Software Project Management II

Master Software Technology
Exercise 7: Project Controlling

As explained in class:

(1) The MTA exercise #1 is intended to check your knowledge.

(2) The EVA exercise #2 is something to calculate.

Please note that the solutions for exercise #2 are to be submitted as part of the pre-exam requirement. For that, please

- work in teams of 3 – 5 students
- upload your solutions (the MS Excel/OpenOffice file) and the explanation (PDF, Word, …) to Moodle.

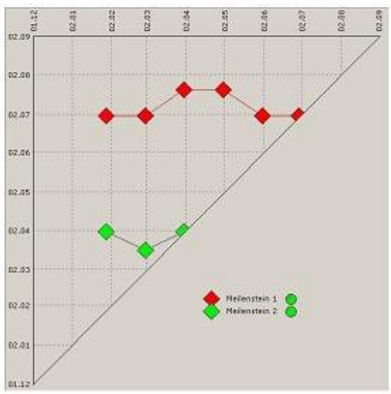
Please name your files such that we are able to identify your respective group.

1 Milestone Trend Analysis (MTA)

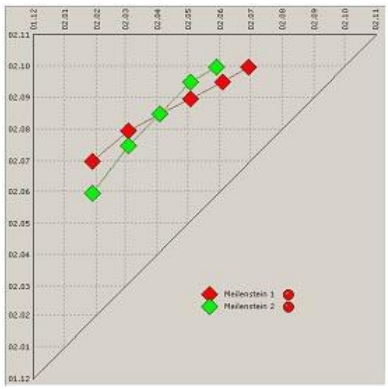
Have a look at the subsequent MTA chards.

a) Briefly describe and explain the given situations!

b) Additionally, please state whether or not the respective project situation causes problems or not!



A



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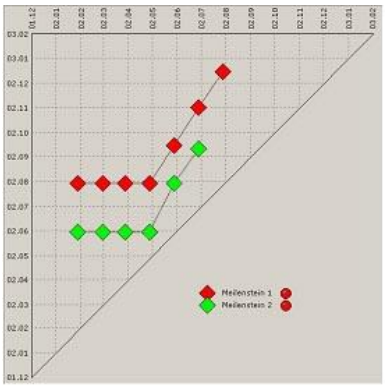

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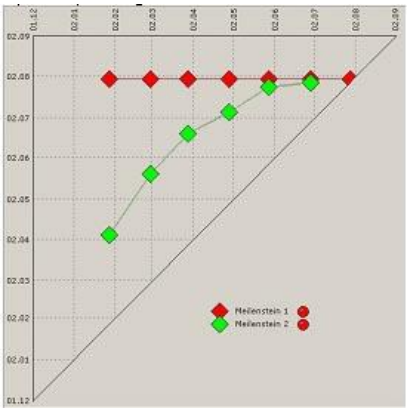

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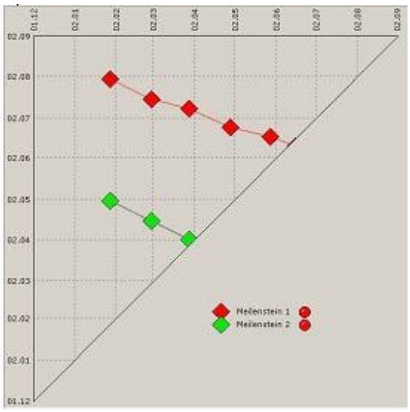

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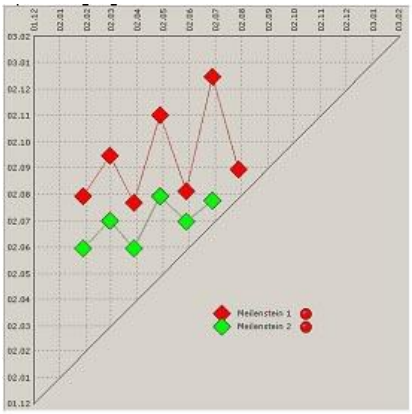

F

2 Earned Value Analysis (EVA)

For the key date 31 January 2018, subsequent plan and actual data of a software project are given.

figures as of 2018-01-31

		Plan			Actual		
#	work package	start	end	effort	start	end	effort
1	Project Management	01.07.2017	31.03.2018	60	01.07.2017		45
2	Requirements Analysis	01.07.2017	31.07.2017	40	01.08.2017	31.08.2017	40
3	Design	01.08.2017	31.10.2017	120	01.09.2017	30.11.2017	120
4	Implementation	01.10.2017	31.01.2018	240	01.11.2017		180
5	Test	01.01.2018	28.02.2018	80			
6	Delivery & Deployment	01.02.2018	31.03.2018	120			

2.1 Calculate the relevant figures

Calculate the relevant figures *for the key date 31 January 2018*:

a) Planned Value PV
b) Earned Value EV
c) Actual Costs AC
d) Cost Variance CV
e) Schedule Variance SV
f) Cost Variance Index CVI (or CPI)
g) Schedule Variance SVI (or SPI)

Use the following additional information and figures:

- Planned costs per person day [PD]: € 500,-
- Actual costs per person day: € 600,-
- For determining the degree of completion, use the pessimistic 0/100-percentage methods: a work package is only taken into account as being completed after it has been completely finished (i.e., finished 100%).

For the calculations, proceed as follows:

1. Calculate PV, EV and AC for the given key date for each work package separately.
2. Calculate those values for the *complete* project, i.e., for *all* work packages, for the key date.
3. Calculate the figures CV, SV, CPI and SPI *for the project as a whole* for the given key date.

2.2 Analyse the figures

Analyse and describe the figures you have calculated (1 – 2 sentences each):

a) Cost Variance CV and Cost Performance Index CPI, resp.;
b) Schedule Variance SV and Schedule Performance Index SPI, resp.

2.3 Degree of completion: 2nd approach

For determining the degree of completion, use the 25/75-percentage methods: a work package is taken into account with 25% as soon as it has started, the remaining 75% are considered upon its completion.

Again, calculate the relevant figures a) – g) as in exercise 2.1.

h) Compare the resulting figures CV/CPI and SV/SPI with those of exercise 2.1: in how far are they different? Explain the difference, if any!