Logistics personal excellence by continuous self-assessment

LOPEC

DE/12/LLP-LdV/TOI/147538

WP 7 – Report:

Piloting of the LOPEC Solution with external field testers

For reasons of data protection this report (public version) was shortened.

Edited by Adela Vitkovska, 30th of September 2014

The LOPEC project is carried out with the support of the European Community. The content of this project does not necessarily reflect the position of the European Community, nor does it involve any responsibility on the part of the European Community.

Education and Culture DG

Lifelong Learning Programme

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DOCUMENT HISTORY

30th of September 2014 WP-7 Report finalised

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1 Introduction

The aim of WP 7 was the external piloting of LOPEC-Solution.

In T7.1 was **Eurofortis** responsible for coordination of acquisition of external end users for iterative evaluation

In T7.2 was **Reutlingen University** responsible for coordination of training of external end-users

In T7.3 was **Reutlingen University** supporting the piloting process in DE (3 pilots or more)

In T7.4 was **Fraunhofer Austria** supporting the piloting process in in AT (3 pilots or more)

In T7.5 was **University of Split** supporting the piloting process in HR (3 pilots or more)

In T7.6 was **Eurofortis** supporting the piloting process in LV (3 pilots or more)

In T7.7 was **Eurofortis** leading and coordinating the field testing

2 Acquisition of external end users for iterative evaluation

Suitable selection of the pilot testing users determines the success or fail of the pilot testing. Project partners were since the beginning of the project well informed about the target group and together they identified suitable target group for each region.

LOPEC target groups, namely:

- ETO (Education and Training Organizations)
- SME (Small and Medium Enterprises)

Country	Chosen target group
Germany	SME (Small and Medium Enterprises)
Austria	SME (Small and Medium Enterprises)
Latvia	SME (Small and Medium Enterprises)
Croatia	SME (Small and Medium Enterprises)

Activities and results of:

ESB	In March 2013 first communication with interested SMEs took place. Three of them committed to be interested in the piloting procedure to benefit from the results of the LOPEC solution. ▪ LGI Logistics Group International GmbH ▪ SG Logistik GmbH ▪ Simon Hegele Gesellschaft für Logistik und Service GmbH All three companies are specialized in logistics.

FhA	In December 2013 LOPEC was introduced to four companies. Three of them committed to be interested in the piloting procedure to benefit from the results of the LOPEC solution. All three companies are specialized in the multi-variant serial production and assembly of metal parts, components and products in batch sizes from 1 to 10,000 and operate with high expenses in the internal and external logistics.
UoS	In February 2013 first communication with interested SME took place. There were short dissemination activities in each SME which helped CEO and leaders of that companies to make decision about piloting. Total three (3) companies were suitable and interesting in LOPEC piloting: All three companies are producers and suppliers for shipbuilding industry. Among production activities which are mostly low volume - high production mix type, inbound and outbound logistic takes strong influence on business success
EuroFortis	In early 2013 communication with the multiplier and stakeholder organizations started to accelerate the future pilot testing organizations acquisition in later phase of the project. All dissemination activities before the project pilot testing helped to select really suitable organizations fitting the project needs.

Dissemination effort presented during first project year was reflected in later selection of the pilot users.

The common procedures of the acquisition were proceeded through successful dissemination activities as local meetings and seminar for the target group, exhibitions, articles in local online and paper based magazines.

The motivation for the pilot users was the possibility of innovative and unique Training opportunity as well as free usage of highly specific software.

3 Training of external end-users

The common approach for the external end users training was developed. As the base for this approach we can present the EFQM training which was delivered to representatives of all project partners. During project lifetime there were organised EFQM trainings for the project representatives (in 2013 in Split and in Prague).

The basic materials for the later training of end users were developed by project partnership and delivered to all partners in English and German language.

4 Supporting the piloting process in DE (3 pilots or more)

From April 2014 till September 2014, the LOPEC Solution was implemented in Germany in order to validate learning platform, the methodology of the learning path and the self-assessment on their industrial applicability. ESB Business School, University of Reutlingen took over doing the pilot testing in Germany.

Target group: In all cases, there was one responsible person in the organisation (manager or head of production) who coordinated other colleagues and workers. Knowledge of Lean Logistics still existed, but it divers between very low level and medium level.

