

### Enhancing excellence and innovation capacity in sustainable transport interchanges 1.01.2016 - 31.12.2018









### www.alliance-project.eu



# alliance Transport and Telecommunication Institute - TTI



- modern university
- centennial history
- diversified research scientific work
- the only private higher education institute included in the list of leading scientific institutions, acting in Latvia.
- 3 Faculties, 19 programs, incl. 7 master and 1 PhD programs

The scope of the research program for 2014-2020

the enabling of stimulating and strengthening the research capacity of TTI and the raising of the profile of the research staff and their institution, by providing knowledge in the field of

Information Communication Technologies in Transport and Logistics which fully corresponds to the national priority of Latvia "Growth of the national economy" by strengthening research and facilitating knowledge transfer between higher education, science and the private sector. The Institute cooperates with local, private and public bodies and other institutions in Europe and internationally.



- **University of Thessaly UTH** expertise in field of freight and passenger transportation and 1. sustainable transport interchanges organization and planning, Transport Economics and Evaluation techniques (CLOSER, STRAIGHTSOL, City-HUB)  $\rightarrow$  new elements for TTI
- two post graduate programs (land uses, sustainability, mobility and 2. logistics)
- two long-life programs (transport infrastructure design and 3. management, urban development)



- experience in common research with industry and business 4. orientated research
- contacts with organizations like ECTRI, European Logistics 5. Association etc.



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of THESSALY



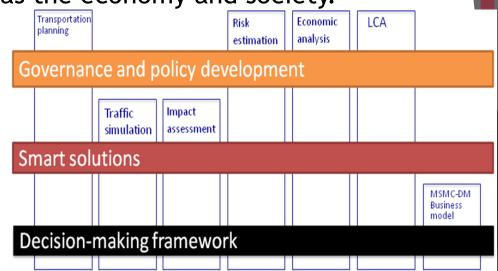
# Background

- 1. Three pillars of priorities: people, integration and technology
- 2. Development of a more competitive and sustainable transport system till 2050
- 3. Intermodal integration among the main quality characteristics of the future transport systems
- 4. Initiatives for the elimination of important obstacles and bottlenecks that obstruct the improvement and cohesion in key aspects of transport, i.e. infrastructure, investments, harmonization of legal frameworks, etc.

Source: EC White Paper "Roadmap to a Single European Transport Area -Towards a competitive and resource efficient transport system", 2011



- 1. Intermodal interconnections (interchanges) for passenger mobility and freight transportation
- 2. Legal and organizational issues, interaction with other domains, such with the one of spatial planning and economic development
- 3. Smart and sustainable solutions for achieving smooth and seamless transportation
- 4. Decision-making strategies, methodologies and techniques for assessing and evaluating the impact of these solutions on the transportation domain, as well as the economy and society.

