Contents

1  Order Picking: Issues, Systems and Models ......................... 1
   Byung Chun Park

2  Storage Systems and Policies ........................................ 31
   Marc Goetschalckx

Part I  Manual Storage Systems

3  Warehouse Layouts .................................................. 55
   Goran Dukic and Tihomir Opetuk

4  Order-Picking by Cellular Bucket Brigades: A Case Study .... 71
   Yun Fong Lim

5  A Sequential Order Picking Policy for Shipping Large Numbers of Small Quantities of Goods ......................... 87
   Jiun-Yan Shiau

6  Order Batching in Order Picking Warehouses: A Survey of Solution Approaches ........................................... 105
   Sebastian Henn, Sören Koch and Gerhard Wäscher

7  Storage Assignment for Order Picking in Multiple-Block Warehouses ........................................... 139
   Kees Jan Roodbergen
Part II Automated Storage Systems

8 Automated Storage and Retrieval Systems: A Review on Travel Time Models and Control Policies .......................... 159
M. R. Vasili, Sai Hong Tang and Mehdi Vasili

9 Designing Unit Load Automated Storage and Retrieval Systems ................................................. 211
Tone Lerher and Matjaž Šraml

10 Warehouse Management: Productivity Improvement in Automated Storage and Retrieval Systems .................. 233
Yaghoub Khojasteh-Ghamari

11 Analytical and Numerical Modeling of AS/RS Cycle Time in Class-Based Storage Warehousing .................. 261
Mauro Gamberi, Riccardo Manzini and Alberto Regattieri

12 A New Technology For Unit-Load Automated Storage System: Autonomous Vehicle Storage and Retrieval System ............... 285
Banu Yetkin Ekren and Sunderesh Sesharanga Heragu

13 Intelligent Optimization Methods for Industrial Storage Systems .......................................................... 341
Mirko Ficko, Simon Klancnik, Simon Brezovnik, Joze Balic, Miran Brezocnik and Tone Lerher

Part III Applications and Case Studies

14 Correlated Storage Assignment and Iso-Time Mapping Adopting Tri-Later Stackers. A Case Study from Tile Industry ........................................ 373
Riccardo Manzini, Filippo Bindi, Emilio Ferrari and Arrigo Pareschi

15 Design and Optimization of Picking in the Case of Multi-Item Multi-Location Multi-Pallet Customer Orders ............... 397
R. Gamberini, B. Rimini, M. Dell’Amico, F. Lolli and M. Bianchi
### Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>The Logistics Reengineering Process in a Warehouse/Order Fulfillment System: A Case Study</td>
<td>425</td>
</tr>
<tr>
<td></td>
<td>Alberto Regattieri, Riccardo Manzini and Mauro Gamberi</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Warehouse Assessment in a Single Tour</td>
<td>457</td>
</tr>
<tr>
<td></td>
<td>M. B. M. De Koster</td>
<td></td>
</tr>
<tr>
<td></td>
<td>About the Author</td>
<td>475</td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td>477</td>
</tr>
</tbody>
</table>
Warehousing in the Global Supply Chain
Advanced Models, Tools and Applications for Storage Systems
Manzini, R. (Ed.)
2012, XXII, 486 p., Hardcover