

KA2 - Cooperation for innovation and the exchange of good practices  
**Capacity Building in Higher Education**  
Joint project

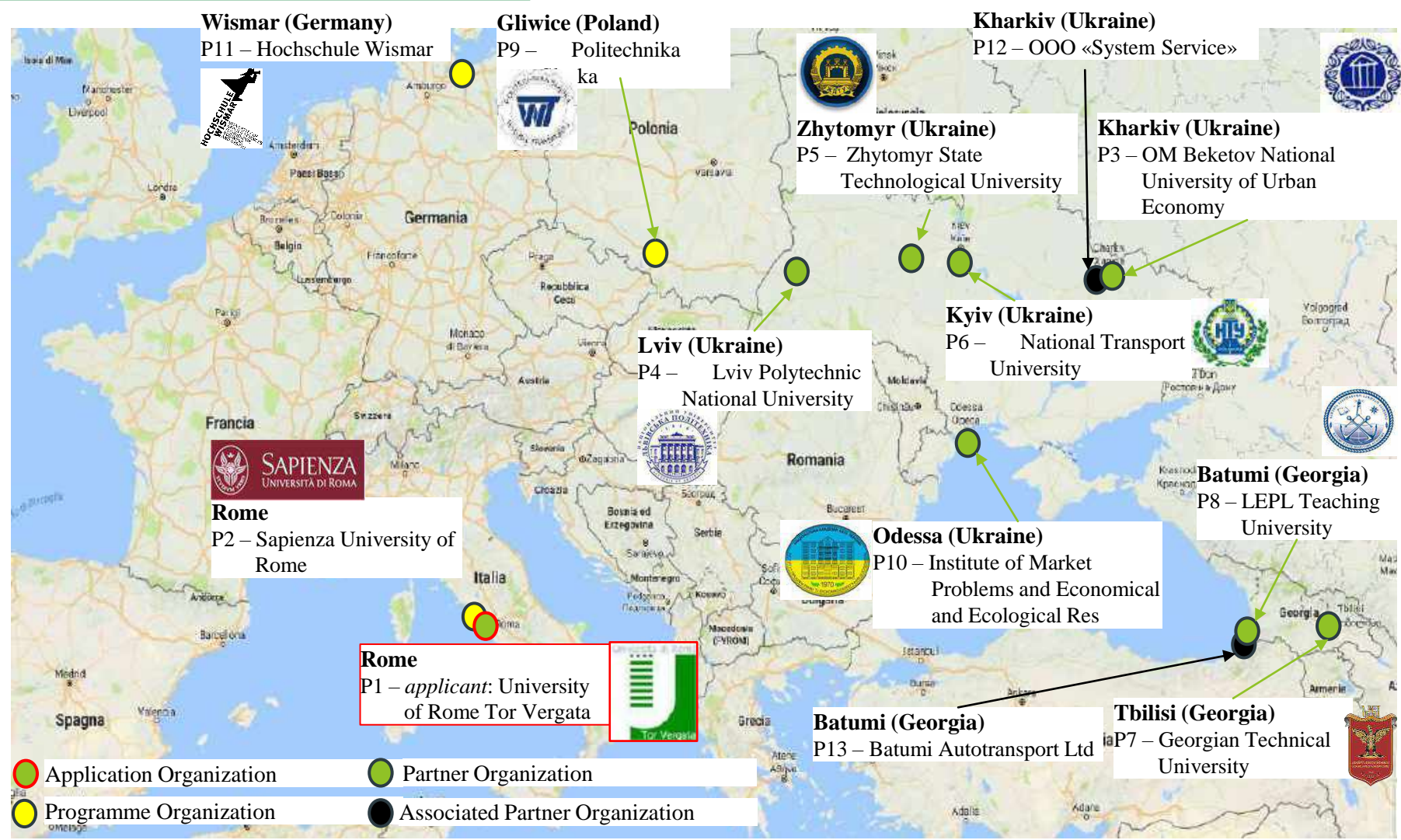
Master in Smart Transport and Logistics for Cities / SmaLog

# SMALOG project: an overview and the main achievements

Final conference, Kharkiv  
**Antonio Comi**, University of Rome Tor Vergata (coordinator)



# Consortium



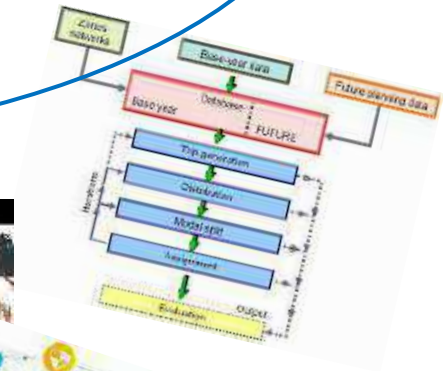
# Why SmaLog?

