

FAST FEEDBACK!

IDEAS TO HELP YOUR PROJECT TEST QUICKER ...

AGILE TESTING DAYS 2013
HUIB SCHOOTS & PASCAL DUFOUR

codecentric

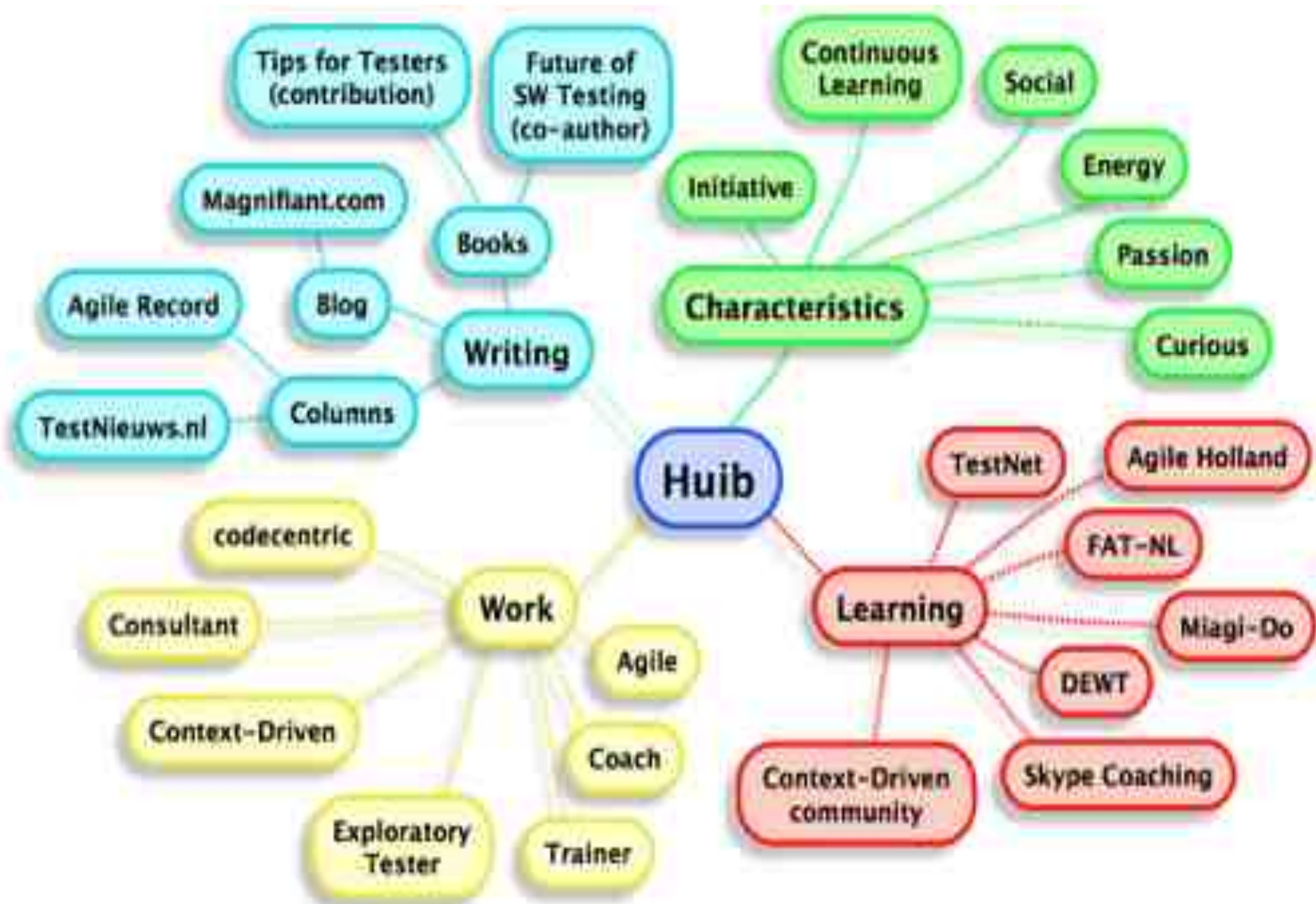


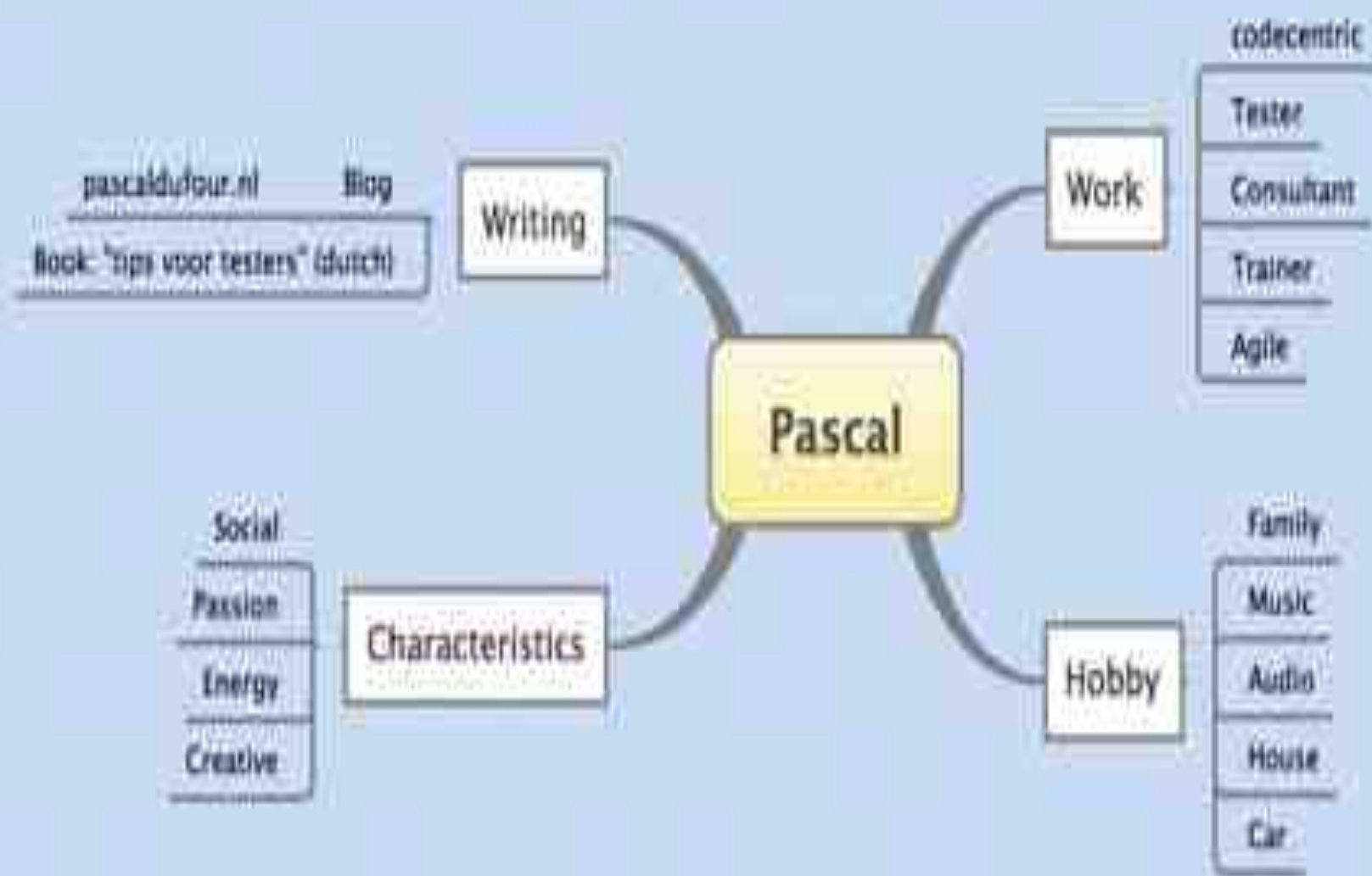
INTRODUCTION

codecentric



1. WHO ARE YOU?
2. WHAT DO YOU DO?
3. WHAT IS YOUR PASSION?
4. WHY ARE YOU HERE?
5. WHAT DO YOU KNOW ABOUT TESTING?
6. WHAT DO YOU KNOW ABOUT AGILE?





TODAY:

1. TESTING THE PRODUCT VISION

HOW TO CHALLENGE VISION AND STRATEGIES
IN AN AGILE CONTEXT?

2. SETUP A VISUAL STRATEGY

CREATE TRANSPARENCY AND INSIGHT FAST
WITHOUT WRITING BULKY DOCUMENTS!

3. DIVERSIFY

TESTING WITH LOTS OF VARIETY

4. GIVING FEEDBACK

SHARE WHAT YOU LEARN OFTEN
AND QUICKLY



READY TO GO?

TESTING THE PRODUCT VISION

HOW TO CHALLENGE VISION AND STRATEGIES IN AN AGILE CONTEXT?

PART 1



It's all about the input



GIGO





Focus on added value

A man with a distressed expression is shown from the chest up, looking upwards and to the right. He has his right hand pressed against his forehead and his left hand resting on his chin. He is surrounded by a towering, chaotic stack of papers and folders that fills the background, creating a sense of being buried under a mountain of work. The lighting is bright, highlighting the texture of the paper and the man's features.

Big design up-front

Why? What? How?



Product Owner role

The Product Owner



Product
Definition



Product
Vision



Strategy



Competitive
Landscape



Market
Segmentation



User
Personas



User
Research



Design
Sense



Analytics



Domain
Knowledge



Marketing



Entrepreneurship



Leadership



Agile / Lean



Innovation



Curiosity, Passion,
& Persistence

P r o d u c t V i s i o n ,

P r o d u c t B a c k l o g ,

T h e m e s / E p i c s ,

S p r i n t B a c k l o g ,

S t o r i e s ,

T a s k s .





PAY IT FORWARD PROGRAM VISION

OUR VISION IS TO SPREAD AWARENESS OF AGILE AND SCRUM AT AN AFFORDABLE PRICE SO THAT ANYONE CAN BENEFIT FROM THIS NEW WAY OF WORKING AND EMPOWER OTHERS TO WORK IN A TRANSPARENT, HONEST, SIMPLE, AND EFFECTIVE WAY.

TARGET GROUP:

- ORGANIZATIONAL CHANGE AGENT
- SCRUM NOVICE
- SCRUM PRACTITIONER

NEEDS:

- PROVIDES AFFORDABLE ACCESS TO SCRUM TRAINING & EDUCATION
- EVALUATES TEAMS TO WORK MORE SIMPLY & EFFECTIVELY
- GIVES PEOPLE AN UNDERSTANDING OF SCRUM TERMS & CONCEPTS

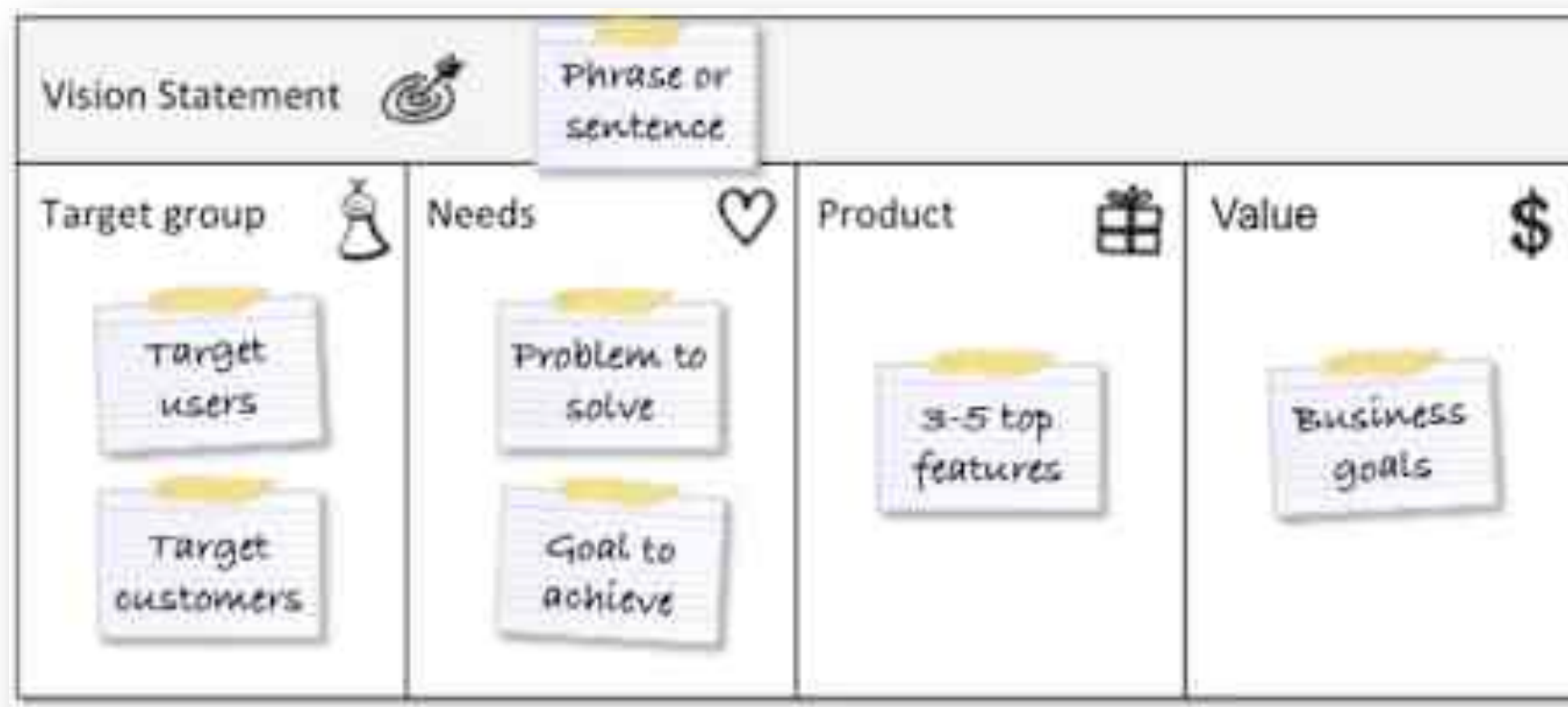
PRODUCT:

- INTERACT & BUILD COMMUNITY
- DISCUSSION FORUMS
- EXPAND KNOWLEDGE & USE OF SCRUM BEYOND IT COMMUNITY
- CREATES SPACE FOR INNOVATION & CREATIVITY

VALUE:

- GIVE BACK TO THE COMMUNITY
- BRANDING
- LEADS
- BUILD RELATIONSHIPS
- REFERRALS PAY PER SEAT

Vision board





Lean Canvas is adapted from The Business Model Canvas (<https://www.businessmodelgeneration.com/>) and is licensed under the Creative Commons Attribution-ShareAlike 3.0 CC BY-SA License.



Techie

Mike

25-34 single male
living with friends

Mike works as a graphic designer in a small agency and one day wants to run his own agency.

He's got an iPhone and a Vodafone 360 H1 by Samsung phone, one personal and one for work. He follows friends and key people in the design industry via Twitter, blogs, and RSS feeds. He uses his iPhone for work emails and his H1 for Facebook.

He uses Twitter to post updates about what he's up to with his project work as well as using it as a tool to find out what people are up to and to invite them to events. He uses Facebook to share personal photos and video and keeps a Tumblr blog to post interesting things he discovers and share them with his friends and followers.



Socialite

Zoë

18-33 single female
living with friends

Zoë is studying a Masters in International Development unsure of what the future lies ahead of her.

She is constantly using the Facebook app on her Vodafone 360 M1 by Samsung phone as well as on her PC to upload and tag photos and videos from places she's been to with her friends, as well as to find out and comment on who's been where at which club nights and parties.

She regularly texts and messages her friends to find out if they've heard about a new pop-up shop she heard about via a flyer, or one-off warehouse party started by friends of friends.



Cost-conscious

Geoff

35-49 married male
with young kids

Geoff works as a senior architect in a large practice, and has a wife and a young girl and 6-month baby boy. He thinks the time is right to start looking for a bigger home for his family.

Geoff uses his Vodafone 360 H1 to take photos and videos of prospective sites he visits. He purchased the H1 because of its ability to check email, surf the web, use apps, and take photos and video.

He loves the built-in camera and also uses this phone on holiday to take snaps of the family as it fits in his pocket and doesn't want to carry a large SLR around with him. He likes to upload his photos and video to Flickr and share them with his family and friends. He also creates photo books from his holiday snaps to give as gifts to his parents.

