



SUPERVISOR'S REPORT ON THE MASTER'S THESIS

Master's thesis title **Optimization of inventory in warehouse locations**
Author (including degrees) **Bc. Barbora Šikolová**
Master's thesis supervisor (incl. deg.) **Ing. Zuzana Bělinová, Ph.D.**
Stefan Engevall, Tekn. Dr.

Evaluation criteria and their classification

Fulfilment of the master's thesis requirements and goals.....A (excellent) ... 1,0
Self-action and own initiative
during the master's thesis elaboration.....A (excellent) ... 1,0
Application of knowledge gained
by self-study and from professional literature C (good) ... 2,0
Usage of groundwork and data from practiceA (excellent) ... 1,0
Professional level and contribution of the master's thesis B (very good) ... 1,5
Formal aspects of the master's thesis..... B (very good) ... 1,5

Further comments to the master's thesis:

First, the summary evaluation from the company the thesis was done at:

Work is very beneficial for the company. It reflects all the conditions and needs of current operations. It will be part of the basis for further development.

My evaluation:

In her master's thesis Barbora Šikolová faced the problem of optimizing the warehouse processes to reach more efficient usage of the storing capacities. To solve this, Barbora Šikolová **showed the ability to face complex problems, orient herself in a practical environment and propose efficient practical solutions.**

The master's thesis starts with the general description of warehousing methods. Although the situation in every warehouse is different and subject of business secret, **more emphasis could be laid on the research** of typical attitudes and procedures in other companies and their application on the problem.

After this introduction detailed description of the particular warehouse, its processes and information on the traffic follows in several chapters. Here Barbora Šikolová used her deep understanding of company procedures to identify the weak points. Unfortunately some part are not explained sufficiently, such as in chapter 7.4 why irregularities emerge. One can find it then in 9.1.2

As it is not possible to test new processes on the real system, Barbora Šikolová **created simplified model** of the warehouse system using real historical data on products turnover. On this model she tested the new proposed processes and compared the results in using the warehouse available space in an efficient way. Creation of the model required several simplifications that may influence the results, although facing the real situation in the warehouse justifies their usage, such as considering every product having a shape of a block, etc. In creating the solution, the range of possible options was **limited by the company requirements**, mainly by the inacceptability of any solution that would require additional workload or costs. Also it was necessary to find a fool-proof solution, as the real operation is strongly based on ordinary people handling the goods. Barbora Šikolová **successfully met these conditions** and was able to find "self-optimizing" solution within the standard warehouse processes. It is a pity that the final solution is just described in Chapter 10, without enclosing the corresponding decision tree as there are for the current processes.

The **results are very promising**, their credibility however would be higher **if more products were used** in the simulation to prove the benefits of the new procedures, not just one product from the "big" and one from the "small" category.

The **formal requirements on the master's thesis have been met**, the thesis is logically structured, there is list of used abbreviations, etc. However **some improvements of the formal part could be done** to increase the comprehensibility, e.g. in description of the appendices (meaning of Simulation 1, 2 is explain just in text) already mentioned missing final decision tree, etc.

Still **Barbora Šikolová has faced her task successfully and achieved valuable results.**

I **recommend** the master's thesis for the defence.

Summary classification of the master's thesis B (very good) ... 1,5

Zuzana Bělinová

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 master's thesis supervisor's name



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 master's thesis supervisor's signature

In Prague June 14, 2017