EUROPEAN UNION HORIZON 2020 RESEARCH & INNOVATION PROGRAMME



ALLIANCE e-platform with digitalized material





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Abbreviation	Description
D	Deliverable
Fraunhofer IFF	Fraunhofer Institute for Factory Operation and Automation IFF
GNU	General Public License
LMS	Learning Management System
LTI	Learning Tools Interoperability
SCORM	Sharable Content Object Reference Model
STIP	Sustainable Transport Interchanges Program
STSE	Short-Term Staff Exchanges
ТТІ	Transport and Telecommunication Institute
UTH	University of Thessaly
WP	Work Package

LIST OF ABBREVIATIONS

ABSTRACT

The present deliverable is a report about the development of the e-platform of the ALLIANCE project. The e-platform is a supporting tool used by ALLIANCE consortium to spread the main results of the ALLIANCE activities. The main objective of the e-platform is to provide public access to the STIP course material developed in the framework of WP2 and digitized in frame of WP4. The e-platform technically bases on the learning management system (LMS) Moodle. The digitized content of the courses is technically developed by the help of Moodle standard tools. Thus, iSpring software was used for producing sharable content object reference model (SCORM) packages, which allows integrating the presentation and narration in one user-friendly environment. The current document gives a brief overview about the e-platform developed and its functionality with regard to the ALLIANCE e-learning activities as a major contribution towards sustainability of the project.

1 Introduction

1.1 Contents of the deliverable

The present deliverable is a report about the development of the e-platform of the ALLIANCE project. The e-platform is a supporting tool used by ALLIANCE consortium to spread the main results of the ALLIANCE activities. The main objective of the e-platform is to provide public access to the STIP course material developed in the framework of WP2 and digitized in frame of WP4. The e-platform technically bases on the learning management system (LMS) Moodle. The digitized content of the courses is technically developed by the help of Moodle standard tools. Thus, iSpring software was used for producing sharable content object reference model (SCORM) packages, which allows integrating the presentation and narration in one user-friendly environment. The developed courses can be considered as an initial core element, which could be further developed and adopted for anyone's own purposes, by exporting Moodle courses. So, courses will be provided under GNU General Public License. The current document gives a brief overview of the developed e-platform and its functionality, showing examples of the developed digital courses.

The outcome of deliverable D4.1 is the ALLIANCE e-platform, which is publicly available in the domain: <u>http://e-alliance.tsi.lv/</u>. The platform is accessed by a direct link or as a section in official webpage of the ALLIANCE project (<u>http://alliance-project.eu/</u>). The e-platform will be supported by TTI at least 5 years after the end of the project.

1.2 Project overview

ALLIANCE aims at developing advanced research and higher education institution in the field of smart interconnecting sustainable transport networks in Latvia, by linking the Transport and Telecommunication Institute – TTI with two internationally recognized research entities – University of Thessaly – UTH, Greece and Fraunhofer Institute for Factory Operation and Automation – Fraunhofer, Germany. The close collaboration of TTI with UTH and Fraunhofer will enable the achievement of the goals through the following activities:

- Organization of young researchers' seminars.
- Organization of workshops.
- Organization of summer schools for trainers and young researchers.
- Development of an educational programme for graduate and post-graduate students.
- Development of a training programme for trainers and practitioners.
- Provision of grants for participation as authors of peer-reviewed publications in conferences.
- Facilitation of Short-Term Staff Exchanges (STSE's) with the aim of international collaboration, mainly publications.
- Establishment of a guidance strategy for preparing scientific publications.
- Creation of an educational forum as an online tool for distance learning and knowledge sharing.

The overall methodology of the project is built around the analysis of the needs of Latvia and the surrounding region of the Baltic sea (Lithuania, Estonia, Poland) on knowledge gain about intermodal transportation networks and the development of the tools to attain this knowledge,

providing at the same time excellence and innovation capacity. The analysis to be conducted during the first stages of the project, steps on the overarching relations among policymakers, industry and education/research.

Structured around three main pillars, organizational/governance, operational/services and service quality/customer satisfaction, ALLIANCE will deliver a coherent educational/training program, addressed to enhancing the knowledge of current and future researchers and professionals offering their services in Latvia and the wider region.

The expected impacts on the overall research and innovation potential of TTI and Latvian research community will be of high importance and TTI will benefit from ALLIANCE by:

- Improving its knowledge in methodologies for preparing, writing and publishing scientific papers.
- Strengthening its research capacity.
- Establishing international research teams in specific areas of interest.
- Generating new innovative ideas for future research work through the project's activities.
- Setting up the fundamentals for the young generation of researchers.
- Being integrated into a number of existing international transportation research networks.
- Being incorporated in the European research system of transport and logistics.

