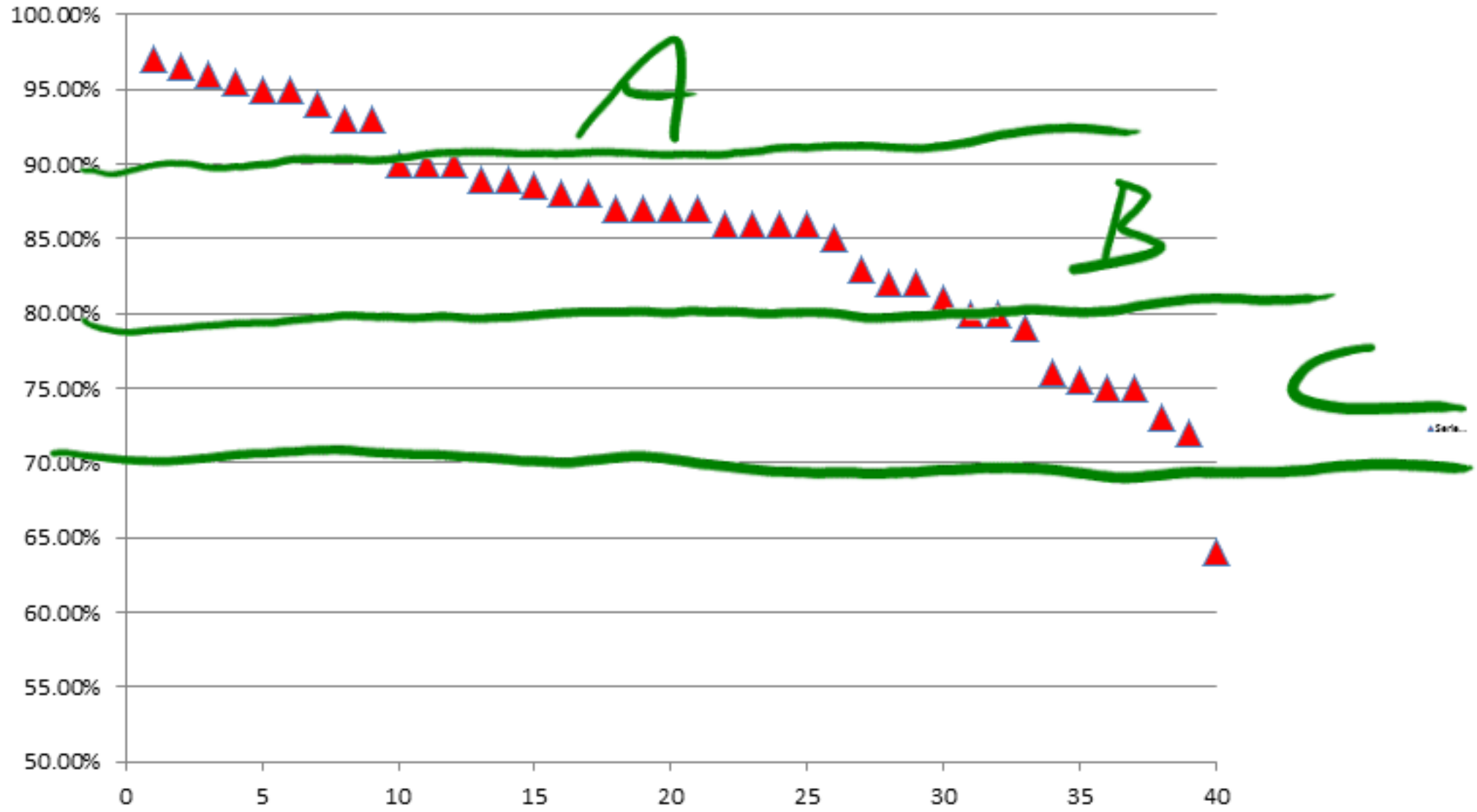


Overall		#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
84.93%	Average	88.15%	87.80%	57.56%	95.12%	81.71%	91.46%	89.76%	90.73%	80.28%	71.80%
87.00%	Median	88.00%	100.00%	60.00%	100.00%	100.00%	100.00%	100.00%	100.00%	91.67%	87.50%
8.58%	STDEV	8.03%	20.92%	20.59%	13.94%	29.72%	18.21%	16.81%	14.21%	29.86%	33.40%
		4.48	4.14	3.69	4.24	4.24	4.21	4.38	4.21	4.17	3.24
		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.00

MAX: 76/97

Functional Requirements

Chapter 10 of text

Lecture Objectives:

1) Define functional requirements
2) Define Scenario
3) Explain how to translate a story into a scenario.
4) Construct a use case scenario from a story.
5) List the symbols used on an activity diagram.
6) Explain how one can draw an activity diagram from a use case scenario.

Functional Requirement:

Something the product must do.

Functional requirements

- Define what a product must do
  - Describe the actions it must carry out to satisfy the functional reasons for its existence

- What should rabbit projects do in regards to functional requirements?

