Software Development Management

Main contacts: Edwin Hendriks
Semester 1 of 2020

Lecturer

Edwin Hendriks

Software Development
Entrepreneur and Innovator

https://www.linkedin.com/in/ehahendriks
Skype-id: eddyhendriks (from Lent)

Important dates (regarding Edwin's lectures/assignments)

1. LECTURE: The process and the client you will manage + START OF MINI PROJECT (5th of Feb)
2. Client of mini project present at Mercator I (12th of Feb 13:30-17:30)
3. Client of mini project present at Mercator I (14th of Feb 08:30-16:30)
4. Deadline of mini project (14th Feb 16:30)
5. LECTURE: Verifying that you delivered what was agreed upon (27th of Feb)
6. LECTURE: Learn from each other's lessons (14th of April)

Passing the course

1. You need to pass my part of the course to be able to pass the whole course

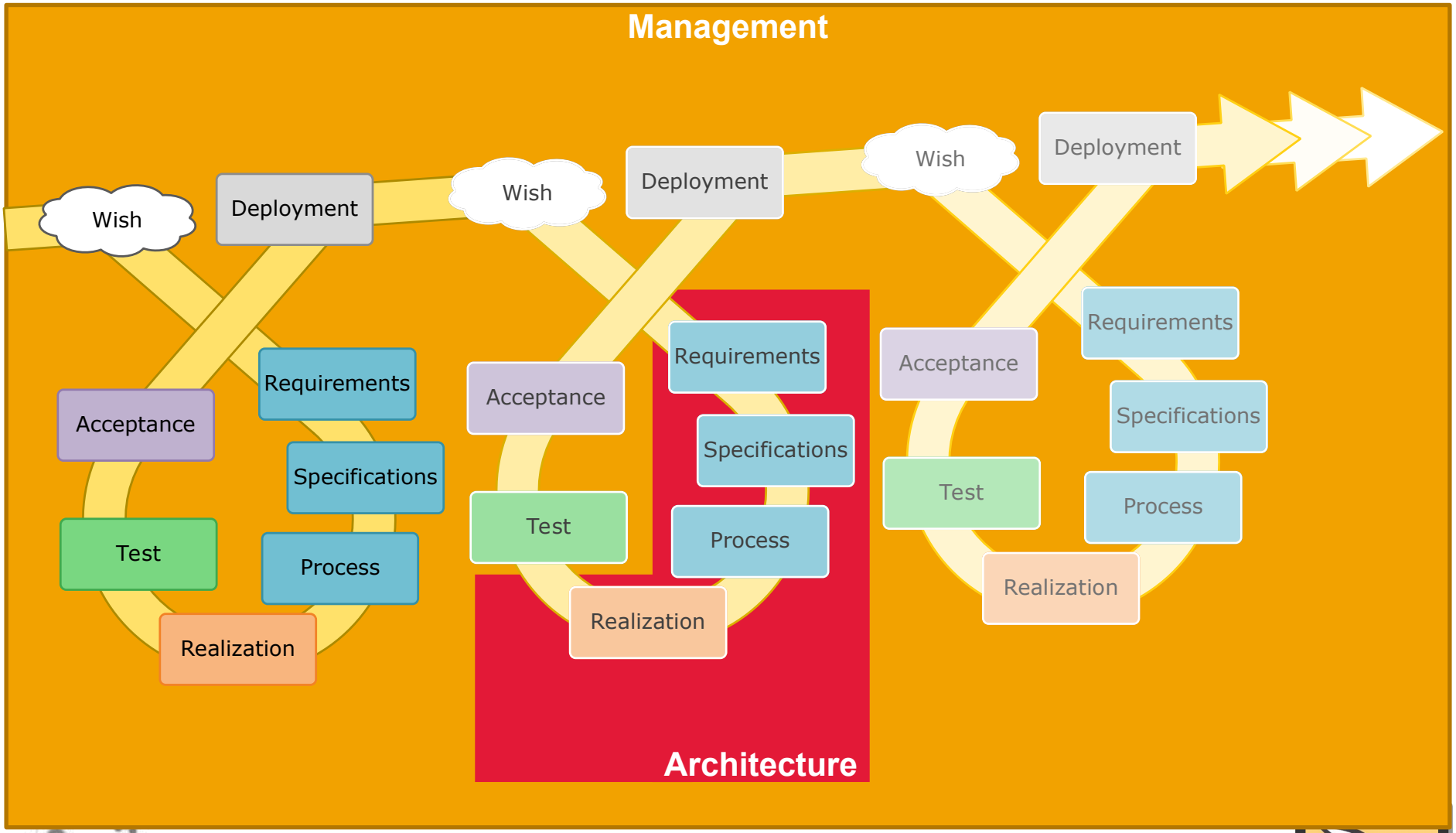
2. Grading: 1 (really bad) to 10 (perfect). A 6 or higher means “Passed”, else “Failed”