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Current backlogs







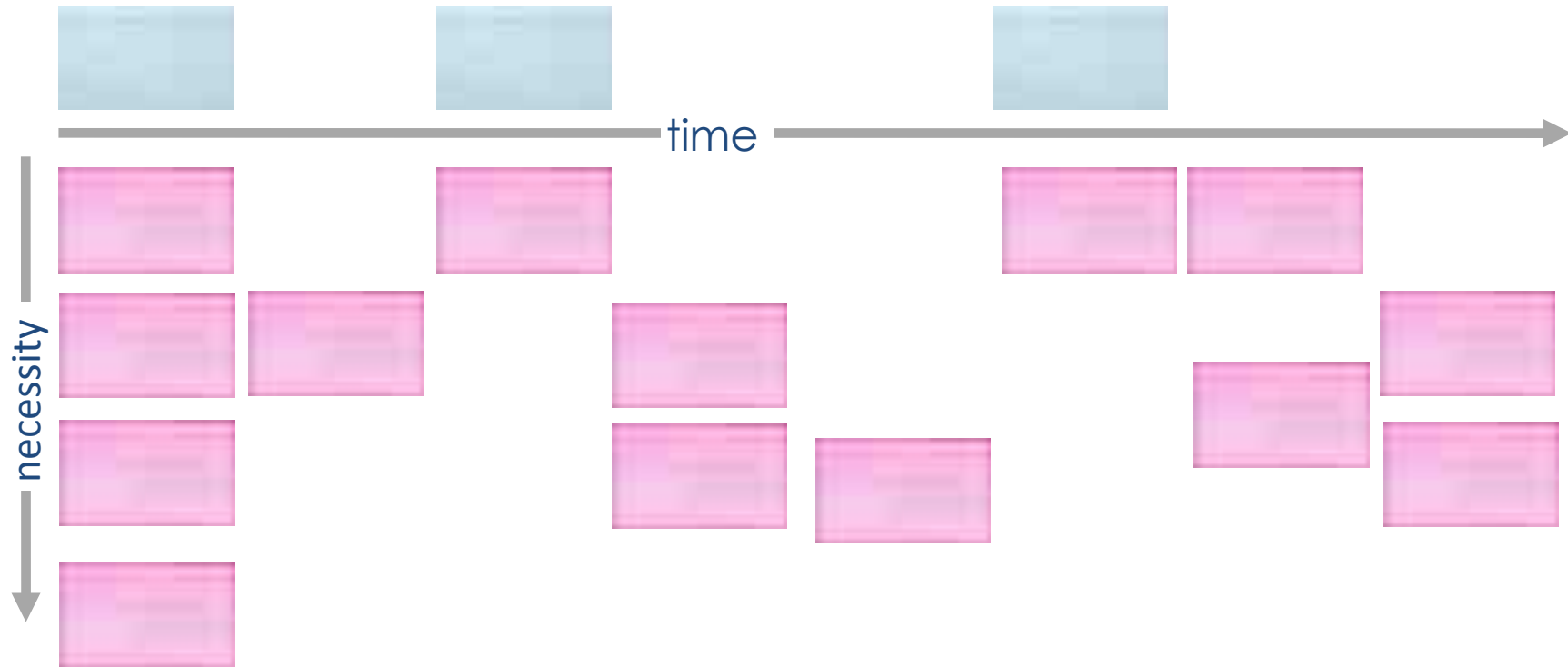
Story Mapping

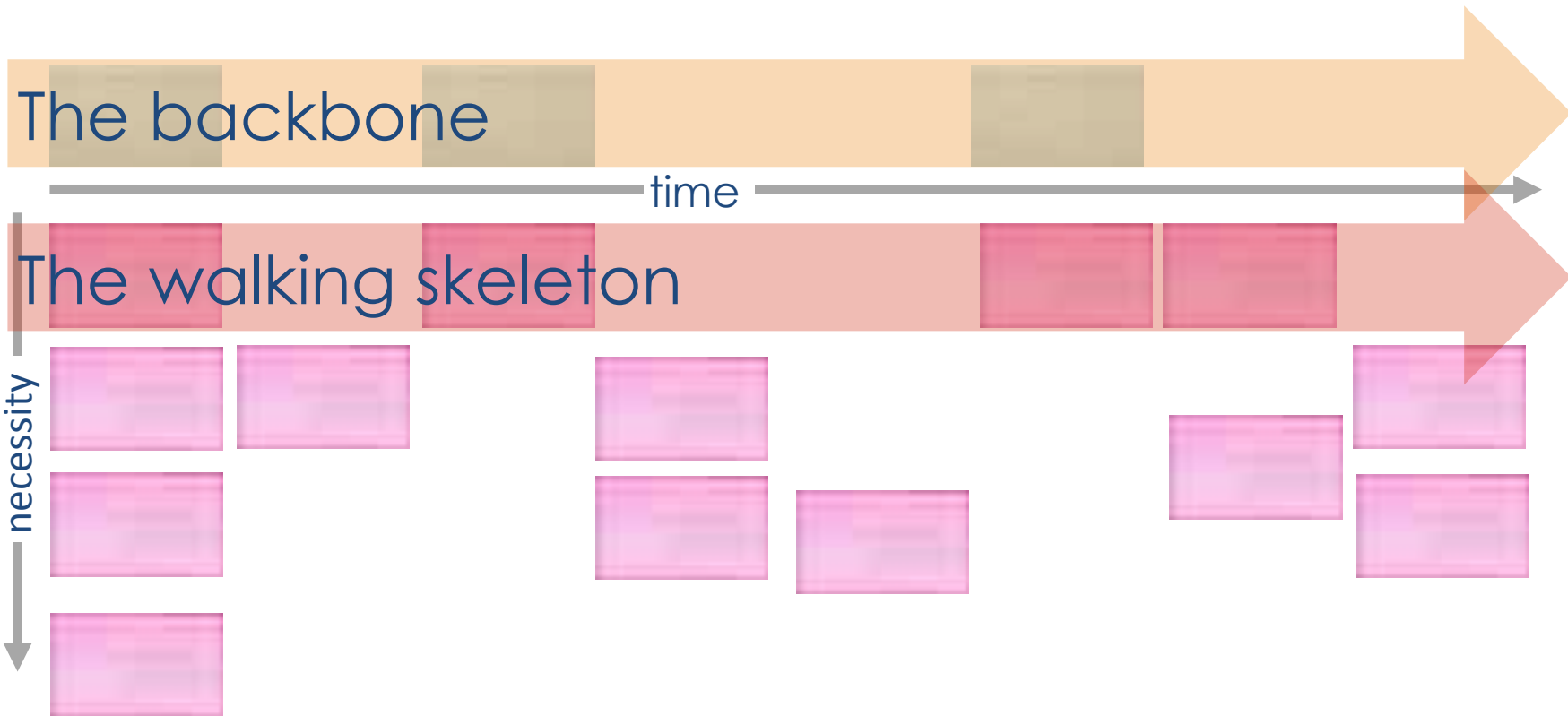
Activities

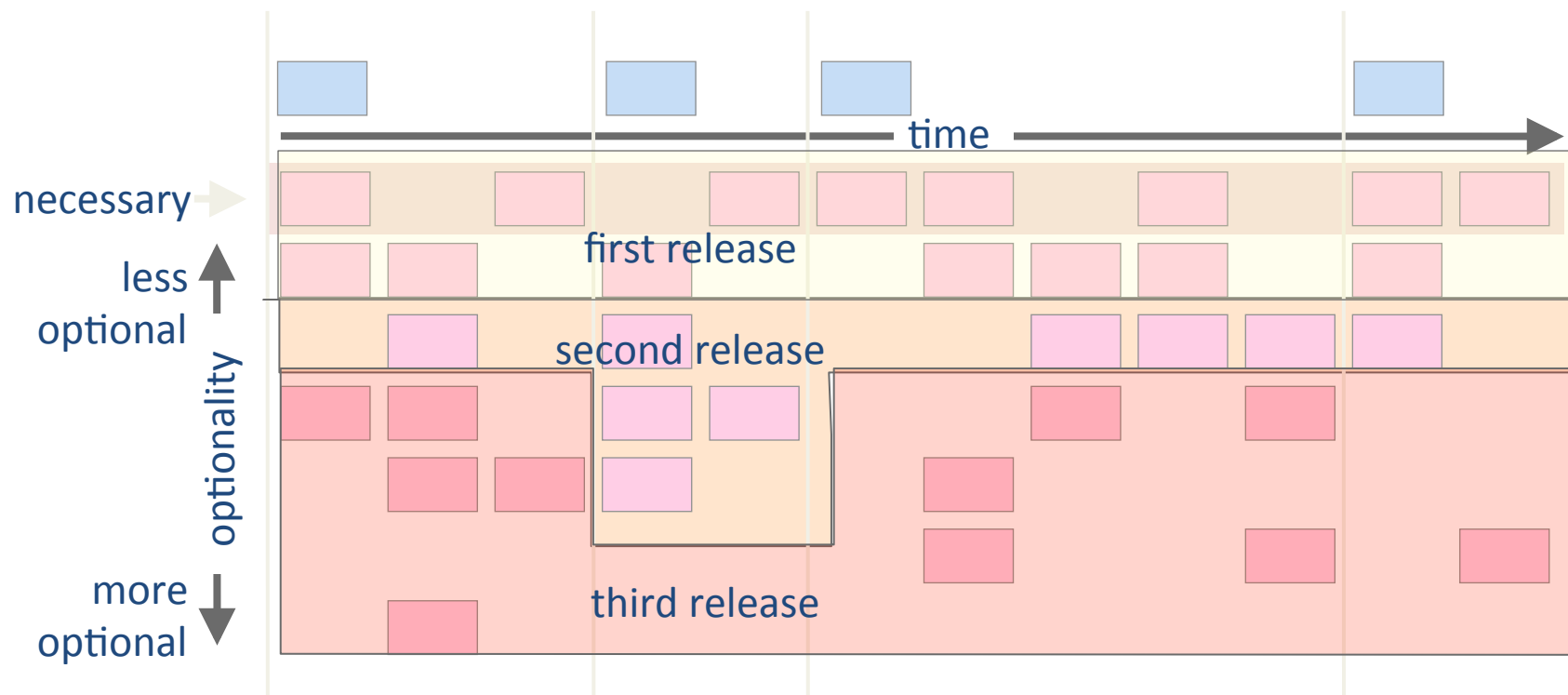


time

Activities

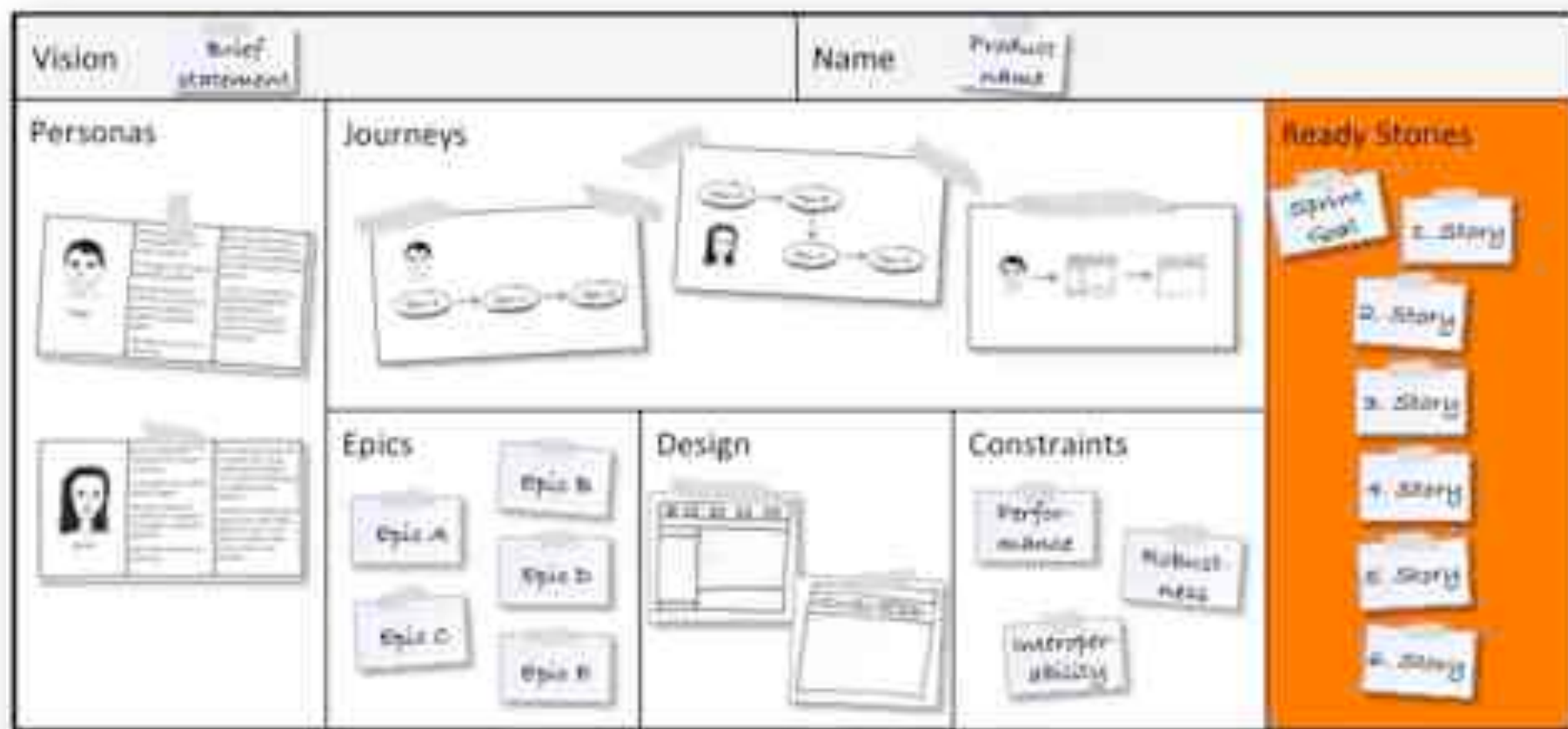






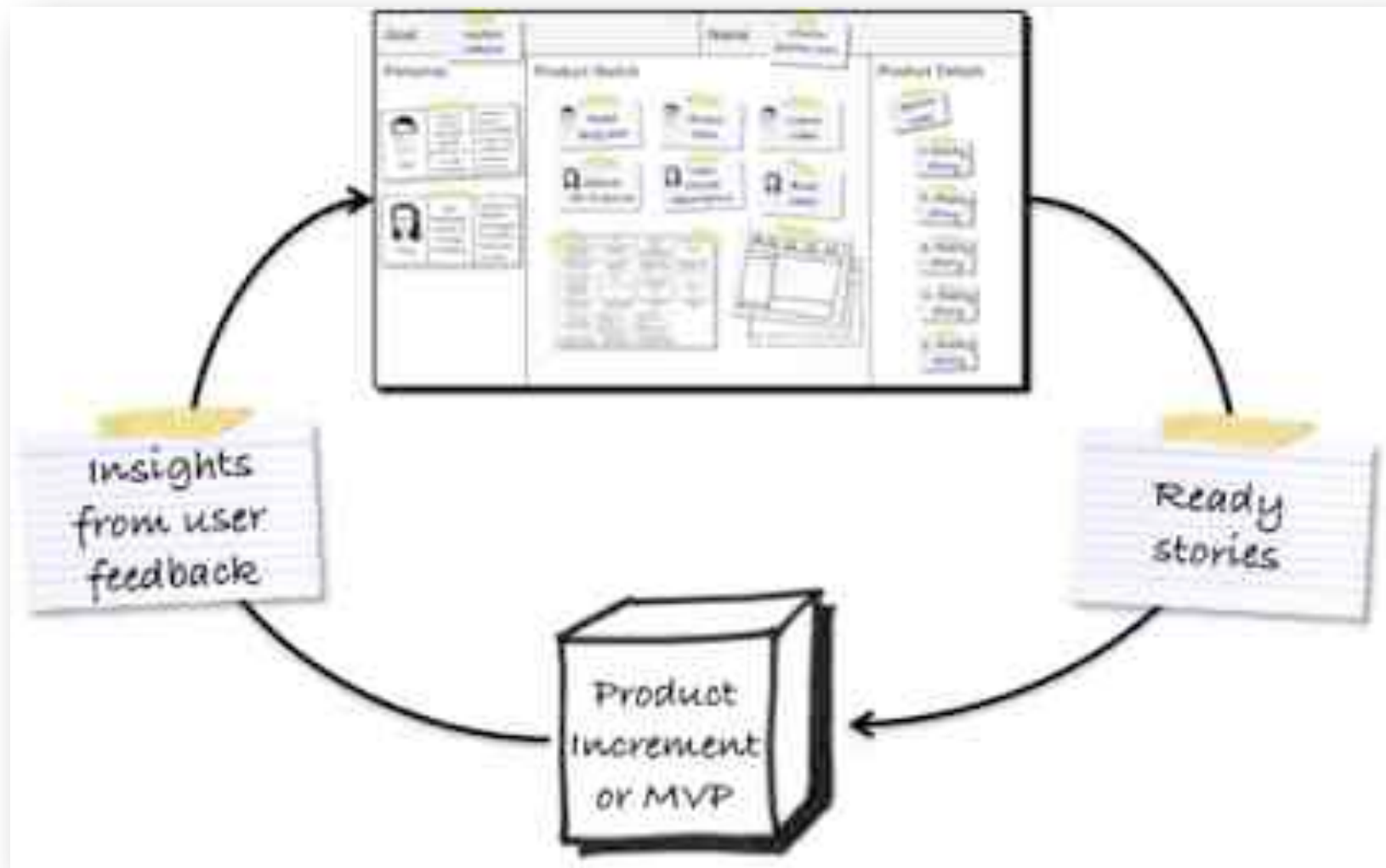
Product Canvas







Minimal Viable Product



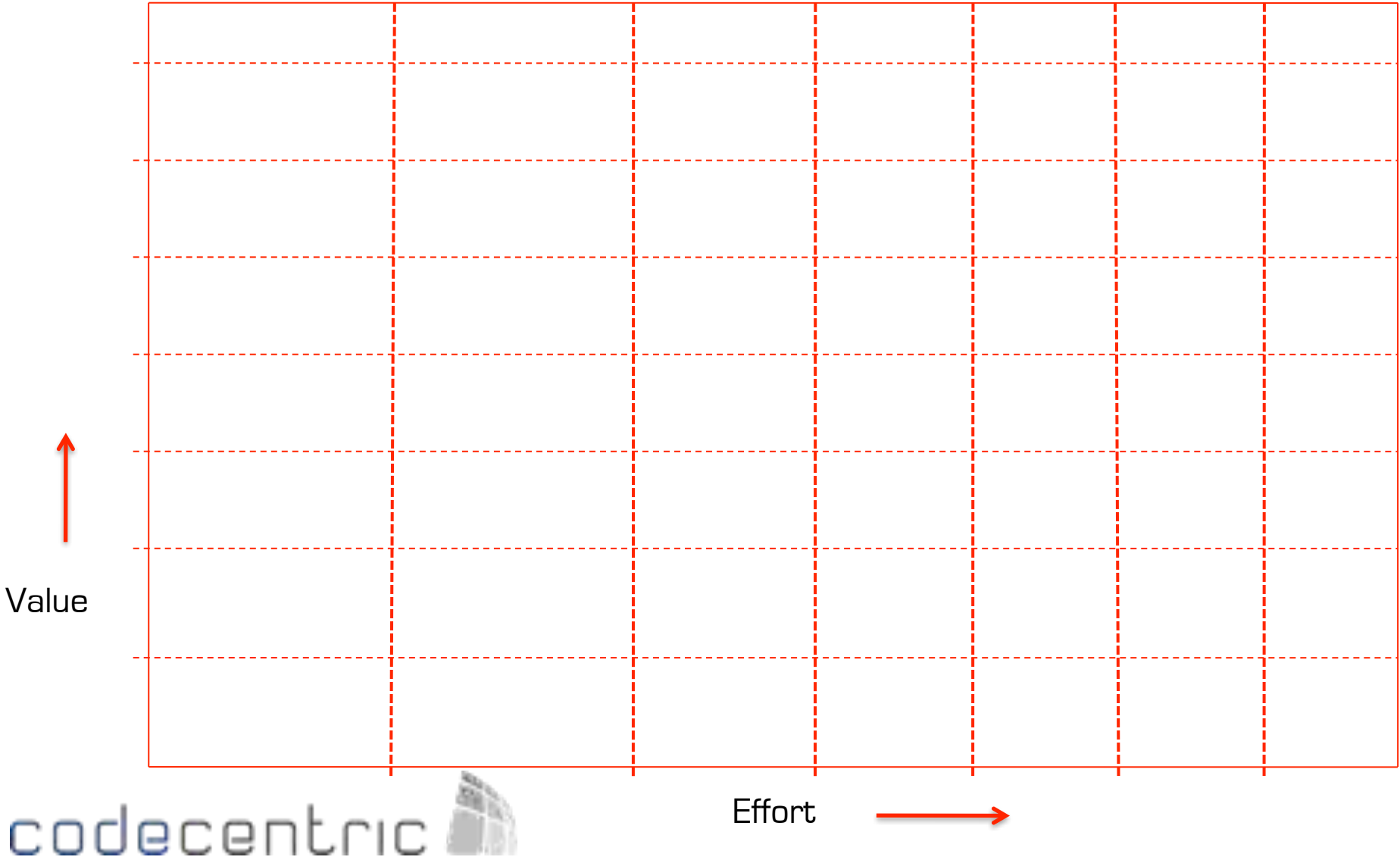
Who's first?



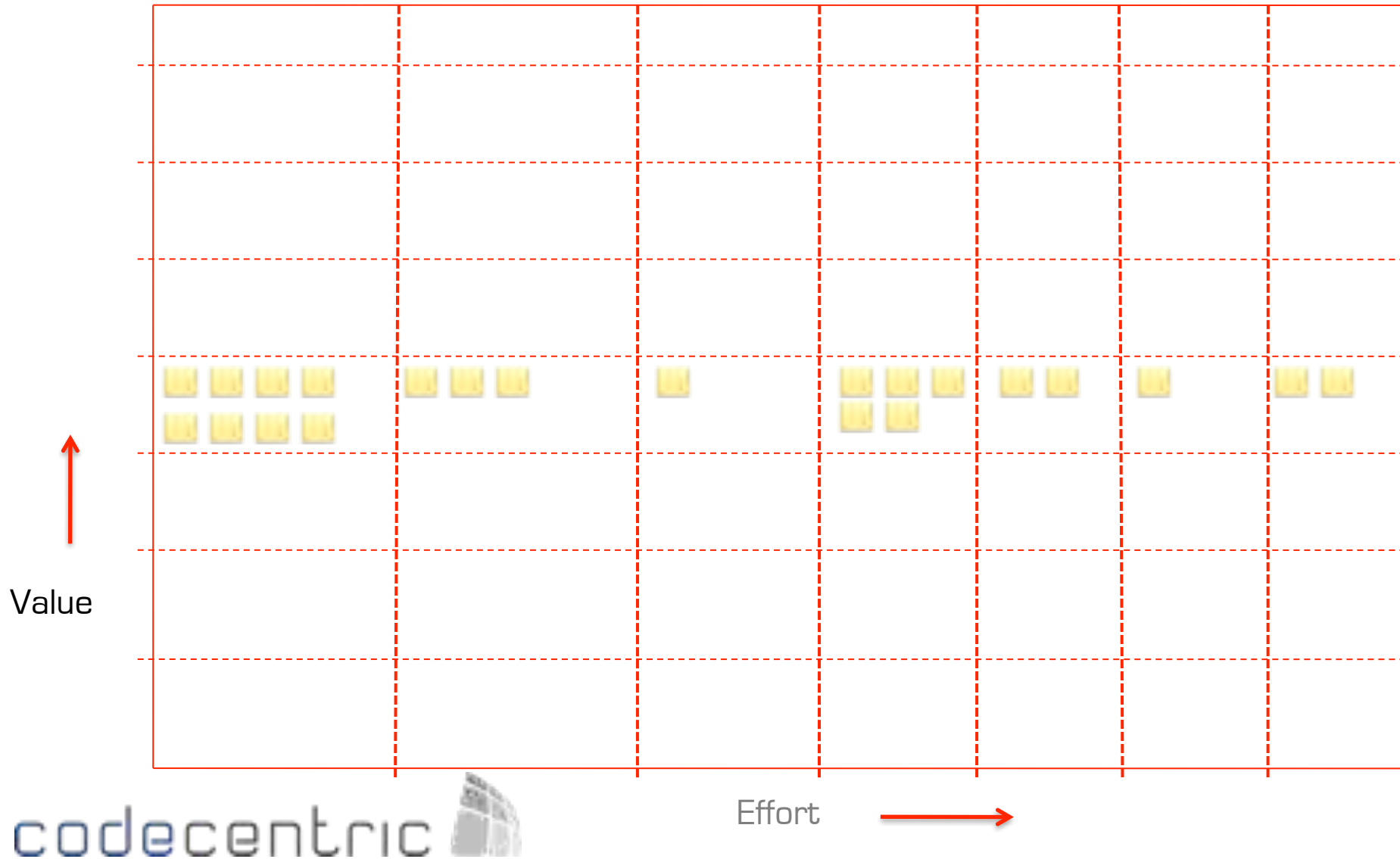
A night-time photograph of a city skyline, likely New York City, with two large, vibrant fireworks exploding in the dark sky. The fireworks are primarily blue and white, with some orange and red streaks. The city lights and buildings are visible in the background, and their reflections are seen on the water in the foreground. A semi-transparent grey banner is overlaid across the middle of the image, containing the text "Bang for the Buck".