In addition, the cooperation of TTI with UTH and Fraunhofer will induce benefits into several domains of everyday life at regional, national and international scope. New bases will be established concerning knowledge transfer procedures, education and interdepartmental collaboration amongst research institutes. The innovative organizational framework, which will be structured for this purpose during the project, is expected to constitute a best practice application with tangible and well-estimated progress results, which will be disseminated and communicated through social events to the research community and to the respective business sector as well.

Lastly, an important benefit will be the configuration of an integrated framework pertaining to the knowledge transfer techniques and the generic upgrading of the educational system with use of networking, staff exchange, webinars and other knowledge transfer methods and techniques based on a well-structured and well-tried schedule.

2 E-platform general description

Current section of the deliverable provides the general overview of the e-platform, which was developed, launched and updated with STIP digitalised materials in the frame of the ALLIANCE project.

2.1 Moodle environment

The developed e-platform is organised as a website, based on the Moodle¹ environment (https://moodle.org). Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments. With over 10 years of development guided by social constructionist pedagogy, Moodle delivers a powerful set of learner-centric tools and collaborative learning environments that empower both teaching and learning. Moodle is provided freely as Open Source software, under the GNU General Public License. Anyone can adapt, extend or modify Moodle for both commercial and non-commercial projects without any licensing fees and benefit from the costefficiencies, flexibility and other advantages of using Moodle. Moodle provides the most flexible tool-set to support both blended learning and 100% online courses. Moodle has a complete range of built-in features, including external collaborative tools such as forums, wikis, chats and blogs. Because it is open-source, Moodle can be customised in any way and tailored to individual needs. Its modular setup and interoperable design allow developers to create plugins and integrate external applications to achieve specific functionalities. Moodle is web-based and can be accessed from anywhere in the world. With a default mobile-compatible interface and cross-browser compatibility, content on the Moodle platform is easily accessible and consistent across different web browsers and devices. Moodle has achieved and is compliant with the following international standards: An Open Source Initiative; IMS LTI™; SCORM-ADL; Open Badges.

2.2 E-platform management and administration

The website is hosted on TTI server and is maintained by the institution's professional team: IT administrator and tutor of distance learning department. Server software is regularly updated to up-to-date versions for security and stability reasons, the same is also regarding Moodle platform.

The e-ALLIANCE website content is managed via a standard Moodle administration console, available only for administrators of the system. A console is a comprehensive tool for creating and updating the content of pages, news, events, publications, and other materials. While the content of the courses could be managed by everyone with role "Teacher".

The detailed user guide is available at Moodle website². The contact person for e-platform administration and support (including accounts management) is:

¹ <u>https://moodle.com/about/</u>

² <u>https://docs.moodle.org/36/en/Main_page</u>

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3 E-platform functionality

Developed e-platform provides all necessary functionality to access digitalised materials of the STIP and to use them in the learning process. Digitalised STIP materials are available free of charge and could be accessed by everyone after registration.

3.1 Login and registration

The developed e-platform allows to do registration using most popular social networks accounts: Facebook and Google+, if the potential user of the platform does not have mentioned social network accounts, the user could complete e-platform specific registration. The access to the materials will be granted after confirmation of the registration. Figure 1 demonstrates the registration options of e-platform.

•	You are not logged in.
excellence and innovation capacity in sus	CO ITAINABLE TRANSPORT INTERCHANGES
Log in	Is this your first time here?
Username Password Password Remember username Log in Forgotten your username or password? • Log in with Google f Log in with Facebook Cookles must be enabled in your browser Some courses may allow guest access Log in as a guest	 Hill For full access to courses you'll need to take a minute to create a new account for yourself on this web site. Each of the individual courses may also have a one-time "enrolment key", which you won't need until later. Here are the steps: An email will be immediately sent to your email address. An email will be immediately sent to your email address. Your account will be confirmed and you will be logged in. Now select the course you want to participate in. If you are prompted for an "enrolment key"- use the one that your teacher has given you. This will "enror" you in the course. You can now access the full course. From now on you will only need to enter your personal username and password (in the form on this page) to log in and access any course you have enrolled in.
	This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 692428
	Log in username

Figure 1. Log in and registration form

3.2 Enrolment

After getting access to the e-platform of ALLIANCE project, the user is able to enrol himself in any course available in STIP. The user could select the course from the list of available courses as presented in Figure 2. Next, he/she could continue the study process by himself.