3. Grading will have 2 major parts with equal grading weight:
   1. **50% on the quality of your deliverables**
   2. **50% on how well you manage your client**

Module 1

The process and the client you will manage

The (software) development cycle



Requirements

Definition Requirement (IEEE Sts.610.12):

1) A condition or capability needed by a user to solve a problem or achieve an objective
2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed documents.
3) A documented representation or a condition or capability as in (1) or (2).

Or in short:

What the system needs to be able to achieve

With (or without) its external actors

Under which circumstances

Specifications

Common definition:

An elaboration of the requirements

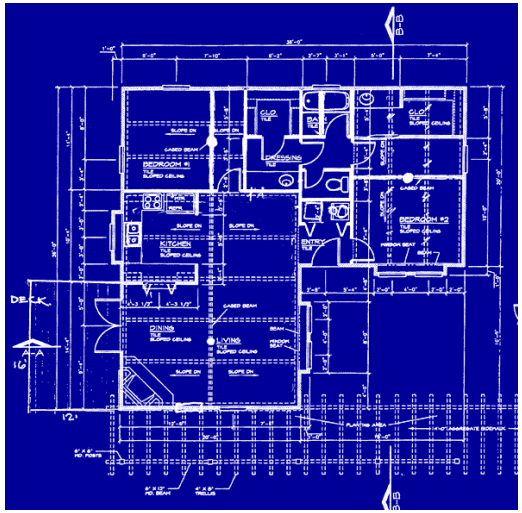
Definition as used for this course:

A clear (unambiguous) specification
of
the required end result
of
a business-, user, or system process

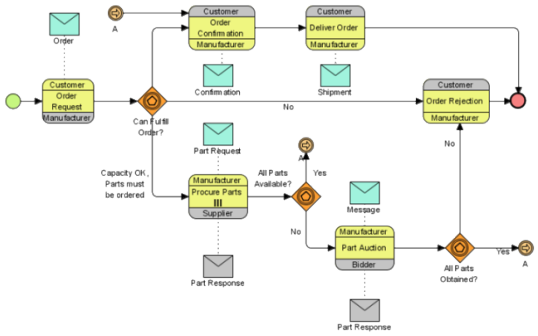
Question: When building a house

What would be the requirement(s)?

What would be the specification(s)?



Question: When building a process executed by software



What could be the requirement(s)?

- **"The requester has been informed of the result"**
- **"the entitled holidays are adjusted if the request is approved"**

