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University of Rome  
Tor Vergata  
Italy

Department of Enterprise Engineering

KA2 - Cooperation for innovation and the exchange of good practices

**Capacity Building in Higher Education**

Joint project

**Master in Smart Transport and Logistics for Cities / SmaLog**

**WP3**

**Theoretical fundamentals of PhD Programme in SmaLog**

*PMC7 / 8 June 2021 / online MS Teams Platform*



CENTRO DI RICERCA  
PER IL  
TRASPORTO E LA LOGISTICA



**SAPIENZA**  
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CTL Centre for Transport and Logistics

Sapienza University of Rome

**P2 – UniRM1**

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# Overview

- ✓ Objectives of WP3
- ✓ Task and Deliverables
- ✓ Activities developed and obtained outcomes
- ✓ Concept Note first draft
- ✓ Next steps



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# Objectives

- ✓ To contribute to harmonization of the Higher Education Systems between EU, UA and GE, by introducing a **PhD Programme on Smart Transport and Logistics** in Partner Countries Universities (Ukraine and Georgia)
- ✓ To provide methodological and technological support of the theoretical fundamentals of PhD Programme
- ✓ To jointly evaluate and approve
  - Topics of the programme
  - Implementation approach (e.g. support from industrial and academic sectors)

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# Task and Deliverables

## ✓ Deliverables

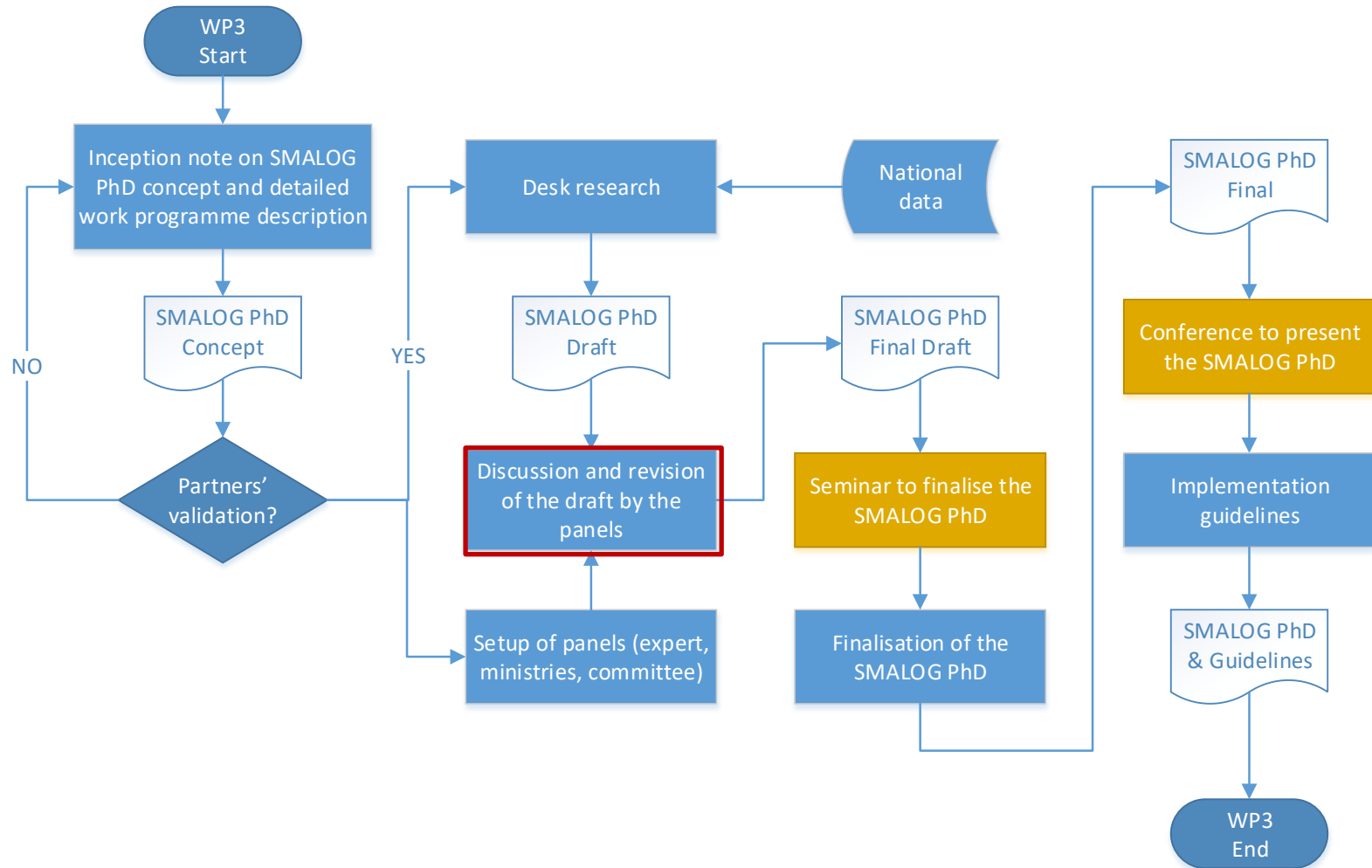
- *Progress Seminar of Theoretical fundamentals of PhD Programme in SmaLog – week 26 – 30 July 2021 (on-line)*
- *Theoretical fundamentals of PhD Programme in SmaLog presentation – **Final conference (to be decided together with PMC)***