Bang for the Buck

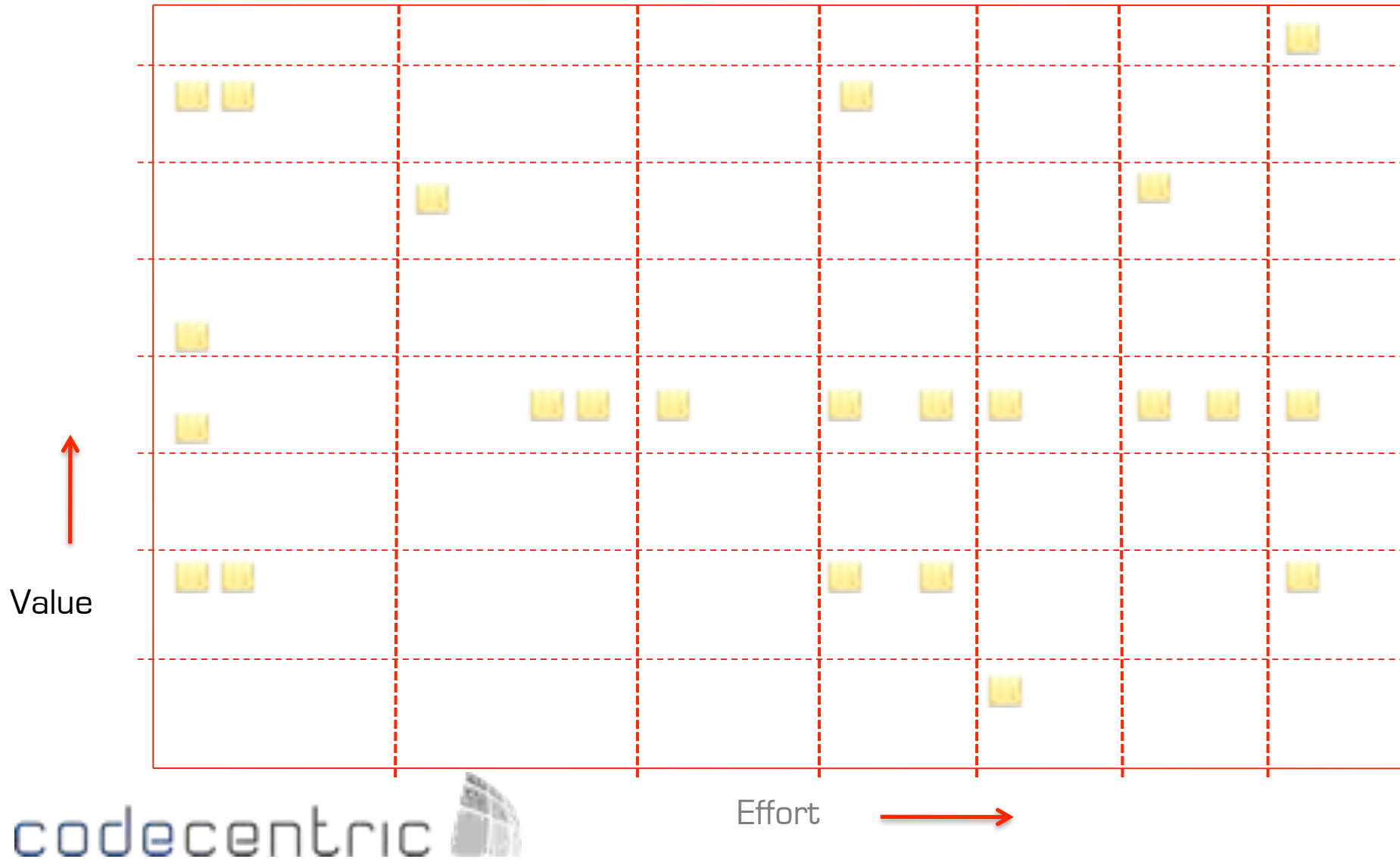
Bang for the Buck



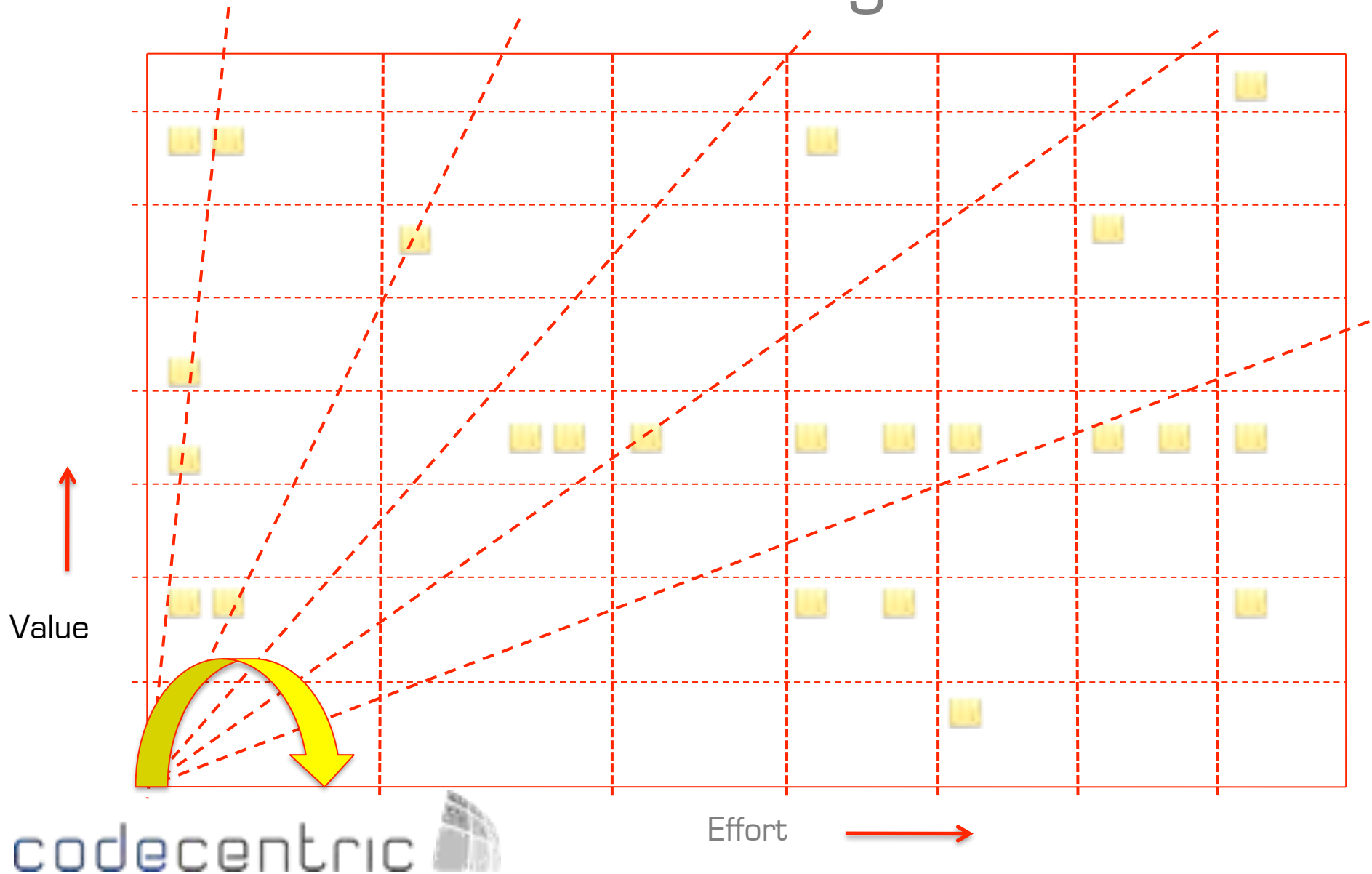
Bang for the Buck



Bang for the Buck



Bang for the Buck







Product Vision,

Product Backlog,

Themes / Epics,

Sprint Backlog,

Stories,

Tasks.



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Product Vision,
Product Backlog,

Themes / Epics,

Sprint Backlog,

Stories,

Tasks.

Exercise: your house



Describe your house



cod

SETUP A VISUAL STRATEGY

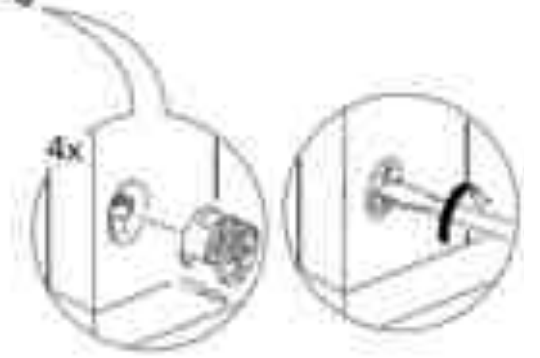
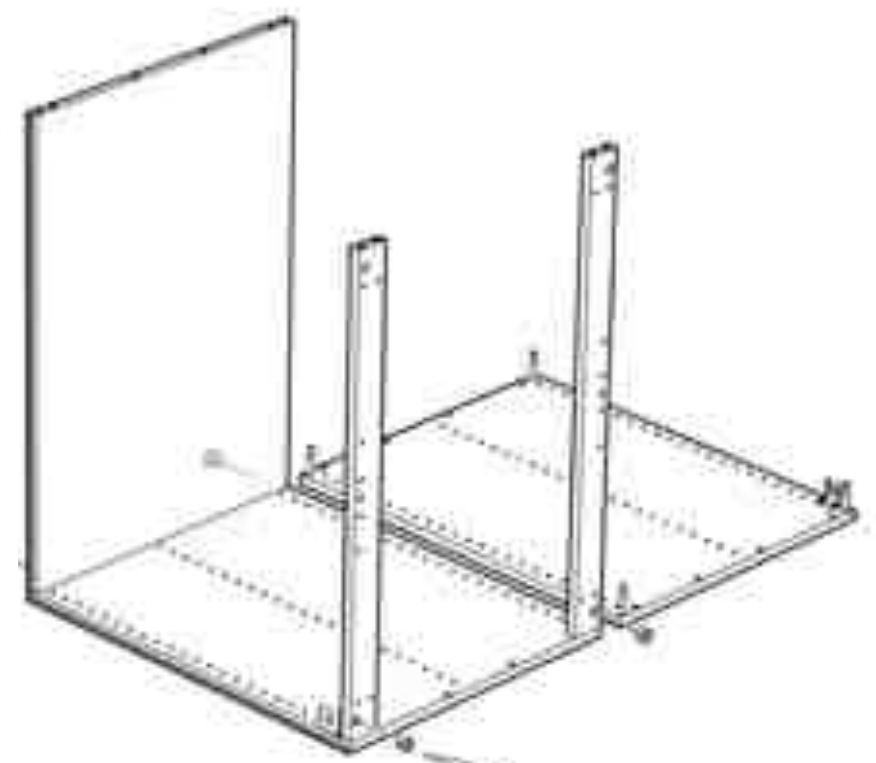
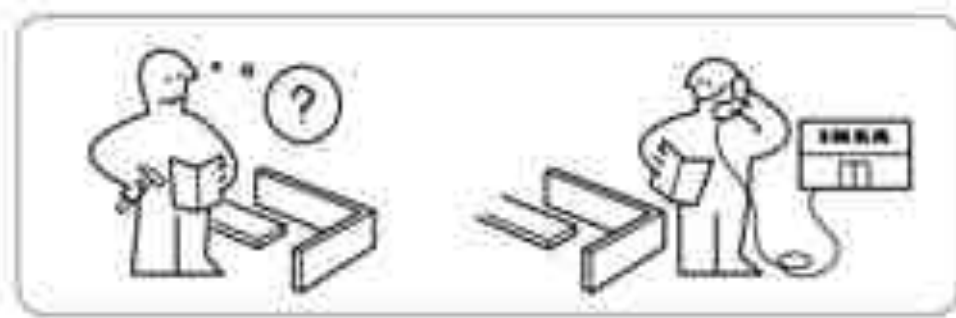
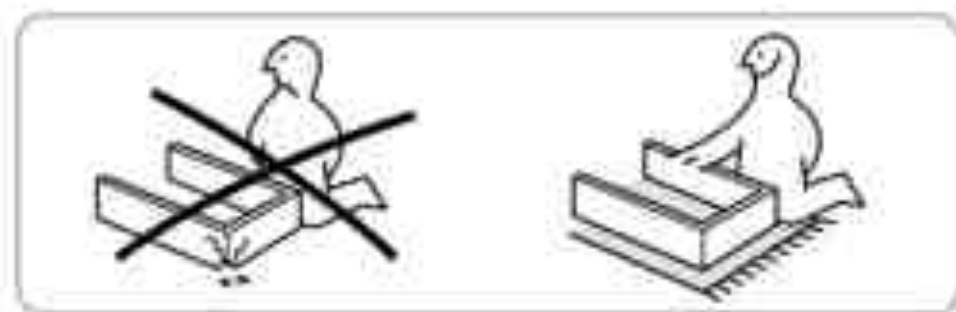
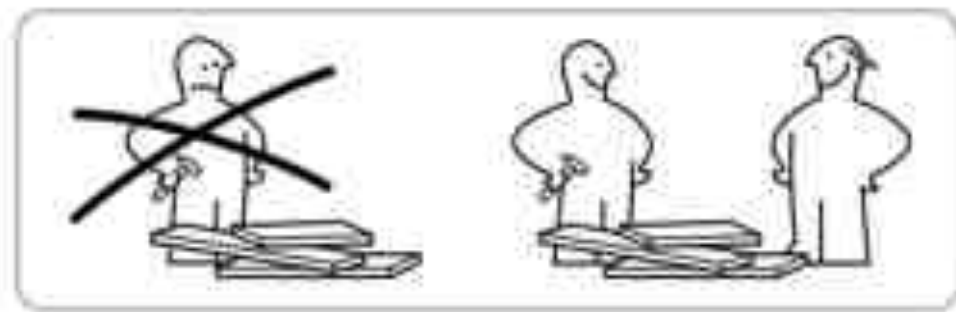
CREATE TRANSPARENCY AND INSIGHT FAST WITHOUT
WRITING BULKY DOCUMENTS!



1. VISUALISATION

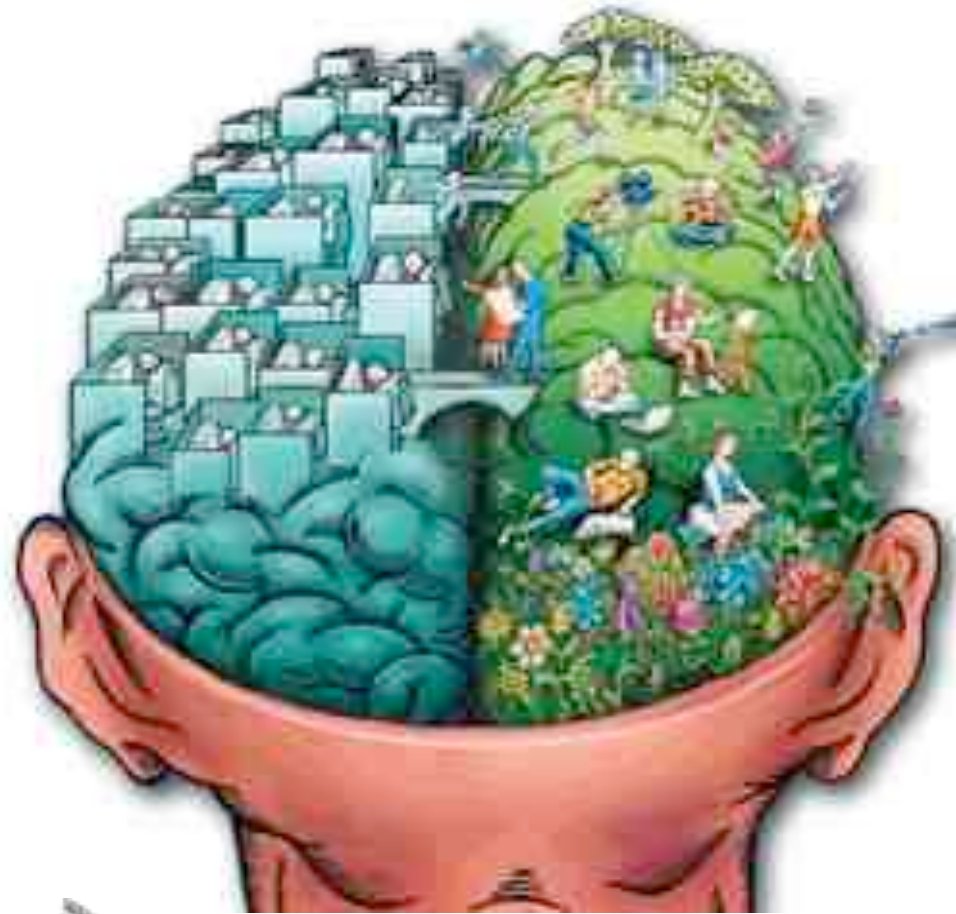
2. MIND MAPS

3. VISUAL STRATEGY



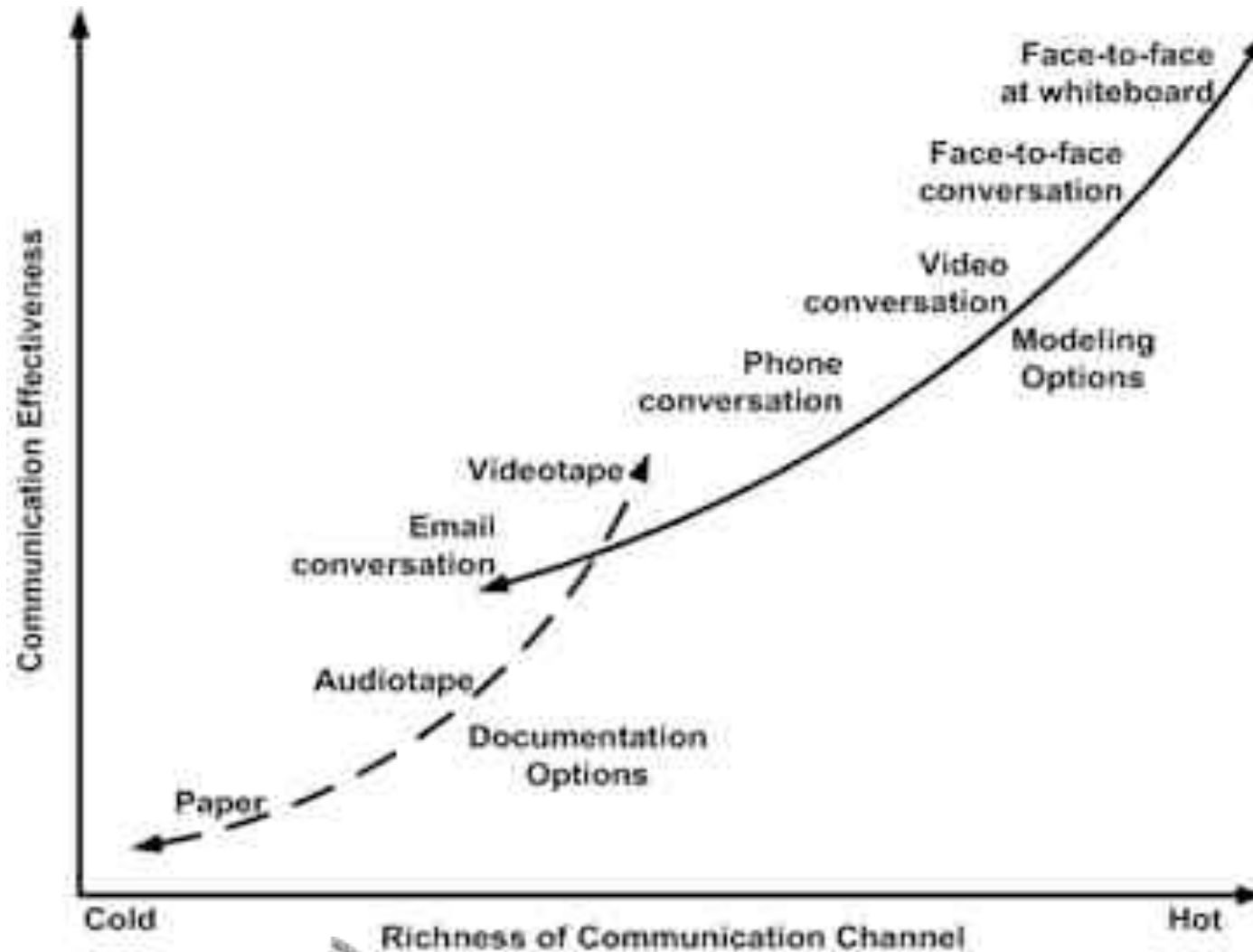
Your brain

Logic
Speech
Language
Analytics
Calculation
Abstract thinking



Color
Phantasy
Music
Images
Feeling
Rythm
Creativity

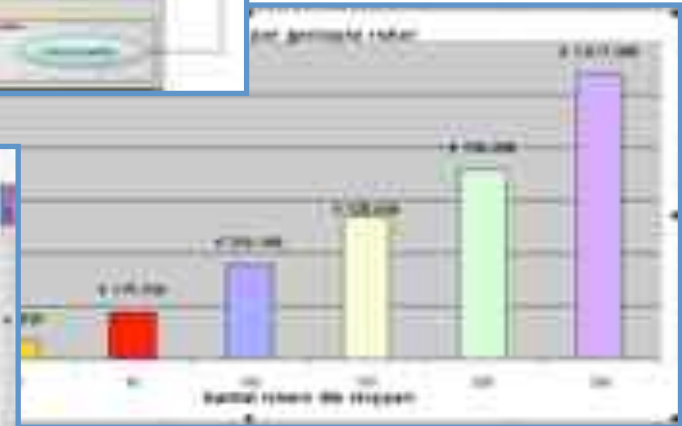
Communication



Visualisation

Best known forms:

- Traffic signs
- Diagrams
- Graphics
- Tables
- Maps
- Photos

A screenshot of a data table with multiple columns and rows, containing various numerical and categorical data points.

Visualisation



Visualisation helps to:

- To express yourself using little text and explanation
- Develop ideas and information
- Steer through processes
- Transfer ideas and results



BUT I CAN'T DRAW...



Ideas not art!

