# AMEISE ASSESSMENT REPORT

TARGET GROUP: TRAINER PROJECT NAME: AMEISE V5.0

Course # 160001
Course Name TUKE
Round 1
Forename TUKE
Surname 4tuke-02
Username 4tuke-02

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# REPORT SECTION 1 PROJECT'S OBJECTIVES

#### Goal achievement

GA	Duration	Costs	C(%)	#E/KLOC	Man(%)	#E/Page
Results	176.0	201740.0	84.95	51.06	94.59	0.49
Goals	270.0	225000.0	95.0	12.0	95.0	0.5

#### Legend:

Duration ... length of project (in days), Costs ... project costs (in EUR), C(%) ... AFPs contained in the code (in percent), #E/KLOC ... number of errors (per 1000 lines of code), Man(%) ... AFPs contained in the user's documentation (in percent), #E/Page ... number of errors (per page in the user's documentation).

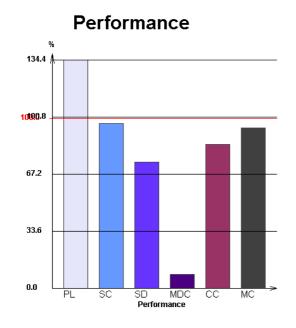
#### Description:

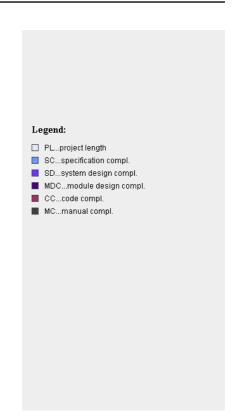
This table summarizes the goal achievement (GA) of the simulation run. The line 'Results' summarizes the actual results, the line 'Goals' summarizes the values as demanded by the customer.

# Explanation/Recommendations:

Goal achievement is a must for every project manager. However, in some situations minor deviations might be acceptable by the customer. You should take a look at Section 8 where the customer's feedback tells you whether s/he accepts the final product or not.

#### REPORT SECTION 1: PERFORMANCE (TUKE 4TUKE-02)





#### Description:

This diagram summarizes the goal achievement (days and AFPs) in respect to the original project objectives. The 100 percent line represents the exact goals. The x-axis shows the project duration, the intermediate, and final documents. The y-axis prints the values relative to the project goals. Values higher than 100% indicate better performance, values lower than 100% indicate a loss in performance. (Values: project length 134.444, specification compl. 97.375, system design compl. 74.3979, module design compl. 8.25209, code compl. 84.9474, manual compl. 94.5858)

#### Explaination/Recommendations:

Typically the quality of documents decreases from document to document. Thus, the better the quality of the system specification, the easier it might be to keep the quality of the succeeding documents. An increase in quality between the module design document and the code indicates that a lot of effort has been spent on testing activities. The exact values of the AFPs can be found in Section 7 (Completeness of documents).

# REPORT SECTION 1: PERFORMANCE (TUKE 4TUKE-02)

# **Total costs**

	Costs	
Total costs	Total effort	Costs per PM
201740.0	12.91	15622.2

# Legend:

Total costs ... costs of the project (in EUR), Total effort ... working effort (in person months), Costs per PM ... average cost of one person month in the project (in EUR).

#### Description:

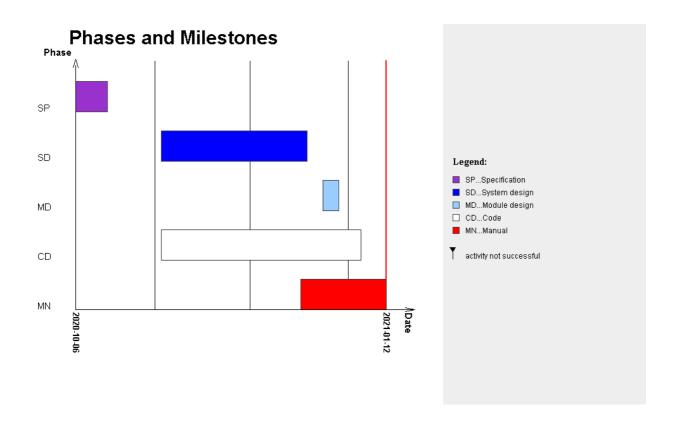
The average costs per person month are calculated by taking just the non-idle time into account (total effort). The total costs divided by the total effort then leads to the average value for the costs of one person month in the project.

#### Explanation/Recommendations:

For a small/medium sized project of this type values near to (or below) 10.000 EUR indicate a rather good use of working power. Values greater than 10.000 EUR indicate that there have been too much periods of idle-time. For a detailed analysis you should take a closer look at Section 4 (Deployment time).

# REPORT SECTION 2 PROJECT MANAGEMENT PROCESS

#### REPORT SECTION 2: PHASES AND MILESTONES (TUKE 4TUKE-02)



#### Values:

Specification (2020-10-06 - 2020-10-16)

System design (2020-11-02 - 2020-12-18)

Module design (2020-12-23 - 2020-12-28)

Code (2020-11-02 - 2021-01-04)

Manual (2020-12-16 - 2021-01-12)

#### Legend:

SP ... specification phase (begin-end), SD ... system design phase (begin-end), MD ... module design phase (begin-end), CD ... coding phase (begin-end), MN ... manual and documentation preparation (begin-end), IN ... integration phase (begin-end).

Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

This Gantt chart visualizes the sequence of main phases in the project. Please note that

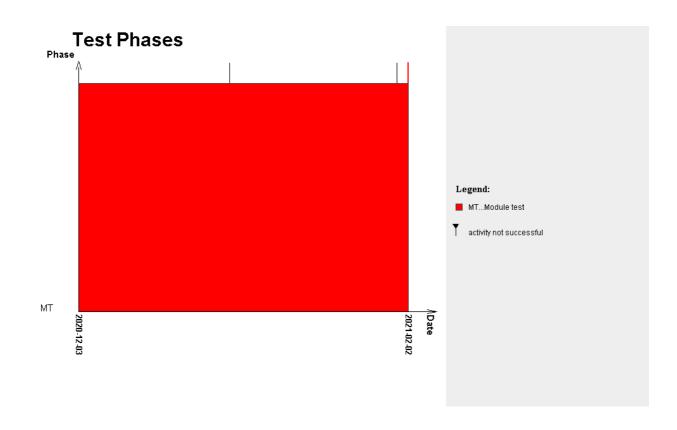
# REPORT SECTION 2: PHASES AND MILESTONES (TUKE 4TUKE-02)

test and review activities are not listed in this diagram.

