



Expectations Levels

Needs

Requirements

Solution Definitions

Agenda

The levels

Needs, Requirements and
Solution definition explained

01

02

Why care

Powerful analysis

Challenge

Some problems you may face
when analysing

03

04

When have you done it enough

When to move on



01



The Levels

Needs, Requirements and Solution Definition briefly explained

Powerful analysis

Goal

Creating the best possible input to the solution. Fast!

Means

Applying a structured way of committing stakeholders to agree on the expectations.

- Holistic
- Natural
- Team based



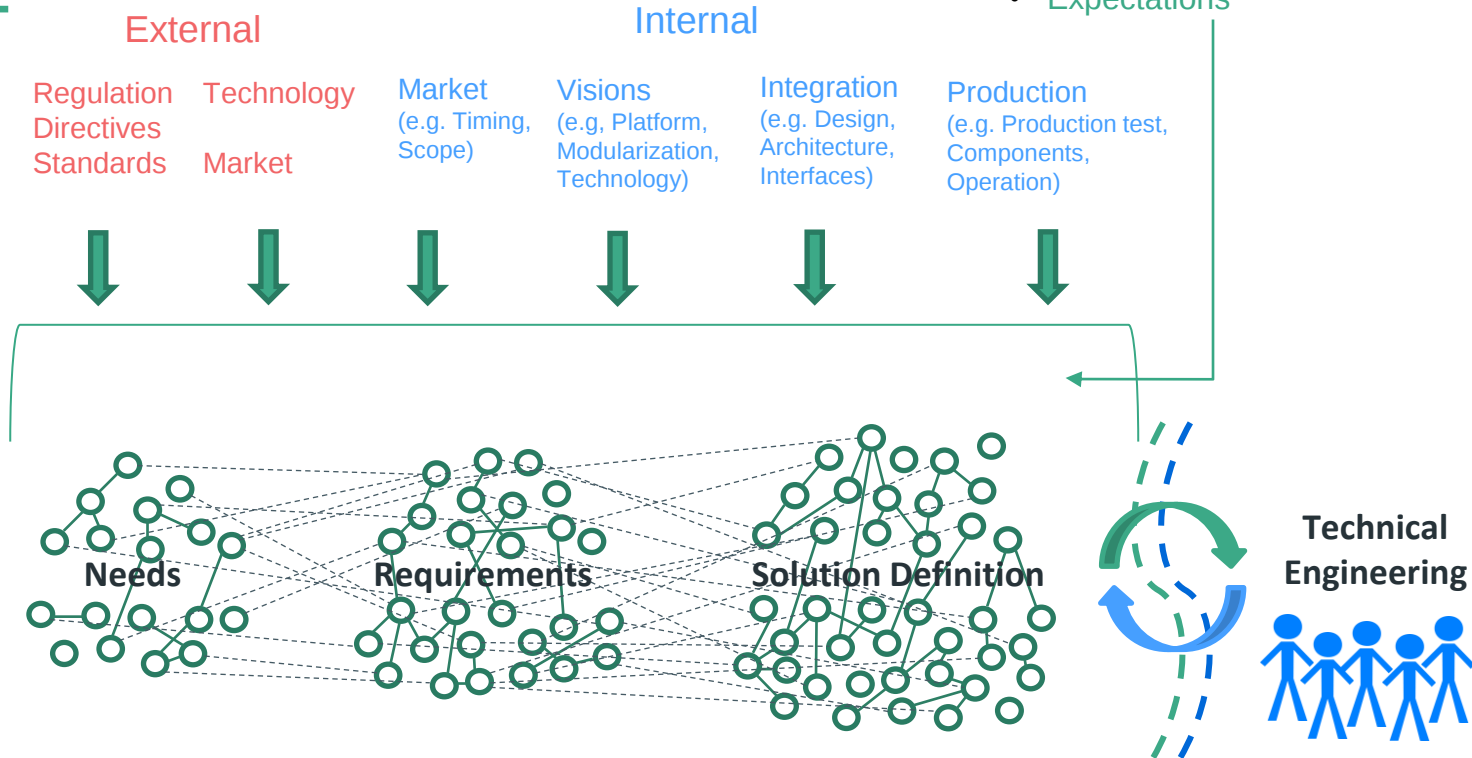
Expectations
levels



The nature of expectations

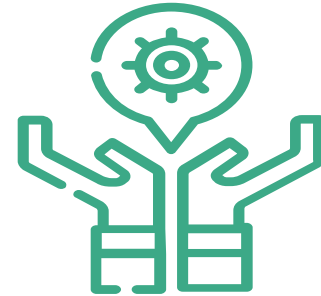
Input for definition of the goal:

