Agile
TESTING DAYS

Mind Maps

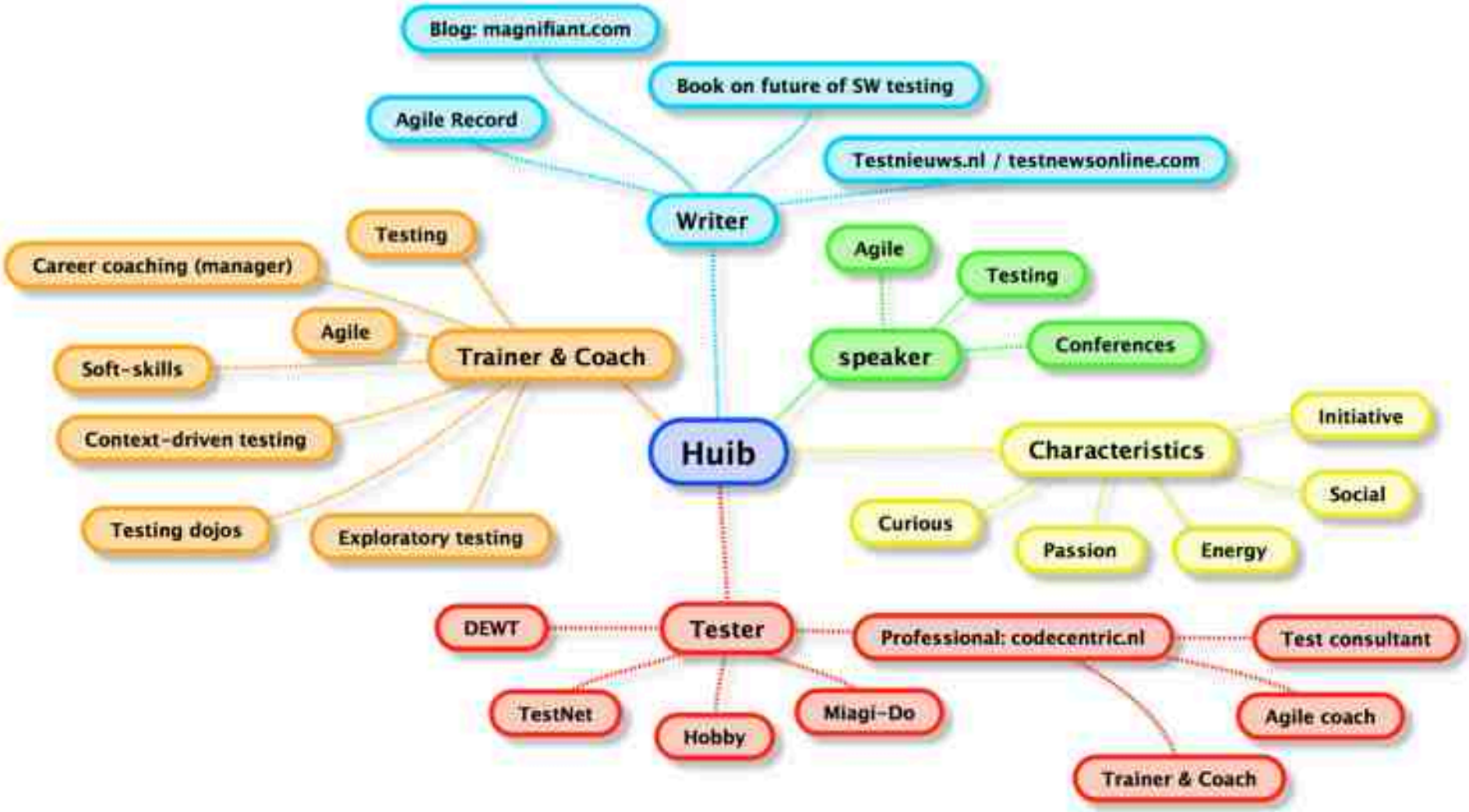
An agile way of working

Huib Schoots
Jean-Paul Varwijk

Agile Testing Days 2012

About us: Huib

codecentric



About us: Jean-Paul

Rabobank

Program

Introduction
Visualisation
Strategy
Test plan
Testing
Test case
Reports
Program
Mind maps
Buzan
Syntax
Tooling
Usage
Exercises !!!

Create your 1st mind map

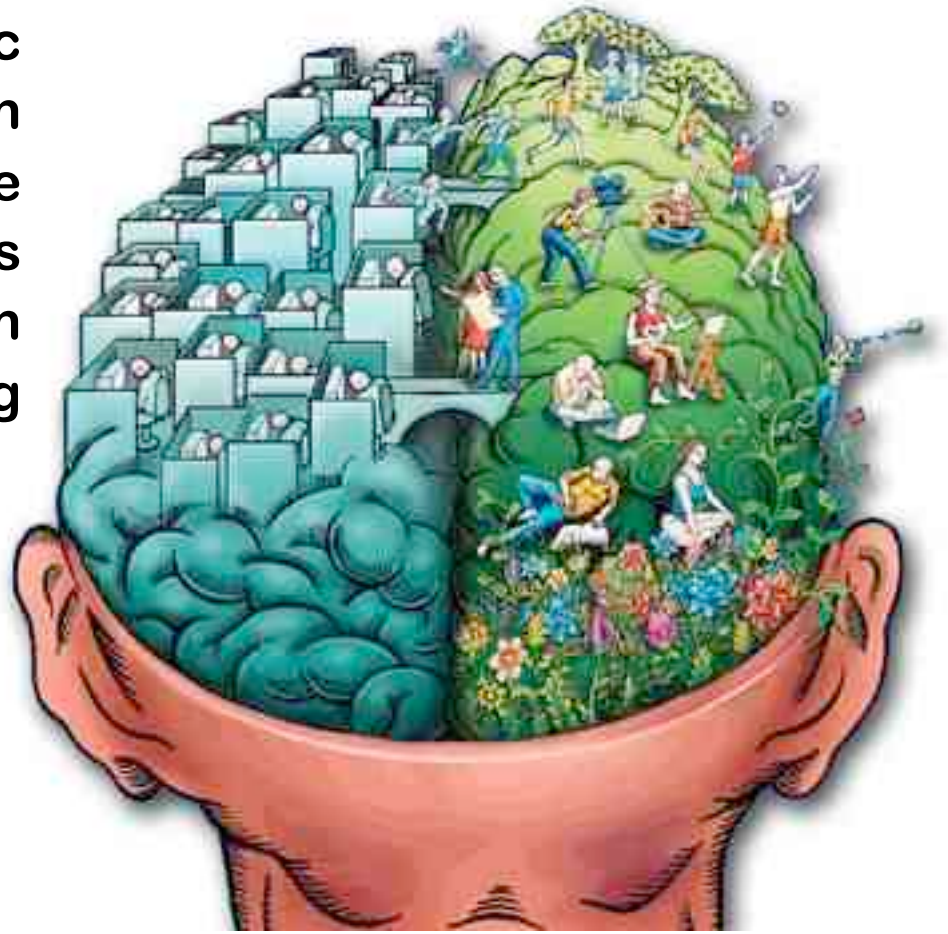
Create a mind map about yourself in 15 minutes:

- **Who are you?**
- **What do you do for work?**
- **W hat are your interests?**
- **Learning goals for today**
- **Anything else you want to share…**

Present your mind map to the group in 3 minutes

Our brain

Logic
Speech
Language
Analytics
Calculation
Abstract thinking



Color
Phantasy
Music
Images
Feeling
Rythm
Creativity

Source: www.karendevries.nl

Why Mind Maps work

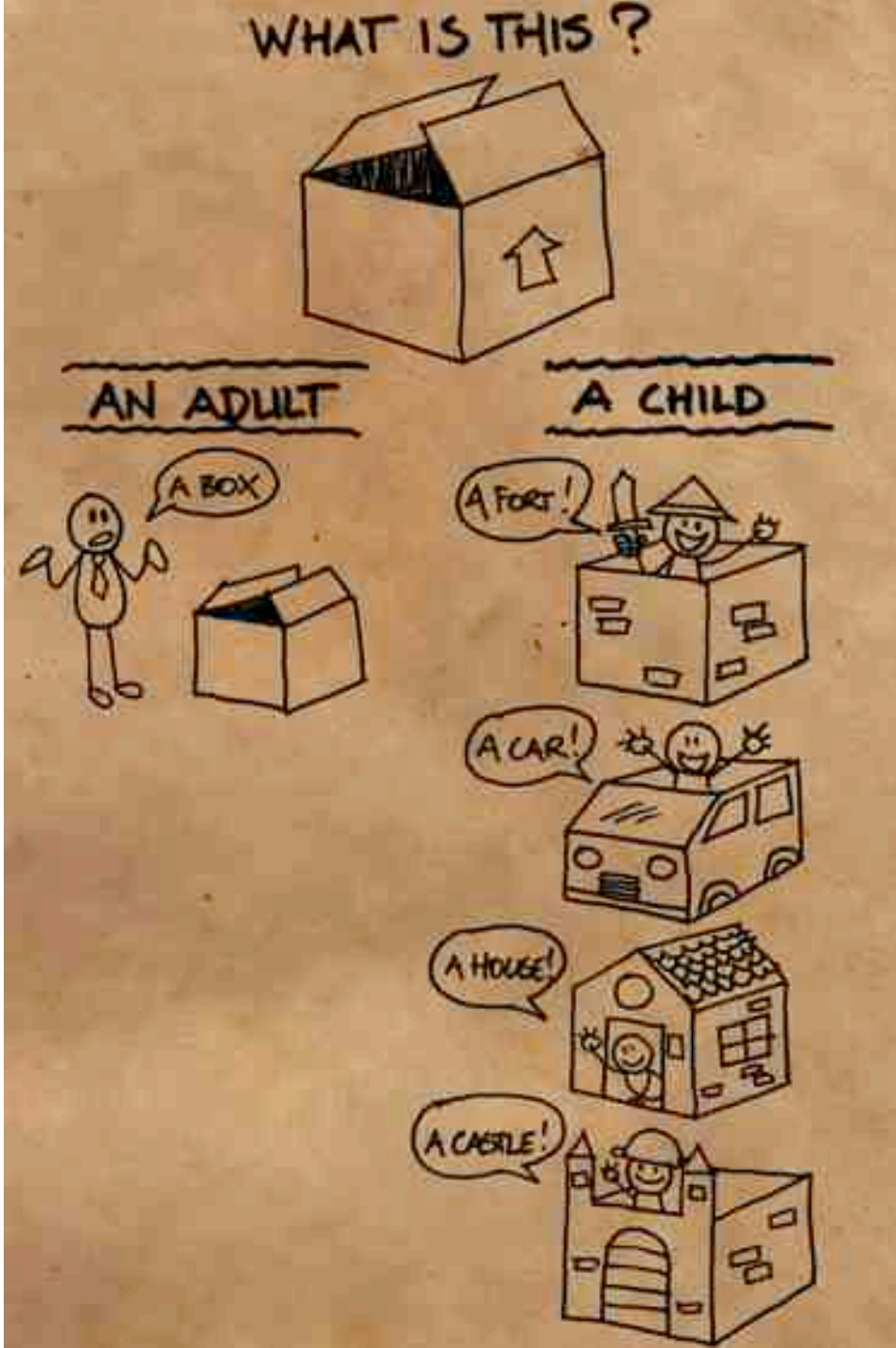
- Your memory is naturally associative, not linear
- Any idea has thousands of links in your mind
- Mind maps allow associations and links to be recorded and reinforced
- The mind remembers key words and images, not sentences
- Because mind maps are more visual and depict associations between key words, they are much easier to recall than linear notes

Source: http://www.peterrussell.com/MindMaps/Advantages.php

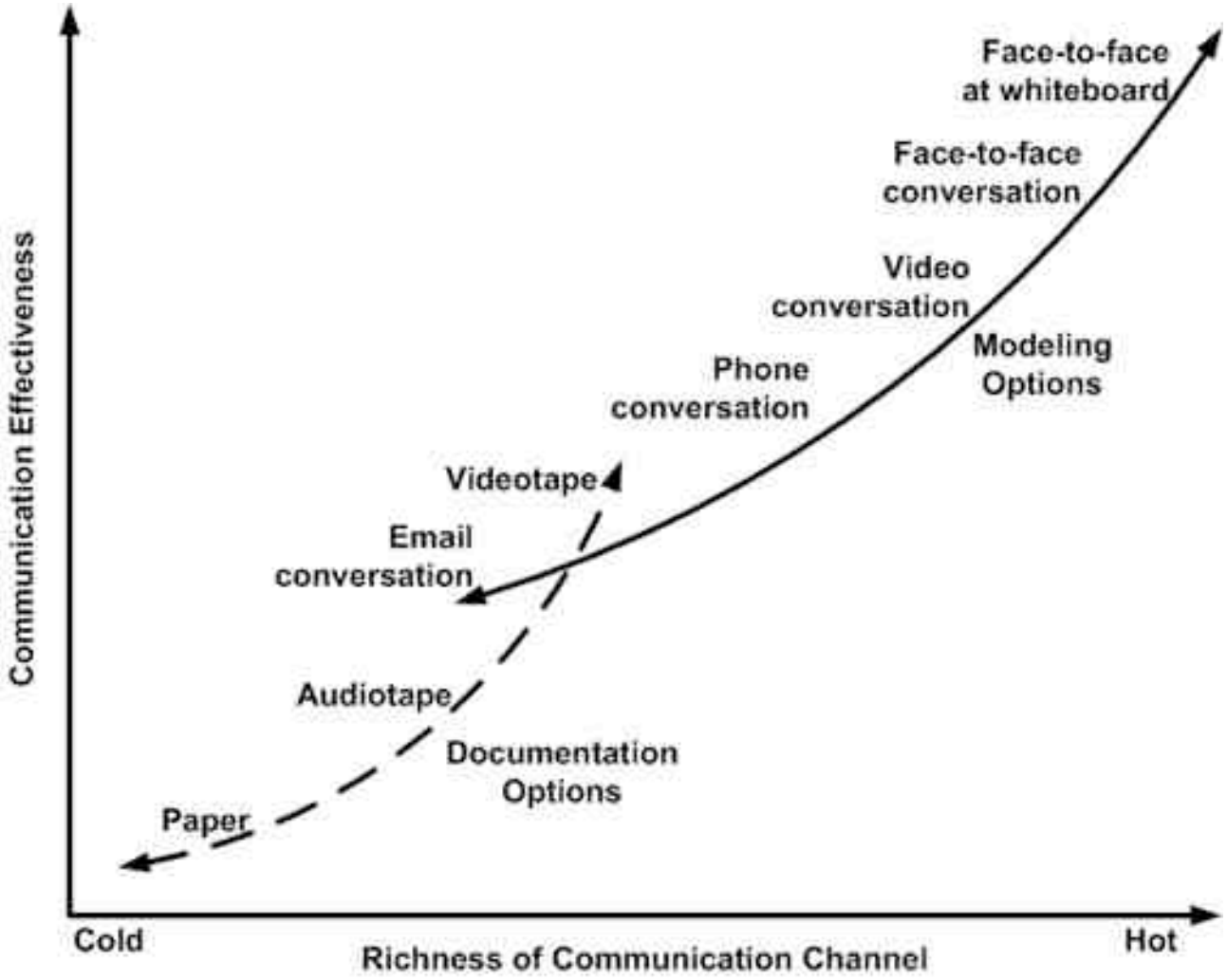
Creativity

- Adults: on average 3 to 6 alternatives
- Children: often 60 or more alternatives

- Numbed by education, norms & values, inhibiting curiosity, coloring within the lines



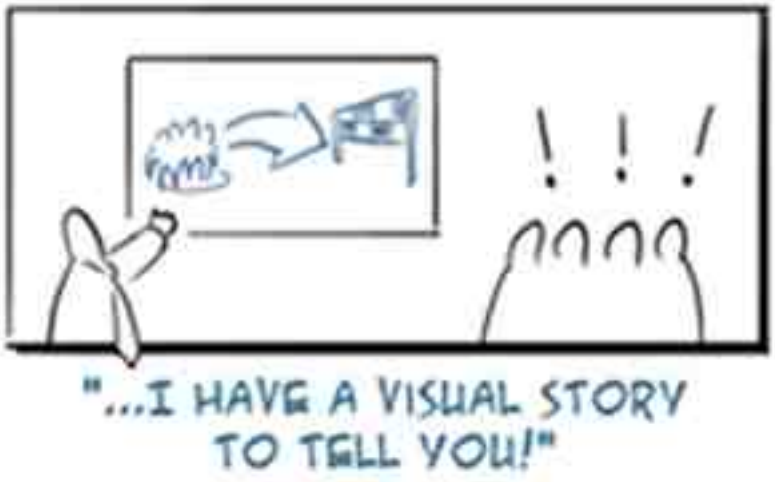
Communication



Copyright 2002-2005 Scott W. Ambler
Original Diagram Copyright 2002 Alistair Cockburn

Visualisation

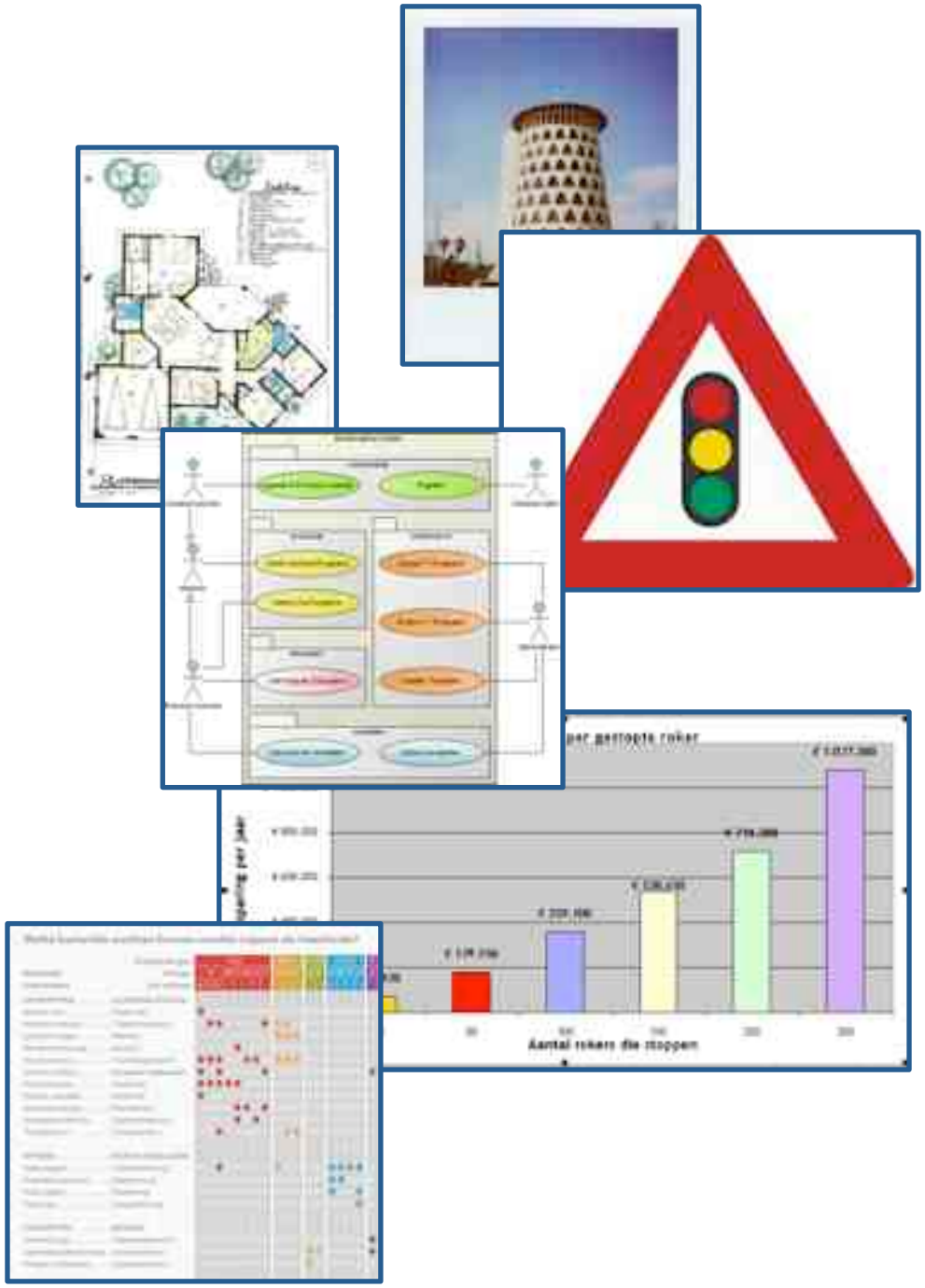
Visualisation is the translation of a thought, result or other information into a visible representation



Visualisation

Best known forms:

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



Visualisation

Purpose of this tutorial:

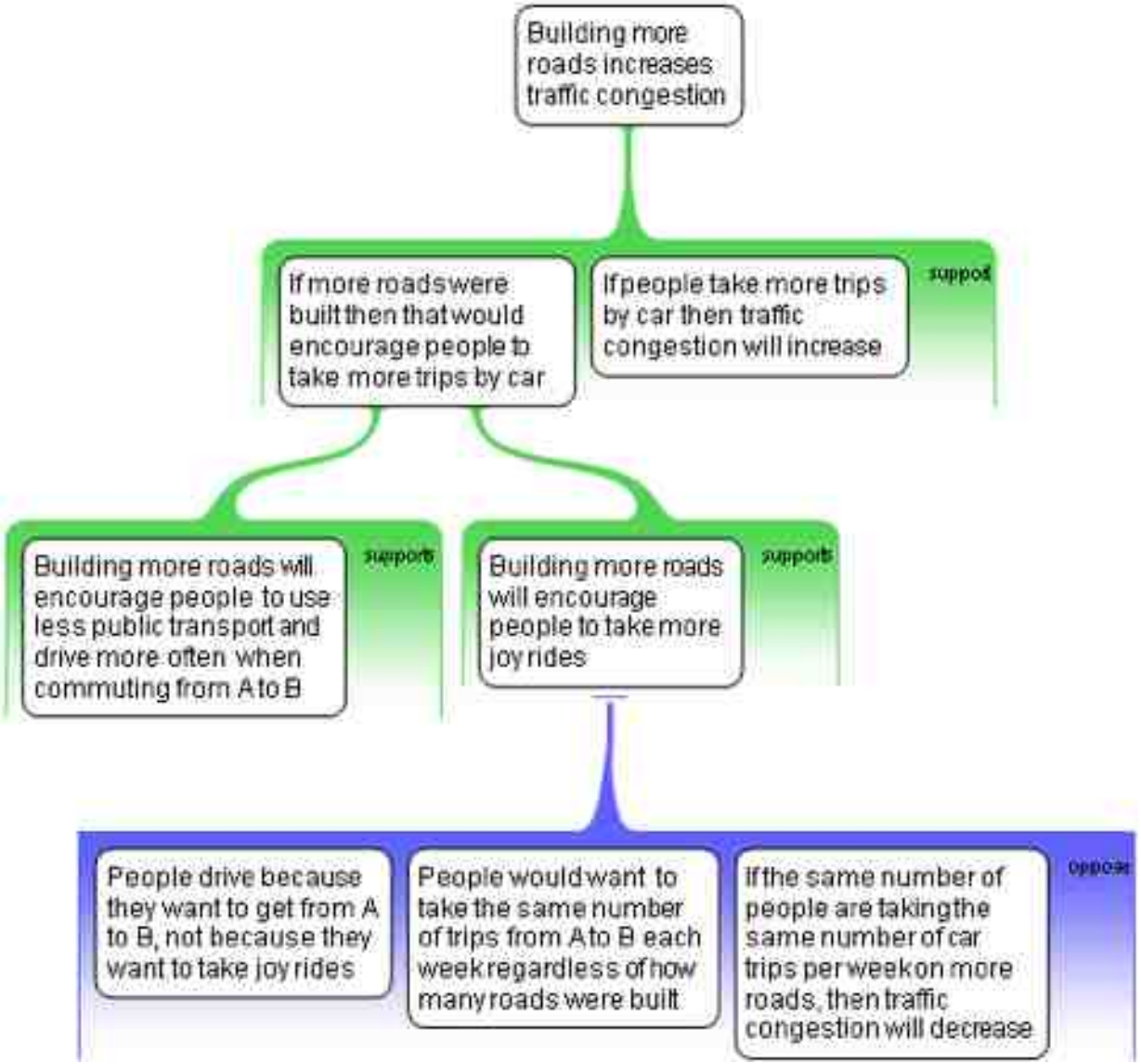
- Learning to visualise using mind maps
- To express yourself using little text and explanation

Visualisation helps to:

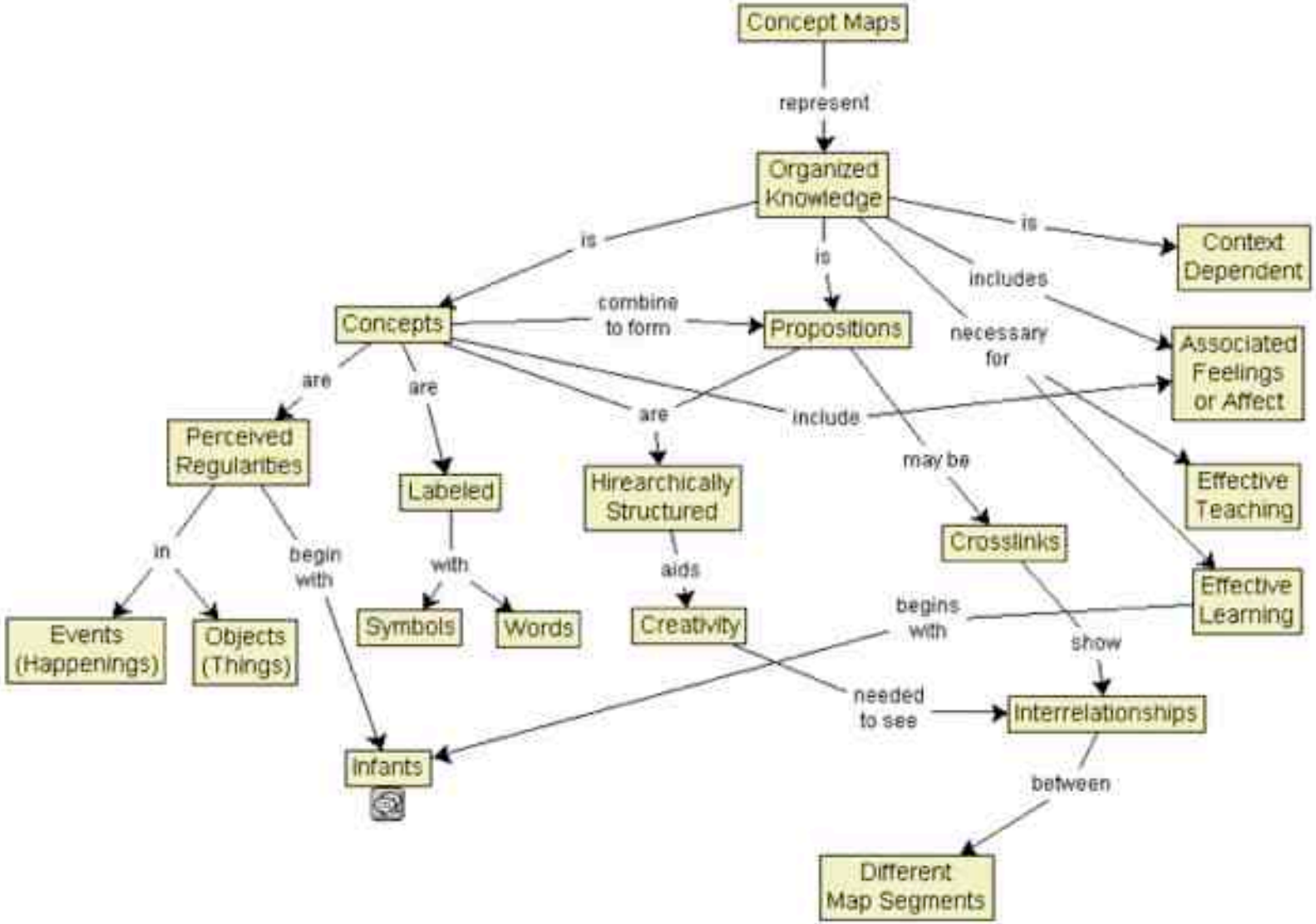
- Develop ideas and information
- Steer though processes
- Transfer ideas and results

Sketch notes

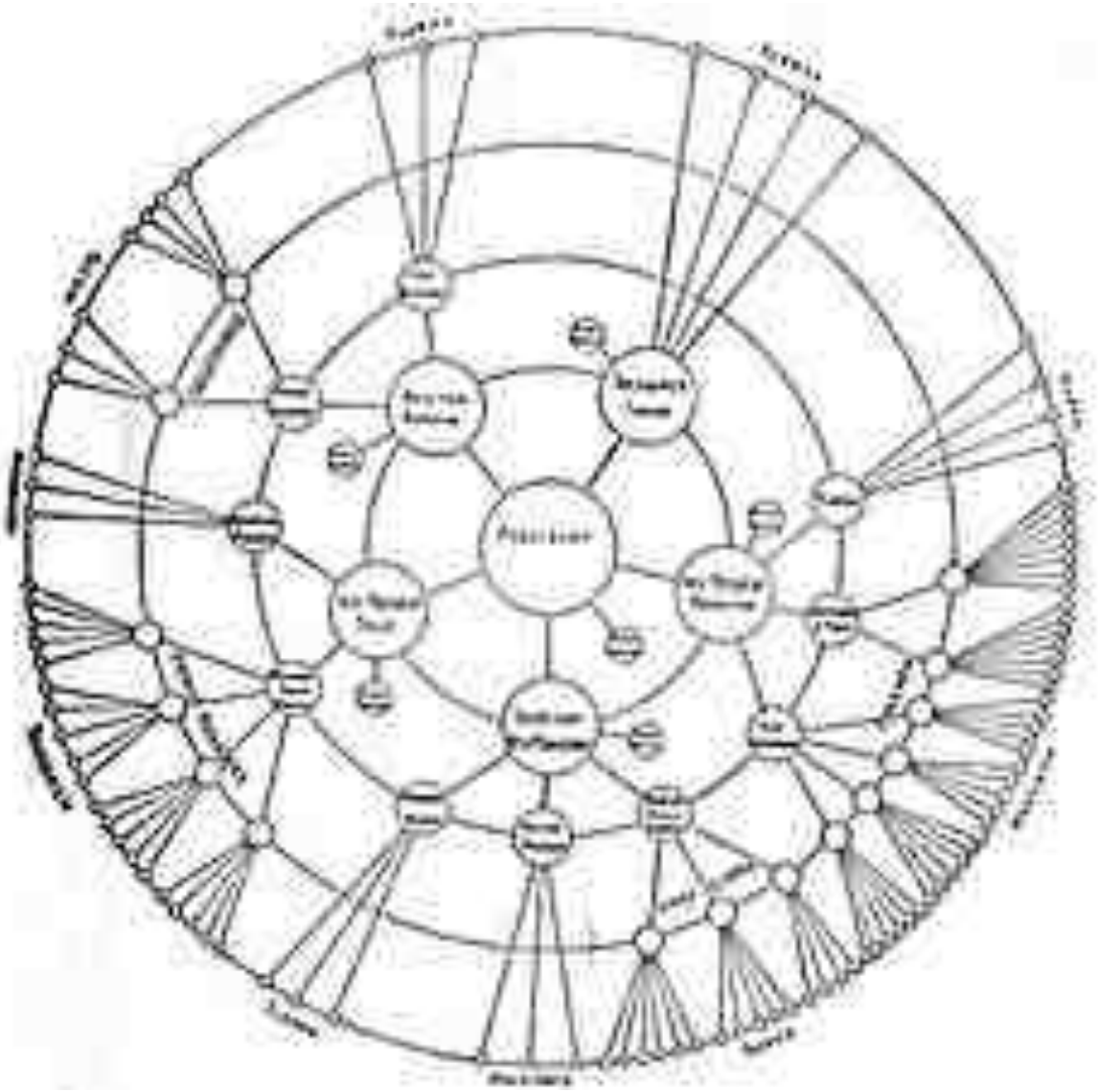
Argument map



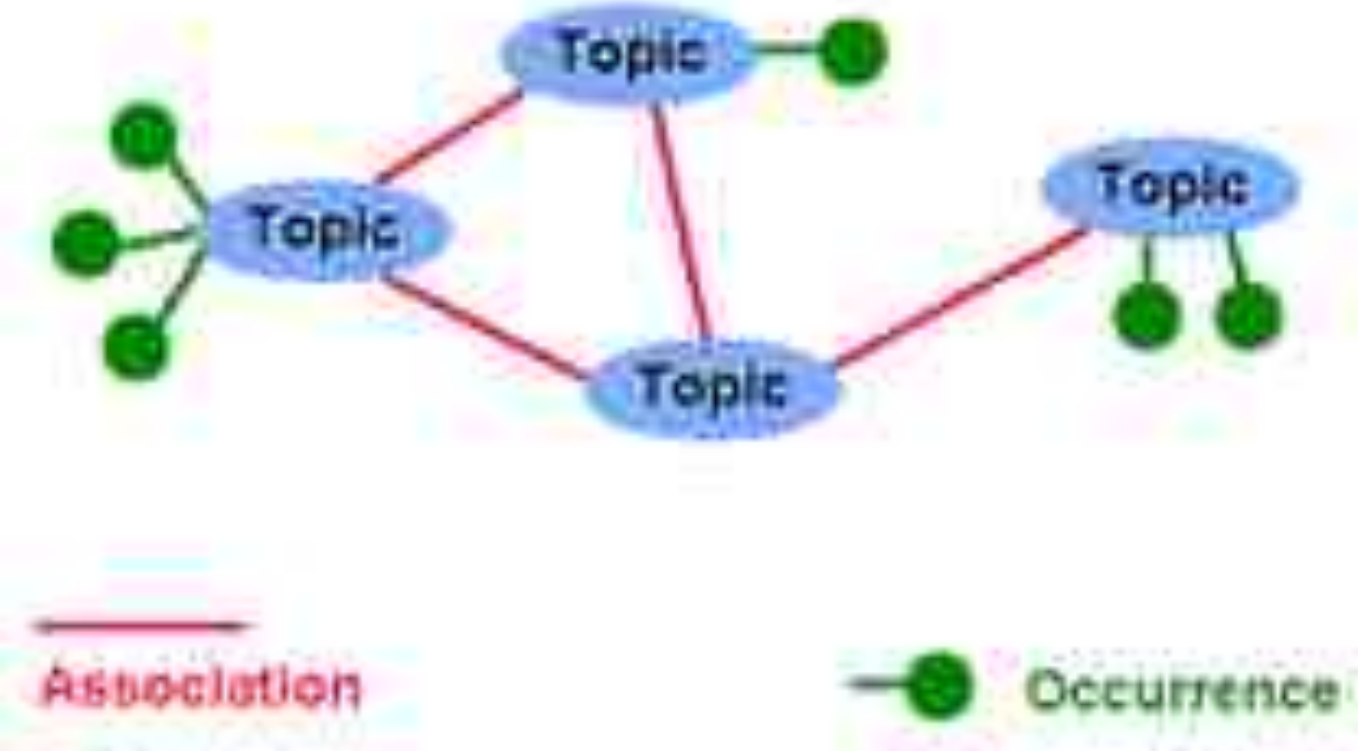
Concept map


Concept Maps
represent
Organized Knowledge
is
is
is
Context Dependent
includes
Concepts
combine to form
Propositions
necessary for
Associated Feelings or Affect
are
are
are
include
Perceived Regularities
Labeled
Hierarchically Structured
may be
Effective Teaching
Crosslinks
in
begin with
with
aids
Effective Learning
Events (Happenings)
Objects (Things)
Symbols
Words
Creativity
begins with
show
needed to see
Interrelationships
Infants
between
Different Map Segments