# Explanation/Recommendations:

The more the project is following the Waterfall model, the more likely succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that you need more effort to ensure consistency between the different artifacts.

# REPORT SECTION 2: TEST PHASES (TUKE 4TUKE-02)



#### Values:

Module test (2020-12-03 - 2021-02-02)

#### Legend:

MT... module test phase (begin-end), IT ... integration test phase (begin-end), ST ... system test phase (begin-end), AT ... acceptance test (begin-end).

Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

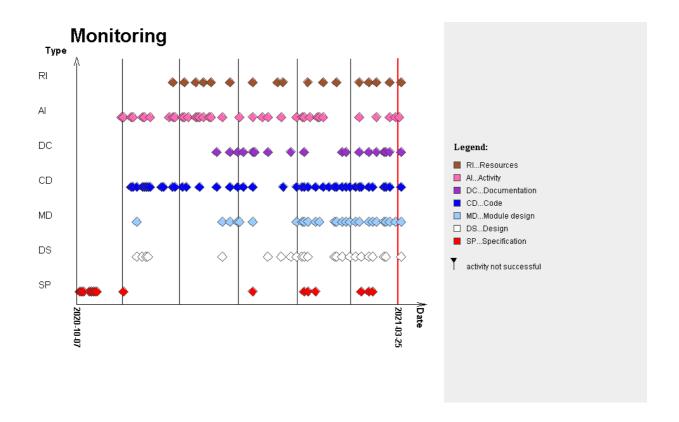
This Gantt chart visualizes the sequence of testing activities in the project.

#### Explanation/Recommendations:

Overlapping tests might indicate that tests are based on erroneous artifacts or that at least effort is needed to keep them consistent. Missing tests are the main reason for poor quality of succeeding (and dependent) artifacts.

# REPORT SECTION 3 PLANNING AND CONTROL

# REPORT SECTION 3: MONITORING (TUKE 4TUKE-02)



# Legend:

Al ... monitoring activity (date). Project manager decisions and commands that led to no result are marked by a small black triangle.

#### Description:

This chart visualizes all monitoring activities during the project.

# Explanation/Recommendations:

Monitoring activities are vital for good project management. However, too many monitoring activities might also be interpreted as a loss in control over the project.

# Task assignment

Dhasa	Task assignment		
Phase	Employees names	Number of employees	
Specification	Christine	3.0	
	Diana		
	Richard		
Specification review	Bernd	3.0	
	Christine		
	Stefanie		
Specification corr.	Thomas	1.0	
Total (SP)	-	6.0	
System design	Richard	1.0	
System design review	Christine	3.0	
	Diana		
	Thomas		
System design corr.	Thomas	1.0	
Total (SD)	-	4.0	
Module design	Richard	1.0	
Module design review	X	0.0	
Module design corr.	X	0.0	
Total (MD)	-	1.0	
Code	Diana	3.0	
	Richard		
	Thomas		
Code review	Axel	4.0	
	Christine		
	Diana		
	Thomas		
Code corr.	Stefanie	1.0	
Total (CD)	-	6.0	
Manual	Axel	2.0	
	Thomas		
Manual review	Diana	3.0	
	Stefanie		
	Thomas		
Manual corr.	Christine	2.0	
	Thomas		
Total (MN)	-	5.0	

# Legend:

Phase ... Major phases during the project, Employees names ... names of employees that are assigned to tasks related to the specific phase, Number of employees ... number of employees assigned to tasks related to the specific phase (total sum).

# Description:

# REPORT SECTION 3: TASK ASSIGNMENT (TUKE 4TUKE-02 )

# **Task assignment - Tests**

Dhana	Tasks assignr	Tasks assignment - Test Phases		
Phase	Employees names	Number of employees		
Module test	Diana Richard	2.0		
Module test corr.	Stefanie	1.0		
Total (MT)	-	3.0		
System test	×	0.0		
System test corr.	Thomas	1.0		
Total (ST)	-	1.0		
Integration test	×	0.0		
Integration test corr.	Christine	1.0		
Total (IT)	-	1.0		
Acceptance test	Customer	0.0		
Acceptance test corr.	Thomas	1.0		
Total (AT)	-	1.0		

# Legend:

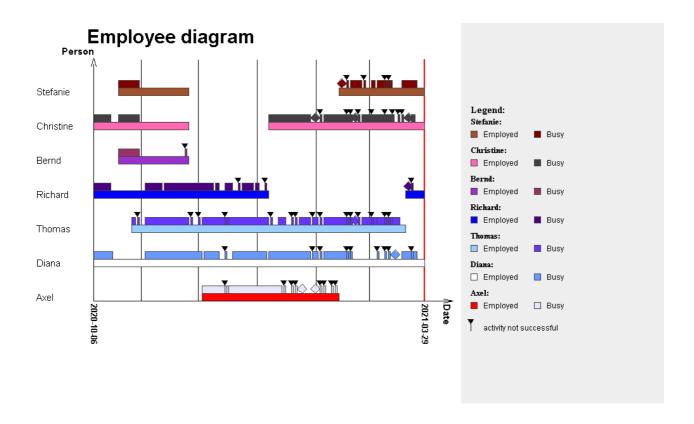
Phase ... Major phases during the project, Employees names ... names of employees that are assigned to tasks related to the specific phase, Number of employees ... number of employees assigned to tasks related to the specific phase (total sum).

# Description:

This table summarizes the employees (developers) assigned to specific testing phases in the project.

# REPORT SECTION 4 PEOPLE MANAGEMENT

#### REPORT SECTION 4: EMPLOYMEE DIAGRAM (TUKE 4TUKE-02)



#### Legend:

Employed ... Time the employee is on the payroll of the project (begin-end), Busy ... Time the employee is working/contributing on/to the project (begin-end).

Project manager decisions and commands that led to zero activities are marked by a small black triangle.

