

WEBINAR 2017-10-26

KLAS SKOGMAR

HOW TO WORK WITH A WBS

INTRODUCTION

AGENDA

- ▶ History of WBS
- ▶ What is a WBS?
- ▶ Uses and Benefits
- ▶ Structure of a WBS
- ▶ WBS Rules
- ▶ How to build a WBS
- ▶ Conclusions

ABOUT ME

- ▶ Master of Science in Computer Science, Executive MBA from Lund
- ▶ Part of ISO standard of WBS (and governance + portfolio management)
- ▶ Partner in Arkatay Consulting, and founder of breakdownstructure.com
- ▶ Some of my clients: Sony Ericsson, IKEA, Ikano, Tetra Pak, Försäkringskassan, Alfa Laval



ABOUT BREAKDOWNSTRUCTURE.COM

- ▶ Collaborate on your WBS
- ▶ Assign work
- ▶ Track progress
- ▶ Aggregate effort and costs
- ▶ Integrate with MS Project, Excel or Trello



OFFER

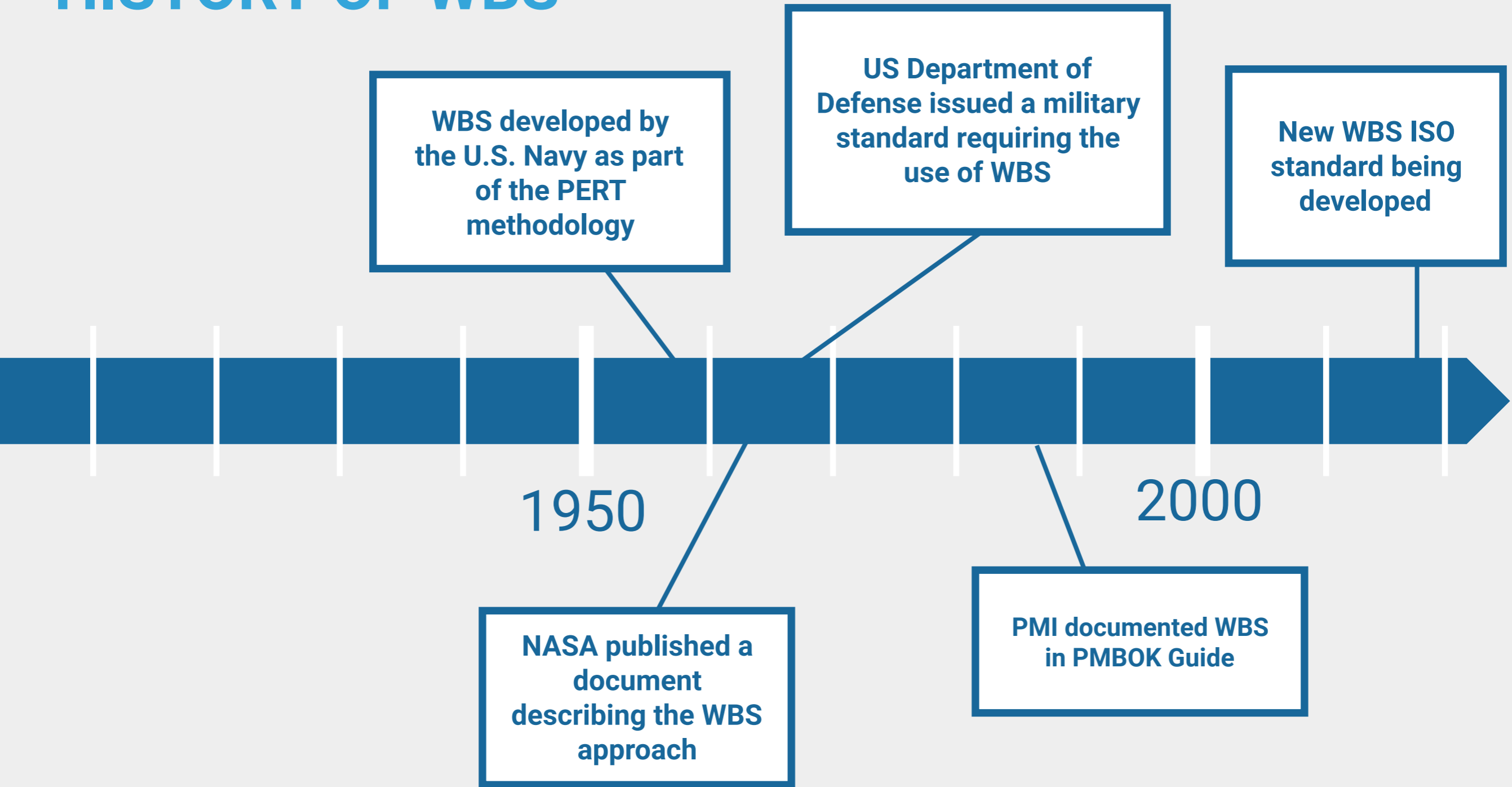
3 MONTHS FREE USE

MAIL ME AT

KLAS@BREAKDOWNSTRUCTURE.COM

HISTORY OF WBS

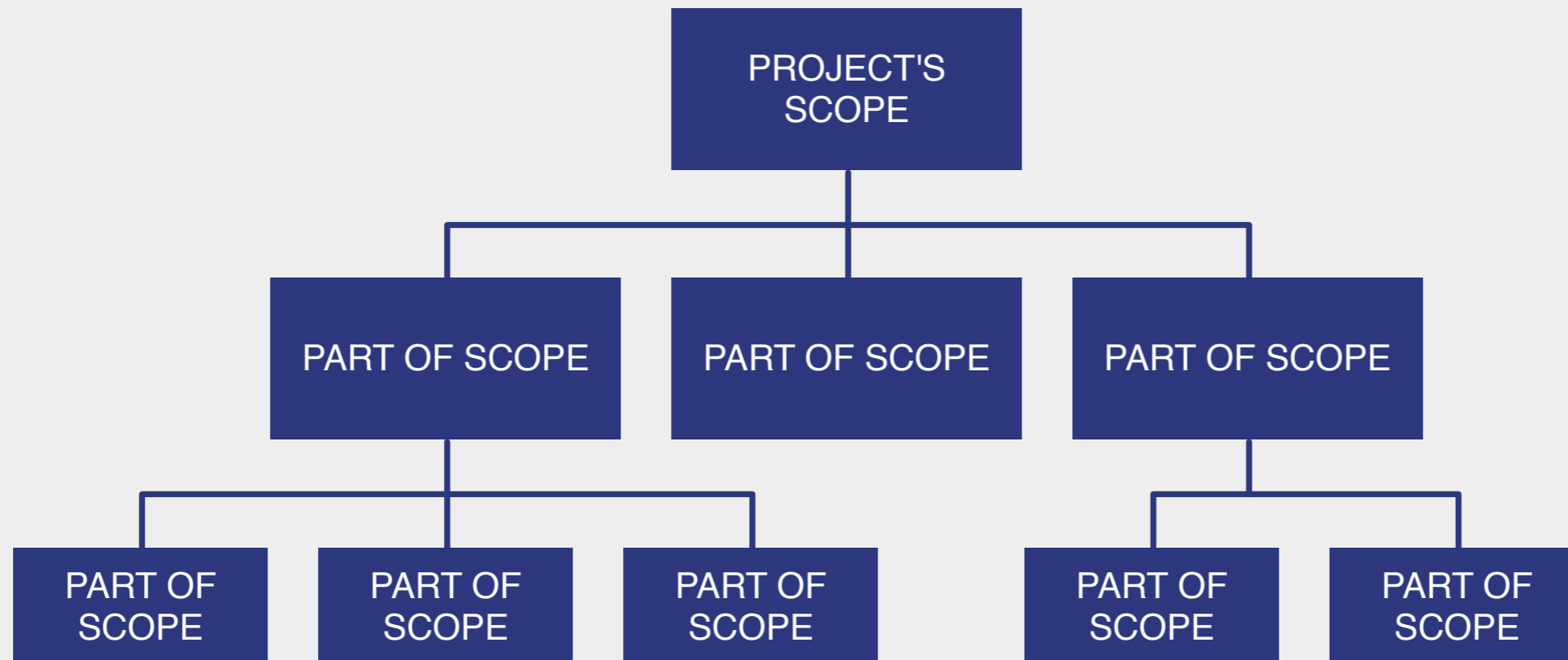
HISTORY OF WBS



WHAT IS A WBS?

WHAT IS A WBS?

- ▶ A WBS is a “hierarchical breakdown of a project’s scope”
- ▶ Usually “product-oriented” or “deliverable-oriented”



THE WBS REPRESENTS A CLEAR DESCRIPTION OF THE PROJECT'S DELIVERABLES AND SCOPE — THE 'WHAT' OF THE PROJECT.