What could be the specification(s)?

```
"The requester has been informed of the result" =
    One MAIL exists in MAILS with:
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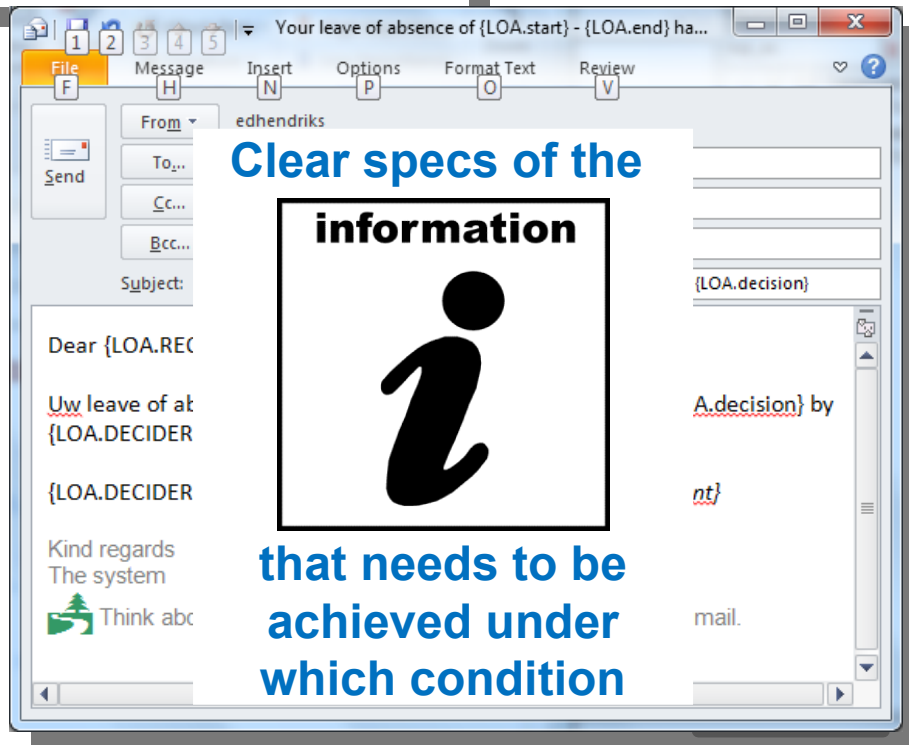
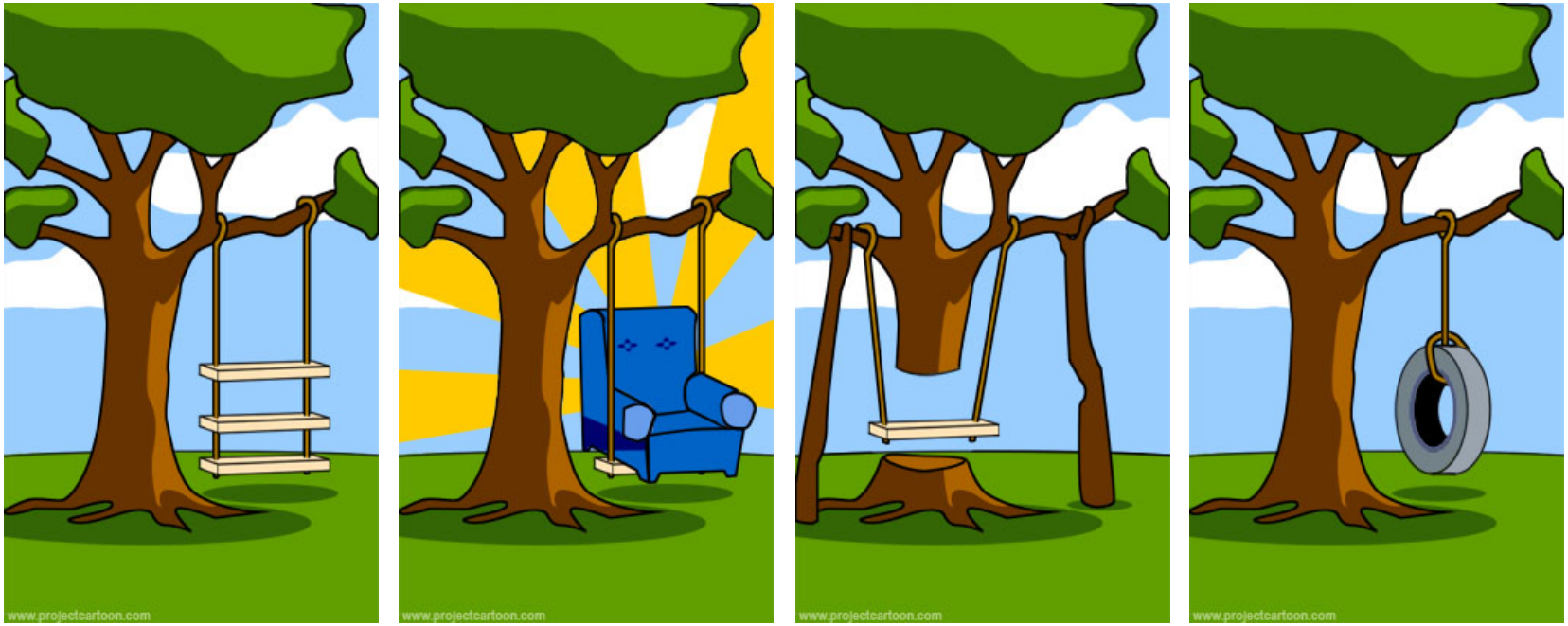


Why are requirements and specs so important?



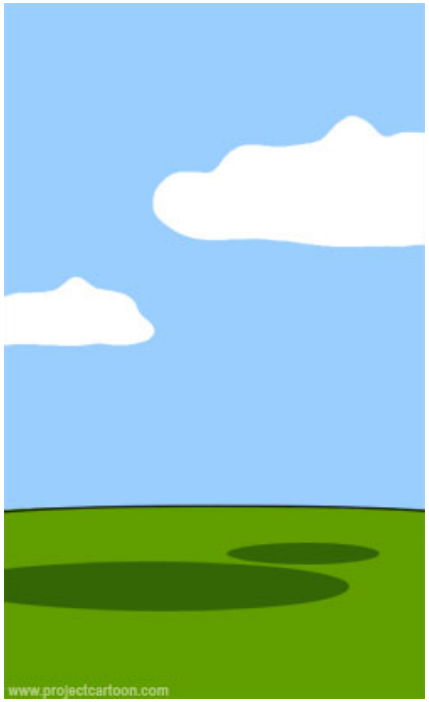
How the customer explained it

How the business consultant described it

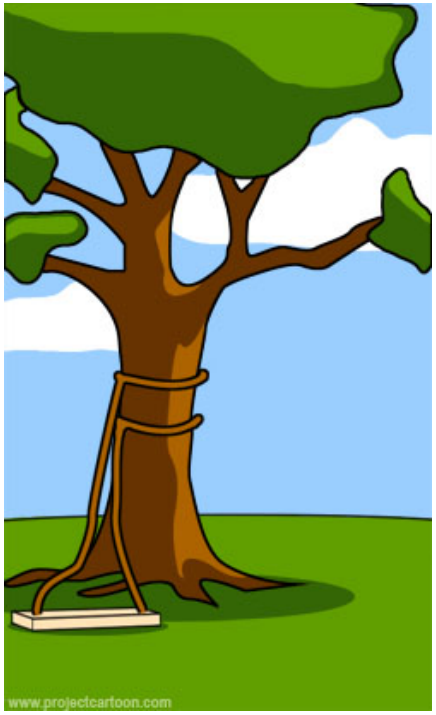
How it was designed

What the customer really needed

Developers and testers are stuck with it



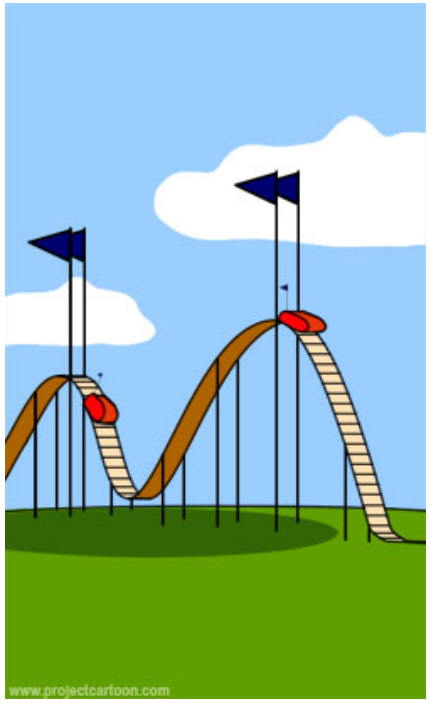
How the system was documented



How the programmer wrote it

What the testers received

And eventually the customer



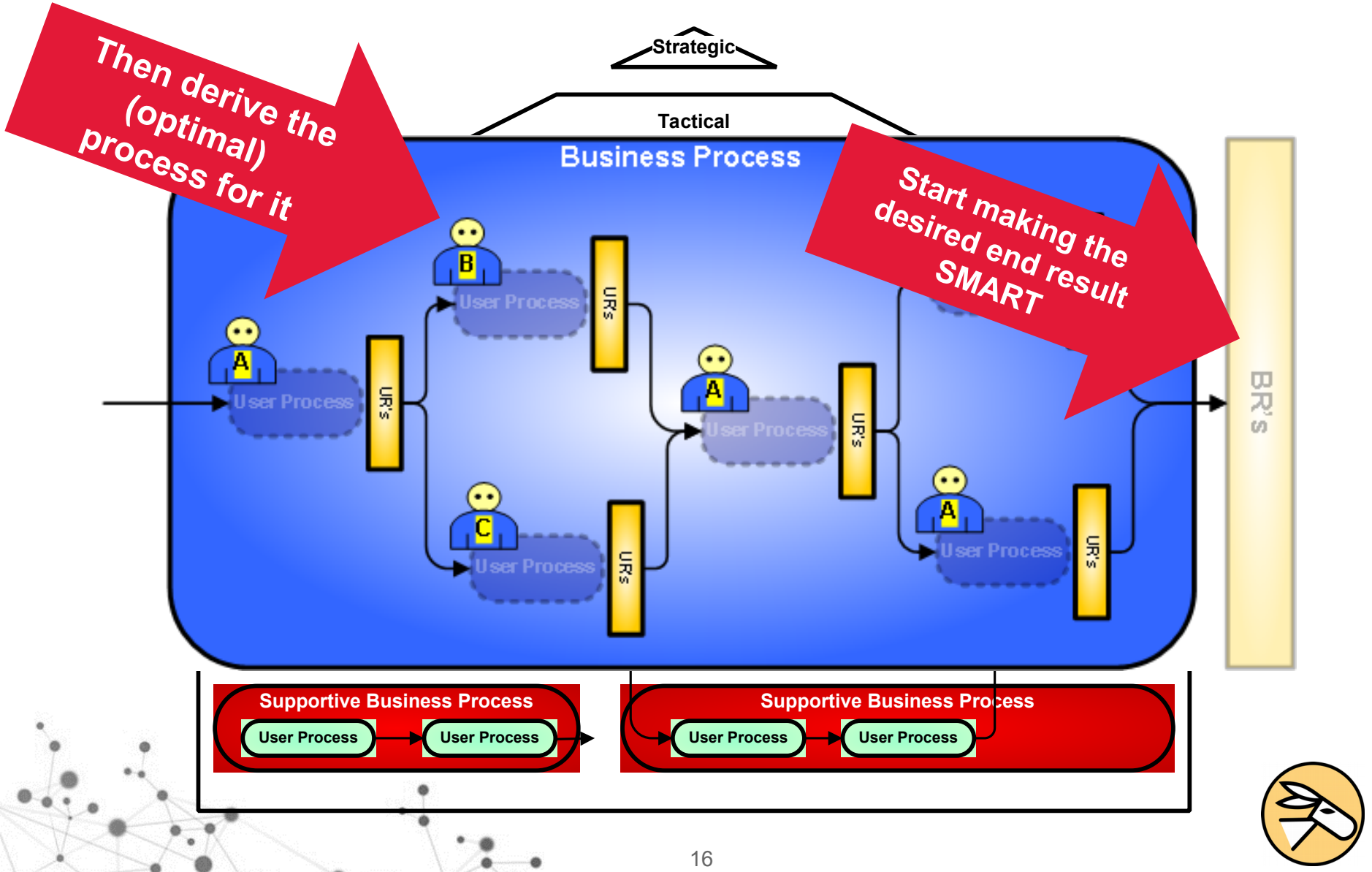
How the customer was billed

When it was delivered

Solving it with the method

Prevent risks, reduce costs, get the system the customer actually needs

SMART Requirements 2.0 is end result oriented



The 3 ingredients to get the end result SMART

1. **What** is the (part of the) end result?

2. **When** will the (part of the) end result be achieve

3. **Where** does the information needed come from?
   a) A person or other external actor (**input from**)
   b) An available internal or external piece of information (**a single v values, a combination of those**)
   c) A calculation **(a formula)**
   d) And the info that is needed by a) – c)?

Copy this in your notes.
