

**Q1.1**



**Q1.2** In cooperation with TLN and the Erasmus University Rotterdam (Christian Kaps and prof. René de Koster), evofenedex has started research to evaluate the effect of technological developments on warehouse efficiency. We ask you to participate in this research by filling out this survey. What is in it for you? When you participate, you will receive a personalized result of our study, in which we benchmark & rank your warehouse's operational efficiency against the entire set of warehouses as well as an analysis how it competes directly against facilities in your industry. The report will include your operation's overall efficiency as computed through the data you provide & the analysis of individual inputs/outputs (e.g. number of people, order lines, etcetera). For a sample benchmark click [here](#). How can you participate? To help with the study and receive the report, please fill out this survey. Filling it out takes 10-15 minutes and focuses on high level operations data of your warehouse. The survey should be completed by the (assistant) logistics manager of your warehouse facility. The questionnaire focuses on operational changes in your facility during the last 5 years. Each warehouse location of your organization can participate separately. If you have any questions or feedback, please contact [Christian.Kaps@student.eur.nl](mailto:Christian.Kaps@student.eur.nl). Thank you for your participation René de Koster Christian Kaps On behalf of EUR, evofenedex & TLN

**Q2.1** Questions to be answered by the (assistant) logistics/warehouse manager

**Q2.2** Company / warehouse information

- Company name (1)
- Name of location (2)
- Address of warehouse (3)
- Zipcode and city (4)

**Q2.3** Personal information

- Name (1)
- Function (2)
- Telephone number (3)
- E-mail address (report will be sent to this address) (4)

**Q2.4** Which product category categorizes your warehouse best? (max 2 selections)

- ☐ Automotive (1)
- ☐ Chemicals/Oil/Gas (2)
- ☐ Construction (3)
- ☐ Consumer goods (4)
- ☐ Electronics (5)
- ☐ Engineering (6)
- ☐ Groceries/Food (7)
- ☐ Household appliances (8)
- ☐ Logistics (9)
- ☐ Military/Defense (10)
- ☐ Pharmacy (11)
- ☐ Retail (non-food) (12)
- ☐ Textiles (13)
- ☐ Other, please specify: (14) \_\_\_\_\_

**Q2.5** Which of the following options describes the position of your warehouse in your company's value chain best?

- ☐ Production warehouse (1)
- ☐ Wholesale warehouse (2)
- ☐ Retail warehouse (3)

**Q2.6** Is your warehouse operated by a logistics service provider?

- ☐ Yes - this warehouse is public, offering services to multiple customers (1)
- ☐ Yes - this warehouse is dedicated/contracted mainly for one specific customer (2)
- ☐ No (3)

**Q3.1** How many employees including temporary workers are active in your warehouse at the moment and how many were active 5 years ago (indicated as FTE - full time equivalent; direct - active on the warehouse floor; indirect - not operational on the floor)?

	2017 (1)	5 years ago (2)
Direct FTEs (1)		
Indirect FTEs (4)		

**Q3.2** What is the floor space of the warehouse at the moment including mezzanines (in m<sup>2</sup>)? And what was it 5 years ago?

	2017 (1)	5 years ago (2)
Floor Space (in m <sup>2</sup> ) (1)		

**Q3.3** What floor space percentage of the warehouse at the moment consists of cold storage and what was that percentage 5 years ago?

	2017 (1)	5 years ago (2)
% Cold storage (1)		

**Q4.1** Approximately how many unique article numbers (Stock Keeping Units) are simultaneously stored in your warehouse at the moment on average and how many were stored 5 years ago?

	2017 (1)	5 years ago (2)
SKUs (1)		

**Q4.2** What is the average number of shipping order lines (outgoing order lines) per day at the moment and how high was this number 5 years ago?

	2017 (1)	5 years ago (2)
Order lines per day (1)		

**Q4.3** What percentage of shipping order lines was error-free on average over the last year and how many 5 years ago? (examples of errors are: faulty quantities, deliveries not on time (too early or too late), packing mistakes, product errors, incorrect component/modules. Select only one field per period)

	Error-free order lines	Error-free order lines
	2017 (1)	5 years ago (1)
No information available / not tracked (1)	<input type="checkbox"/>	<input type="checkbox"/>
Below 90% error-free order lines (2)	<input type="checkbox"/>	<input type="checkbox"/>
90-95% error-free order lines (3)	<input type="checkbox"/>	<input type="checkbox"/>
95-97% error-free order lines (4)	<input type="checkbox"/>	<input type="checkbox"/>
97-98% error-free order lines (5)	<input type="checkbox"/>	<input type="checkbox"/>
98-99% error-free order lines (6)	<input type="checkbox"/>	<input type="checkbox"/>
99-99.5% error-free order lines (7)	<input type="checkbox"/>	<input type="checkbox"/>
99.5-99.9% error-free order lines (8)	<input type="checkbox"/>	<input type="checkbox"/>
Over 99.9% error-free order lines (9)	<input type="checkbox"/>	<input type="checkbox"/>

**Q5.1** Besides the standard processes like handling incoming shipments, visual inspection, storage and order picking, which occur in all warehouses, additional special processes may be performed as well. Which of the following special processes are performed at the moment by your warehouse? Which were also performed 5 years ago? (check all that apply)