Companies with different sizes were selected. All three companies are specialized in logistics.

Conclusions

All participants successfully passed the pilot testing and provided the valuable feedback which helped to make the final improvements for the validated LOPEC Solution. In general the users were very satisfied with the functionality provided as well as with the overall content of the training modules.

5 Supporting the piloting process in AT (3 pilots or more)

From December 2013 till June 2014, the LOPEC solution was implemented on a pilot project basis in Austria in order to validate the methodology of the learning path and the self-assessment on their industrial applicability. Fraunhofer Austria took over doing the pilot testing in Austria.

Target group: In all cases, there was one responsible person in the organisation (manager or head of production) who coordinated other colleagues and workers. Knowledge of Lean Logistics did not exist or at a very low level.

Companies with different sizes were selected. This should ensure that the successful application of LOPEC solution does not depend on time or monetary resources. All three companies are specialized in the multi-variant serial production and assembly of metal parts, components and products in batch sizes from 1 to 10,000 and operate with high expenses in the internal and external logistics.

Conclusions

The participating companies defined the targets of reducing waste in the logistics department independently through their own employees.

During the implementation of the pilot project three volunteers from the plant level of each company selected the relevant modules for their work environment. These were discussed in a team with the support of the logistics or the production board of management and aligned. At the same time the self-assessment of "personal excellence in Lean Logistics" was performed by the employees to identify further learning and operation requirements.

The motivation of the companies consisted primarily in the bottom-up approach of the procedure. Lean Logistics-learning modules have been selected by the skilled workers and independently implemented. This leads to a significantly higher acceptance of the emerging ideas and optimization projects in contrast to the traditionally used top-down management approaches in companies.

In addition, the participating companies wanted to support their employees by promoting personal excellence in combination with the systematic continuing process of education in both professional and private fields.

All three companies have reached the goal defined before the project start, to initiate and implement noticeable improvements in logistics with the help of employees. The result was the efficient design of workflows and processes in predefined pilot areas. This had a positive impact on productivity, cost reduction and increasing the service level of logistics.

All three companies committed to extend the use of Lean Logistics learning modules from three to six till eight employees. The launched improvement initiative should be rolled out to additional business areas, such as the administration and generate new impulses.

Based on the feedback given by the participants of the pilot implementation, the pilot project has shown that the LOPEC solution facilitates the discovery and implementation of potentials for employees in the logistics fields. It supports the generation, selection, prioritization and implementation of new optimization ideas. With the introduction of the concept of excellence

thinking on a personal and organizational level, the LOPEC solution provides a "red line" in the application of the very complex EFQM model and enables a cost-and time-efficient application of EFQM without a wide prior knowledge.

6 Supporting the piloting process in HR (3 pilots or more)

Pilot testing in Croatian was realised during period April 2014 - September 2014.

Target group: In all cases, there was 1 responsible person in the organisation (quality related manager or CEO) who coordinated other colleagues and workers. Previous knowledge of LEAN concepts was very individual and differed from person to person, it was tested by short survey at beginning of piloting to determine current knowledge level, in order to adapt learning materials and approach individually.

Conclusions

Work with each pilot testing organisation was done individually. Piloting started from April 2014. All participants passed the pilot testing and provided the valuable feedback. In general the users were satisfied with the functionality provided as well as with the content of the training modules. At the end feedback about project usability were acquired from trainers and learners, both about learning content and web based training experience.

7 Supporting the piloting process in LV (3 pilots or more)

Pilot testing in Latvia was realised during period April 2014 - August 2014.

Target group: In all cases, there was 1 responsible person in the organisation (quality related manager) who coordinated other colleagues and workers. Previous knowledge of LEAN concepts was very individual and differed from person to person.

Conclusions

All participants successfully passed the pilot testing and provided the valuable feedback which helped to make the final language updates. In general were the users satisfied with the functionality provided as well as with the content of the training modules.

8 Co-ordinating the field testing

To support the effective pilot testing experience there were provided 2 instruments to support the pilot testing in all participant countries. The common questionnaires for the external test users in English as well as the instructions for the field testing and the common agreement with the pilot users were provided.