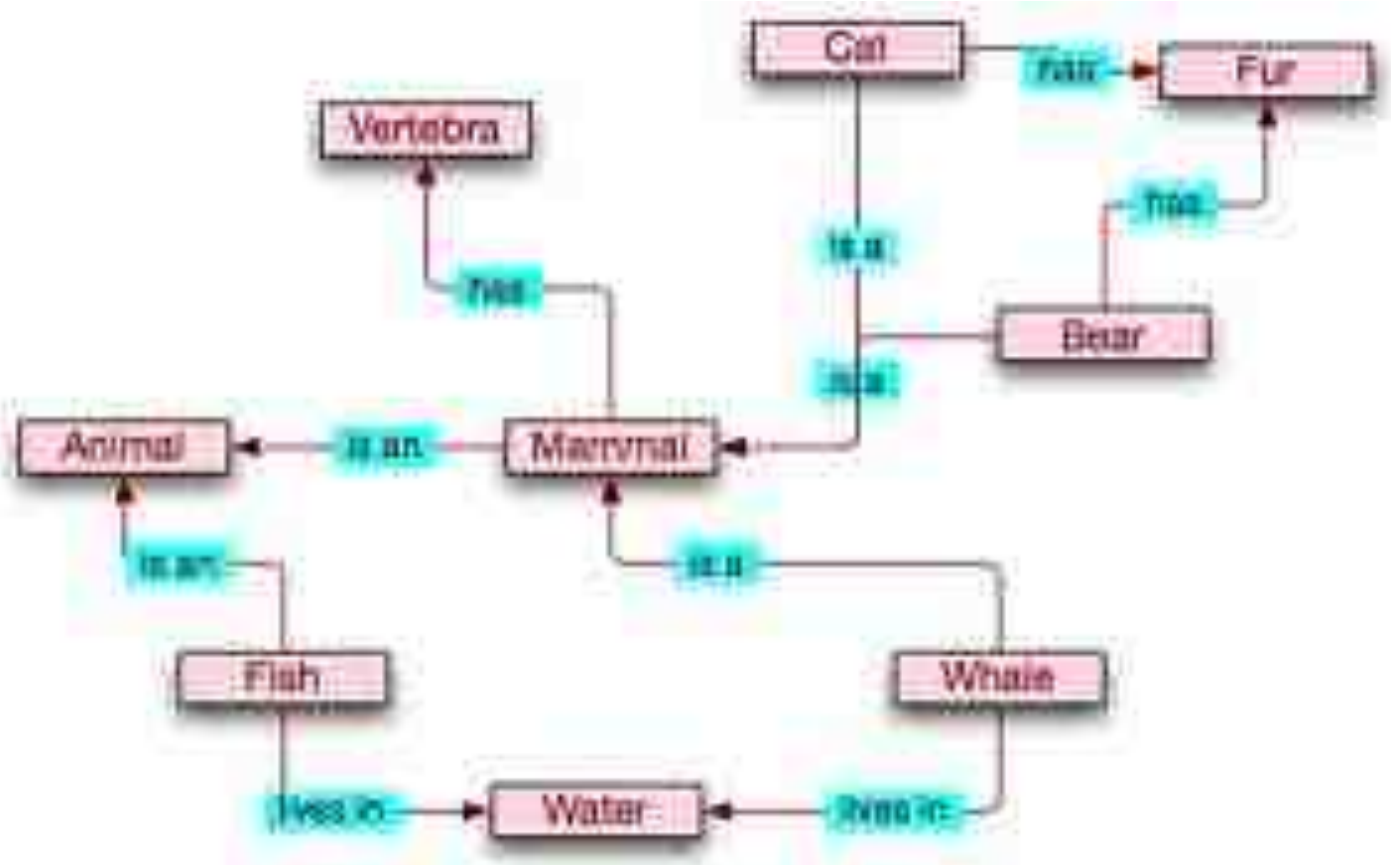
Radial tree



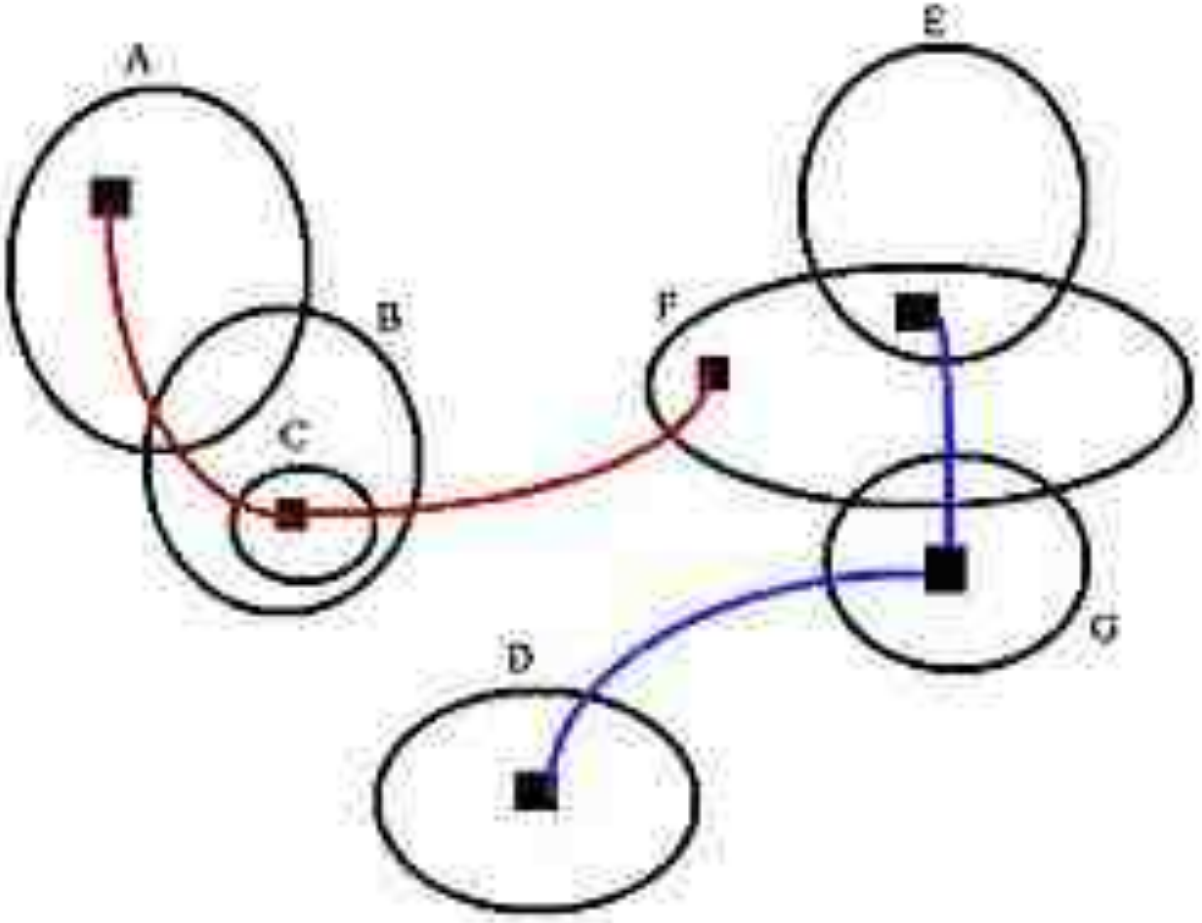
Topic map



Semantic network

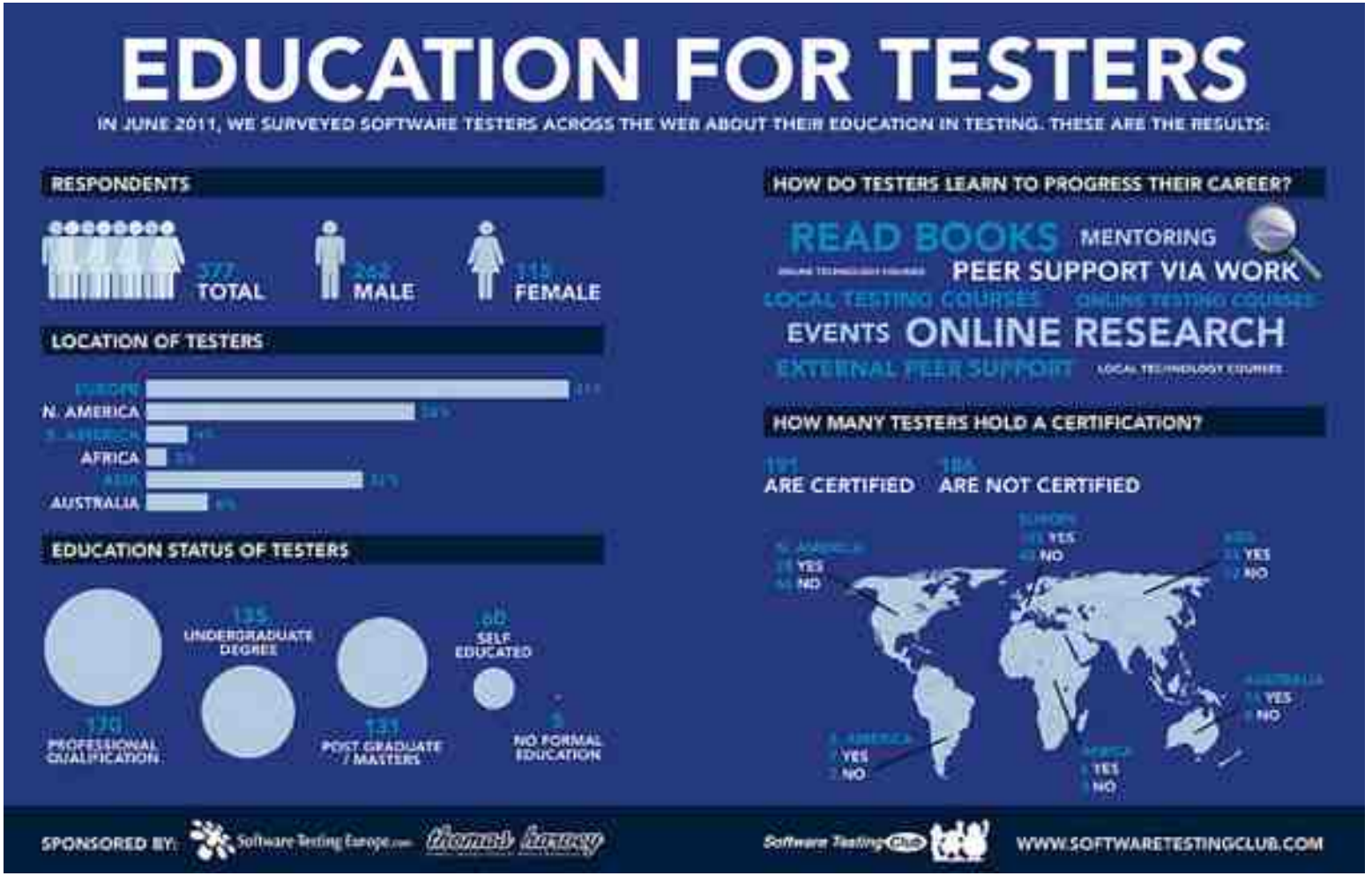


Euler diagram

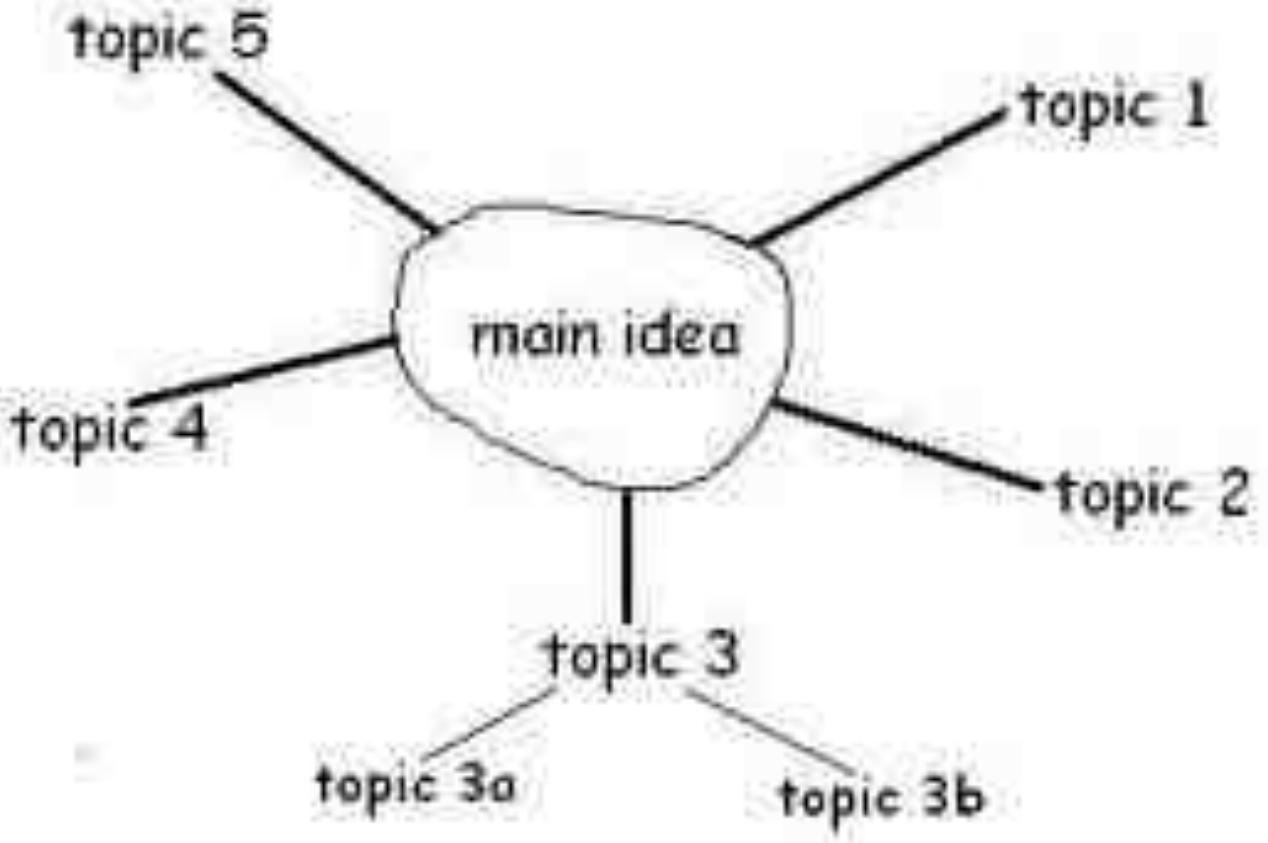


Information graphics

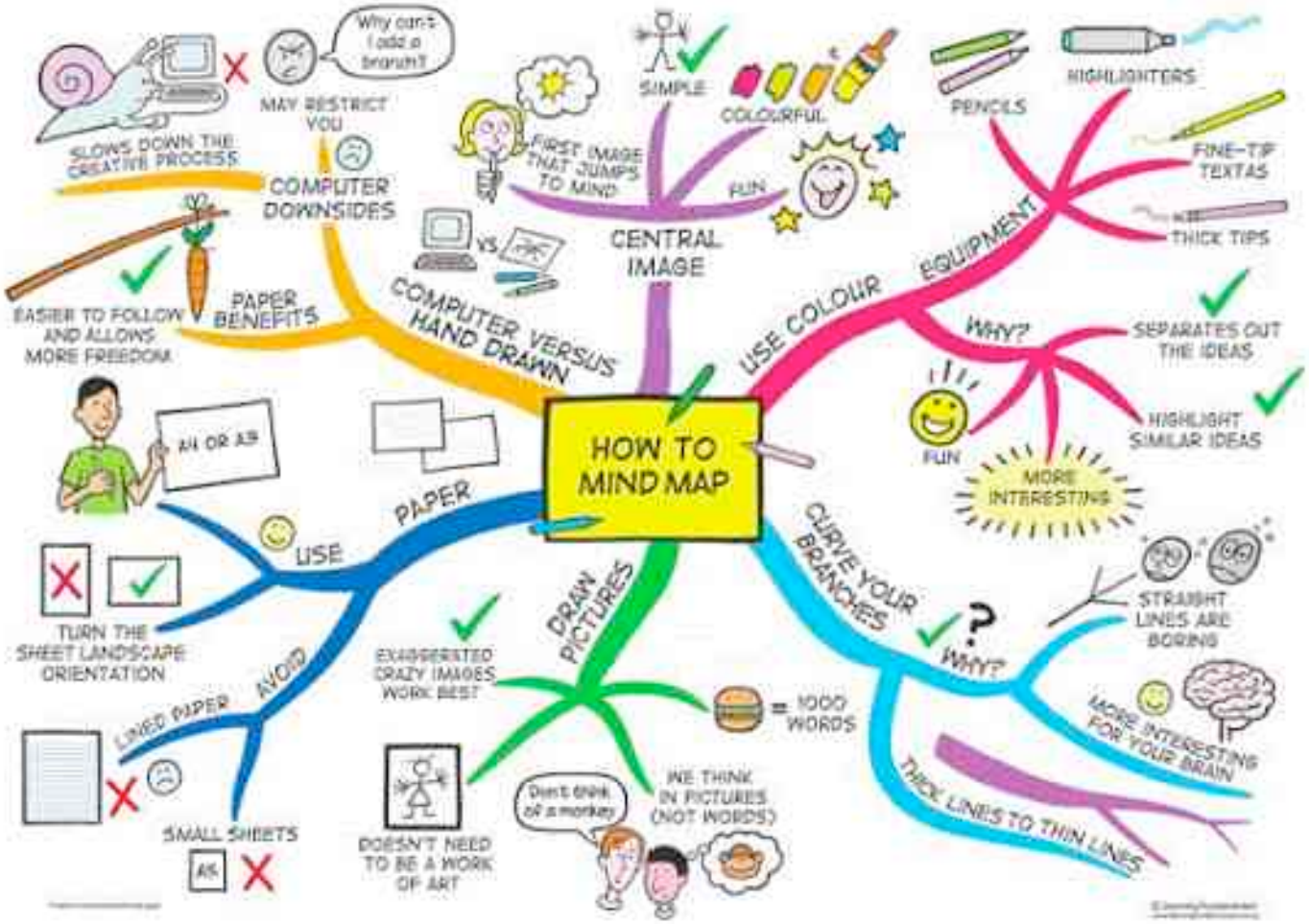
Information graphics



Spider diagram



Mind map



Source: http://www.mindmapart.com/how-to-mind-map-mind-map-jane-genovese/

Mind map

A combination of:

- Images
- Symbols
- Codes
- Dimensions
- Key words

Goal: To store and transmit information

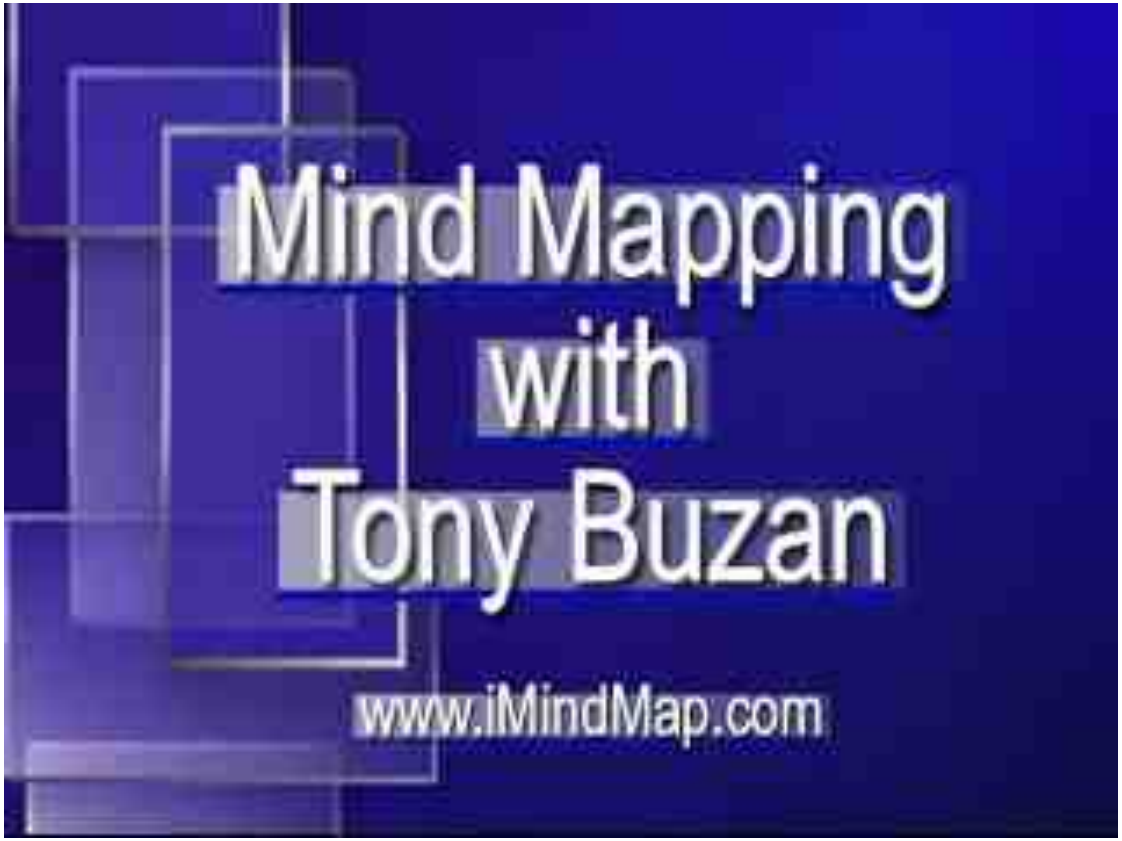
Tony Buzan

Mind maps mimic the thought processes of your brain!

The five most important brain functions:

1. **Recieve**
2. **Store**
3. **Analyse**
4. **Execute**
5. **Control**

Video Tony Buzan



http://www.youtube.com/watch?v=MlabrWv25qQ

Mind maps according Buzan

- Take a large piece of paper (A2 – A3)
- Place the paper in ‘landscape’
- Draw a central image in the middle of your mind map
- Do not box in your image

Source: http://www.mind-mapping.co.uk

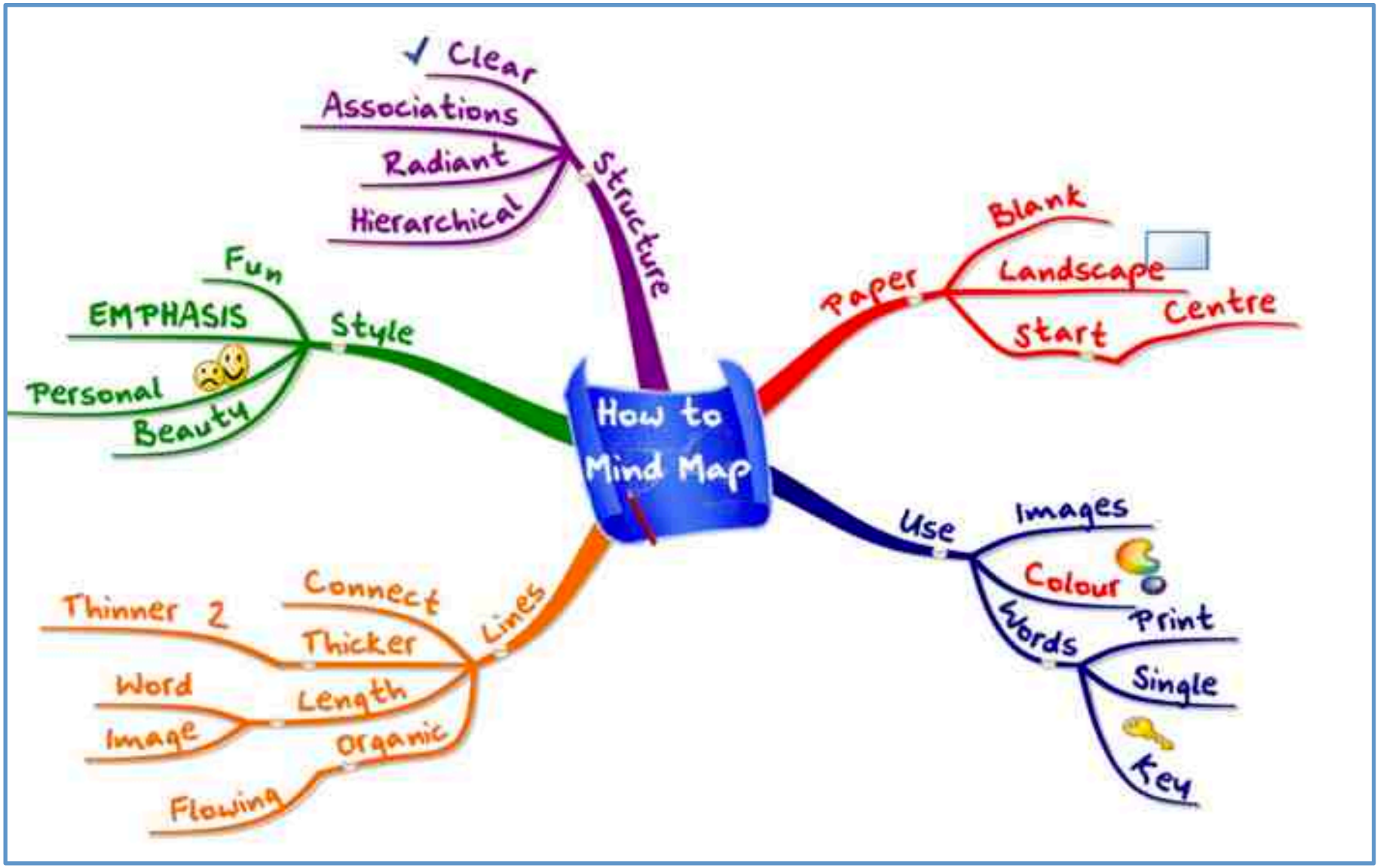
Mind maps according Buzan

- Add branches to your central image
- These branches represent main themes to your cental image
- Each branch has its own color. Use at least three colors.
- The lines are thick, curved and organic, like the branch of tree to the trunk
- Each branch has a single (key) word of image

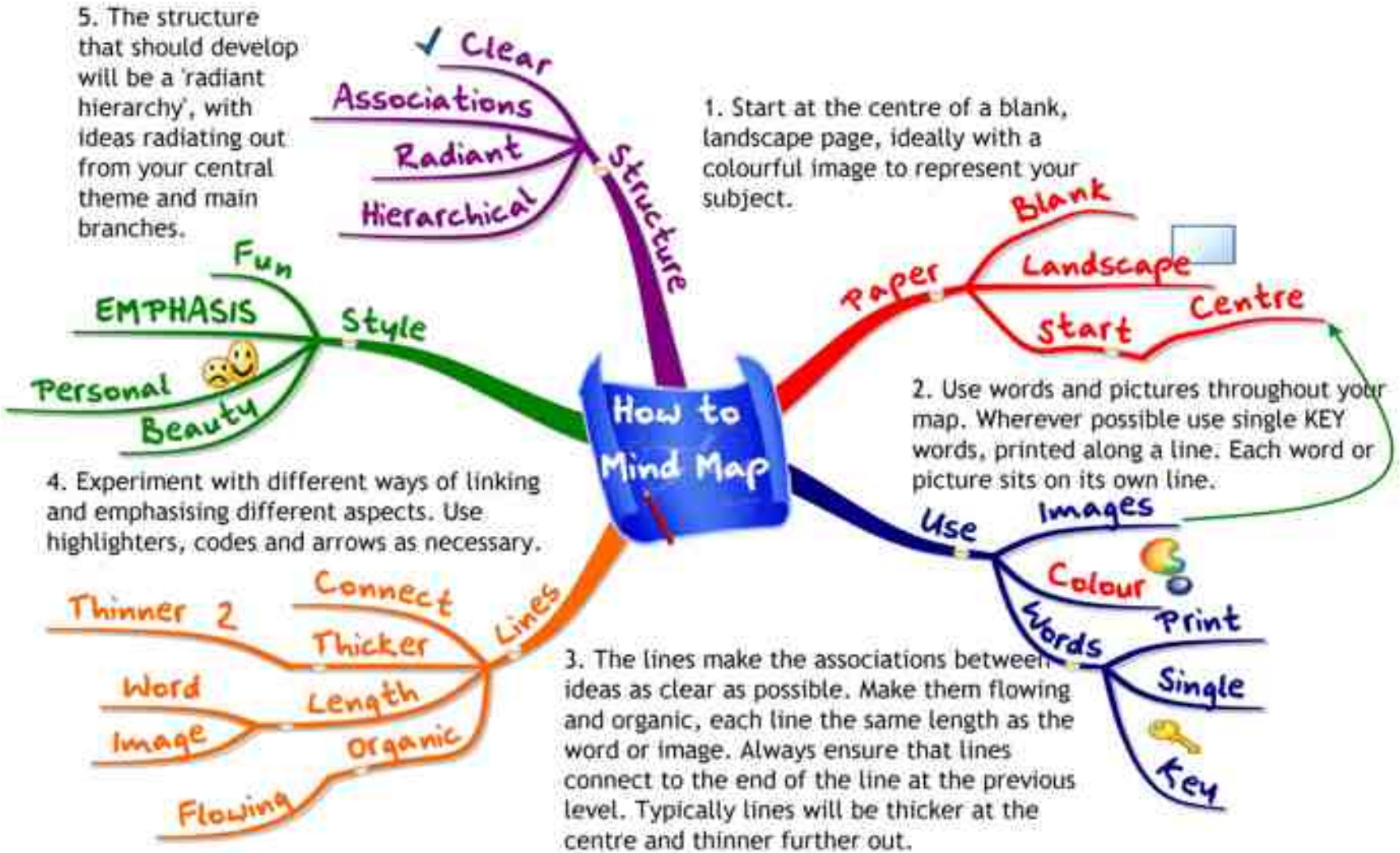
Source: http://www.mind-mapping.co.uk

Mind maps according Buzan

- Add a second level of branches
- These branches are associations triggered by the main branches
- The lines are thinner, but still curved
- The branches have single words, but may be lowercase
- The size and style of the letters provide extra data about the importance and meaning

