone at Metal Toad with the link can view

Copy link

https://docs.google.com/a/metaltoad.com/document/d/12xxWNPNCro6R3P0Seri_4t

People

Kevin McConnaughay Alex Laughnan Nick Procter Add more people...


Add: [Joaquin Lippincott](#) [Jason James](#) [Tony Rasmussen](#)

Notify people via email


Send Cancel

Advanced

11:08 AM



Tom Martin 7:51 PM



tom@met

Comments

| Checkout | X | Y |
|-------------|----|----|
| Orders | A | A+ |
| Fulfillment | A | A+ |
| | A- | B+ |
| | B+ | B |

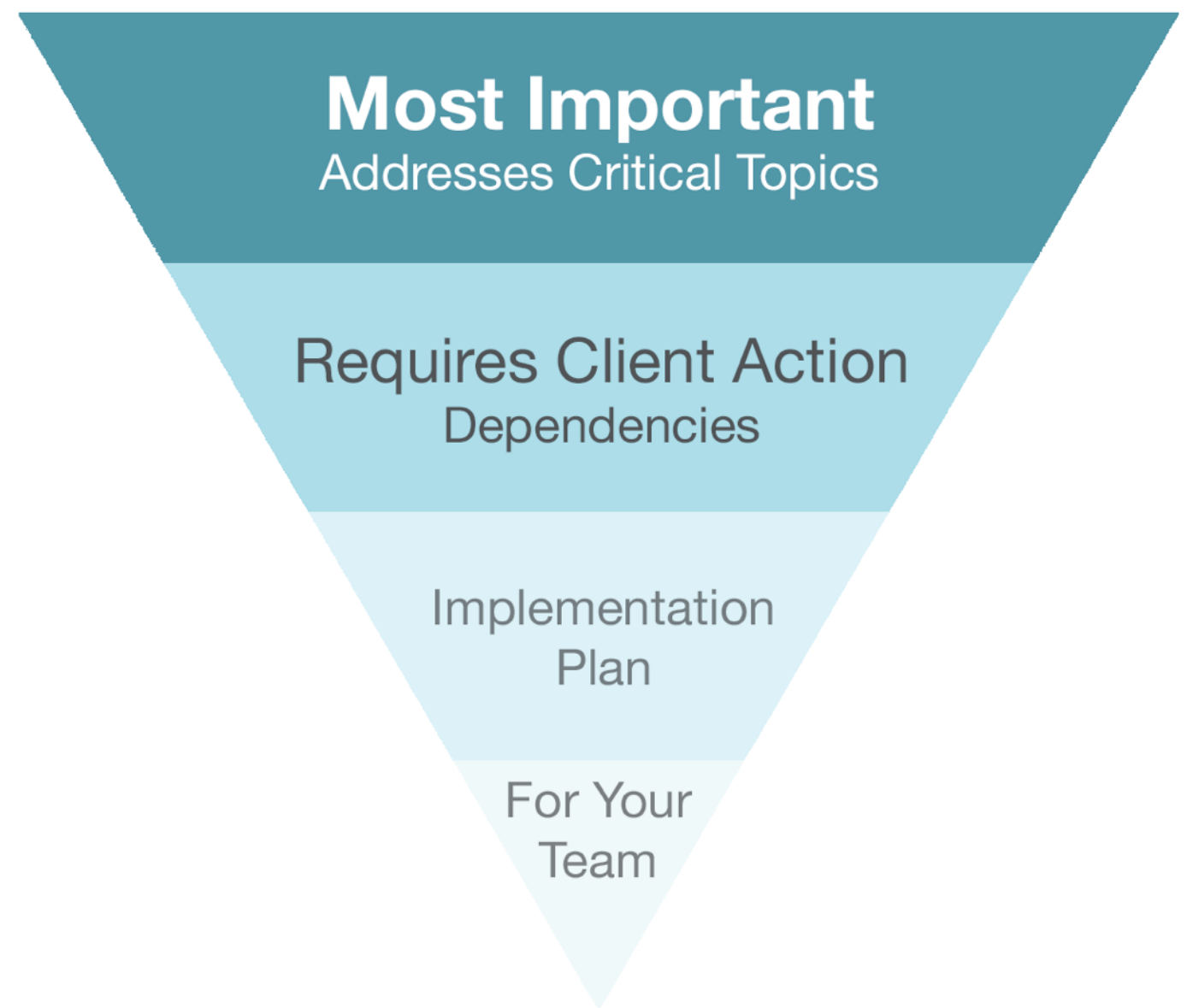
7:35 AM

9:00 AM

Document & Communicate

Documents

The Inverted Pyramid



Document & Communicate

User Stories



Archetypes

Epics

As a <archetype>
I want to <some goal>
so that <some reason>

Marketer



A Marketer is

Customize How Items Are Browsed

As a Marketer

I want to be able to

So that I can

As a Marketer

I want to be able to

So that I can easily

Upload Product Images

As a Marketer

I want to be able to

So that it can

As a Marketer

I want to be able

So that I can be

As a Marketer

I want the system to

So that I can

As a Marketer

I want to be able to

So that I can help

Document & Communicate

Discovery Document



METAL TOAD

Technical Discovery

Example Data Interface v1.0

Happy Client

Version
1.0

Date
May 2, 2015

Document & Communicate

Discovery Document

Change History

| Version | Date | Author | Summary of Changes |
|---------|--------|------------|--------------------|
| 1.0 | 5-2-15 | Tom Martin | • Initial creation |
| | | | • |

Document Index



Document & Communicate

Discovery Document

Project Goal

To provide an interface for multiple Happy Client teams to modify data that is currently stored only within the information [redacted]. The following types of data will be given a graphical user interface:

- [redacted]
- [redacted]

Diagrams and Interactive Wireframes

All diagrams found in this document, as well as an interactive prototype built from wireframes of the proposed [redacted] can be found in an accompanying InVisionApp.com project. To request access to the project please email your InVision account name to [redacted]



InVision : Example Data Interface
[Click Here](#)

User Stories

An additional document of user stories is available in Google Docs format. To request access, send your Google account / gmail address to [redacted]