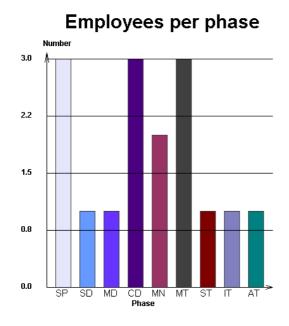
#### Description:

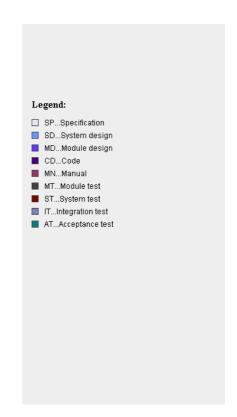
This Gantt chart shows when developers were hired and laid off and when the employees were occupied.

#### Explanation/Recommendations:

The deployment of employees (developers) is crucial for the success of the project. A good project manager ensures that every employee has tasks to fulfill and that there are not too many idle-times. Small gaps (idle-times) are normal, but too many of them increase the average costs of a person month.

#### REPORT SECTION 4: EMPLOYEES PER PHASE (TUKE 4TUKE-02)





#### Legend:

SP ... specification phase, SD ... system design phase, MD ... module design phase, CD ... coding phase, MN ... manual/documentation preparation, MT ... module test phase, ST ... system test phase, IT ... integration test phase, AT ... acceptance test.

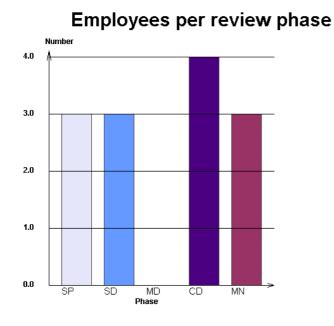
#### Description:

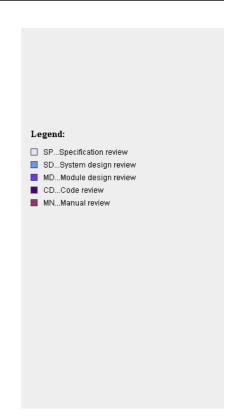
This chart visualizes how many persons were involved in the related phases (excluding review activities).

#### Explanation/Recommendations:

For this type of project it is sufficient to start with 1-2 persons (due to the communication overhead) in the specification phase, and to deploy 2-3 employees during design and coding phases.

# REPORT SECTION 4: EMPLOYEES PER REVIEW PHASE (TUKE 4TUKE-02)





# Legend:

SP ... specification review phase, SD ... system design review phase, MD ... module design review phase, CD ...coding review, MN ... manual/documentation review.

#### Description:

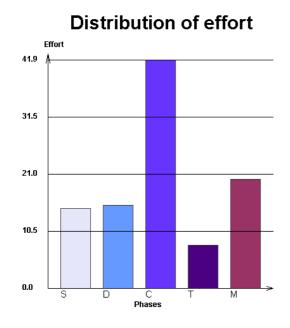
This chart visualizes how many persons were involved in the review of the specific documents (excluding the customer).

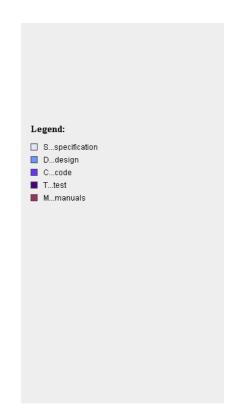
# Explanation/Recommendations:

Typically, the author of a document should not be part of the review team.

# REPORT SECTION 5 PROJECT PHASES

#### REPORT SECTION 5: DISTRIBUTION OF EFFORT (TUKE 4TUKE-02)





#### Values:

specification	14.68
design	15.32
code	41.94
test	7.98
manuals	20.08

#### Description:

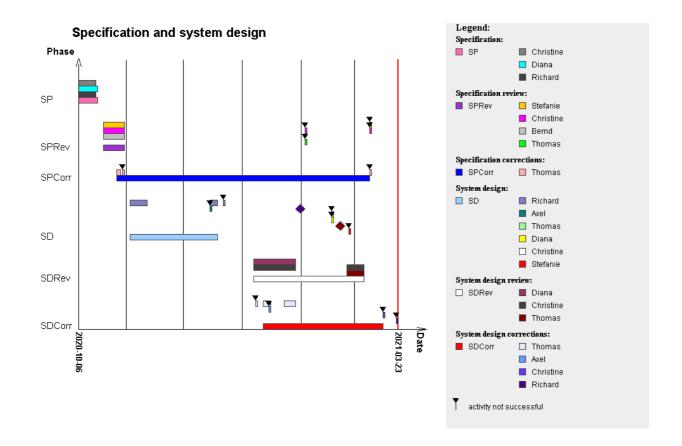
This diagram shows the distribution of the ressources for several project phases. (Values: specification 14.6836, design 15.3235, code 41.9378, test 7.97838, manuals 20.0767). Please note that the diagram can only be drawn after delivering the system.

#### Explanation/Recommendations:

If the effort for the specification is low, this would indicate that the specification was not a good reference document for the system design. Uncorrect reference documents result in uncorrect code, which could only be improved by testing. A high effort for testing indicates that the reference documents were incorrect and incomplete. A high effort in the specification and the design phase leads often to a low effort in testing.

REPORT SECTION 5: DISTRIBUTION OF EFFORT (TUKE 4TUKE-02)
20

#### REPORT SECTION 5: SPECIFICATION AND SYSTEM DESIGN (TUKE 4TUKE-02)



#### Values:

Specification (2020-10-06 - 2020-10-16):

Christine: PRODUZIERT Spezifikation (2020-10-06 - 2020-10-15)
Diana: PRODUZIERT Spezifikation (2020-10-06 - 2020-10-16)
Richard: PRODUZIERT Spezifikation (2020-10-06 - 2020-10-15)

Specification review (2020-10-19 - 2020-10-30):

Stefanie: BEGUTACHTET Specification (2020-10-19 - 2020-10-30; 2021-03-08 - 2021-03-09 not successful)

Christine: BEGUTACHTET Specification (2020-10-19 - 2020-10-30; 2021-02-02 - 2021-02-03 not successful; 2021-03-08 - 2021-03-09 not successful)

Bernd: BEGUTACHTET Specification (2020-10-19 - 2020-10-30)

Thomas: BEGUTACHTET Specification (2021-02-02 - 2021-02-03 not successful)

Specification corrections (2020-10-26 - 2021-03-08):