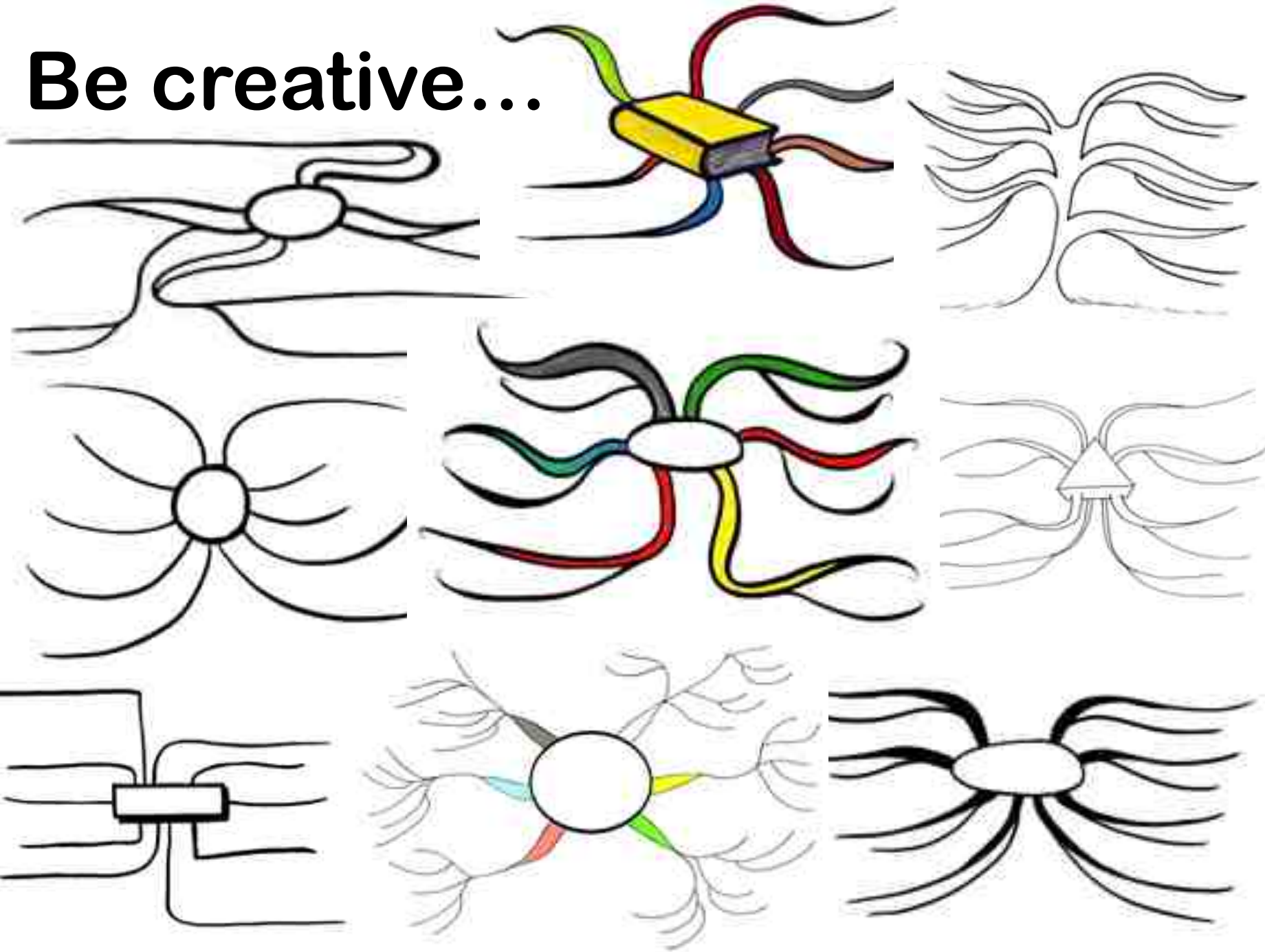


Source: http://www.mind-mapping.co.uk



Source: http://www.mind-mapping.co.uk

Be creative…



Source: http://www.mindmapinspiration.co.uk

Buzan

Exercise:

1. Create a mind map of your holiday plans or hobby
2. Use words, colors and drawings
3. Share your mind map
4. Two of you will present the result to the group

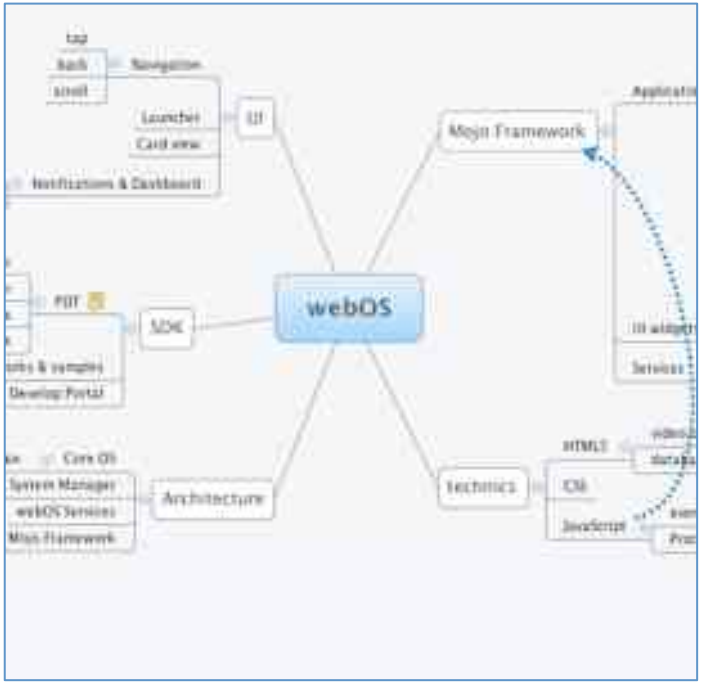
Hand made mind maps?

- Advantage:
  - Easy to create
  - Personal

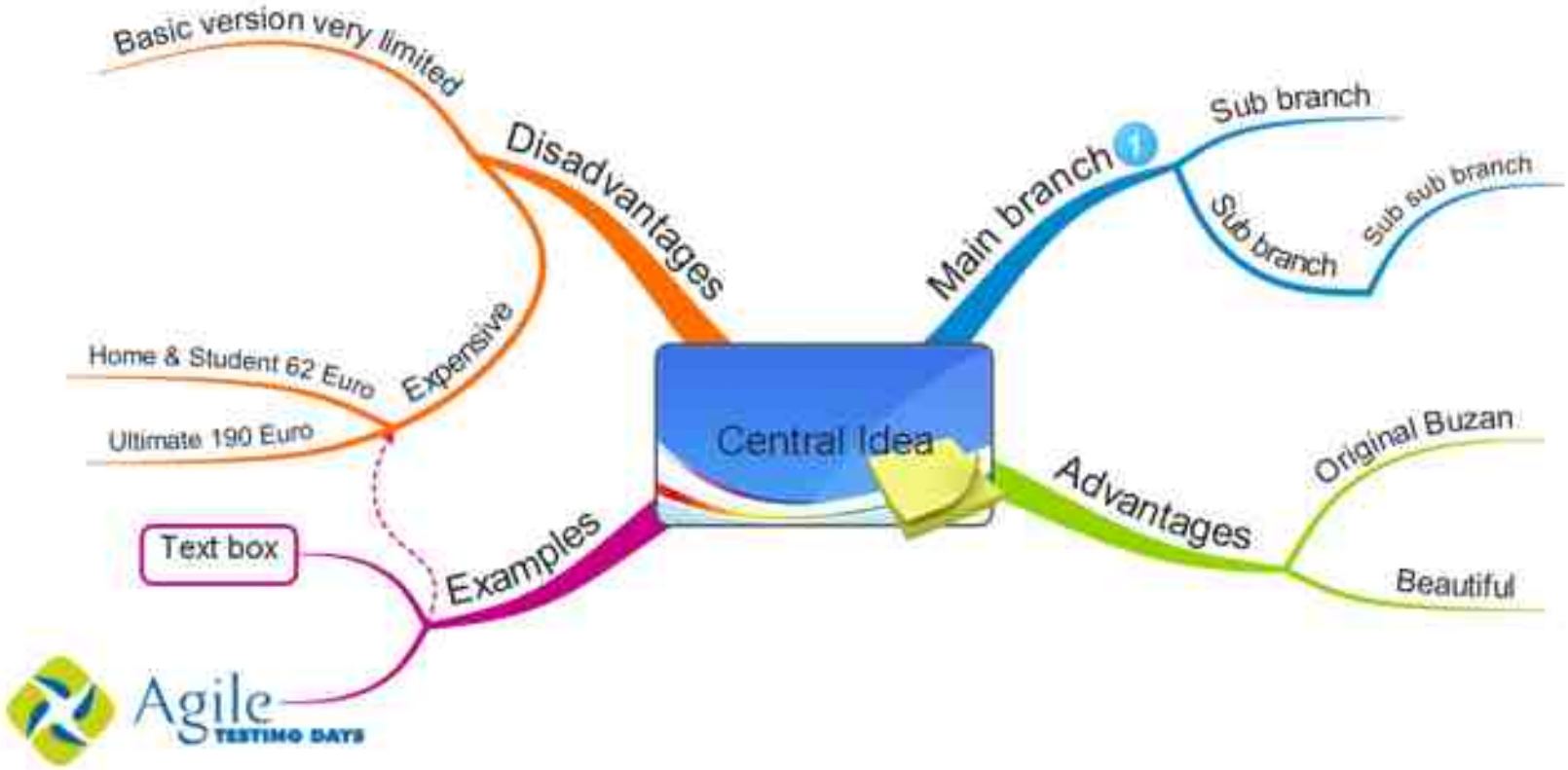
- Disadvantage:
  - Personal
  - Changes
  - Transfer

Mind map tooling

- Advantage:
  - Easy to share
  - Fits in to existing documents
- Disadvantage:
  - Is it really a mind map?
  - Need of hardware
  - Need of software

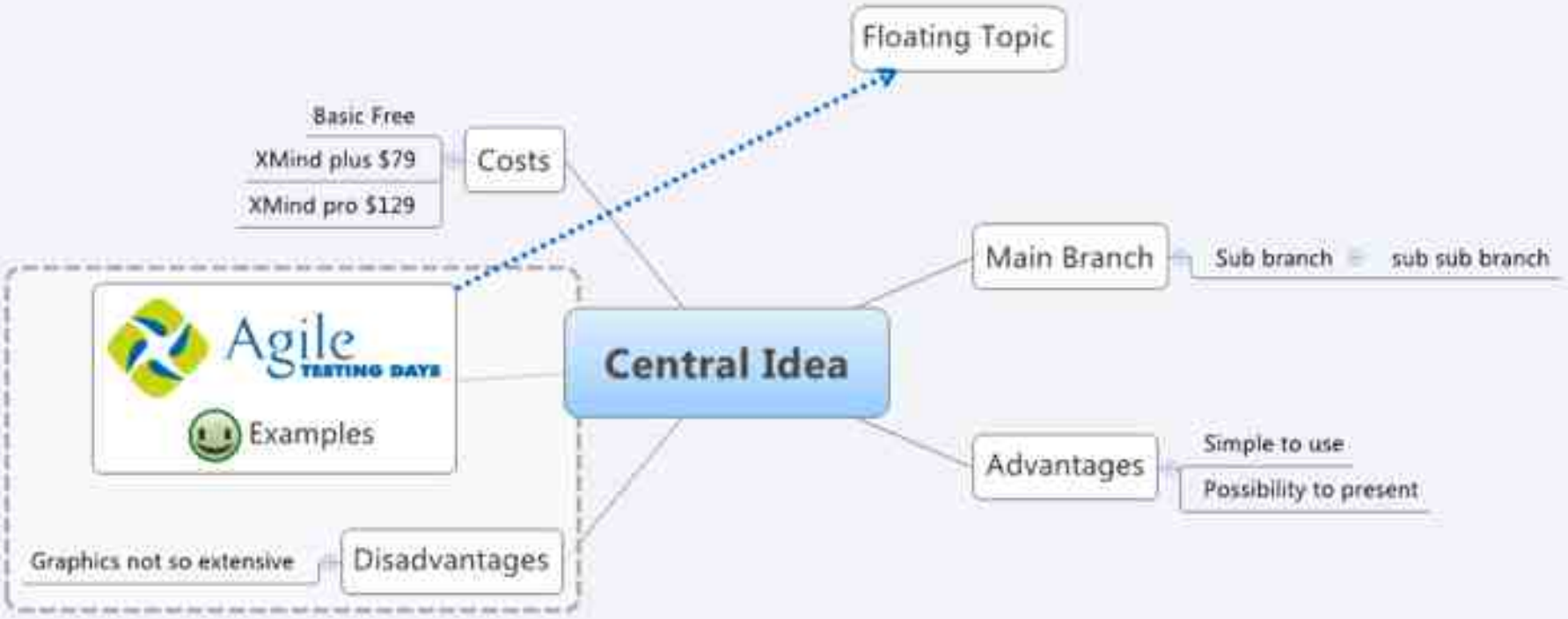


iMindmap



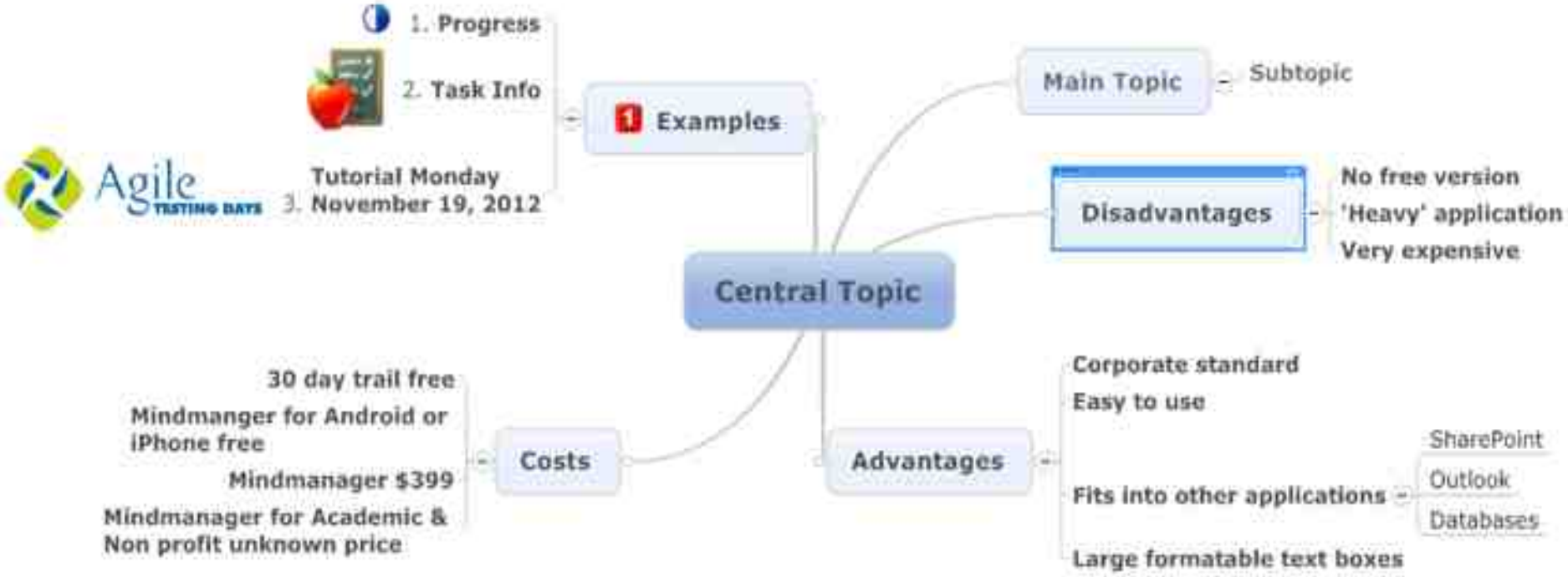
http://www.thinkbuzan.com/nl/registration/freetrial

XMind



http://www.xmind.net/download/win/

MindJet

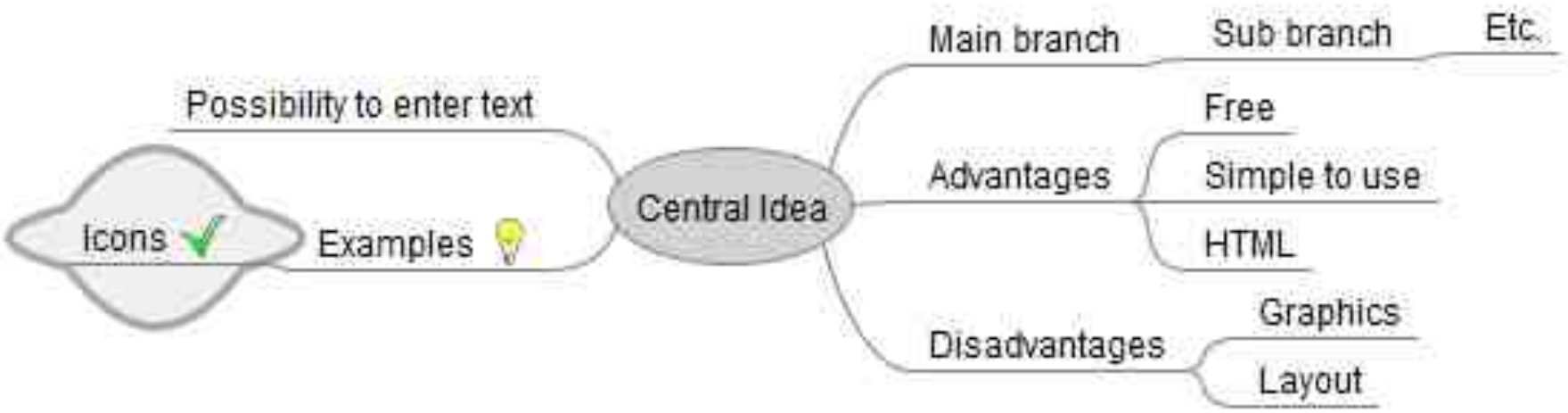


http://www.mindjet.com/

SimpleMind

http://www.simpleapps.eu/simplemind/desktop#trial

Freemind



http://freemind.sourceforge.net/wiki/index.php/Download

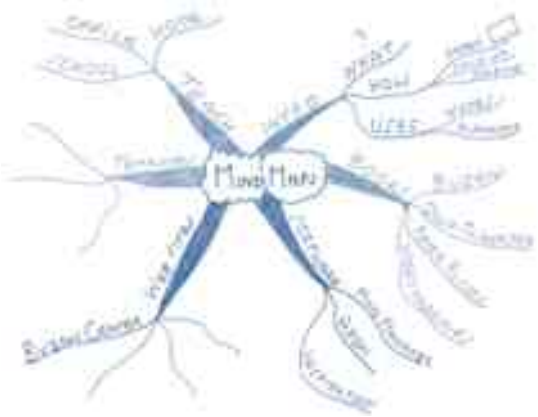
Text2MindMap

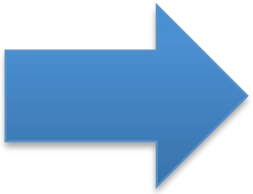
http://www.text2mindmap.com/

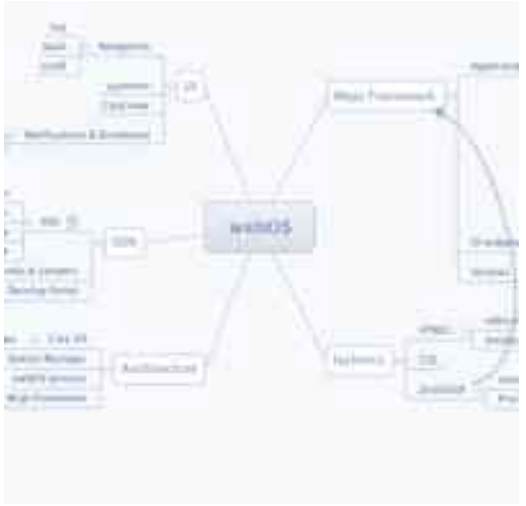
Tooling

Exercise:

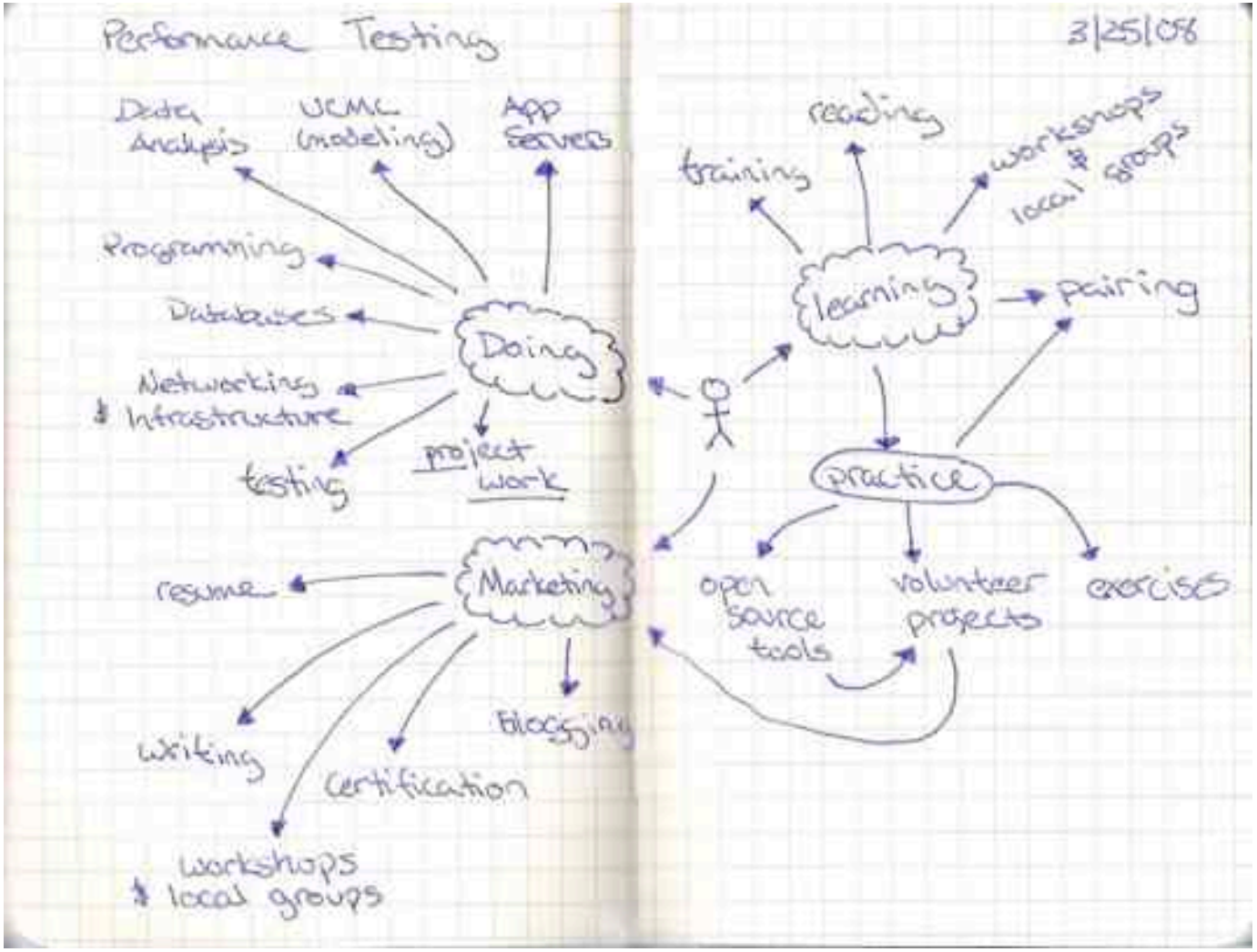
Transfer your previously hand made mind map into a tool







Mind maps and testing

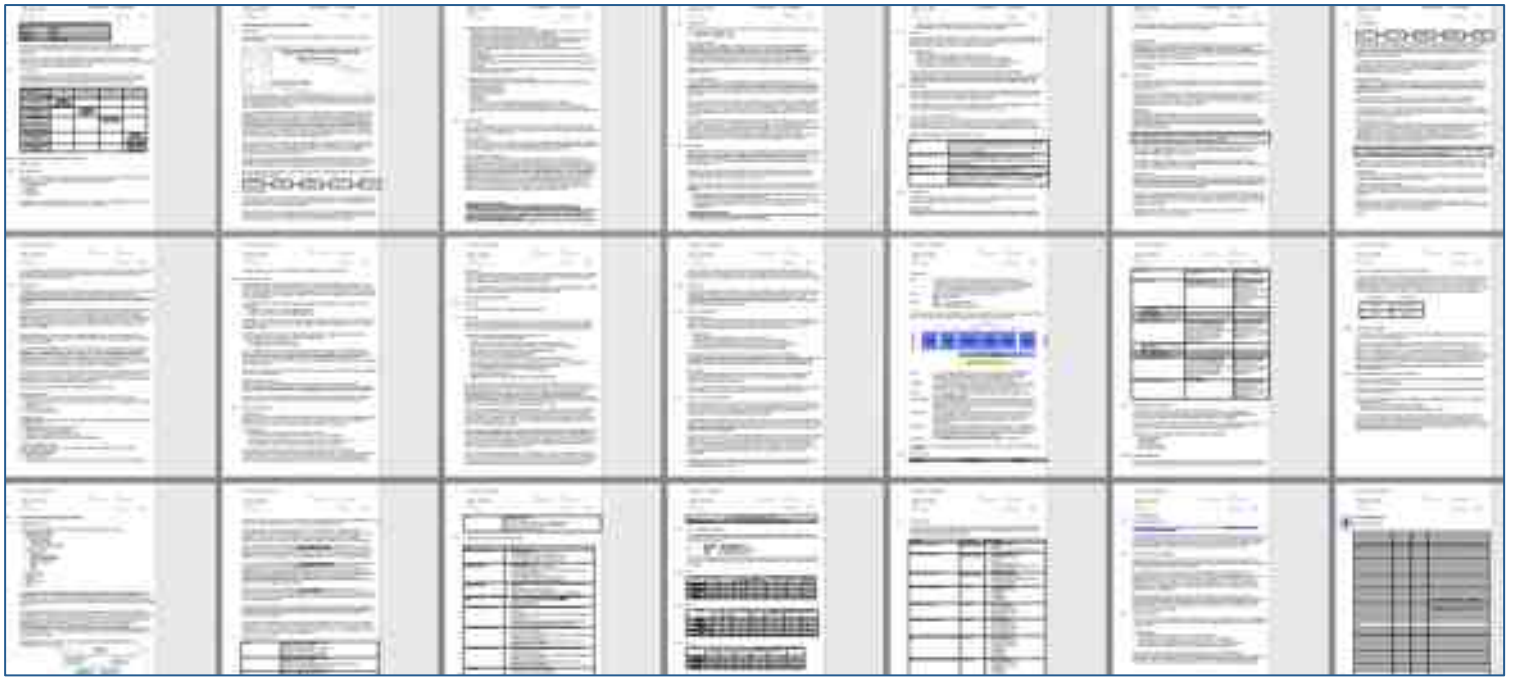


Test plan

Question:

What are characteristics of a good test plan?