You don't have to draw like an artist to tell that these pictures are all houses





1. VISUALISATION

2. MIND MAPS

3. VISUAL STRATEGY

Mind map

A combination of:

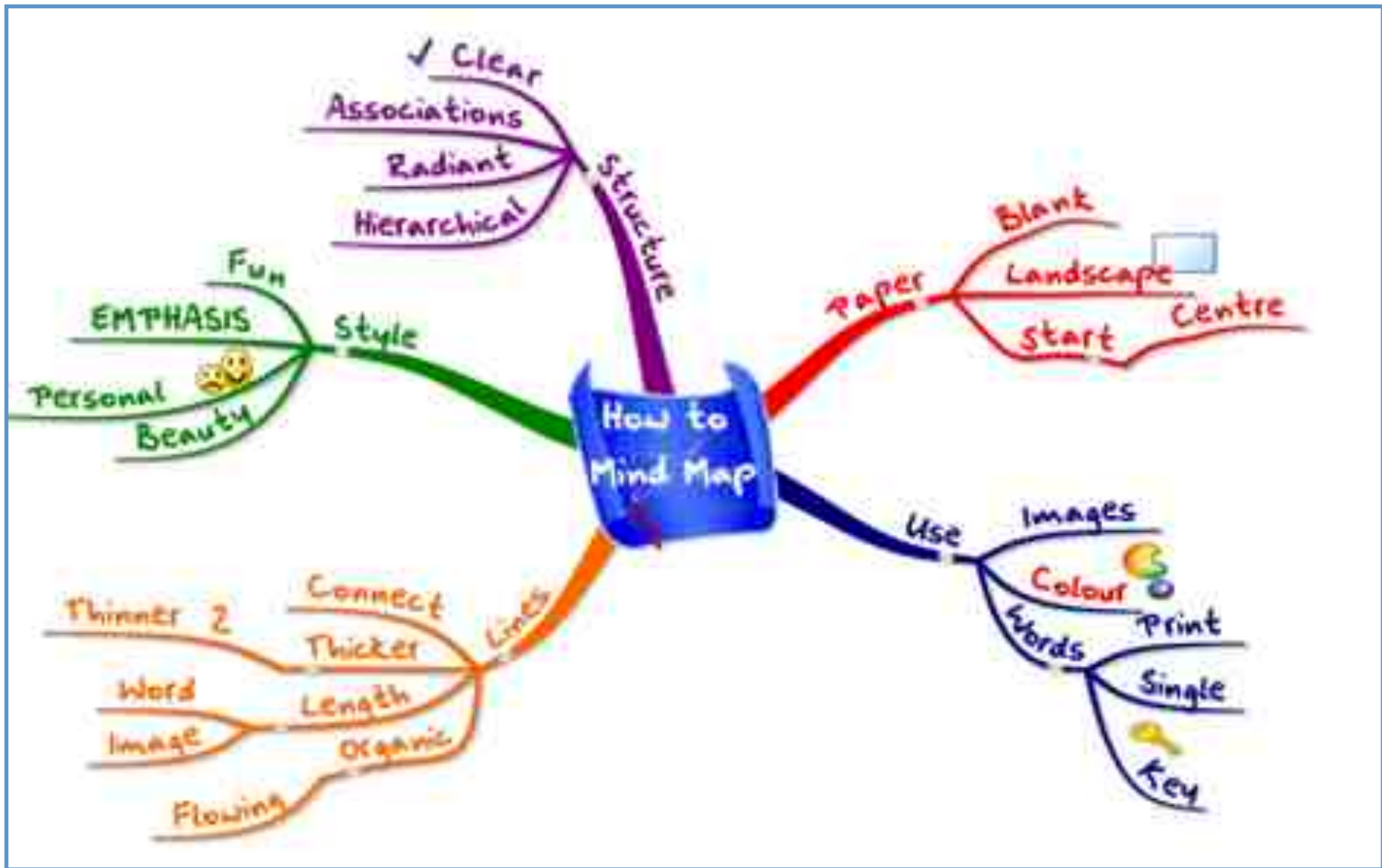
- Images
- Symbols
- Codes
- Dimensions
- Key words



Goal: to store and transmit information







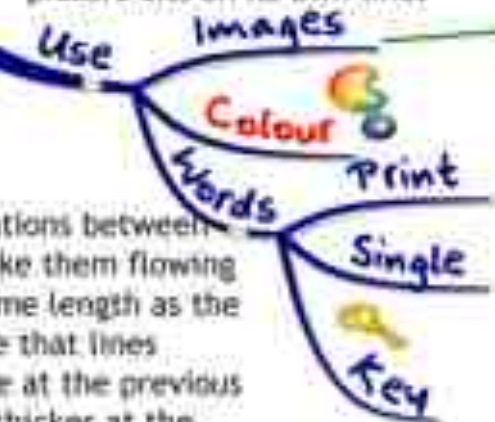
5. The structure that should develop will be a 'radiant hierarchy', with ideas radiating out from your central theme and main branches.



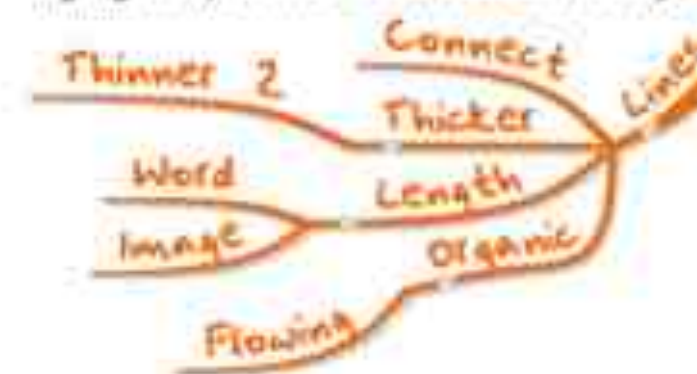
1. Start at the centre of a blank, landscape page, ideally with a colourful image to represent your subject.



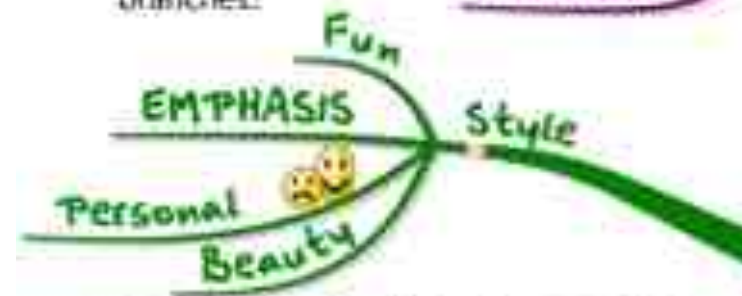
2. Use words and pictures throughout your map. Wherever possible use single-KEY words, printed along a line. Each word or picture sits on its own line.



3. The lines make the associations between ideas as clear as possible. Make them flowing and organic; each line the same length as the word or image. Always ensure that lines connect to the end of the line at the previous level. Typically lines will be thicker at the centre and thinner further out.



4. Experiment with different ways of linking and emphasising different aspects. Use highlighters, codes and arrows as necessary.



How to Mind Map

Create your 1st mind map



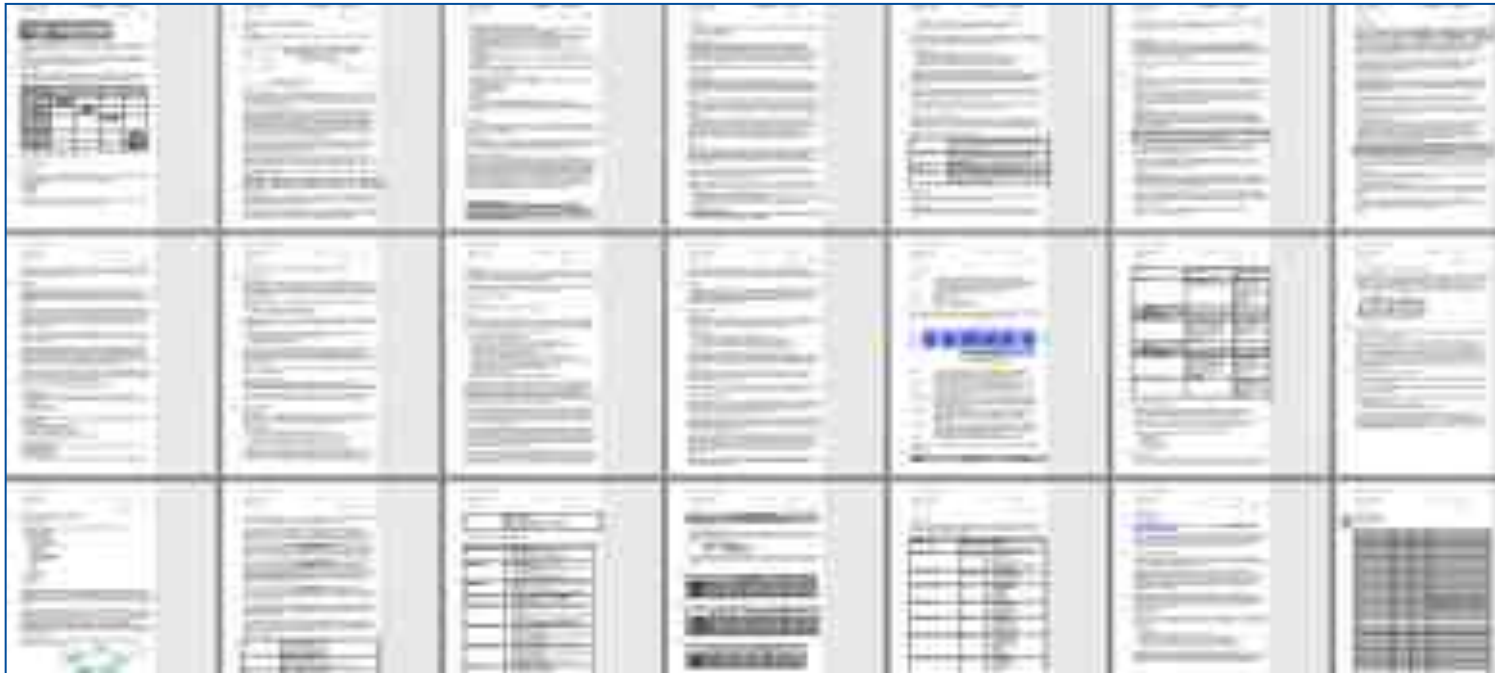
Create a mind map in 10 minutes:

- Who are you?
- What are your goals for ATD?
- Your projects test strategy
- How would you test a salt shaker?
- Anything else you want to share...

Present your mind map
to the group in 60 seconds



Test plan example



- Lots of text (this example = 55 pages!!!)
- Inaccessible
- Does anybody really read these?