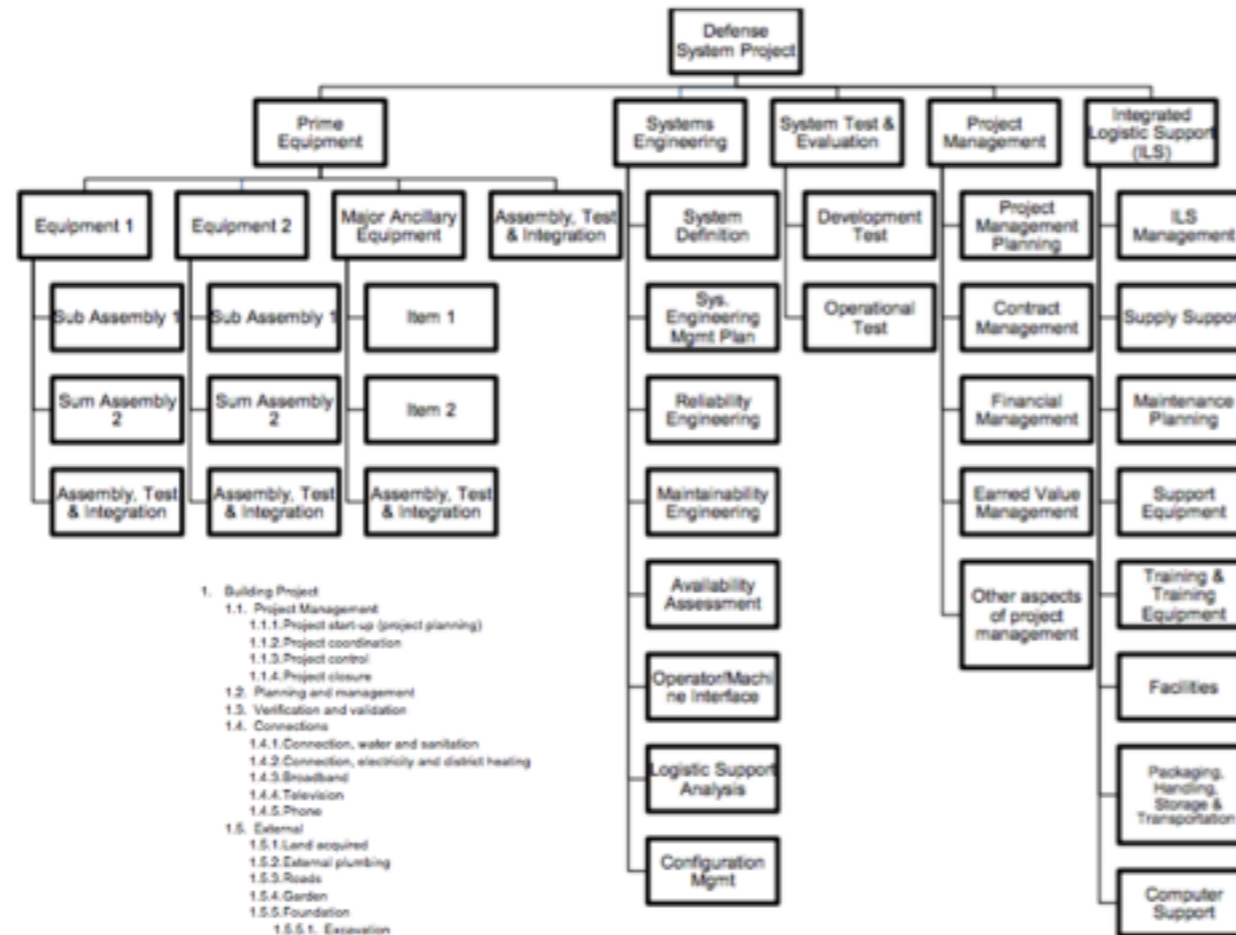
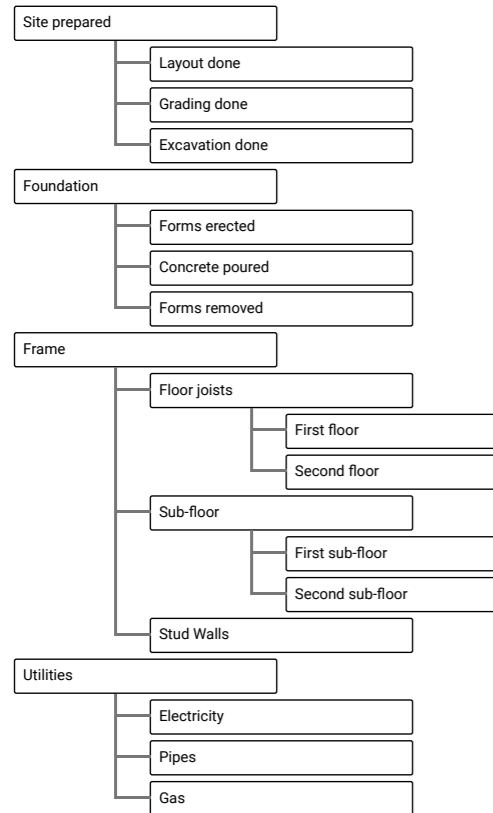
PMI's practice standard on WBS

IN THE CONTEXT OF THE WBS, WORK REFERS TO WORK PRODUCTS OR DELIVERABLES THAT ARE THE RESULT OF ACTIVITY AND NOT TO THE ACTIVITY ITSELF.

PMBOK Guide, 6th edition

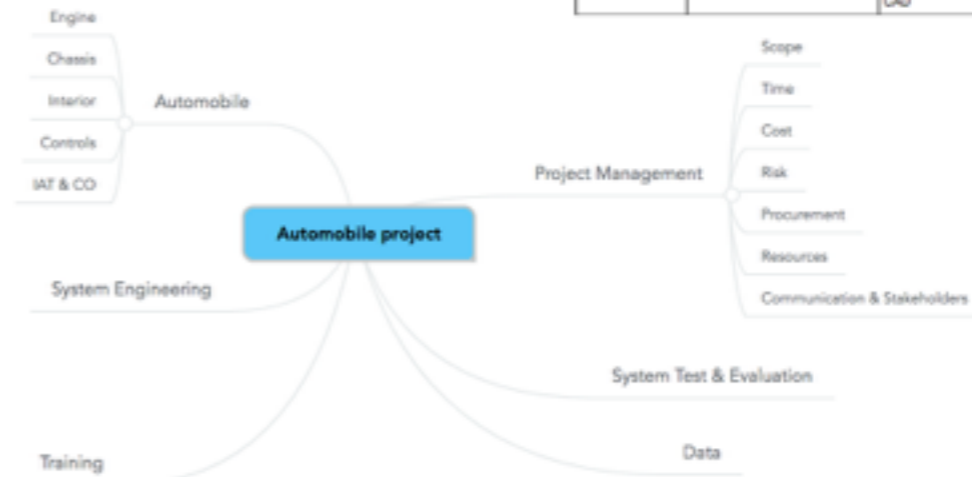
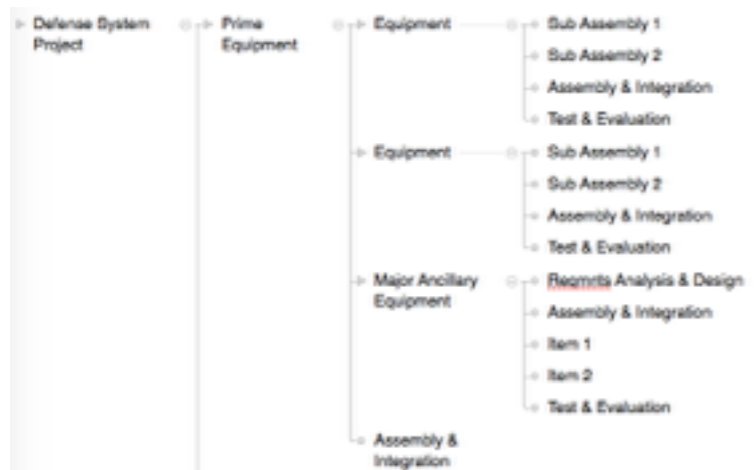
HOW TO USE A WBS

WBS VISUALIZATIONS

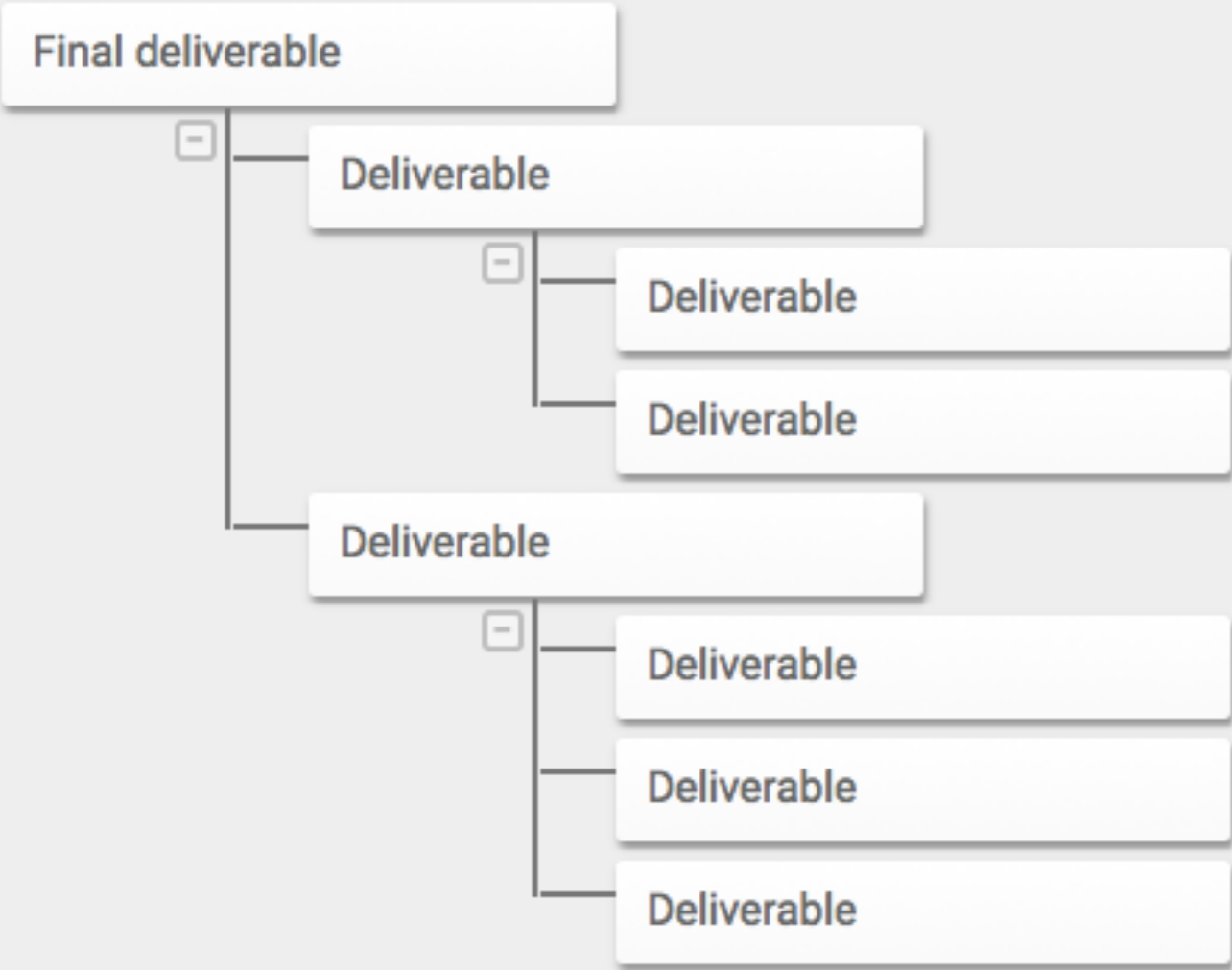


1. Building Project
 - 1.1. Project Management
 - 1.1.1. Project start-up (project planning)
 - 1.1.2. Project coordination
 - 1.1.3. Project control
 - 1.1.4. Project closure
 - 1.2. Planning and management
 - 1.3. Verification and validation
 - 1.4. Connections
 - 1.4.1. Connection, water and sanitation
 - 1.4.2. Connection, electricity and district heating
 - 1.4.3. Broadband
 - 1.4.4. Television
 - 1.4.5. Phone
 - 1.5. External
 - 1.5.1. Land acquired
 - 1.5.2. External plumbing
 - 1.5.3. Roads
 - 1.5.4. Garden
 - 1.5.5. Foundation
 - 1.5.5.1. Excavation
 - 1.5.5.2. Concrete
 - 1.5.5.3. Other foundational work
 - 1.6. Main Building
 - 1.6.1. Ground floor level
 - 1.6.1.1. Slab work
 - 1.6.1.2. Inner walls
 - 1.6.2. First floor level
 - 1.6.2.1. Slab work
 - 1.6.2.2. Inner walls
 - 1.6.3. Frame/steel erection
 - 1.6.4. External
 - 1.6.4.1. Walls
 - 1.6.4.2. Windows
 - 1.6.4.3. Roof
 - 1.6.5. Internal
 - 1.6.5.1. Walls and finishes
 - 1.6.5.2. Flooring
 - 1.6.5.3. Lighting
 - 1.6.5.4. Furniture and interior design
 - 1.6.6. Installations
 - 1.6.6.1. Ventilation
 - 1.6.6.2. Heating/sanitation
 - 1.6.6.3. Electricity
 - 1.6.6.4. Fire Protection
 - 1.7. Garage and additional buildings
 - 1.8. Architecture