Thomas: KORRIGIERT Spezifikation (2020-10-26 - 2020-10-28; 2020-10-29 - 2020-10-

#### REPORT SECTION 5: SPECIFICATION AND SYSTEM DESIGN (TUKE 4TUKE-02)

30 not successful; 2021-03-08 - 2021-03-09 not successful)

System design (2020-11-02 - 2020-12-18):

Richard: PRODUZIERT Systemdesign (2020-11-02 - 2020-11-11; 2020-12-14 - 2020-12-18; 2020-12-21 - 2020-12-22 not successful)

Axel: PRODUZIERT Systemdesign (2020-12-14 - 2020-12-15 not successful; 2021-01-29 - 2021-01-29 not successful)

Thomas: PRODUZIERT Systemdesign (2021-02-16 - 2021-02-17 not successful)
Diana: PRODUZIERT Systemdesign (2021-02-16 - 2021-02-17 not successful)
Christine: PRODUZIERT Systemdesign (2021-02-19 - 2021-02-19 not successful)
Stefanie: PRODUZIERT Systemdesign (2021-02-25 - 2021-02-26 not successful)

System design review (2021-01-06 - 2021-03-05):

Diana: BEGUTACHTET Systemdesign (2021-01-06 - 2021-01-28)

Christine: BEGUTACHTET Systemdesign (2021-01-06 - 2021-01-28; 2021-02-24 - 2021-03-05)

Thomas: BEGUTACHTET Systemdesign (2021-02-24 - 2021-03-05)

System design corrections (2021-01-11 - 2021-03-15):

Thomas: KORRIGIERT Systemdesign (2021-01-07 - 2021-01-08 not successful; 2021-01-11 - 2021-01-15; 2021-01-22 - 2021-01-28)

Axel: KORRIGIERT Systemdesign (2021-01-14 - 2021-01-15 not successful)

Christine: KORRIGIERT Systemdesign (2021-03-15 - 2021-03-16 not successful) Richard: KORRIGIERT Systemdesign (2021-03-22 - 2021-03-23 not successful)

#### Legend:

SP ... specification phase (begin-end, author(s)), SPRev ... specification review (begin-end, author(s)), SPCorr ... specification correction (begin-end, author(s)), SD ... system design (begin-end, author(s)), SDRev ... system design review (begin-end, author(s)), SDCorr ... system design correction (begin-end, author(s)).

Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

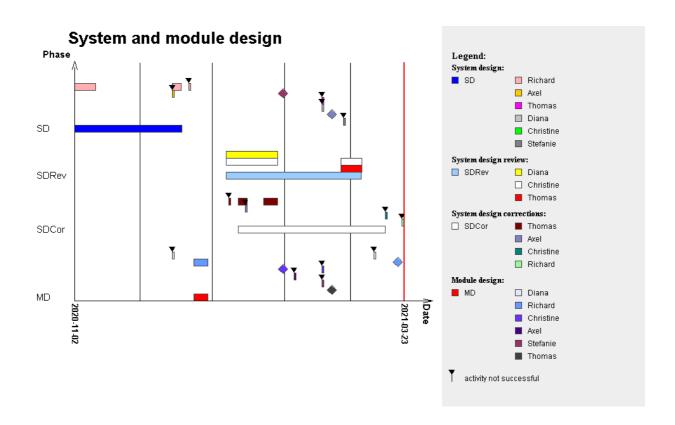
This chart visualizes the author(s) of documents and the member(s) of the

# REPORT SECTION 5: SPECIFICATION AND SYSTEM DESIGN (TUKE 4TUKE-02)

review/correction team(s) used in the specification and system design phase.

# Explanation/Recommendation:

The more the project is following the Waterfall model, the more likely it is that succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that one needs more effort to ensure consistency between the different artifacts.



#### Values:

System design (2020-11-02 - 2020-12-18):

Richard: PRODUZIERT Systemdesign (2020-11-02 - 2020-11-11; 2020-12-14 - 2020-12-18; 2020-12-21 - 2020-12-22 not successful)

Axel: PRODUZIERT Systemdesign (2020-12-14 - 2020-12-15 not successful; 2021-01-29 - 2021-01-29 not successful)

Thomas: PRODUZIERT Systemdesign (2021-02-16 - 2021-02-17 not successful)

Diana: PRODUZIERT Systemdesign (2021-02-16 - 2021-02-17 not successful)

Christine: PRODUZIERT Systemdesign (2021-02-19 - 2021-02-19 not successful)

Stefanie: PRODUZIERT Systemdesign (2021-02-25 - 2021-02-26 not successful)

System design review (2021-01-06 - 2021-03-05):

Diana: BEGUTACHTET Systemdesign (2021-01-06 - 2021-01-28)

Christine: BEGUTACHTET Systemdesign (2021-01-06 - 2021-01-28; 2021-02-24 -

2021-03-05)

Thomas: BEGUTACHTET Systemdesign (2021-02-24 - 2021-03-05)

#### REPORT SECTION 5: SYSTEM AND MODULE DESIGN (TUKE 4TUKE-02)

System design corrections (2021-01-11 - 2021-03-15):

Thomas: KORRIGIERT Systemdesign (2021-01-07 - 2021-01-08 not successful; 2021-01-11 - 2021-01-15; 2021-01-22 - 2021-01-28)

Axel: KORRIGIERT Systemdesign (2021-01-14 - 2021-01-15 not successful)

Christine: KORRIGIERT Systemdesign (2021-03-15 - 2021-03-16 not successful)

Richard: KORRIGIERT Systemdesign (2021-03-22 - 2021-03-23 not successful)

Module design (2020-12-23 - 2020-12-29):

Diana: PRODUZIERT Moduldesign (2020-12-14 - 2020-12-15 not successful; 2021-03-10 - 2021-03-11 not successful)

Richard: PRODUZIERT Moduldesign (2020-12-23 - 2020-12-29; 2021-03-19 - 2021-03-19 not successful)

Christine: PRODUZIERT Moduldesign (2021-01-29 - 2021-01-29 not successful; 2021-02-16 - 2021-02-17 not successful)

Axel: PRODUZIERT Moduldesign (2021-02-04 - 2021-02-05 not successful)

Stefanie: PRODUZIERT Moduldesign (2021-02-16 - 2021-02-17 not successful)

Thomas: PRODUZIERT Moduldesign (2021-02-19 - 2021-02-19 not successful)

#### Legend:

SD ... system design (begin-end, author(s)), SDRev ... system design review (begin-end, author(s)), SDCorr ... system design correction (begin-end, author(s)).