		Course categories:		
	Sustainable Transport Interc	hange Program (STIP)	v	
	Search courses:	Go		
			 Collapse al 	
- Core courses				
The European policy on intermodal transp	ortation			
Building business models for intermodal tr	ansport interchanges			
Decision making methodologies				
- Passenger transport bloc	k courses			
Design of passenger transport interchange	95			
Operation and management of intermodal	transport systems: passenger	interchanges		
Intelligent services for passenger transport	tation			
Data collection methods: Historical and ob	Data collection methods: Historical and observed data (Public transport)			
Data collection methods: Travel Surveys				
Freight transport block control	ourses			
Design of freight transport interchanges				
Operation and management of intermodal	transport systems: freight inter	changes		
Smart equipment for freight transshipment				
Data collection methods: Historical and ob	Data collection methods: Historical and observed data (Freight transport)			
Data collection methods: Freight Transport	Data collection methods: Freight Transportation Surveys			
Research methodology a	and teamwork se	tup		



3.3 Digitalised courses structure and content

Each course that initially has been selected for digitalisation is represented in the e-ALLIANCE platform as a specific course with its individual content and elements. But the general structure of the course is the same for all courses, it is the following:

- General information about the course
 - o Course title
 - Course id
 - Course aim and scope
 - Course learning outcomes
 - Recommended information sources
 - Collaboration forum
 - News forum
- Sections per each theme
 - \circ Title of the theme
 - o Learning outcomes of the specific theme

- Theme SCORM³ package: narrated presentation
- o Theme handouts
- o Specific references to additional materials regarding topic
- Self-assessment tests
- Final-assessment
- Feedback about course
- Certificate

The above-presented structure is common for all digitalised courses, but deviations are possible depending on the specific course and author.

Figure 3 demonstrates the example of the digitalised course "Design of freight transport interchanges" in e-platform.

Home In Courses In Sustainable Transport In	terchange Program	n (STIP) 🕨 eC9	Turn edition on
Tione P Courses P Costaniaue Hansport	teronange i rogran		torn editing on
ACTIVITES Centificates Generation Formula Control Activity Courses Control SCORM packages		Design of freight transport interchanges course title: <i>eeign of freight transport interchanges</i> Course ID: # eC9	LOGGED IN USER
(last 5 minutes)	- 3	(Sale)	
None			SEARCH FORUMS
		Course author:	Go
COURSE COMPLETION STATUS		Prof. Eftihia Nathanail	Advanced search (2)
Completion is not enabled for this course		nogic, nansparation and cogistics cadoratory, oniversity of messary, dreece	
ADMINISTRATION Course administration Turn editing on Edits estimates	- 0	Course author bio Course aim and scope Course laaming outcomes	LATEST NEWS DIA Add a new topic (No news has been posted yet)
Calify Edit settings Users Users Filters Reports Gradess Gradess		 Recommended information sources News forum Questions, comments, discussions 	UPCOMING EVENTS CO There are no upcoming events Go to callendar New event
Badges			
🖆 Backup		Theme 1: Introduction	
Import Publish Reset		This theme will focus on the components of an intermodal freight terminal and will analyse the parameters that have to be estimated and assessed, in order to provide the input data for designing the terminal.	MESSAGES EL
Question bank		Theme 1: Introduction	
Switch role to		Theme 1 Handouts	RECENT ACTIVITY
Site administration Search		Self-assessments: Theme 1	Activity since Wednesday, 26 December 2018, 5:33 PM Full report of recent activity No recent activity
		Theme 2. European legal framework - guidelines	
		It will present the European regulation framework for designing and interconnecting freight transport interchanges and will reveal the relativeness of transportation planning with regional and urban development procedures.	
		Theme 2: European legal framework - guidelines	
		Theme 2 Handouts	
		Theme 2 References	
		Self-assessments: Theme 2	
		Theme 3. Background	
		This theme will focus on the background and on relevant information about the current state of practice of intermodal freight terminal facilities around Europe.	
		Thoma 2: Packaround	

Figure 3. Example of course internal structure

As was stated above, each theme consists of several elements, the most important are: theme SCORM package, handouts, self-assessment tests.

³ https://scorm.com/scorm-explained/

The SCORM package was produced by specific software for the creation of online content – iSpring (<u>https://www.ispringsolutions.com</u>). Each SCORM package is a narrated presentation in specific user-friendly environment. SCORM packages are also device-friendly, it means, that the SCORM package could be opened even in mobile device and the graphical user interface will be automatically adopted to the device type. Figure 4 demonstrates example of the SCORM package.



Figure 4. Example of SCORM package for the specific theme

iSpring creates the specific environment around standard PowerPoint presentation and adds a narration. The user of the course could use the outline of the presentation to navigate or use a search tool to find the specific slides using the search tool. Use could regulate the volume and do navigation in narration in the frame of one slide.

To take notes about presentation all themes in all courses have presentations handouts in pdf format, which could be printed and used for making notes. Figure 5 demonstrates the handouts example.



Figure 5. Example of handouts

As was stated above, each theme concludes with a self-assessment test. The tests give the opportunity to the user to check his/her understanding of the specific theme. The self-assessments are not time-limited and the user can use any material for help. The type of test depends on the course author. According to specification, the answer will be checked automatically by Moodle. Figure 6 – Figure 8 demonstrate the examples of different self-assessment tests developed in the frame of STIP digitization.