Level 1	Level 2	Level 3	Level 4	
Building project	Project management	Project start-up		
		Project coordination		
		Project control		
		Project closure		
	Planning and management			
	Verification and validation			
	Connections	Connection, water and sanitation		
		Connection, electricity and district heating		
		Broadband		
		Television		
External	Land acquired			
	External plumbing			
	Roads			
	Garden			
	Foundation	Excavation		
		Concrete		
		Other foundational work		
	Main Building	Ground floor level	Slab work	
			Inner walls	
		First floor level	Slab work	
		Inner walls		
Frame/steel erection				
External		Walls		
		Windows		
		Roof		
Internal		Walls and finishes		
		Flooring		
Installations	Lighting			
	Furniture and interior design			
	Ventilation			
	Heating/sanitation			
	Electricity			
	Fire protection			
	Garage and additional buildings			
	Architecture	Procured architect		
		Contract		
		Sketches		
	CAD			



WHERE ARE THE ACTIVITIES?



Activities

WBS DICTIONARY

- ▶ A WBS Dictionary contains details on the WBS, such as:
 - ▶ Description
 - ▶ Owner
 - ▶ Costs
 - ▶ Effort
 - ▶ Deadline

The screenshot displays the Breakdown Structure software interface. The top navigation bar includes the logo, a search bar, and menu items: SHARING, CHANGES, FILE, HELP, FEEDBACK, and an account dropdown. The main workspace shows a hierarchical tree structure. The root is 'General Project Portfolio Work', which branches into 'Portfolio Plan' and 'Governance'. Below these are 'Project A' and 'Project B'. 'Project B' is highlighted with a red box and contains a sub-tree starting with 'Prime Equipment'. This sub-tree includes 'Equipment A' (with a summary box: Effort: 2990h (P), Completed: 9%, Deadline: 2017-07-01), 'Equipment B', and 'Major Ancillary Equipment'. 'Equipment A' further breaks down into 'Sub Assembly 1', 'Sub-Assembly-2', 'Assembly & Integration', and 'Test & Evaluation'. 'Major Ancillary Equipment' includes 'Assembly & Integration'. A right-hand panel provides details for 'Project B', including its ID (3), owner (klas.se@gmail.com), summary statistics (Effort: 2990h (P), Cost: N/A, Completed: 3%), tags, a deadline field, a description text area, and a comments section.

Effort (sum)	Cost (sum)	Completed (avg)
2990h (P)	N/A	3%

Tags	Deadline
<input type="text" value="Add new tags here"/>	<input type="text" value="YYYY-MM-DD"/>

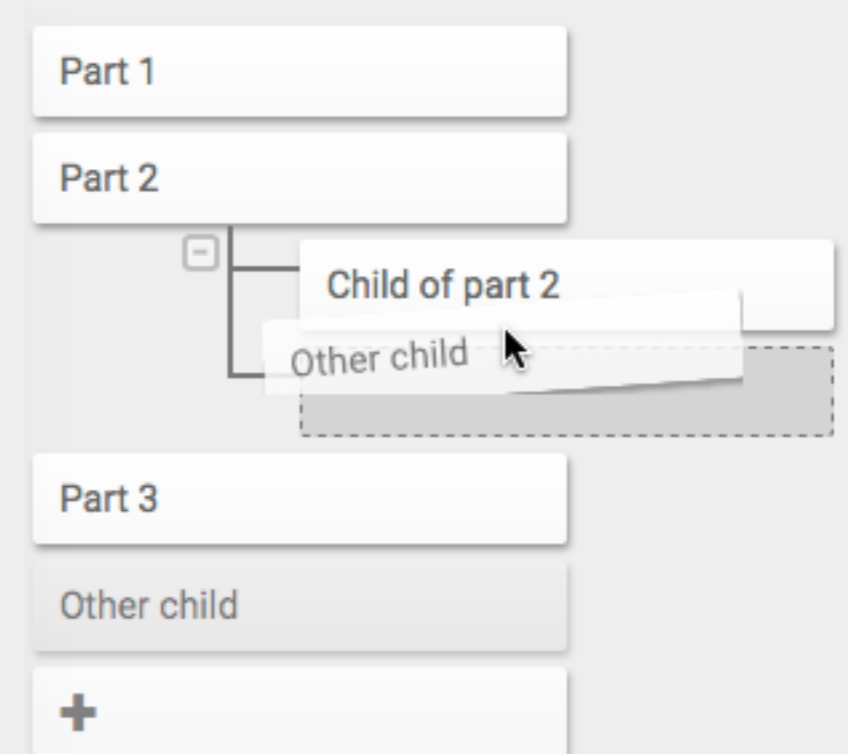
USES AND BENEFITS

USES FOR A WBS

- ▶ Planning scope
- ▶ Aggregate data
- ▶ Map to other data
- ▶ Communicate with stakeholders
- ▶ Assign responsibility for scope
- ▶ Monitor & Control progress
- ▶ Learn from experience, apply learnings

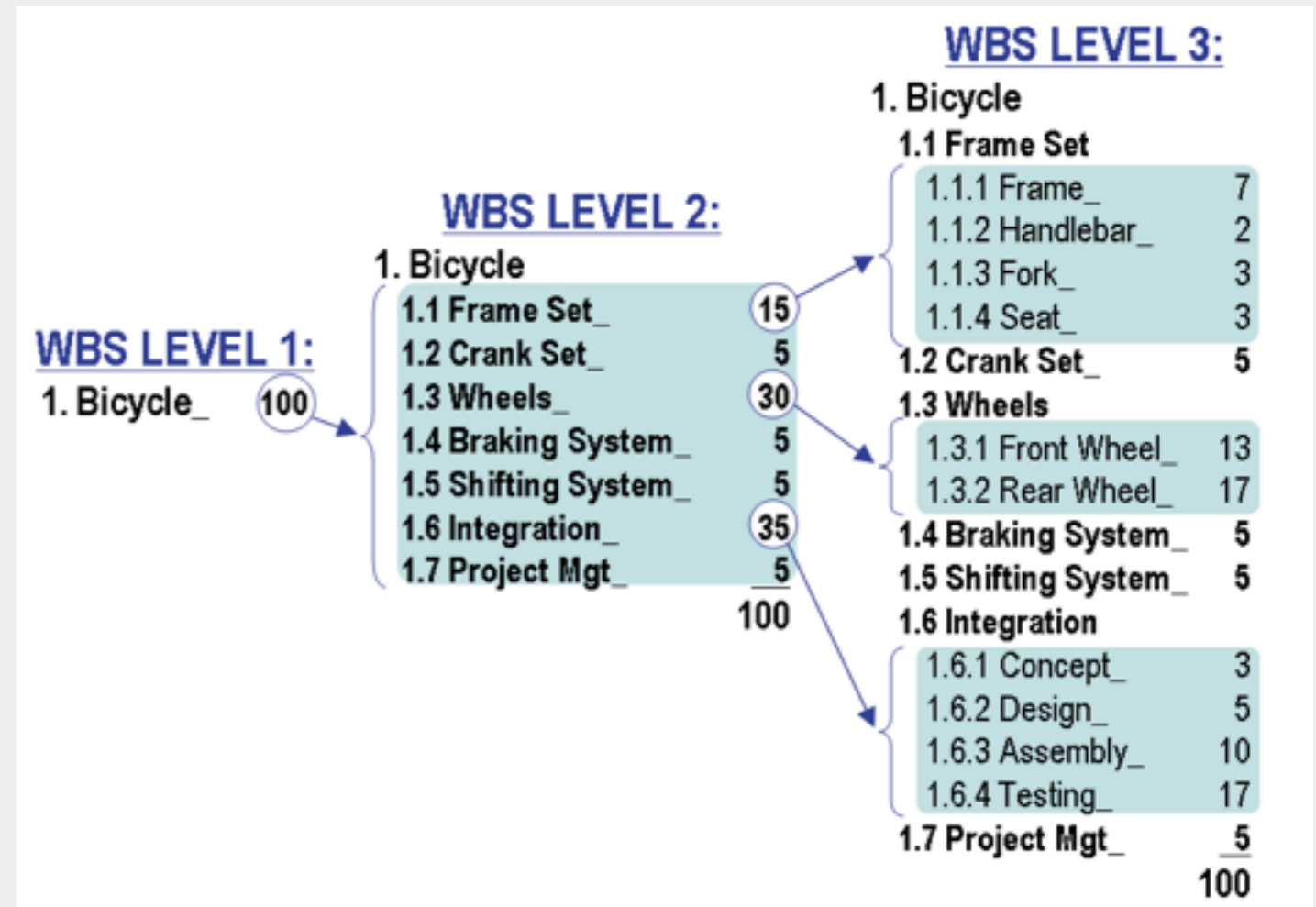
PLANNING SCOPE

- ▶ WBS enables collaboration
- ▶ It is easy to:
 - ▶ brainstorm
 - ▶ group
 - ▶ discuss
 - ▶ agree