MD ... module design phase (begin-end, author(s)), MDRev ... module design review (begin-end, author(s)), MDCorr ... module design correction (begin-end, author(s)). Project manager decisions and commands that led to zero activities are marked by a

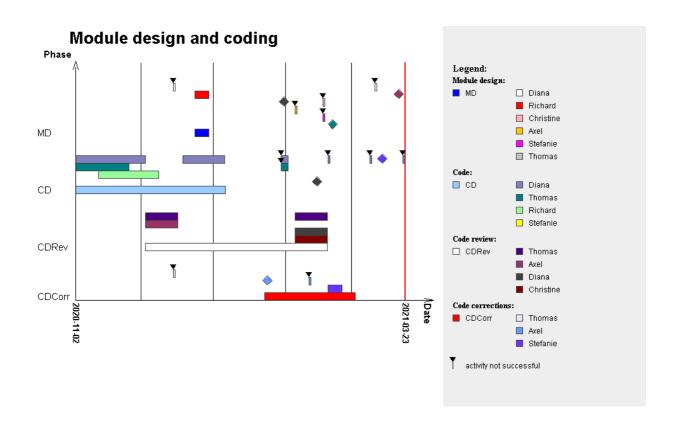
Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

This chart visualizes the author(s) of documents and the member(s) of the review/correction team(s) used in the system and module design phase.

#### Explanation/Recommendation:

The more the project is following the Waterfall model, the more likely it is that succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that one needs more effort to ensure consistency between the different artifacts.



#### Values:

Module design (2020-12-23 - 2020-12-29):

Diana: PRODUZIERT Moduldesign (2020-12-14 - 2020-12-15 not successful; 2021-03-10 - 2021-03-11 not successful)

Richard: PRODUZIERT Moduldesign (2020-12-23 - 2020-12-29; 2021-03-19 - 2021-03-19 not successful)

Christine: PRODUZIERT Moduldesign (2021-01-29 - 2021-01-29 not successful; 2021-02-16 - 2021-02-17 not successful)

Axel: PRODUZIERT Moduldesign (2021-02-04 - 2021-02-05 not successful) Stefanie: PRODUZIERT Moduldesign (2021-02-16 - 2021-02-17 not successful) Thomas: PRODUZIERT Moduldesign (2021-02-19 - 2021-02-19 not successful)

Code (2020-11-02 - 2021-01-05):

Diana: PRODUZIERT Code (2020-11-02 - 2020-12-02; 2020-12-18 - 2021-01-05; 2021-01-29 - 2021-02-01 not successful; 2021-02-18 - 2021-02-19 not successful; 2021-03-08 - 2021-03-09 not successful; 2021-03-12 - 2021-03-12 not successful; 2021-03-22 - 2021-03-23 not successful)

#### REPORT SECTION 5: MODULE DESIGN AND CODING (TUKE 4TUKE-02)

Thomas: PRODUZIERT Code (2020-11-02 - 2020-11-25; 2021-01-29 - 2021-02-01 not successful)

Richard: PRODUZIERT Code (2020-11-12 - 2020-12-08)

Stefanie: PRODUZIERT Code (2021-02-12 - 2021-02-12 not successful)

Code review (2020-12-02 - 2021-02-18):

Thomas: BEGUTACHTET Code (2020-12-02 - 2020-12-16; 2021-02-04 - 2021-02-18)

Axel: BEGUTACHTET Code (2020-12-02 - 2020-12-16)

Diana: BEGUTACHTET Code (2021-02-04 - 2021-02-18)

Christine: BEGUTACHTET Code (2021-02-04 - 2021-02-18)

Code corrections (2021-01-22 - 2021-03-02):

Thomas: KORRIGIERT Code (2020-12-14 - 2020-12-15 not successful)

Axel: KORRIGIERT Code (2021-01-22 - 2021-01-22 not successful; 2021-02-10 -

2021-02-11 not successful)

Stefanie: KORRIGIERT Code (2021-02-18 - 2021-02-24)

#### Legend:

MD ... module design (begin-end, author(s)), MDRev ... module design review (begin-end, author(s)), MDCorr ... module design correction (begin-end, author(s)).

CD ... coding (begin-end, author(s)), CDRev ... code review (begin-end, author(s)), CDCorr ... code correction (begin-end, author(s)).

Project manager decisions and commands that led to zero activities are marked by a small black triangle.

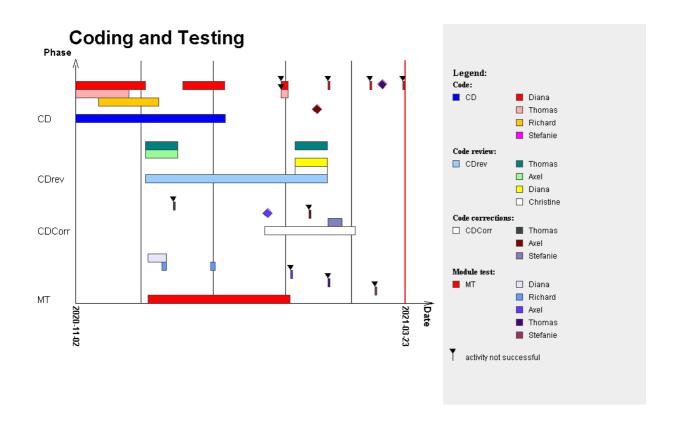
#### Description:

This chart visualizes the author(s) of documents and the member(s) of the module design/coding team(s).

#### Explanation/Recommendation:

The more the project is following the Waterfall model, the more likely it is that succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that one needs more effort to ensure consistency between the different artifacts.