- Vision
- Purpose
- Scope
- Expectations



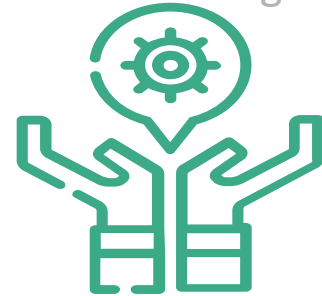
Needs

- ❏ The reason why we are making a solution
- ❏ Why we are trying to solve which problem (purpose)
- ❏ Expressed as why it is important to the user
 - Not what he want to meet his need
 - Not suggesting any solution
- ❏ Must be validated
- ❏ Different stakeholders – different needs
- ❏ Reasonable constant



Needs – look like

- As a <stakeholder> I need <something> to achieve <goal>
- As a <stakeholder> in this < context> I need <something> to achieve <goal>
- We are talking about the stakeholder and his need
 - What he want to achieve
 - Why it is important to him
- “Use Cases” often includes a need statement



Requirements

- ❏ What is required (capabilities) to fulfil the needs (under which conditions)
- ❏ Expressed as requirements to the solution
 - Not why it is needed
 - Not how it must be solved
- ❏ Must be verified
- ❏ Many types of requirements
- ❏ Very volatile



Requirements – look like

- ❏ The solution shall <functionality / quality>
- ❏ We are talking about the solution
- ❏ Stakeholder want the solution to have some functionality or a quality (to meet his needs)
- ❏ Measures often stated in more or less than a given value