AGGREGATING DATA

- ▶ Aggregate:
 - ▶ Costs
 - ▶ Effort
 - ▶ Risks
 - ▶ Resource requirements

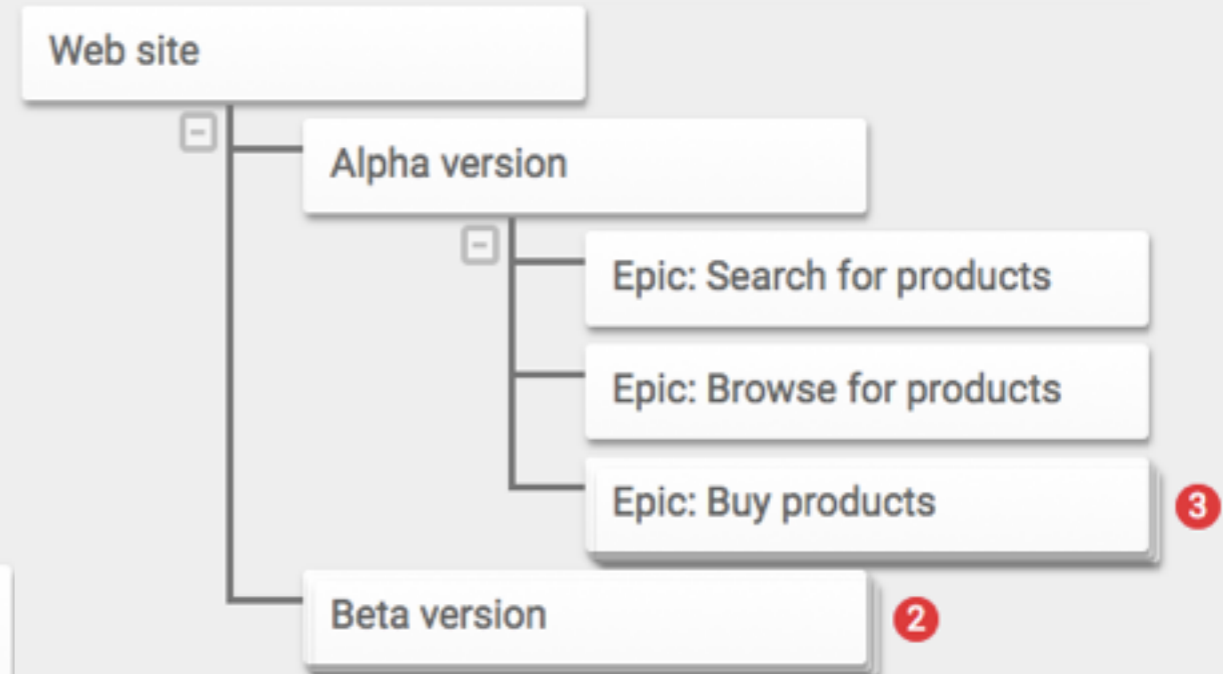
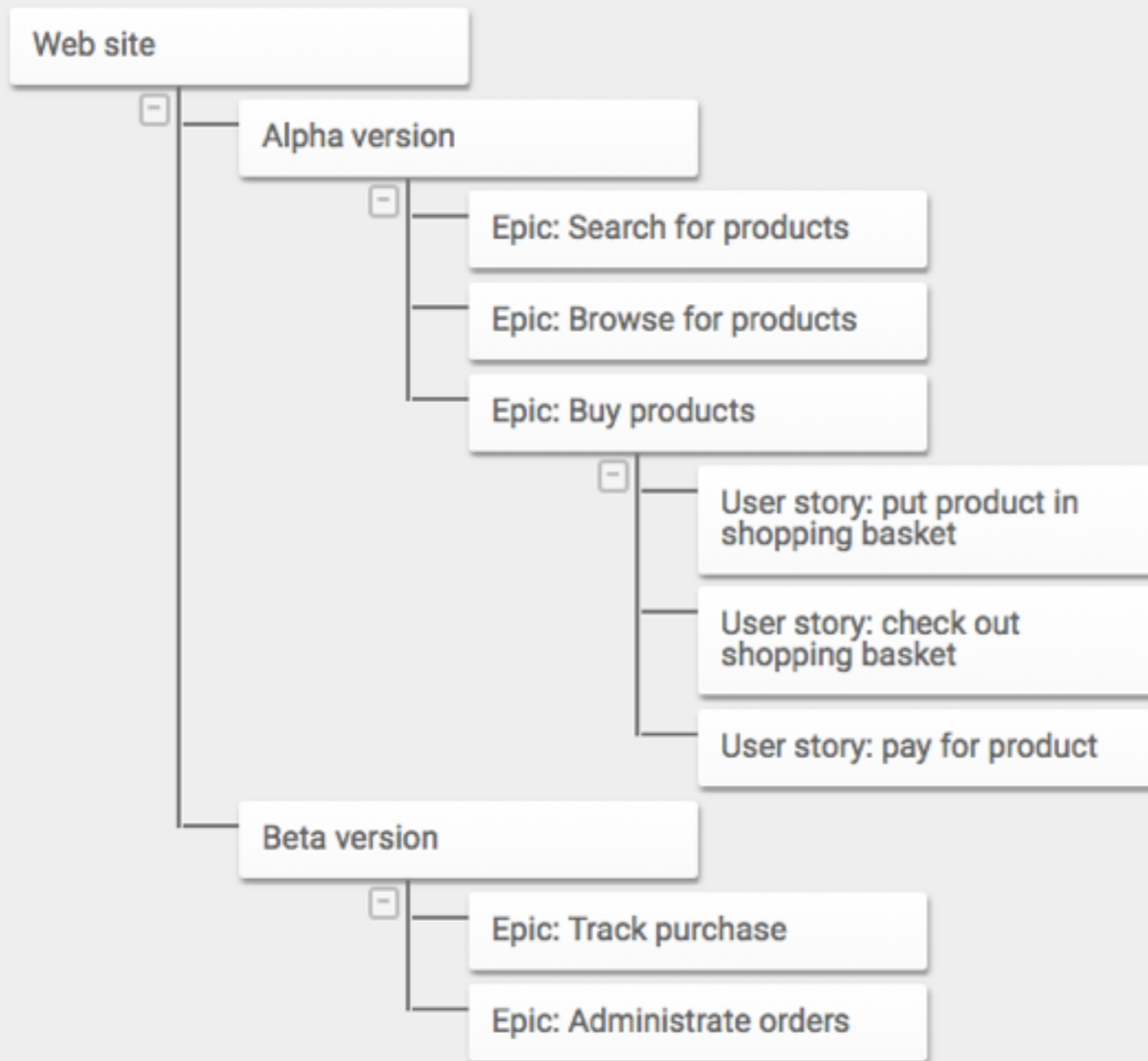


Source: Wikipedia

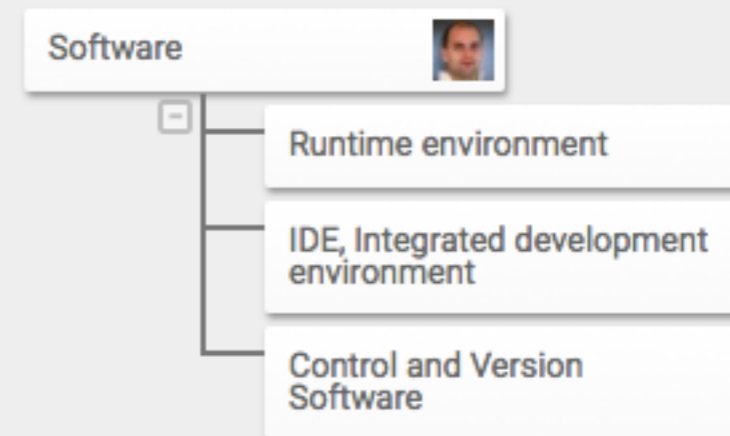
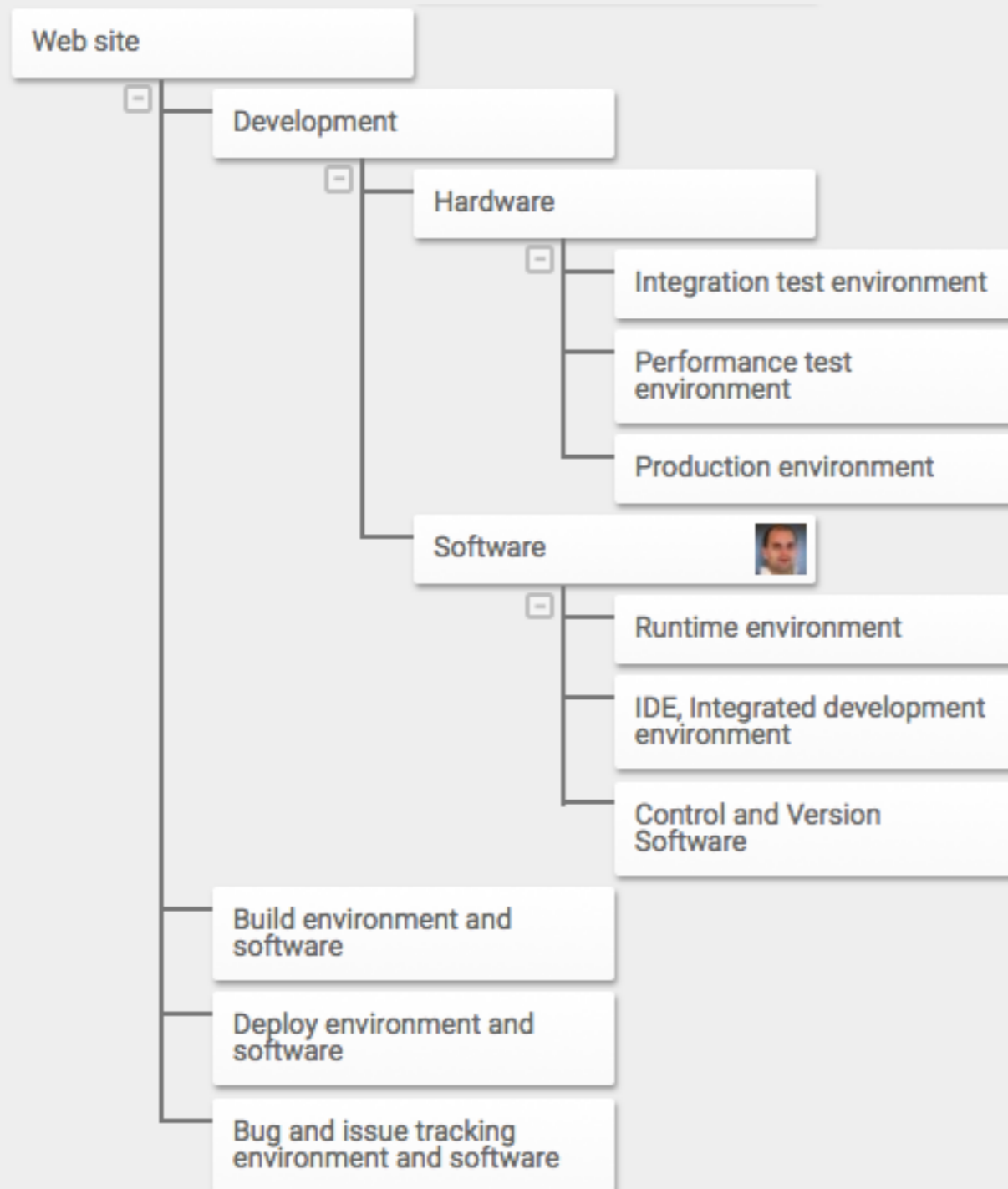
MAP TO OTHER DATA