A Rabbit Project

Avoid writing reqs before building the project.

=> Do not rush to implement before understanding the reqs.

- What should horse projects do with regards to written functional requirements specifications?

Horse projects

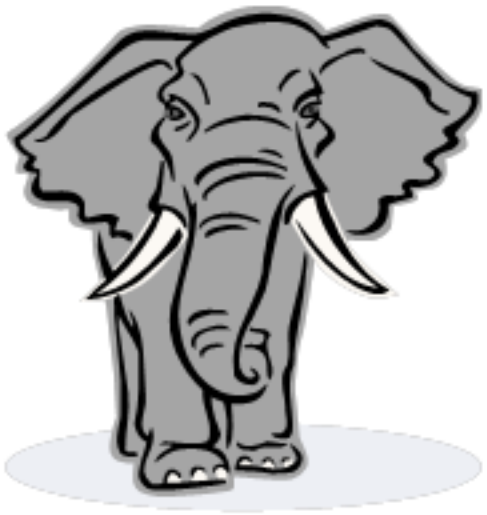
Horse Projects need to write some of their reqs.

⇒ Why

Geographically scattered

Longer release cycles.

Greater need for clear and concise communication.



Elephant Projects

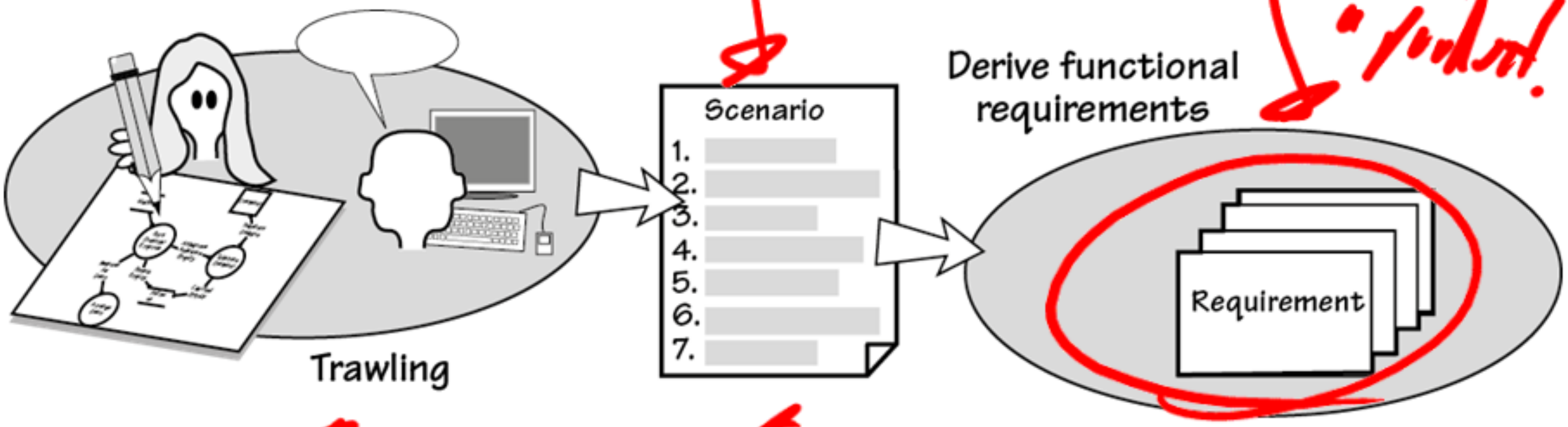
- What do elephant projects needs in regards to requirements?

Need complete and correct reqs

Need reqs to be very detailed.