You need them in the next exercise

Exercise:
Point out the What, When, Where in the following example

And of course: be SMART about all of the ingredients!!

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www

FACTUUR

Aan: {"klantnaam"}
{"klantadres"}
{"klantpostcode"} {"klantplaats"}
t.a.v. {"klant contactpersoon"}

Debiteur: {"klant debiteurnummer"}

Factuur nr.: {"factuur nummer"}

Factuurdatum

Omschrijving	Datum	Hoeveelheid	Eenh.	Prijs/Eenh.

Easy SMART

“Invoices are created for approved timesheets ” =

If “timesheets are approved ”
then “invoices are created for this customer”

100% SMART (only if needed)

“time sheets are created by all employees” =

For each EMPLOYEE **in** EMPLOYEES **applies**:

There exists a SHEET **in** TIMESHEETS **with**:

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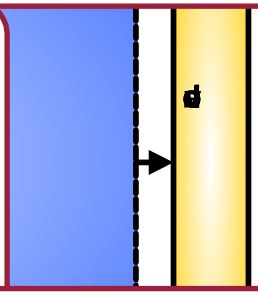


100% SMART (only if needed)

“time sheet lines” =

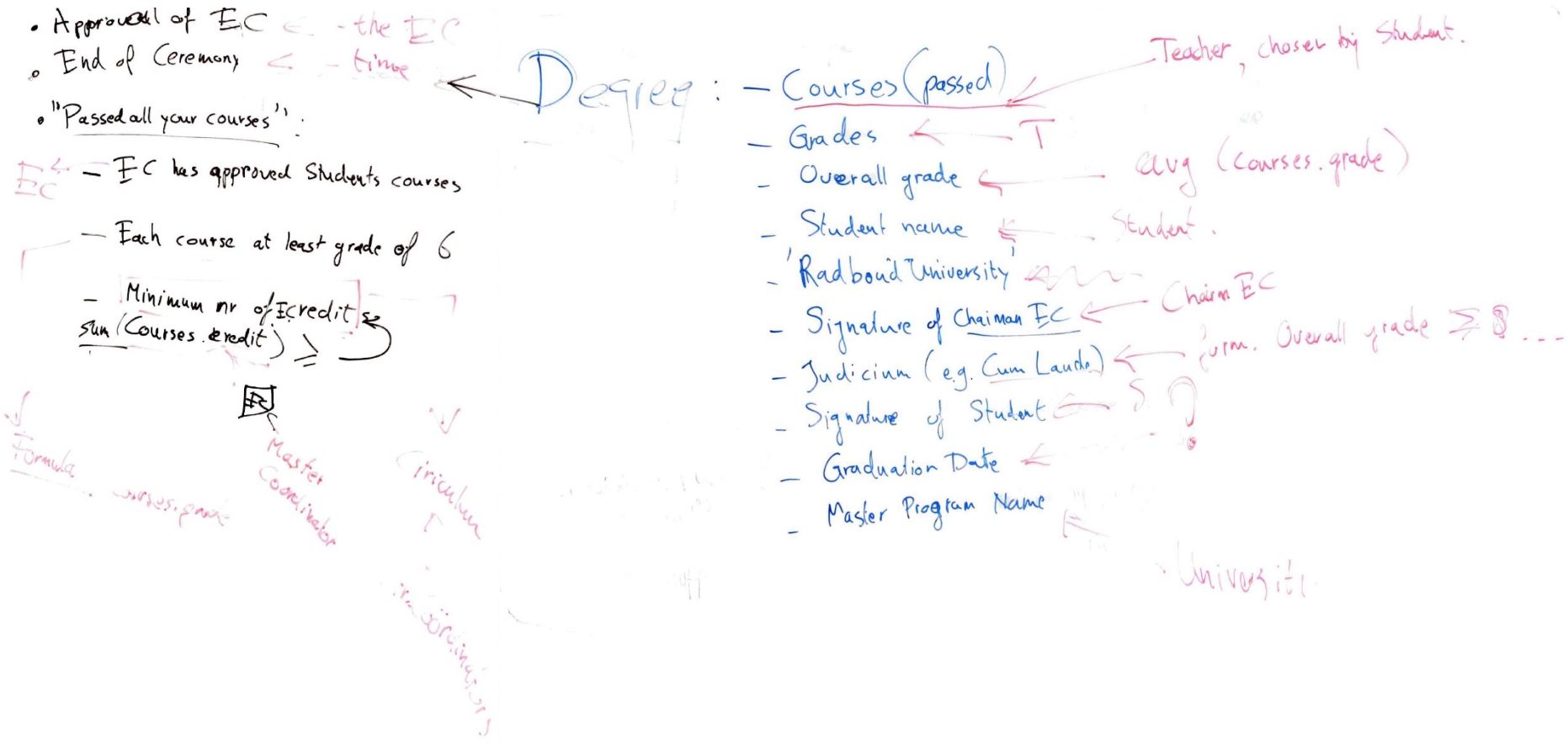
There exists several LINES **in** TIMESHEET_LINES **with**:

Attibu te		Value
day	=	**input from** EMPLOYEE
TASK	=	**input from** EMPLOYEE
hours	=	**input from** EMPLOYEE

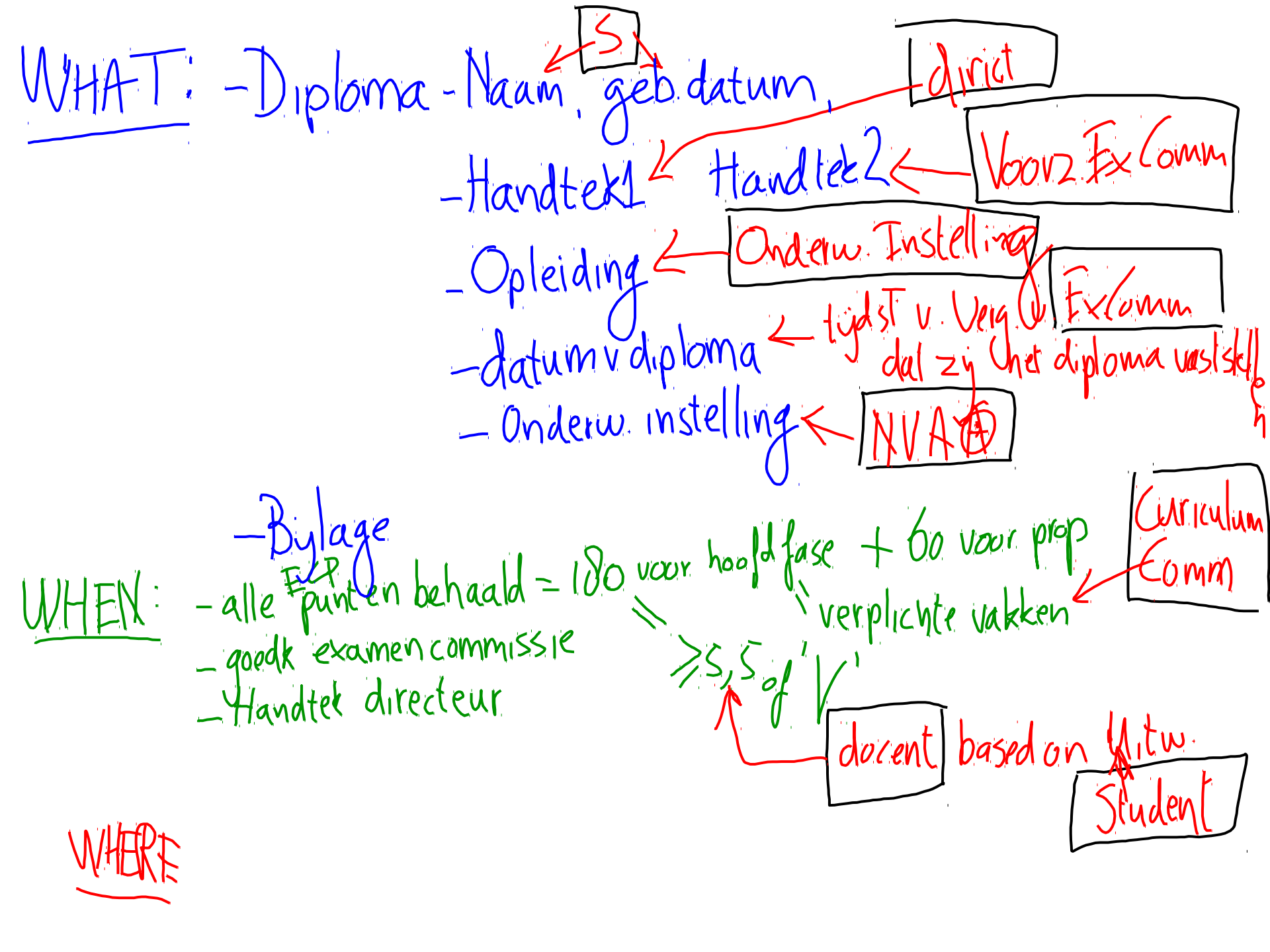
Easy SMART

Let’s try this together

Draw up the requirements of the primary business that you are currently being part of



Legend:
“What” in blue
“When” in black
“Where” in red


WHAT: -Diploma -Naam, geb. datum,
S
-Handtek1
Handtek2
Voorz Ex Comm
-Opleiding
Onderw. Instelling
-datum v diploma