#### REPORT SECTION 5: CODING AND TESTING (TUKE 4TUKE-02)



#### Values:

Code (2020-11-02 - 2021-01-05):

Diana: PRODUZIERT Code (2020-11-02 - 2020-12-02; 2020-12-18 - 2021-01-05; 2021-01-29 - 2021-02-01 not successful; 2021-02-18 - 2021-02-19 not successful; 2021-03-08 - 2021-03-09 not successful; 2021-03-12 - 2021-03-12 not successful; 2021-03-22 - 2021-03-23 not successful)

Thomas: PRODUZIERT Code (2020-11-02 - 2020-11-25; 2021-01-29 - 2021-02-01 not successful)

Richard: PRODUZIERT Code (2020-11-12 - 2020-12-08)

Stefanie: PRODUZIERT Code (2021-02-12 - 2021-02-12 not successful)

Code review (2020-12-02 - 2021-02-18):

Thomas: BEGUTACHTET Code (2020-12-02 - 2020-12-16; 2021-02-04 - 2021-02-18)

Axel: BEGUTACHTET Code (2020-12-02 - 2020-12-16)

Diana: BEGUTACHTET Code (2021-02-04 - 2021-02-18)

Christine: BEGUTACHTET Code (2021-02-04 - 2021-02-18)

#### REPORT SECTION 5: CODING AND TESTING (TUKE 4TUKE-02)

Code corrections (2021-01-22 - 2021-03-02):

Thomas: KORRIGIERT Code (2020-12-14 - 2020-12-15 not successful)

Axel: KORRIGIERT Code (2021-01-22 - 2021-01-22 not successful; 2021-02-10 -

2021-02-11 not successful)

Stefanie: KORRIGIERT Code (2021-02-18 - 2021-02-24)

Module test (2020-12-03 - 2021-02-02):

Diana: TESTET MODULE Code (2020-12-03 - 2020-12-11)

Richard: TESTET\_MODULE Code (2020-12-09 - 2020-12-11; 2020-12-30 - 2021-01-01)

Axel: TESTET\_MODULE Code (2021-02-02 - 2021-02-03 not successful)

Thomas: TESTET\_MODULE Code (2021-02-18 - 2021-02-19 not successful)

Stefanie: TESTET\_MODULE Code (2021-03-10 - 2021-03-11 not successful)

#### Legend:

CD ... coding (begin-end, author(s)), CDRev ... code review (begin-end, author(s)), CDCorr ... code correction (begin-end, author(s)).

MT ... module test (begin-end, author(s)), MTCorr ... corrections (begin-end, author(s)). Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

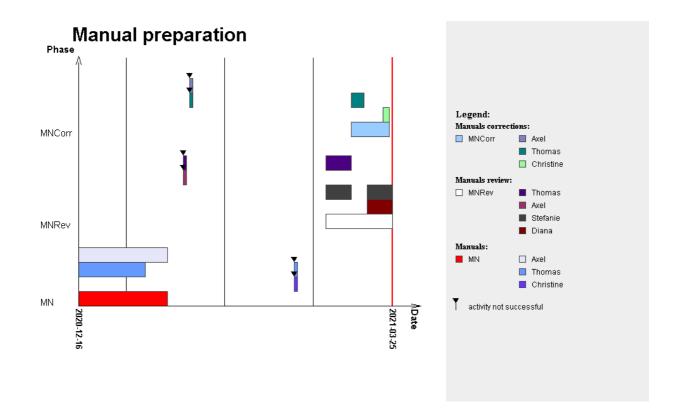
This chart visualizes the author(s) of the code and the member(s) of the review/correction team(s) used in the coding and testing phase.

#### Explanation/Recommendation:

The more the project is following the Waterfall model, the more likely it is that succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that one needs more effort to ensure consistency between the different artifacts.

REPORT SECTION 5: TESTING PHASES (TUKE 4TUKE-02)
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# REPORT SECTION 5: MANUAL PREPARATION (TUKE 4TUKE-02)



#### Values:

Manuals corrections (2021-03-12 - 2021-03-24):

Axel: KORRIGIERT Manual (2021-01-20 - 2021-01-21 not successful)

Thomas: KORRIGIERT Manual (2021-01-20 - 2021-01-21 not successful; 2021-03-12 - 2021-03-16)

Christine: KORRIGIERT Manual (2021-03-22 - 2021-03-24)

Manuals review (2021-03-04 - 2021-03-25):

Thomas: BEGUTACHTET Manuals (2021-01-18 - 2021-01-19 not successful; 2021-03-04 - 2021-03-12)

Axel: BEGUTACHTET Manuals (2021-01-18 - 2021-01-19 not successful)

Stefanie: BEGUTACHTET Manuals (2021-03-04 - 2021-03-12; 2021-03-17 - 2021-03-25)

Diana: BEGUTACHTET Manuals (2021-03-17 - 2021-03-25)

Manuals (2020-12-16 - 2021-01-13):

Axel: PRODUZIERT Manual (2020-12-16 - 2021-01-13)

# REPORT SECTION 5: MANUAL PREPARATION (TUKE 4TUKE-02)

Thomas: PRODUZIERT Manual (2020-12-16 - 2021-01-06; 2021-02-22 - 2021-02-23

not successful)

Christine: PRODUZIERT Manual (2021-02-22 - 2021-02-23 not successful)

#### Legend:

MN ... manual/documentation creation (begin-end, author(s)), MNRev ... review of manuals (begin-end, author(s)), MNCorr ... corrections of manuals (begin-end, author(s)). Project manager decisions and commands that led to zero activities are marked by a small black triangle.

#### Description:

This chart visualizes the author(s) of manuals and the member(s) of the review/correction team(s).

#### Explanation/Recommendation:

The more the project is following the Waterfall model, the more likely it is that succeeding phases are based on tested and finalized artifacts of previous phases. However, in order to save time it is possible to overlap the phases, which then means that one needs more effort to ensure consistency between the different artifacts.

# REPORT SECTION 6 REVIEWS, TESTS, AND CORRECTIONS

# **Review information**

	Review information					
	Spec.	Sys.Design	Mod.Design	Code	Manual	
Length (d)	10.0	46.0	5.0	63.0	27.0	
Effort (h)	41.64	54.65	0.0	99.1	30.23	
Corr. (h)	10.51	102.48	0.0	15.26	16.81	
Det. errors	31.96	30.52	0.0	43.65	80.99	
Err. in docs	108.0	97.0	20.0	427.0	124.0	
Reviews	0.0	1.0	0.0	0.0	0.0	
Corr.total	1.0	2.0	0.0	1.0	2.0	

#### Legend:

Length ... duration for activity (in days), Effort ... effort for activity (in hours), Corr ... effort to correct (in hours), Det. errors ... number of errors detected (total), Err. in docs ... remaining errors in documents, Reviews ... number of reviews of the document (total), Corr.total number ... number of correction activities (total).