		Deliverable			Deliverable 2	
		Sub-deliverable 1	Sub-deliverable 2	Sub-deliverable 3	Sub-deliverable A	Sub-deliverable B
Development	Team 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Team 2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Testing	Team A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Team B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

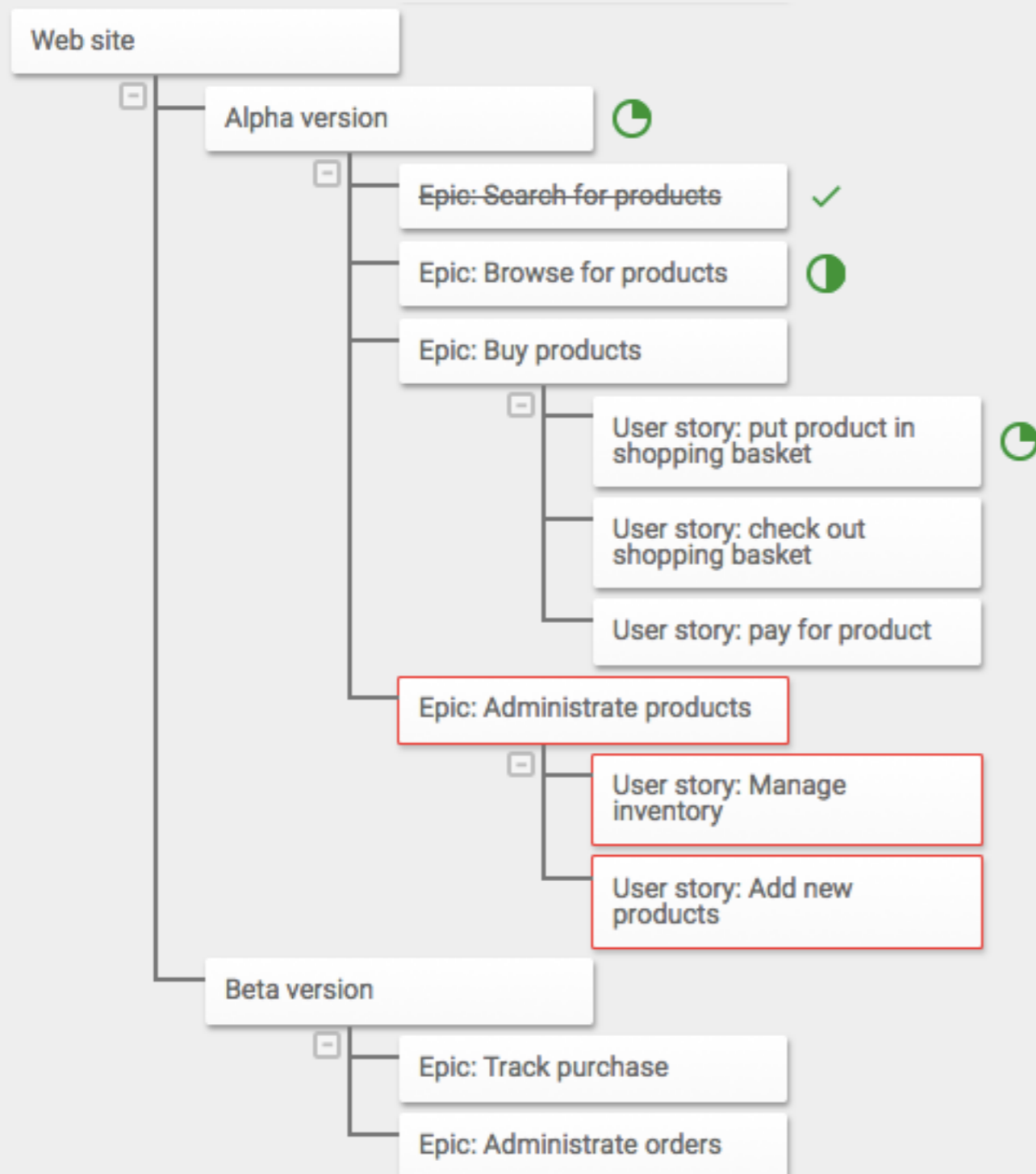
COMMUNICATE



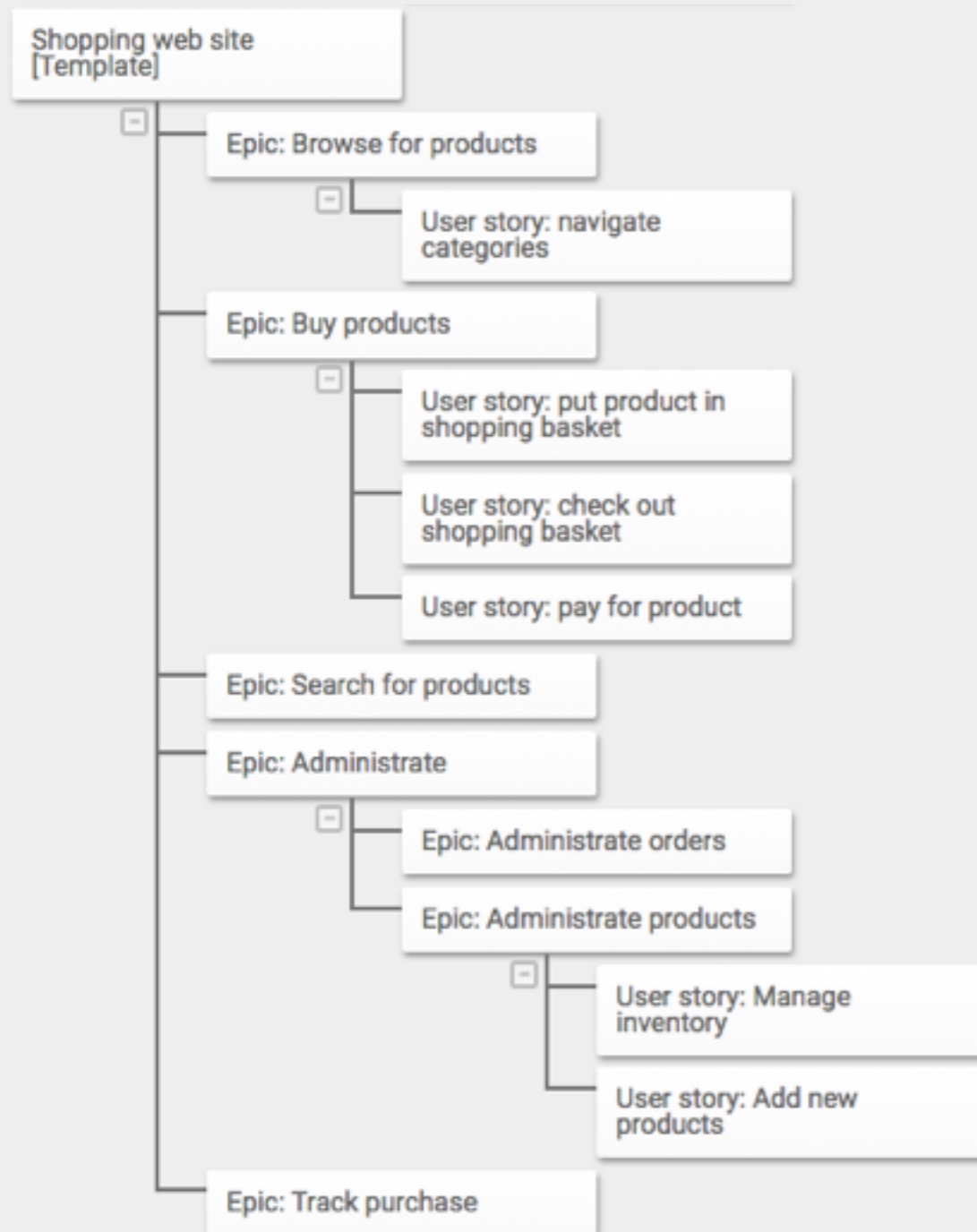
ASSIGN RESPONSIBILITY FOR SCOPE



MONITOR & CONTROL PROGRESS



LEARN FROM EXPERIENCE



BENEFITS OF WBS

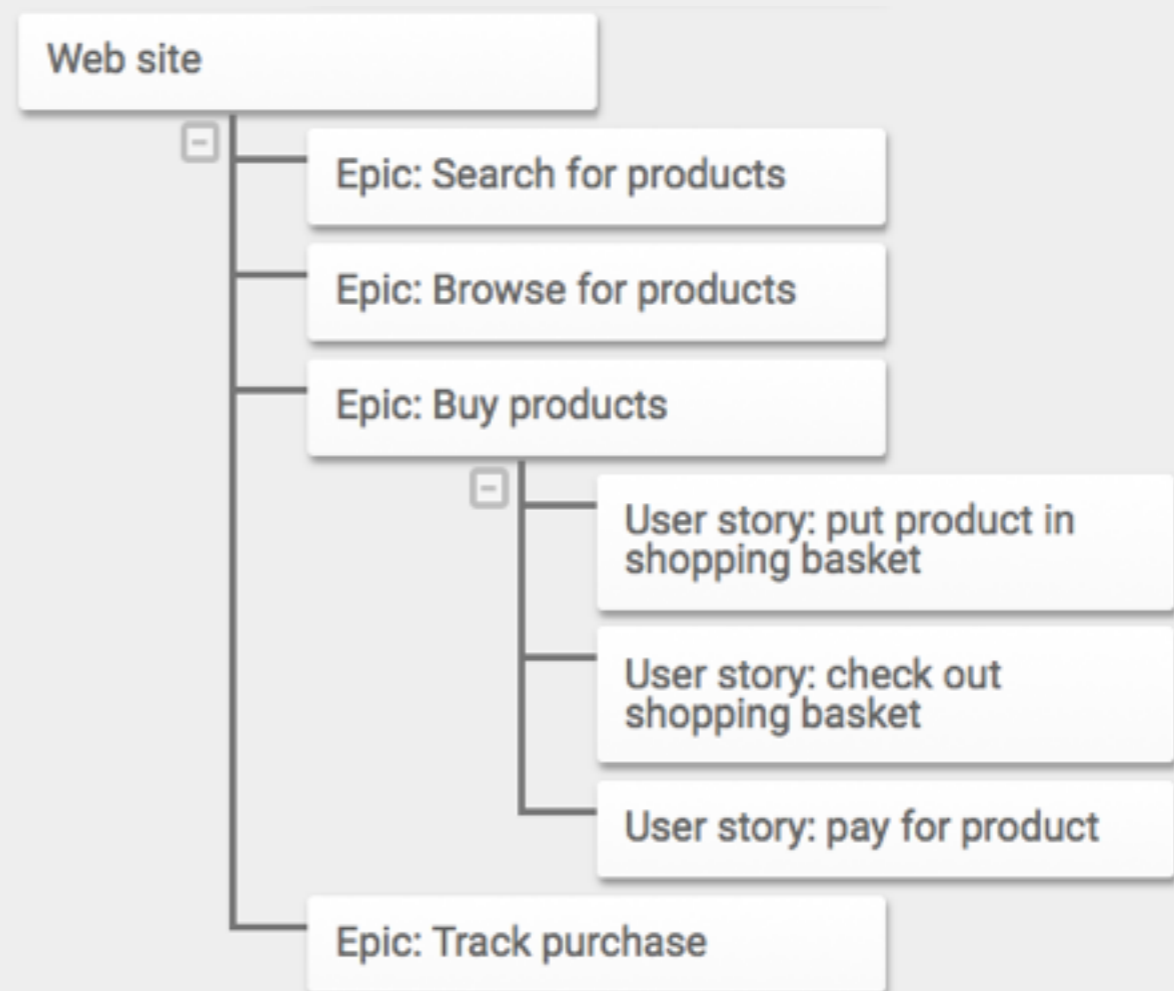