Without this common way of doing this task it would be very difficult to identify common problems in the use of the developed solution.

These 2 validation questionnaires were implemented in online version and all partner languages.

English:

www.saeto.eu/LOPEC/Validation_questionnaire(Learner).htm

www.saeto.eu/LOPEC/Validation_questionnaire(Trainer).htm

German:

www.saeto.eu/LOPEC/Bewertungsfragebogen(TeilnehmerInnen).htm

www.saeto.eu/LOPEC/Bewertungsfragebogen(Trainer).htm

Latvian:

www.saeto.eu/LOPEC/Validācijas_aptauja(Dalībniekiem).htm

www.saeto.eu/LOPEC/Validācijas_aptauja(Testēšanas_vadītājiem).htm

LOPEC Field Testing Process

For the piloting of the LOPEC solution we recommend a three layer approach with an optional extension for the more experienced users.

Step 1: Testing with the project team

Use LOPEC tools (ILIAS, LOPEX, PEX) and check usability in a real life application on your own organisation; i.e.:

- Do you easily understand all questions?
- Are the context explanations good enough?
- Is the user guidance intuitive enough to give to untrained users?
- Is the link working to your satisfaction or do you need additional information?
- Are the requirements for your local accreditation needs covered to your satisfaction or do you need additional functionality?
- Are the corresponding training modules easily accessible from the tool and are they convincing or where do you need more information?
- Is the methodology related part of the training OK or do we need improvements and where?

- Any other comments?

Remark: Since this test is done with the project partners themselves, it can be done with the English language version of the interface and does not need any localisation besides the assessment catalogues yet – the next assessment step should however also include the translated user interface.

Step 2: Running the external validation with your selected pilot users

Select external test users to pilot some (or all) of the tools, following the same process as in your own Step 2.

9 Annex

9.1 **Annex 1**

PILOT TESTING AGREEMENT NO. .....

on xxx in Riga

Partner of the Leonardo da Vinci programme project LOPEC (project No. LOPEC DE/12/LLP-LdV/TOI/147538) ***SIA Eurofortis*** (registration No. 40003898384, Anniņmuižas bulv. 38-37, Riga, LV-1067), represented by its director Adela Vitkovska, (hereinafter referred to as **SIA Eurofortis**), on the one hand

and

..... (registration No. ....., taxpayer identification number ....., registered office: .....), represented by its director ..... (hereinafter referred to as **the PP** or **the Pilot Testing Partner**), on the other hand

hereinafter collectively referred to as **the Parties**,

have agreed on testing the tools of LOPEC project from xxx until xxx under the following provisions:

1. **SIA EuroFortis** shall assign to **the PP** the pilot testing tool of the LOPEC project (the first online self-assessment project of the self-assessment computer software PEX and online learning platform ILIAS) within 2 (two) working days from the day the agreement comes into effect.
2. The access information for the self-assessment project given to **the PP** shall be valid until 30. September 2014. During this period of time **the PP** is entitled to receive free of charge technical support from the PEX and ILIAS software developer or its official representative in Latvia.
3. **The PP** shall undertake the following duties during the testing period of the LOPEC project tools:
    a) To actively participate and be present in all meeting of the workgroup, providing qualitative suggestions for the improvement and localisation of the software. **The PP** is allowed to miss not more than 2 (two) meetings of the workgroup during the duration of this agreement.
    b) Provide qualitative and detailed feedback on the following topics:
        1. fulfilment of testing in the ILIAS and PEX software environment;
        2. carrying out detailed self-assessment with the PEX software;
        3. technical verification of the computer software;
        4. verification and improvement of the content;
        5. testing and verification of e-learning activities;
        6. specifications for localisation in Latvia.
    c) To present the experience of **the PP** gained in the pilot testing of the LOPEC project in written and oral form during the last meeting.
4. **The PP** shall submit the last required report with suggestions to **SIA EuroFortis** not later than 30. September 2014. This deadline could be extended upon a written mutual agreement between **the Parties**.