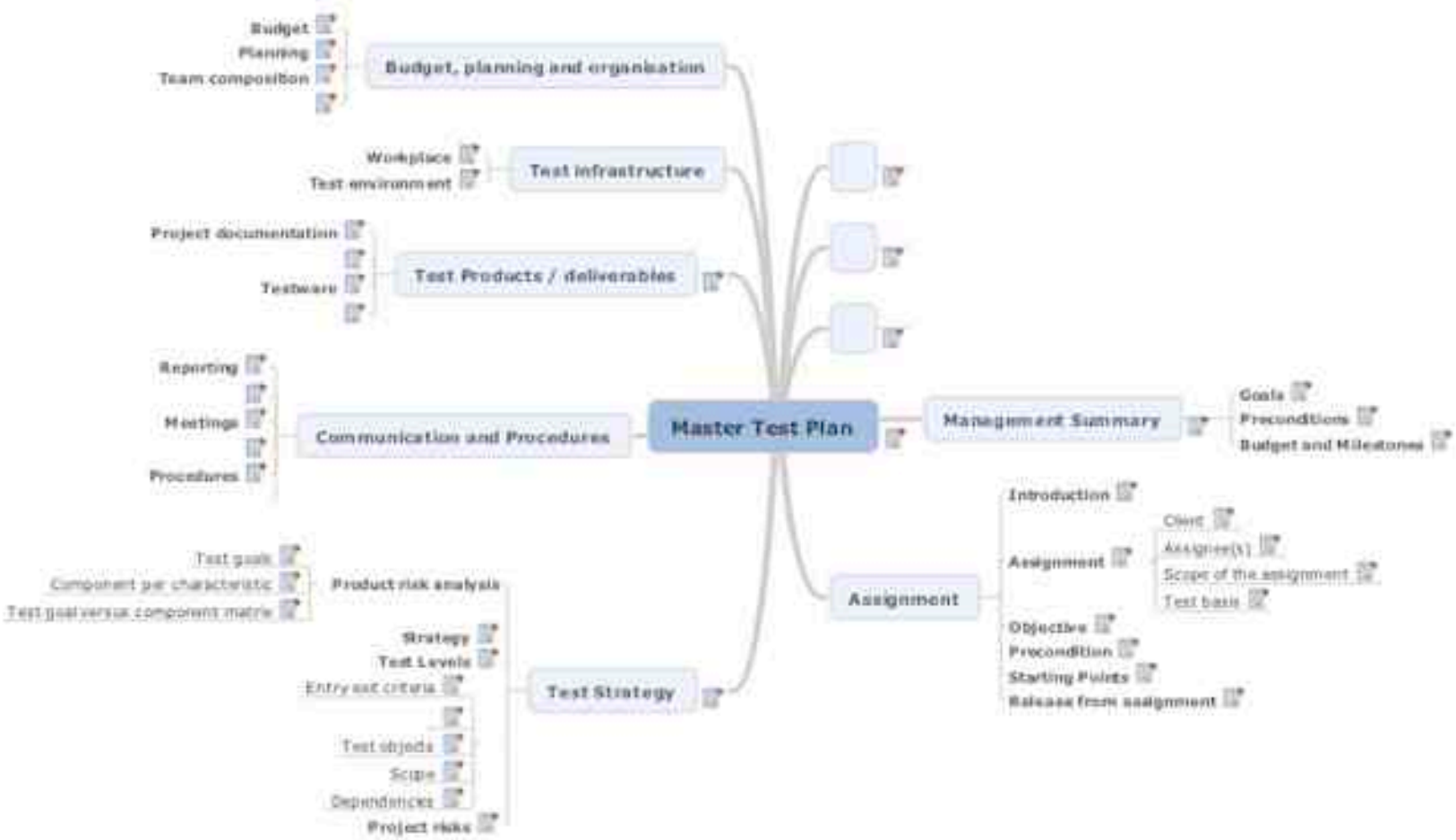
Test plan: old school



MS Word:

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

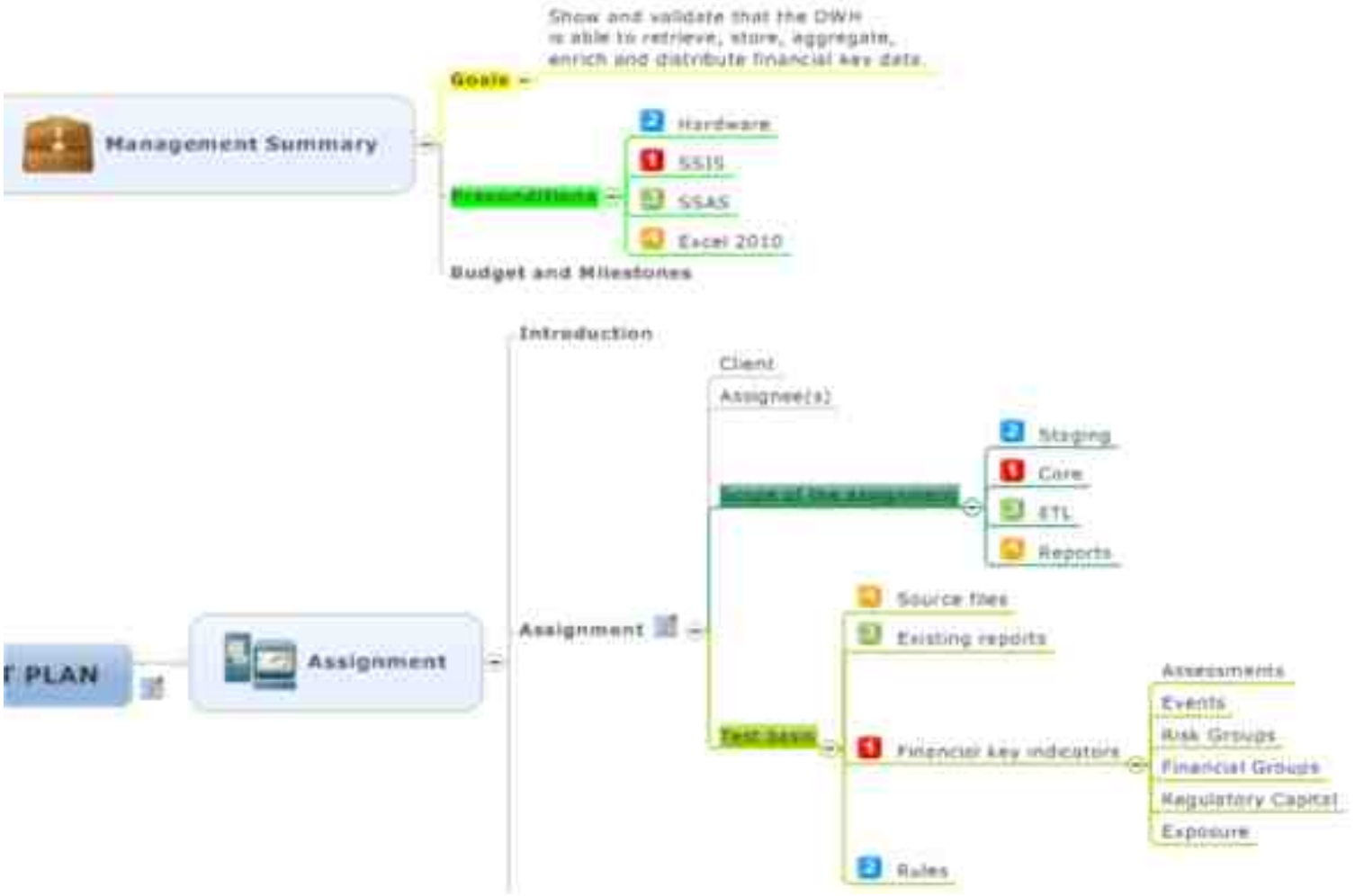
Test plan: mind map



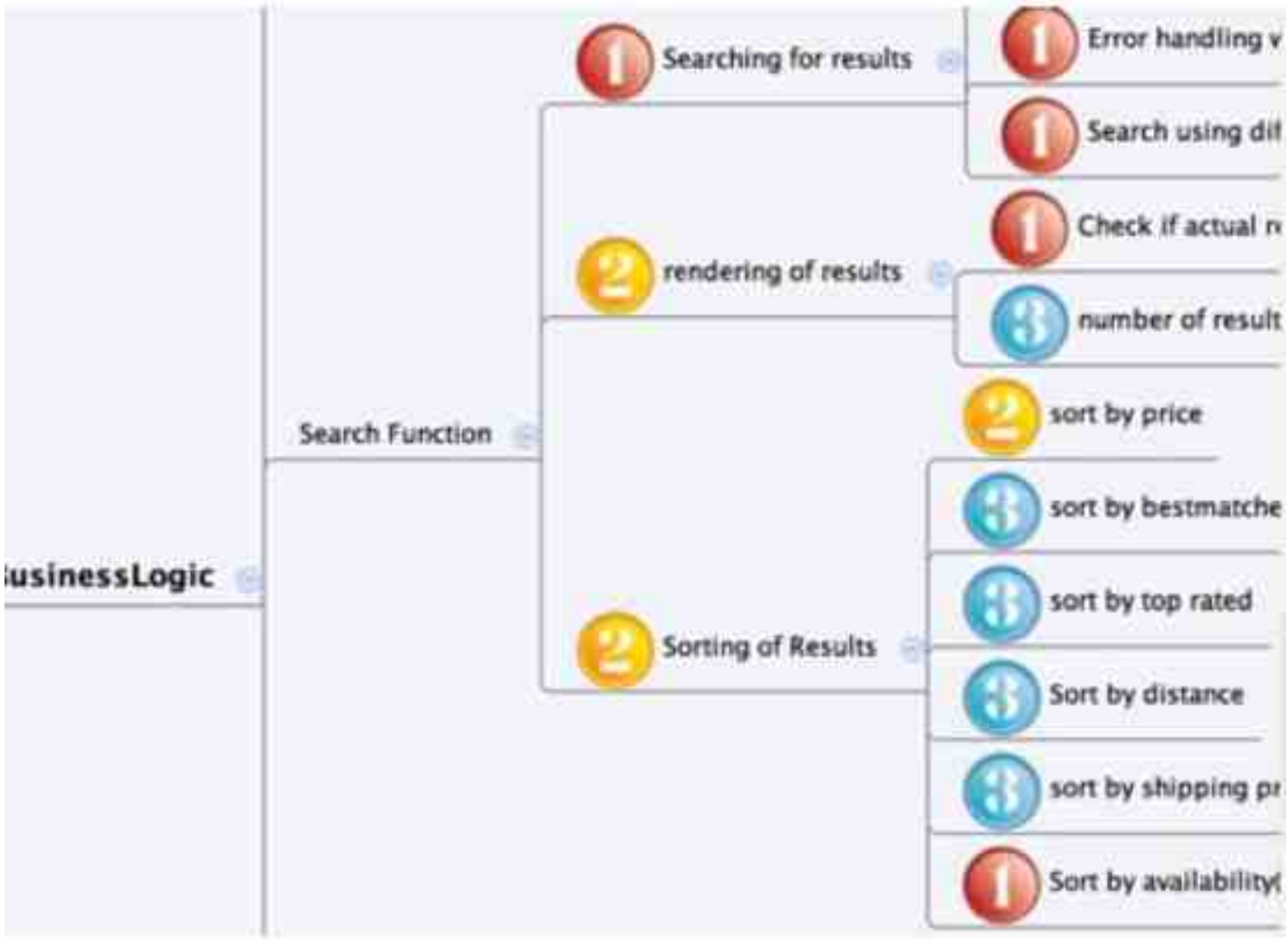
Mindjet Mind Manager turned a 24 pages template into this mind map (word document import)

Test plan: mind map

Test plan: mind map

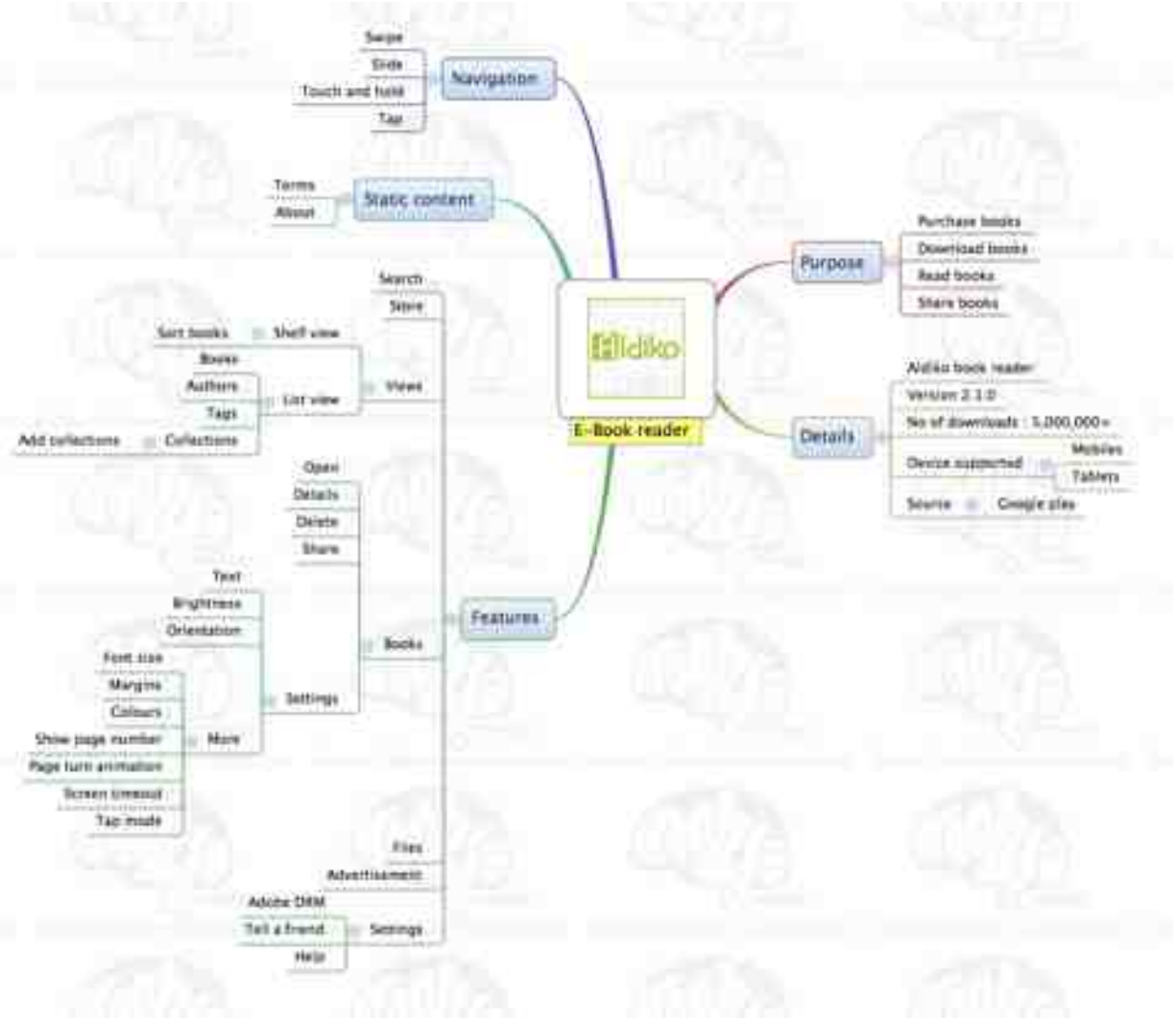


Test strategy: risk analysis



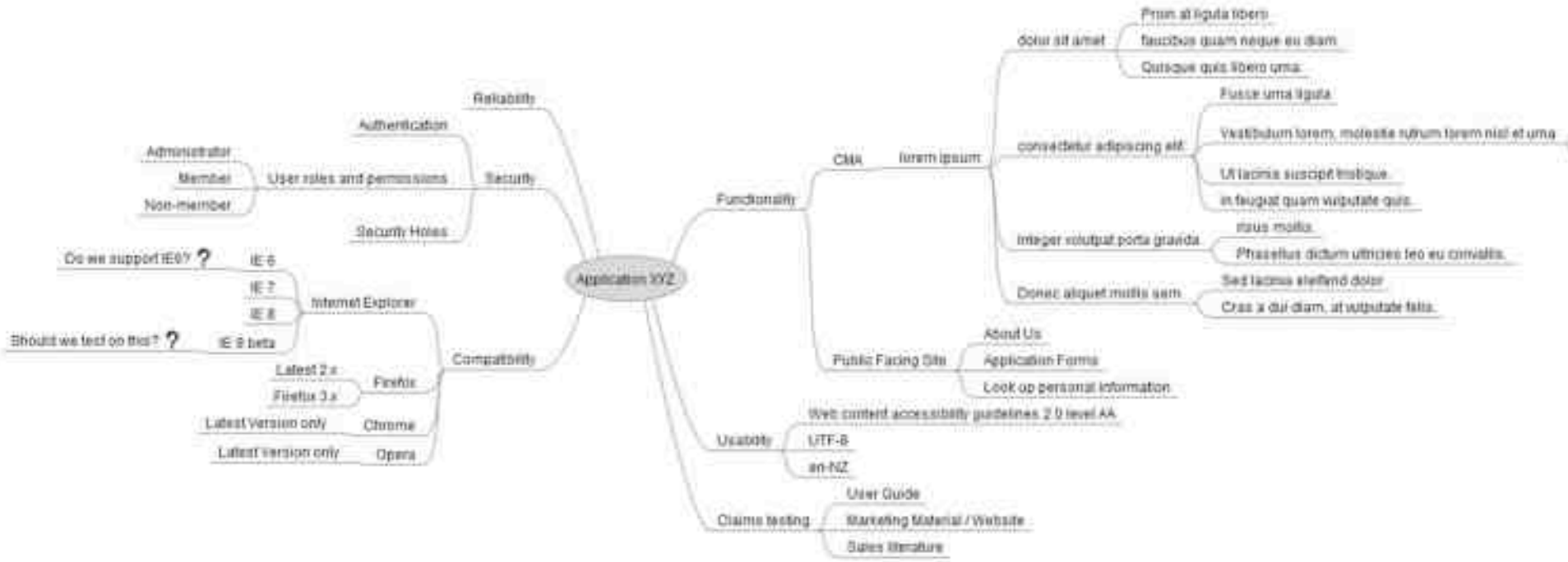
Source: Pascal Dufour (http://pascaldufour.wordpress.com/)

Test strategy

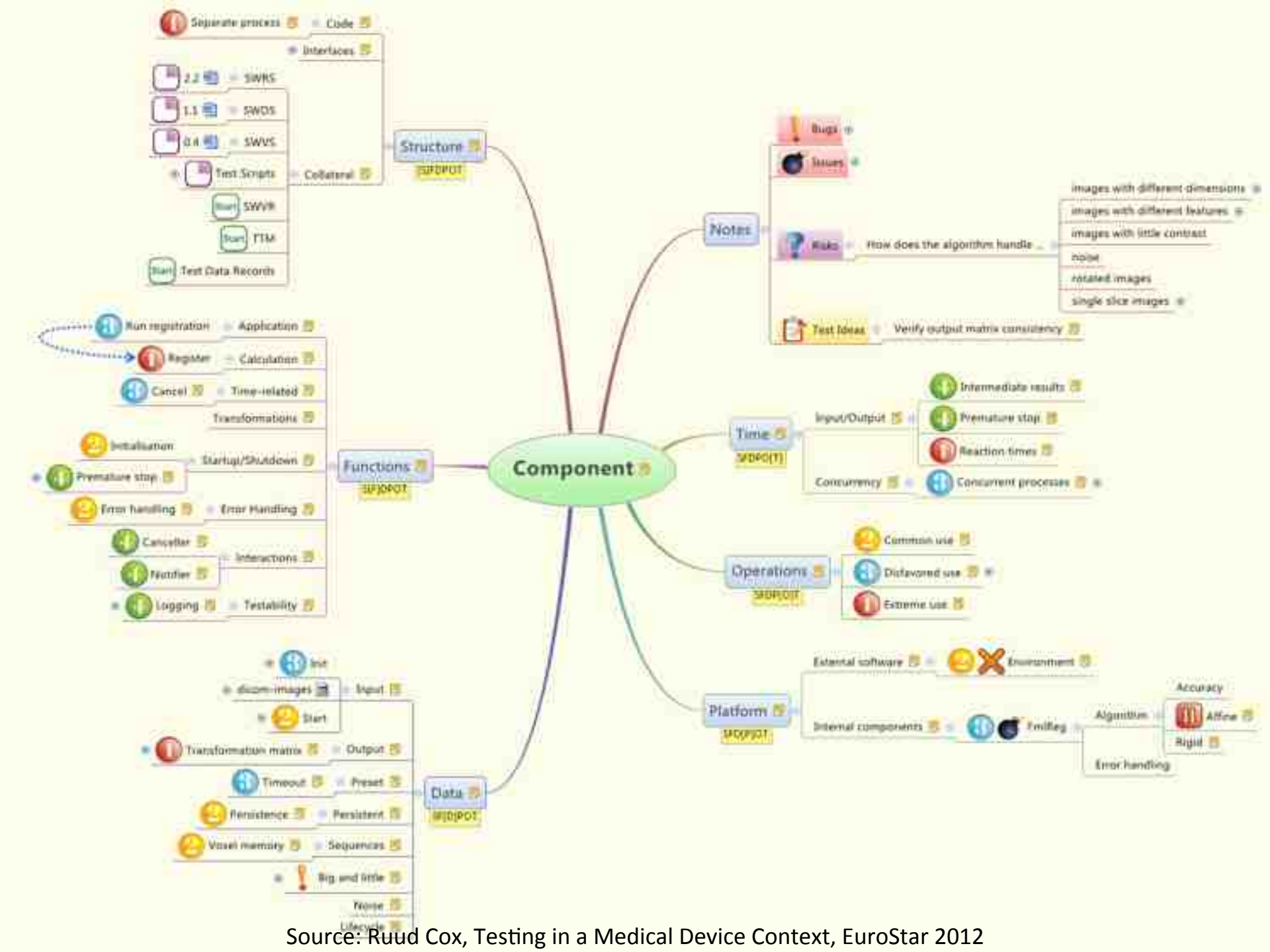


Source: http://www.moolya.com

Test strategy

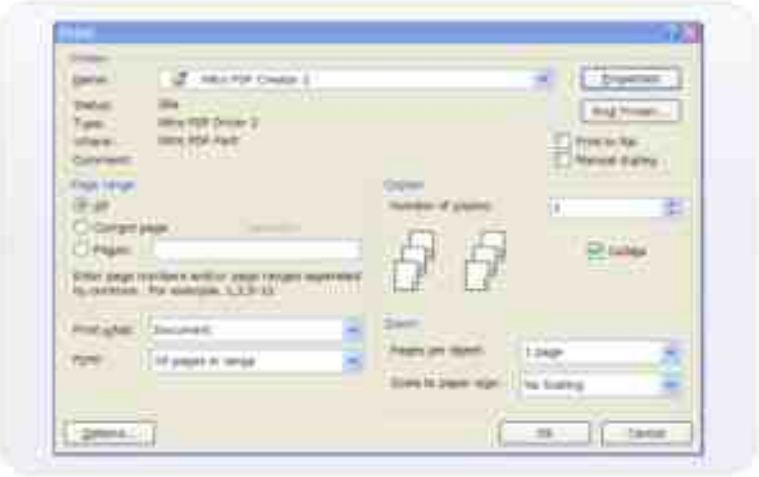


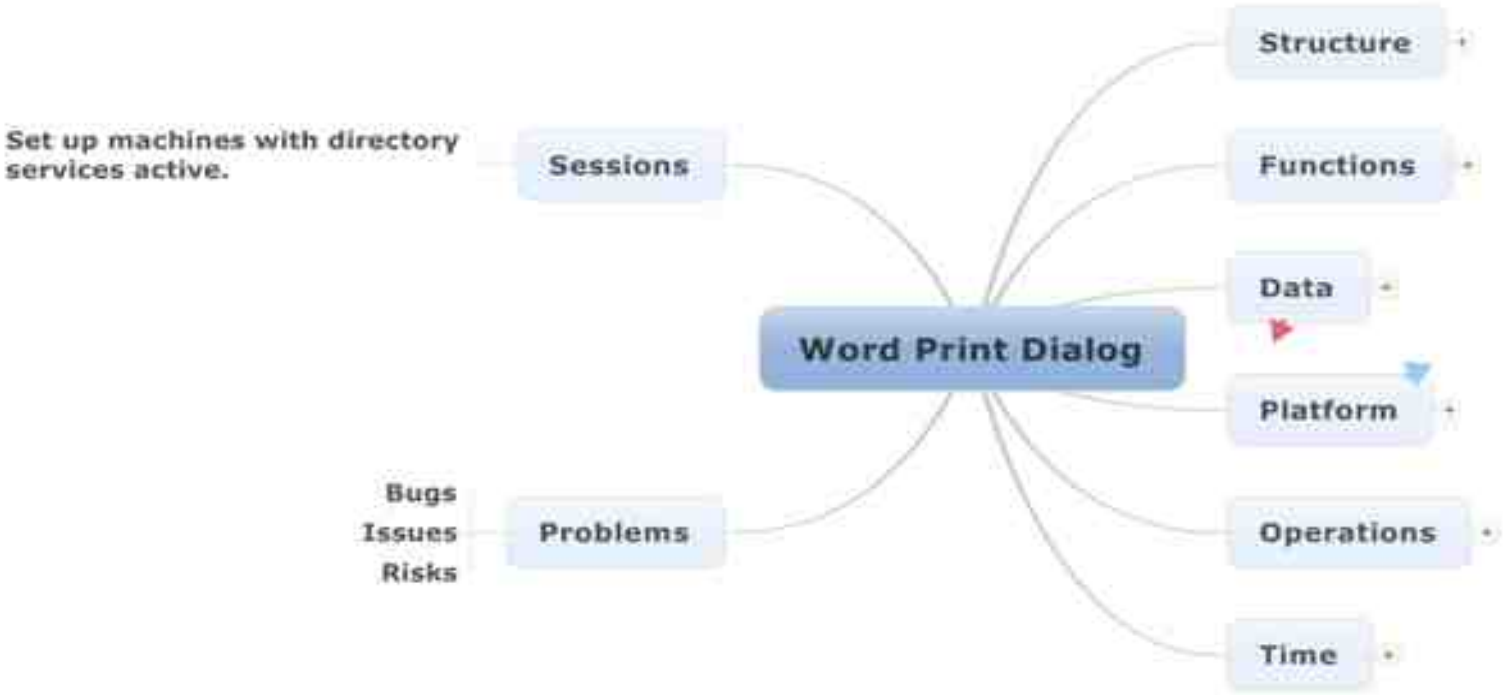
Source: http://testerkiwi.blogspot.nl/



Source: Ruud Cox, Testing in a Medical Device Context, EuroStar 2012

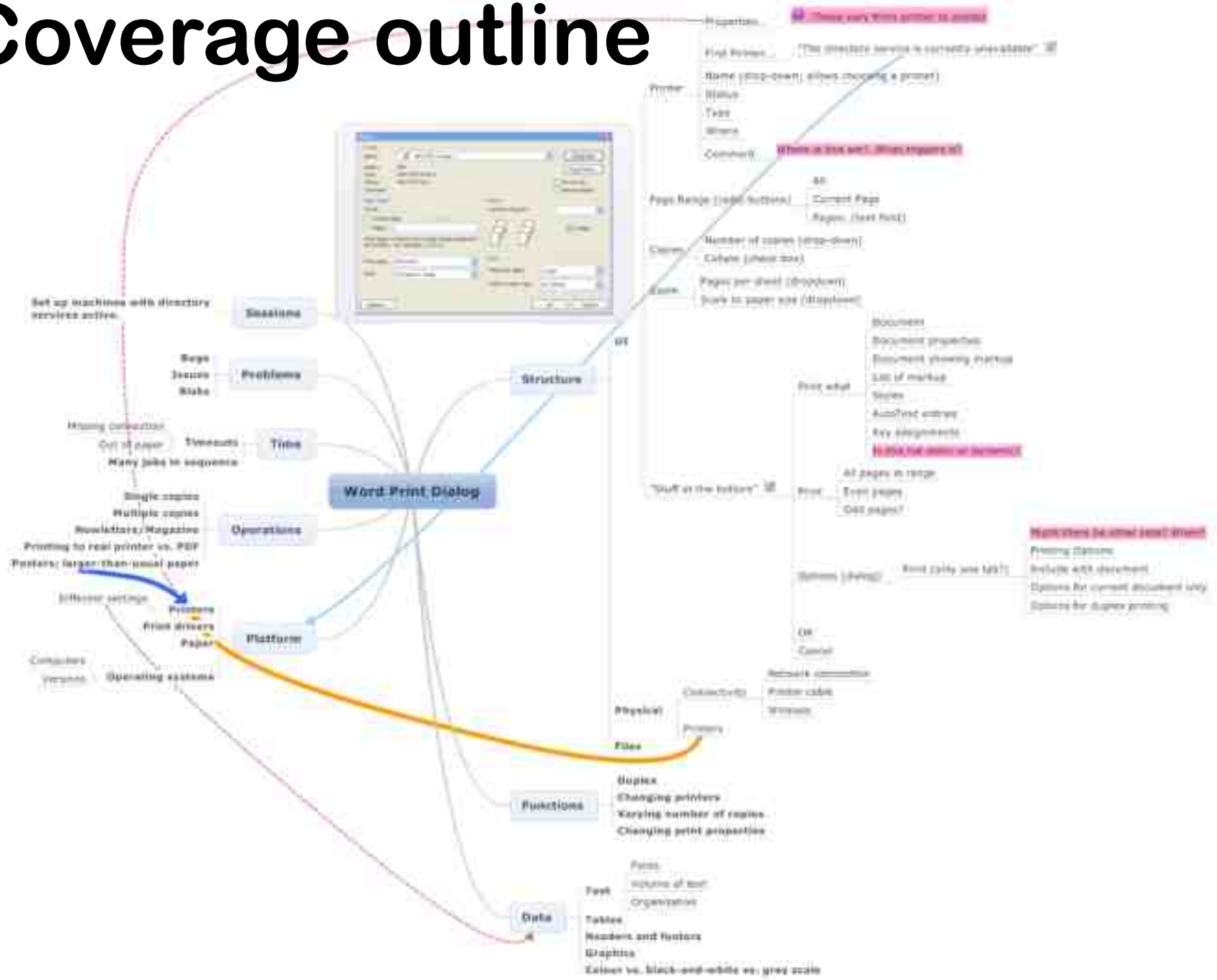
Coverage outline





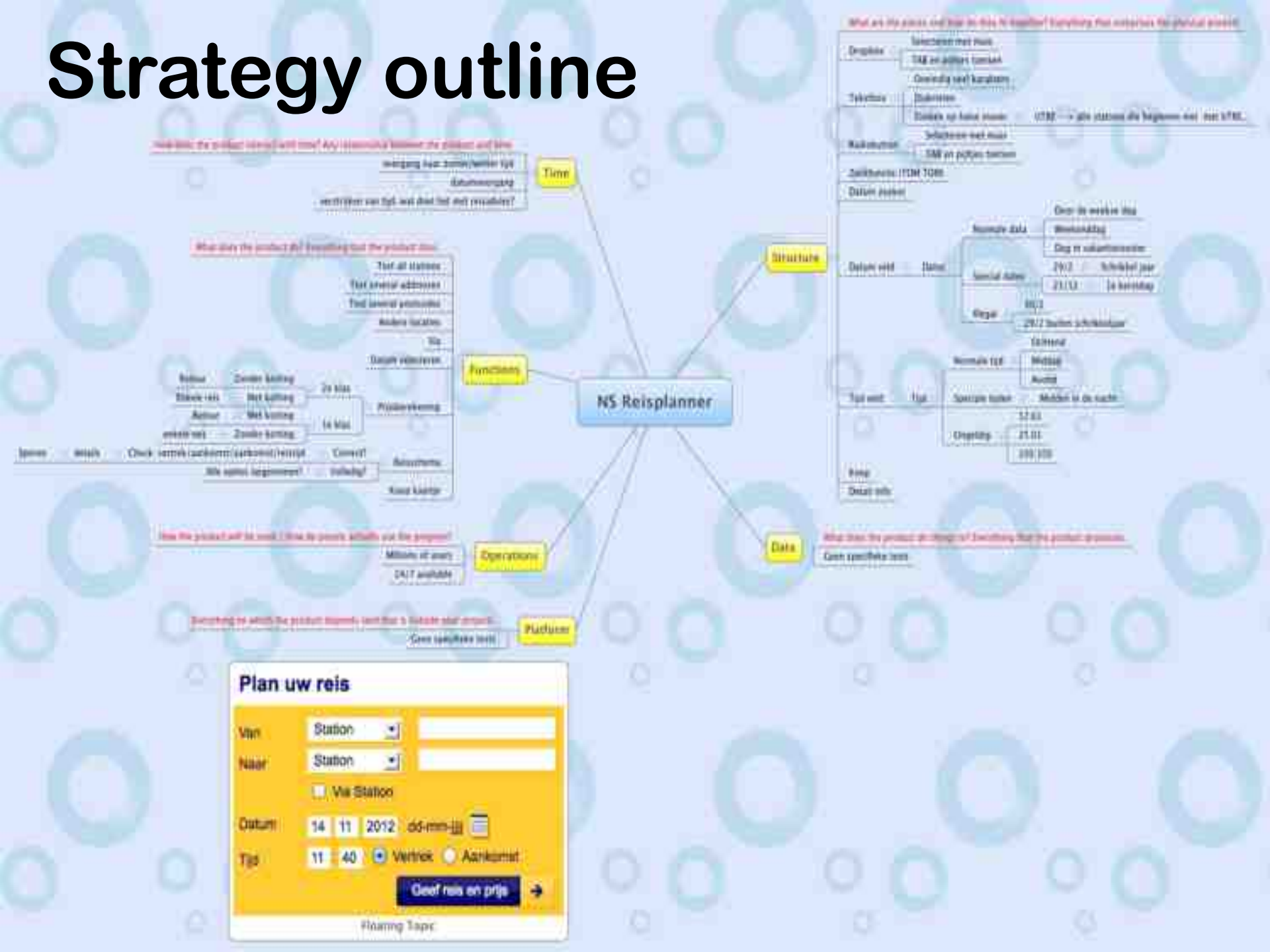
Source: Michael Bolton, ET workshops Rabobank International 2012