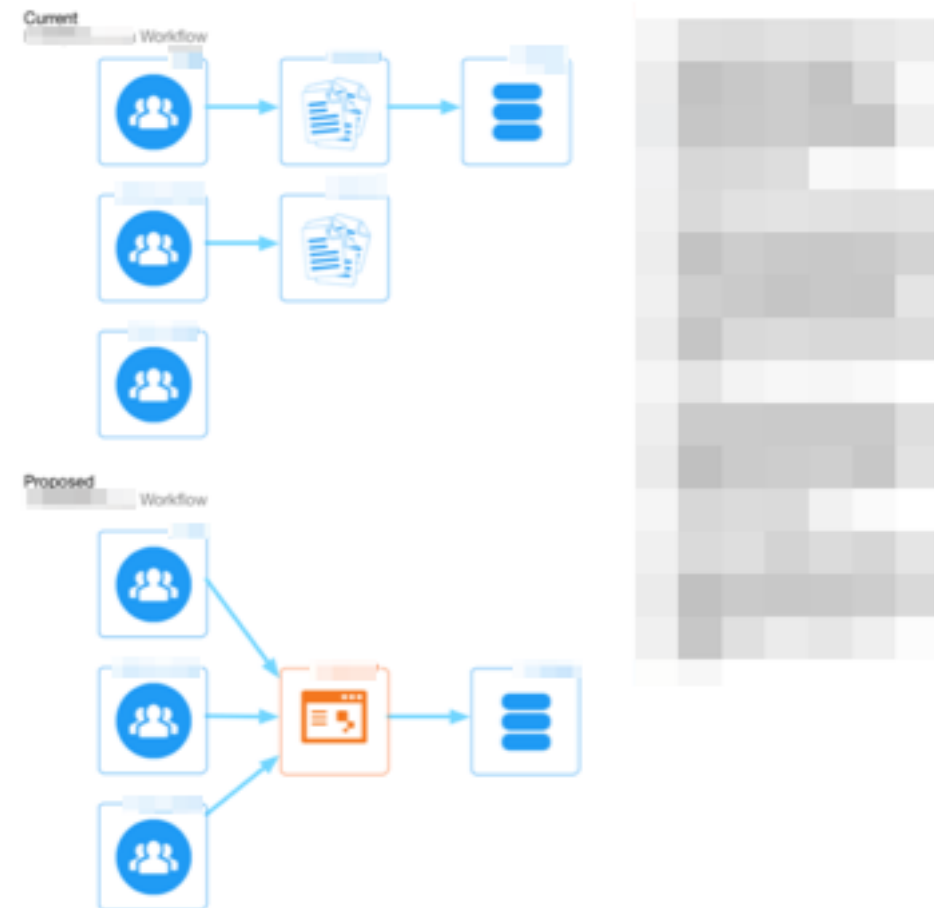


Google Docs : [redacted]
[Click Here to View the Document](#)

Document & Communicate

Discovery Document

Proposed Changes to Process Flow



Document & Communicate

Discovery Document

System Overview



System Architecture Overview



Document & Communicate




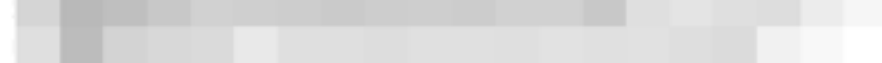
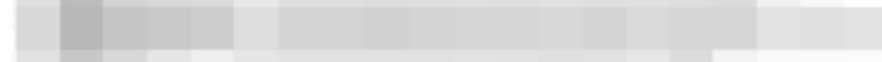






Discovery Document

Information Systems Dependencies

There are several dependencies that must be fulfilled by the Happy Client Enterprise Information Systems team for the project to begin development.

Creation

Creation of the proposed new  support the flow of data. At the time of writing this includes tables for .

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 
- 

Permissions



Additional Product Data



Document & Communicate

Discovery Document

Let's Get Started!

Next Steps:

- Happy Client project approval
- Timeline discussion and kickoff planning.

Document & Communicate

Statement of Work

- Project Overview
 - Purpose Statement
 - Business Objectives
 - Overview of Deliverables
 - Success Criteria
- Timeline & Milestones
- Resources
- Scope & Cost



Document & Communicate

Statement of Work

- Roles & Responsibilities
- Quality Assurance
- Maintenance/Support & Warranty
- Assumptions & Exclusions
- Other Key Information
- Terms of Agreement
- Signatures



The How

Step 3: Delivery

INTERVIEW

DELIVERY

DOCUMENT

HANDOFF

Discovery Project Timeline

Delivery

The Big Reveal Is Not for Us

- Maintain transparency
- Follow up call with interviewees to go over sections relevant to them