5. **SIA EuroFortis** is not entitled to transfer any results of the self-assessment process to third parties other than those involved in the LOPEC project.
6. **The PP** shall undertake to use the access given to the GOA-Workbench® software only for the needs of its institution during the pilot testing phase of the LOPEC project. The content, structure, functionality, user guides or any other information related to the software and learning materials shall be considered as confidential and cannot be disclosed to third parties. Any duplication or republishing of information provided by **SIA EuroFortis** shall be considered as a breach of confidentiality.
7. If the confidential information is disclosed the receiver of the information shall compensate the provider of the information in full amount for all direct and indirect costs, lost profits and losses incurred by the provider of the information due to the breach of the agreement.
8. Any disagreements and disputes, which may arise between **the Parties**, shall be settled by mutual negotiations. If no settlement is found through negotiations, disputes shall be settled by court in accordance with the laws and regulations of the Republic of Latvia.
9. **Parties** are entitled to a unilateral termination of this agreement, if the other **Party** has failed to fulfil its obligations for more than 1 (one) month.
10. **Parties** shall not be liable for complete or partial failure to comply with their obligations, if it is due to the conditions of force majeure. Force majeure shall mean natural disasters, military aggression, strikes and other similar events that influence the fulfilment of the obligations and are not the result of direct or indirect activity or omission by **the Parties**, and the Parties could have not foreseen at the moment this agreement was signed.
11. If force majeure conditions have occurred, **the Parties** shall inform the other Party by sending a written notice without a delay but not later that 2 (two) days after the occurrence of such conditions. This notice must include the description of the conditions, as well as their impact on the fulfilment of the obligations stated in this agreement and their fulfilment deadline. Furthermore, new dates when it would be possible to continue the fulfilment of the obligations should be proposed.
12. If the force majeure conditions continue for more than 1 (one) month, t**he Parties** are entitled to a unilateral termination of this agreement upon a written notice to the other Party at least 5 (five) days prior to the termination.
13. This agreement shall become effective upon its signing and is valid until **the Parties** fulfil their obligations in full amount.
14. This agreement is drawn up in 2 (two) counterparts, one of which is issued to **the PP** and other to **SIA Eurofortis**.

SIA Eurofortis:

SIA Eurofortis

Anniņmuižas bulvāris 38-37, Riga, LV-1067

Registration No. 40003898384

Bank: A/S Swedbank
IBAN: LV05HABA0551015881349

Director Adela Vitkovska

Pilot Testing Partner:

Director

9.2 **Annex 2**

Case study guidelines

Our organisation – a short profile (products/services, Vision & mission, market & competition, organisation type/size/dependencies)	
Why do we aim for Personnel excellence and lean logistics knowledge?	
How do we differ from other organisations and what both our short term and long term objectives that we want to reach by starting our journey towards personnel excellence?	
Why do we think that Personnel excellence is the best way for us?	
Why did we select to do it with the help of a software and how LOPEC solution exactly help us?	
Why did we select LOPEC solution instead of another solution?	
How die we get into contact with the LOPEC project?	
Are there any special areas where we work with the LOPEC solution?	
Are there solution for TQM that we use in other parts of the organisation?	
What goals and results have reached during the piloting phase? What are our improvements?	
Did LOPEC solution help to optimise saving in : costs or efforts or give better results	

What do we expect to reach as our next goals?	
Others	

9.3 **Annex 3**

LOPEC validation questionnaire – Learner

We kindly ask you to fill in this questionnaire as we would like to improve the LOPEC solution based on your evaluated input. The published results from this field test will be anonymous, on request we are happy to send you a copy of the evaluation report (see end of questionnaire).

LOPEC field test	
1. What is your occupation?	▪ Teamleader ▪ Shop-floor ▪ Other:
2. When did you start to work with the learning software?	▪ Please tell us the date:
Your knowledge on Lean Logistics	
3. Please rate your level of knowledge on Lean Logistic before the received training!	▪ Very high ▪ High ▪ Medium ▪ Low ▪ Very low ▪ I don't know
4. Did you already receive training in the context of Lean Management?	▪ Yes, one. ▪ Yes, several. ▪ None
5. Which learning methods were presented (e.g. E-Learning, group work, etc.)?	▪ Presented methods:_____
6. Are software/ multi-media programmes/ virtual learning environment (e.g. computer- or web-based learning) used in the context of these trainings?	▪ No ▪ Yes, always ▪ Partly
7. How useful is this computer- or web-based training in your view?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not so useful ▪ Not at all useful ▪ I don't know
Expectations of the Training	

