

**DEVELOPMENT OF SYSTEMATIC RE-LAYOUT METHODOLOGY IN  
FOOTWEAR INDUSTRY PRODUCTION LINE:  
A CASE STUDY IN PT XYZ**

by

DINDA BUNGA HAPSARI

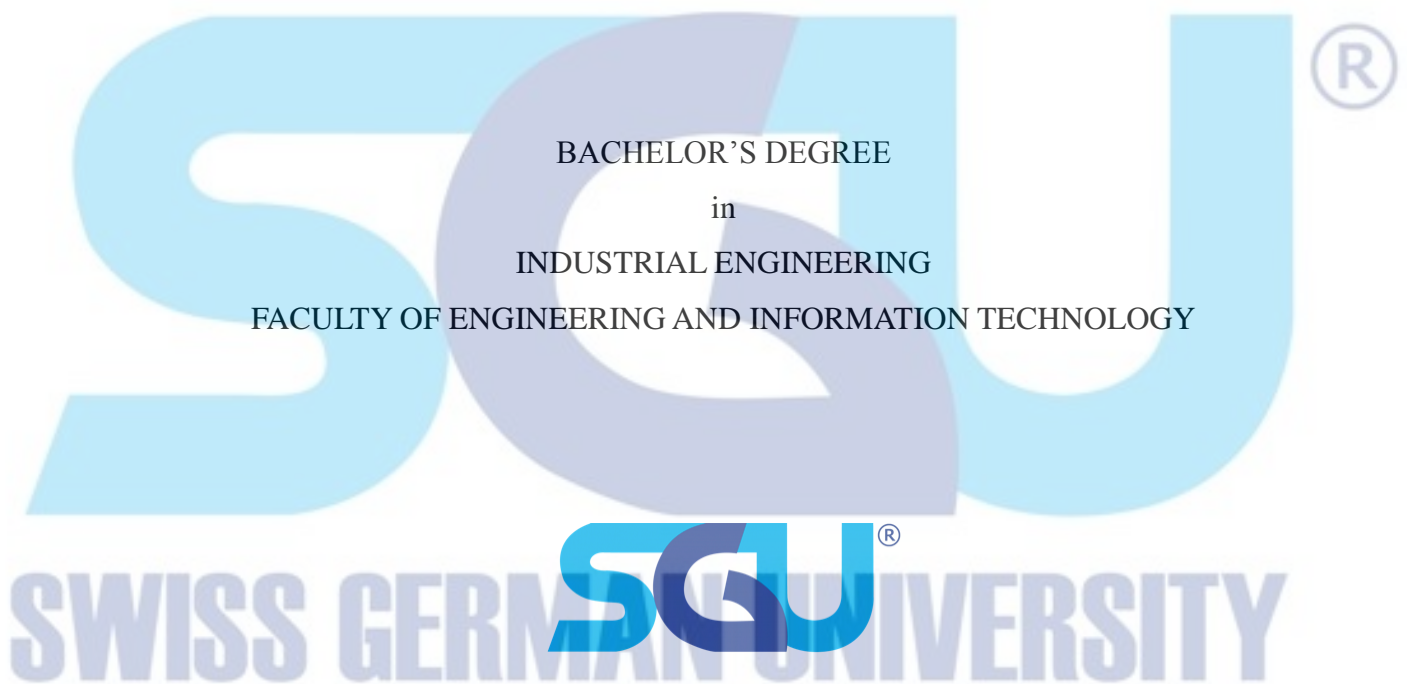
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### STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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## ABSTRACT

### DEVELOPMENT OF SYSTEMATIC RE-LAYOUT METHODOLOGY IN FOOTWEAR INDUSTRY PRODUCTION LINE: A CASE STUDY IN PT XYZ

by

Dinda Bunga Hapsari  
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The main objective of this thesis is to make a re-layout procedure in footwear industry production line based on the case studies in PT XYZ. The existing problem is the need for a prompt and precise changes in the plant layout caused by a frequent new product arrival that will be manufactured in the company, whereas currently PT XYZ creates it by only following the line balancing. Therefore, a systematic re-layout methodology is required to facilitate the re-layout process. The methodology will be supported by flow analysis and Systematic Layout Planning (SLP). Concerning the verification process, Tecnomatix Plant Simulation will be used to simulate and analyze the bottleneck, as well as to see whether the proposed layout design is effective and can meet the target. The line balancing method that belongs to the company will be used only for determining the quantity of machine and operator required. In result, there is an increase in the throughput per hour fulfilling the company target.

*Keywords: Re-layout methodology, plant layout, Systematic Layout Planning (SLP), simulation.*



## DEDICATION

*I dedicate this thesis to my beloved parents:*

*Triono Rahardjo and Dewi Kencanawati,*

*Whose affection, love, encouragement and prays of days and nights*

*Make me able to get this work done.*



## ACKNOWLEDGEMENTS

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There have been many friends who have walked together with me during the last four years. I would like to thank all of the Industrial Engineering students batch 2013, whose given me colours during college. We have passed the days together with laughter and even tears because of the endless assignments. Goodluck in all that comes our way in the future, friends.

Last but not least, my deepest gratitude goes to my parents and family for the endless prayer, love, and support throughout the process of writing this thesis.

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