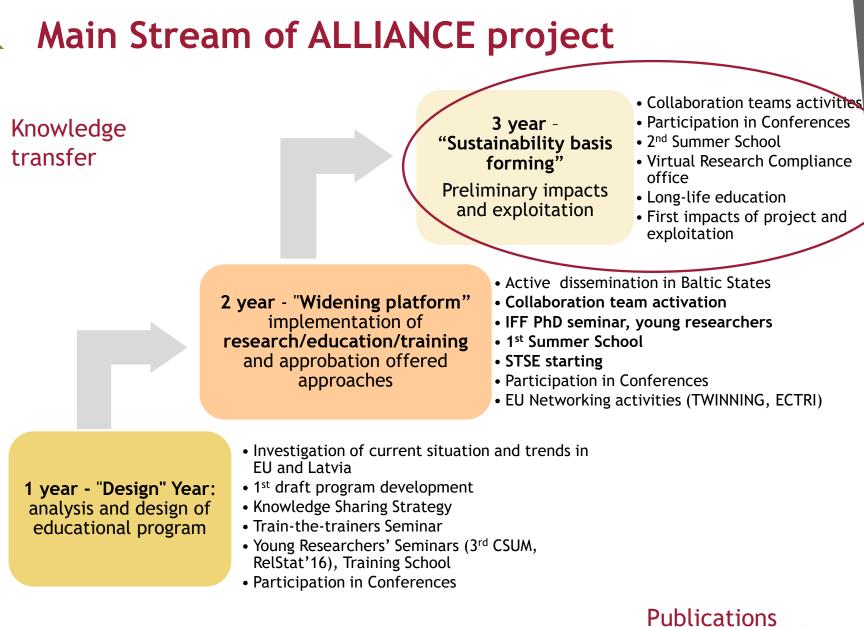




# **ALLIANCE Activities**

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







# Impact chain

| Knowledge<br>Sharing Tools of<br>ALLIANCE<br>Project | ALLIANCE project<br>impacts   | TTI Strategy and<br>Research<br>programme for<br>2016-2020 impacts   | National<br>Development Plan<br>of Latvia Impacts  | Macro Impact<br>Indicators of Latvia |
|--|---|--|--|--------------------------------------|
| e-resources<br>Summer schools<br>Short-Term Staff    | <ul> <li>Increase of papers<br/>indexed in Scopus or Web<br/>of science by 50%</li> <li>Increase of number of<br/>jointed papers written by<br/>the international team of<br/>researchers at least twice</li> <li>Increase of number of<br/>join publications written in</li> </ul> | b (amount, FTE)<br>• Average age of researchers<br>• Scientific articles published in<br>the SCOPUS, Web of Sciences(<br>per 1 FTE)<br>• Number of PhD student<br>defended<br>• Number of Ms student                               | <ul> <li>Private sector investment in<br/>research and development in<br/>2020 reaches at least 48% of<br/>the total investment in research<br/>and development (private<br/>sector investment in research<br/>and development, as a<br/>percentage of the total<br/>investment)</li> <li>Number of researchers<br/>employed in the private sector,</li> </ul> |                                      |
| Exchanges<br>Educational<br>/Training<br>programs    | cooperation with Latvian<br>business entities at least<br>twice<br>• Increase of the research<br>work for industry by 20%;<br>• TTI scientific journal<br>development (Increase H-<br>index to 8)   | n supported for implementing<br>Postdoc research<br>• Cooperation Agreements with<br>RE and Universities<br>• Cooperation Agreements with<br>business companies<br>• Funding from H2020<br>approved projects<br>• Patents/licenses | as a percentage of the total,<br>full-time equivalent<br>• Number of students obtaining<br>degrees or qualifications at<br>universities and colleges,<br>thousands<br>• Higher education (percentage<br>of the population aged 30 to 34<br>with higher education)<br>• European patents granted,   |                                      |
| Collaborative<br>research<br>activities              |   | Agreements on<br>comercialisation of TTI research<br>and Consulting projects     Overall research income   | applied for by researchers<br>residing in Latvia   |                                      |

#### ALLIANCE e-platform

Home 
Courses 
Sustainable Transport Interchange Program (STIP)

| NAVIGATION  | Course categories:   |              |  |  |
|---|--|--------------|--|--|
| Home<br>Site news   | Sustainable Transport Interchange Program (STIP)                                 |              |  |  |
| Courses   |  |              |  |  |
| Sustainable Transport Interchange Program<br>(STIP)                     | Search courses: Go   |              |  |  |
| Core courses  |  | Collapse all |  |  |
| ■ eC1   | - Core courses   |              |  |  |
| <pre>#eC2 eC11</pre>  |  |              |  |  |
| Passenger transport block courses                                       | The European policy on intermodal transportation                                 |              |  |  |
| <pre>eC8 eC4_2018</pre>   | Building business models for intermodal transport interchanges                   |              |  |  |
| <pre>eC6 #eC12b_2018</pre>  | Decision making methodologies  |              |  |  |
| <ul> <li>eC12a_2018</li> <li>Freight transport block courses</li> </ul> | ✓Passenger transport block courses   |              |  |  |
| ■ eC9<br>■ eC4_2017<br>■ eC10   | > Design of passenger transport interchanges                                     | Ŀ            |  |  |
| <pre>#eC12b_2017 eC12a_2017</pre>                                       | Operation and management of intermodal transport systems: passenger interchanges |              |  |  |
| ■ c0  | > Intelligent services for passenger transportation                              |              |  |  |
|   | Data collection methods: Historical and observed data (Public transport)         |              |  |  |
|   | Data collection methods: Travel Surveys  |              |  |  |
|   | - Freight transport block courses  |              |  |  |
|   | > Design of freight transport interchanges                                       |              |  |  |
|   | Operation and management of intermodal transport systems: freight interchanges   |              |  |  |
|   | Smart equipment for freight transshipment  |              |  |  |
|   | Data collection methods: Historical and observed data (Freight transport)        |              |  |  |
|   | Data collection methods: Freight Transportation Surveys                          |              |  |  |
|   | © Research methodology and teamwork setup  |              |  |  |
|   |  |              |  |  |
|   |  |              |  |  |



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### ALLIANCE Virtual Research Compliance Office

#### Mission

The mission of the ALLIANCE V-RCO is to create and provide young and professional researchers with a virtual platform where they will be guided through the process of their research. The different stages of scientific and scholarly research will be supported through the ALLIANCE V-RCO. Hereby, reaching scientific excellence and obtaining it should be the main aspect, whilst taking the European Policy and ethical standard regulations into account. Also, ALLIANCE V-RCO will act as a platform for networking and collaboration between ALLIANCE stakeholders of industry, education and research.