8. Concerning your own motivation, where do you want to be in five years?	▪ Senior Management ▪ Executive staff ▪ Supervisor ▪ Expert in my working field ▪ I don't know ▪ Other:_____
9. What are your general expectations regarding the e-learning training?	▪ Improvement / optimization of knowledge ▪ Higher income ▪ Career possibilities ▪ Qualification ▪ Other:_____
10. Which expectations do you have for your final results?	▪ To have a personal evaluation ▪ To make a better performance ▪ To have a comparison to other professionals ▪ To fulfil the agreed training targets ▪ None ▪ I don't know ▪ Other: _____
Learning platform ILIAS	
11. How do you evaluate the usefulness of each level?	1 2 3 4 5 Very useful (++), Somewhat useful (++), Neither (0), Not useful (-), Not at all useful (--), I don't know (00), Not edited (000)
12. On the average, how long do you need to learn one unit within the ILIAS learning program?	▪ Less than 1 hour ▪ 1 hour – 2 hours ▪ 2- 3 hours ▪ 3-4 hours ▪ 4-5 hours ▪ More than 5 hours ▪ 1 Day ▪ 1-2 Days ▪ 2-3 Days ▪ Other: _____(minutes/hours)
13. How could you follow the structure of the learning modules?	▪ Very good ▪ Good ▪ Moderate ▪ Poor ▪ Very poor ▪ I don't know
14. How would you judge the difficulty of the provided tasks?	▪ Very easy ▪ Tended to be easy ▪ Neither ▪ Tended to be difficult ▪ Very difficult ▪ I don't know
15. What targets did you have agreed on with your supervisor?	
16. Did you fulfil your agreed targets?	▪ More than fulfilled ▪ Fulfilled

	▪ Neither ▪ Rather not fulfilled ▪ Not at all fulfilled ▪ I don't know
17. Are you satisfied with your learning results?	▪ Completely satisfied ▪ Very satisfied ▪ Somewhat satisfied ▪ Slightly satisfied ▪ Not at all satisfied ▪ I don't know
18. Please declare three modules which were very useful to you!	▪ Fiorst useful module: ▪ Second useful module: ▪ Third useful module:
19. Did you miss specific learning contents which would be important to you?	▪ Yes, in fact:_____ ▪ No
20. Do you have any additional comments? – just in case we have forgotten to ask for something you consider relevant …	
Self-assessment LOPEX / PEX	
21. Do you think the structure of the self-assessment tasks is useful?	▪ LOPEX self-assessment ▪ PEX self-assessment Very useful (++); Somewhat useful (+), Neither (0), Not so useful (-), Not at all useful (--)
22. Do you have any suggestions to improve the usefulness?	▪ Yes, in fact:_____ ▪ No
23. Do you have any additional comments? – just in case we have forgotten to ask for something you consider relevant …	▪
Technical usability	
24. Did you have technical problems using the software?	▪ Yes, indeed:_____ ▪ No
25. How would you judge the technical usability of the software in general?	▪ ILIAS (Learning platform) /LOPEX (self-assessment) ▪ PEX (self-assessment) Very good (++), Good(+), Moderate (0), Poor (-), Very poor (--)
General assessment of the LOPEC solution	
26. How would you judge the relevance of the offered program for the further development of employees?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not useful ▪ Not at all useful ▪ I don't know
27. Does the LOPEC solution fulfil your expectations?	▪ More than fulfilled ▪ Fulfilled ▪ Neither