Next





Figure 7. Example of self-assessment tests (right word selection)



Figure 8. Example of self-assessment tests (true/false)

Every STIP course concludes with a final-assessment. It is organised in test form and to be checked automatically in Moodle. The difference between self-assessment and final assessment is related with the following issues:

- Final-assessment contains questions regarding the whole content of the course;
- Final-assessment is time-limited (execution time is set by authors);
- Final-assessment has only one try for the user;
- Final-assessment is graded;

In Figure 9 an example of a final-assessment is shown.

QUIZ NAVIGATION 1 2 3 4 5 6 7 8 9 10 Finish attempt Time left 0:14:14 Start a new preview		Question 1 Not yet answered Marked out of 4.00 V Flag question	Please state whether the following statements are true or false Step: Identify a research problem. Quantitative research attempts to describe the trends and explain the relationships of the variables.
ADMINISTRATION Cuiz administration Edit settings Group overrides User overrides Edit quiz	- 6	Next	Step: Analyze and interpret data. Quantitative research analyzes the text, the description of the themes and states the larger meaning of findings.



Final-assessment can contain a number of questions (amount is up to course authors). The user has the possibility to navigate in frame of the final-assessment, to observe all questions first and to answer them in self-paced order. After submission, user is reported about the results of final-assessment. The example of the report is demonstrated in Figure 10.

	Starte	ed on Friday, 21 December 2018, 11:07 AM
1 2 3 4 5 6 7 8 9 10		State Finished
Show one name at a time	Complete	ed on Friday, 21 December 2018, 11:12 AM
Show one page at a time	Time	taken 5 mins 6 secs
Finish review	N	Marks 18.00/30.00
Start a new preview	c	Grade 6.00 out of 10.00 (60%)
Clart a non pronon		
	Question 1	Please state whether the following statements are true or false
	Partially correct	
ADMINISTRATION	 	Step: Identify a research problem. Quantitative research attempts to describe the trends and explain the relationships of the variables. Falce • X
Abilition	Mark 1.00 out of	
 Quiz administration 	4.00	Step: Specify the purpose. Quantitative research is general and broad and seeks to understand the participants' experiences. True 🔻 🗙
Edit settings	V Flag question	
Group overrides	Edit question	Step: Collect data. Qualitative research collects information from a small number of individuals or sites. True 🔻 🗸
 User overrides 		
Edit quiz		Step: Analyze and interpret data. Quantitative research analyzes the text, the description of the themes and states the larger meaning of findings. True 🔻 🗙
Q Preview		
Results		
Locally assigned roles		
Permissions	Question 2	Name the three basic parts of a travel survey. For each part name one of its characteristics:
Check permissions	Partially correct	
 Filters 	Mark 3.00 out of	
Logs	6.00	11 Gender and the second
Backup	V Flag question	
Restore	A Edit question	2 Forter
Question bank	Se Can question	
Course administration		2.1. Trip purpose departure time and arrival time
Switch role to		
Site administration		
Search		3.1. Possession of private car

Figure 10. Example of the report about final assessment

After course completion, the user has the opportunity to assess the course with regard to the content and structure of the course, the quality and comprehensibility of the themes as well as the assessments and the study process as a whole, using the feedback form provided.

If the user has passed the final-assessment, the user is offered an automatically generated certificate, which could be downloaded and marked by the unique combination of digits and letters. The example of the certificate is presented in Figure 11.



Figure 11. Certificate example

4 Annexes

Annex A: Screenshot of the course "The European policy on intermodal transportation"

Annex B: Screenshot of the course "Building business models for intermodal transport interchanges"

Annex C: Screenshot of the course "Operation and management of intermodal transport systems: freight interchanges"

Annex D: Screenshot of the course "Operation and management of intermodal transport systems: passenger interchanges"

Annex E: Screenshot of the course "Intelligent services for passenger transportation"

Annex F: Screenshot of the course "Design of passenger transport interchanges"

Annex G: Screenshot of the course "Design of freight transport interchanges"

Annex H: Screenshot of the course "Smart equipment for freight transshipment"

Annex I: Screenshot of the course "Decision making methodologies"

Annex J: Screenshot of the course "Data collection methods: Freight Transportation Surveys"

Annex K: Screenshot of the course "Data collection methods: Travel Surveys"

Annex L: Screenshot of the course "Data collection methods: Historical and observed data (Freight transport)"

Annex M: Screenshot of the course "Data collection methods: Historical and observed data (Public transport)"

Annex N: Screenshot of the course "Research methodology and teamwork setup"