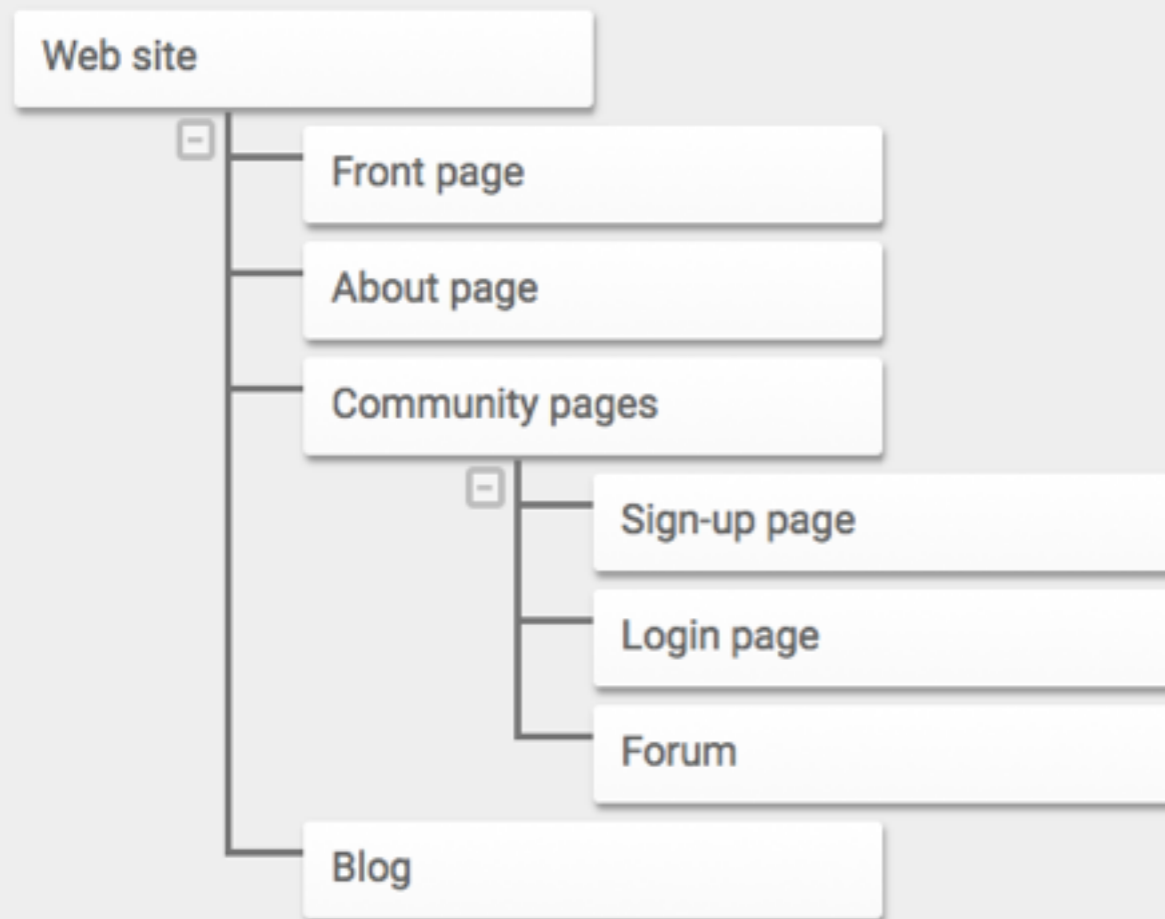
- ▶ Enables qualitative plans, with regards to scope, cost and time
- ▶ Enables progressive elaboration - detail the near future only
- ▶ Facilitates communication about scope on various levels
- ▶ Enables accountability and delegation
- ▶ Makes it easier to control scope - avoiding scope creep
- ▶ Enables earned value management
- ▶ Makes scope for typical projects reusable

STRUCTURE OF WBS

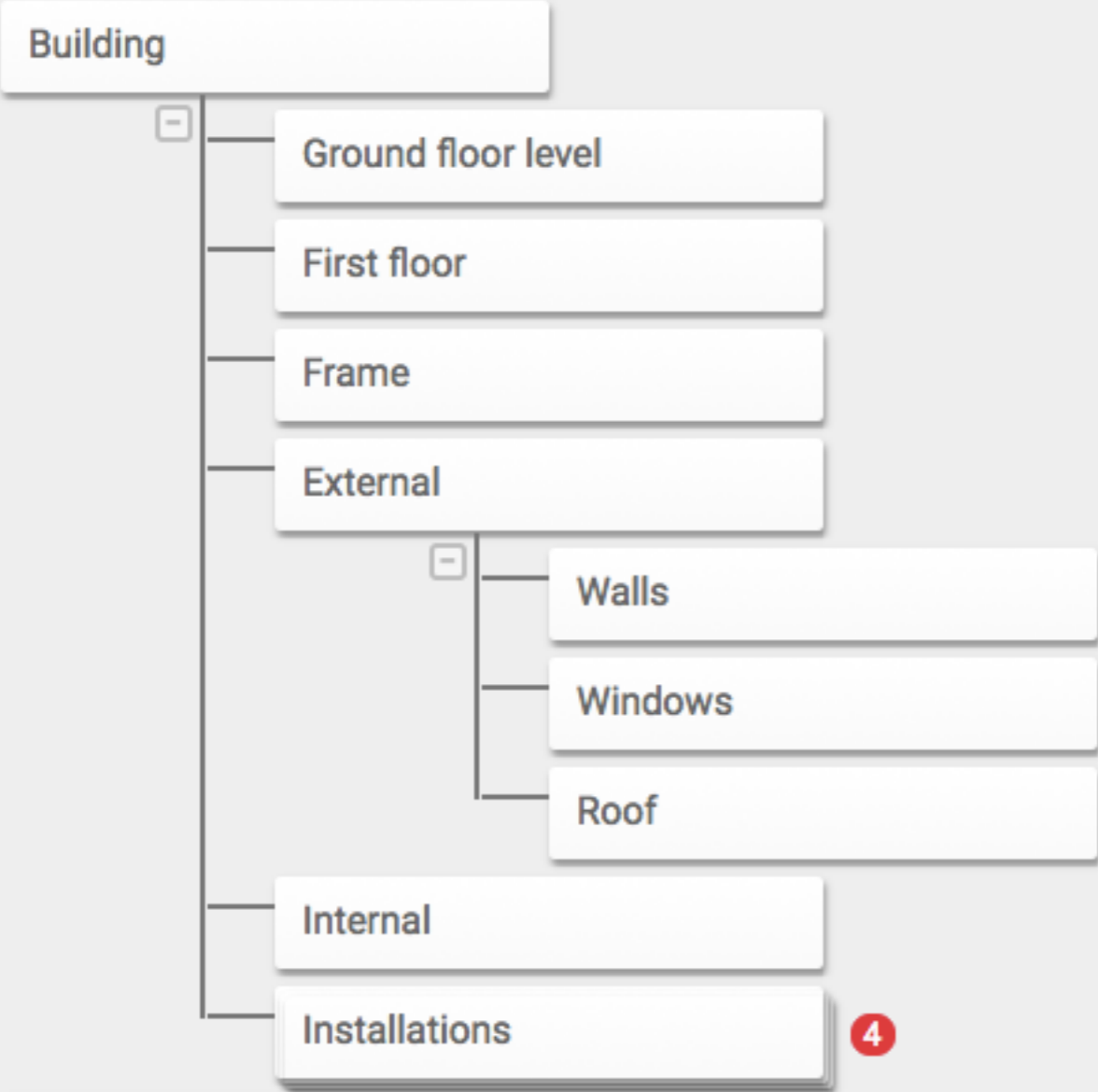
TYPES OF PARENT-CHILD RELATIONSHIPS

- ▶ Parent consists-of children
- ▶ Children belong to the same category
- ▶ Children are products, services or objectives needed to complete parent