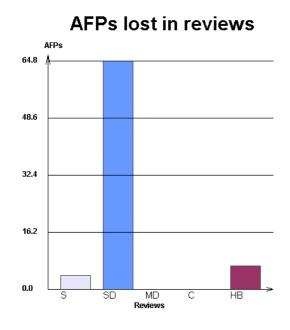
# Description:

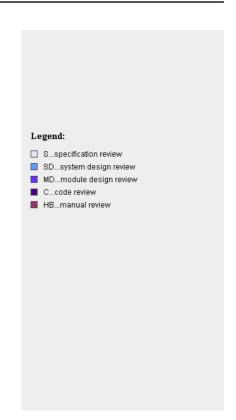
This table summarizes the effort spent on the review activities for several documents.

#### Explanation/Recommendation:

Reviews are essential for preserving the quality of the documents. The more time one invests in the quality of the basic documents (specification, design) the better the quality of the succeeding documents.

# REPORT SECTION 6: AFPS LOST IN REVIEWS (TUKE 4TUKE-02)





# Description:

This diagram shows the number of AFPs lost in reviews. The smaller the number of AFPs, the better the review process. (Values: specification review 4.02452, system design review 64.7982, module design review 0.0, code review 0.0, manual review 6.74681)

#### Explanation/Recommendation:

Loosing only a few AFPs is acceptable. Focus on those reviews that lead to a higher number of losses and improve the review process by taking care of the team members and consistency between the documents. Especially in the very early phases and for the review of the manuals/documentation the customer should be part of the review team.

# **Test information**

		Test information				
	Mod. tests	Sys. tests	Int. tests	Acc. tests		
Length	61.0	0.0	0.0	0.0		
Effort	85.25	0.0	0.0	0.0		
Corr. effort	24.72	0.0	0.0	0.0		
Det. errors	62.28	0.0	0.0	0.0		
Tests	3.0	0.0	0.0	2.0		

# Legend:

Length ... duration of activity (in days), Effort ... effort of activity (in hours), Corr ... effort of correction (in hours), Det. errors ... number of errors detected (total), Err. in docs ... remaining errors in documents, Reviews ... number of reviews of the document (total), Test ... number of test activities (total).

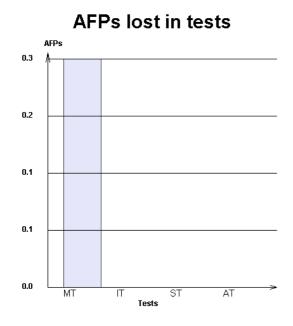
# Description:

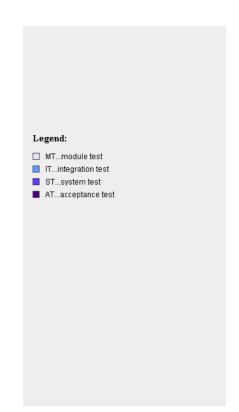
This table summarizes the effort spent on testing activities.

# Explanation/Recommendation:

Tests are essential for preserving the quality of the product. Be sure that all four type of tests were conducted.

# REPORT SECTION 6: AFPS LOST IN TESTS (TUKE 4TUKE-02)



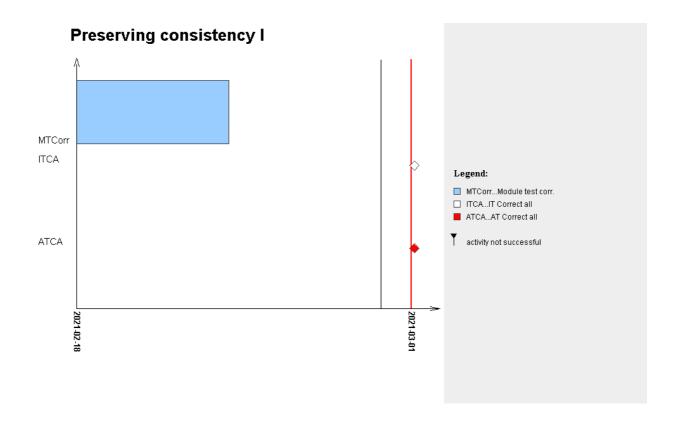


# Description:

This diagram visualizes the loss of AFPs during the test activities. The smaller the number of AFPs, the better the test and correction process. (Values: module test 0.265309, integration test 0.0, system test 0.0, acceptance test 0.0)

# Explanation/Recommendations:

Loosing only a few AFPs is acceptable. Focus on those tests that lead to a higher number of losses and improve the test and correction process by checking the qualification of the testing team.



#### Values:

Module test corr. (2021-02-18 - 2021-02-23)

IT Correct all (2021-03-01)

AT Correct all (2021-03-01)

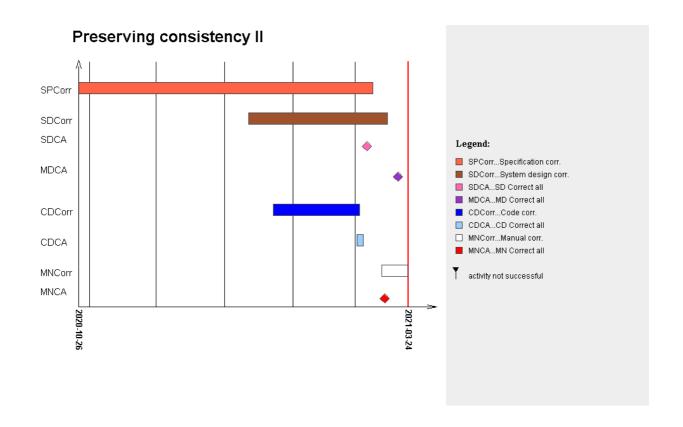
#### Description:

This chart vizualizes all correction activities related to the documents in the project.

Activities containing the suffix all are activities that also correct all preceding documents.

## Explanation/Recommendations:

Every time errors are identified and changes are made to documents, all preceeding documents have to be corrected, too.