4.1 Annex A: Screenshot of the course "The European policy on intermodal transportation"

The European policy on intermodal transportation				
Home Courses Sustainable Transport Int	erchange Program	(STIP) ⊫ eC1		
ACTIVITIES Certificates Feedback Forums Quizzes Resources SCORM packages		The European policy on intermodal transportation Course title: The European policy on intermodal transportation Course ID: # = C1 Course ID: # = C1		
ONLINE U SERS (last 5 minutes) None	- C			
COURSE COMPLETION STATUS Completion is not enabled for this course		Course author: Dr. Giannis Adamos Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece		
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Gradebook setup Badges		Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion		
Badges Backup Restore Import Publish Reset Question bank Switch role to Site administration Search		Theme 1: Background This theme introduces some basic principles of the European policy and indicative statistical data. Theme 1: Background Theme 1: Handouts Theme 1. Specific references for the theme Self-assessment: Theme 1		
		Theme 2. Trends in intermodality This theme will help students to understand some basic terminology and it will introduce current and future trends in passenger and freight transportation. Image: Theme 2: Trends in intermodality Theme 2 Handouts Theme 2. Specific references for the theme Self-assessment: Theme 2		
		Theme 3. EU legal and institutional framework This theme explains how transport has become one of the main concerns of the European policy.		

4.2 Annex B: Screenshot of the course "Building business models for intermodal transport interchanges"

Building business m	odels fo	or intermodal transport interchanges
Home ► Courses ► Sustainable Transport Ir	terchange Program	m (STIP) ▶ #eC2
ACTIVITIES Certificates Feedback Forums Quizzes Resources SCORM packages	2 -	Building business models for intermodal transport interchanges Course title: Building business models for intermodal transport interchanges Course ID: # eC2
ONLINE U SER S (last 5 minutes) None	- 2	Course author:
COURSE COMPLETION STATUS Completion is not enabled for this course	- 3	Otto von Guericke University Magdeburg (OvGU) Faculty of Mechanical Engineering Institute of Logistics and Material Handling Systems (ILM)
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Grades Gradesook setup Badges Backup Restore Import Publish Reset		Course author bio Course aim and scope Course learning outcomes Recommended information sources Recommended information sources Recommended information sources Course forum
Question bank Switch role to Site administration Search		 Theme 1 Handouts Theme 1. Specific references for the theme Self-assessment: Theme 1
		Theme 2. Intermodal Transport
		Acquire basic knowledge of intermodal transport. Theme 2: Intermodal Transport Theme 2 Handouts Theme 2. Specific references for the theme Self-assessment: Theme 2
		Theme 3. Interchange Zones
		Acquire basic knowledge of intermodal transport interchange zones.

4.3 Annex C: Screenshot of the course "Operation and management of intermodal transport systems: freight interchanges"

Home Courses Sustainable Transport In	terchange Program (S	STIP) ▶ eC4_2017
ACTIVITIES Certificates Feedback Forums Quizzes Resources SCORM packages		Operation and management of intermodal transport systems: freight interchanges Course title: Operation and management of intermodal transport systems: freight interchanges Course ID: # eC4_2017
ONLINE U SERS (last 5 minutes) None		
COURSE COMPLETION STATUS	- 4	Course author:
		Dr. Giannis Adamos
ADMINISTRATION Course administration Curse administration Curse administration Curses		Image: Industry of Inessity of Inessity, Greece Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Cuestions, Comments, Discussion
		Theme 2. Operational structures This theme provides an overview of the main operational structures in freight transport interchanges. Theme 2: Operational structures Theme 2: Operational structures Theme 2 Handouts Theme 2. Specific references for the theme Self-assessment: Theme 2
		Theme 3. Management structures

4.4 Annex D: Screenshot of the course "Operation and management of intermodal transport systems: passenger interchanges"

Operation and manag	ement of intermodal transport systems: passenger interch
Home Courses Sustainable Transport Inte	hange Program (STIP) 🕨 eC4_2018
ACTIVITIES Certificates Feedback Forums Cuizzes Resources SCORM packages	Course title: Operation and management of intermodal transport systems: Description Descr
ONLINE USERS (last 5 minutes) None	
COURSE COMPLETION STATUS	Course author:
Completion is not enabled for this course	Dr. Giannis Adamos
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Gradebook setup Badges Backup Restore Import Publish Reset Question bank Switch role to Site administration Search	Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece Course author bio Course author bio Course learning outcomes Recommended information sources News forum Cuestions, Comments, Discussion Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Theme 1: Stakeholders Stalf-assessment: Theme 1
	Theme 2. Operational and management structures This theme provides an overview of the main operational and management structures in passenger transport interchanges. Image: Theme 2: Operational and management structures Theme 2: Operational and management structures Theme 2: Anadouts Theme 2. Specific references for the theme Self-assessment: Theme 2