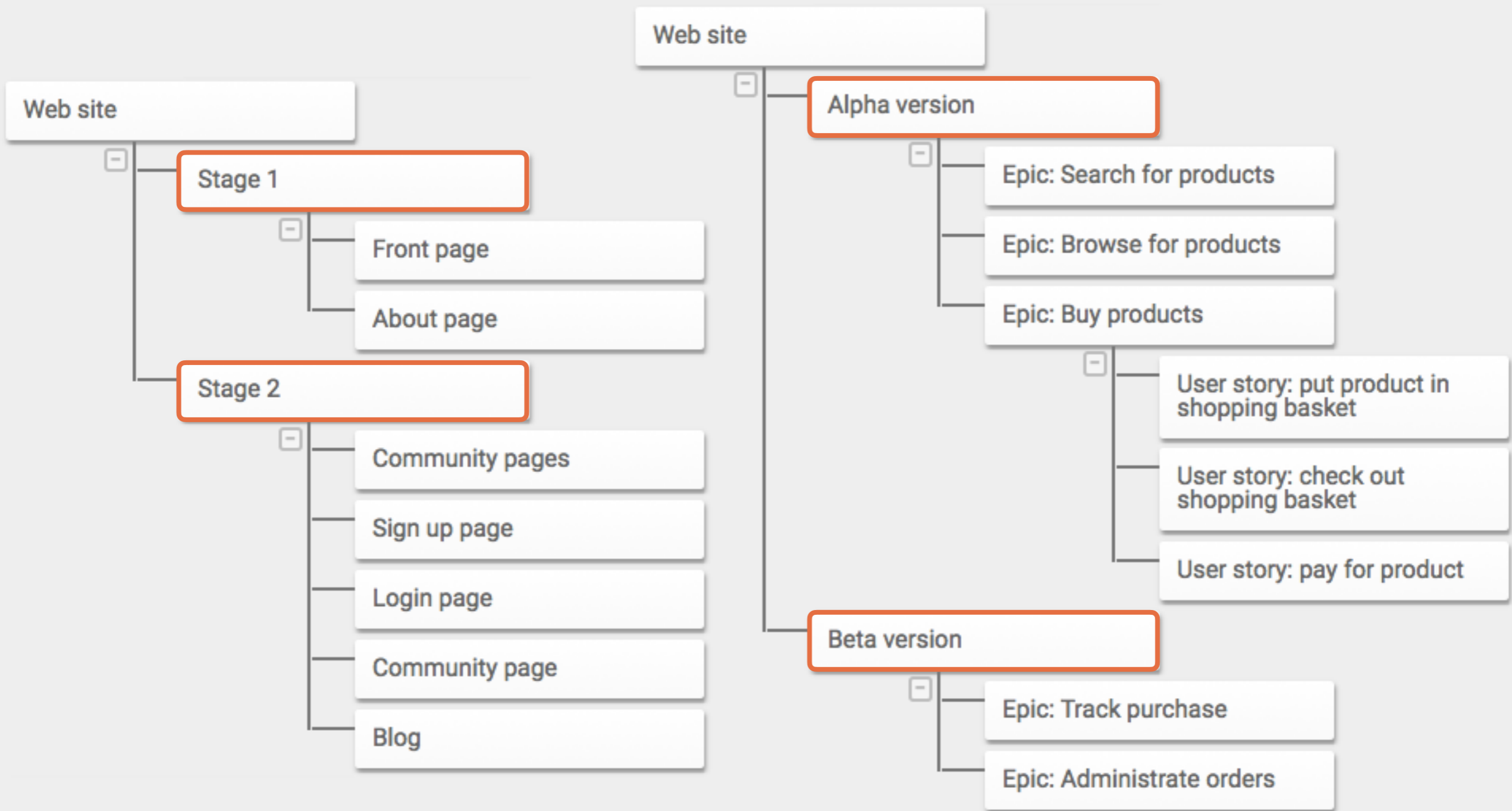
PARENT CONSISTS-OF CHILDREN



PARENT CONSISTS-OF CHILDREN



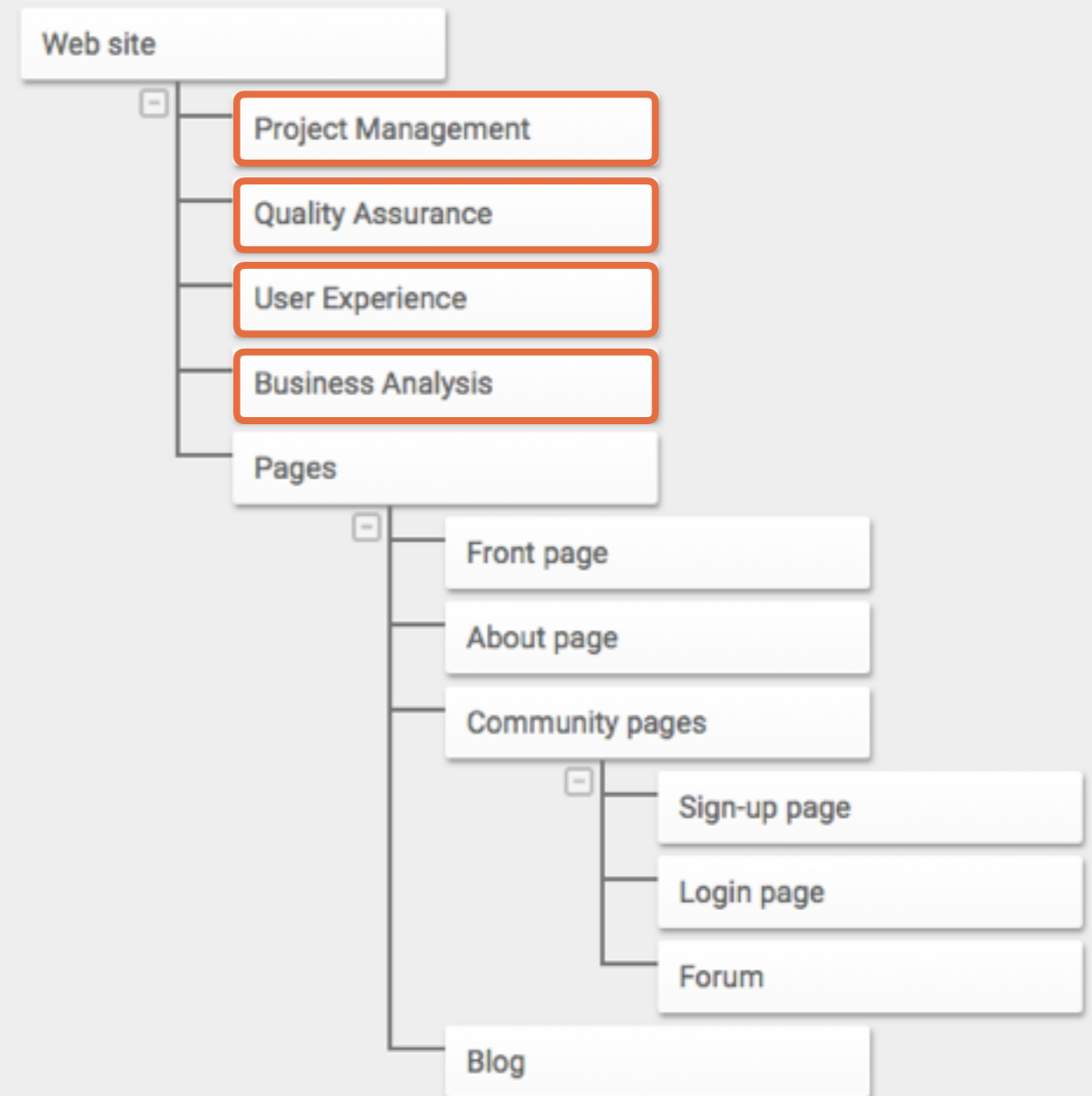
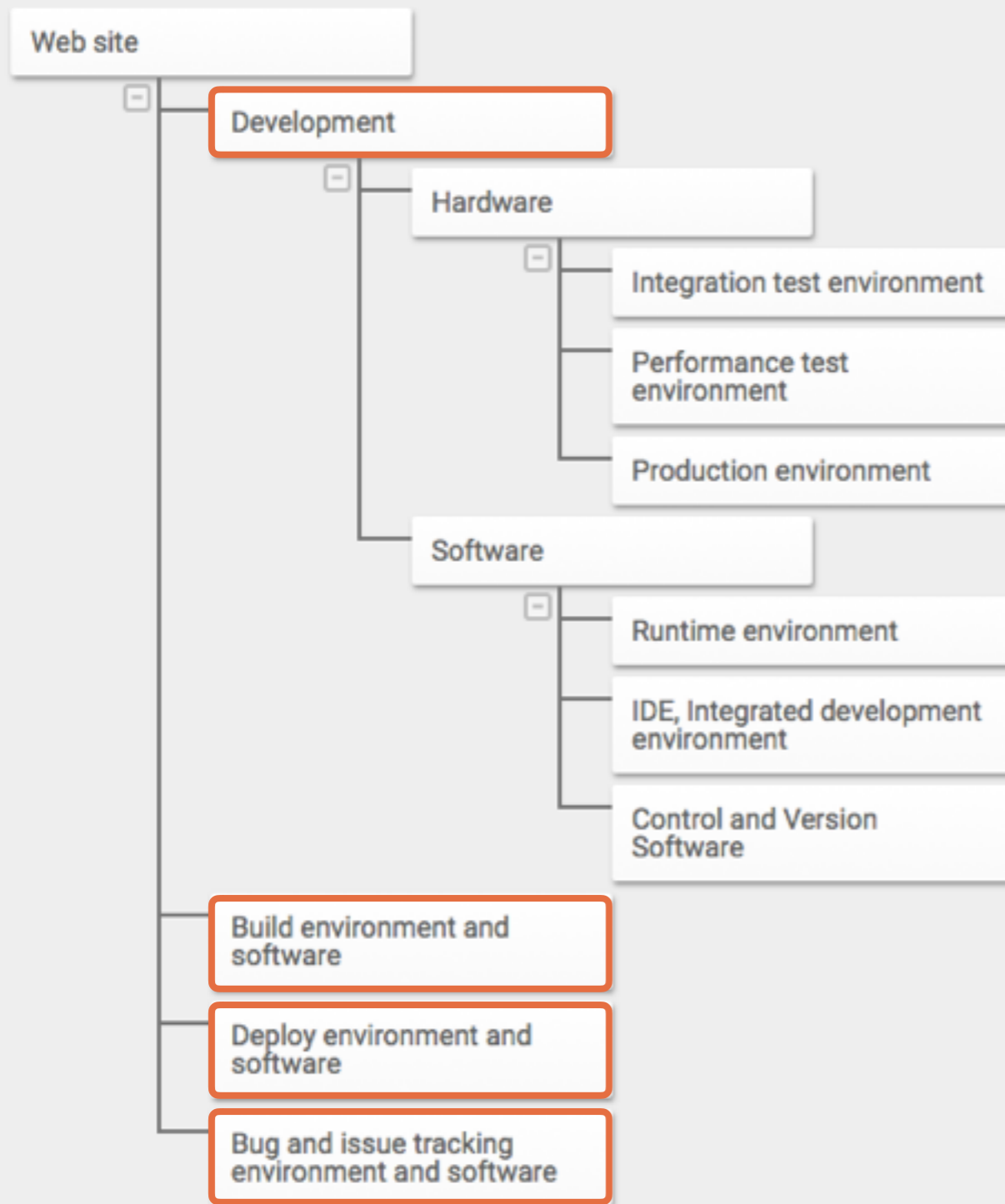
CHILDREN BELONG TO THE SAME CATEGORY