The ALLIANCE V-RCO is a virtual platform, including an official representative with a consulting function, which offers the following content:



European research policies and regulations



**Research** sources



University's research regulations, policies and guidelines



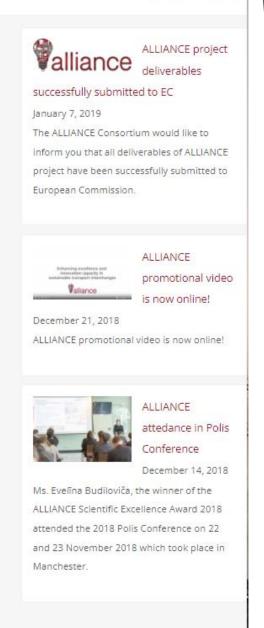
Toolkit



Career



Contact V-RCO



#### LATEST PUBLICATIONS



16th Press Release



PhD candidates participated in Alliance activities

- 11 Latvian + 1 Lithuanian + 4 Greek + 3 German
- 3 PhD's awarded (one with double supervision) in TTI

### MSc students participated in Alliance activities

- 17 Latvian + 3 Greek + 2 German
- 3 MSc's awarded in TTI
- 3 PostDoc participated in Alliance activities
- 11 grants for Conferences
- Papers
- Participation in research international teams
- New courses:
  - Decision Making Methodologies
  - Building business models for intermodal transportation interchanges
  - Management of intermodal transport system







# alliance Generating new innovative ideas for future research work

- TTI has applied 4 post-doc proposals for ERDF funding and 3 of them were accepted
- 2) TTI started new ERASMUS+ projects:

ERASMUS+ KA2 / KA303: Cooperation for innovation and the exchange of good practices / Development of Innovation» Spread your wings, SYW

(main result - the course "The development of sustainable aviation") ERASMUS+ KA2 / KA303: "Digitally supported and virtual study practices for modern logistic systems" **DigiLog** 

- 3) TTI and IFF successfully submit proposal for Baltic-German program Sci-Bi: Digitalization in Logistics and Transport
- 4) TTI participated in COST Action CA16222: Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport

# alliance Regional impact

- Special events "Research-to-Business (R2B)" organized in context of ALLIANCE
  - 09.2016: "Science Night" and Seminar "Building Information Modelling"
  - 10.2016: Seminar How You Can Bring INDUSTRY 4.0 Technologies to Logistic Networks
  - 11. 2016: ECTRI Assembly with TTI hosting and representatives of Latvian transport industry
  - 12.2016: Seminar "Sustainable Urban Mobility Plan: Information Gathering & Analysis Tools" organised by Jasper and TTI for municipalities
- Annual International Conference "Reliability and Statistics in Transportation and Communication". The number of participants in 2016 was increased by 25%; <u>from business - 15%.</u>
- 08.12.2017 Science Day for YR "Researches and Technologies step to the future". TTI Projects Review. <u>Seminar "From Data to Business Added Value"</u>

### Alliance for Latvian Regions and stakeholders (2018):

- 14 February Elgava municipality
- 2 March Riga airport
- 22 March Alliance Stakeholder Networking Meeting (TTI)
- 26 April Open Seminar "Digitalization in Transportation and Logistics"
- 4 September Workshop "Innovations in passenger transport with bus and coach and terminal development in the future"



## International Visibility

- Presentation about project at ECTRI Association
- Presentation about project at TransBaltika 2017 (Lithuania)
- Presentation about project at TRB 2017 (US)
- Presentation project at Pan European Terminal Association (twice)
- Participation in forum "WIRE2017" (Slovenia)
- Special sessions during CSUM 2016 and 2018
- Special sessions during RelStat 2016, RelStat 2017 and RelStat 2018
- Participation in CIVITAS Forum
- Special Session during European Transport Conference (Dublin, 11 October 2018)

etc.





## Challenges for sustainability

- The relationship between the higher education and industry/business will deepen
- Industry/business plays multiple roles as
  - ✓ customer
  - ✓ key partner of higher education institutions
  - increasingly, as a competitor in specialist professional programs
- Research higher degree programs and applied research will increasingly be run in partnership with industry
- Research commercialisation will go from being a fringe activity to being a core source of funding for many universities' research programs.





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