4.5 Annex E: Screenshot of the course "Intelligent services for passenger transportation

Intelligent services for passenger transportation		
Home ► Courses ► Sustainable Transport Int	erchange Program	m (STIP) 🕨 eC8
ACTIVITIES		Intelligent services for passenger transportation Course title: Intelligent services for passenger transportation Course ID: # eC6
ONLINE U SERS (last 5 minutes) None		Course author:
COURSE COMPLETION STATUS Completion is not enabled for this course	- 4	Otto von Guericke University Magdeburg (OvGU) Faculty of Mechanical Engineering Institute of Logistics and Material Handling Systems (ILM)
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Grades Grades Gradebook setup		 Course author bio Course aim and scope Course learning outcomes Recommended information sources Recommended information sources News forum Questions, Comments, Discussion
 Badges Backup Restore Import Publish Reset Question bank 		Theme 1: Transport Modes. Introducing different transport modes. Theme 1: Transport Modes Theme 1 Handouts
Switch role to Site administration Search		Theme 1. Specific references for the theme Self-assessment: Theme 1
		Get an overview of information technologies for the passenger transport market. Image: Theme 2: Information Technology Image: Theme 2: Handouts Image: Theme 2: Specific references for the theme Image: Self-assessment: Theme 2:
		Theme 3. IT Application Fields This theme will focus on the places of transshipment with their interacting devices.
		Theme 3: IT Application Fields

4.6 Annex F: Screenshot of the course "Design of passenger transport interchanges

Design of passenger transport interchanges			
Home ► Courses ► Sustainable Transport In	rchange Program (STIP) 🕨 eC8		
ACTIVITIES Certificates Feedback Forums Quizzes Resources SCORM packages	Design of passenger transport interchanges Course title: Design of passenger transport interchanges Course ID: # eC8		
ONLINE USERS (last 5 minutes) None			
COURSE COMPLETION STATUS Completion is not enabled for this course	Course author: Dr. Giannis Adamos Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece		
ADMINISTRATION Course administration Turn editing on Cdit settings Users Tilters Reports Grades Crades A Gradebook setup B Batons	Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion		
Backup Backup Restore Import Publish Reset Ouestion bank Switch role to Site administration	Theme 1: Components of passenger transport interchanges. This theme introduces the components of passenger transport interchanges. Theme 1: Components of passenger transport interchanges Theme 1: Components of passenger transport interchanges Theme 1 Handouts Theme 1. Specific references for the theme Self-assessment: Theme 1		
	Theme 2. Guidance and recommendations This theme provides to students some guidelines and recommendations of the efficient design of passenger Image: Image:		

4.7 Annex G: Screenshot of the course "Design of freight transport interchanges

Design of frei	ght transport in	iterchanges
Home 🕨 Courses 🕨 Sustair	nable Transport Interchange Program ((STIP) 🕨 eC9
ACTIVITIES		Design of freight transport interchanges Course title: Design of freight transport interchanges Course ID: # eCP
ONLINE USERS (last 5 m Nor	inutes) ne	Course author
COURSE COMPLETION S Completion is not enabled for t	TATUS III this course	Course author. Prof. Eftihia Nathanail Troffic, Transportation and Logistics Laboratory, University of Thessaly, Greece
ADMINISTRATION Course administration Turn editing on Edit settings Users Tilters Reports Grades Gradeso Badoes		Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, comments, discussions
Backup Restore Import Publish Reset Question bank Switch role to Site administration	Search	Theme 1: Introduction This theme will focus on the components of an intermodal freight terminal and will analyse the parameters that have to be estimated and assessed, in order to provide the input data for designing the terminal. Image: Theme 1: Introduction Theme 1 Handouts Self-assessments: Theme 1
		Theme 2. European legal framework - guidelines It will present the European regulation framework for designing and interconnecting freight transport interchanges and will reveal the relativeness of transportation planning with regional and urban development procedures. Image: Theme 2: European legal framework - guidelines Image: Theme 2: Handouts Image: Theme 2: References Image: Self-assessments: Theme 2
		This theme will focus on the background and on relevant information about the current state of practice of intermodal freight terminal facilities around Europe. Theme 3: Background