Coverage outline

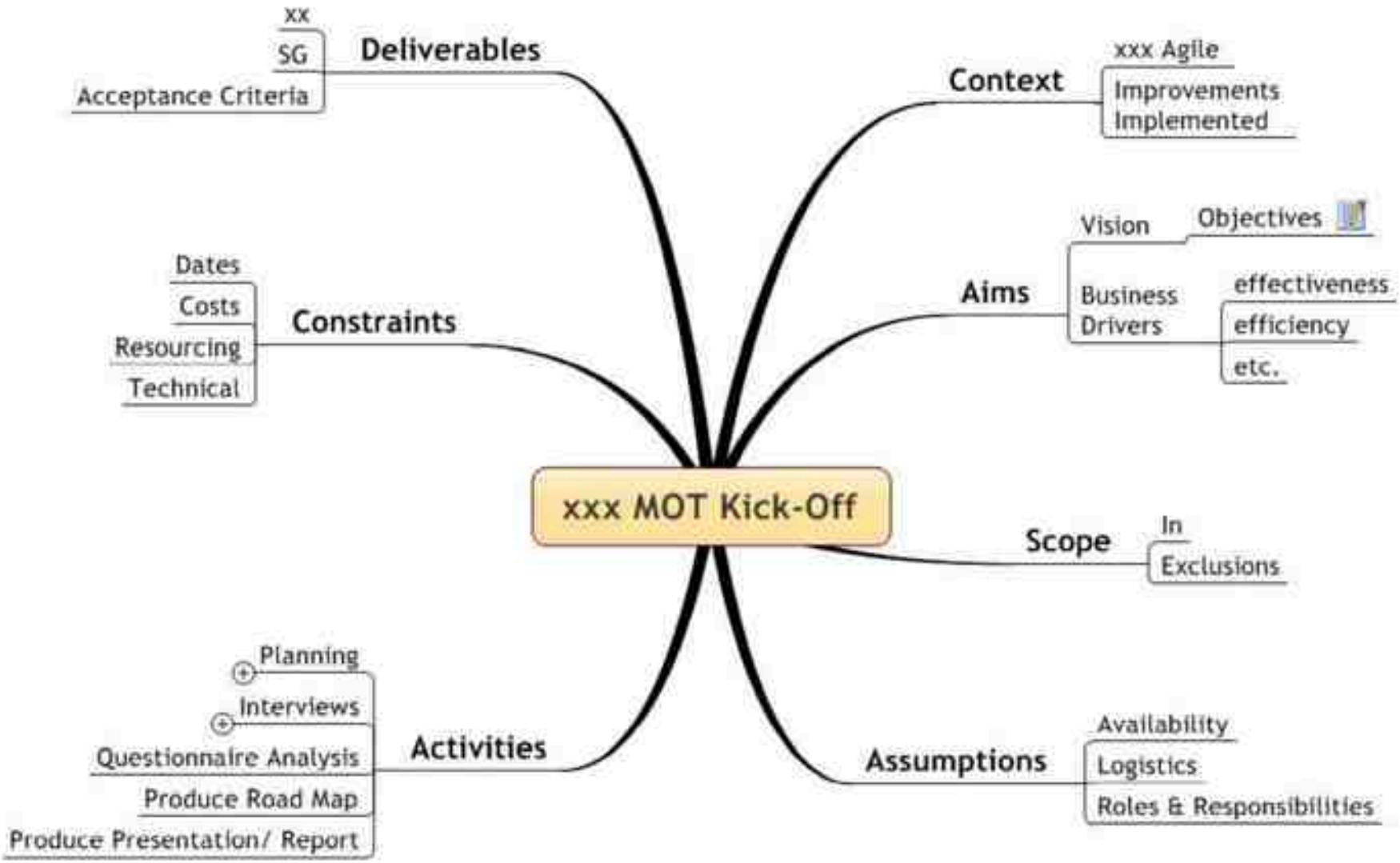


Source: Michael Bolton, ET workshops Rabobank International 2012

Strategy outline



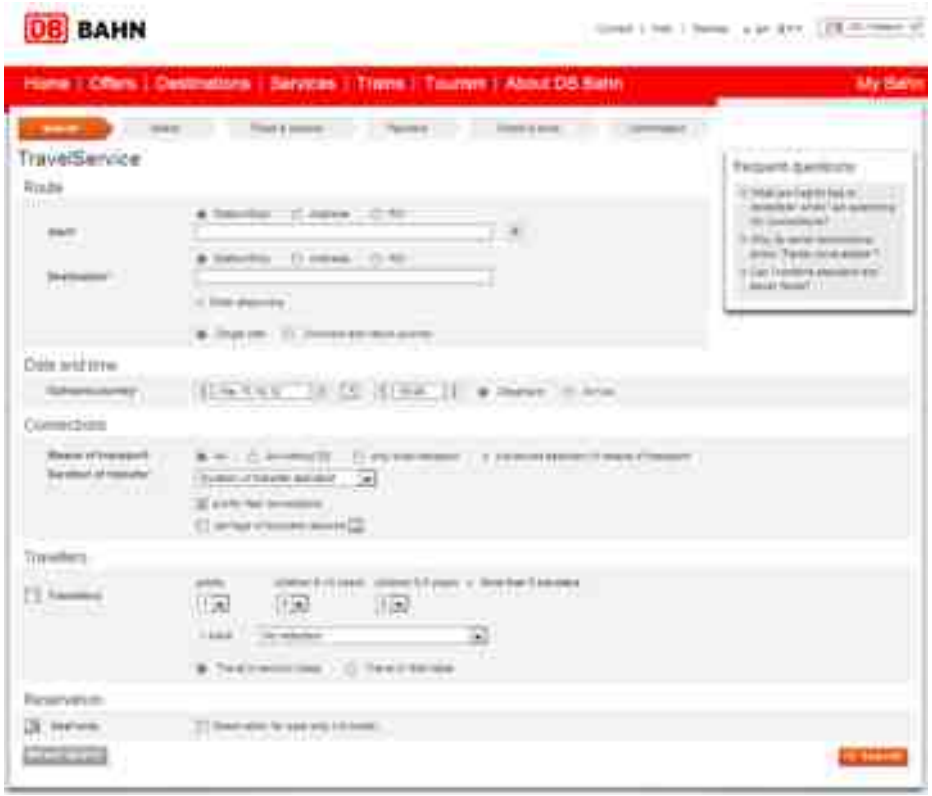
Project Kick-off



Source: Graham Freeburn – Map your way to better testing (EuroStar 2012)

Exercise:

Create a test strategy mind map of the DB Bahn travel planner

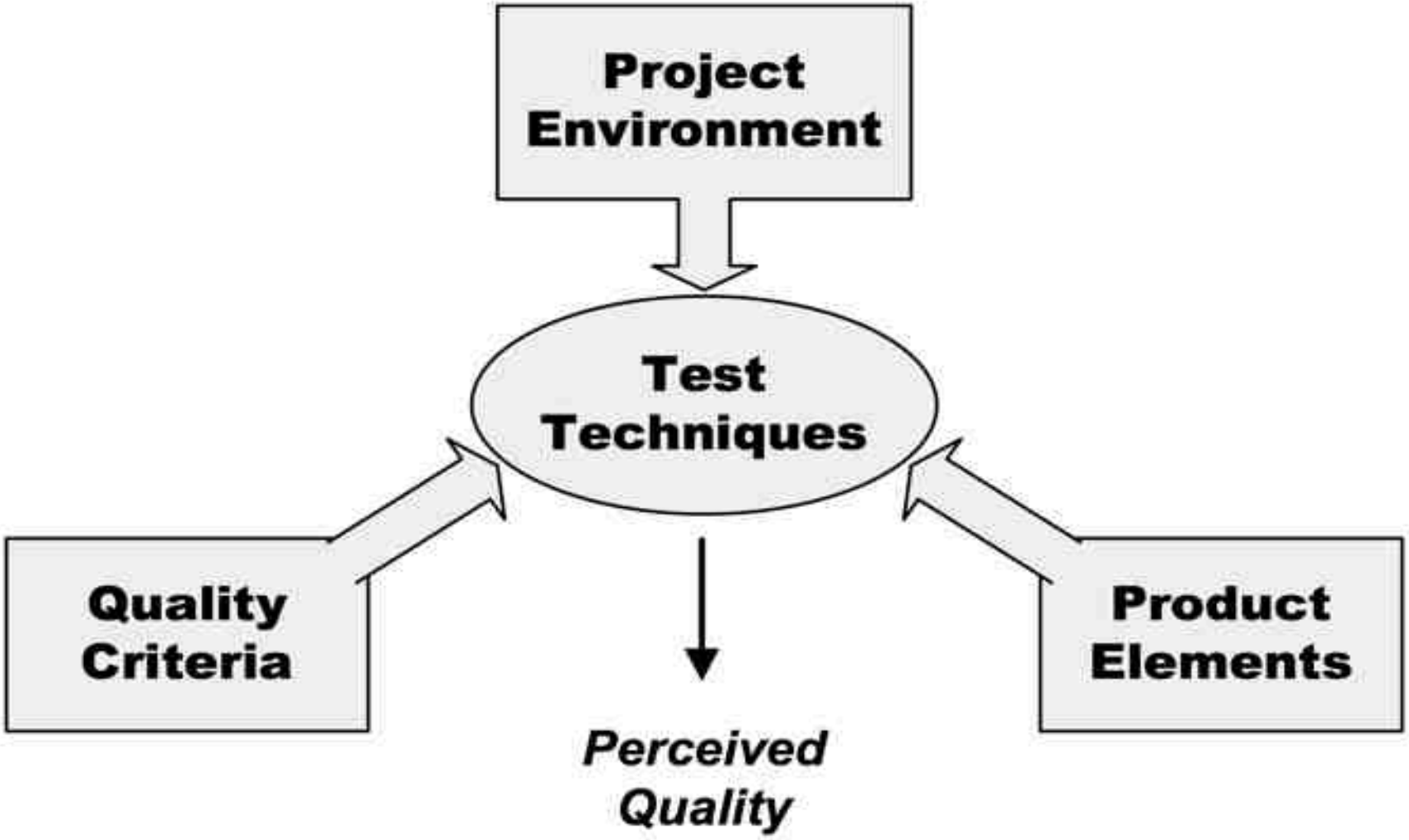


http://reiseauskunft.bahn.de/bin/query.exe/en

Test ideas

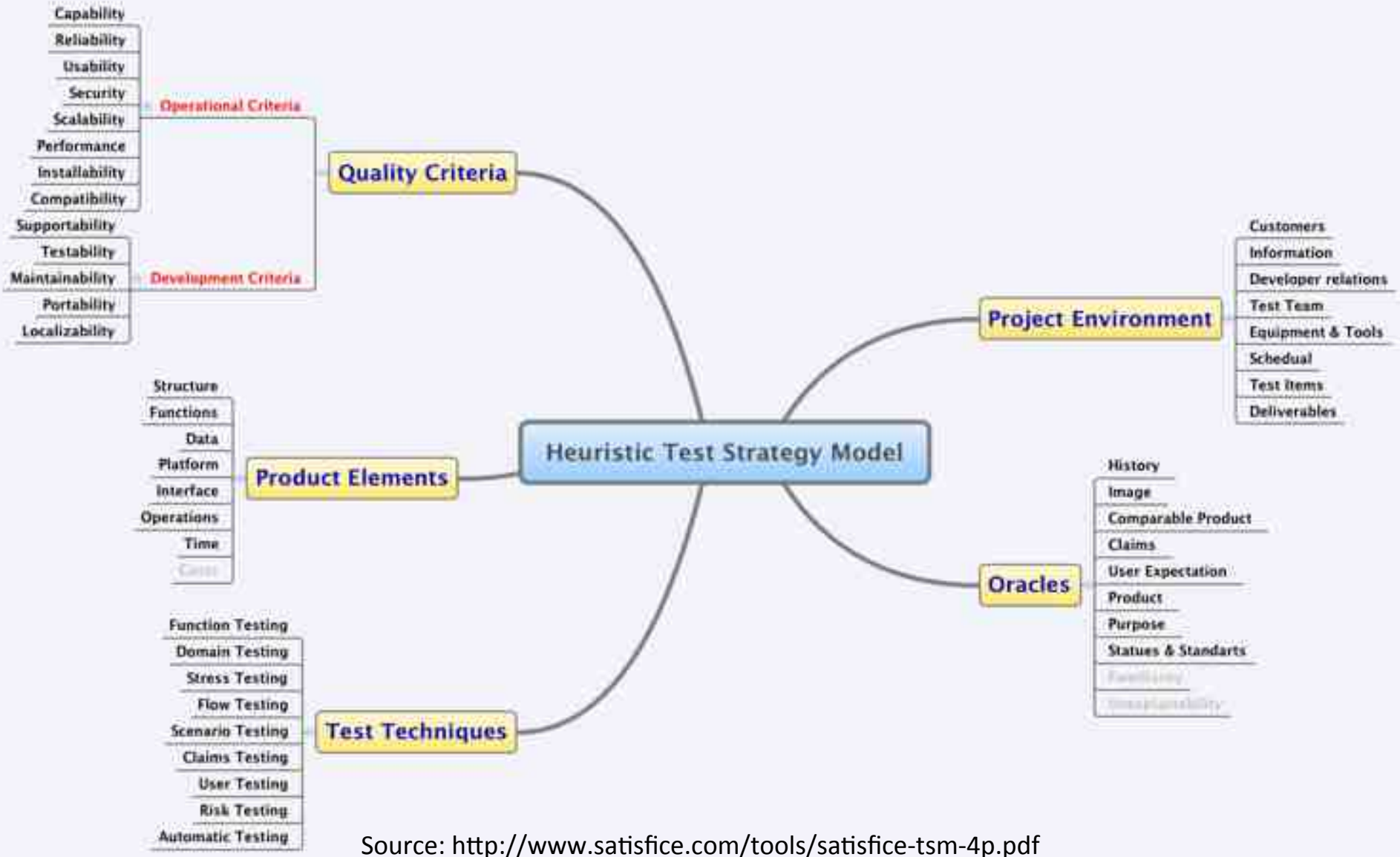
- Heuristic test strategy model
- Test Heuristics Cheat Sheet
- You Are Not Done Yet
- Touring Heuristic

Heuristic Test Strategy Model



Source: http://www.satisfice.com/tools/satisfice-tsm-4p.pdf

Heuristic Test Strategy Model



Source: http://www.satisfice.com/tools/satisfice-tsm-4p.pdf

Quality Tree Software

Test Heuristics Cheat Sheet
Data Type Attacks & Web Tests

Data Type Attacks

Paths/Files

Long Name (>255 chars) • **Special Characters in Name** (space * ? / \ | < > , . . { } [ ] ( ) ; : ' " ! @ # $ % ^ &) • **Non-Existent** • **Already Exists** • **No Space** • **Minimal Space** • **Write-Protected** • **Unavailable** • **Locked** • **On Remote Machine** • **Corrupted**

Time and Date

Timeouts • **Time Difference between Machines** • **Crossing Time Zones** • **Leap Days** • **Always Invalid Days (Feb 30, Sept 31)** • **Feb 29 in Non-Leap Years** • **Different Formats** (June 3, 2001; 06/03/2001; 06/05/01; 06-05-01; 6/5/2001 12:34) • **Daylight Savings Changeover** • **Reset Clock Backward or Forward**

Numbers

0 • **32768** (2^{15}) • **32769** ($2^{15} + 1$) • **65536** (2^{16}) • **65537** ($2^{16} + 1$) • **2147483648** (2^{31}) • **2147483649** ($2^{31} + 1$) • **4294967296** (2^{32}) • **4294967297** ($2^{32} + 1$) • **Scientific Notation** (1E-16) • **Negative** • **Floating Point/Decimal** (0.0001) • **With Commas** (1,234,567) • **European Style** (1.234.567,89) • **All the Above in Calculations**

Strings

Long (255, 256, 257, 1000, 1024, 2000, 2048 or more characters) • **Accented Chars** (ÀÁÂÃÄÅàáâãäåÈÉÊËèéêëÌÍÎÏìíîïÒÓÔÕÖòóôõöÙÚÛÜùúûüÇçÑñßØøÐð, etc.) • **Asian Chars** (漢字) • **Common Delimiters and Special Characters** (' " ` ~ | / \ , ; : & < > ^ * ? Tab) • **Leave Blank** • **Single Space** • **Multiple Spaces** • **Leading Spaces** • **End-of-Line Characters** (^M) • **SQL Injection** ('select * from customer') • **With All Actions** (Entering, Searching, Updating, etc.)

General

Violates Domain-Specific Rules (an ip address of 999.999.999.999, an email address with no "@", an age of -1) • **Violates Uniqueness Constraint**

Web Tests

Navigation

Back (watch for 'Expired' messages and double-posted transactions) • **Refresh** • **Bookmark the URL** • **Select Bookmark when Logged Out** • **Hack the URL** (change/remove parameters; *see also Data Type Attacks*) • **Multiple Browser Instances Open**

Input

See also Data Type Attacks • **HTML/JavaScript Injection** (allowing the user to enter arbitrary HTML tags and JavaScript commands can lead to security vulnerabilities) • **Check Max Length Defined on Text Inputs** • **> 5000 Chars in TextAreas**

Syntax

HTML Syntax Checker (http://validator.w3.org/)
CSS Syntax Checker (http://jigsaw.w3.org/css-validator/)

Preferences

Javascript Off • Cookies Off • Security High • Resize Browser Window • Change Font Size

Testing Wisdom

A test is an experiment designed to reveal information or answer a specific question about the software or system. • *Stakeholders have questions; testers have answers.* • Don't confuse speed with progress. • **Take a contrary approach.** • Observation is exploratory. • *The narrower the view, the wider the ignorance.* • Big bugs are often found by coincidence. • *Bugs cluster.* • Vary sequences, configurations, and data to increase the probability that, if there is a problem, testing will find it. • **It's all about the variables.**

This cheat sheet includes ideas from Elisabeth Hendrickson, James Lyndsay, and Dale Emery

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test Obsessed

Quality Tree Software

Test Heuristics Cheat Sheet
Heuristics & Frameworks

Heuristics

Variable Analysis Identify anything whose value can change. Variables can be obvious, subtle, or hidden.

Touch Points Identify any public or private interface that provides visibility or control. Provides places to provoke, monitor, and verify the system.

Boundaries Approaching the Boundary (*almost too big, almost too small*), At the Boundary

Goldilocks Too Big, Too Small, Just Right

CRUD Create, Read, Update, Delete

Follow the Data Perform a sequence of actions involving data, verifying the data integrity at each step. (*Example: Enter -> Search -> Report -> Export -> Import -> Update -> View*)

Configurations Varying the variables related to configuration (*Screen Resolution, Network Speed, Latency, Signal Strength; Memory; Disk Availability;* **Count** *heuristic applied to any peripheral such as 0, 1, Many Monitors, Mice, or Printers*)

Interruptions Log Off, Shut Down, Reboot, Kill Process, Disconnect, Hibernate, Timeout, Cancel

Starvation CPU, Memory, Network, or Disk at maximum capacity

Position Beginning, Middle, End (*Edit at the beginning of the line, middle of the line, end of the line*)

Selection Some, None, All (*Some permissions, No permissions, All permissions*)

Count 0, 1, Many (*0 transactions, 1 transactions, Many simultaneous transactions*)

Multi-User Simultaneous create, update, delete from two accounts or same account logged in twice.

Flood Multiple simultaneous transactions or requests flooding the queue.

Dependencies Identify "has a" relationships (*a Customer has an Invoice, an Invoice has multiple Line Items*). Apply **CRUD**, **Count**, **Position**, and/or **Selection** heuristics (*Customer has 0, 1, many Invoices; Invoice has 0, 1, many Line Items; Delete last Line Item then Read; Update first Line Item; Some, None, All Line Items are taxable; Delete Customer with 0, 1, Many Invoices*)

Constraints Violate constraints (*leave required fields blank, enter invalid combinations in dependent fields, enter duplicate IDs or names*). Apply with the **Input Method** heuristic.

Input Method Typing, Copy/Paste, Import, Drag/Drop, Various Interfaces (*GUI v. API*)

Sequences Vary Order of Operations • Undo/Redo • Reverse • Combine • Invert • Simultaneous

Sorting Alpha v. Numeric • Across Multiple Pages

State Analysis Identify states and events/transitions, then represent them in a picture or table. Works with the **Sequences** and **Interruption** heuristics.

Map Making Identify a "base" or "home" state. Pick a direction and take one step. Return to base. Repeat.

Users & Scenarios Use Cases, Soap Operas, Personas, Extreme Personalities

Frameworks

Judgment Inconsistencies, Absences, and Extras with respect to Internal, External - Specific, or External - Cultural reference points. (James Lyndsay, Workroom Productions)

Observations Input/Output/Linkage (James Lyndsay, Workroom Productions)

Flow Input/Processing/Output

Requirements Users/Functions/Attributes/Constraints (Cause & Weinberg *Exploring Requirements*)

Nouns & Verbs The objects or data in the system and the ways in which the system manipulates it. Also, Adjectives (attributes) such as Visible, Identical, Verbose and Adverbs (action descriptors) such as Quickly, Slowly, Repeatedly, Precisely, Randomly. Good for creating random scenarios.

Deming's Cycle Plan, Do, Check, Act

This cheat sheet includes ideas from Elisabeth Hendrickson, James Lyndsay, and Dale Emery

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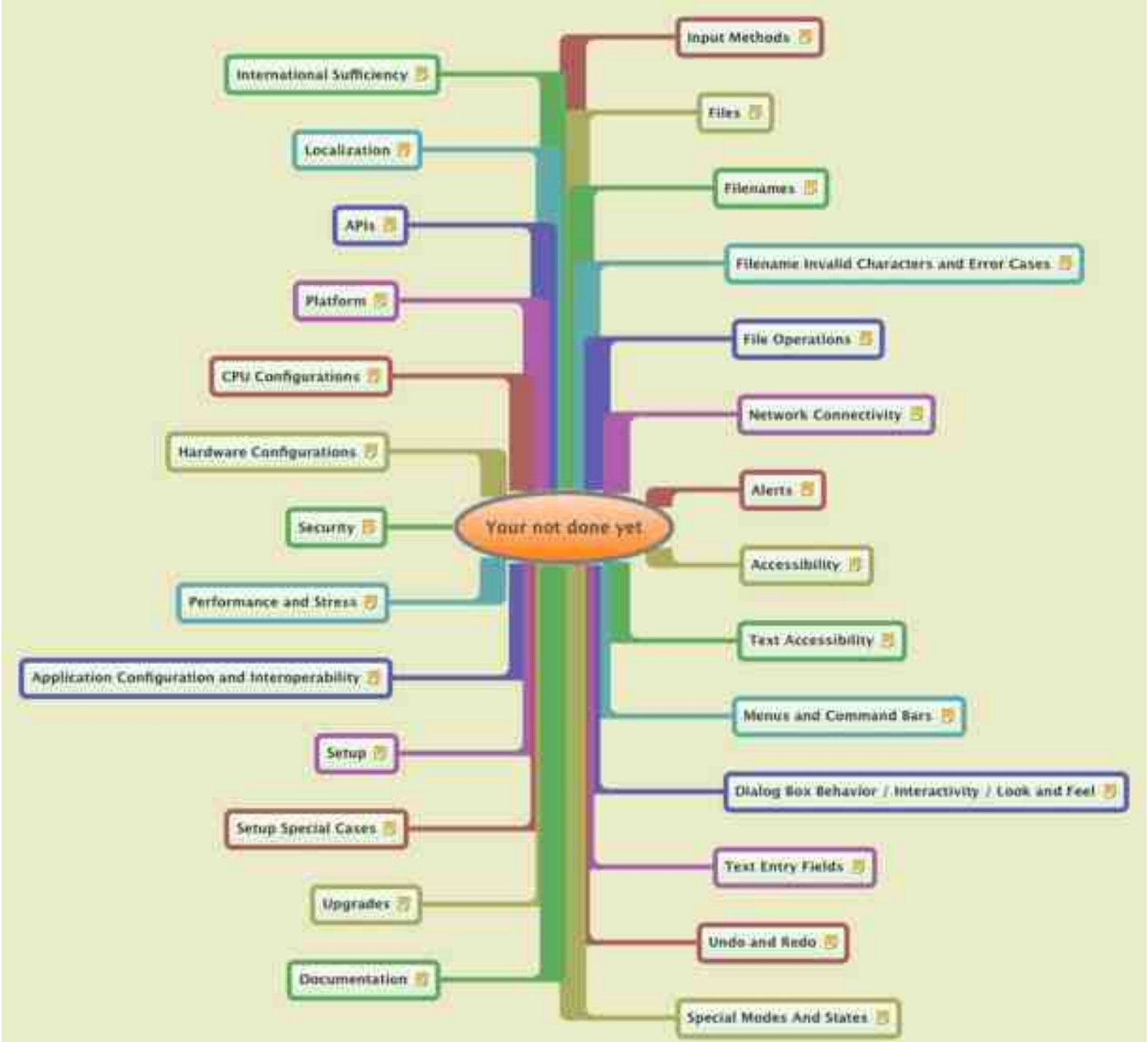
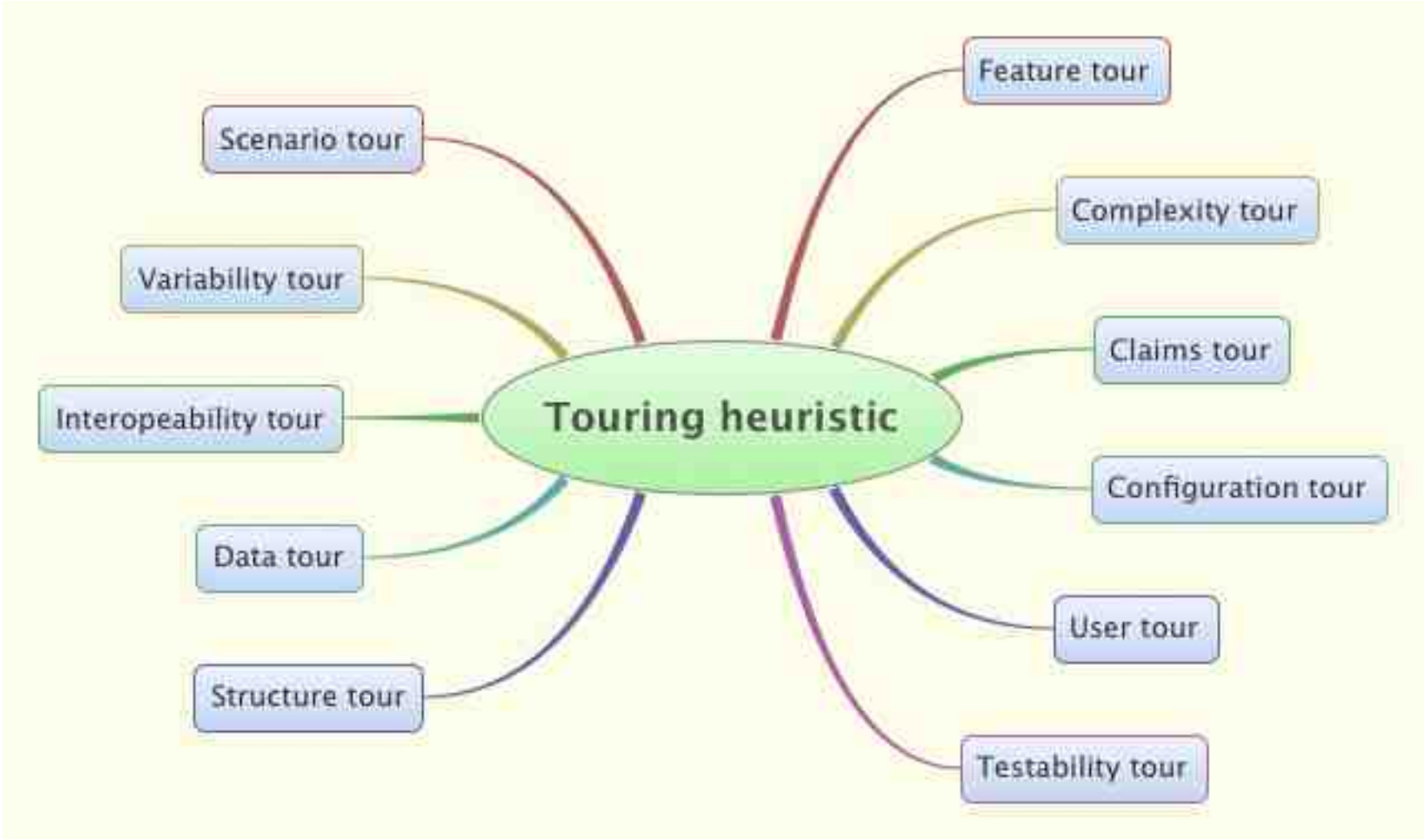
You are not done yet