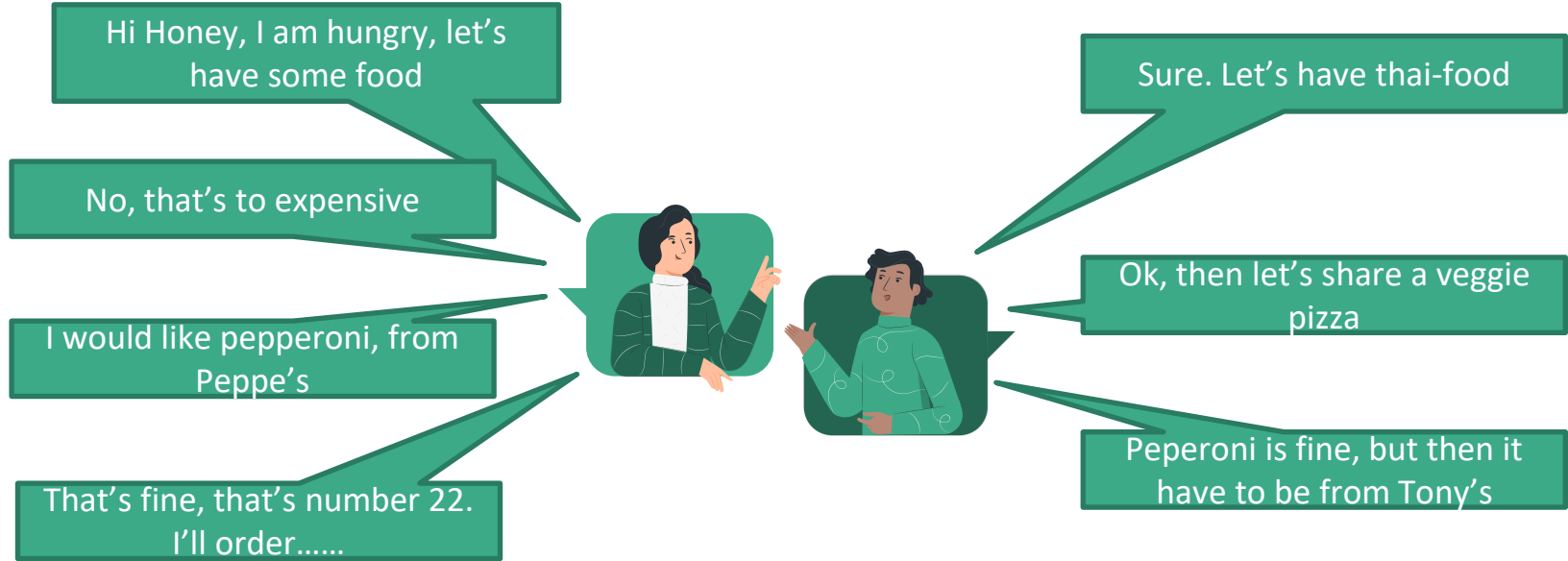


Solution Definitions

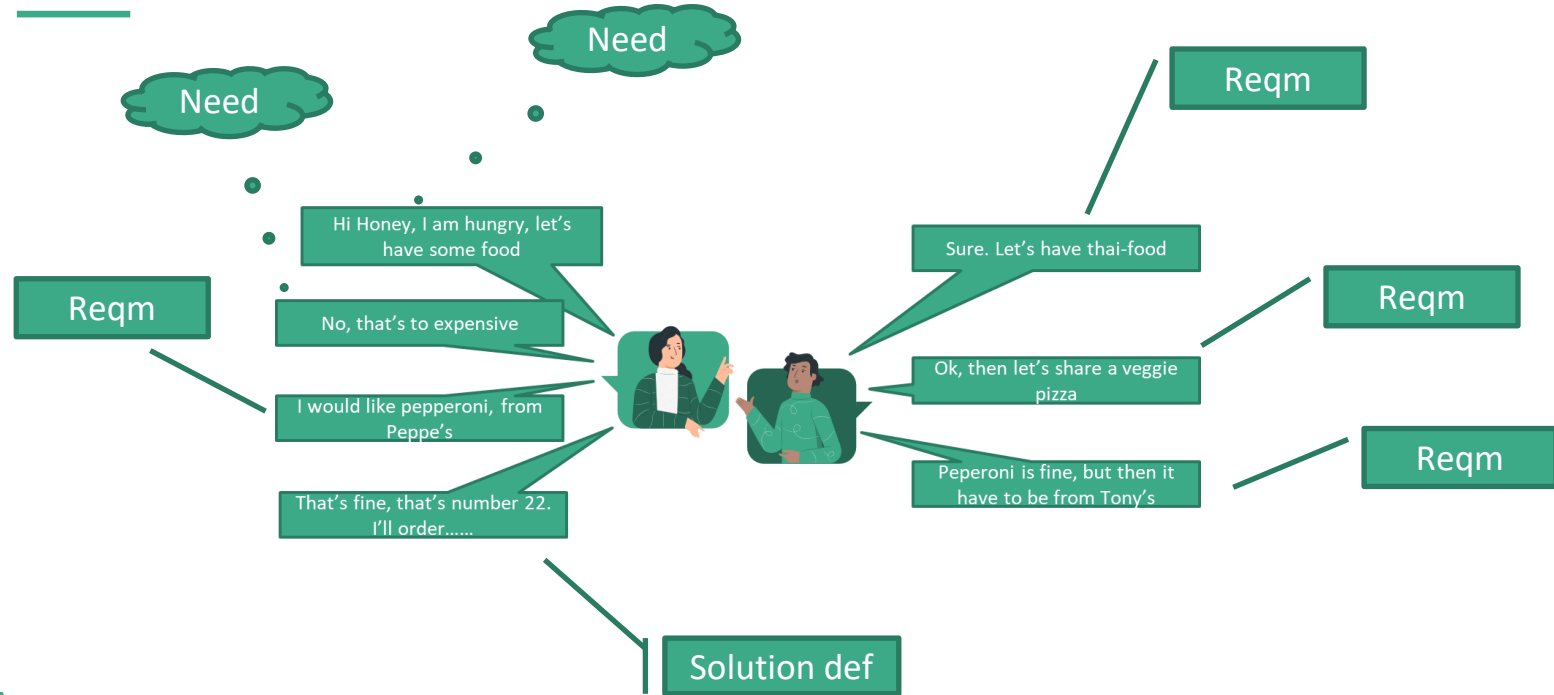
- ❏ How the solution must be implemented (to fulfil the requirements)
- ❏ Expressed in specifications to the solution
 - Not why the solution is needed
 - Not what it is supposed to do
- ❏ Must be verified
- ❏ Can take many forms, as long as it communicates
- ❏ Volatile



The way it works



Translates into



In a table...