tijdst v. Verg. dat zij het diploma vaststelt
Ex Comm
-Onderw. instelling
NVAO
-Bylage
WHEN:
- alle EVP punten behaald = 180 voor hoofdfase + 60 voor prop
- goedk examencommissie
- Handtek directeur
verplichte vakken
Curriculum Comm
≥ 5,5 of 'V'
docent
based on Uitw.
student
WHERE

Process

Definition:

A (conditional) sequence of steps

Different types of processes:

- **Business process**: a (conditional) sequence of steps performed by a business. Its steps are either user- or system processes.
- **User process**: ditto but performed by a (human) user as its main actor.
- **System process**: ditto but performed by a (non-human) system as its main actor. No (human) users are involved.

Brainstorm: Examples of processes

- **Of Business processes**
- **Of User processes**
- **Of System processes**
- **And how about your projects?**

ess process

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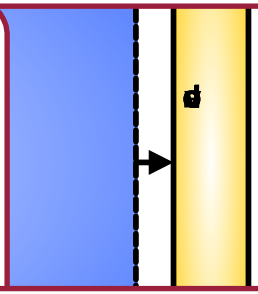

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Easy SMART

Think back from the result and you won't miss a thing

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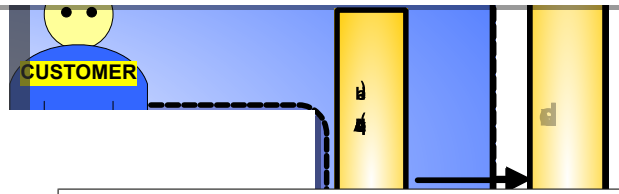

"time sheets are created by all employees" =

For each EMPLOYEE in EMPLOYEES applies:

Year: 2010
Month: March

Day	Task	Location	Hours
1	PM for RVS	Amsterdam	8
2	Research	Arnhem	8
…	…	…	…
31	PM for RVS	Amsterdam	4
31	Dutch Test Co	Utrecht	4

Cancel Done

