# Validation Work Plan

Evaluation time planned and spent



Table 1 Overview of amount of time planned and spent in weeks 4 to 8. We start with week 4 because then our Work Plan started and ended in week 8, because in week 9 the calculations were finished. Time spent is derived from the logbooks. Time planned is derived from the weekly tables of the Work Plan. Total work planned is derived from the Total work section of the Work Plan. Overworked is based on Time spent and Time planned. Planned difference is Time planned – Total work planned. Tasks in bold actually are phases.

Logbooks

Next time we keep logbooks we should stick to the task description in the Work Plan instead of making up a description that often differs per person and differs in detail to the Work Plan. This way it saves time to do the calculations, whereas now we had to come up with the task description consistent with the Work Plan for the descriptions in the logbook.

Another thing that could be improved is the way we keep the logbook. Instead of having a file where we can keep logbooks we should design the file as such that the calculations can be done way easier. It takes some more time in the beginning of the project but saves a lot of time at the end.

### Work Plan

The Work Plan lacked some tasks. For instance the FR phase lacked the whole process part documentation.

The weekly tables had 1 row per week that had a time duration of 30 minutes. This too is very inconvenient in calculating. We couldn’t figure out, on a quick enough notice, how to deal with this. Therefore these half hours are counted as whole hours. This is luckily a small part of the planning. Another thing that’s off with the tables is that it has a different amount of time planned than the scheme in the section Total work of the Work Plan. This is due to that we wanted to finish the Work Plan quickly. Another fault due to this reason is that some subtasks didn’t get planned, like the first 4 subtasks of Validation and Testing.

#### Planned difference

The column labelled “Planned difference” shows per phase and in total how much time is falsely planned due to the reason given above. Because of this false planning we base the rest of the numbers on the actual planning, which is in the Timetables section of the Work Plan. We chose this as the actual planning because it’s the most detailed one.

### Numbers

#### Totals

##### Time planned

We set ourselves the goal to spend 500 hours on the project, from week 4 to week 8, collectively. We got this number from the information from our tutor that we have to think about spending 700 hours collectively on the project. We started the planning from week 4, so it should be less. We also decided that we wanted to be done before the exam weeks, week 9 and 10. Per week, the time planned is more than the indicated time divided by 8 weeks. This is because we thought that we spent too little time in those first 3 weeks. Why it says 510 in the table, however, is because there were some late changes. Some tasks were expected to take a few hours longer.

##### Overworking

As you can see in Table 1, we underworked quite a bit. This may be partially explained by not being finished at the end of week 8. We will be spending some more time in weeks 9 and 10. Another reason might be that we work more efficient, but this is hard to show with these intermediate data.

#### Phases

The time spent on phases is not just simply the summation of the subtasks. We did this so we could add spent time to the phase if the subtask wasn’t specified.

##### Work Plan (Simultaneously with Machine Design)

It seems that we underestimated the time needed to finish the Work Plan. This may as well explain why we rushed the weekly tables a bit. Due to bad logging it isn’t clear on what subtask the time was spent.

##### Machine Design

We spent almost 25% more time on this. However the overworked time is just about 4 hours, which is small compared to the total length of the project.

##### Software Specification

We clearly overestimated the time needed for this phase. This is partially due to our tutor predicting that this phase will probably take the most time.

##### Software Design

Apparently we didn’t follow the Work Plan well enough on this one. Except from “Compiling and defining layout of the document” (Sd.L) the two other tasks weren’t executed in the first 8 weeks. This may be explained by how we work, described in the Workday section. There it isn’t mentioned that we look at the Work Plan for tasks to be done.

##### Software Implementation and Integration

The overall planning and execution of this phase is quite well.

##### Validation and Testing

We don’t think that we overestimated the time needed for Validation and Testing but that we didn’t log this when we did it. This may have to do with our VaT being done and documented throughout the span of the project which may have caused that this got logged into an other phase. This implies that the subtasks weren’t logged either.