Needs

- Hungry
- Affordable



Requirements

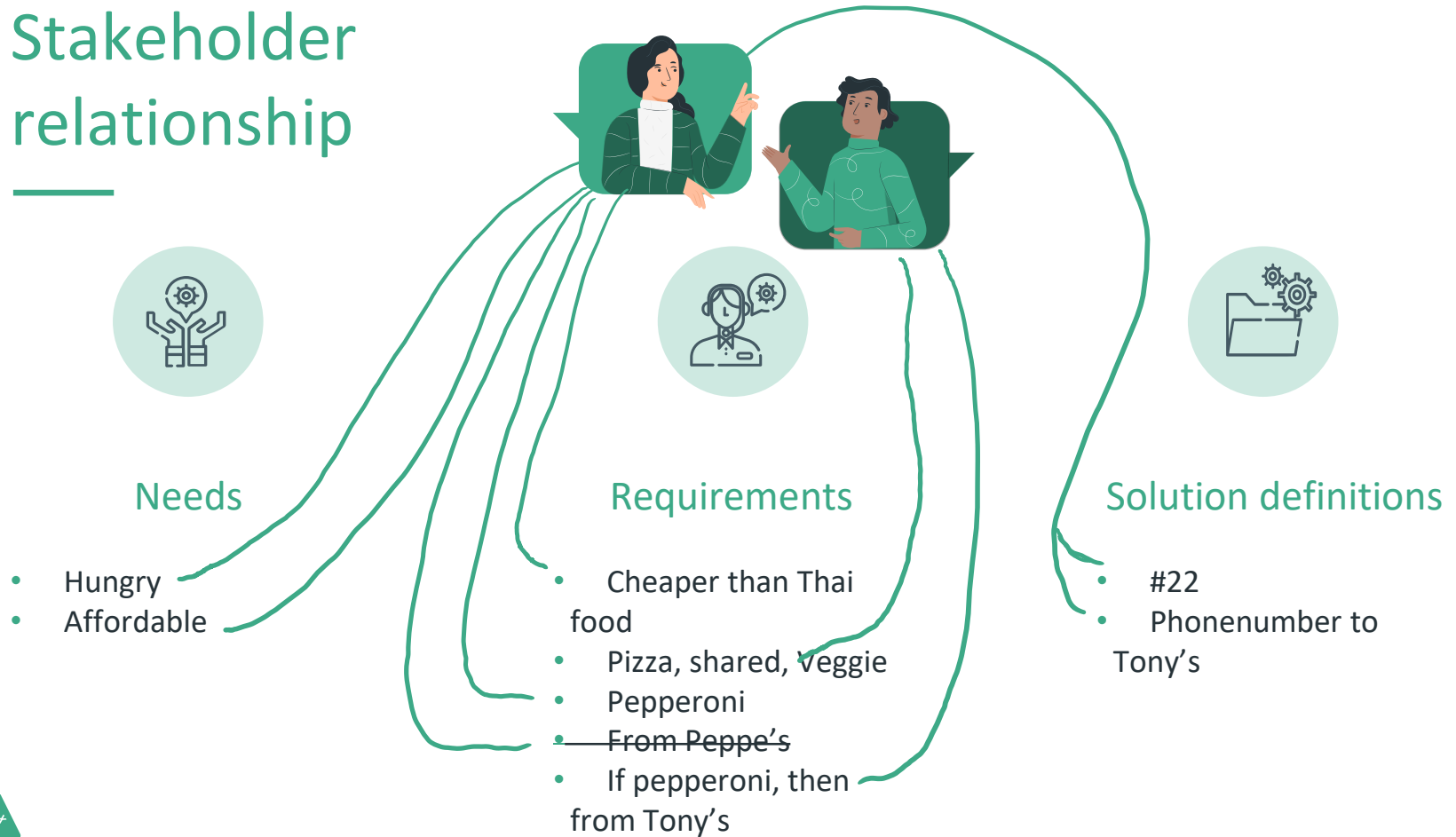
- Cheaper than Thai food
- Pizza, shared, Veggie
- Pepperoni
- ~~From Pepe's~~
- If pepperoni, then from Tony's