- Take their feedback to heart - send a quick follow up thank you note with a snippet showing their changes

The How

Step 4: The Handoff

INTERVIEW

DELIVERY

DOCUMENT

HANDOFF

Discovery Project Timeline

The Handoff

Setting Your Team Up for Success

- Share Everything
- Invite team members to strategic meetings, the earlier the better
- Encourage team members to take an active role in the discovery
- Transition the knowledge
- Transition the ownership

The Handoff

Transition the Energy

Moving On

Frequent Check-Ins

- Attend sprint demos and sprint planning/estimation meetings
- Be the team's compass - ensure they're still heading towards the "True North" of the client's vision
- Stay in touch with the client.

That was a lot of work...

Was It Really Worth the Effort?



Project Timeline

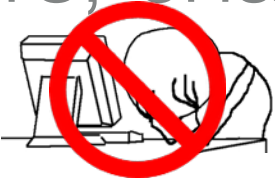
Is It Really Worth the Effort

Reality Police

- You'll never do all the techniques we discussed in a single discovery
- Be practical about how much time you spend in discovery
- It's about prevention : You'll never truly know how many obstacles you avoided.

Is It Really Worth the Effort

You Are Doing Things Right If:

- You see a sharp decline in project escalations, pre-launch blockers, change orders, and developer face-palming 
- The client trusts you, and feels like you have a rich understanding of their business goals
- Your internal champion within the client gets a promotion
- A stakeholder buys you a beer

Is It Really Worth the Effort

The **Client**
becomes a
Partner



Q & A



Tom Martin

Senior Technology Consultant

Metal Toad

tom@metaltoad.com

@squidhaven