	Special processes	Special processes
	2017 (1)	5 years ago (1)
Cross-docking / Transshipment (1)	<input type="checkbox"/>	<input type="checkbox"/>
Transport planning (2)	<input type="checkbox"/>	<input type="checkbox"/>
Internal product movements (relocating stock) for optimization (3)	<input type="checkbox"/>	<input type="checkbox"/>
Re-packing / sealing of products (4)	<input type="checkbox"/>	<input type="checkbox"/>
(Re)coding of products (5)	<input type="checkbox"/>	<input type="checkbox"/>
Quality control of received products (6)	<input type="checkbox"/>	<input type="checkbox"/>
Adding (promotional) material (7)	<input type="checkbox"/>	<input type="checkbox"/>
Receiving and processing customer returns / return logistics (8)	<input type="checkbox"/>	<input type="checkbox"/>
Pricing (9)	<input type="checkbox"/>	<input type="checkbox"/>
Assembly (10)	<input type="checkbox"/>	<input type="checkbox"/>
Other special processes not mentioned yet, namely (11)	<input type="checkbox"/>	<input type="checkbox"/>

**Q5.2** Which of the following automated systems were already used to support the processes in the warehouse 5 years ago? (Indicate the number of units of the selected systems where applicable)

- ☐ Automated Storage/Retrieval system (# cranes) (1) \_\_\_\_\_
- ☐ Mini-load system (# cranes) (2) \_\_\_\_\_
- ☐ Flow racks (3)
- ☐ Conveyor belts (# meters) (4) \_\_\_\_\_
- ☐ Automated sorter (# output lanes / chutes) (5) \_\_\_\_\_
- ☐ Automated packing/labelling machine (# machines) (6) \_\_\_\_\_
- ☐ Automated box stacker (# stackers) (7) \_\_\_\_\_
- ☐ Automated guided vehicles (# vehicles) (8) \_\_\_\_\_
- ☐ Robots (# robots) (9) \_\_\_\_\_
- ☐ Horizontal/vertical carousel or elevator storage module (# units) (10) \_\_\_\_\_
- ☐ Multi-deep storage of pallets/totes with gantry crane or conveyors (11)
- ☐ Radio Frequency ID technology (12)
- ☐ Augmented reality technology (13)
- ☐ Automated process gamification (15)
- ☐ Others, for example: (14) \_\_\_\_\_

**Q5.3** Which new automated systems were added to support the processes in the warehouse during the last 5 years ? (Indicate the number of units of the selected systems where applicable)

- ☐ Automated Storage/Retrieval system (# cranes) (1) \_\_\_\_\_
- ☐ Mini-load system (# cranes) (2) \_\_\_\_\_
- ☐ Flow racks (3) \_\_\_\_\_
- ☐ Conveyor belts (# meters) (4) \_\_\_\_\_
- ☐ Automated sorter (# output lanes / chutes) (5) \_\_\_\_\_
- ☐ Automated packing/labelling machine (# machines) (6) \_\_\_\_\_
- ☐ Automated box stacker (# stackers) (7) \_\_\_\_\_
- ☐ Automated guided vehicles (# vehicles) (8) \_\_\_\_\_
- ☐ Robots (# robots) (9) \_\_\_\_\_
- ☐ Horizontal/vertical carousel or elevator storage module (# units) (10) \_\_\_\_\_
- ☐ Multi-deep storage of pallets/totes with gantry crane or conveyors (11) \_\_\_\_\_
- ☐ Radio Frequency technology (12) \_\_\_\_\_
- ☐ Augmented reality technology (13) \_\_\_\_\_
- ☐ Automated process gamification (15) \_\_\_\_\_
- ☐ Others, for example: (14) \_\_\_\_\_

**Q5.4** What type of information system does the warehouse make use of at the moment and which type was used 5 years ago? (a standard system is comprised of less than 20% tailor-made software. Select only one field per period)

	Information system	Information system
	2017 (1)	5 years ago (1)
No information system used (e.g. Excel or paper-based tracking) (1)	<input type="checkbox"/>	<input type="checkbox"/>
A standard ERP warehouse module (2)	<input type="checkbox"/>	<input type="checkbox"/>
A standard ERP warehouse module with more than 20% customization (3)	<input type="checkbox"/>	<input type="checkbox"/>
A standard WMS (Warehouse Management System) package (4)	<input type="checkbox"/>	<input type="checkbox"/>
A standard WMS package with more than 20% customization (5)	<input type="checkbox"/>	<input type="checkbox"/>
A tailor made/customized system (6)	<input type="checkbox"/>	<input type="checkbox"/>

**Q5.5** Please indicate how you perceive your warehouse's performance at the moment compared to that of competitors, when facing the situations mentioned below.

[illegible]

**Q5.6** Please indicate how you perceived your warehouse's performance 5 years ago compared to that of competitors, when having faced the situations mentioned below.

[illegible]

**Q5.7** As the final question, please indicate at which frequency the following activities are currently performed in your warehouse at the moment and how often they were performed 5 years ago.

[illegible]



**Q5.8** You have reached the end of the survey. Would you like to receive a personalized efficiency benchmark of your warehouse, based on the results of this study? (Reports will be sent in June/July to the provided e-mail address)

- ☐ Yes (1)
- ☐ No (2)