Title paper
Subtitle project

Name, Name, etc.

Abstract: This document provides guidelines how to write the final report. The report consists of a poster, a paper and an appendix. Begin with a front page mentioning course name, student ids, company contact, instructors, date, etc. Subsequently include an A4 poster displaying the outcome of the project. Next include the paper. The paper presents the main result. The ingredients of the paper are further elaborated below. The paper should be stand-alone readable. Include an abstract of max 150 words. Use the format of this document as template, using 10pt Times New Roman (or alike) font. The **paper length is limited to a maximum of 10 pages.** The paper is followed by the appendix. The appendix has no page limit. The appendix is a reference document which serves to support reproducibility of the paper. The appendix may also include additional results that could not be included in the paper.

Keywords: Reporting instructions, Poster, Paper, Appendix

1 Introduction < 1 page >

Introduce the case and the company. What is the problem? Explain how a DSM model is used to address the problem. Cite DSM literature that has studied similar or related problem statements. Present the purpose of the DSM model you have developed.

2 Case: system description < 1 page >

Describe the case system in further detail. Introduce terminology and present the main function(s) of the case system. Explain using a picture the working of the system, and the relevant system characteristics. Present which aspects of system performance or behavior is considered in your study. Outline which question about the case needs to be answered.

3 DSM modeling method < 3 pages >

Present the method to build your DSM or MDM model. Give a schematic picture of the developed DSM or MDM, and motivate the DSM layout in view of the model purpose and research question. Explain the matrix elements, the system decomposition, the system boundary, the types and attributes of dependencies, and the attributes of the elements (if present). Describe the method to derive the matrix dependency values and the attribute values. Cite the relevant DSM literature that you have used or your method derives from. Report which data is collected and how this is used to build the model. Describe the method of matrix analysis (e.g. clustering/sequencing), and the software tooling that has been used to support the DSM model development and analysis.

4 Results < 3 pages >

Present the key DSM or MDM matrix result. Explain how the matrix should be interpreted. Elaborate on the DSM analysis. Present the main findings regarding the problem statement

5 Conclusion < 0.5 page >

State the main conclusions that follow from your project. Give recommendations to the client.

Acknowledgements

Include a few sentences explaining how and for which purposes you have used AI or GenAI (LLM) tools in your project. Also indicate which tools you have used.

References

Include the references you have cited following a format similar to below.

Browning, T.R., 2001. Applying the design structure matrix to system decomposition and integration problems: a review and new directions. IEEE Transactions on Engineering Management 48 (1), 292-306.

Browning, T.R. (2016): Design structure matrix extensions and innovations: a survey and new opportunities. IEEE Transactions on Engineering Management 63, 27-52.

Eppinger, S.D., Browning, T.R., 2012. Design structure matrix methods and applications. MIT Press, Cambridge.

Poster

The purpose of the poster is to provide a single page display of the outcome of the project. The developed DSM (or MDM) model should have a prominent place on the poster. Include also a visual of the case system. Choose an appropriate title. Add limited text providing a brief introduction to the case problem, additional explanation of the DSM model, and the conclusion from the DSM analysis.

Appendix

The purpose of the appendix is that the DSM/MDM outcomes presented in the paper are fully reproducible. Present tables documenting the full system decomposition as well as the scoring of the various dependencies and attribute values. Additional DSM matrix displays for which there was no space in the paper and other supporting materials may also be included in the appendix.

How to write your paper

A top-down approach to writing is often helpful in guiding the writing process:

1. Start with the section headings (see the section headings suggested above).

2. Collect the key figures (or use placeholders if you do not yet have them) that need to be included in the paper. Place them in the appropriate sections. Write the captions to these figures. Do the same for tables that need to be included.

3. Include the necessary equations; place them in the appropriate section in the appropriate order.

4. Decompose each section in a story line of paragraphs. Write down one topic keyword for each paragraph (one paragraph covers one topic). Or write the first sentence of the paragraph, with the intended topic as subject of the sentence. (the first sentence of the paragraph is the most important sentence of the paragraph). Pay attention to the ordering of the paragraphs considering the storyline. Do not yet write the paragraphs. Keywords or first sentences only.

5. When you arrive at (much) more than ten prospective paragraphs in a section, consider to split that section into two sections with new headings. Alternatively, introduce subsections, with appropriate subsection headings. Avoid unnecessary nesting; keep the decomposition of the text as flat as possible. Possibly return to Step 4.

6. Verify the sequence and balance of the paragraph topics within and across the sections. There should be a clear global story line supporting the main contribution of the paper. Also associate the figures, tables and equations to the appropriate paragraphs in the text.

7. Make a page budget for each section, respecting the ten page limit for the full paper. Note that a paragraph typically varies between three to twelve sentences. Reiterate starting from Step 1 in case you anticipate you cannot stay within the paper page limit (no worries, you have not written much so far).

8. Distribute the intended paragraphs among the team members. Do the actual paragraphs writing. Do you arrive at more than twelve sentences in a paragraph? Check whether it is really about one topic. Consider to split that paragraph into two paragraphs, with separate topics. Also make sure that each paragraph is written such that it contributes to the story line. It should logically follow up on the previous paragraph and bridge towards the next paragraph.

9. Assemble the paper with all contributions. Review the paper thoroughly, and rewrite sentences or paragraphs where needed. Possibly revise (sub)section headings or captions of figures and tables. Pay attention to (a) the main story line across the various contributions, (b) the consistency in terminology, (c) the readability, (d) the grammar, (e) the references to and captions of figures and tables, (f) the references to equations, and (g) the proper citation of work by others that you have used.

10. Write the summary and choose a suitable title.