	▪ Rather not fulfilled ▪ Not at all fulfilled ▪ I don't know
28. How useful was the LOPEC solution for your occupation?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not useful ▪ Not at all useful ▪ I don't know
29. In what extent does the LOPEC solution help you to clarify your working results/aims?	▪ I know who my stakeholders are ▪ I know where I want to be in five years ▪ I recognized my potential as a leader ▪ Other:_____
30. How would you rate the influence of the training on your following competences?	▪ Time management ▪ Communication ▪ My knowledge on Lean logistics ▪ Solving problems ▪ Motivation Extremely influential (++); Very influential (+), Somewhat influential (0), Slightly influential (-), Not at all influential (--)
31. How can you feel your personal improvement?	▪ Better communication ▪ I am more organized ▪ I am faster in my working routine ▪ I have a better overview ▪ Other:_____
32. Please rate your level of knowledge on Lean logistics after the received training!	▪ Very high ▪ High ▪ Medium ▪ Low ▪ Very Low ▪ I don't know
33. How were you able to use your knowledge in your organisation?	▪ Team leader gave me time to apply the knowledge ▪ During communications processes with colleagues ▪ In my daily working routine ▪ I could not use it ▪ Other:_____
34. Has something been missing in the LOPEC solution to achieve the expected improvement?	▪ Yes, in fact:_____ ▪ No ▪ I don't know
35. How satisfied were you with the support received by your tutors?	▪ Completely satisfied ▪ Very satisfied ▪ Somewhat satisfied ▪ Slightly satisfied ▪ Not at all satisfied ▪ I don't know
36. Do you have any suggestions to improve the usefulness of the LOPEC solution?	

37. Do you have any additional comments? – just in case we have forgotten to ask for something you consider relevant …	
General data for companies	
Name of the institution	
Country (site location)	
Type of company	Logistics operator Serial production Plant construction
Number of staff (company)	▪ < 10 ▪ 10-50 ▪ 51-250 ▪ 251-1000 ▪ 1001-5000 ▪ > 5000
Gender	▪ Male ▪ Female
How long do you work in your company (years)?	▪ <3 ▪ 3-5 ▪ 5-10 ▪ 10-20 ▪ 20+
What is your educational level?	▪ Hauptschulabschluss (only German questionnaire) ▪ Realschulabschluss (only German questionnaire) ▪ Secondary level ▪ Vocational school ▪ University access ▪ Bachelor (3-years) ▪ Master (specialization) ▪ Other: _____
Please send the anonymous evaluation **report** of the field test to the following email address:	_____

LOPEC validation questionnaire – Trainer

We kindly ask you to fill in this questionnaire as we would like to improve the LOPEC solution based on your evaluated input. The published results from this field test will be anonymous, on request we are happy to send you a copy of the evaluation report (see end of questionnaire).

LOPEC field test	
1. What is your occupation?	▪ CEO ▪ Head of Department ▪ Manager ▪ Project Manager ▪ Supervisor ▪ Team leader ▪ Other: _____
2. When did you start the piloting of the learning software (LOPEC project)?	Please tell us the date:
Learner knowledge on Lean Logistics	
3. Please rate the level of knowledge on Lean Logistic of your employees before the received training!	▪ Very high ▪ High ▪ Medium ▪ Low ▪ Very Low ▪ I don't know
4. Did your employees already receive training in the context of Lean Management?	▪ Yes, one ▪ Yes, several ▪ None
5. Which learning methods (e.g. E-Learning, Group work, etc.) were presented?	▪ Presented Methods: _____
6. Are software/ multi-media programmes/ virtual learning environment (e.g. computer- or web-based learning) used in the context of these trainings?	▪ No ▪ Yes, always ▪ Partly
7. How useful is this computer- or web-based training in your view?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not useful ▪ Not at all useful ▪ I don't know
Expectations of the Training / LOPEC Solution	
8. What have been your general expectations regarding the LOPEC solution?	▪ To have an evaluation of knowledge ▪ To support personal development ▪ To reveal possible training needs ▪ To test learning methods ▪ I can quantify my employees (measuring learnability) ▪ Other: _____