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Of employee: edwin.hendriks@cgi.com
Year: 2010
Month: March

Day	Task	Location	Hours
1	PM for RVS	Amsterdam	8
2	Research	Arnhem	8
…	…	…	…
31	PM for RVS	Amsterdam	4
31	Dutch Test Con	Utrecht	4

Approved?: ☑

Cancel Done

Pagina 1 van 1

Registeren office in Amstelveen,
The Neterlands

Registration Number
Chamber of Commerce: 33136004

Realization

Common definition:

Create that what the client wants

Definition as used for this course:

Creation of a software the client wants

Test

Common definition:

Verifying if that what is realized complies to that what is agreed (or desired?)

Definition as used for this course:

A structured way to verify if
that what is realized
is what is agreed upon/specified

Acceptance

Common definition:

Accept that what was realized

Definition as used for this course:

Formally accept that what was realized.

Deployment

Definition:

Deploy that what was realized in the intended environment

Architecture

Definition:

The rules and guidelines
that define
how the system should be build

(versus, what end result the system should produce)

Brainstorm: how to manage your client (“Bill”)

?

(Make sure you have some idea on how to
manage your client and still be agile;
it is an important part of your grade)

- Ask Questions
- His Goal
- His customers
- budget
- deadline
- Get to know him
- How he likes to communicate
- Stakeholders
- Validate specs

- Prio's on specs
- Expectation (@ End of project)