Solution definitions

- #22
- Phonenumber to Tony's

Stakeholder relationship



Expectations relationship



Needs

- Hungry
- Affordable



Requirements

- Cheaper than Thai food
- Pizza, shared, Veggie
- Pepperoni
- ~~From Peppe's~~
- If pepperoni, then from Tony's



Solution definitions

- #22
- Phonenumber to Tony's

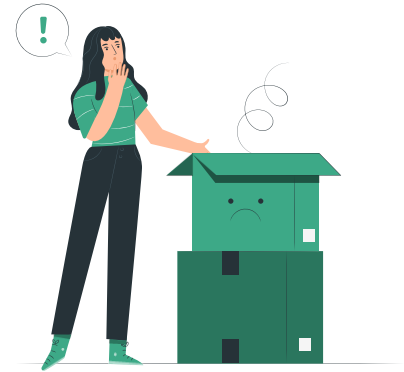
Hold on...

3 minutes analysis on top of a 15 sec conversation???

Is that worth it???

Not if:

- The situation is as simple as this one
- No other stakeholders must be involved
- The cost of failure is acceptable
- No changes will occur



What could go wrong (risks)?

Task: Someone else make the phone call

If everything follows the plan, no problem 😊

But, if Tony is closed

Where can you go?



What if?

Tony is out of pepperoni

What where the second best choice, or
should you go to Peppe's for at pepperoni.
How would you know that it was Peppe's?

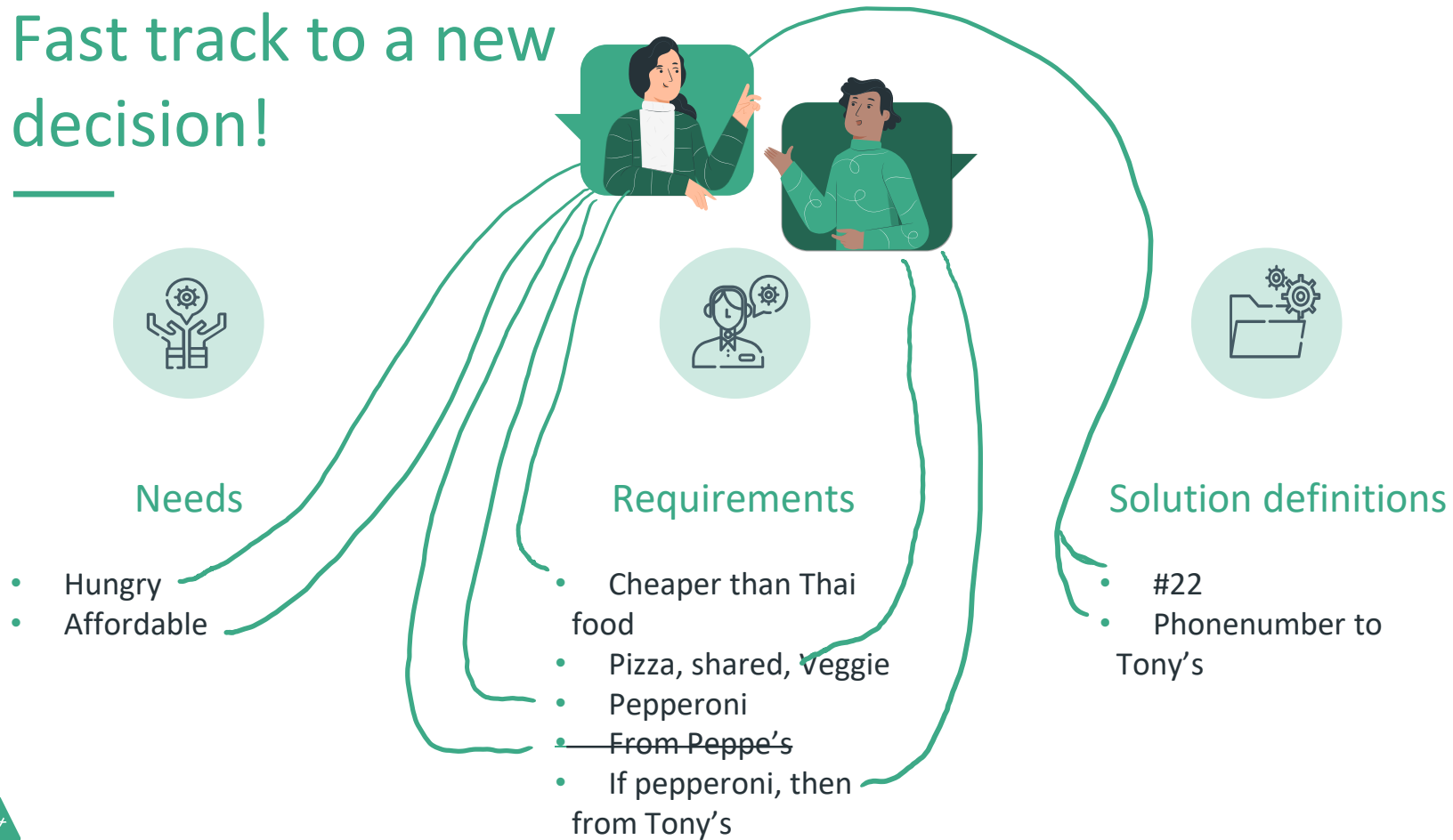
There is two hours waiting....