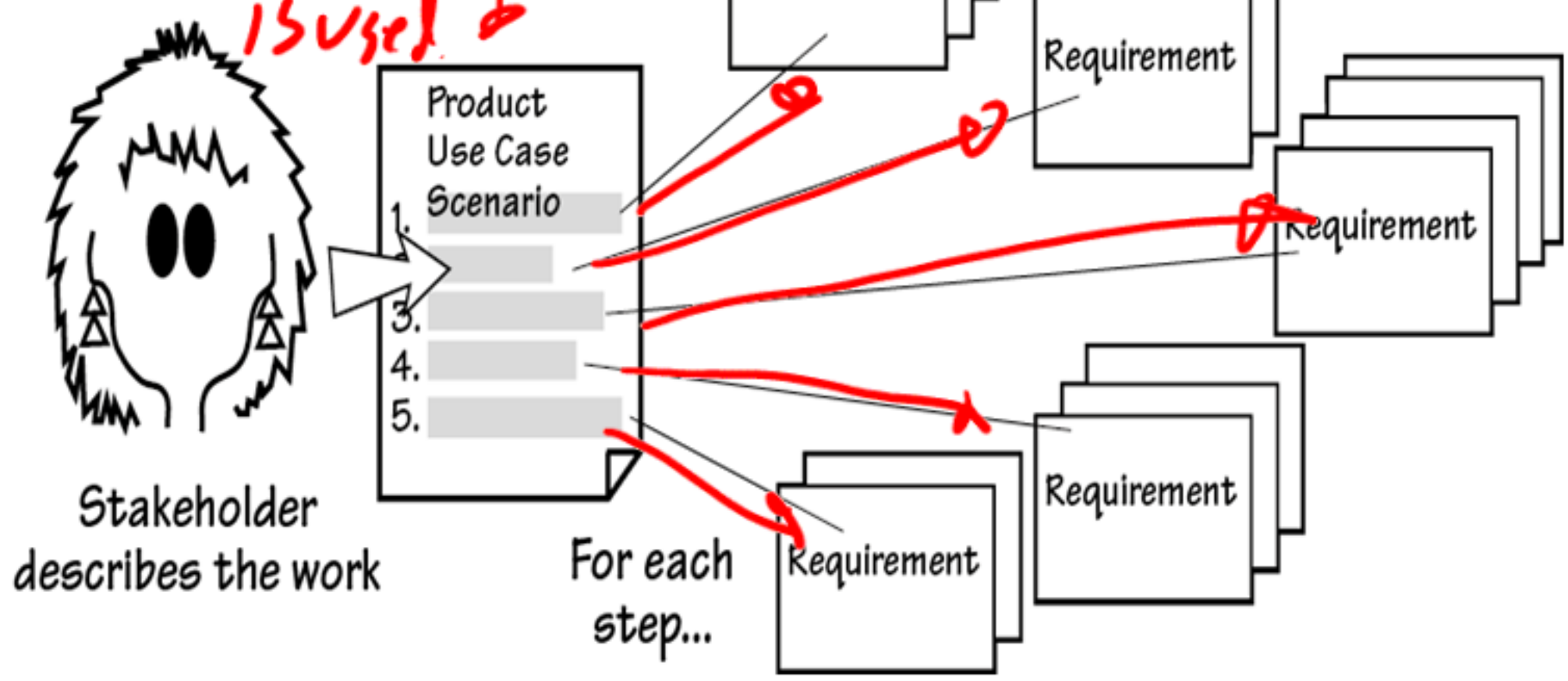
⇒ Critical / Mission safety.

Obtaining Functional Requirements



Determining Functional Requirements

How a product is used



Scenario

Use Case

- Submit Assignment
- Actors
  - Student
- High Level Description
  - This use case describes how a student would submit an assignment into the system. By submitting an assignment, a student indicates that the Assignment is complete and ready to be graded.
- Preconditions
  - Student has been authenticated by the system.
- Use Case Flow:
  1. Student indicates a desire to submit an assignment into Blackboard.
  2. BlackBoard displays a set of assignments which the user can submit at the current time.
  3. Student indicates the assignment that they wish to submit.
  4. Blackboard prompts the user to upload the file(s) which constitute the assignment. (Transition to the file upload use case)
  5. Blackboard prompts the user to agree with assignment submission statement.
  6. Blackboard archives the assignment internally for grading.
  7. Blackboard displays to the user that the assignment has been submitted successfully.
- Alternate flows:
  - 2-a-1. Student has no assignments due at the present time. Exit use case scenario.
  - 4-a-1. Student does not upload any files to the system. Prompt the user that they must upload at least one file for assignment submission. Retry file upload use case. If still no uploads are performed, exit use case.
  - 5-a-1. Student fails to agree to the terms of service.
- Outcome:
  - The students assignment is submitted.

- Use Case Flow:
  1. Student indicates a desire to submit an assignment into Blackboard.
  2. BlackBoard displays a set of assignments which the user can submit at the current time.

Lets write some requirements

Blackboard shall be capable of showing which assignments are due at the present time.

- Use Case Flow:
  1. Student indicates the assignment that they wish to submit.
  2. Blackboard prompts the user to upload the file(s) which constitute the assignment. (Transition to the file upload use case)
  3. Blackboard prompts the user to agree with assignment submission statement.

Lets write some requirements

Blackboard shall show the appropriate agreement to students when submitting an assignment.

- Use Case Flow:
  1. Blackboard prompts the user to agree with assignment submission statement.
  2. Blackboard archives the assignment internally for grading.
  3. Blackboard displays to the user that the assignment has been submitted successfully.

Lets write some requirements

Level of Detail and granularity

- Requirements are written as a single sentence with one verb.
- Where possible, avoid the usage of and
- Tend to want to use "shall" instead of other words.
  - Consistency

Multiple conditions

or ⇒ indicates multiple reqs merged.

Online poll of class...

Select A – E as you agree.

- How many functional requirements for each step in the use case
  - A. 1
  - B. 2 – 6
  - C. 6 – 10
  - D. More than 10
  - E. None of the above

- The product shall display pictures of goods for the customer to click on.

What's wrong with this functional requirement

How to group requirements