## ✓ Expected Reports

- Inception note (**done**)
- SmaLog PhD concept and content description draft (**done, to be send asap**)
- SmaLog PhD concept and content description final (**30 June 2021**)
- SmaLog PhD synthesis (**30 June 2021**)

# Activities developed and obtained outcomes <sup>1</sup>

## WP3 Logical block diagram



# Activities developed and obtained outcomes

## International review on Transport and Logistics PhD courses

### Concept note for theoretical fundamentals of Ph.D. Programme in SmaLog

 Co-funded by the Erasmus+ Programme of the European Union	 www.smalog.uniroma2.it	585832-EPP-1-2017-1-IT-EPPKA2-CBHE-JP Master in <b>SM</b> Art transport and <b>LOG</b> istics for cities <b>SMALOG</b>
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N.	Name	Institution
1	The PhD Course in Infrastructures and Transport	Sapienza University of Rome
2	Transport Studies (Research)	University of Leeds
3	PhD Position in Transportation and Logistics	Tallinn University of Technology, Estonia
4	PhD scholarship in Transport Network Modelling	Technical University of Denmark, Denmark
5	Ph.D fellowship in Sustainable Urban Mobility	University of Stavanger, Norway
6	PhD in Intelligent Transportation	The Hong Kong University of Science and Technology
7	Ph.D. in Transportation Program	New Jersey Institution of Technology
8	PhD Positions in Institute of Transport and Logistics Studies at University of Sydney in Australia	Institute of Transport and Logistics at University of Sydney in Australia
9	Transportation Planning and Engineering PhD Program	NYU Shanghai.
10	PhD Position in Intelligent Transportation Systems at the Chair Sustainable Transport Logistics	Johannes Kepler University Linz Austria
11	PhD positions in IoT solutions for Smart transport and logistics	University of Twente (UT), Netherlands
12	PhD Scholarship Position(s) in Logistics	Molde University College (HiM), Norway
13	PhD Position in Transportation and Logistics	Tallinn University of Technology, Estonia
14	PhD in Logistics and Supply Chain Management	The University of Zaragoza, Spain
15	Collaboration and competition between transport and logistics modes in supply chains across Australia	Macquarie University, Australia

#### 4 International review of relevant Ph.D. courses

The Ph.D. programs focus on scientific improvements by using more professional, and multidisciplinary ways with providing higher qualification and internationally. There are lots of Ph.D. program opportunities around the world. In this Concept Note, one of the steps to approach proposed for the Ph.D. Program development is to define the best practices of Ph.D. Programs from leading universities in the world according to their preferability, academic background, and ranking platforms, concerning the programs that are related to smart intelligent transport and urban logistics. Therefore, it was performed a comprehensive analysis of existing Ph.D. courses in the leading universities in the world within specifically on topics of “Smart Transport” and “Smart Logistics” and some relevant ones. The detailed information on results is provided in Annex 1.