Is Ann hungry, or very hungry?
How long lunchbreak do Ann and James
have?



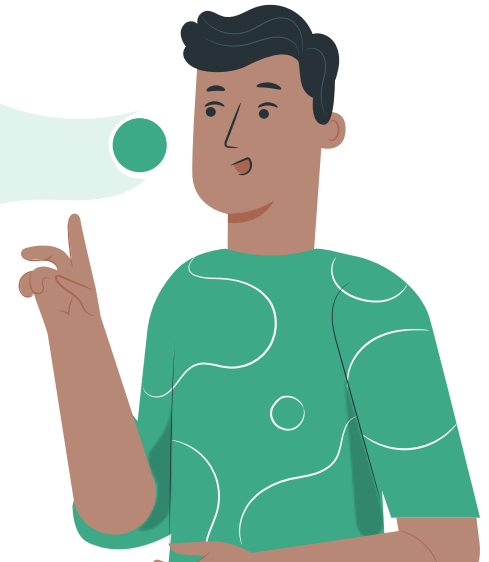
Learn more in the Risk lesson!

Fast track to a new decision!



“The need for revisiting the expectations comes surprisingly fast and suddenly”

— Whitebox



02



Why care

Powerful analysis

Why do the three levels of expectations support consensus?

Natural

It is easy to talk about

Common ground

Expectations is the boundary object, that all can talk about and realise the need to agree upon



Layered

The three levels has different characteristics.
Separating supports understanding

Common practice

Analysing expectations is a common process that support the co-operating between the stakeholders

Supported by standards

Requirements has been studied thoroughly. As soon as you know what you need, there are standards ready to help you

Generic

The same principles apply to all domains and all stakeholders

Natural

The way we talk at the high levels

The way we solve daily issues

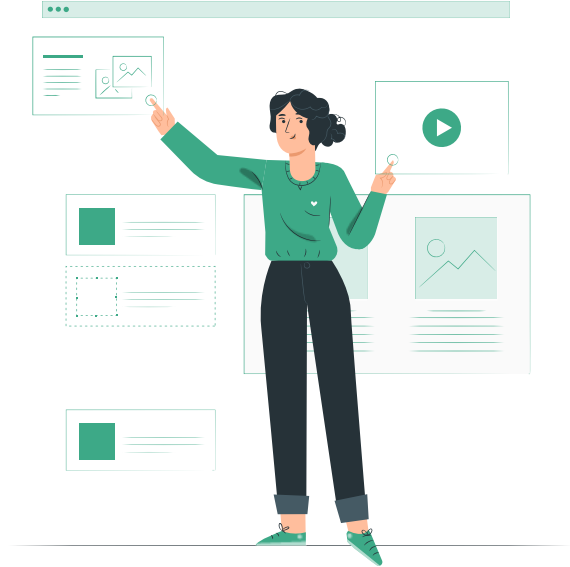
Just recognize the pattern and you will
feel comfortable



Layered

The topic is complicated and has three levels of properties

Distinguishing between them supports the understanding



Supported by standards

When we dig deeper, the topic can become very complex indeed.