9. What kind of strategic benefits did you expect for your company?	HR Development ▪ Meeting qualification and training needs ▪ Initiating different learning methods ▪ Development of experts ▪ Raising motivation Organisational development / targets ▪ Capacity for innovation ▪ Initiate changing processes ▪ Continuous improvement and optimization ▪ Quality assurance ▪ Financial added value ▪ Avoiding waste Other:_____
10. Do you think that the LOPEC solution raises the learning ability of your employees?	▪ Very good ▪ Good ▪ Moderate ▪ Poor ▪ Very poor ▪ I don't know
Learning platform ILIAS	
11. How would you judge the structure of the learning modules?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not useful ▪ Not at all useful ▪ I don't know
12. How would you judge the difficulty of the provided tasks?	▪ Very easy ▪ Tended to be easy ▪ Neither ▪ Tended to be difficult ▪ Very difficult ▪ I don't know
13. Which training contents might be especially useful to your employees? Please rate each item!	Level 1 ▪ Workplace Level 2 ▪ Intralogistics Level 3 ▪ Warehouse Management (1= Not useful, 2= Neither, 3= very useful)
14. Which tools might be especially useful to your employees? Please rate each item!	▪ Philosophy of Lean Logistics o Lean warehousing o Lean supply chain management ▪ Analysis Tools o For In-plant Logistics o For Supply chains ▪ Process design & optimization methods o Optimization methods for in-plant logistics o Optimization methods for SCM ▪ Additional tools o Tools for project Management and decision-making

	o Quality Management tools o Graphical tools / visual management o Creativity tools o Tools for Customer Management ▪ Technology support for Lean Logistics ▪ Organisational Behaviour & Sustainability (1= Not useful, 2= Neither, 3= very useful)
Self-assessment LOPEX/PEX	
15. Do you think the structure of the self-assessment tasks is useful?	▪ LOPEX self-assessment ▪ PEX self-assessment Very useful (++); somewhat useful (+), Neither (0) Not so useful (-), Not at all useful (--)
16. Do you have any suggestions to improve the usefulness?	▪ Yes, in fact:_____ ▪ No
17. Do you have any additional comments? – just in case we have forgotten to ask for something you consider relevant	
Technical usability	
18. Did you have technical problems using the software?	▪ Yes, indeed:_____ ▪ No
19. How would you judge the technical usability of the software in general?	▪ ILIAS (Learning platform) /LOPEX (self-assessment) ▪ PEX (self-assessment) Very good (++), Good(+), Moderate (0), Poor (-), Very poor (--)
General assessment of the LOPEC solution	
20. How would you judge the relevance and usefulness of the offered training/ LOPEC solution for the further development of professionals?	▪ Very useful ▪ Somewhat useful ▪ Neither ▪ Not useful ▪ Not at all useful ▪ I don't know
21. Does the LOPEC solution fulfil your expectations?	▪ More than fulfilled ▪ Fulfilled ▪ Neither ▪ Rather not quite fulfilled ▪ Not at all fulfilled ▪ I don't know
22. Please rate the level of knowledge on Lean Logistics of your employees after the received training!	▪ Very high ▪ High ▪ Medium ▪ Low ▪ Very Low ▪ I don't know
23. Do you have any suggestions for further learning methods?	▪ Yes, in fact: _____ ▪ No
24. Has something been missing in the LOPEC solution to achieve the expected improvement?	▪ Yes, in fact: _____

	▪ No
25. How satisfied were you with the support received by the LOPEC partner(s)?	▪ Completely satisfied ▪ Very satisfied ▪ Somewhat satisfied ▪ Slightly satisfied ▪ Not at all satisfied ▪ I don't know
26. Do you have any suggestions to improve the usefulness?	
27. Do you have any additional comments? – just in case we have forgotten to ask for something you consider relevant …	
General data for companies	
Name of the institution	
Country (site location)	
Type of company	Logistics operator Serial production Plant construction
How many staff members were involved?	Number of staff members involved: ▪ < 5 ▪ 5 - 10 ▪ 11 – 15 ▪ >15
Number of staff (company)	▪ < 10 ▪ 10-50 ▪ 51-250 ▪ 251-1000 ▪ 1001-5000 ▪ > 5000
Gender	▪ Male ▪ Female
How long did you work in your company (years)?	▪ <3 ▪ 3-5 ▪ 5-10 ▪ 10-20 ▪ 20+
Please send the anonymous evaluation **report** of the field test to the following email address:	_____

These 2 validation questionnaires were implemented in online version and all partner languages.

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www.saeto.eu/LOPEC/Bewertungsfragebogen(Trainer).htm

Latvian:

www.saeto.eu/LOPEC/Validācijas_aptauja(Dalībniekiem).htm

www.saeto.eu/LOPEC/Validācijas_aptauja(Testēšanas_vadītājiem).htm