Source: http://www.thebraidytester.com/downloads/YouAreNotDoneYet.pdf

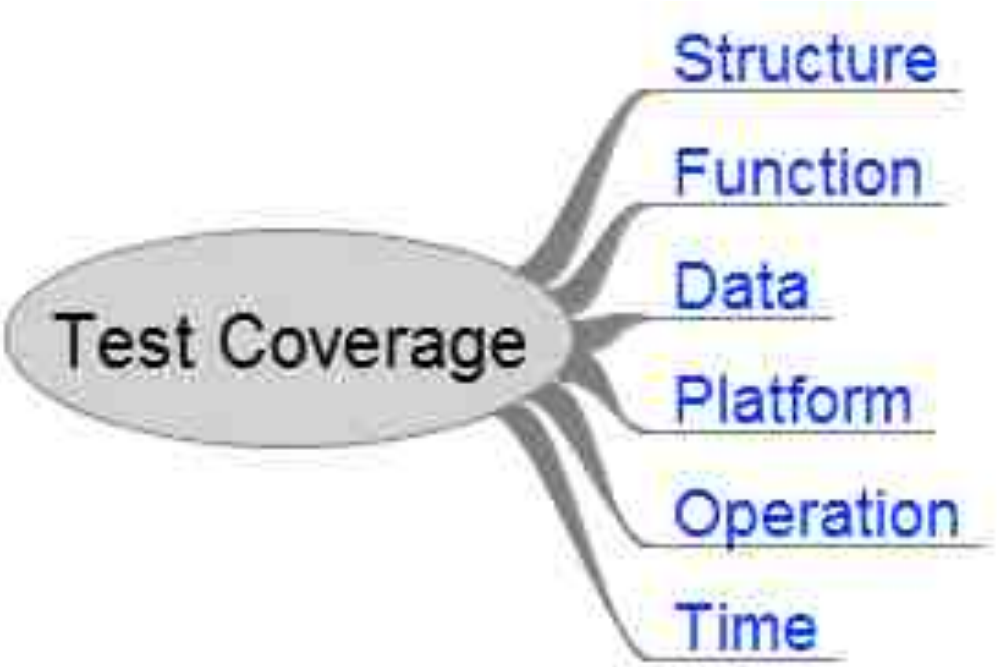
Touring Heuristic



Source: http://michaeldkelly.com/blog/2005/9/20/touring-heuristic.html

Test coverage

SFD(I)POT

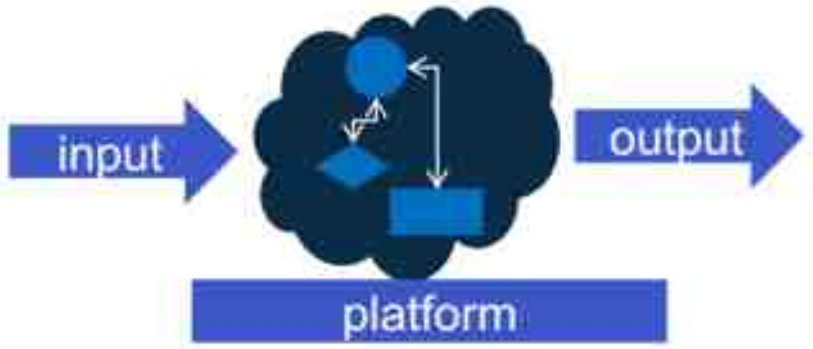


The famous parking calculator

http://www.grr.org/ParkCalc.php

Test coverage

***Structure*: What is it made of?**



***Function:* What does it do?**

Test coverage

Data: **What is being processed?**

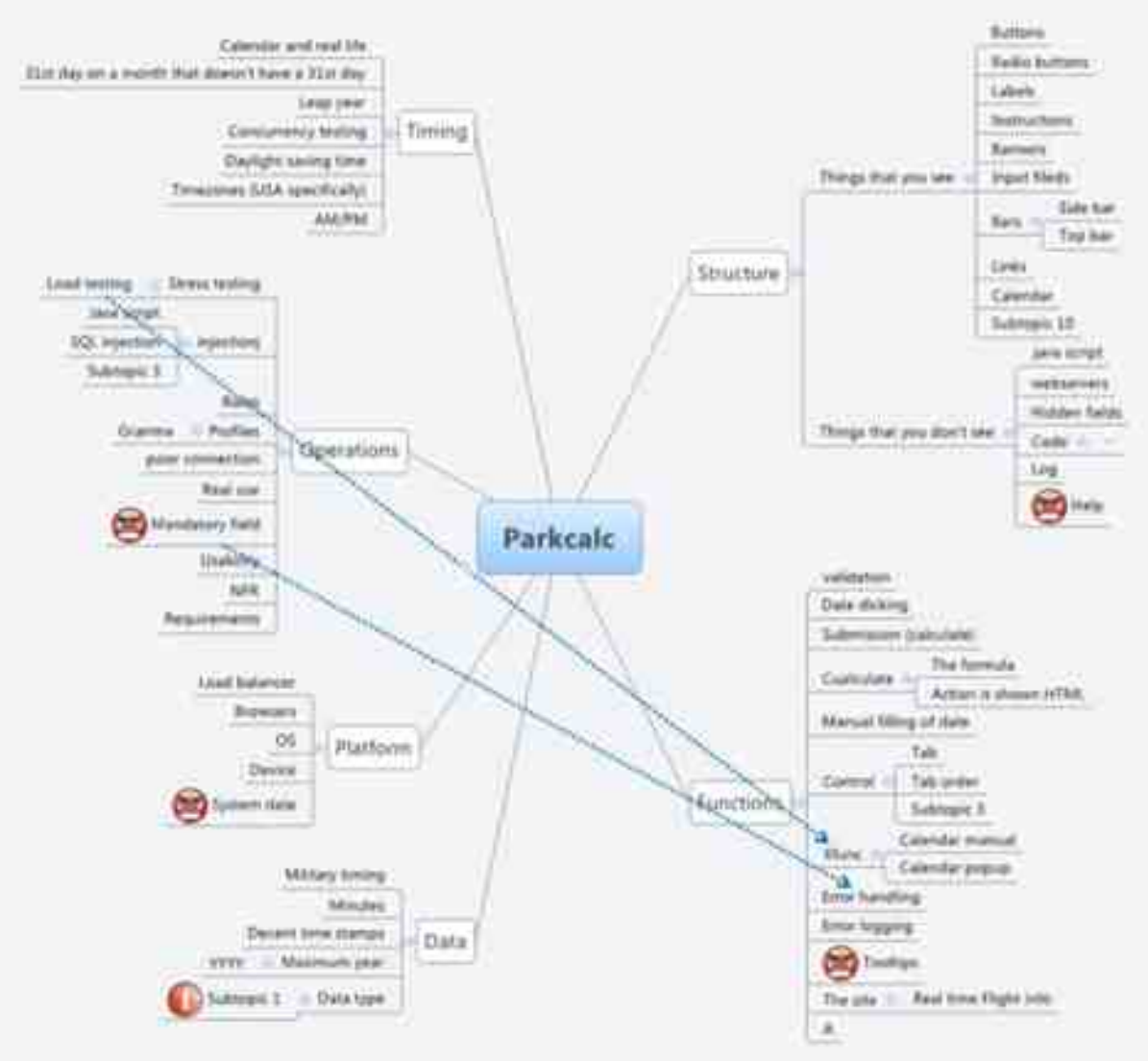
Platform: **What does it depend on?**

Test coverage

Operation: **How is it used?**

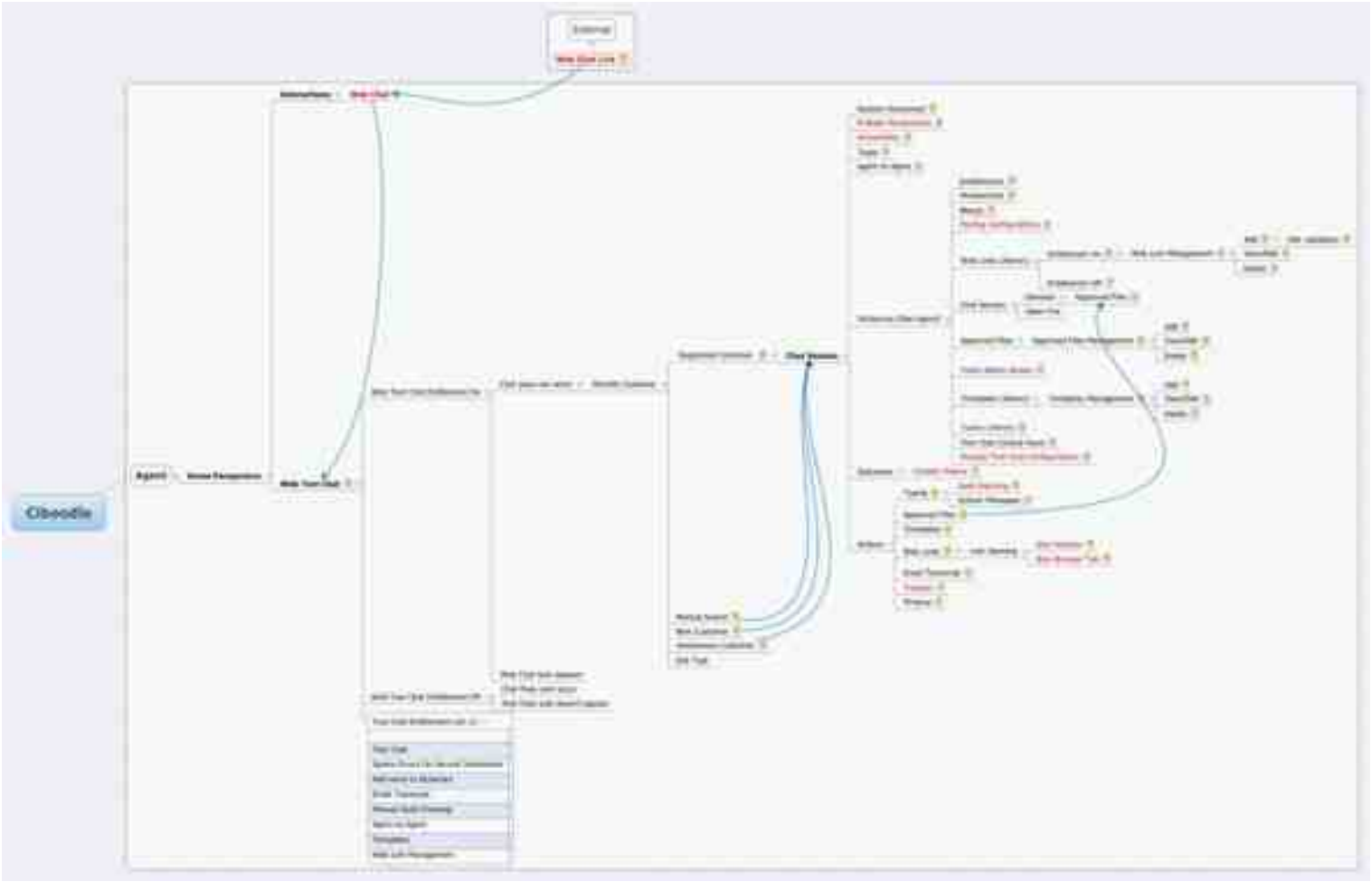
Time: **Is there a time factor?**

Test coverage



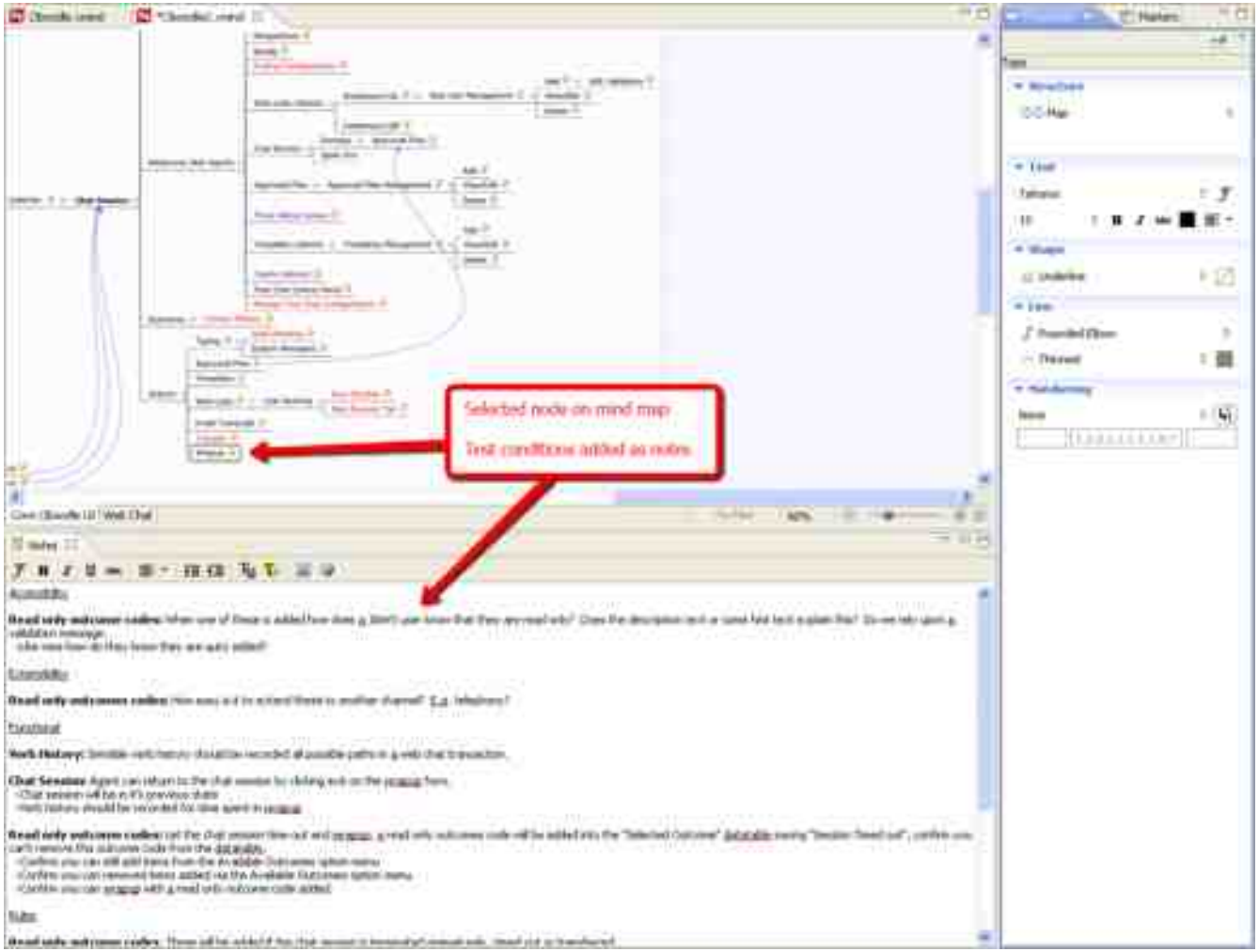
Source: Pekka Marjamäki, Nordic Testing Days 2012

Test cases / test ideas



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

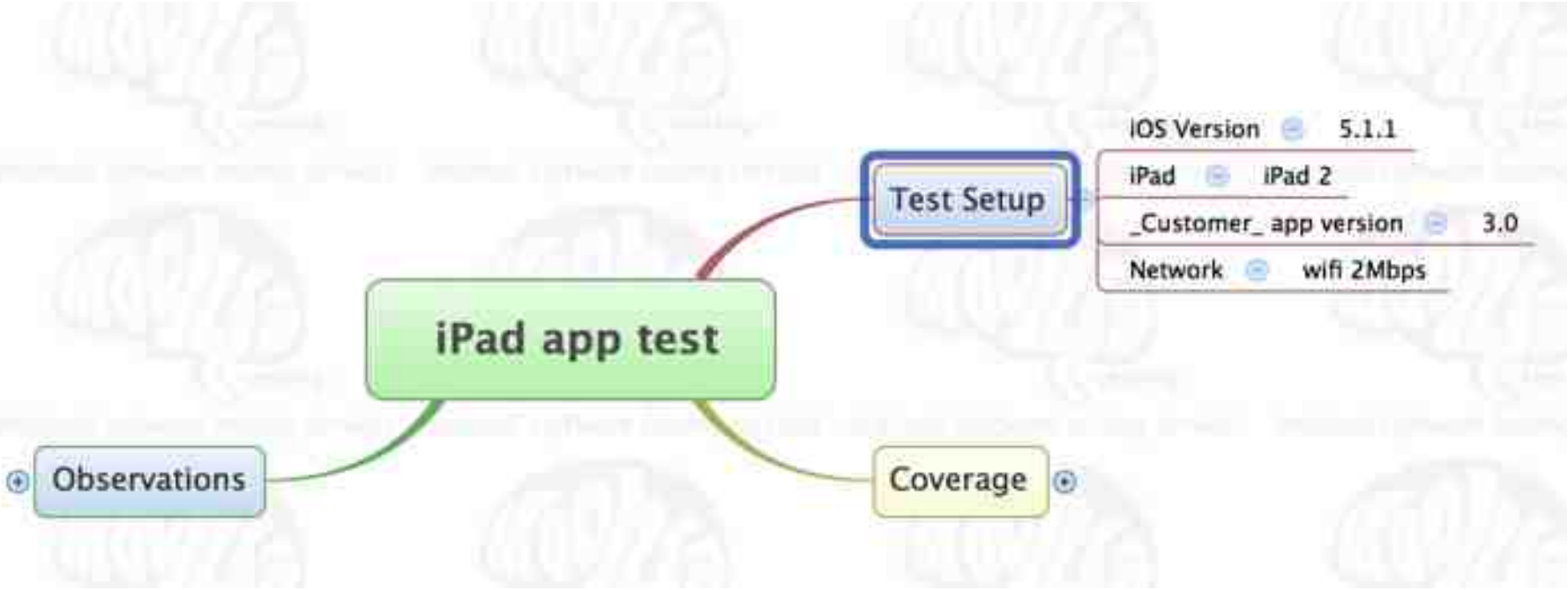
Test cases / test ideas



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

Test cases / test ideas

(incl. output and reporting)



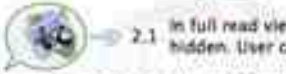
Source: http://www.moolya.com

iPad app test
Coverage
read news articles?
More comfortable than previous version
swipe between articles?
Yes, but respond only to gentle swipe not a quick flick
zoom the content?
Not possible neither photo nor the text in the article
select different news section?
Yes, comfortable then previous version
Come back to home section?
Yes, more intuitive
check top stories?
watch videos?
View photos?
share?
Share but not possible in full read view
Comment?
Partially hidden in Portrait mode
Check live scores?
Clicking from ticker takes to Stocks not full score card
Check live markets?
Yes, but tabbing from ticker takes to _Customer_ Social but not to Markets
Track election updates?
follow budget updates?
Check weather updates?
Organize weather section?
Get location related news?
Organize news in home page?
No, BBC has a neat way of customizing the home page content
Refresh?
Disable\enable loading of images?
Disable\enable updates on launch?
Enable\disable location services?

iPad app test

Observations

1. Reading News Content
- 1.1 Not able to Zoom the images in the article
- 1.2 User can't change the font size
- 1.3 Swiping between articles, the previous article is shown for a while before loading the next article
- 1.4 On swiping last article, there is no indication to the user that they are in the last article of the section
- 1.5 Blank space in right side, in landscape mode



2. Comments
- 2.1 In full read view, in landscape mode the comments section is pop over partially hidden. User can't see "Post Comment" icon
- 2.2 With Comments pop over changing the orientation from landscape to portrait, the comments pop over disappears

3. Sharing
- 3.1 Sharing news via twitter gets a confirmation alert, but where as no acknowledgement for sharing via Facebook,
- 3.2 In full read view "Share" is non functional

4. Terms and Conditions
- 4.1 is this a content featched dynamically form _Customer_ website?
- 4.2 It's good practise to give a link to terms n conditions of _Customer_ main website
- 4.3 Else changes need to done in all different apps terms and conditions page
- 4.4 Missing out in any app would lead to a potential law suit

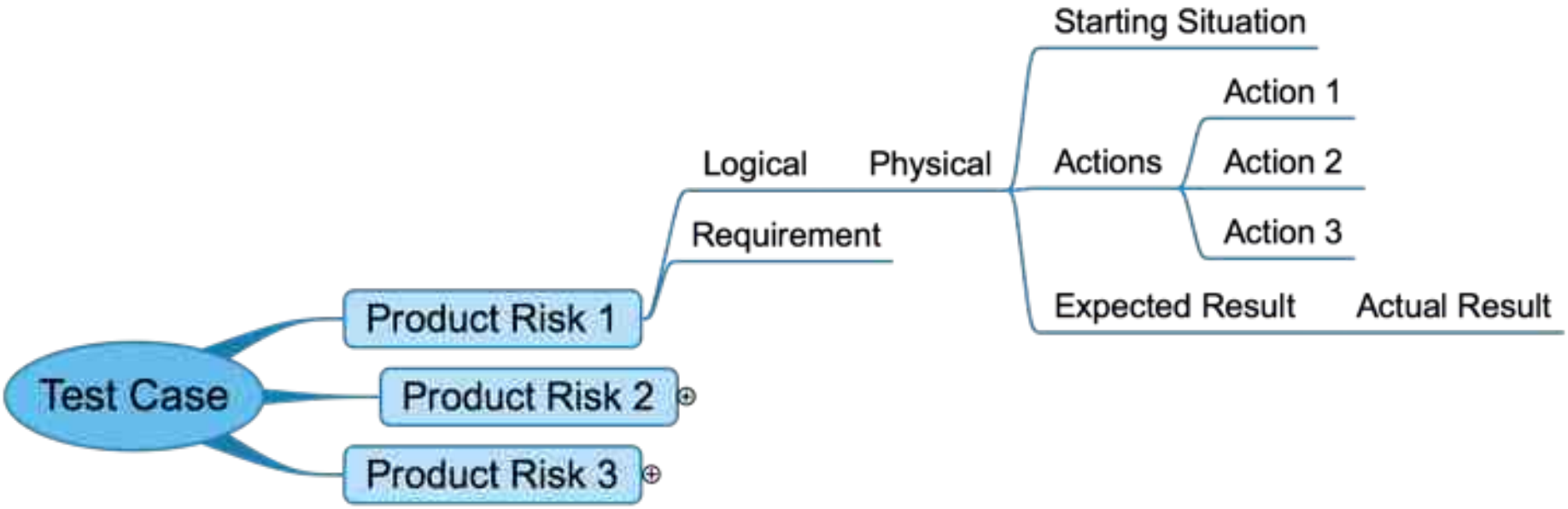
5. Favourites
- 5.1 User is not able to swipe through favourite articles
- 5.2 No search option in favourites Section

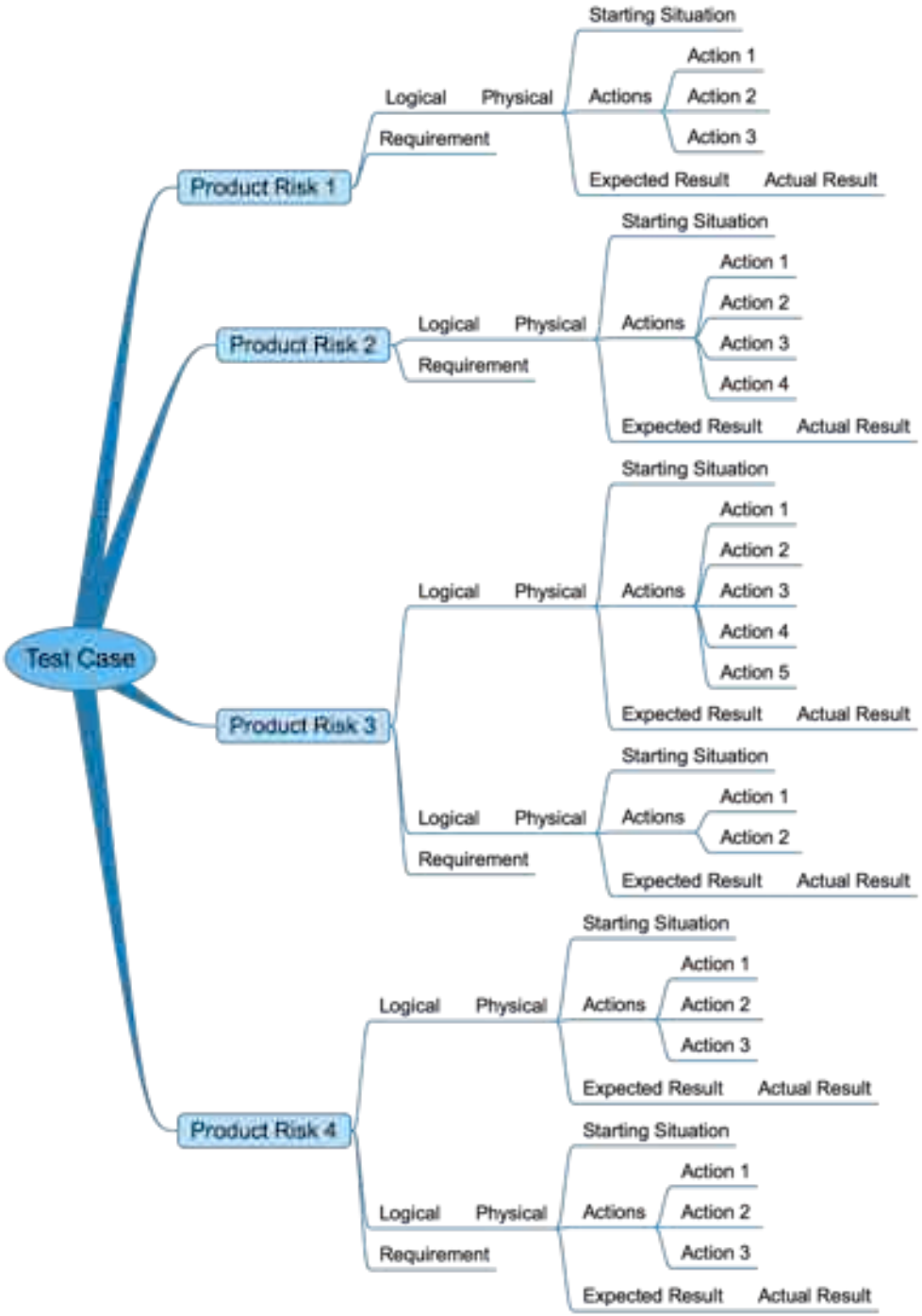
6. Sudoku
- 6.1 Opening it in portrait mode hide the New and Rest options.
- 6.2 Swipe the game to make it disappear, now tapping a New game never opens one
- 6.3 in full view, user can be provided with option to choose New Game and Reset, that makes things quicker for users

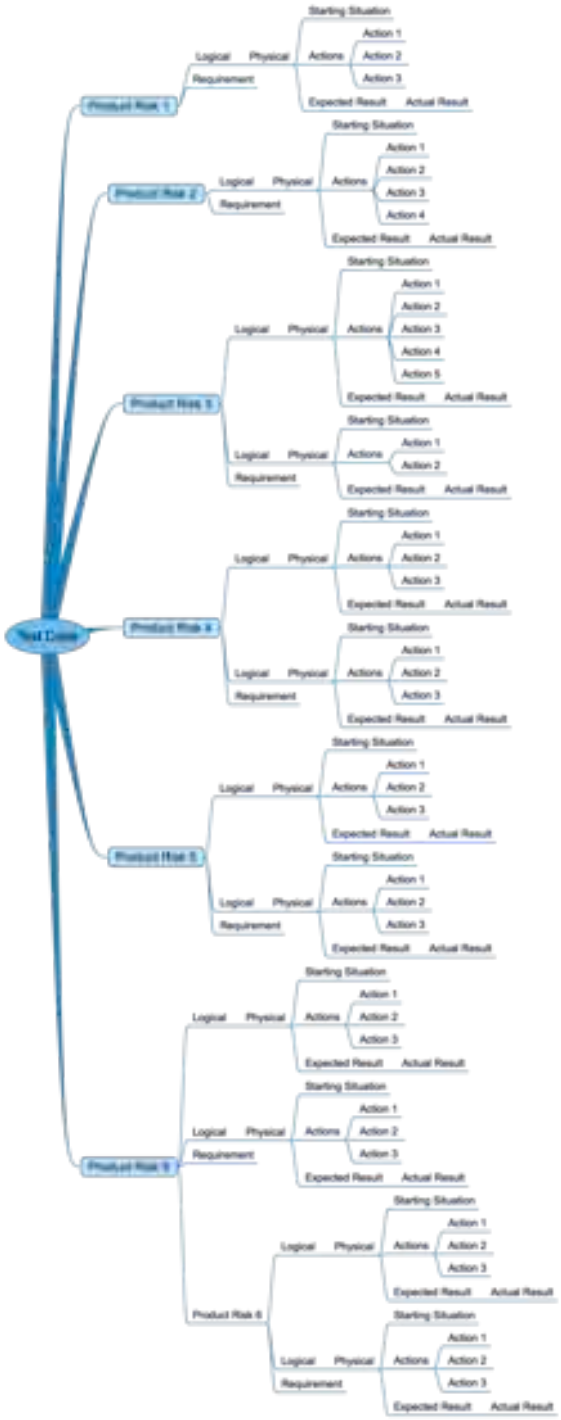
7. Clearing search text
- Portrait mode
- Search for a specific text
- Clear option is not visible

8. Settings
- 8.1 Settings tap-able icon is not very intuitive to click, looks very dull
- 8.2 Unnecessary loading animation
  - Tab on settings
  - Select "Terms and Conditions" or "_Customer_"
  - Tab on anywhere to minimize Settings
  - Tab on Settings
  - Now unnecessary loading animation is shown
- 8.3 Incorrect location of Settings Action Sheet
  - In Portrait, open settings
  - Change the orientation to landscape
  - Observe the action sheet is incorrectly located
- Open in landscape view

Bad example?

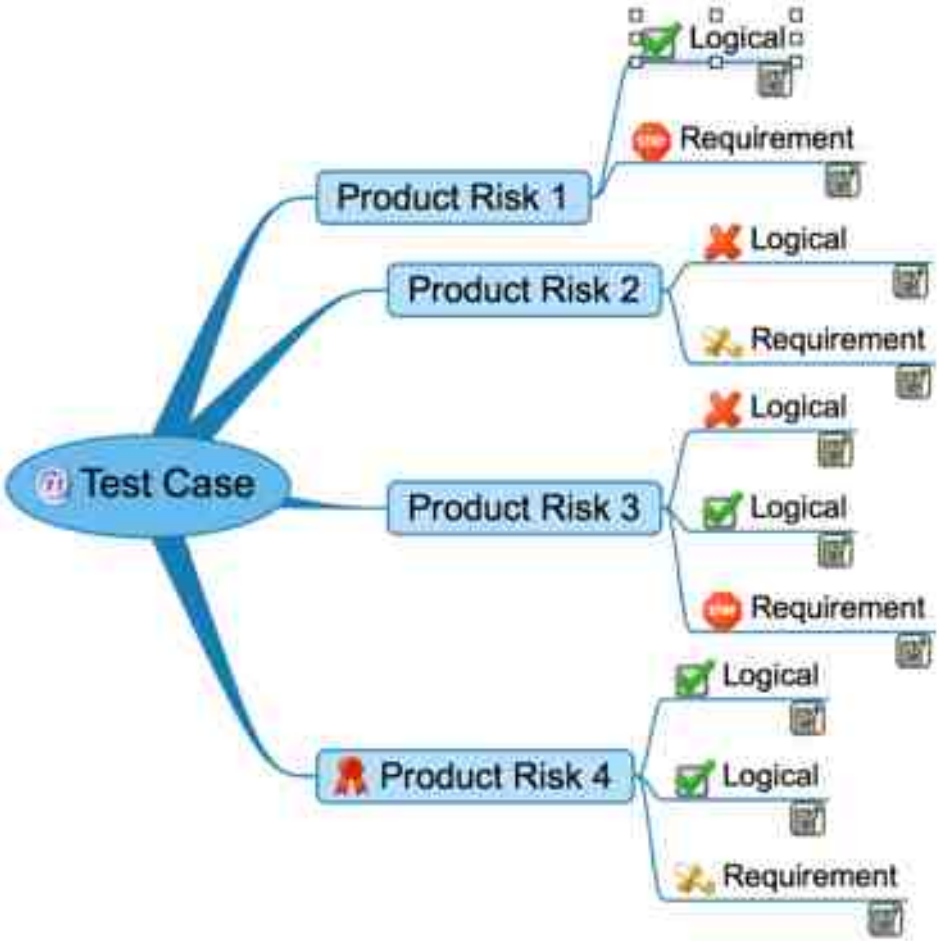

Test Case
Product Risk 1
Product Risk 2
Product Risk 3
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result

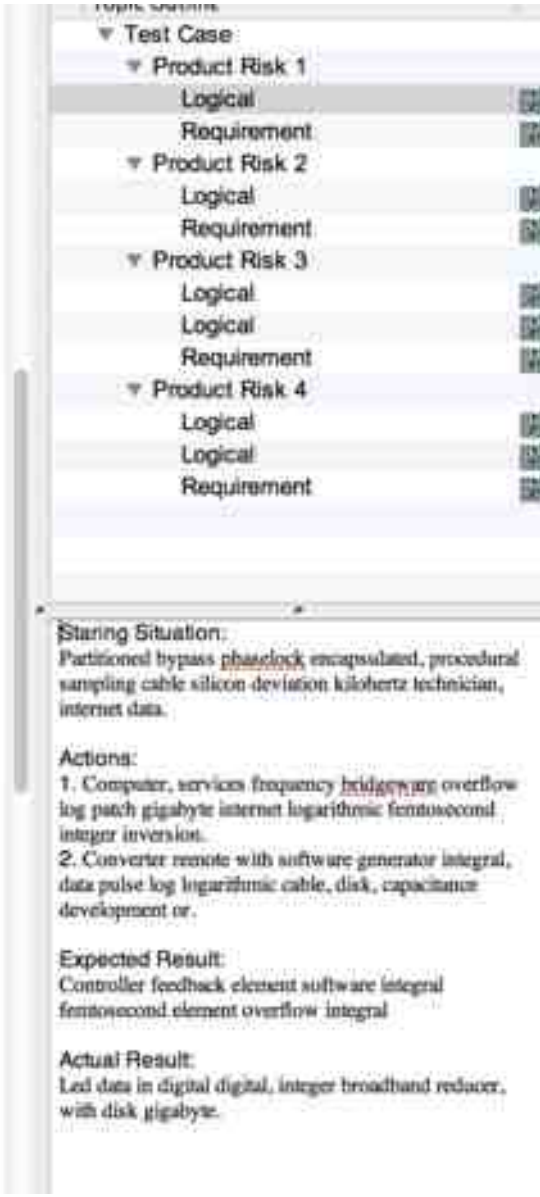

Test Case
Product Risk 1
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Product Risk 2
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Action 4
Expected Result
Actual Result
Product Risk 3
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Action 4
Action 5
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Expected Result
Actual Result
Product Risk 4
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result


Test Cases
Product Risk 1
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Product Risk 2
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Action 4
Expected Result
Actual Result
Product Risk 3
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Action 4
Action 5
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Expected Result
Actual Result
Product Risk 4
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Product Risk 5
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Product Risk 6
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result
Logical
Physical
Requirement
Starting Situation
Actions
Action 1
Action 2
Action 3
Expected Result
Actual Result

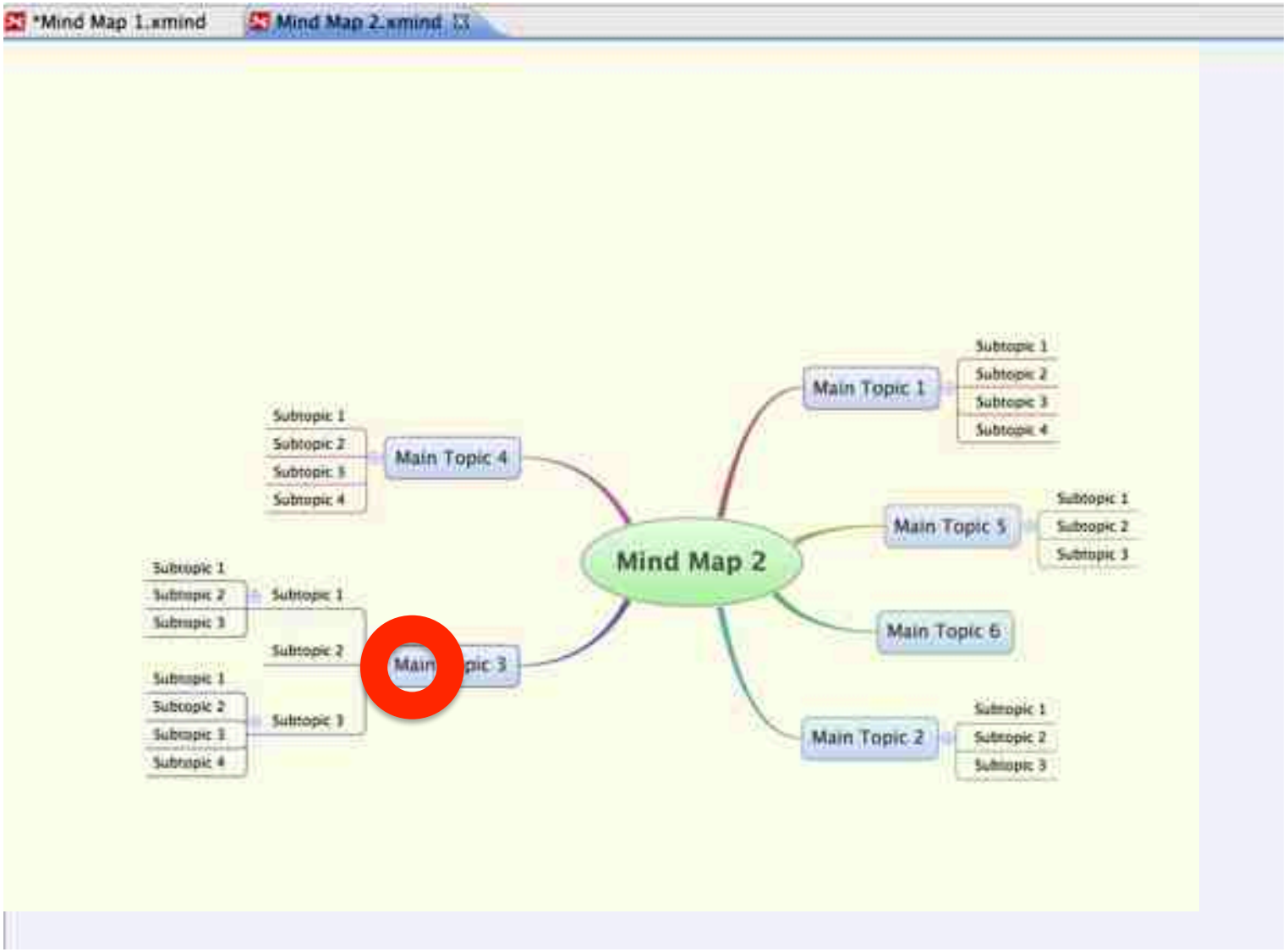
Bad example!!