##### Final Report

We kind of underestimated the work needed to finish the project. We thought that we only had to put all our documents together and write a conclusion for the Validation and Testing. Though, there’s the process part that needs to be documented in this and also this document needs an introduction or preface and a conclusion.

##### Presentation

We underestimated the presentations. You already see that for the first 8 weeks we ‘overworked’. This is only the time spent on the mid-term presentation. Despite the fact that we had to redo it, this isn’t a valid reason that it took us more time. If we prepared better for our first attempt, which we lacked in shown by talking hesitantly and softly, we wouldn’t have to do it a second time. Then we didn’t even discuss the final presentation we started working on in week 9.

##### Undefined

Due to inconsistent logging as discussed in the Logbook section above there’s a lot of time in the logbooks that we couldn’t add to a certain phase for sure.

#### Peaks

To find peaks to discuss here we didn’t only look at the overworked percentage but also the overworked time. If the planned time is small, bigger differences between Time spent and Time planned are forgiven more easily. We guess it’s harder to plan the time needed for a small task and small tasks have less impact on the overall project.

##### Ss.In, Ss.Ot and Ss.Dio

Apparently we thought that these tasks would be more complicated and take more time, but in practice this was not the case.

##### Ss.UPP

<insert by Stefan>

##### Ss.Cr and Sd.Cr

We neglected this task. When we finished these phases we were more excited about having it finished and delivering it than investing more time to go through it and enhance it.

##### Sd.I/o, Sd.Fe and Sd.L

See section Machine Design above.

##### Sd.Ec and Sd.Dd

We think this underworking is due to bad logging, putting less effort in it and overestimating the time needed for the task. If you look at the outcome of these tasks in the Software Design document we wouldn’t say we just spent about 1 hour on these tasks, but we probably didn’t spent much more either. They could have been more extensive but there may be some lack of motivation caused by the team members working on the technical part of this phase were also expected to write the documentation and this may have been too much.

##### Si.Cs, Si.Fa and Si.Cr

In the Software Implementation and Integration section above it is mentioned that this phase went quite well, but if you look into the subtasks you might state quite the opposite. This is due to bad logging. Probably after being busy with the project for a few weeks the logbooks got less attention and therefore were less detailed. This is why the subtasks appear to have no time spent on them.

##### VaT.Co, VaT.Pr, VaT.L and VaT.Cr

See Validation and Testing section above.

##### FR.L

The final report was not finished at the end of week 8. Therefore the “Compiling and defining layout of the document” couldn’t be done yet.

##### Pr.P

If you look at the time missing for this subtask and the time overworked in the Presentation phase they cancel out. Therefore we think that this missing time is due to bad logging.

## Evaluation Team Roles

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dat | Rolf | Stefan | Tudor | Wigger | Maarten |  |  |
| Week 4 | Q | - | - | S | - | P, M |  |  |
| Reality | x | - | S(1) | S(2) | - | P, M |  |  |
| Week 5 | Q | - | S | P | - | M |  |  |
| Reality | x | - | S(1), x(2) | P(1), x(2) | - | x |  |  |
| Week 6 | S, Q | - | P | - | - | M |  |  |
| Reality | x | - | x | - | - | x |  |  |
| Week 7 | - | - | S | - | P | Q, M |  | P = President |
| Reality | - | - | x | - | x | x |  | S = Secretary |
| Week 8 | - | P | - | - | - | S, Q, M |  | Q = Quality assurance manager |
| Reality | - | x | - | - | - | x |  | M = Materials manager |

Table 2 Overview of roles assigned by the Work Plan and the reality checked by the Minutes. x’s mean that the minutes didn’t report if the role was performed by the right person. (#) expresses at what meeting this was the case. A hyphen means that this person had no role that week.

### Minutes

The minutes need to be improved to let this validation succeed. Not all Minutes provided who was performing what role, therefore the x’s in Table 2.

### Results

If we take a look at the division of roles where were able to check it we executed them according to the Work Plan. Only Tudor was so late once that the meeting started without him and Stefan took his role instead.