EXAMPLE CATEGORIES

- ▶ Function
- ▶ Role
- ▶ Stage
- ▶ State
- ▶ Method

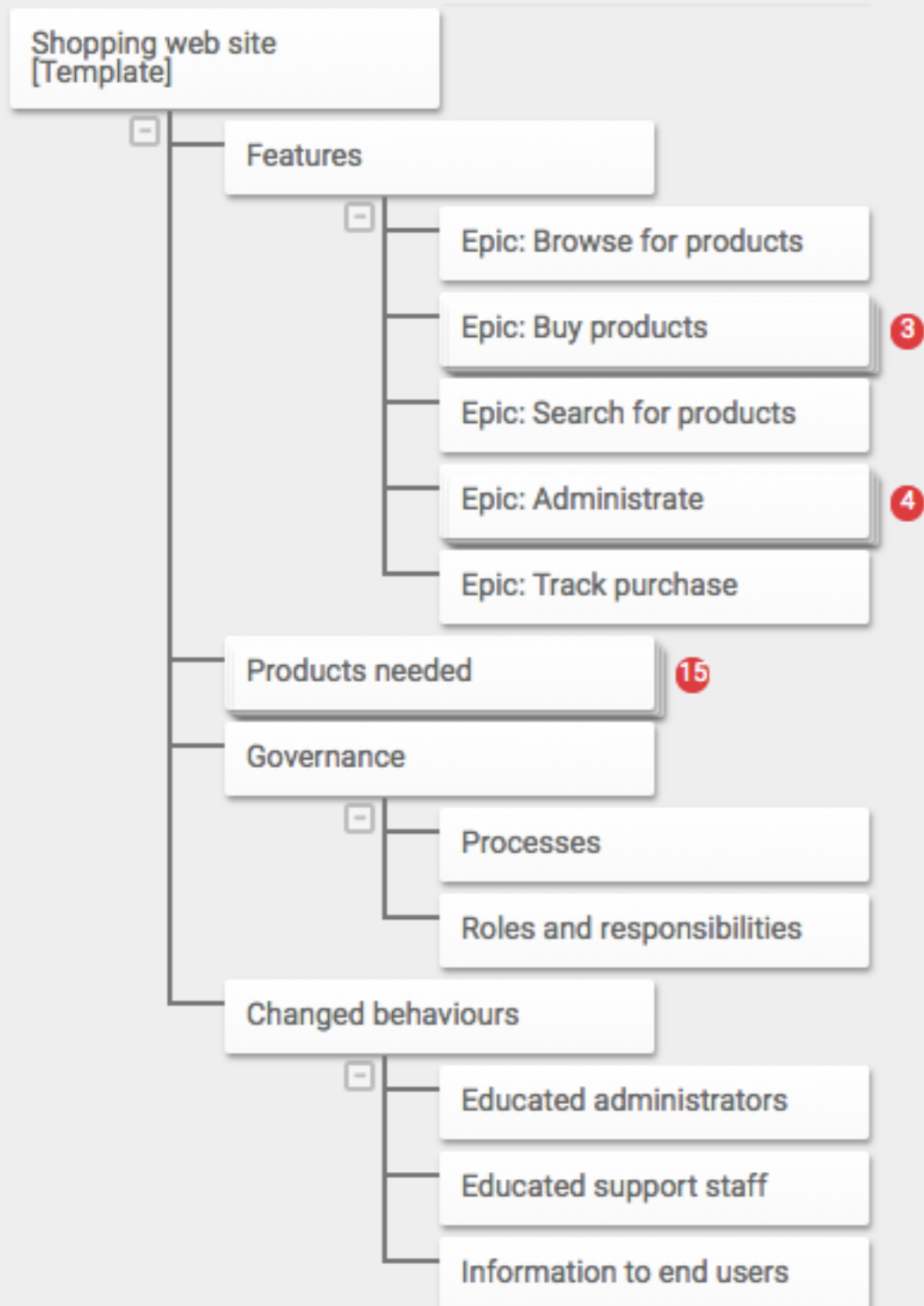
CHILDREN ARE PRODUCTS, SERVICES OR OBJECTIVES NEEDED



EXAMPLE OF OBJECTIVES

- ▶ Changed behaviors
- ▶ New or improved skills
- ▶ Increased awareness
- ▶ Management buy-in

EXAMPLE OF A GOOD WBS FOR WEB SITE



WBS RULES

100% RULE

- ▶ 100% rule says that the entire work needs to be captured in the work breakdown structure
- ▶ All children of each parent must represent 100% of the scope of the parent
 - ▶ There should not be any “hidden” or implicit work
 - ▶ It follows that each node must have at least two children
- ▶ This rule may not work well for agile projects

OTHER "RULES"

- ▶ Assignment of identification codes
 - ▶ Can simplify WBS management
 - ▶ May not be needed in integrated software tools
- ▶ Use nouns – not verbs
- ▶ Is baselined, and changed using change management procedures

HOW TO BUILD A WBS

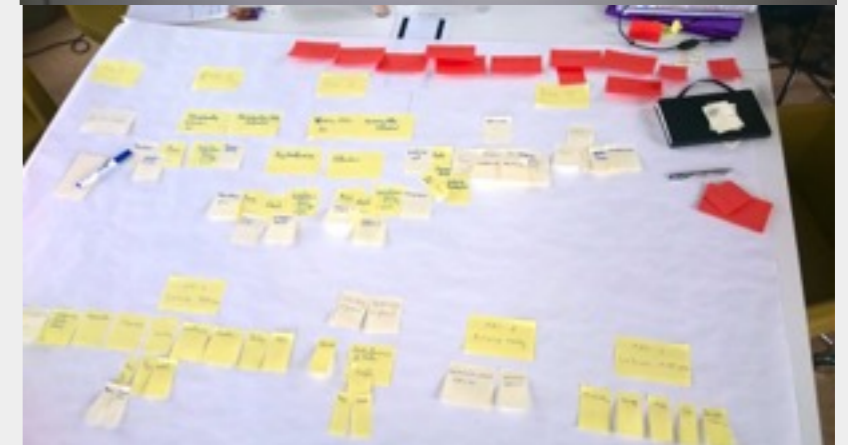
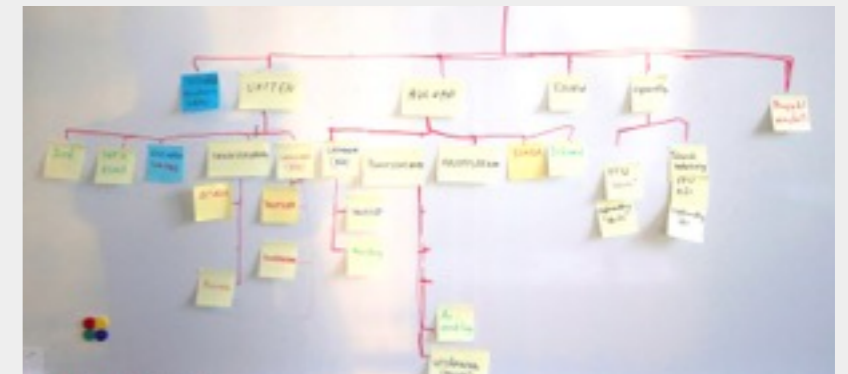
HOW TO BUILD A WBS

- ▶ Bottom-up
- ▶ Top-down
- ▶ Standards
- ▶ Templates

- ▶ Use any combination of the above

HOW TO BUILD A WBS - WORKSHOP

- ▶ Invite many different people to represent various areas
- ▶ Use collected requirements as input
- ▶ Ensure everyone understands what:
 - ▶ a WBS is
 - ▶ how it can be structured
 - ▶ what it can be used for
- ▶ Divide into groups to simplify communication
- ▶ Use post-it notes and workshop techniques



HOW TO BUILD A WBS - WORKSHOP

- ▶ Start with deliverables and project objectives
- ▶ Break down parts to get more details (top-down)
- ▶ Brainstorm, and use "affinity diagramming" to group (bottom-up)
- ▶ Represent "recurring work" with post-its of different colors
- ▶ Use templates to reuse learnings

TOOL SUPPORT

- ▶ Some examples of tools:
 - ▶ breakdownstructure.com
 - ▶ Primavera
 - ▶ Excel
 - ▶ mindmeister.com
 - ▶ Etc.

CONCLUSIONS

CONCLUSIONS

- ▶ **A WBS is focused on deliverables** - although it can be structured and broken down in various ways
- ▶ **A WBS is useful** - besides planning, for controlling scope communicating with stakeholders and delegating work (and more)
- ▶ **Creating a WBS is a collaborative effort** - ensure you include the right stakeholders, workshops and tools

FOLLOW-UP WEBINAR - WBS IN PRACTICE

- ▶ A Webinar showing how to use breakdownstructure.com in practice to develop and collaborate on WBS
- ▶ 23 of November, 17:00
- ▶ Contact me to sign up:
 - ▶ klas@breakdownstructure.com



OFFER

**3 MONTHS FREE USE
MAIL ME AT**

KLAS@BREAKDOWNSTRUCTURE.COM

GROUP WORK AND NETWORKING

- ▶ For those that have met physically, work in groups to discuss the following topics:
 - ▶ Good and bad experiences from using WBS
 - ▶ Benefits of WBS
 - ▶ Development of WBS
 - ▶ How can you improve your work on a WBS?