

Deliverables week 1.

Project 2.

Group 8.

Planning.

During this project, our team develops a complex information system for a transport company. The system is developed from scratch and the team comes into contact with all aspects of software engineering. The project starts with the analysis and documentation of core business processes in the company, which are based on interviews with employees or so called domain experts. Subsequently, our team needs to gather and specify software requirements in cooperation with the customer (CEO). After the analysis phase, we will design and implement an information system using common software engineering techniques. During the whole project, the focus is on delivery of high quality and consistent artefacts that are in line with each other. Besides the integration of technical skills and knowledge, the process of working together in bigger groups in an efficiently and effective manner is exercised.

The items listed above will be completed by the following plan:

	Week	Topic of coaching hour	Deliverables
Part 1 (PRJ21) Analysis	1	Introduction: goals, practical arrangements, software development process	Stakeholders, questions for customer and domain experts, planning
	2	Project management	Refined planning using a Work Breakdown Structure
	3	Software Requirements Specification (SRS)	Initial version of SRS
	4	Feedback on SRS, domain model	Second version of SRS + initial version of domain model
	5	GUI design	GUI design document + GUI prototype
	6	Quality and review	Review report
	7	Presentations, individual assessments	Presentations, reports, final SRS and GUI design/prototype
Part 2 (PRJ22) Design & Implementation	8	Feedback, agile development, planning, design, realization	For each sprint: <ul style="list-style-type: none">• Database design• Database implementation & tests• Software design: class diagram• Software design: sequence diagrams• Implementation business & persistence logic & tests• Implementation GUI
	9	JavaServer Faces & Facelets	
	10	(possible additional coaching hours and peer learning)	
	11		
	12		
	13		
	14	Presentations, individual assessments	Presentations, reports and final software

Stakeholders.

Here is a list of stakeholders, these people relate in any way to the company of mister van der Heijden.

- owner (CEO)

He has interest to his company since he earns his income with it and if the company fails to keep existing he doesn't have an income anymore.

- employees

The employees have interests in the company because they need money for living. If they make big failures the company can lose a lot of money and eventually go bankrupt. What leaves the employees unemployed which means that they don't have income any longer.

- Customers

The customers are concerned if their liquids are transported on time and safely. If anything goes wrong whole shipments have to be delayed perhaps and this costs money.

- citizens living close to the company

These people are probably concerned about noises the trucks make and or the hazardous liquids.

- shareholders

They want to know if they will earn money with the money that they invested → ROI

- government

The government has interest in the company because they earn tax money from this company (19 % (see the invoice called 'Factuur' down below in the appendix)). And they want to keep people alive and since they are transporting hazardous liquids, the government should check them every now and then for safety measures.

Interview questions and answers.

Interview with Expert of Invoices and orders

QUESTION 1:

What is your work process?

ANSWER 1:

Mr. Monsieur from the department which is responsible for the orders and invoices described the work process very detailed to us and told us that all orders are done by the telephone or fax. His first step is to note down all information he gets from the customer on a sheet of paper.

Step 1:

Note all information about the customer (name, address, sales tax ID number).

Step 2:

Note the date on which the customer made an order.

Step 3:

Giving the order an invoice number.

Step 4:

- Note how many tons.
 - o Every order gets its own order / assignment number (PLANNING DEPARTMENT TASK)
- Where it has to be loaded and when.
 - o Every loading gets its own internal document number and a date (PLANNING DEPARTMENT TASK)
- Note how much of the fluid has to be delivered to which destination and when (more than one destination possible => 10 of 30 tons to destination A and the rest to destination B).
 - o Every unloading gets its own internal document number and a date (PLANNING DEPARTMENT TASK)
- Note or determine the date it has to be delivered.
- Determine the price for each ton and calculate the total price without and with the taxes. (FINANCE DEPARTMENT TASK)
- Note the product (name?).
- Determine the date of payment (normally 14 days, also FINANCE DEPARTMENT TASK) .

Step 5:

Typing it into a computer and printing it out twice (once for the customer and once for the finance department).

Step 6: (PLANNING DEPARTMENT TASK)

Typing a way bill for the driver including the needed information like:

- Order number.
- Name of the customer.
- Name of the product.
- The total weight.
- The price for each ton. (needless?)
- The driver's tasks (What to do. When and where).

QUESTION 2:

How is the current system limiting your effort/output?