Then, there are all kinds of standards ready to support us.



Common ground

When many different people are discussing the same topic, they need a common ground to work from.

Expectations are the “boundary object” that all stakeholders can discuss.



Common practice

All stakeholders are analysing expectations in pretty much the same way. This add to the highly appreciated “teamwork” feeling.



Generic

The high level practices in Expectation Engineering can be applied across the organisation and different domains. Trained Expectations Engineers can easily communicate with each other



Powerful analysis

Goal

Creating the best possible input to the solution. Fast!

Means

Applying a structured way of committing stakeholders to agree on the expectations.

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03



Challenge of difference

When is it a need, and when is it a requirement?

Rules

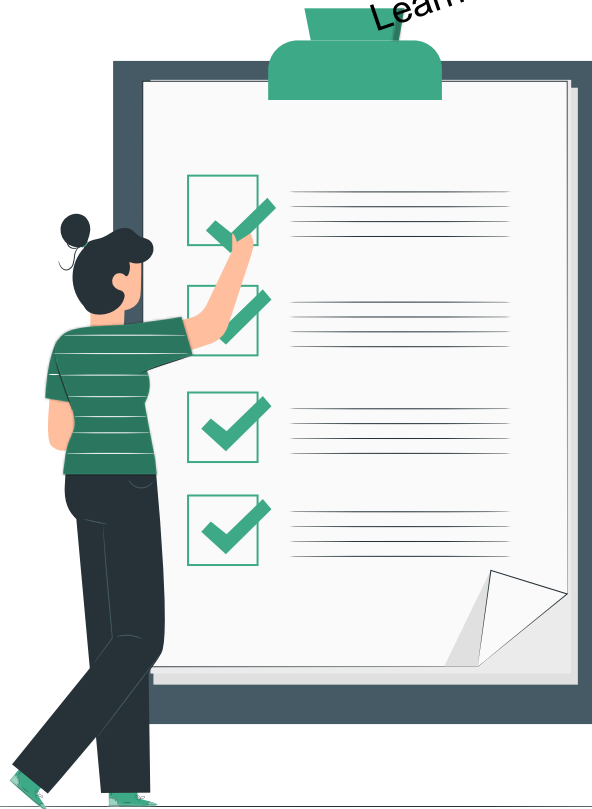
Learn more in the “Elicitation” lesson

Listen to the words

The wording will tell you, most of the times

Quality?

Is it ambiguous or unclear?



Decide!

It is often dependent on the point of view. Decide and change the wording to reflect the chosen point of view.

Move on....

If you have discussed, you are all ready smarter! If you were wrong, you can change.

Examples

- ❏ The system shall provide a search facility that will allow full-text searching of all web pages that the user is permitted to access.
- ❏ The system shall provide a search facility that will allow full-text searching of all web pages that the user is permitted to access.
- ❏ = Requirement

Examples

- Down time after a failure shall not exceed x hours
- Down time after a failure shall not exceed x hours
- = Requirement

Examples

- ❏ As a Product Owner, I want to communicate product incentives to our customers each time they purchase a complimentary product.
- ❏ As a Product Owner, I want to communicate product incentives to our customers each time they purchase a complimentary product.
- ❏ = Need



Examples

- ❏ The process must finish within 3 hours, so data is available by 8 a.m. local time after an overnight update.
- ❏ The process must finish within 3 hours, so data is available by 8 a.m. local time after an overnight update.
- ❏ = Requirement

Examples

1.03.00 BUILDING PAD

Description:

- These embankments will be formed by layers of "imported bank material" with an average of 8" (20cm), moistened and compacted to meet 95% of the Proctor compaction test. The amount of "imported bank material" layers will depend on the final grading requirements. The building grade is based on a dock height design, with actual and future dock areas (dock area expansion capability). Consider positive slope to property limit directed to a concrete flume (if required), all this for rainwater superficial drainage purposes, the water must be conducted outside the property to authorized areas.
- The building must be dock high.