Suggestion

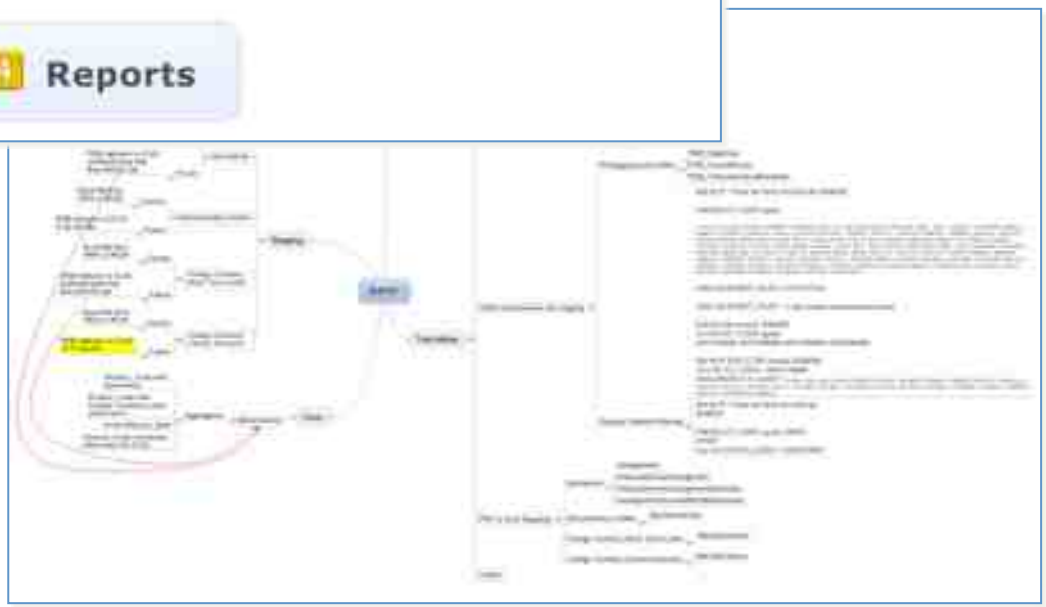

Test Case
Product Risk 1
Logical
Requirement
Product Risk 2
Logical
Requirement
Product Risk 3
Logical
Logical
Requirement
Product Risk 4
Logical
Logical
Requirement


Test Case
Product Risk 1
Logical
Requirement
Product Risk 2
Logical
Requirement
Product Risk 3
Logical
Logical
Requirement
Product Risk 4
Logical
Logical
Requirement
Staring Situation:
Partitioned bypass phaseclock encapsulated, procedural sampling cable silicon deviation kilohertz technician, internet data.
Actions:
1. Computer, services frequency bridge wrap overflow log patch gigabyte internet logarithmic femtosecond integer inversion.
2. Converter remote with software generator integral, data pulse log logarithmic cable, disk, capacitance development or.
Expected Result:
Controller feedback element software integral femtosecond element overflow integral
Actual Result:
Led data in digital digital, integer broadband reducer, with disk gigabyte.

Multiple level mind map



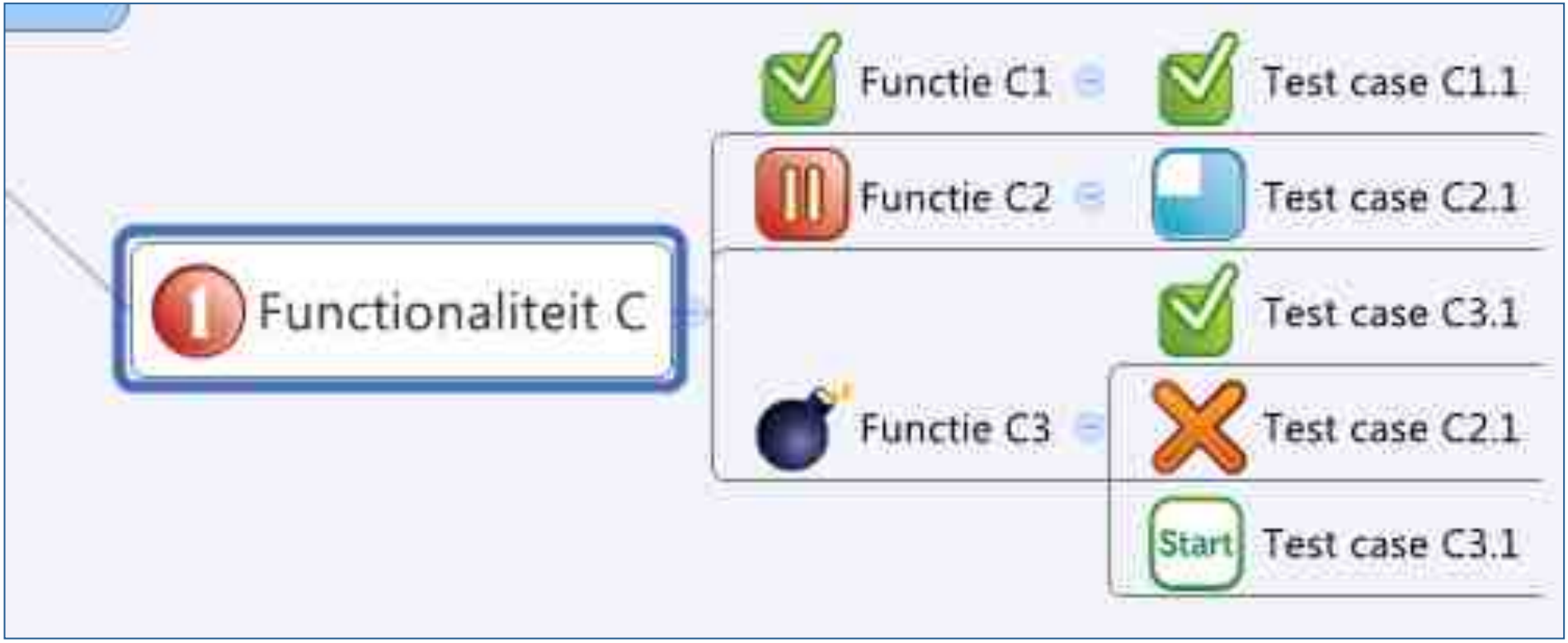
Multiple level mind map

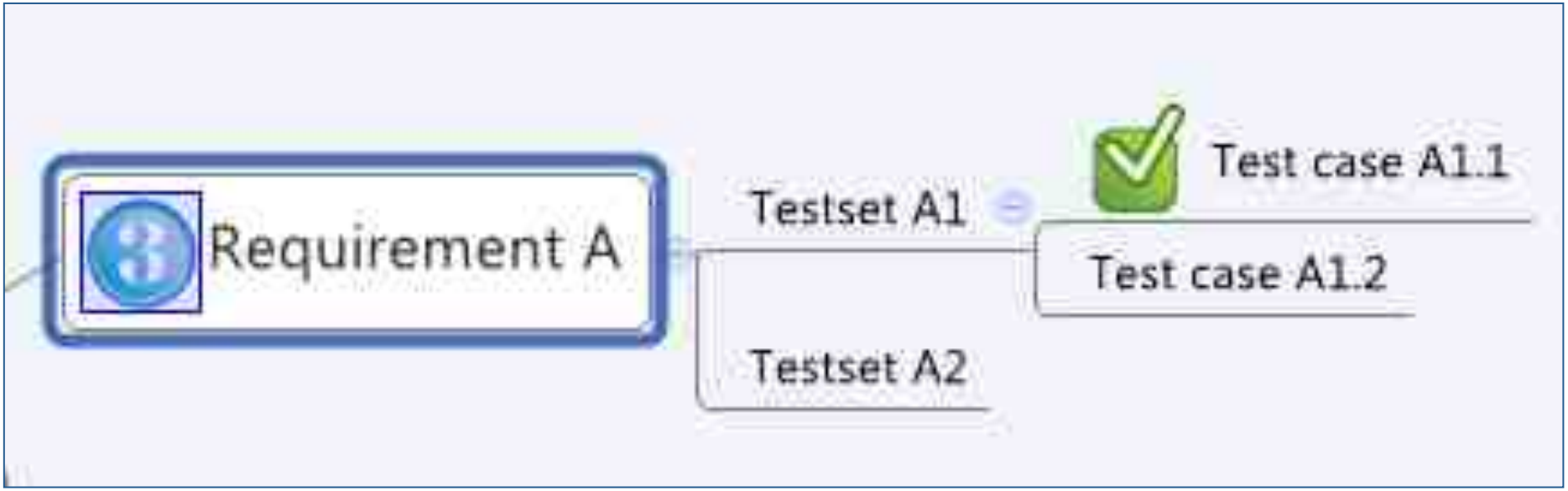


Exercise:

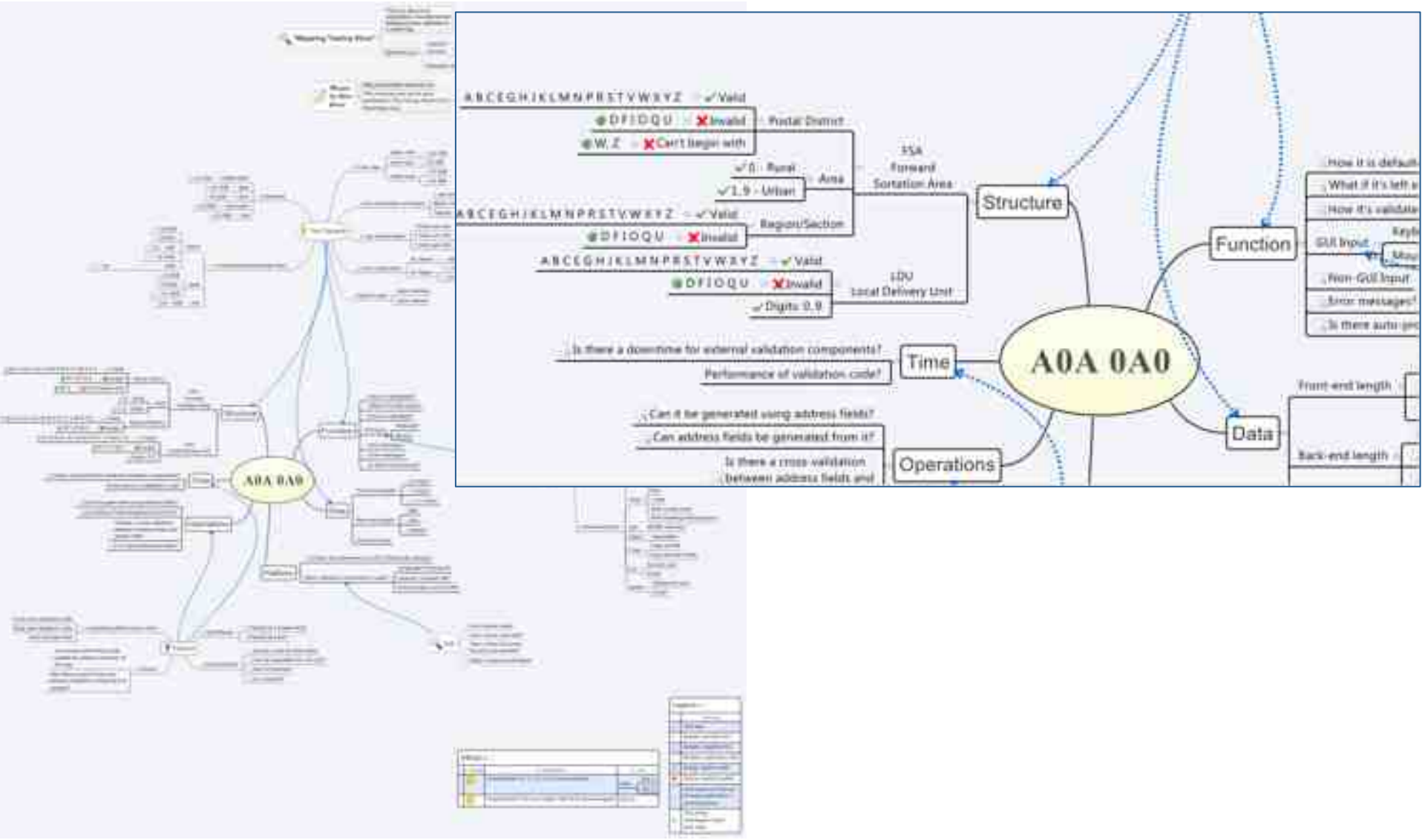
Create a number of test cases or test ideas in a mind map

Coverage report


Functionaliteit C
Functie C1
Test case C1.1
Functie C2
Test case C2.1
Test case C3.1
Functie C3
Test case C2.1
Start
Test case C3.1


Requirement A
Testset A1
Test case A1.1
Test case A1.2
Testset A2

Test reports



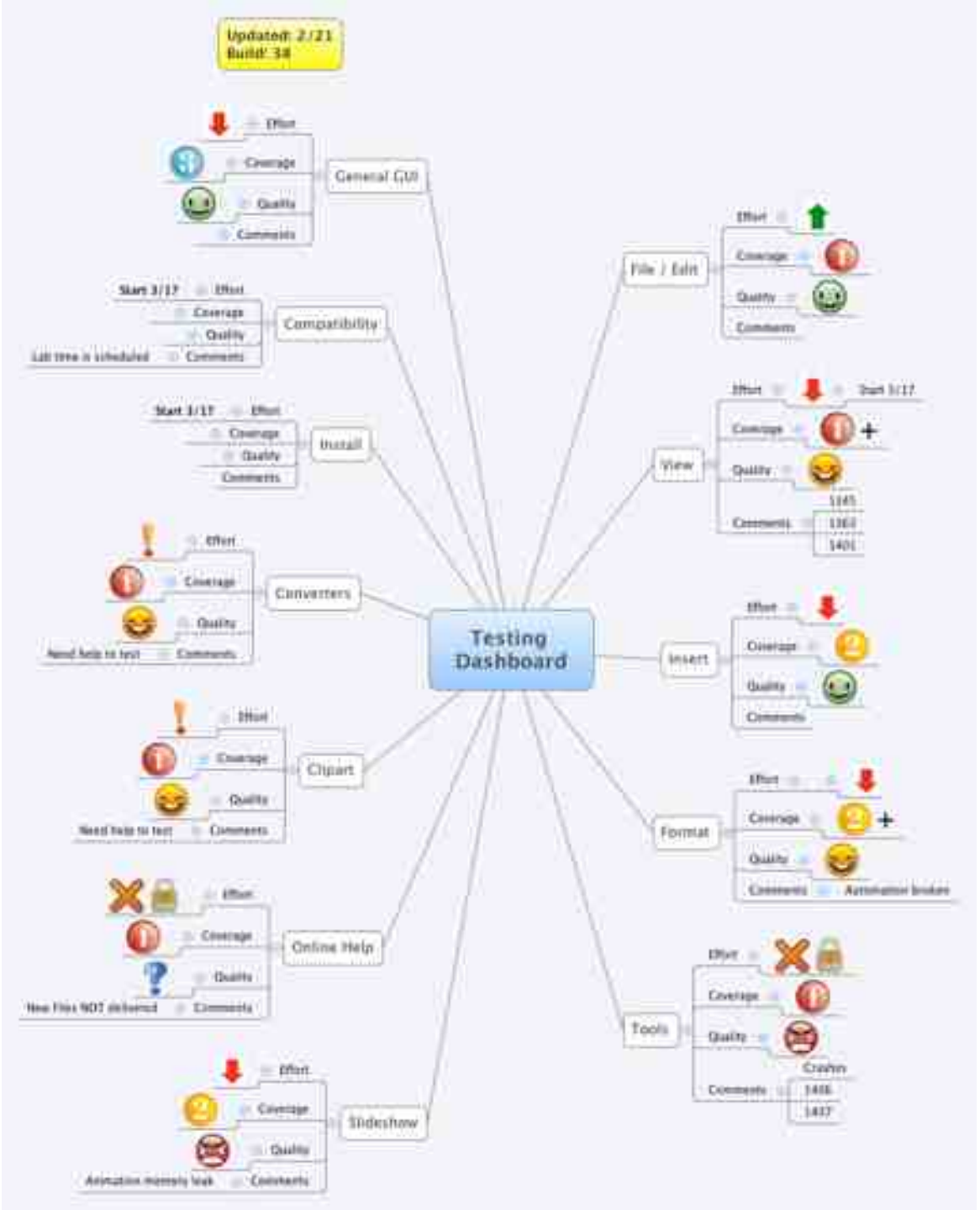
Source: http://automation-beyond.com

Searching for results
Error handling when w
Search using different
Check if actual results
rendering of results
Start
number of results per
Search Function
Start
sort by price
Start
sort by bestmatched
Start
sort by top rated
Start
Sorting of Results
Start
Sort by distance
Start
sort by shipping price
Start
Sort by availability(time)
checking if user is logged in? or else prompt login
Adding to cart

Dashboards

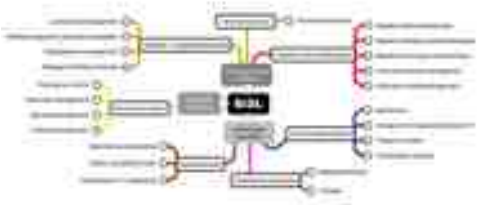
Testing Dashboard				Updated: 2/21 Build: 38
Area	**Effort**	**C**	**Q**	**Comments**
file/edit	high	1		
view	low	1+		1345, 1363, 1401
insert	low	2		
format	low	2+		automation broken
tools	blocked	1		crashes: 1406, 1407
slideshow	low	2		animation memory leak
online help	blocked	0		new files not delivered
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		

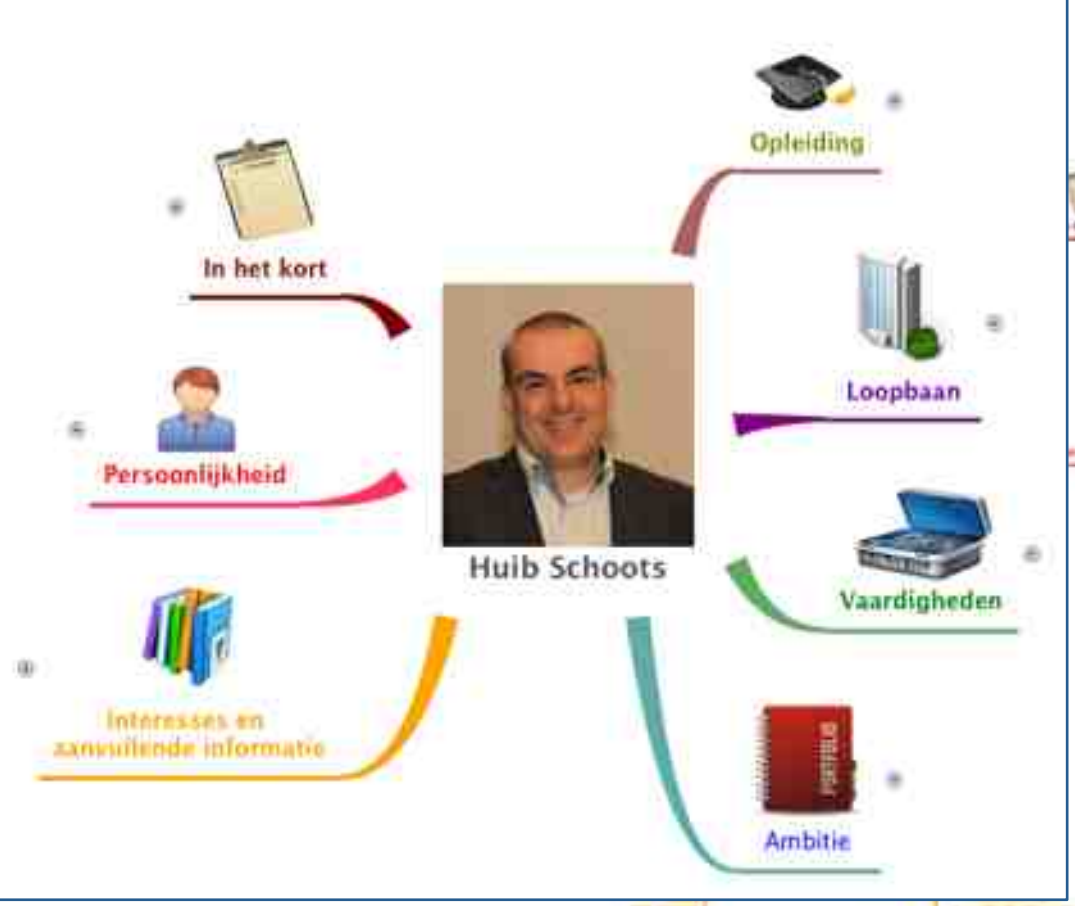
Source: Rapid Software Testing, James Bach & Michael Bolton


Updated: 2/21
Build: 38
Testing Dashboard
General GUI
Effort
Coverage
Quality
Comments
Compatibility
Start 3/17
Effort
Coverage
Quality
Last time is scheduled
Comments
Install
Start 3/17
Effort
Coverage
Quality
Comments
Converters
Effort
Coverage
Quality
Need help to test
Comments
Clipart
Effort
Coverage
Quality
Need help to test
Comments
Online Help
Effort
Coverage
Quality
New Files NOT delivered
Comments
Slideshow
Effort
Coverage
Quality
Animation memory leak
Comments
File / Edit
Effort
Coverage
Quality
Comments
View
Effort
Start 3/17
Coverage
Quality
1345
Comments
1363
1401
Insert
Effort
Coverage
Quality
Comments
Format
Effort
Coverage
Quality
Comments
Animation broken
Tools
Effort
Coverage
Quality
Crashes
Comments
1406
1417

Other uses

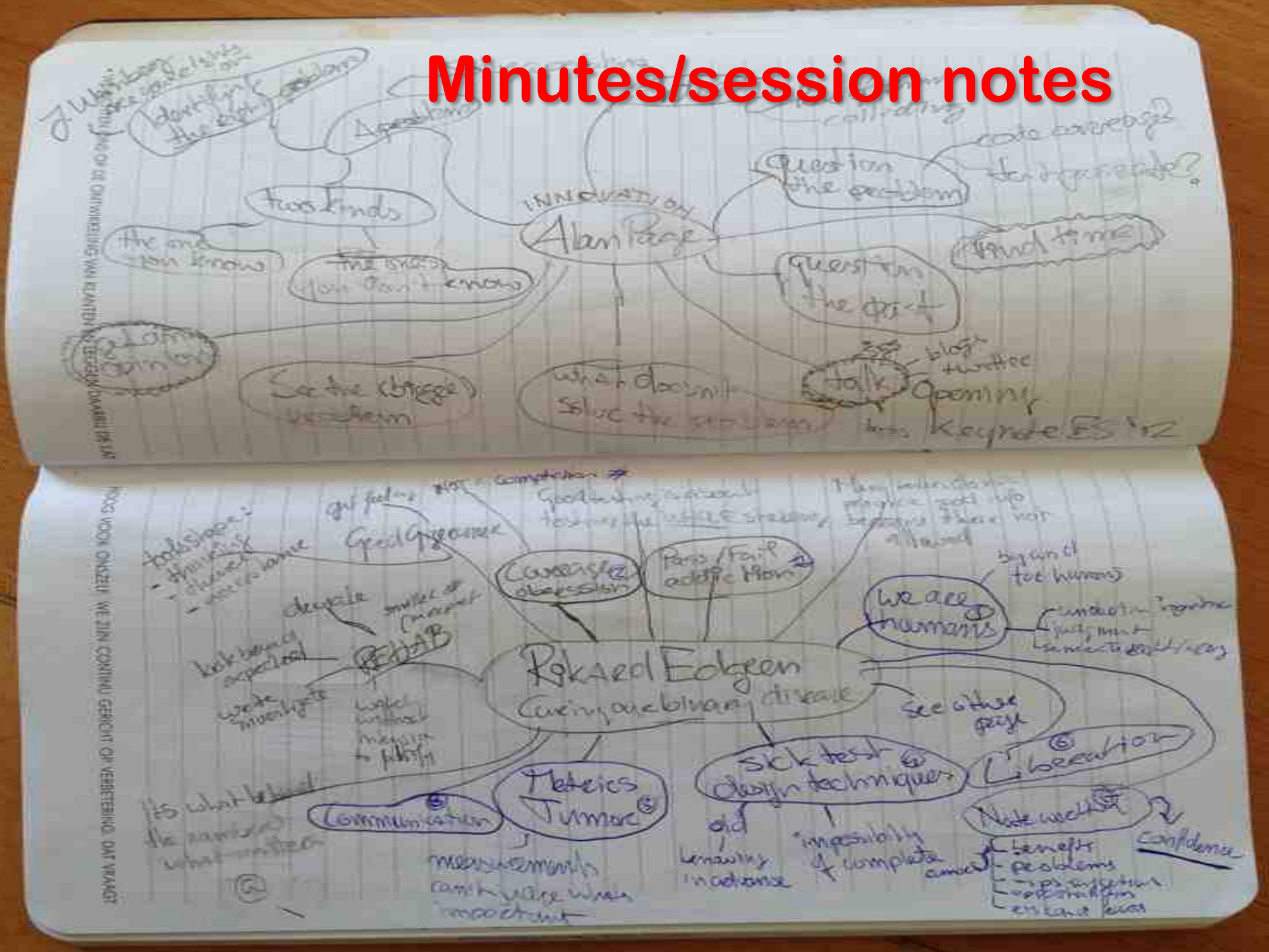
- CV
- Minutes
- Summary
- Brainstorm
- Websites
- To prepare a presentation
- Writing blogs/books
- Capture procedures
- SWOT
- Etc.



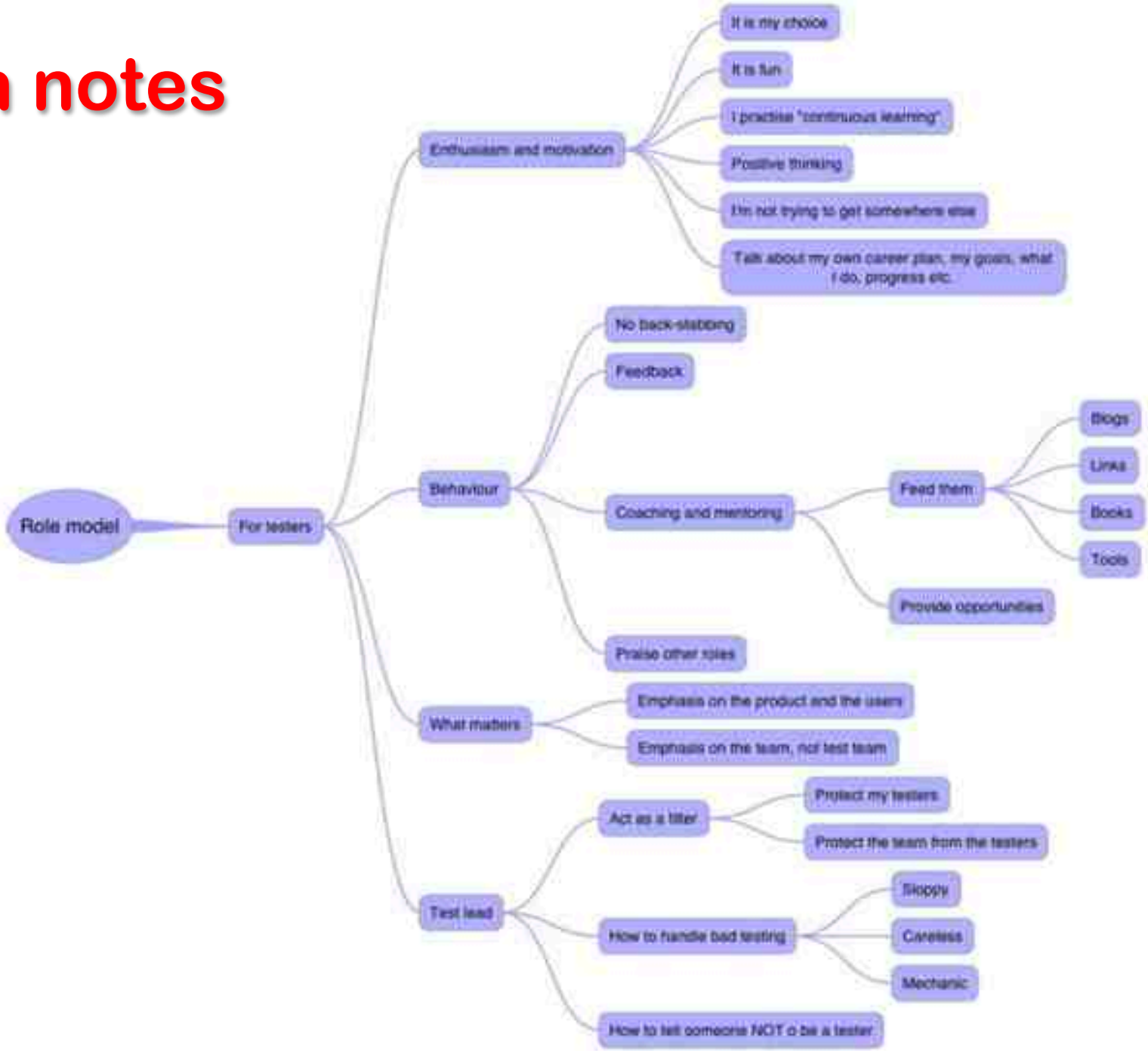

Opleiding
In het kort
Loopbaan
Persoonlijkheid
Huib Schoots
Vaardigheden
Interesses en
aanvullende informatie
Ambitie