Test plan example

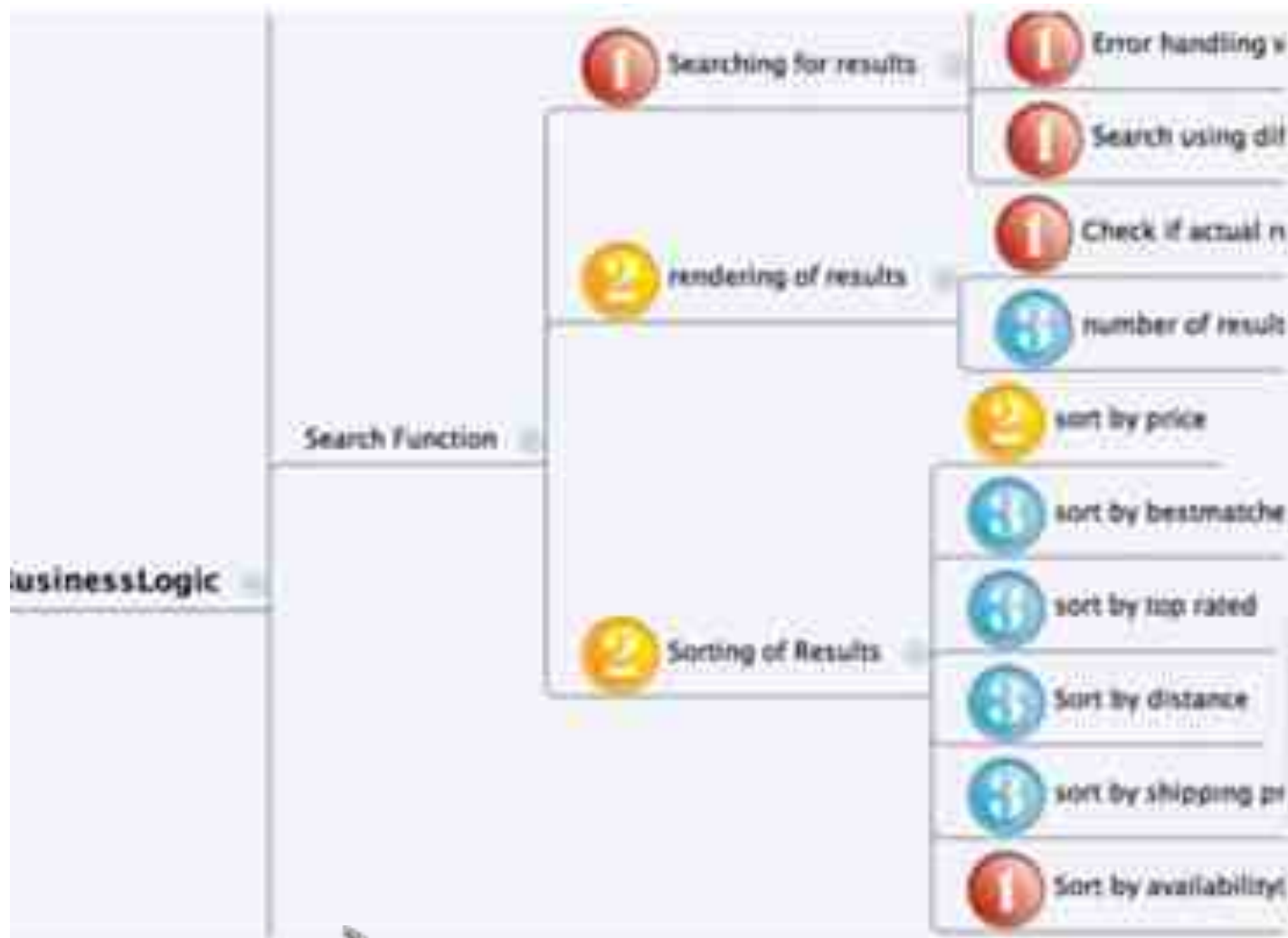


Doc imported

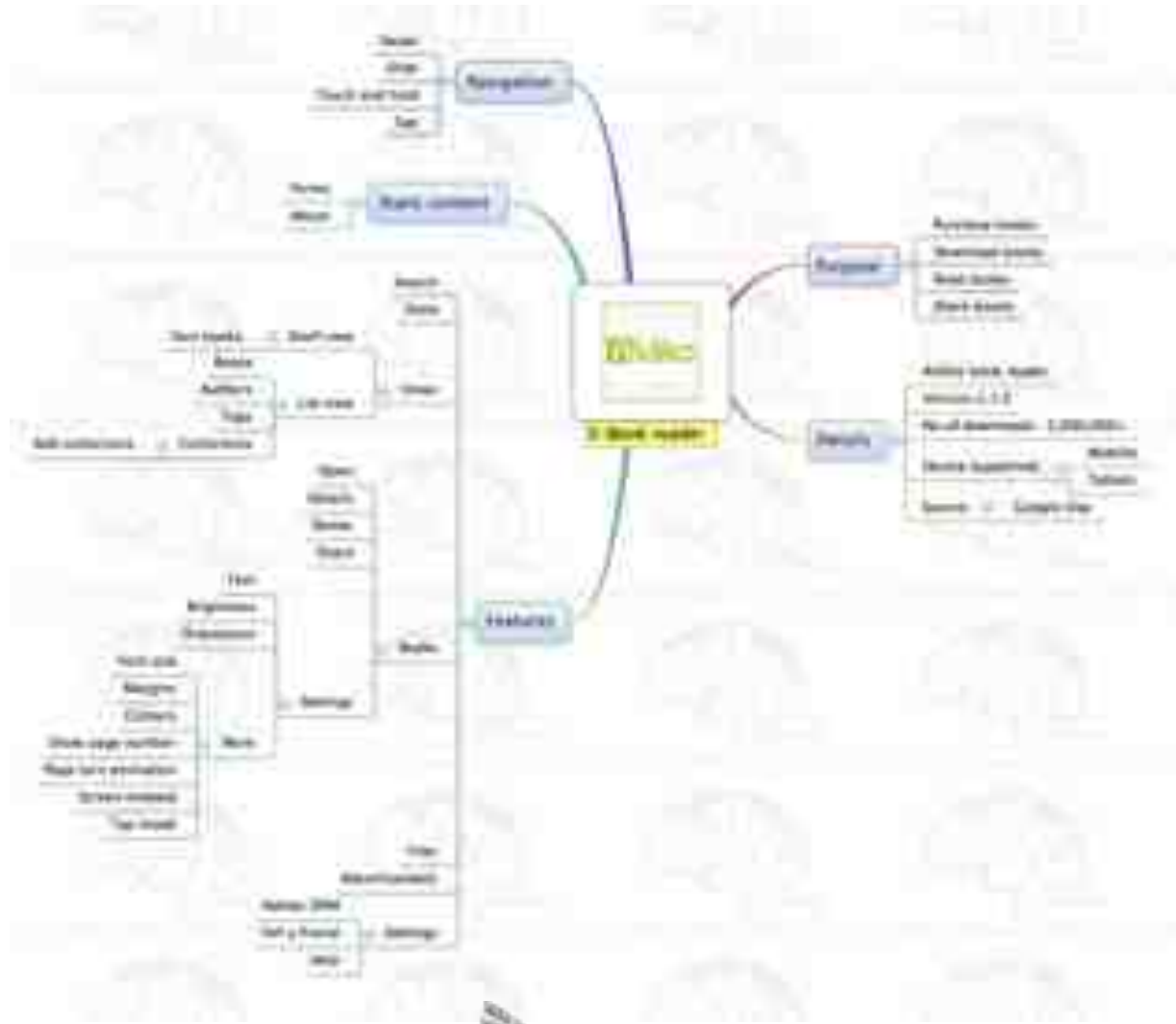
Test plan: mind map



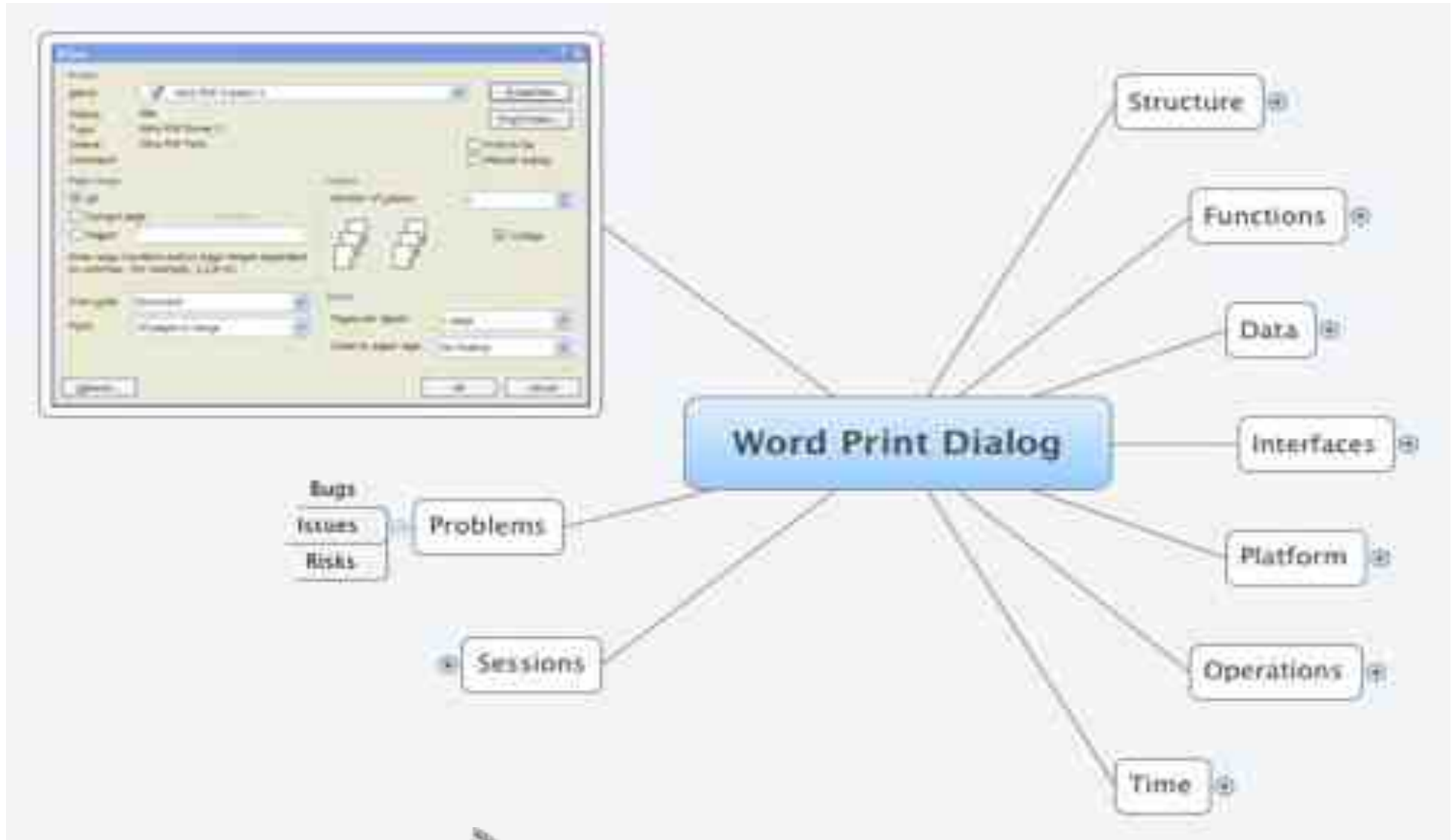
Test strategy: risk analysis

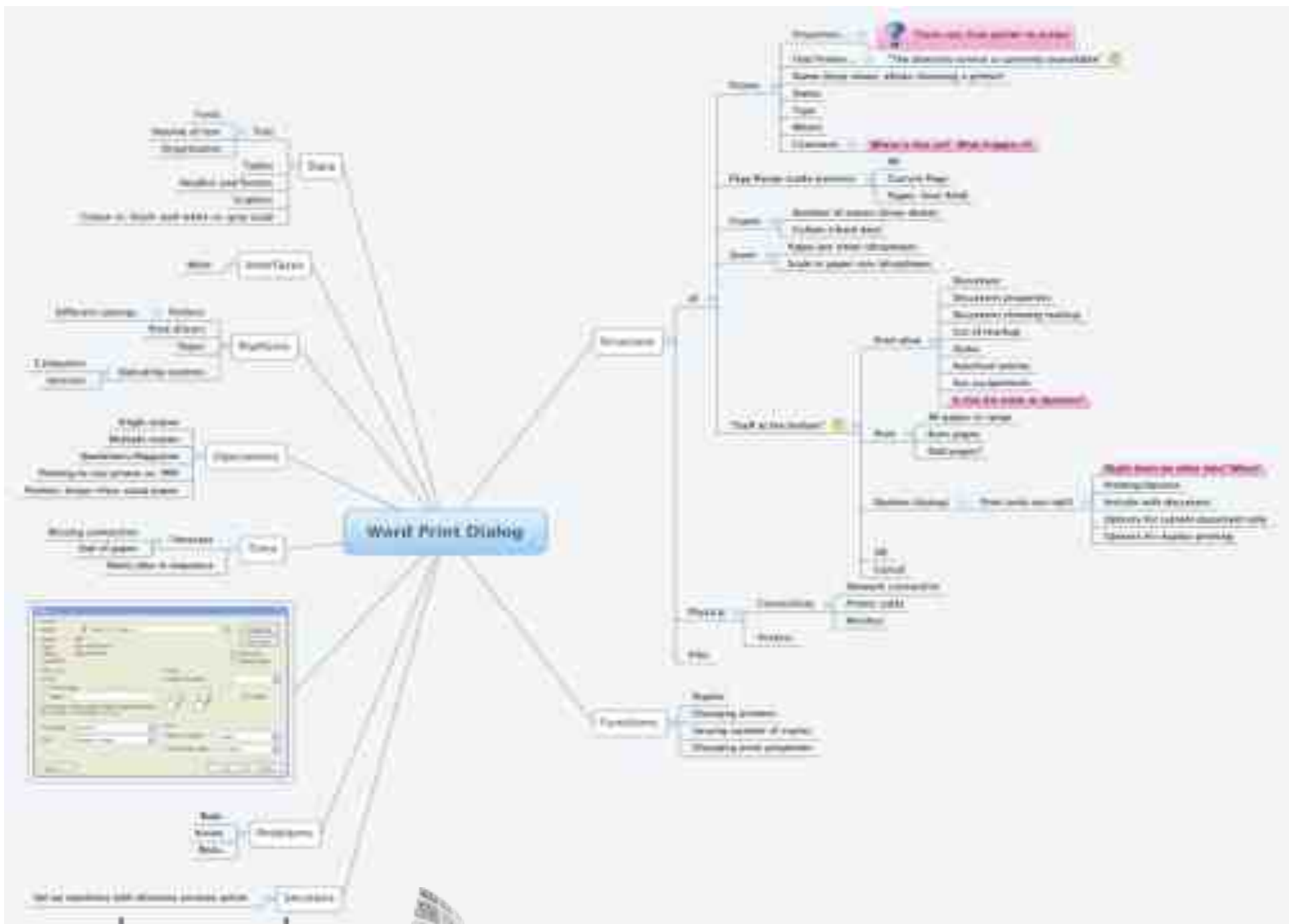


Test strategy

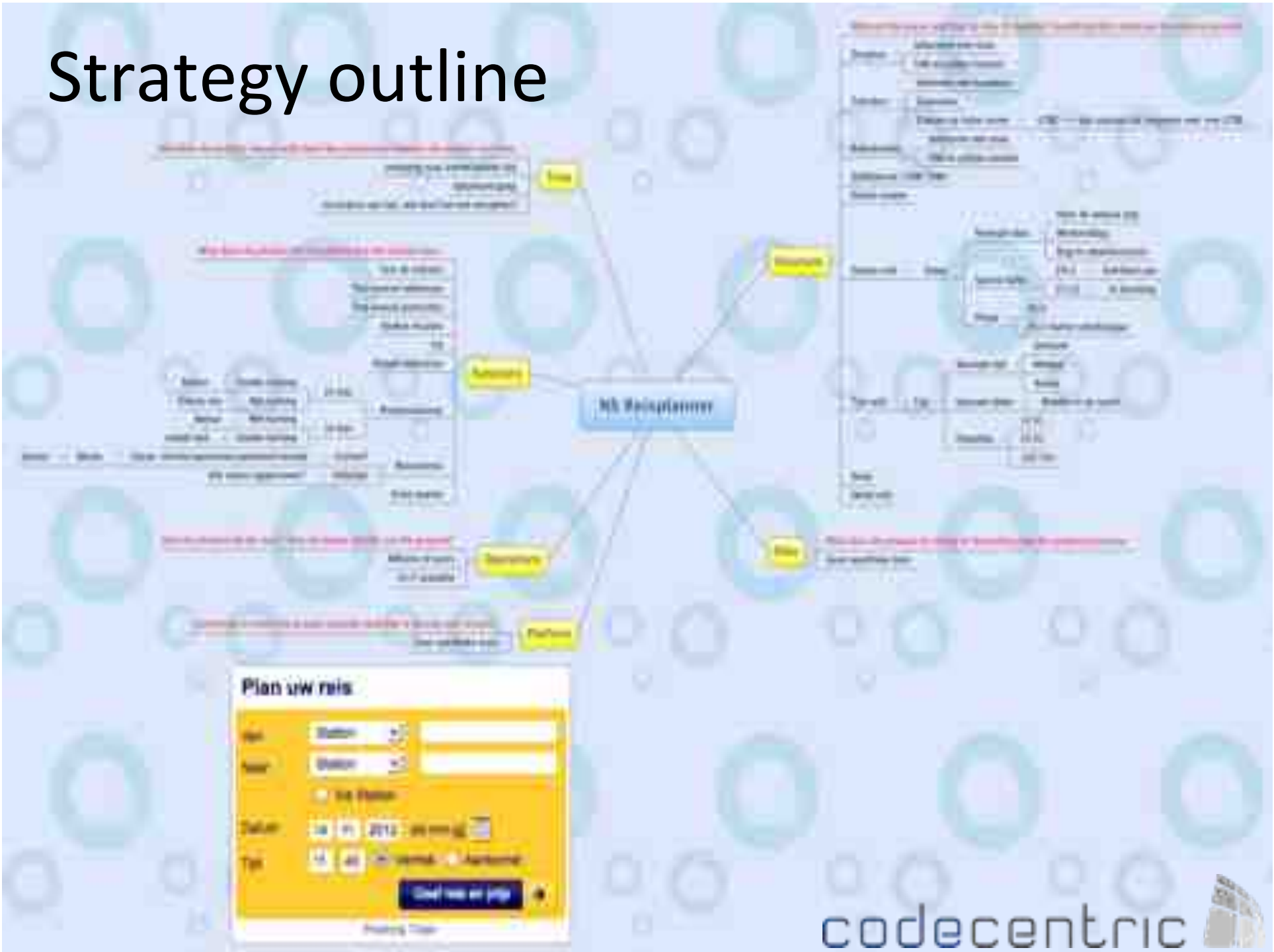


Coverage outline

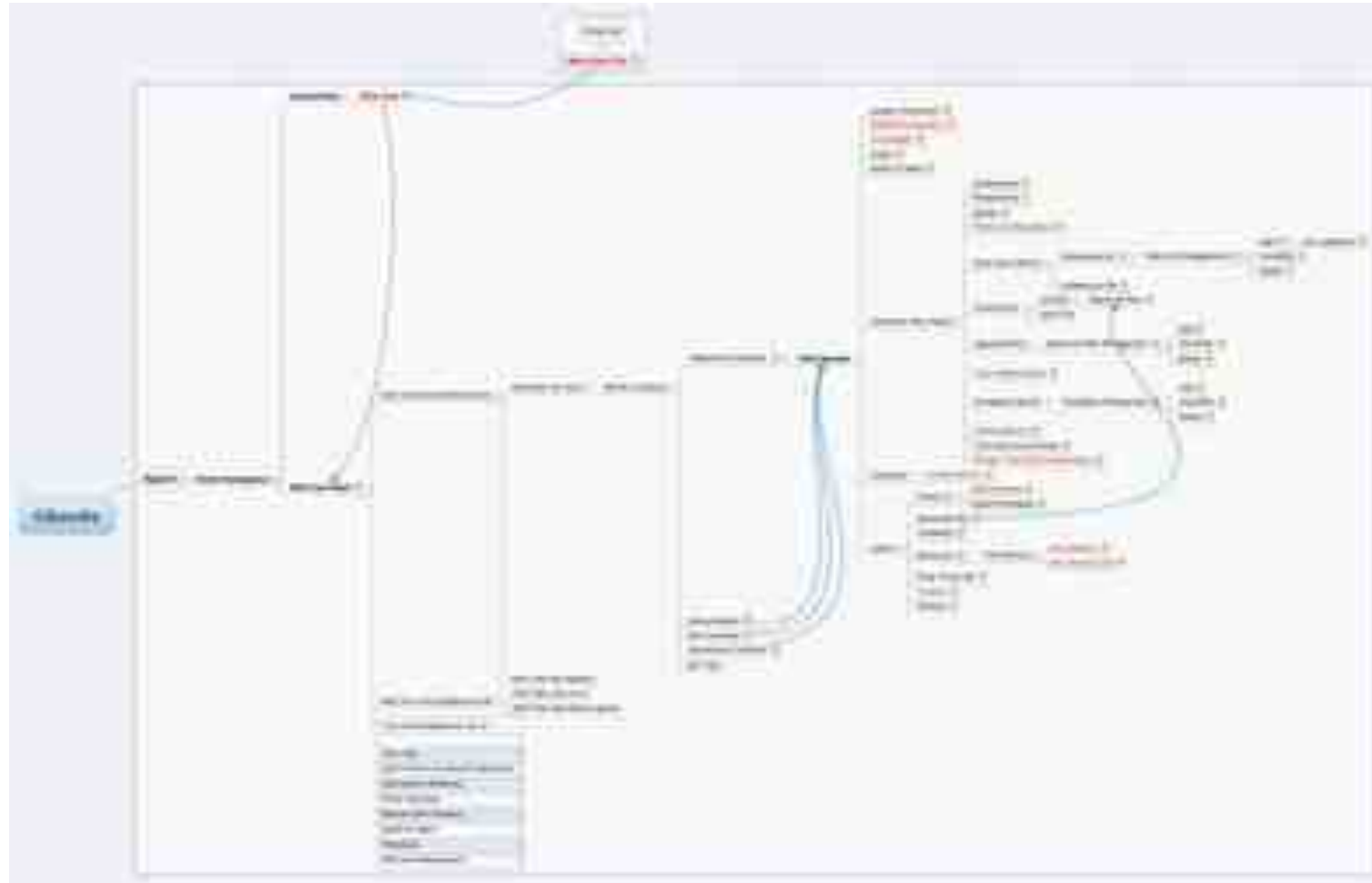




Strategy outline

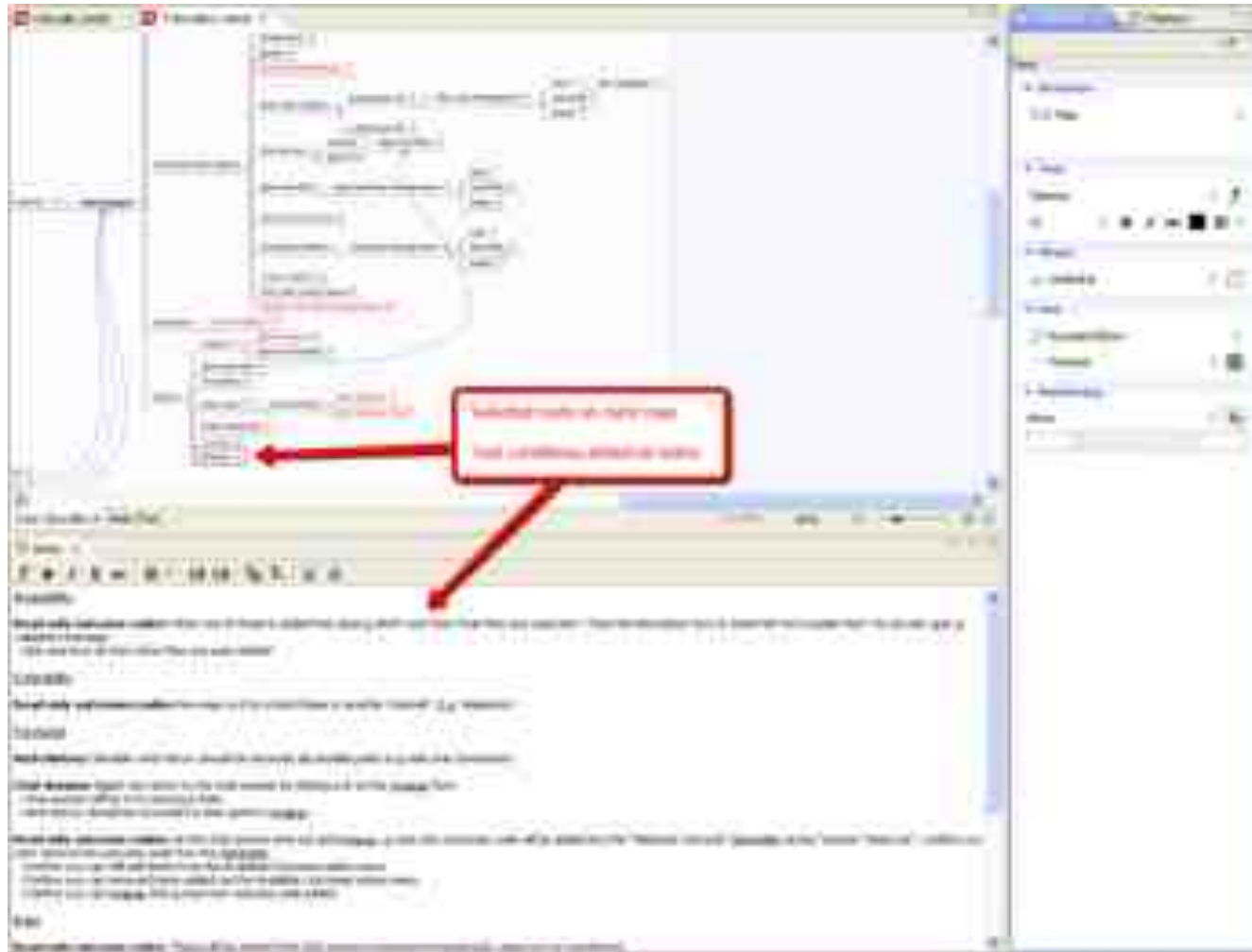


Test cases / test ideas



Source: <http://www.bettertesting.co.uk>

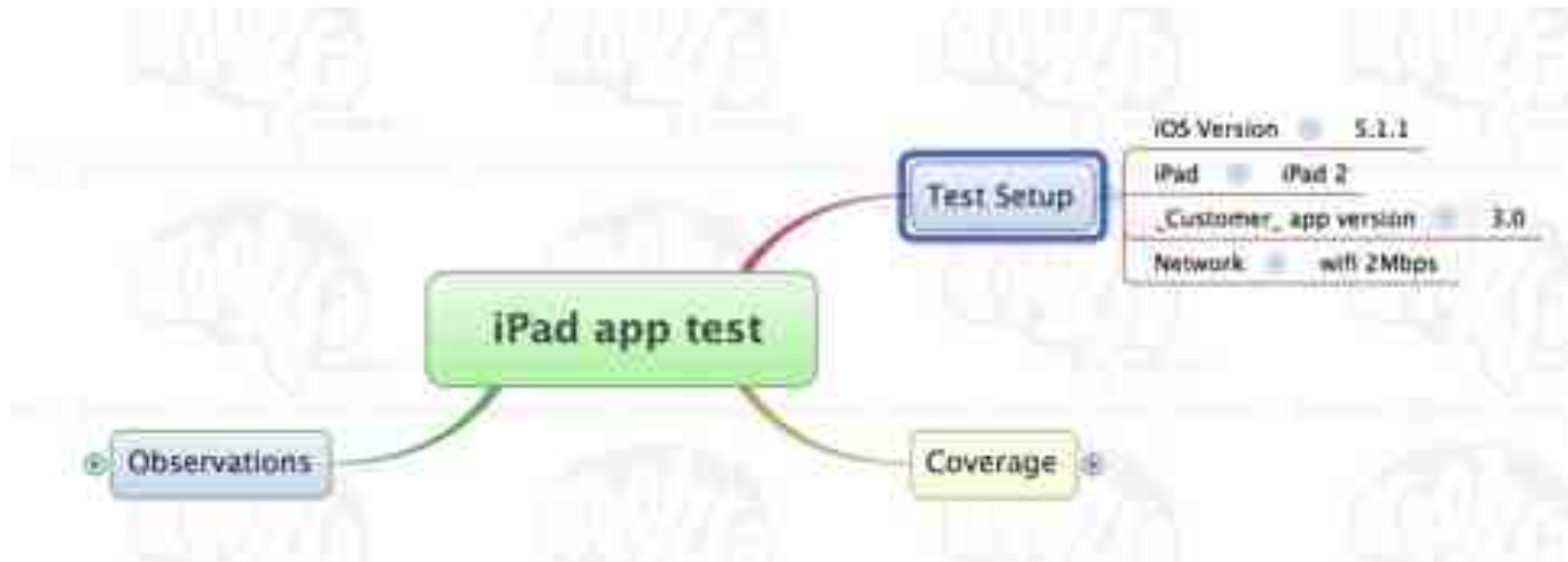
Test cases / test ideas



Source: <http://www.bettertesting.co.uk>

Test cases / test ideas

(incl. output and reporting)



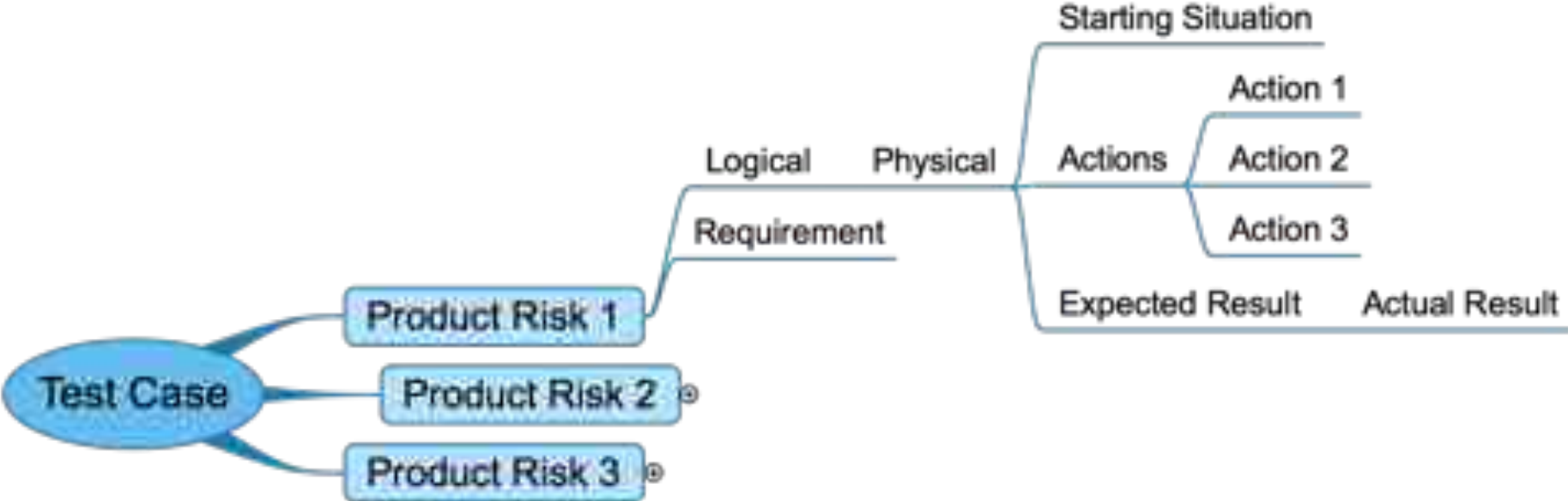
iPad app test

Coverage

- ✓ read news articles? → More comfortable than previous version
- ✓ swipe between articles? → Yes, but restricted only to gentle swipe not a quick flick
- ✗ zoom the content? → Not possible neither photo nor the text in the article
- ✓ visit different news sections? → Yes, comfortable than previous version
- ✓ Come back to home screen? → Yes, more intuitive
- ✓ check live scores?
- ✓ watch videos?
- ✓ view photos?
- ✓ share? → Share but not possible in full read view
- ✓ Comment? → Partially hidden in Portrait mode
- ✓ Check live scores? → Clicking from sidebar takes to Scores not full score card
- ✓ Check live markets? → Yes, but adding from sidebar takes to „Customer“ screen but not to Markets
- Track election updates?
- Follow budget updates?
- ✓ Check weather updates?
- Organize weather sections?
- ✗ Get location-related news?
- ✗ Organize news in home page? → No, BBC has a neat way of customizing the home page content
- ✗ Schedule?
- ✗ Disable/enable loading of images?
- ✗ Disable/enable updates on launch?
- ✗ Disable/enable location services?



Bad example?







Bad example!!



Suggestion



Test Case
Product Risk 1
Logical
Requirement
Product Risk 2
Logical
Requirement
Product Risk 3
Logical
Logical
Requirement
Product Risk 4
Logical
Logical
Requirement

Existing Situation
Partitioned types: globally manipulated, processed, sampled, cable, slow, device, interface, software, server data.