The overview of the relevant universities is carried out by starting the definition of the leading universities list concerning some criteria such as academic situations and locations to include as much universities as possible all over the world. After that, general information about durations, research areas, and entry requirements of the defined leading universities are highlighted and analyzed.

##### 4.1 Introduction

The Ph.D. programs are highlighted at the chosen universities around the world. These universities are considered according to their locations, preferabilities, ranking scores, academic background, and popularity at the national or international levels.



# Definition of research needs – Survey

## SMALOG WP3 User Needs Analysis for Academics

The objective to understand the local conditions and needs and understand how to deliver the PhD courses in UA&GE considering also the current administrative and academic structure of Local Universities.

\*Campo obbligatorio

Are there any available PhD courses on 'Smart Transport', 'Transport' in general or on 'Smart Logistics'? (if yes please provide the curricula of these courses and a short description) \*

La tua risposta

What are the entry requirements for students to attend these PhD courses?

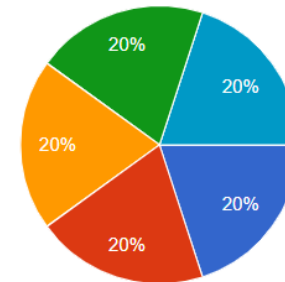
La tua risposta

In these PhD degrees are there any laboratory activities (e.g. use of simulation software, if yes - which)?

La tua risposta

Which university are you from?

5 risposte



- NUUE, UA
- LPNU, UA
- ZSTU, UA
- NTU, UA
- GTU, GE
- BSMA, GE

## Current local situation

Are there any available PhD courses on 'Smart Transport', 'Transport' in general or on 'Smart Logistics'? (if yes please provide the curricula of these courses and a short description)

5 risposte

When preparing a PhD in speciality 275 "Transport technologies (by type)", the following disciplines are studied on the requested topics:

- Scientific and methodological bases of the conceptual development of transport technologies and systems
- Process modelling in intelligent transport systems
- Transport logistics of cities

The curriculums are available only on Ukrainian

Yes. PhD program "Transport technologies (by types)"

<https://lpnu.ua/sites/default/files/2021/3/12/paragraphs/17028/onp-2020275tt.pdf>

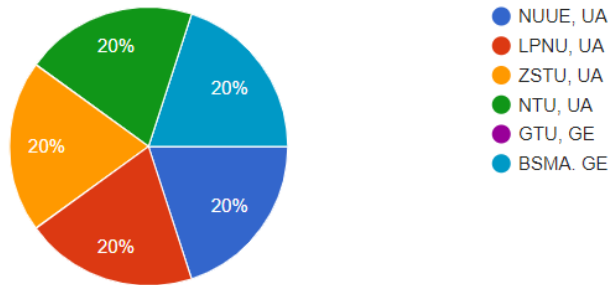
not



# Definition of research needs – Survey

Which university are you from?

5 risposte



## Current local situation

Are there any available PhD courses on 'Smart Transport', 'Transport' in general or on 'Smart Logistics'? (if yes please provide the curricula of these courses and a short description)

5 risposte

When preparing a PhD in speciality 275 "Transport technologies (by type)", the following disciplines are studied on the requested topics:

- Scientific and methodological bases of the conceptual development of transport technologies and systems
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Yes. PhD program "Transport technologies (by types)"

<https://lpnu.ua/sites/default/files/2021/3/12/paragraphs/17028/onp-2020275tt.pdf>

not

## Concept note for theoretical fundamentals of Ph.D. Programme in SmaLog



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[www.smalog.uniroma2.it](http://www.smalog.uniroma2.it)

585832-EPP-1-2017-1-IT-EPPKA2-CBHE-JP  
Master in ~~SM~~Art transport and ~~LOG~~istics  
for cities  
SMALOG

### 5 Analysis of the existing Ph.D. Courses in Ukrainian and Georgian universities

#### 5.1 Introduction

The specific aim of WP3 was to identify the research needs and to develop study programs on smart transport and logistics in Partner countries. The work was based on universities' needs and existing Ph.D. activities and courses in Partner countries.