Mandatory codes, regulations and standards:

- *Manual de calidad de materiales en secciones de pavimentos carreteros de SCT, Proctor Test, Qualified/licensed soils consultant project and tests.*

- ▣ Instructions to the constructors
- ▣ = Solution definition



04



When have you done enough

When to move on

Enough?

The purpose...

To create the best possible input to the solution, fast!

Enough

When the time you spent on analysis, is not worth the increased quality of the input



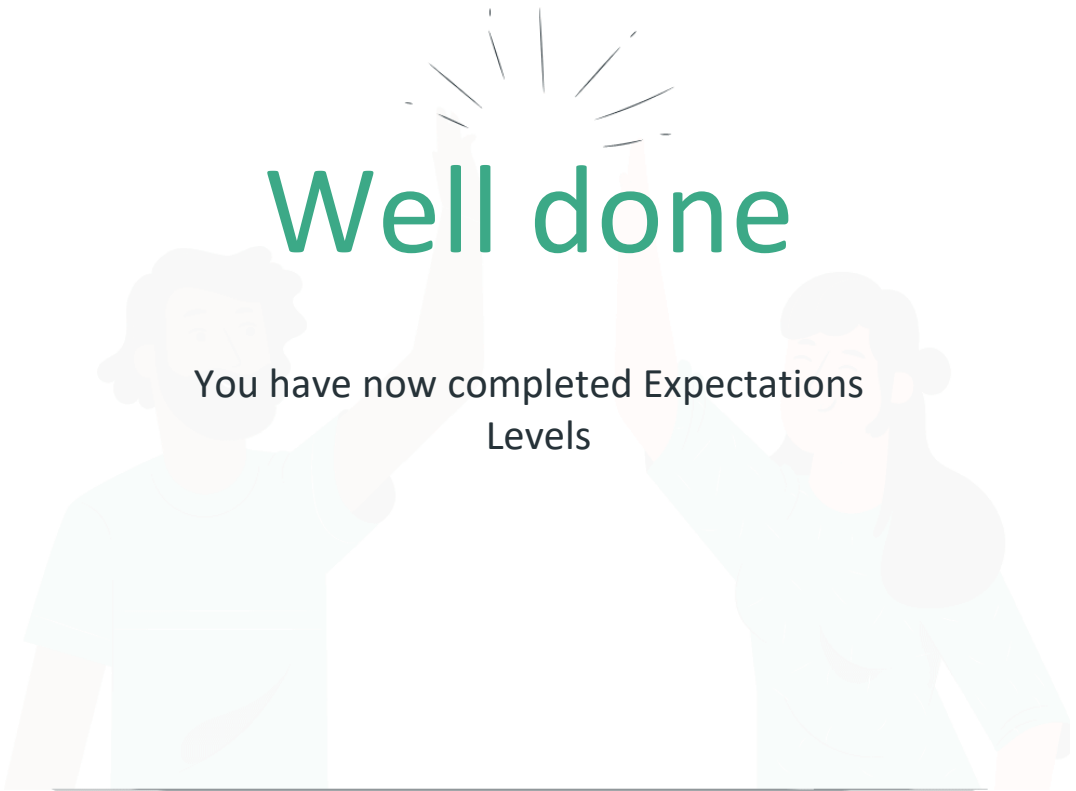
“Move on” signs

- ❏ You are repeating discussions
- ❏ When the quality of the expectations is good enough for all stakeholders
 - E.g. when the testers actually can test
- ❏ A general feeling of
 - “We are comfortable now”
 - “Analysing does not bring us forward anymore, we have to do something”
- ❏ No new items comes up
- ❏ No new relationships comes up

Caveats!! Bad reasons to stop

- ❏ Cumbersome documentation process
 - Does NOT make the complexity go away
 - Do: Improve the tool support
- ❏ Not having access to key stakeholders
 - Will only postpone the problems to a point in time, where they really burn and are 50 times as expensive to fix.
 - Do: Escalate the “lack of access” issue to the steering group
- ❏ Plainly feeling more comfortable with jumping to construction
 - A great construction that support the wrong problem is not great
 - Do: Continue with the Expectations Engineering training to become great expectation engineers



A faint, stylized illustration of two people, a man and a woman, high-fiving. Their hands are raised towards the center of the image, where a bright light or spark is depicted with several radiating lines. The people are wearing light green shirts.

Well done

You have now completed Expectations
Levels