4.8 Annex H: Screenshot of the course "Smart equipment for freight transshipment"

Smart equipment for freight transshipment			
Home IN Courses IN Sustainable Transport Inte	erchange Program	n (STIP) 🕨 eC10	
ACTIVITIES		Smart equipment for freight transshipment Course title: Smart equipment for freight transshipment Course ID: # eC10	
ONLINE U SERS (last 5 minutes) None	- 2	Course author:	
COURSE COMPLETION STATUS Completion is not enabled for this course		DiplWirtInform.Oliver Meier Yves Cohen Otto von Guericke University Magdeburg (OvGU) Faculty of Mechanical Engineering Institute of Locistics and Material Handling Systems (ILM)	
ADMINISTRATION Course administration Curse administration Curse administration Edit settings Users Filters Users Filters Reports Grades Grades Gradebook setup Badges Badges Backup		 Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion 	
 ▲ Restore ▲ Import ④ Publish Q Reset ▶ Question bank 		Theme 1: Challenges of transshipment Introducing in the transshipment topic with theoretical basics.	
Switch role to Site administration Search		Theme 1. Challenges of damsshipment Theme 1 Handouts Self-assessments: Theme 1	
		Theme 2. Transshipment technologies Transshipment technologies is about the theoretical basics and well-known examples from the industry. Theme 2: Transshipment technologies Theme 2: Transshipment technologies Theme 2 Handouts Additional information section (optional): Theme 2 Self-assessments: Theme 2	
		Theme 3. Places of transshipment	
		This theme will focus on the places of transshipment with their interacting devices. Theme 3: Places of transshipment	

4.9 Annex I: Screenshot of the course "Decision making methodologies"

Decision making m	ethodolog	gies
Home 🕨 Sustainable Transport Interchange	e Program (STIP) 🕨 e	C11
ACTIVITIES Certificates V Feedback Forums Quizzes Resources SCORM packages		Your progress (*) Decision making methodologies Course title: Decision making methodologies Course ID: # eC11
ONLINE USERS (last 5 minutes) Mihails Savrasovs	- (
COURSE COMPLETION STATUS Statue: Not yet started All criteria below are required:	- 2	Course author. Prof. Eftihia Nathanail Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece Course author bio
Required criteria	Status	Course aim and scope
Activity completion More details View course report	0 of 1	 Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion
ADMINISTRATION Course administration Course completion Users Unenrol me from eC11 Filters Reports Grades Gradebook setup Badges Backup Restore Import Publish Reset Question bank Switch role to Site administration Sear	DT th	Instruction Instruction <
		Theme 3. Multi-stakeholder multi-criteria analysis This theme will help the student to understand the problem building given alternatives and different stakeholders.

4.10Annex J: Screenshot of the course "Data collection methods: Freight Transportation Surveys"

Data collection meth	ods: Fr	eight Transportation Surveys
Home ► Courses ► Sustainable Transport In	erchange Program	m (STIP) 🕨 eC12a_2017
ACTIVITIES Certificates Feedback Forums Quizzes Resources SCORM packages	- 4	Data collection methods: Freight Transportation Surveys Course title: Data collection methods: Freight Transportation Surveys Course ID: # eC12a_2017
ONLINE USERS (last 5 minutes) None	- (
COURSE COMPLETION STATUS Completion is not enabled for this course	- <	Course author: Prof. Eftihia Nathanail Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Grades Grades Grades Gradesock setup		 Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion
 ▶ Badges ▲ Backup ▲ Restore ▲ Import ④ Publish Q Reset > Question bank ▶ Switch role to 		Theme 1: Introduction This theme will provide a smooth introduction and understanding of qualitative research and the differences between qualitative and quantitative research. Image: Theme 1: Introduction Image: Theme 1: Introduction
Site administration Search		Self-assessments 1
		Theme 2. Sampling & Statistical analysis Inis theme will focus on the understanding of the role of sampling in data collection. Image: Theme 2: Sampling & Statistical analysis Image: Theme 2: Handouts Specific references for the Theme 2 Image: Self-assessments 2
		Theme 3. Data collection methods This theme will provide the students with an understanding of qualitative methods in data collection along with the strengths and weaknesses of each method.

4.11 Annex K: Screenshot of the course "Data collection methods: Travel Surveys"

Data collection meth	ods: Tra	avel Surveys
Home 🕨 Courses 🕨 Sustainable Transport Ir	terchange Program	m (STIP) ⊨ eC12a_2018
ACTIVITIES Certificates V Feedback Forums Cuizzes Resources SCORM packages	- (Data collection methods: Travel Surveys Course title: Data collection methods: Travel Surveys Course ID: # cC12a_2018
ONLINE USERS (last 5 minutes) None	- 4	Course author:
COURSE COMPLETION STATUS Completion is not enabled for this course	- <	Prof. Eftihia Nathanail Traffic, Transportation and Logistics Laboratory, University of Thessaly, Greece
ADMINISTRATION Course administration Turn editing on Edit settings Users Filters Reports Grades Grades Gradebook setup		 Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion
 Badges Backup Restore Import Publish Reset Question bank 		Theme 1: Introduction This theme will provide a smooth introduction and understanding of qualitative research and the differences between qualitative and quantitative research. Theme 1: Introduction
Switch role to Site administration Search		Theme 1 Handouts Specific references for the Theme 1 Self-assessments 1
		Theme 2. Setting up a travel survey This theme will help the students to understand how to set up a travel survey from A to Z and analyze survey's results in order to draw useful conclusions. Theme 2: Setting up a travel survey Theme 2: Setting up a travel survey Theme 2: Handouts Self-assessments 2
		Theme 3. Sampling & Statistical analysis
		i nis tneme will tocus on the understanding of the role of sampling in data collection.