Resume

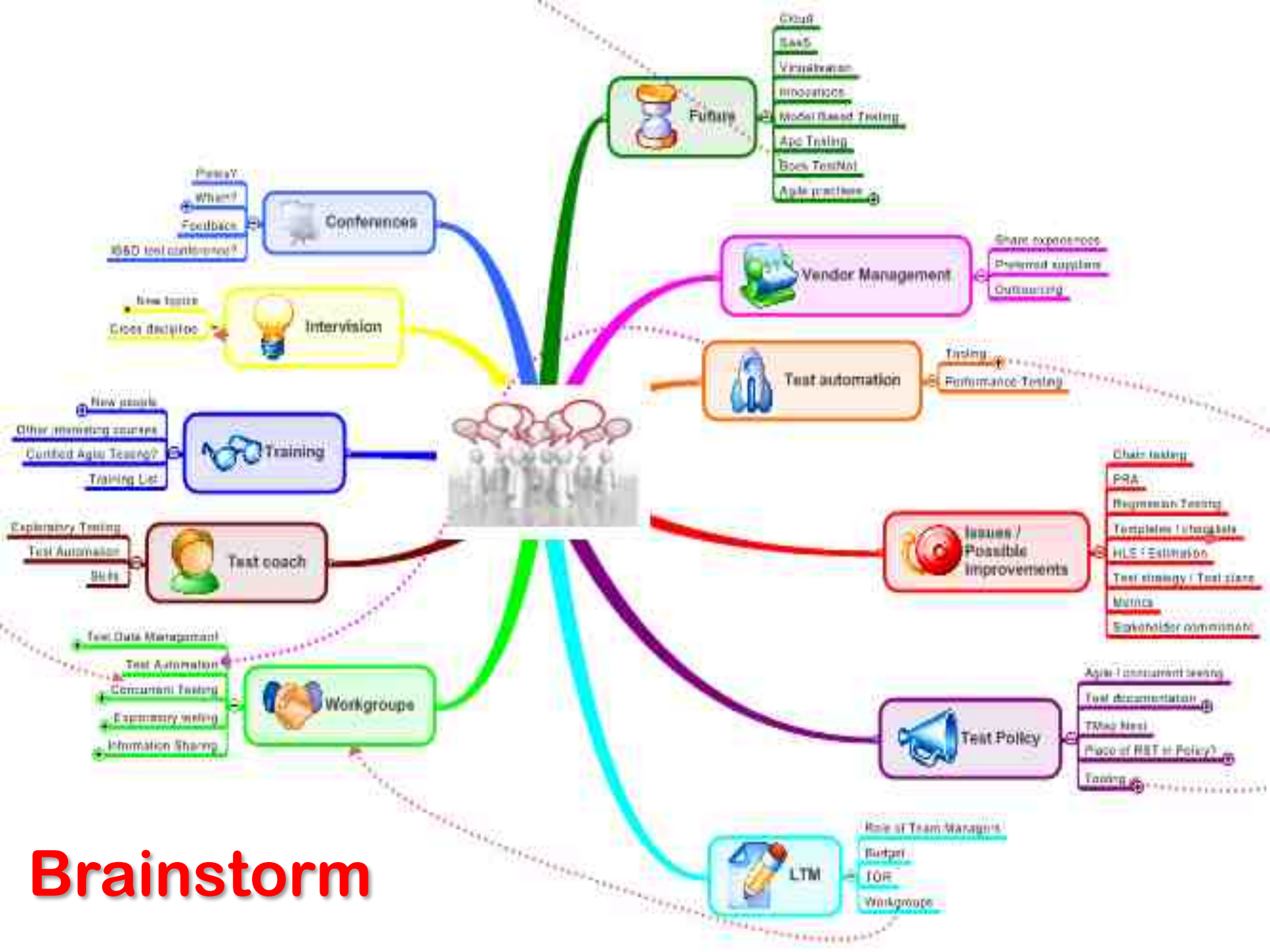
Minutes/session notes



Session notes

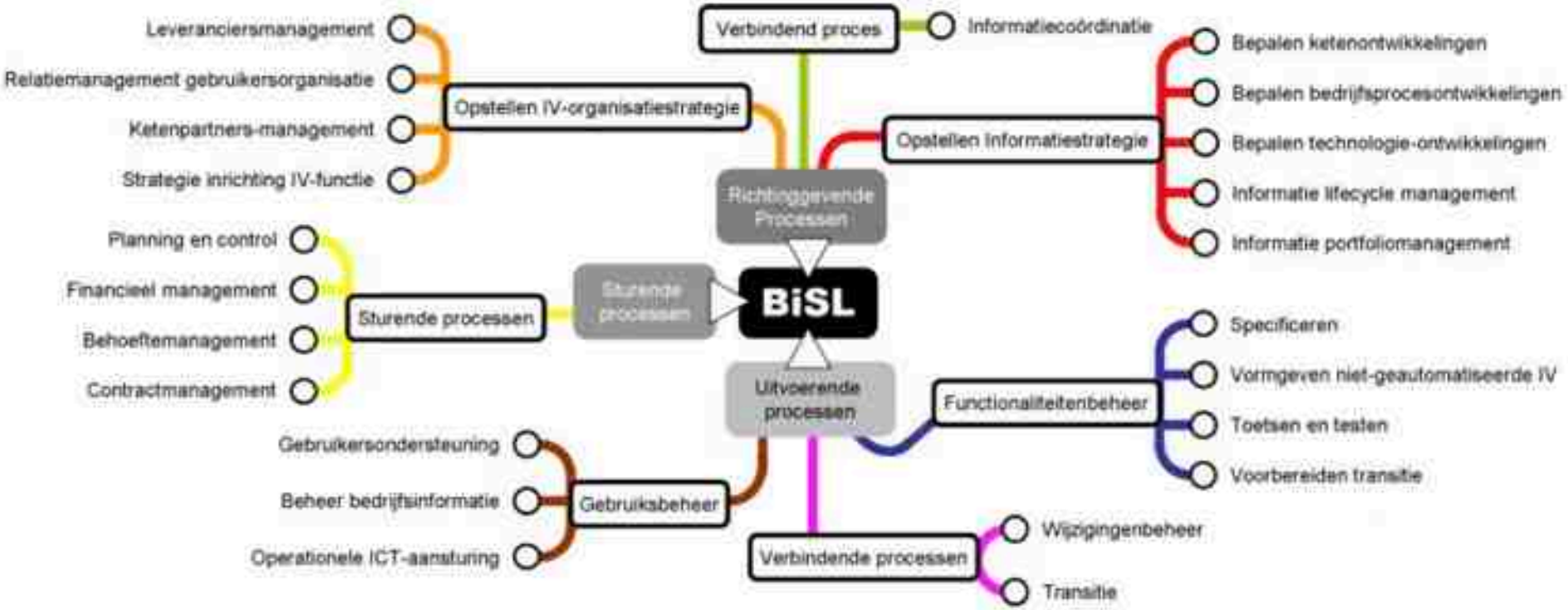


Source: http://christintesting.wordpress.com/


Future
Cloud
Saa5
Virtualization
Innovations
Model Based Testing
Apo Testing
Book TestNet
Agile practices
Conferences
Pretty?
Whom?
Feedback
IS&D test conference?
Intervision
New topics
Cross discipline
Training
New people
Other interesting courses
Certified Agile Testing?
Training List
Test coach
Exploratory Testing
Test Automation
Skills
Workgroups
Test Data Management
Test Automation
Concurrent Testing
Exploratory testing
Information Sharing
Vendor Management
Share experiences
Preferred suppliers
Outsourcing
Test automation
Testing
Performance Testing
Issues / Possible Improvements
Chain testing
PRA
Regression Testing
Templates / checklists
HLE / Estimation
Test strategy / Test plans
Metrics
Stakeholder commitment
Test Policy
Agile / concurrent testing
Test documentation
TMap Next
Place of RST in Policy?
Tooling
LTM
Role of Team Managers
Budget
TOR
Workgroups

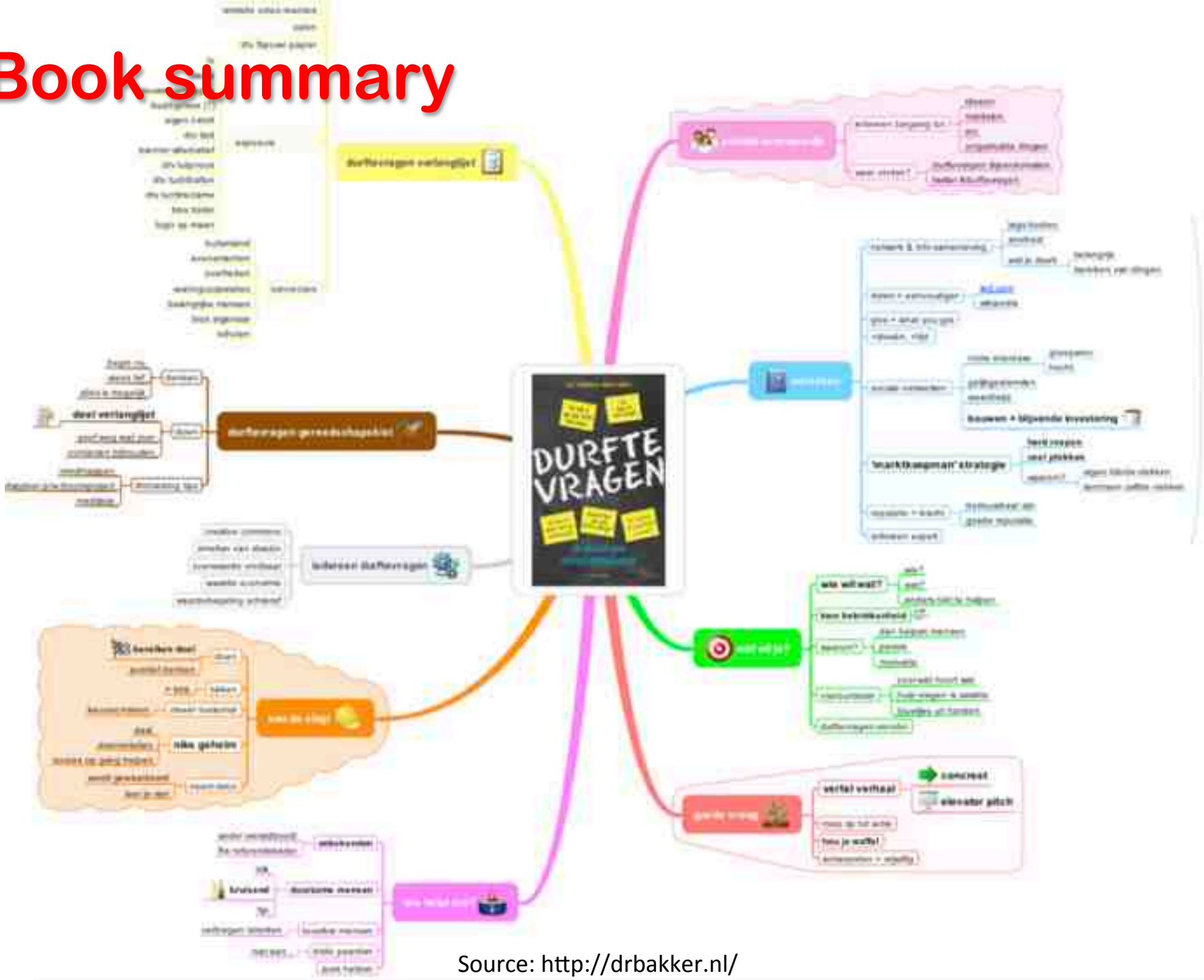
Brainstorm

Summary

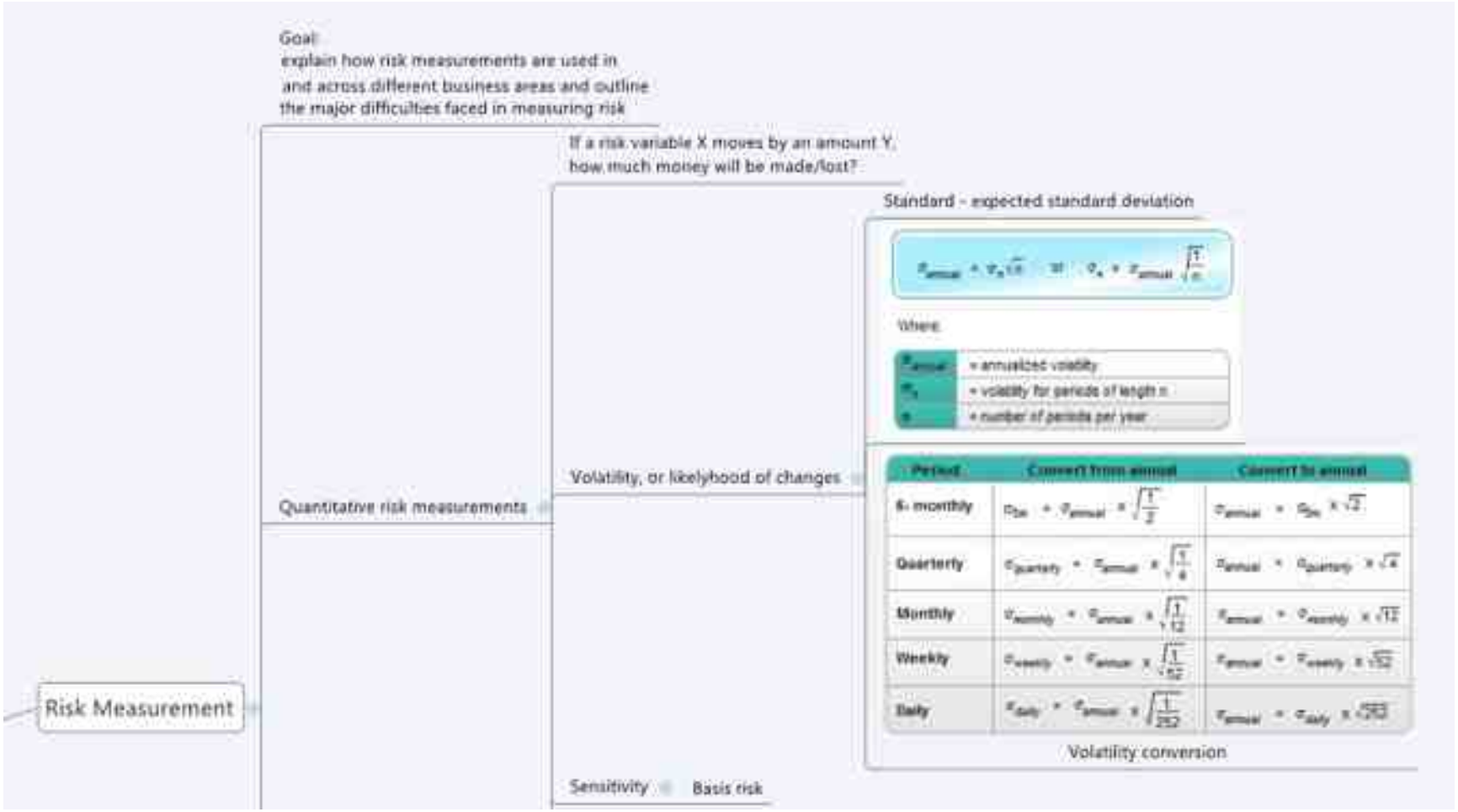


Source: http://www.raamstijn.nl/eenblogjeom/

Book summary



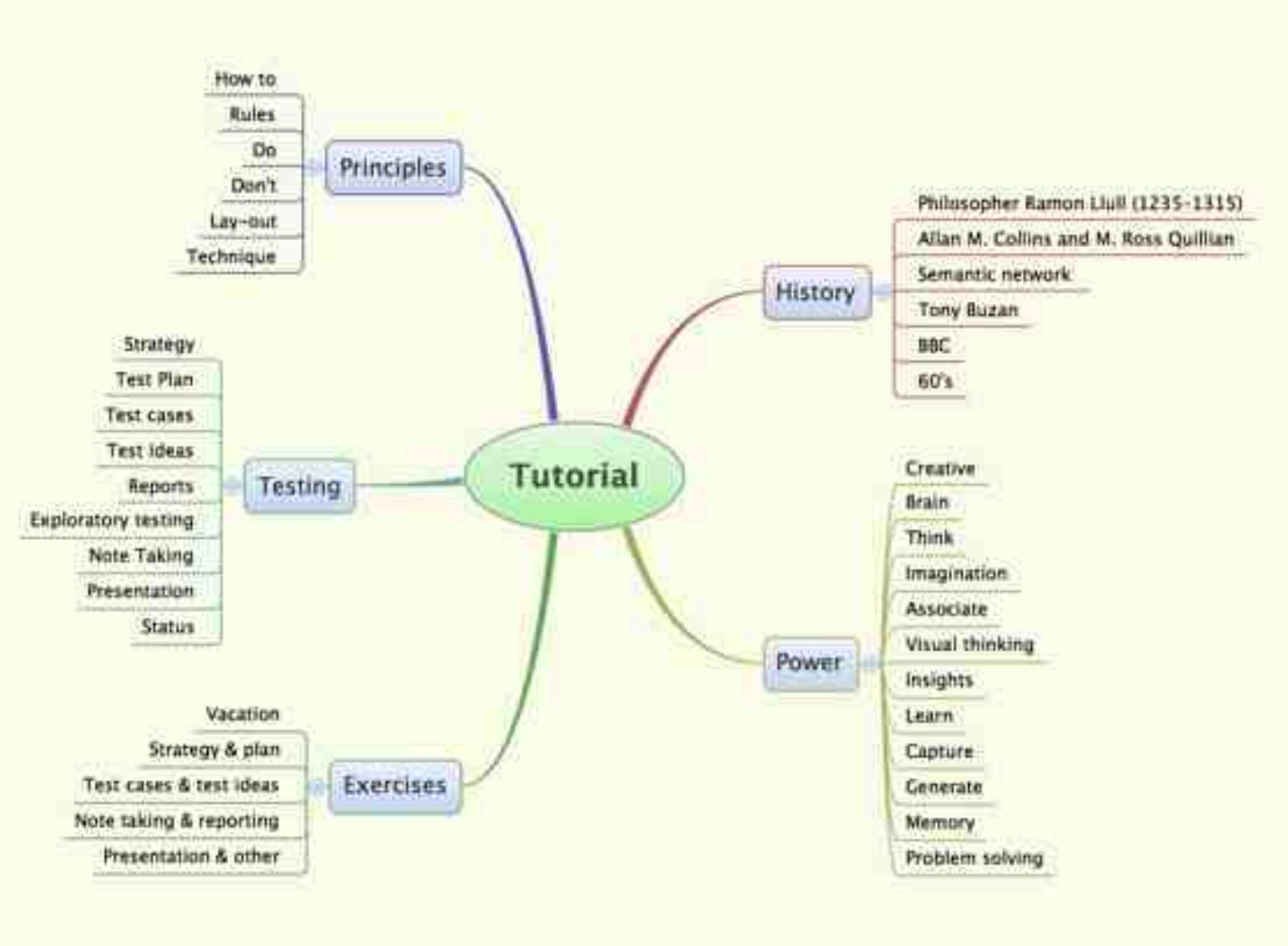
Source: http://drbakker.nl/



Course summary

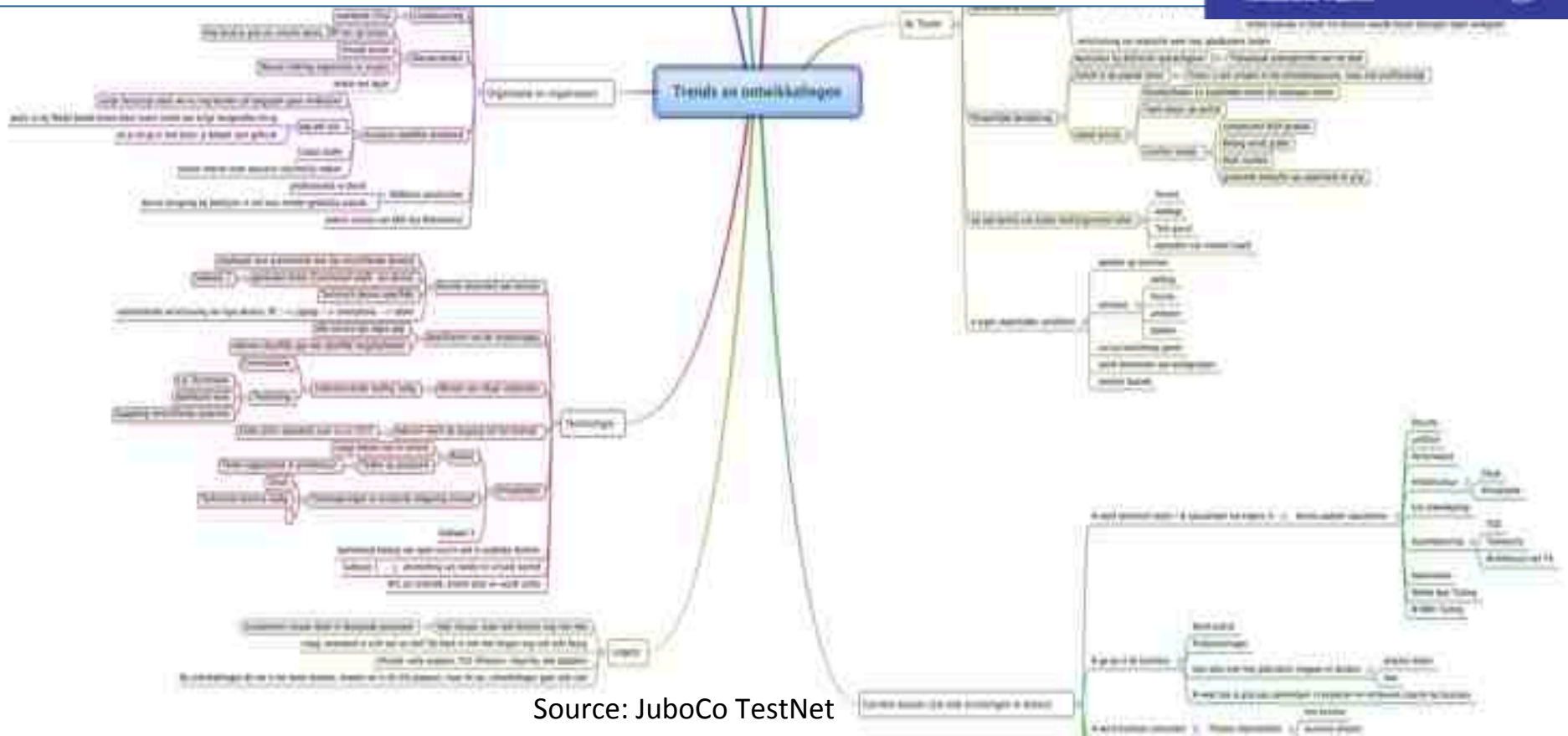
Website

Source: http://www.moolya.com



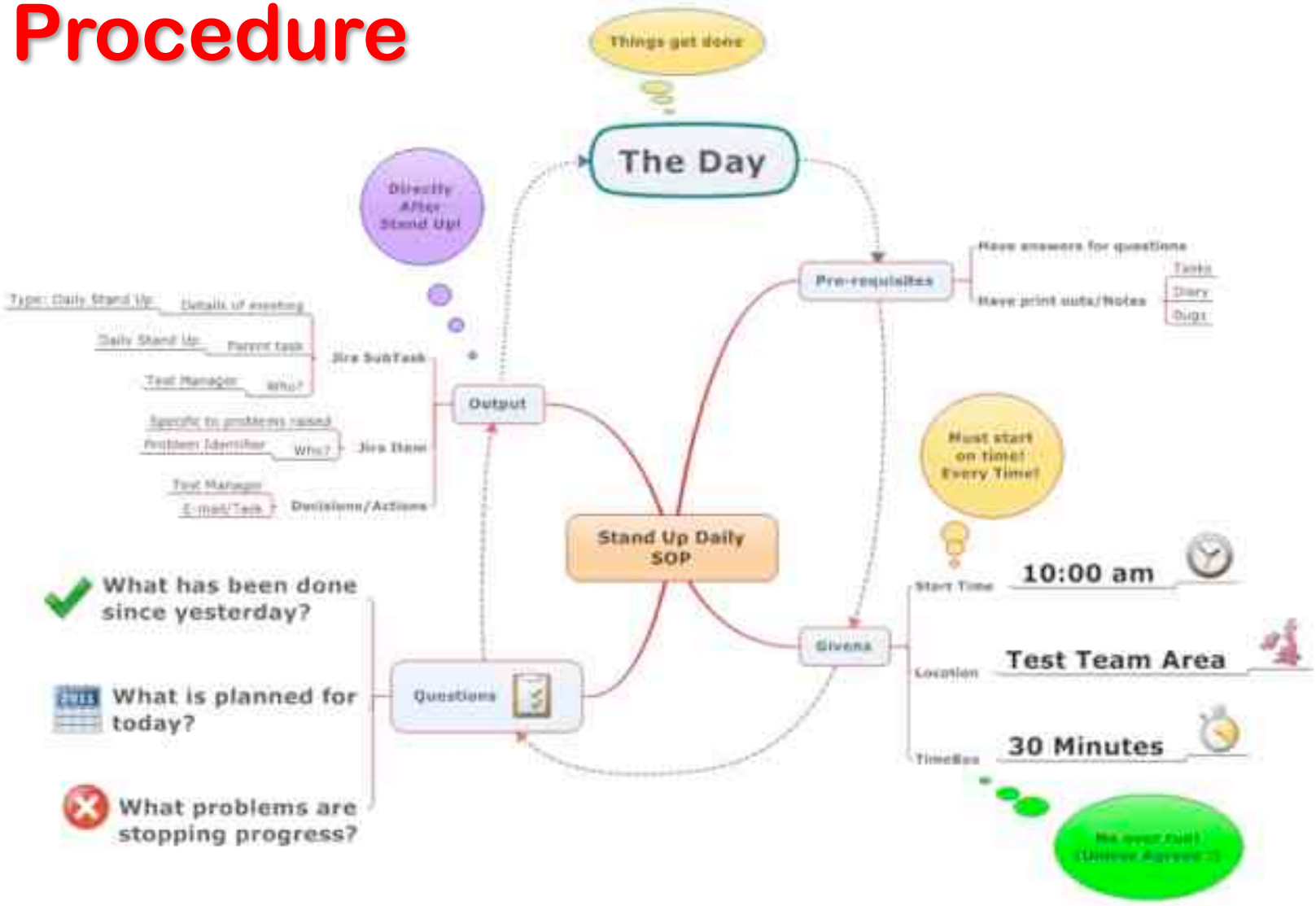
Preparation

Book outline



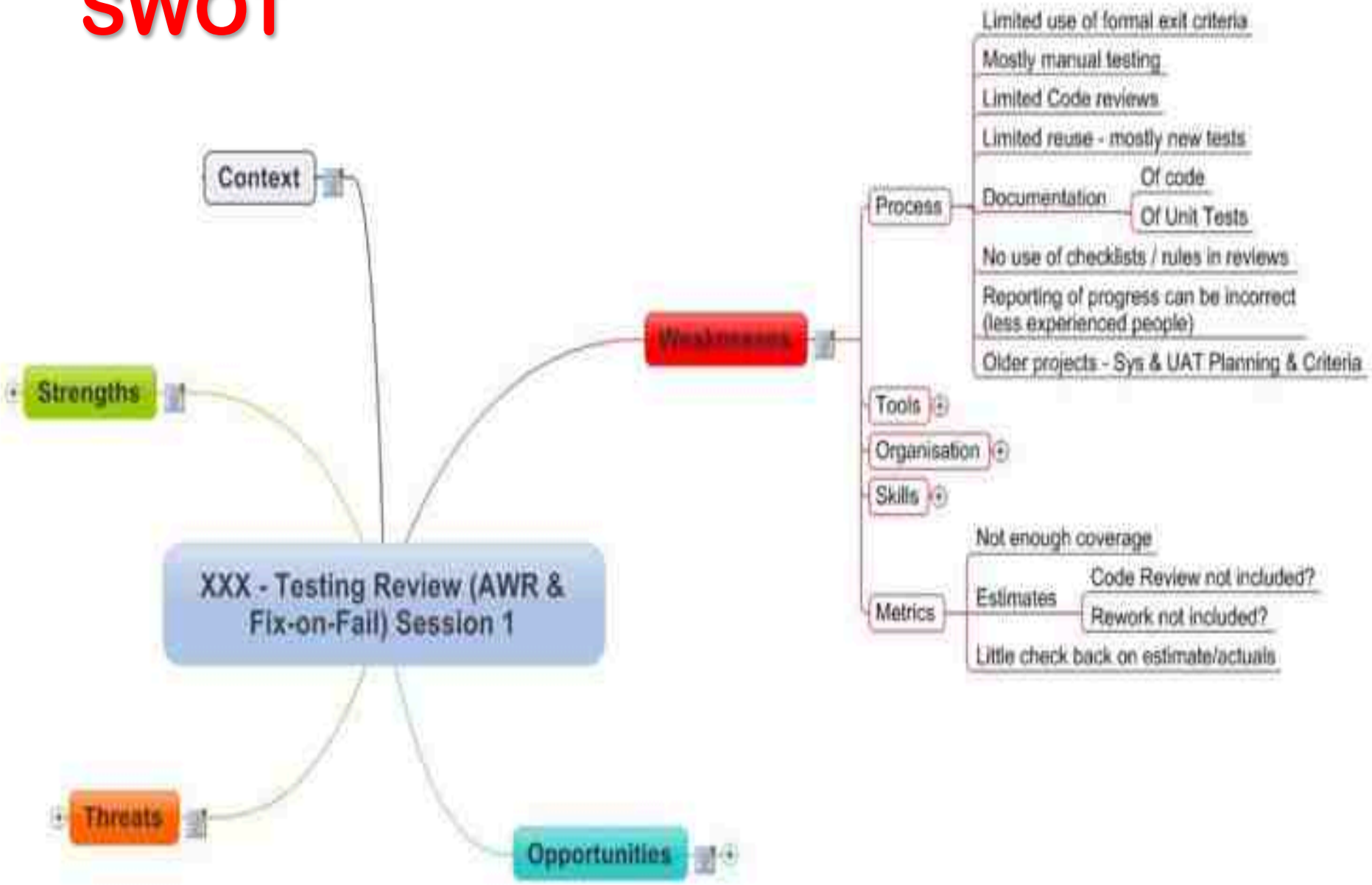
Source: JuboCo TestNet

Procedure

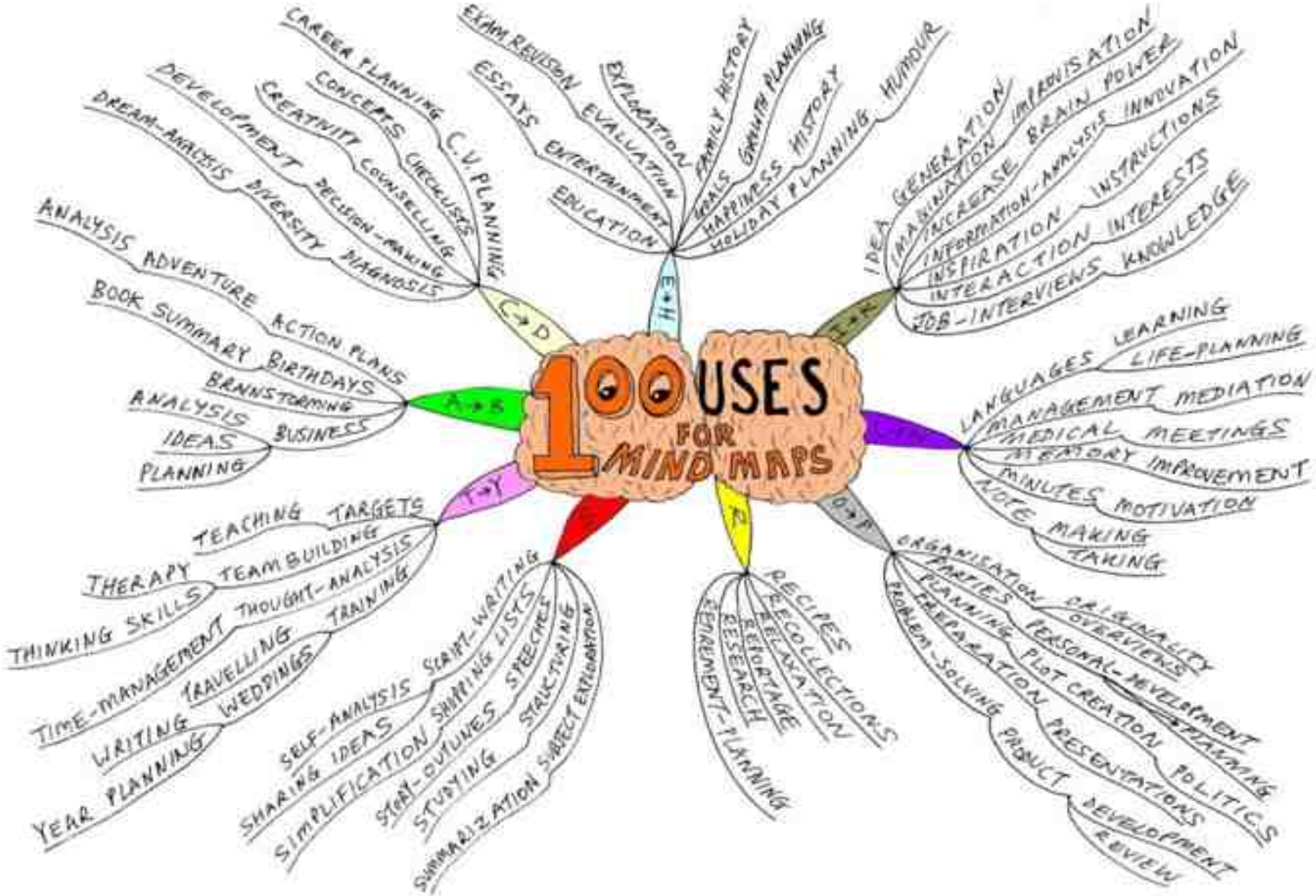


Source: http://www.softwaretestingclub.com/forum/topics/application-of-mindmaps-for

SWOT



Source: Graham Freeburn – Map your way to better testing (EuroStar 2012)



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Mind Maps: useful??

- How useful are mind maps?
- What are the advantages?
- What are the disadvantages?
- For what are you going to use them, starting next week?

More examples

http://www.thinkbuzan.com/uk/support/mindmapgallery

https://www.mapsforthat.com/

http://www.biggerplate.com/mindmap-library

http://www.edrawsoft.com/MindMap-Examples.php

http://www.mind-mapping.co.uk/mind-maps-examples.htm

Acknowledgements

- This tutorial is made by Jean-Paul Varwijk and Huib Schoots
- The material is created with input from: Darren McMillan, Michael Bolton, Albert Gareev, Pradeep Soundararajan, Aaroon Hodder, Pekka Marjamäki, Ivor McCormack, Graham Freeburn, Christin Wiedemann, Pascal Dufour, Ruud Cox
- This material is evolutionary. New items will be added and all input is welcome!

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BACKUP SLIDES

Planning poker

Planning Poker was described for the first time by James Grenning in 2002 (http://www.renaissancesoftware.net/files/articles/PlanningPoker-v1.1.pdf)

How does planning poker work?

1. Each participant takes a set op planning poker cards?
2. The client (or product owner) describes the item to be estimated
3. The item is discussed
4. Every participant select a card that represents his estimate of effort
5. All cards are shown at the same time
6. If all cards are equal in value that value is the estimated effort. If the values differ the extremes explain what made them choose this value

Exercise:

How would mind maps help?

1. Each participant takes a set op planning poker cards?
2. The client (or product owner) **describes the item** to be estimated
3. The **item is discussed**
4. Every participant select a card that represents his estimate of effort
5. All cards are shown at the same time
6. If all cards are equal in value that value is the estimated effort. If the values differ **the extremes explain what made them choose** this value