In this chapter it is described the review on research needs in Partner countries, existing courses, their specifications, problems, and different barriers, and finalized main findings.

#### 5.2 Review of the Ph.D. courses in Partner countries

As stated above, several universities already have their Ph. D courses developed. The programs' descriptions are placed in Annex 2.

To complete the task of developing fundamentals to a Ph. D course, an analysis of those available programs was performed, and the main points and findings are described below.

The durations and ECTS of the courses are set up as 2 years (LPNU) – 60 ECTS, 4 years (NTU) – 60 ECTS and 4 years (NUUE) with only 45 ECTS. The language of teaching the program is only Ukrainian.





# Concept Note first draft

## List of abbreviations

- 1 Introduction
- ▲ 2 WP3 Overview
  - 2.1 Activities
  - 2.2 Panel of Experts
- 3 Smalog Ph.D. Conceptual framework
- ▲ 4 International review of relevant Ph.D. courses
  - 4.1 Introduction
  - 4.2 Duration of the courses
  - 4.3 Area of research
  - 4.4 Entry requirements
  - 4.5 Summary of main findings
- ▲ 5 Analysis of the existing Ph.D. Courses in Ukrainian...
  - 5.1 Introduction
  - 5.2 Review of the Ph.D. courses in Partner countries
  - 5.3 Online survey and its outcomes

## ▲ 5.4 Research needs

- 5.4.1 Available courses of Ph.D. in UA and GE...
- 5.4.2 Entry requirements for students to attend...
- 5.4.3 Availability of laboratory activities
- 5.4.4 Availability of in-field activities
- 5.4.5 Availability of informatics labs
- 5.4.6 Assessment of a currently implemented r...
- 5.4.7 The most important issues at local level t...
- 5.4.8 The most important issues at local level t...
- 5.4.9 The most important issues at local level t...
- 5.4.10 The most important road safety fields t...
- 5.4.11 The most relevant administrative barrier...
- 5.4.12 Skills or aspects to be included in the Ph...
- 5.4.13 Fields in smart transport and logistics to...
- 5.5 Summary of main findings



# Concept Note first draft

✓ To be sent asap for the review

- ▲ 6 Fundamentals of the Ph. D course
    - 6.1 Programme overview
    - 6.2 Candidate selection process
    - 6.3 Candidate curriculum studiorum
    - 6.4 Evaluation Scale for the Qualification Exam
    - 6.5 Course format and requirements
    - 6.6 Proposed course contents and curriculum
  - ▲ 6.7 Proposed learning outcomes, final output that...
    - 6.7.1 Learning Outcomes
    - 6.7.2 Final exam
    - 6.7.3 Requirements for Ph. D thesis
  - 6.8 Committee
  - 6.9 Risks and limitations
  - 6.10 Students evaluation
  - 6.11 Quality Assurance Process
  - 6.12 Guidelines to support an involvement of Ind...
- References
- Annex 1 World Ph.D. courses overview
- Annex 2 Existing Ph.D courses in Partner countries
- Annex 3 Questions of the survey for PC universities a...
- Annex 4 Responses of the survey for PC universities a...



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# Next steps

- ✓ **By 20 June** - SmaLog PhD concept and content description draft
- ✓ **From 20 June to 20 July** – revision by partners and final version
- ✓ **Week 26 – 30 July 2021** (on-line) Progress Seminar of Theoretical fundamentals of PhD Programme in SmaLog
- ✓ **30 July 2021** – SmaLog PhD concept and content description final
- ✓ **30 July 2021** – SmaLog PhD synthesis





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**Thanks for your attention**



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