4.12 Annex L: Screenshot of the course "Data collection methods: Historical and observed data (Freight transport)"

Data collection meth	ods: Hi	storical and observed data (Freight transport)
Home 🕨 Courses 🕨 Sustainable Transport In	terchange Program	m (STIP) ▶ #eC12b_2017
ACTIVITIES		Data collection methods: Historical and observed data course title: Data callection methods: Historical and observed data course ID: # eC12b_2D17 Course ID: # eC12b_2D17
ONLINE USERS (last 5 minutes) None	- 4	
COURSE COMPLETION STATUS Completion is not enabled for this course	- <	Course author: M.Sc. David Weigert Fraunhofer Institute for Factory Operation and Automation IFF Magdeburg, Germany
ADMINISTRATION Course administration Turn editing on Edit settings Users Titlers Reports Grades Grades Grades Badnes		 Course author bio Course aim and scope Course learning outcomes Recommended information sources News forum Questions, Comments, Discussion
 ▲ Backup ▲ Restore ▲ Import ④ Publish Q Reset > Question bank 		Theme 1: Complex Data Analysis What do complex data structures mean for transport and logistics today? In which areas does it apply and how can data be collected and processed? The introductory, first topic will clarify the problem formulation and possible applications to you. You will understand and / or repeat the relevance of complex data structures for future evaluation of transport and logistics systems.
Switch role to Site administration Search		Theme 1: Complex Data Analysis Theme 1 Handouts Self-assessment: Theme 1
		 Descend topic focuses on content and methods for analyzing, processing and visualizing large amounts of data (big Data). You will be able to identify and name differences between traditional and current analysis and susualization. You will be enabled to apply the content in the following case study. Imme 2: Big Data, Analysis and Visualization Teme 2: Big Data, Analysis and Visualization Self-assessment: Theme 2

4.13 Annex M: Screenshot of the course "Data collection methods: Historical and observed data (Public transport)"

Data collection metho	ds: His	storical and observed data (Public transport)
Home Courses Sustainable Transport Inter	change Program	(STIP) ► #eC12b_2018
ACTIVITIES Certificates Feedback Forums Cuizzes Resources SCORM packages		Data collection methods: Historical and observed data Course title: Data collection methods: Historical and observed data Course ID: #ec12b_2018
(last 5 minutes) None		
COURSE COMPLETION STATUS		Course author:
Completion is not enabled for this course		M.Sc. David Weigert Fraunhafer Institute for Factory Operation and Automation IFF Magdeburg, Germany
ADMINISTRATION Course administration Turn editing on Edit settings Users Users Filters Reports Gradebook setup Badges Badges Badges Badges Restore Import Publish Reset Question bank Switch role to Site administration Search		 Course author bio Course aim and scope Course learning outcomes News forum Questions, Comments, Discussion Theme 1: Big Data in Passenger Transport Theme 1: Big Data in Passenger Trans
		Theme 2. Case Study And the case study provides a practical example of how to identify and evaluate a big data analysis. Conceptually, you apply the contents of the previous topics to this case study. You will use your learned methods purposefully and develop your own solutions to problems. Image: Theme 2: Case Study Theme 2: Handouts Self-assessment 2

4.14Annex N: Screenshot of the course "Research methodology and teamwork setup"

Research methodology and teamwork setup Home > Courses > Sustainable Transport Interchange Program (STIP) > c0		
ONLINE U SER S (last 5 minutes) None	- 3	
COURSE COMPLETION STATUS Completion is not enabled for this course	-	Course author: Prof. Irina Yatskiv (Jackiva)
ADMINISTRATION Course administration Curse administration Curse administration Curses Cur	- (Transport and Telecommunication Institute, Latvia Course author bio Course aim and scope Course learning outcomes Recommended information sources Recommended information sources Recommended information sources Course forum Course forum
		Theme 1: Research process: definition, phases, methods This theme will provide a smooth introduction to the research process, clarify definitions and puts attention to phases and methods of the research. Theme 1: Research process: definition, phases, methods Theme 1: Research process: definition, phases, methods Theme 1 Handouts Theme 1 References Self-assessment: Theme 1
		Theme 2. Scientific document types This theme will help students to understand the scientific documents types, their purpose and also clarify generic structure for each type of the document types Image: Theme 2: Scientific document types Theme 2: Scientific document types Theme 2: Handouts Theme 2: References Self-assessment: Theme 2 Theme 3. Guidelines for good research work