- Be honest about Expectations
- Give alternatives

Brainstorm: how about Agile or explorative projects

Does this apply to Agile projects? Or explorative (innovation) projects? Is it different? And if so, how to manage those?

No brainstorm done during lecture but know this:

- For Agile projects all that is learned still applies. However it will be harder to plan these project for a longer period in the future. If a client want a long term planning you should always be very clear that as situations will change, the planning will change.

- For explorative projects (e.g. innovation projects) it may be less beneficial to put much effort in having really clear requirements. It is often better to start with a rough idea, try to create a working thing as soon as possible and often decide (with your client) how to proceed.

- On both cases you should put as little effort as possible in creating something to show and ask the client: “Is this what you were looking for?”

Assignment: Do mini-project

Create deliverables for your client	You figure out which deliverables. Note that: • I did not mention all deliverables you may need • Software will be done with mock prototyping (e.g. use PowerPoint GUI Prototype or even a whiteboard) • You can skip any test deliverables (we will do that later)
Manage your client	I will not explicitly tell you how, but use what we brainstormed about.
Client satisfaction	Your client should be happy about what you realized and how you managed him.
In groups of 2 or 3	You can do this assignment in groups of 2 or 3. One group per GIPHouse project. Enrol in these groups in Brightspace.
Make a profit	You have max 8 hours per student. Each student costs 100 UE's (Uni Euros) per hour. Time registration is required and must be handed over to me. Tip: Spent you time well.
Deadline	Upload deliverables + time registration to Brightspace under assignment **Mini-project** before 14 Feb 16:30

Your client and his wishes for the mini project

Your client Bill:

- He is a very busy man.
- Interactive contact is preferred through Skype id: **eddyhendriks** from Lent or **+31625014678**. Use mail (edwin@xlrit.com) only when necessary.
- He will be present in Mercator I on Wed 12 Feb 13:30-17:30 and Fr 14 Feb 08:30-16:30

His wishes:

A. *Create a permit system that makes it possible for a CIVILIAN to enter a request for a building permit. He needs to enter:*
   - *The construction start date of the building and*
   - *The height in meters*

   The system will need to automatically add the following information:
   - *The REQUESTOR (which is CIVILIAN who entered the request).*
   - *The current date*

B. *The system needs to have an automatic approval if the height of the building is below 5 meters. If not an APPROVER should give his/her approval*

C. *The system should produce a message send to the REQUESTOR informing him / her of the result (approved or not).*