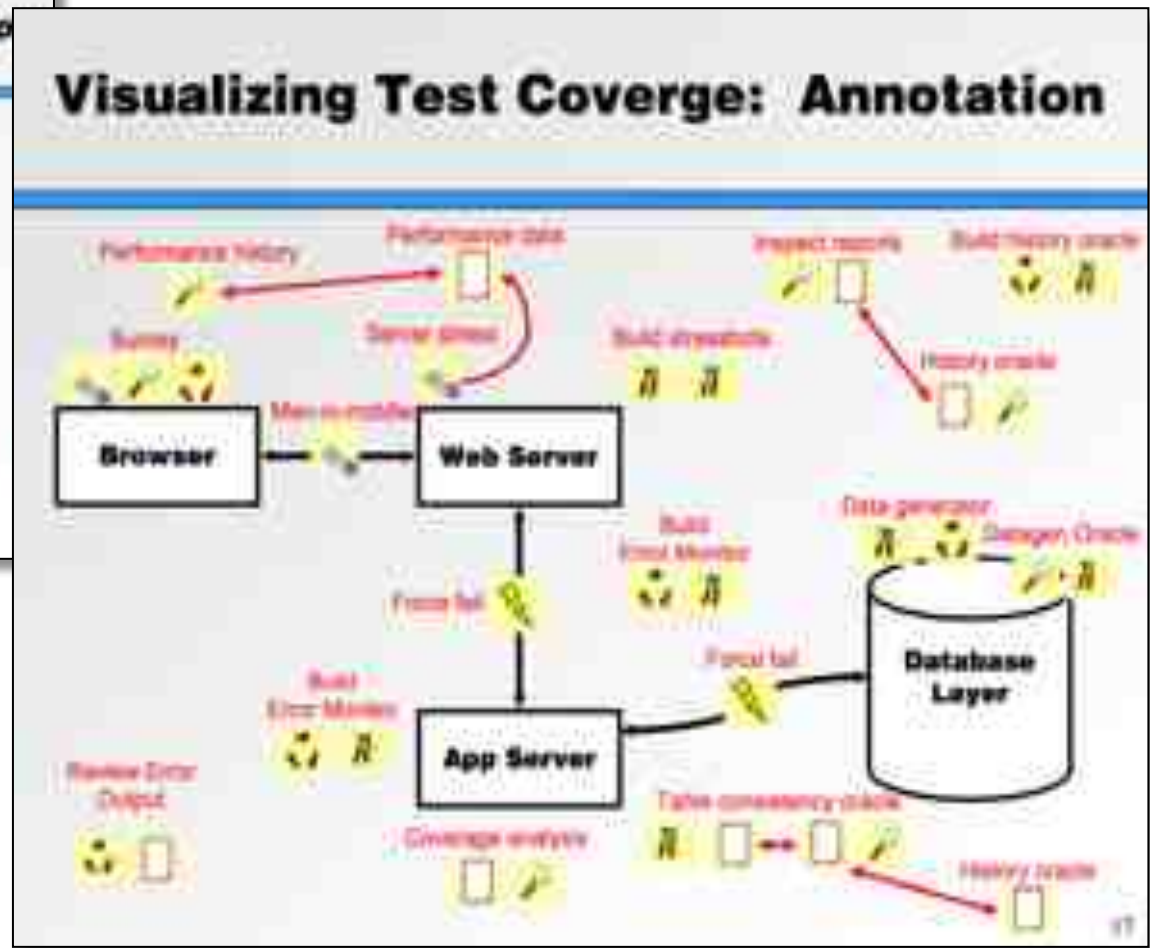
Actions
1. Compare, version, backup, integrate, overflow, log, patch, update, internet, equivalent, functional, image, inventory.
2. Connect, remote, with, software, generate, integral, data, patch, log, interface, cable, data, equipment, development, or.

Expected Result
Generate, feedback, element, software, integral, functional, element, overflow, integral.

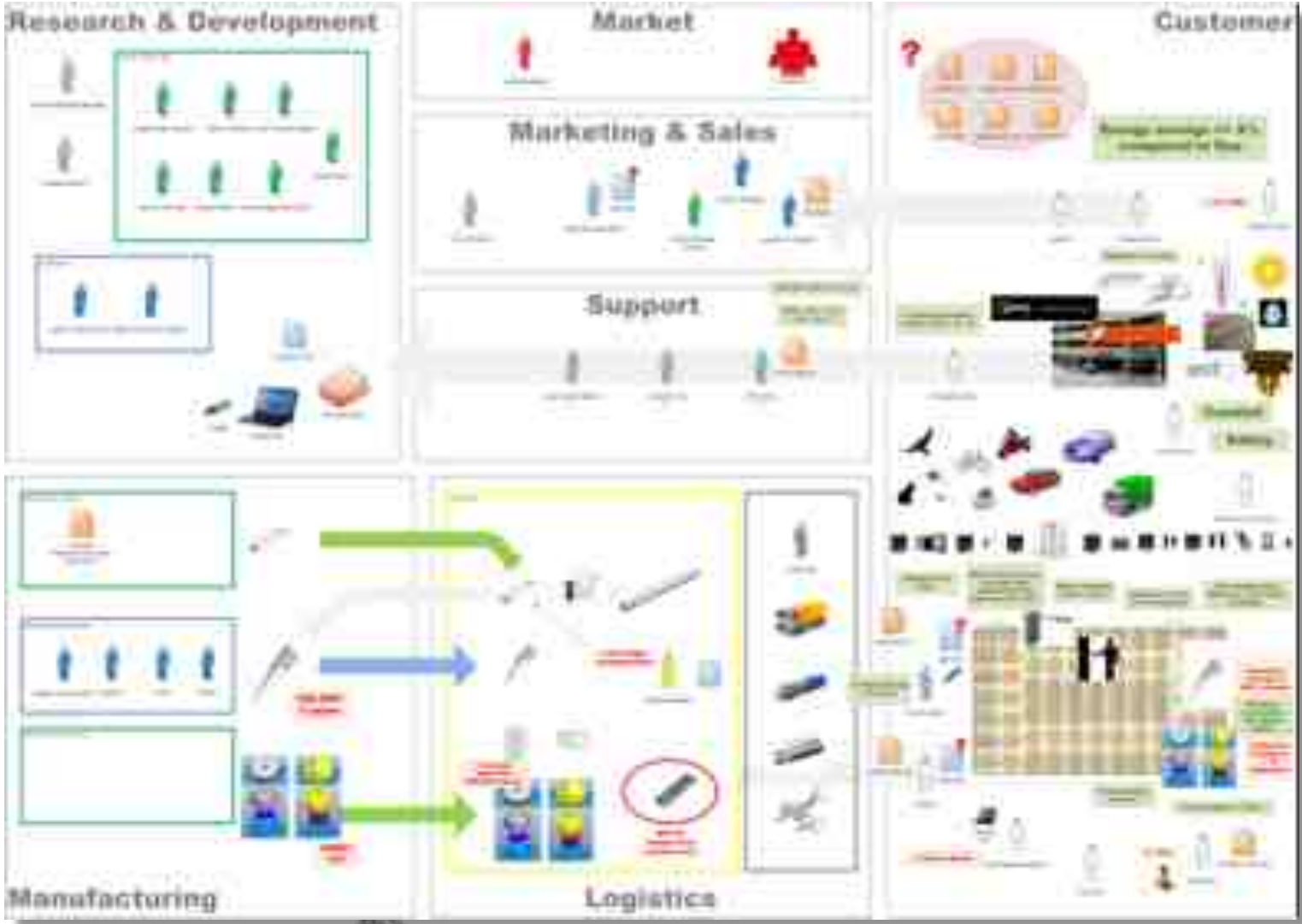
Actual Result
Let, data, in, digital, digital, image, broadcast, volume, with, data, update.

- 
1. VISUALISATION
 2. MIND MAPS
 3. VISUAL STRATEGY

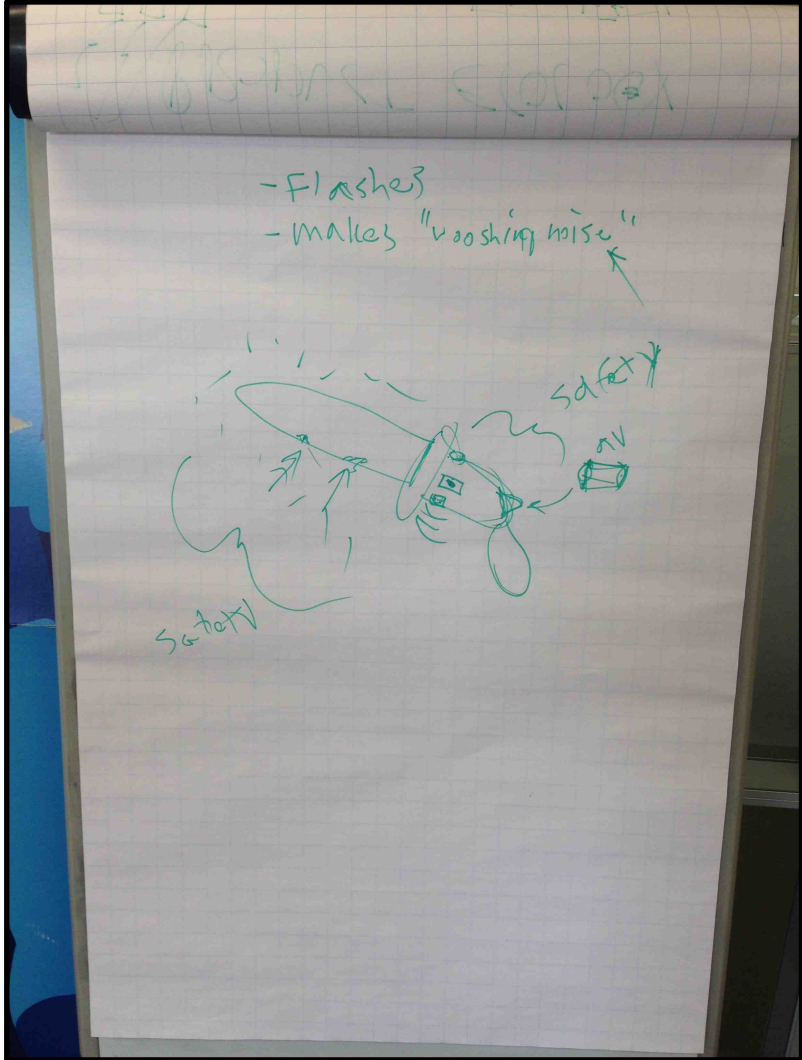
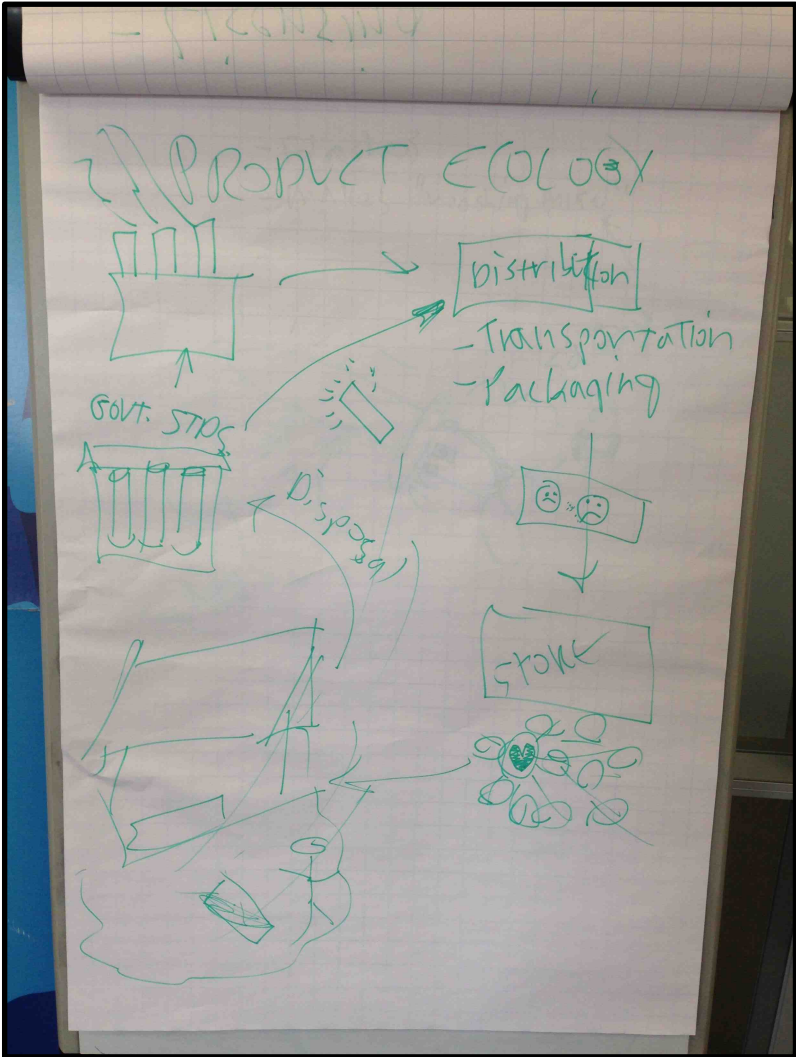
Visual Test Strategy



Product Ecology

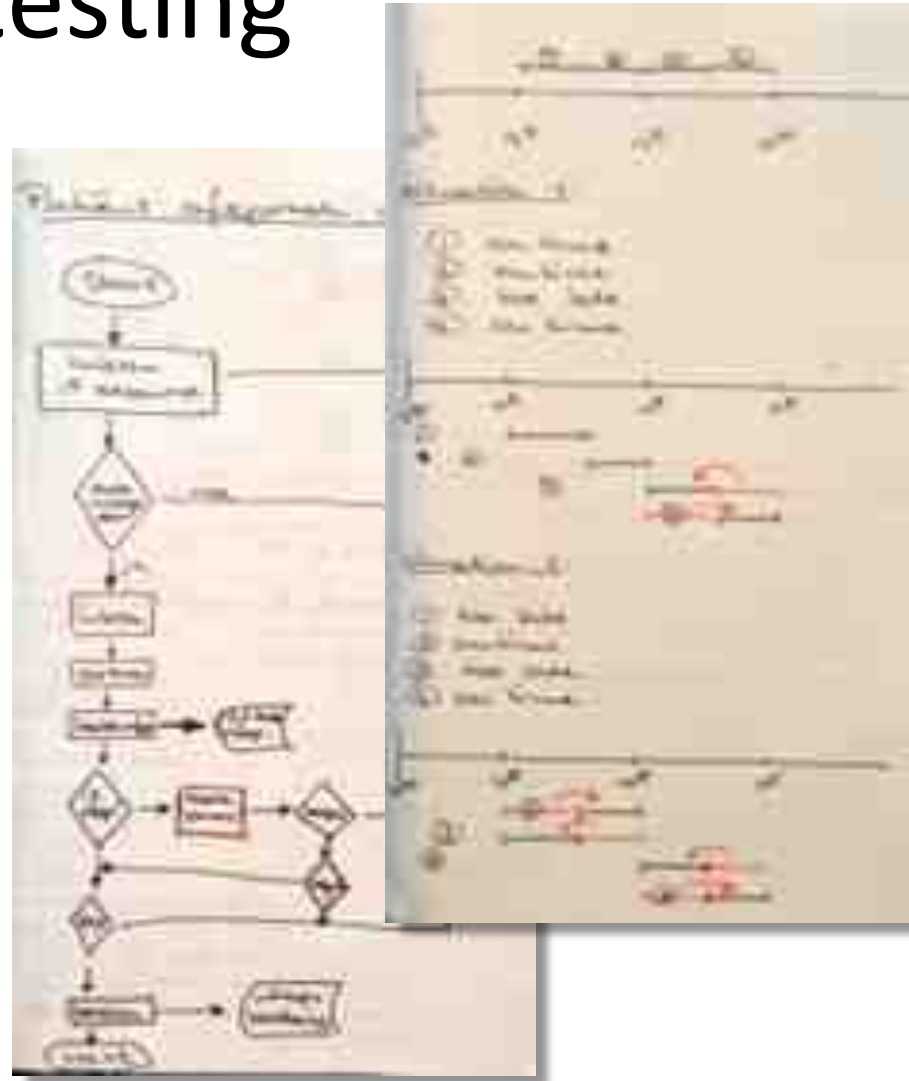


Light Sabre Example

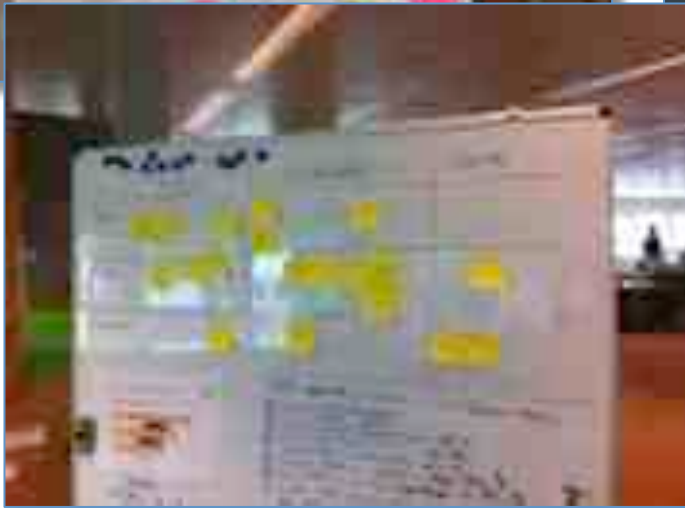


Modeling your testing

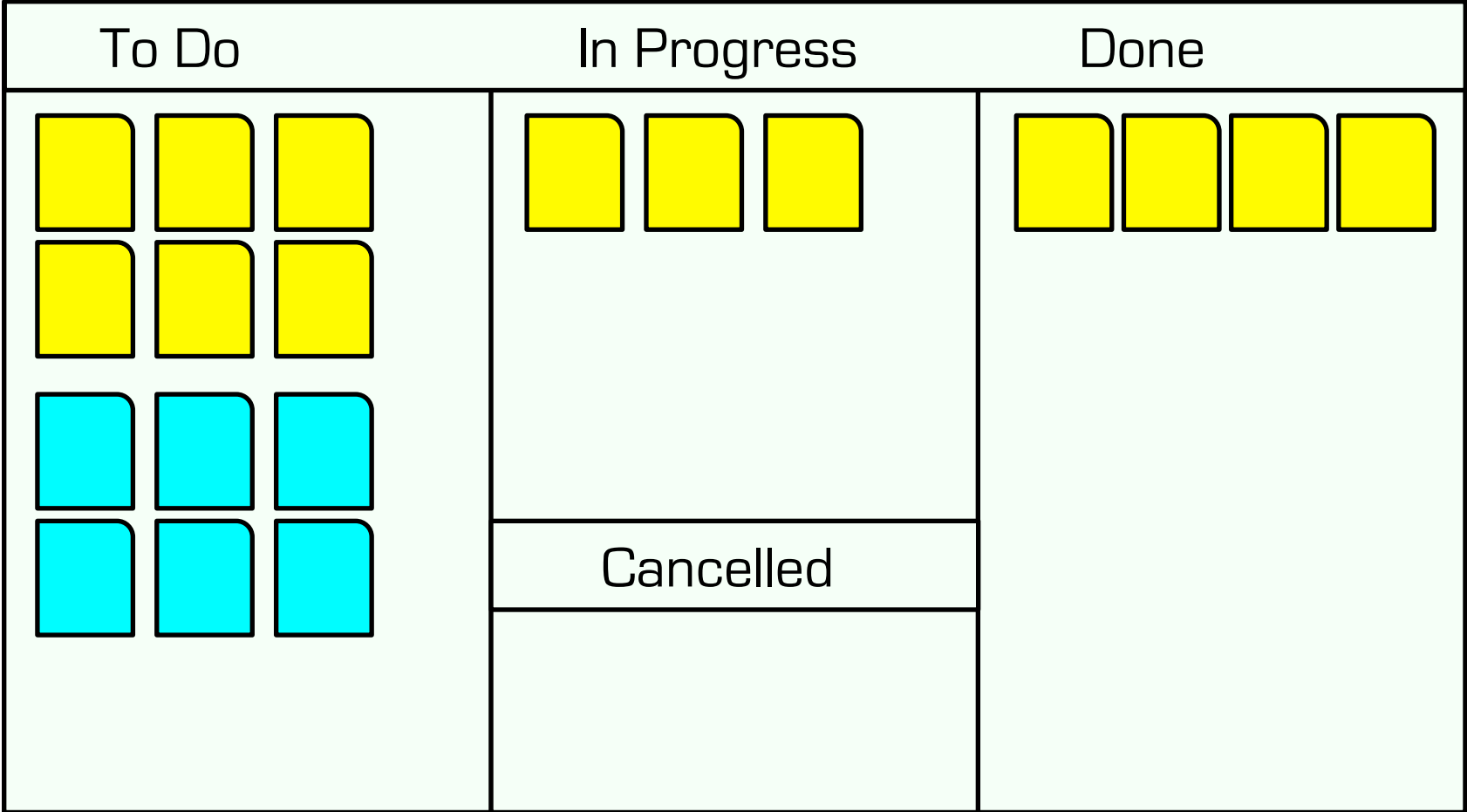
- Flowcharts
- Timelines
- Equivalence Classes
- SQL Joins
- State diagrams
- Story Boarding
- Etc.