ANSWER 2:

- The current system is not using any computers except Microsoft Word for printing.
- The business department has to be called for checking if the customer is blocked or not to allow performance.
- The truck drivers are writing unreadable.
- The sorting of paper on Monday takes a lot of time. (orders from the weekend)
- Calculation is made manually.
- A lot of communication with the business department is needed because they decide the most. (maybe giving more permission to Mr. Monsieur?)

QUESTION 3:

How are the bills being stored?

ANSWER 3:

- The bill is not stored digital. There is only one copy of the bill that is stored by Mr. Monsieur in his folders. (Mr. Monsieur is very scared to lose the copy.)
- Searching for a bill takes a lot of time.
- Every order has to be checked after two weeks if it was payed. If not so then Mr. Monsieur has to type a new one because he doesn't save the files on his computer.

QUESTION 4:

What does your service cost in terms of €/km?

ANSWER 4:

6,25 – 7,50 / ton.

QUESTION 5:

Would you like to have a template for email/invoices/etc.?

ANSWER 5:

Mr. Monsieur uses the computer only for working with Microsoft Word.
He has no idea what an email or a template is.

QUESTION 6:

What information do you need for every order?

ANSWER 6:

See answer 1.

QUESTION 7:

Is there any form of discount?

ANSWER 7:

There is no possibility of giving discounts to the customers but they are thinking about it.
Mr. Monsieur didn't want to answer this question because its not his task to decide about that.

Interview with CEO

About the company

The company has a total of 100 trucks and 120 trailers. They ship a large variety of fluids, any fluid you can imagine. Thus some trucks may not be used to transport all liquids. For example, you can't transport milk in a truck after oil has been transported in it. The company has four different departments, namely, Finance & Orders, Planning, CEO / management, Drivers.

The current system

The system that is currently in place is paper based. Planning is done weekly. If there are any issues, the CEO will only be notified once a week.

Problems with the current system

- CEO can only be notified once a week in case of issues
- Mistakes are made due to use of paper based system (for example, illegible writing)
- Information not detailed enough
- Information supplied too late (only once a week)
- Only possible to update / change schedule / adjust strategies weekly.

System requirements

The current paper based system needs to be converted into the digital system.

There should be a possibility to order automatically for a certain period of time. Large customers don't want to order the same shipments every single week.

The system needs to be user specific. Employees speak English, but truck drivers only Dutch. Especially for drivers, the system needs to be very easy to use.

Since the company has a potential to grow and do business internationally, instead of locally, there needs to be a possibility of adding other languages (German and French in particular) in the future.

The system data needs to be updated at least daily, so the CEO is up to date with any problems, delays and overall progress.

The CEO needs to be informed about errors / mistakes so an optimal solution can be applied instantly.

There is a need for employees to be trained how to use the system. We have to organize this ourselves. Only a guide on how to use the system will not suffice.

The system needs to be up to EDIFACT standards. See:

<http://www.unece.org/trade/untid/welcome.html>

Future

In four weeks after the interview, an overview needs to be presented which contains a list of the main functions of the system.

In five weeks after the interview a paper based prototype needs to be presented.

Interview with truckdriver

- Does not like and is generally unable to work with computers
 - o But can use a TomTom
 - o Says he might be able to work with it if it is really easy
- Transports liquids
 - o Food industry
 - o Hazardous liquids like alcohol
- Has a workschedule that he plans himself. The only things he gets in the morning are order forms with a deliverytime. He will plan the route and times by himself. Picture is added to this file.
 - o Forms have to be signed at pickup and delivery and have to be handed in at the end of the day.
- Will have to drive to other countries in the near future resulting in more paperwork
- Has bad handwriting which is a problem for the people reading the forms after a delivery has been made.

Driver would be happy with the software if it would cover three main issues:

- Make less errors
- Have less work
- Consume less time

Resulting in more time on the road, thus more deliveries, this more money.

Vrachtbrief/work order

Opdrachtnummer	1234
Opdrachtgever	P. Janssen
Product	Melasse
Gewicht	32 ton
Prijs per ton	7,50 euro
Kenteken auto	BD-LF-12
Numero oplegger	151
Naam chauffeur	Bob Beton
Factuurnummer	124

Volgnummer	Datum	Actie	Plaats	Bonnummer	Gewicht
1	12-2-01	Laden	SvG A'dam	2413	32 ⁰⁰⁰
2	12-2-01	Lossen	Janssen Veghel	8526	20 ⁴⁰⁰
3	12-2-01	Lossen	Janssen Helmond	2712	11 ⁶⁰⁰