#### Values:

Specification corr. (2020-10-26 - 2021-03-08)

System design corr. (2021-01-11 - 2021-03-15)

SD Correct all (2021-03-04)

MD Correct all (2021-03-18)

Code corr. (2021-01-22 - 2021-03-02)

CD Correct all (2021-03-01 - 2021-03-04)

Manual corr. (2021-03-12 - 2021-03-24)

MN Correct all (2021-03-12)

# Description:

This chart vizualizes all correction activities related to the documents in the project.

Activities containing the suffix all are activities that also correct all preceding documents.

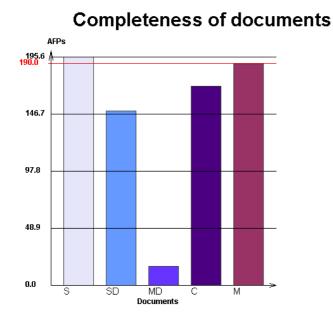
# Explanation/Recommendations:

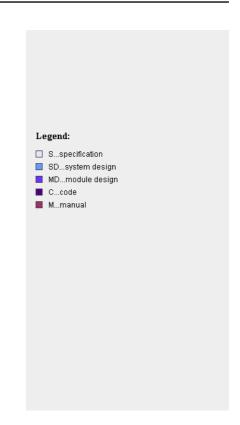
Every time errors are identified and changes are made to documents, all preceeding

REPORT SEC	TION 6: CORRECT	IONS OF ALL	DOCUMENTS	II (TUKE 4TUKE	-02)
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# REPORT SECTION 7 DOCUMENTS

# REPORT SECTION 7: COMPLETENESS OF DOCUMENTS (TUKE 4TUKE-02)





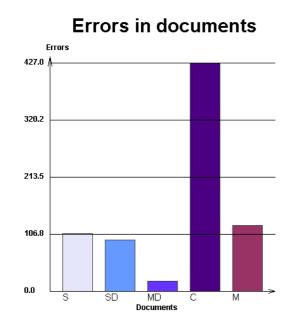
#### Description:

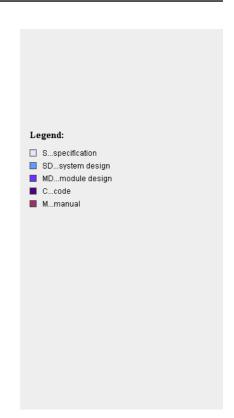
The diagram shows the Completeness of the project documents. (Values: specification 195.607, system design 149.45, module design 16.5768, code 170.642, manual 190.004)

#### Explanation/Recommendations:

Quality slightly decreases from document to document. However, the better the quality (in terms of number of AFPs realized) of the specification, the easier it is to maintain the quality of the succeeding documents. By putting additional effort on the testing phase, the quality of the code can be increased, too.

# REPORT SECTION 7: ERRORS IN DOCUMENTS (TUKE 4TUKE-02)





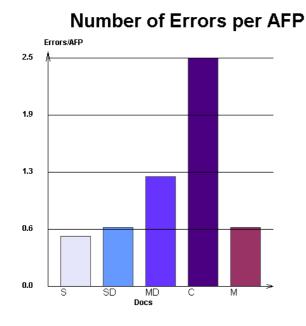
# Description:

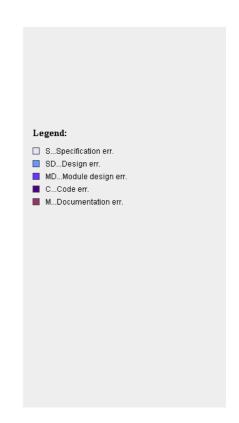
This diagram shows the remaining errors in the documents. (Values: specification 108.0, system design 97.0, module design 20.0, code 427.0, manual 124.0)

## Explanation/Recommendations:

If the specification contains more than 30 errors, then you did not review this document thoroughly. In later phases the correction of documents is more costly and timeexpensive, as the number of errors increases during the project. Already at early stages of the project you should try to produce documents that are correct and complete.

# REPORT SECTION 7: NUMBER OF ERRORS PER AFP (TUKE 4TUKE-02)





# Legend:

S ... errors in the specification (per AFP), SD ... errors in the system design (per AFP), MD ... errors in the module design (per AFP), C ... errors in the code (per AFP), M ... errors in the manuals/documentation (per AFP).

## Description:

This diagram summarizes the remaining errors relative to the AFPs in the document. (Values: Specification err. 0.552128, Design err. 0.649045, Module design err. 1.20651, Code err. 2.50231, Documentation err. 0.652618)

## Explanation/Recommendations:

Not available.

# REPORT SECTION 8 CUSTOMER

# **Customer participation**

	С	Customer participation		
	Number	Number		
Analysis	true	1.0		
Spec. rev.	true	3.0		
Doc. rev.	true	2.0		
Acc. test	true	2.0		

#### Legend:

Analysis ... Employee visits the customer and talks about analysis document (yes/no, number of times), Spec. rev. ... customer participates in specification review (yes/no, number of times), Doc. rev. ... customer participates in review of documentation/manuals (yes/no, number of times), Acc. rev. ... customer conducts an acceptance test (yes/no, number of times).

#### Description:

This table summarizes the involvement and the activities of the customer during the project.

## Explanation/Recommendations:

Especially at early phases the customer can provide valid feedback. It is a good idea to involve him/her in review activities.

# REPORT SECTION 8: CUSTOMER FEEDBACK (TUKE 4TUKE-02)

# **Customer feedback**

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Sorry! Due to missing and/or incomplete data this diagram/table/information cannot be displayed.

# REPORT SECTION 9 SOFTWARE QUALITY

# **Errors remaining in documents**

Document	Type of errors					
	Analysis	Sys.Des.	Mod.Des.	Code	Manual	Total
Spec.	108.0	-	-	-	-	108.0
Sys.Des.	72.0	25.0	-	-	-	97.0
Mod.Des.	10.0	3.0	7.0	-	-	20.0
Code	95.0	67.0	118.0	147.0	-	427.0
Manual	85.0	-	-	-	39.0	124.0

# Legend:

Document ... contains the different types of errors for the specification, system and module design document, code, and the manual.

# Description:

This table summarizes the different types of errors for all documents. The specification contains only analysis errors, the system design document contains errors from analysis AND system design errors, and so on.

## Explanation/Recommendations:

Errors propagate in the life cycle of documents. Every time a new document is created new errors turn up. As reviews identify different types of errors, not only the reviewed document should be corrected, but also the preceeding documents.