Scrum Boards

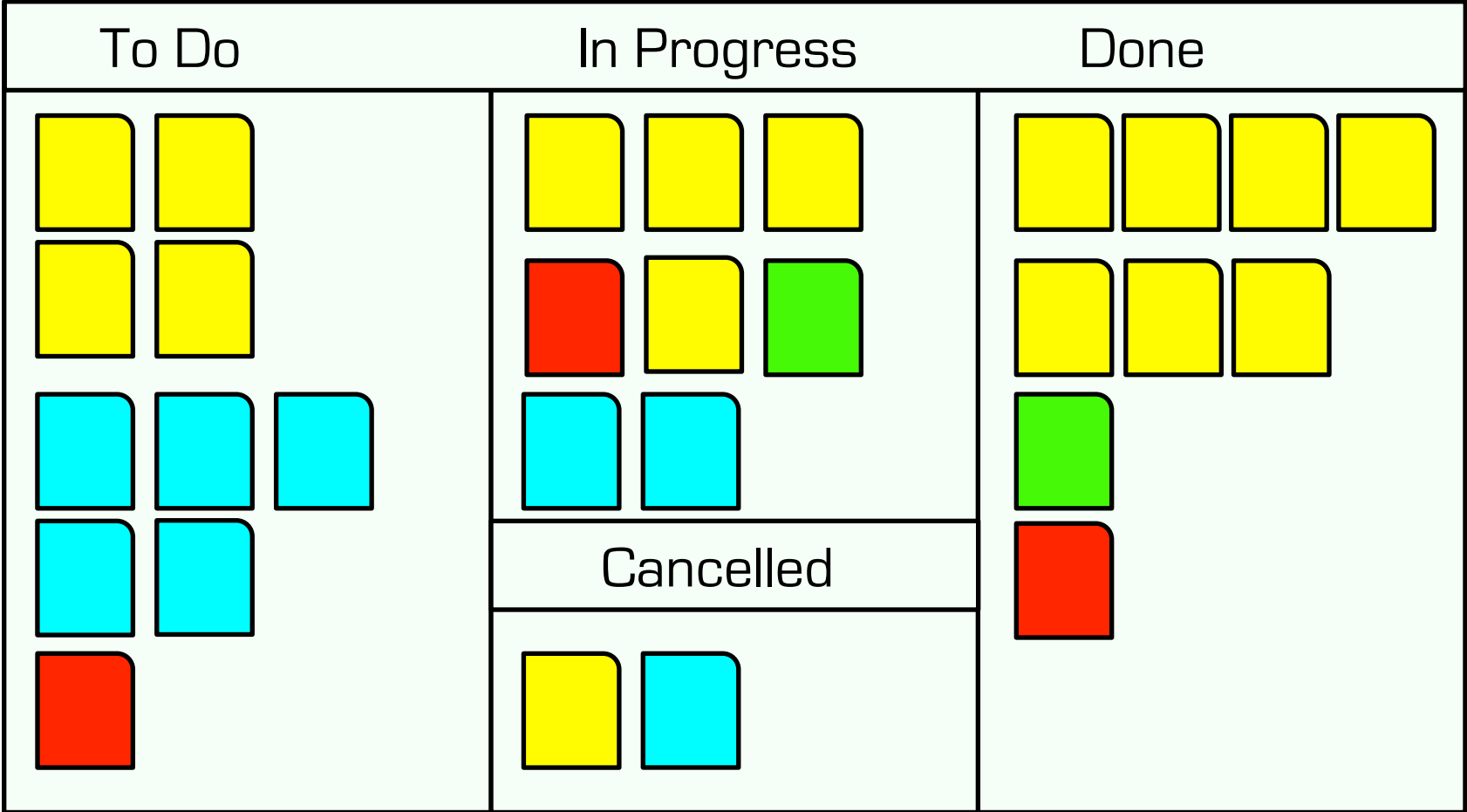


Dashboards for testing



 Feature 1  Feature 2

Dashboards for testing

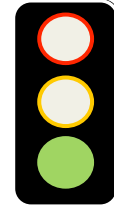


Feature 1 Feature 2 Bug Unplanned work

Dashboards for testing

<i>Testing Dashboard</i>				Updated: 2/21	Build: 38
Area	Effort	C.	Q.	Comments	
file/edit	high	1	😊		
view	low	1+	😐	1345, 1363, 1401	
insert	low	2	😊		
format	low	2+	😐	automation broken	
tools	blocked	1	😞	crashes: 1406, 1407	
slideshow	low	2	😞	animation memory leak	
online help	blocked	0		new files not delivered	
clipart	none	1	😐	need help to test...	
converters	none	1	😐	need help to test...	
install	start 3/17	0			
compatibility	start 3/17	0		lab time is scheduled	
general GUI	low	3	😊		

Subway map



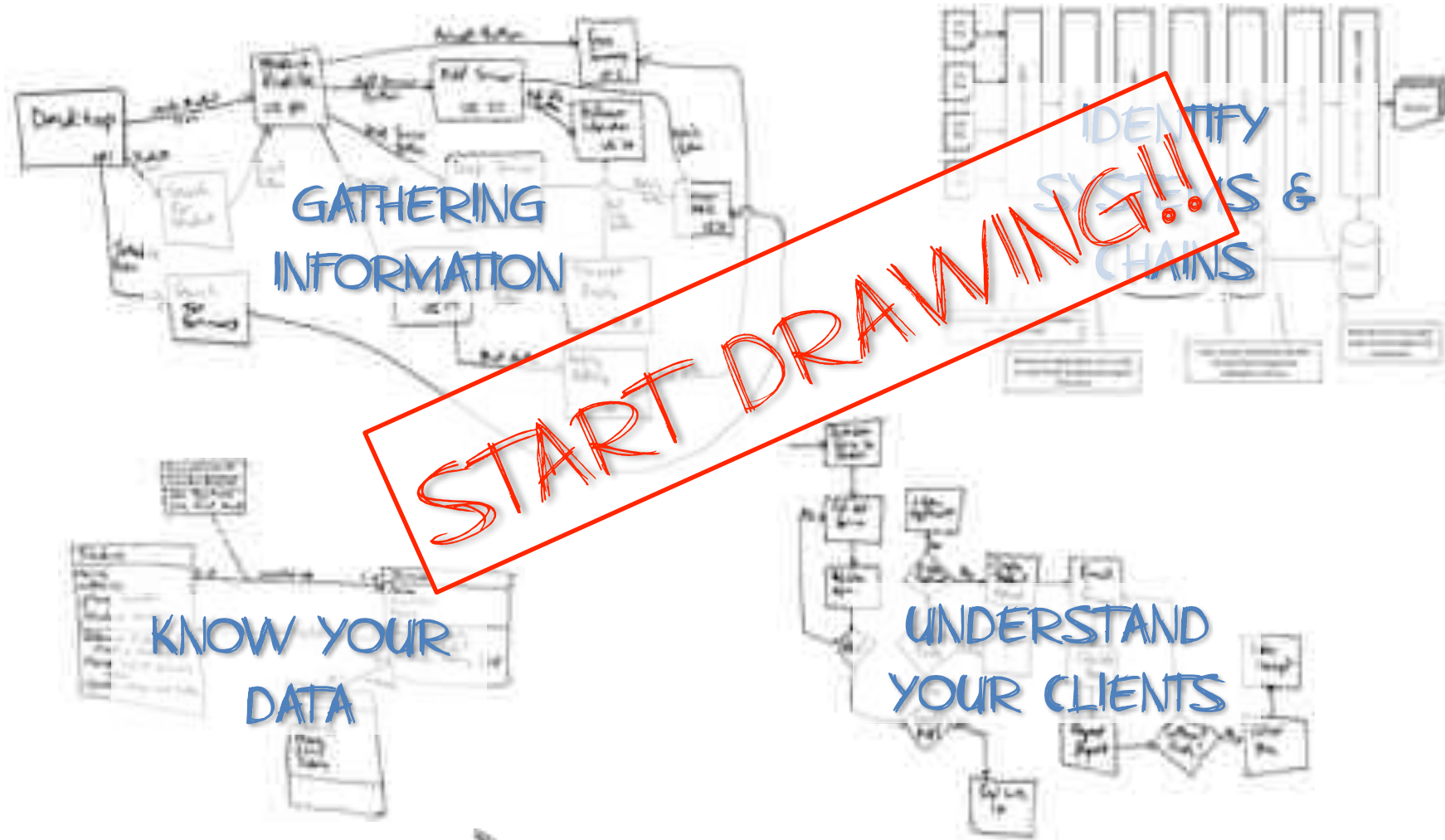
Date: 17 10 2013
By: Derk-Jan de Groot/ Valori



Current Project



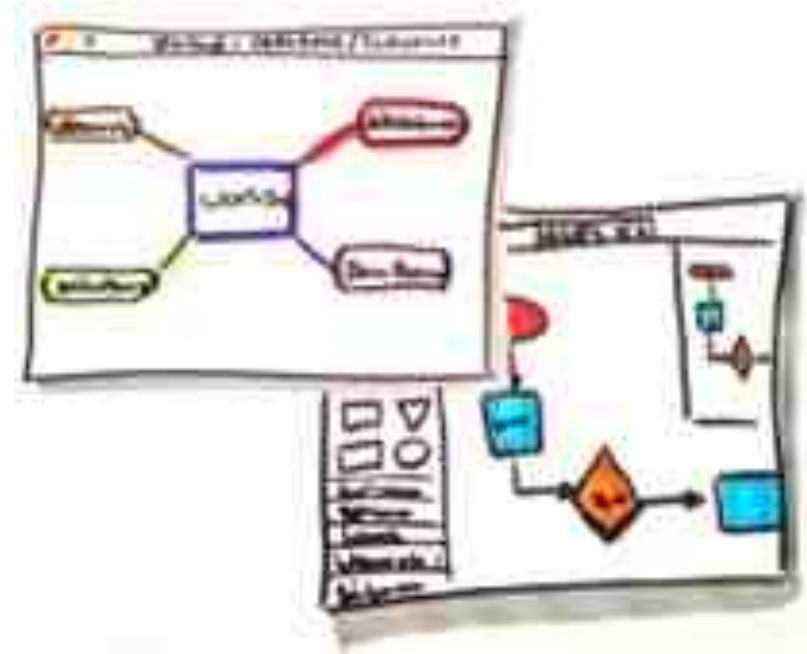
Working & thinking visual for testers...



Tools

- Freemind
- Xmind
- Paper (ipad)
- Sketchbook (Android)
- Gliffy
- yEd
- pixlr.com
- Notepad++, UltraEdit, Textwrangler
- Powerpoint
- Excel
- Screen Capture

And your notebook and fineliners 😊





“Think. Make your thinking visible. Communicate your thinking. And do it your way.”

Alan Richardson

DIVERSIFY

TESTING WITH LOTS OF VARIETY



Exercise

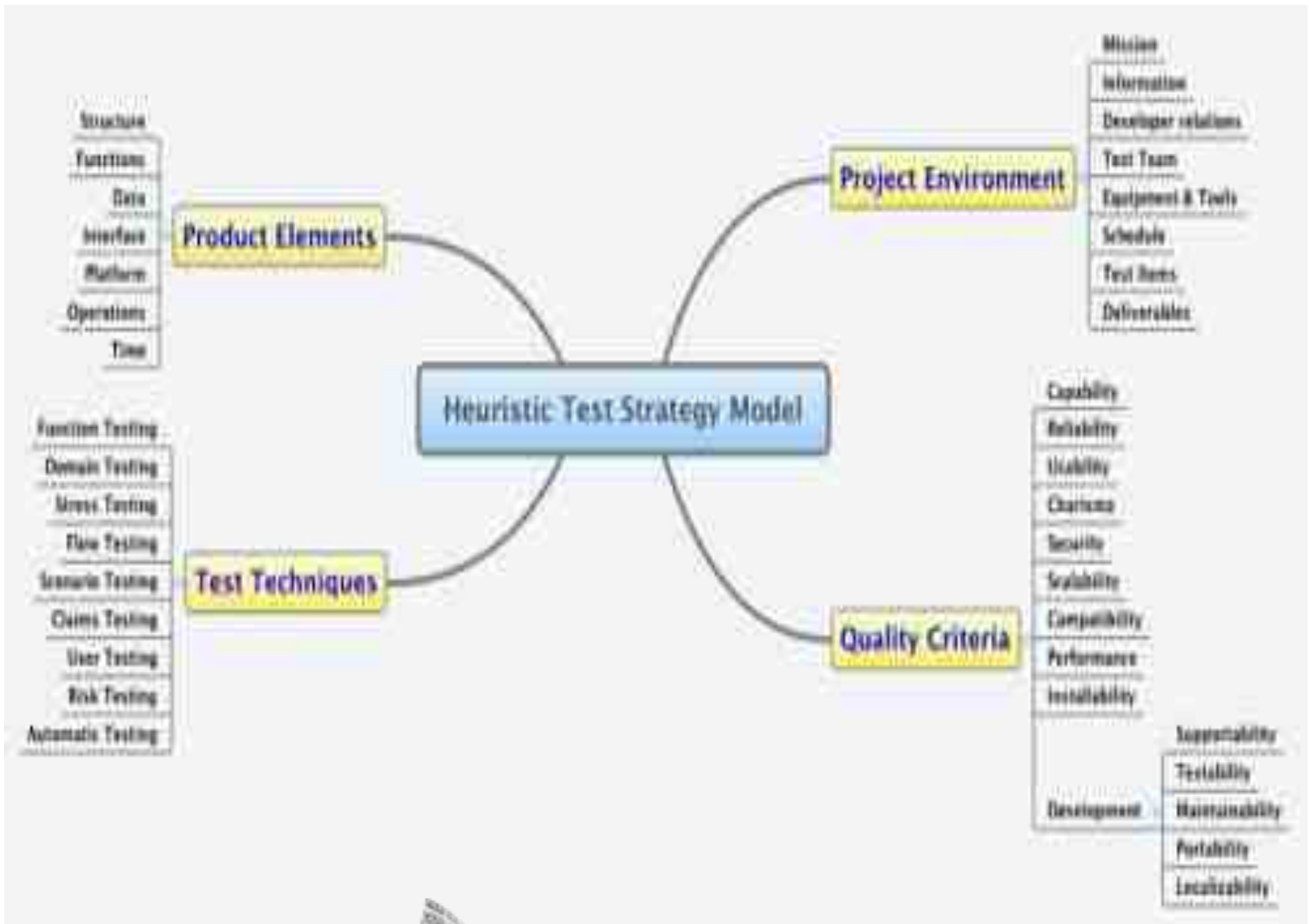


Test something.... Create a test strategy in 5 minutes





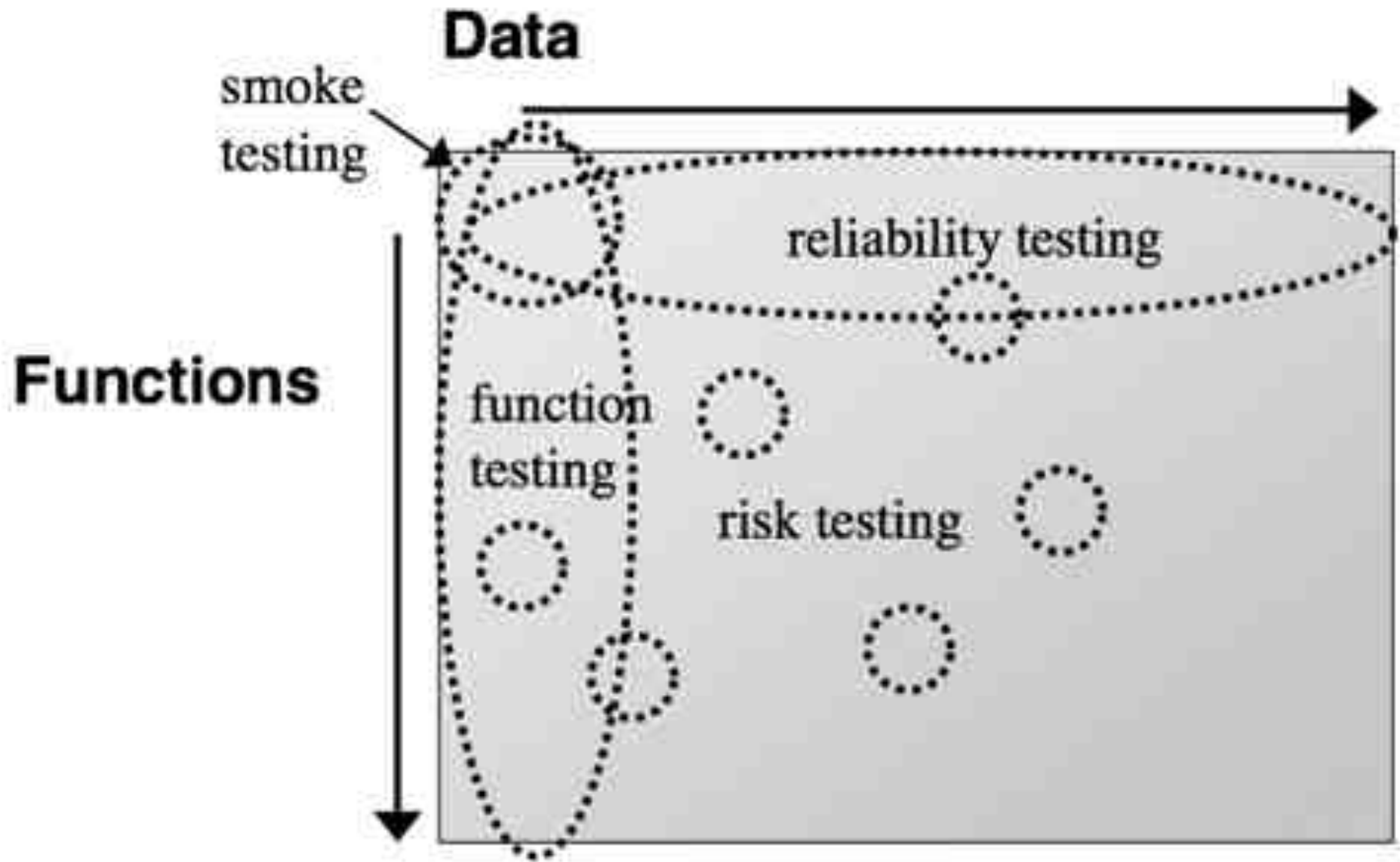
Diversify



Test Techniques

- Function Testing
- Domain Testing
- Stress Testing
- Flow Testing
- Scenario Testing
- Claims Testing
- User Testing
- Risk Testing
- Automatic Testing





What technique do we use?

- There is no single technique that finds all bugs
- We can't do any technique perfectly
- We can't do all conceivable techniques

Use “diverse half-measures”

- Lots of different points of view, approaches, techniques, even if no one strategy is performed completely.



Cost as a Simplifying Factor

Try quick tests as well as careful tests

A quick test is a cheap test that has some value but requires little preparation, knowledge, or time to perform.

- Happy Path
- Tour the Product
 - *Sample Data*
 - *Variables*
 - *Files*
 - *Complexity*
 - *Menus & Windows*
 - *Keyboard & Mouse*
- Interruptions
- Undermining
- Adjustments
- Dog Piling
- Continuous Use
- Feature Interactions
- Click on Help

Cost as a Simplifying Factor

Try quick tests as well as careful tests

A quick test is a cheap test that has some value but requires little preparation, knowledge, or time to perform.

- Input Constraint Attack
 - Resource Starvation
 - Multiple Instances
 - Crazy Configs
 - Cheap Tools
- Click Frenzy
- Shoe Test
- Blink Test
- Error Message Hangover

Blink testing



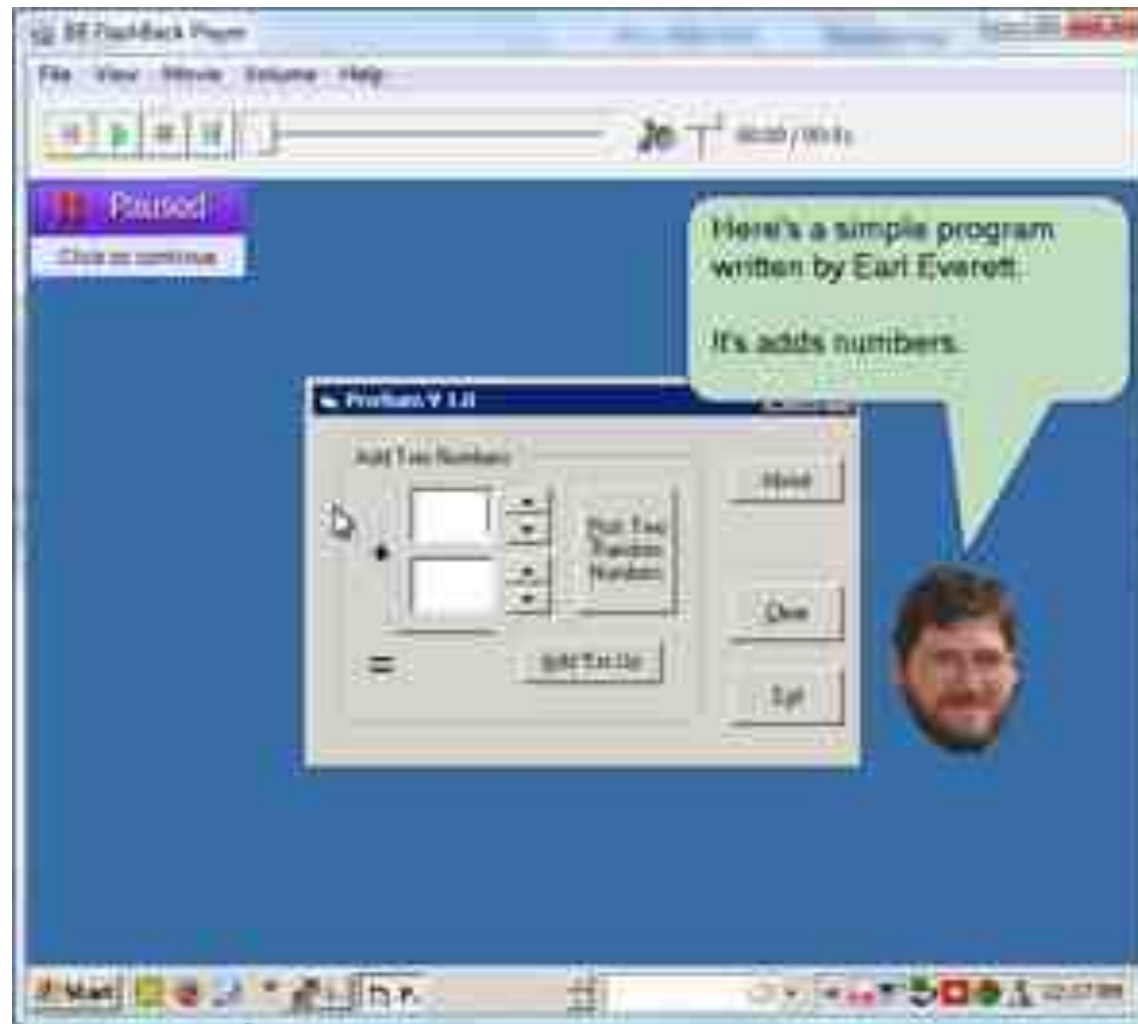
- Discovering errors by looking at patterns
- Goal: quickly analyze large volumes of data
- Can be used as a complement to the "normal" testing

Approach:

Enter any number of test cases, generate a logging, scroll through a table in a database, etc.

- Search for abnormal patterns
- Analyze the abnormalities

Blink testing: an example



Blink testing



- Walkthrough (scroll)
- Paste logging in Excel and zoom out extremely
- Compare screen prints with <alt><tab>
- Print file(s) and browse through it or keep it up to the light
- Screens with buttons that generate data: keep <enter> button pressed
- Convert data to sound and listen to the pattern
- ...

Show me!

- Tester does quick validation of the implementation on developer's machine before code check-in
- Developer does a demo and shows steps
- Testers gives feedback about the solution and makes notes

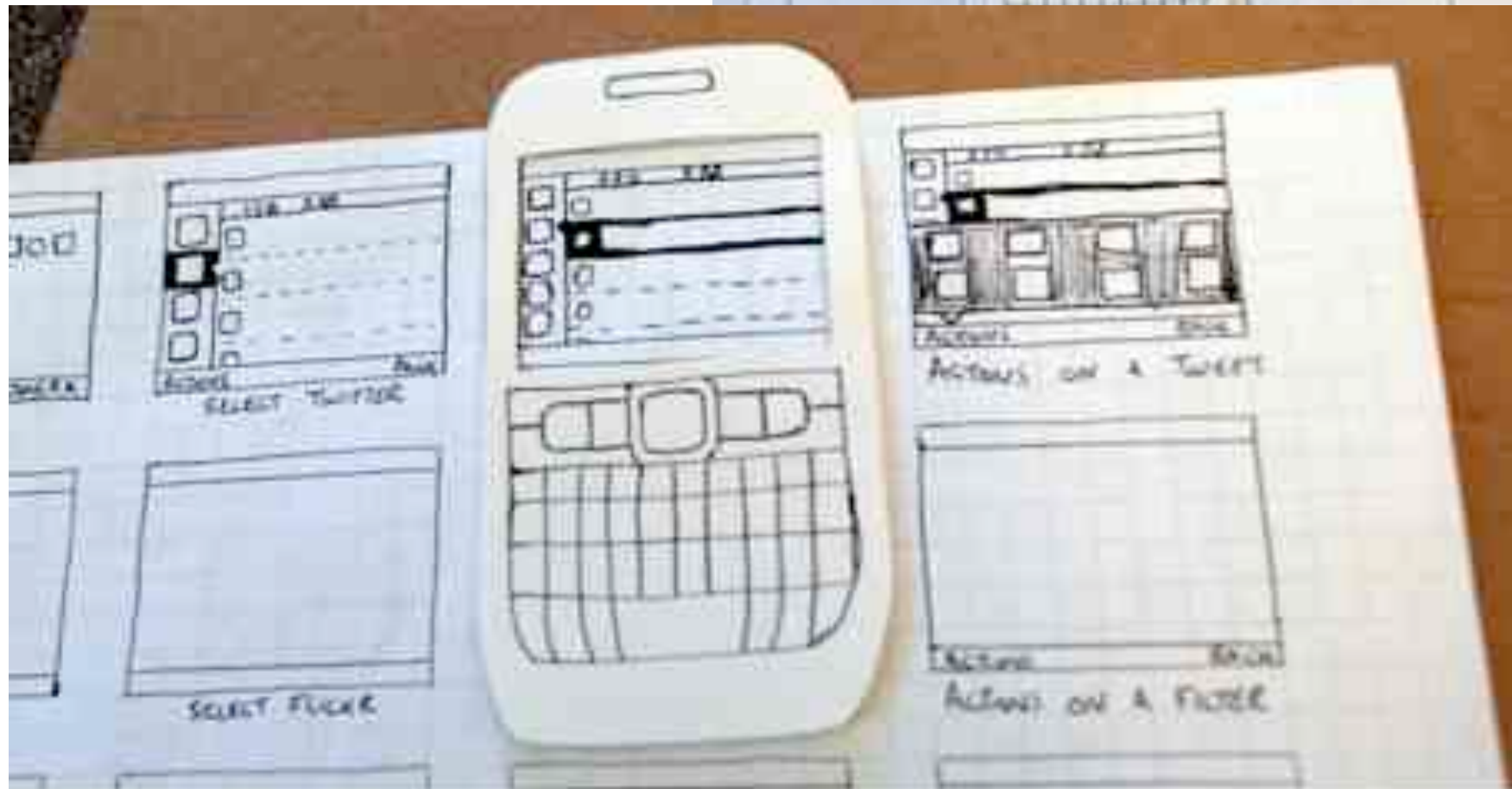
Pair Testing

Similar to pair programming
Often used in Exploratory Testing

Benefits:

- Knowledge Exchange
- More focus, keep each other sharp
- Four eyes see more than two ...
- Focus on different things by different roles
- Quick analysis of errors by different roles
- Training of inexperienced team members
- Last but not least: fun!

Usability



Test Ideas

- Heuristic test strategy model
- ET dynamics
- The Little Black Book on Test Design
- 37 Sources for Test Ideas
- Software Quality Characteristics
- Test Heuristics Cheat Sheet
- 10 sources of Testing Ideas
- Several Checklists
- Touring Heuristic
- You Are Not Done Yet (checklist)
- 8-layer testing model
- 36 days of web testing



TESTABILITY



Testability

- **Controllability:** the better we can control it, the more the testing can be automated and optimized.
- **Observability:** what you see is what can be tested.
- **Availability:** to test it, we have to get at it.
- **Simplicity:** the simpler it is, the less there is to test.
- **Stability:** the fewer the changes, the fewer the disruptions to testing.
- **Information:** The more information we have, the smarter we will test.

Exercise



Create a test strategy for the same object from the last exercise.

Create a Mindmap and add a test for every Test Technique (**FDSFSCURA**) and all Product Elements (**SFDIPOT**).



GIVING FEEDBACK

SHARE WHAT YOU LEARN OFTEN AND QUICKLY

PART 4

A scenic view of a valley with many colorful paper airplanes flying in the sky. The background shows a valley with green hills and a clear blue sky. The foreground is filled with dry grass and some green bushes. The paper airplanes are in various colors: yellow, orange, red, pink, and white. They are scattered across the sky, some flying towards the viewer and others away. The overall atmosphere is bright and cheerful.

Objective of the game

Run a profitable startup



codecentric 

A close-up photograph of a person's hands holding a thick stack of US dollar bills. The person is wearing a dark suit jacket and a blue shirt. The background is slightly blurred, showing what appears to be an office or business setting. The lighting is bright, highlighting the texture of the paper money.

You build something that flies

I buy

A diverse group of people, including men and women of various ethnicities, are shown in a celebratory mood. They are raising their hands and smiling, suggesting a successful event or achievement. The setting appears to be an indoor space with large windows in the background, through which greenery and a traffic light are visible. The overall atmosphere is one of joy and collective success.

Organize

Every team

- 1 Flipchart
- 1 Pen
- 1 scissor
- 4 sheets
- 200 dollars



Every team

- Tracking
 - Cost of supplies
 - Paper 5 sheets \$20, 2 pens \$20
 - Operation cost
 - \$40 per run
 - Cost of bug/rejected \$20 per widget
 - Revenue (money generated by sales)
 - Balance How must money your making




Iteration	Cost of supplies	Revenue cost	cost of Bug	Balance



Iteration I



Inspect & adapt




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Iteration II



Inspect & adapt




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Iteration III



Inspect & adapt



codecentric



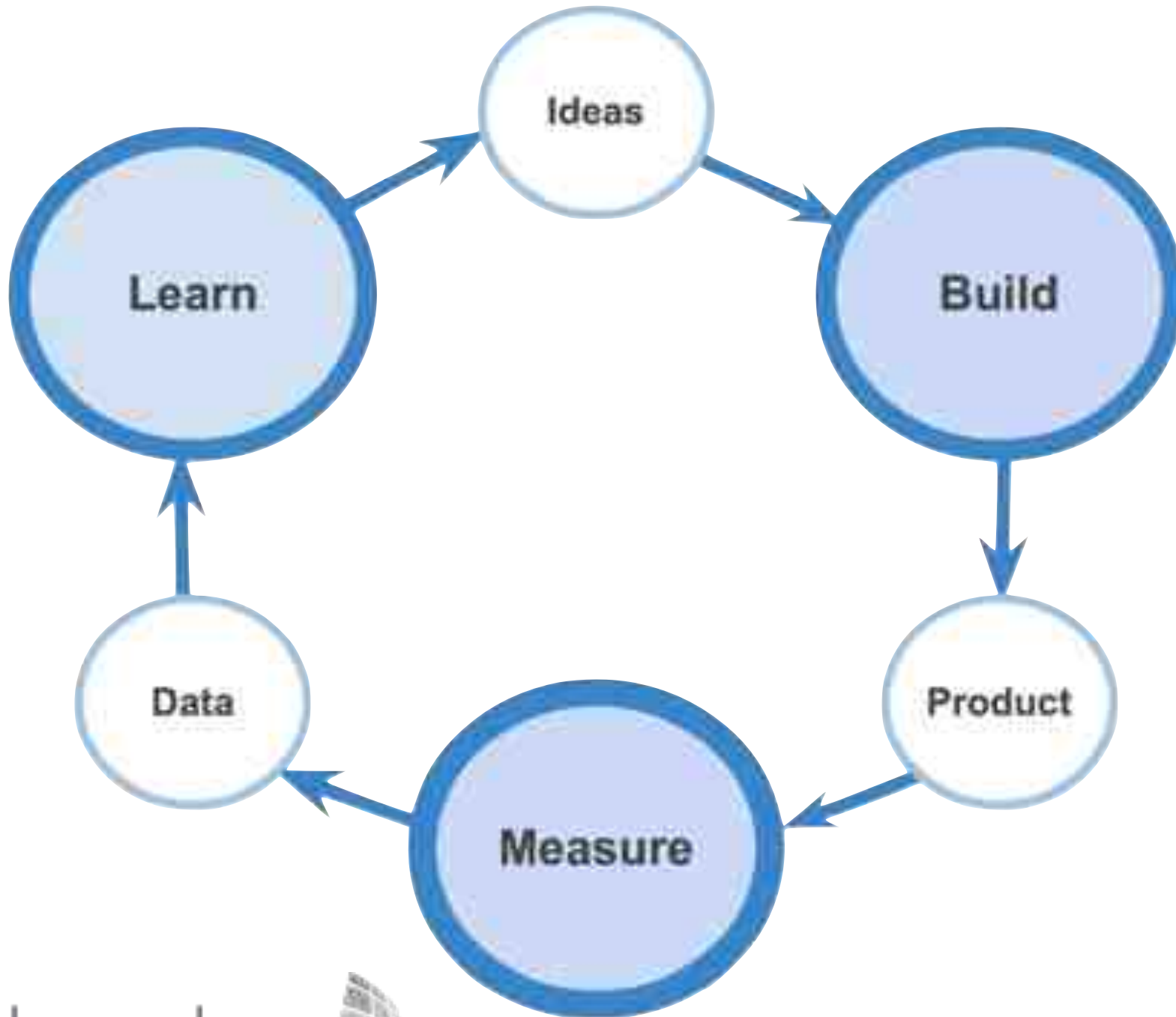
What is a startup?





Re-define *Startup* ?

A **TEMPORARY** ORGANIZATION DESIGNED TO
SEARCH FOR A **REPEATABLE AND SCALABLE**
BUSINESS MODEL



Iterating on Hypotheses

String of multiple experiments run together to *test these hypotheses* towards achieving a specific goal, such as product/market fit



	Search Lean startup	Execution Large cooperation
Strategy	Business Model Hypothesis	Operating Plan + Financial Model
Process	Customer Development, Agile Development	Product Management
Organization	Founder Driven Customer Development Team	Functional or Cross-Functional departments
Education	Business Model Driven, Entrepreneurial Finance, Customer development	Organizational Behavior, Accounting, Operations, HR, Leadership

Run an experiment

- Prototypes (lo-fi)
- Videos
- Mock websites/software
- SEO keywords
- and the **most** expensive way ...
Build the actual feature



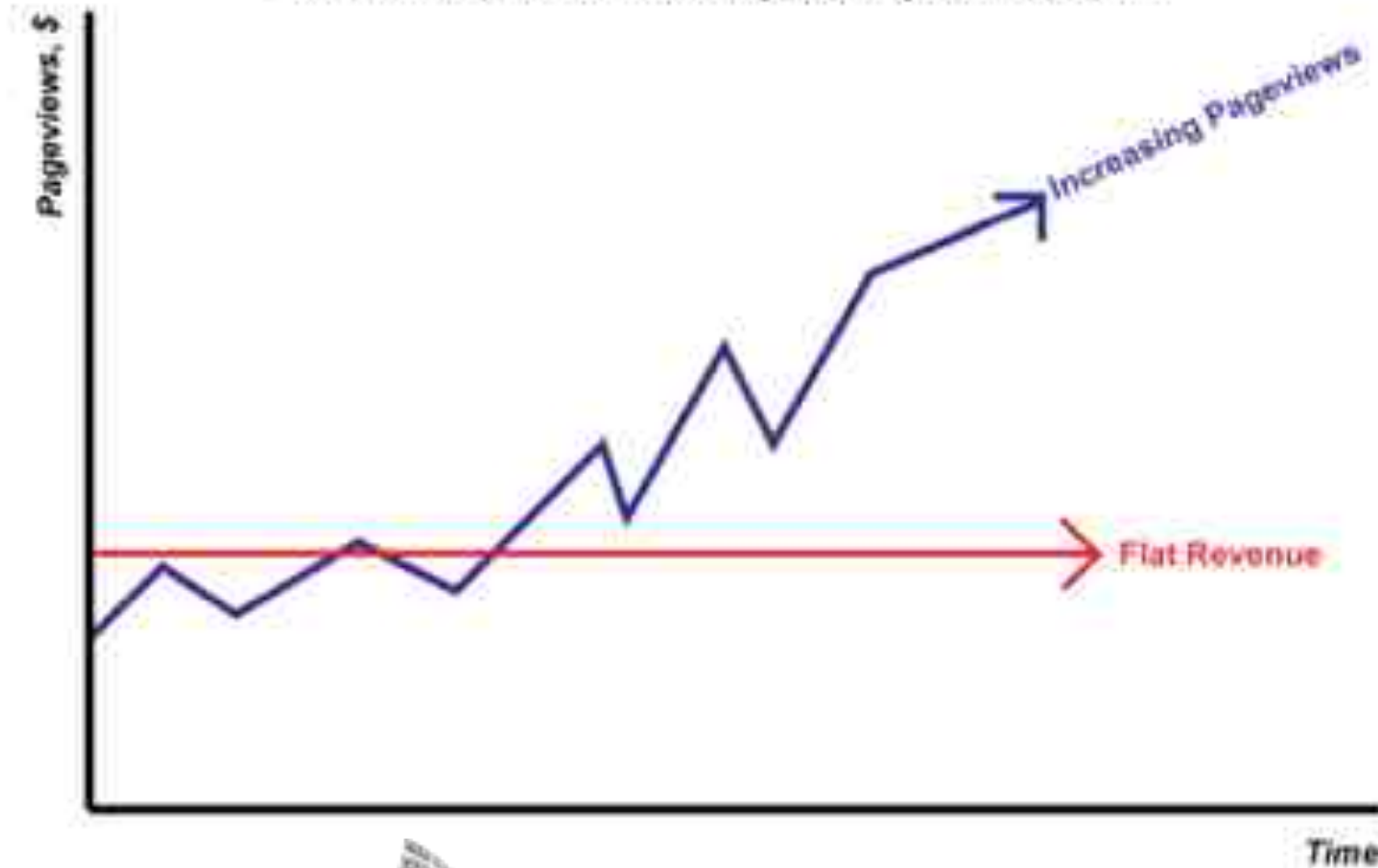
How do you validate your learning?

- Cohort Analysis
- Multi-variate (A/B) testing
- Crowdfunding

Vanity vs. Actionable Metrics

The Curse of Vanity Metrics

"Mirror, Mirror On The Wall, Why Does My Revenue Stall?"





lean **startup** machine

Validation Board

Project Name: _____

Start Date: _____

Track Pivots	Start	1st Pivot	2nd Pivot	3rd Pivot	4th Pivot
Customer Hypothesis					
Problem Hypothesis					
Solution Hypothesis					

Design Experiment

Core Assumptions

Riskiest Assumption

Method

WE CARE

Results →

GET OUT OF THE BLDG

Invalidated		Validated	
	1		1
	2		2
	3		3
	4		4
	5		5
	6		6

www.ValidationBoard.com

Kickstarter

The screenshot shows a web browser window with the URL www.kickstarter.com/discover/section/design?ref=discover. The page is titled "Design" and features three project cards, each with a green "SUCCESSFUL" banner at the bottom. The first card is for "Fizzle: E-Paper Watch for iPhone and Android" by Fizzle Technology, with 10,266% funded (\$10,266,845) by Feb 18, 2012. The second is "EMOTIV INSIGHT: Optimize your brain fitness & performance" by Tom Lal, with 1,643% funded (\$1,643,117) by Feb 15, 2012. The third is "Elevation Dock: The Best Dock For iPhone" by Corey Hopkins + ElevationLab, with 1,852% funded (\$1,464,706) by Feb 17, 2012. A "View in Design" link is visible at the bottom right of the page.

Project Name	Percentage Funded	Amount Funded	Status	End Date
Fizzle: E-Paper Watch for iPhone and Android	10,266%	\$10,266,845	FUNDED	Feb 18, 2012
EMOTIV INSIGHT: Optimize your brain fitness & performance	1,643%	\$1,643,117	FUNDED	Feb 15, 2012
Elevation Dock: The Best Dock For iPhone	1,852%	\$1,464,706	FUNDED	Feb 17, 2012

The 9 Deadly Sins of New Product Introduction Model

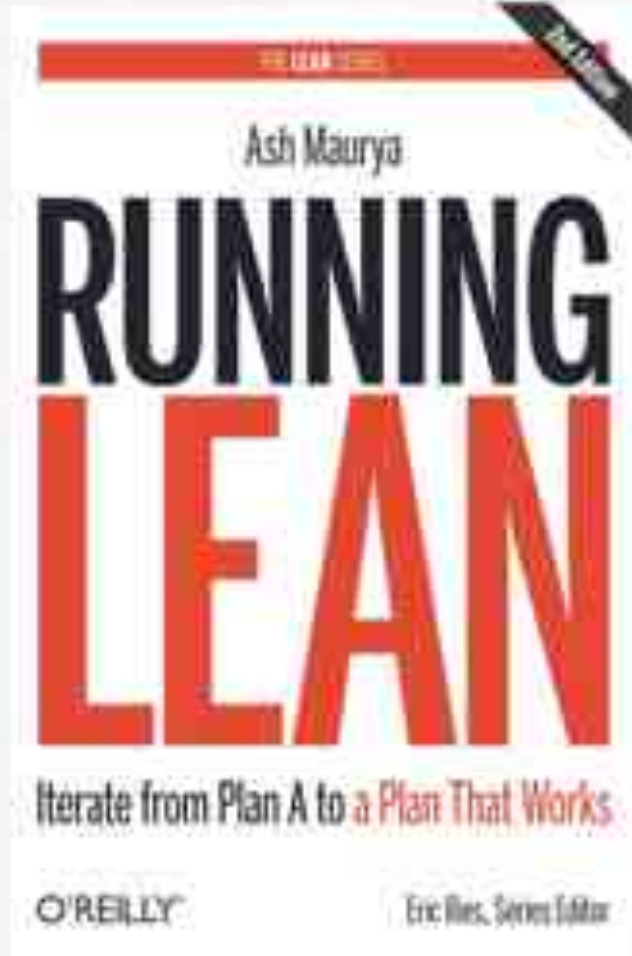
1. Assuming "I Know What the Customer Wants"
2. Know What Features to Build" Flaw
3. Focus on Launch Date
4. Emphasis on Execution Instead of Hypotheses, Testing, Learning and Iteration
5. Traditional Business Plans Presume No Trial and No Error
6. Confusing Traditional Job Titles with What a Startup Needs to Accomplish
7. Sales and Marketing Execute to a Plan
8. Presumption of Success Leads to Premature Scaling
9. Management by Crisis Leads to Death Spiral

Source: Steve Blank

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Book Running lean



**Running
Lean: Iterate
from Plan A
to a Plan
That Works**

Ash Maurya

Why do most startup fail?

- Cofounders fight
- They can't build their initial spec
- No one will fund the idea
- Too few people buy/use the product

Testing and Lean Startup

- Measuring is keen
- Metrics are sometimes right
- Bias
- Creative
- Not all costumers are the same
- You do not need the product to test



QUESTIONS?



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