City sustainability  
issues



Education  
*backwardness*

Research  
lacks



# SMALOG





# All started in Rome about 4 years ago...

- ▶ Official start: October 2017
- ▶ Some concerns
- ▶ A lot of *Interest, Curiosity & Enthusiasm*
- ▶ ...



*Rome Kick-off Meeting  
5-7 Dec 2017*

# The «logical framework»

## Then...



to strengthen the role of telematics in transport services  
for improving city sustainability and liveability

SmaLog  
Masters

Train the  
Trainer

SmaLog  
Laboratories

Newsletters,  
events,  
workshops &  
seminars  
(dissemination)

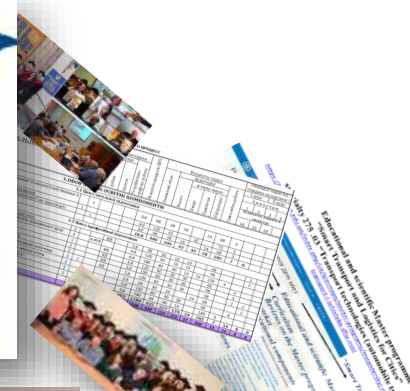
Setting up Smart  
Transport & Logistics  
networks  
IQAS  
Internalization strategy  
(exploitation)

## IF...

# SmaLog Masters

## What:

- ▶ Establish new master curricula (120/90 ECTS) for engineering and economics faculties on Smart Transport and Logistics for Cities
- ▶ Based on Bologna process standards (full part of educational offers at each PC HEIs)



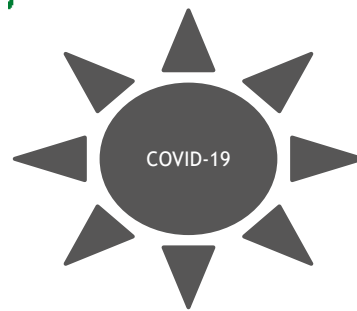
*ECTS: European Credit Transfer and Accumulation System*

# How we get there

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## Hard preparatory work:

- ▶ No existing Masters in Smart Transport and Logistics for Cities
- ▶ Master curricula needed a formal approval by the Ukrainian and Georgian Authorities
- ▶ Teaching material not fully available
- ▶ Not fully aware of the opportunities offered by new tools and methods for transport systems analysis and simulation
- ▶ Ukrainian and Georgia researchers were mainly out of the main worldwide expert/research networks



Pandemic

- ▶ 6 new innovative Master programme “Smart Transport and Logistics for cities”
- ▶ 20 new and upgraded disciplines
- ▶ **Acknowledgements:** Approval of the Masters by the Ministry of Education; Accredited by the National Agency for Higher Education Quality Assurance (Ukraine; Georgia ongoing)

[illegible]



# Achievements (2)

- ▶ 4 editions, enrolment: 2018, 2019, 2020, 2021
- ▶ 69 graduated students (2018-2020) in the 2 first Master editions
- ▶ 20 master theses under the supervision of EU and PC experts and from the industry sector
- ▶ More than 80% of the 1<sup>st</sup> generation graduated students employed by transport companies



# Achievements (3)

- ▶ 66 students studied at EU universities (physically)
- ▶ One full semester for learning and training activities (physically)
- ▶ Three courses hold remotely for contrasting covid-19 mobility restrictions

	2018-2020
University of Rome Tor Vergata (Italy)	32
“Sapienza” University of Rome- CTL (Italy)	14
Silesian University of Technology (Poland)	9
Hochschule Wismar (Germany)	11



Students visiting the Amazon Distribution Center (FCO1) in Rome





# Train the Trainer

## What:

- ▶ Supporting Local Academics in planning/organizing the Masters
- ▶ Knowledge transfer of smart transport and logistics good practices in EU
- ▶ Supporting Local Academics in defining learning materials
- ▶ Supporting local administrations in the development of IQAS in HEIs

Co-funded by the Erasmus+ Programme of the European Union

SMA LOG

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SMA LOG

ROMAN MAMULADZE, MERI GARADZE

Supply chain management

НАЗВА НАВЧАЛЬНОЇ ДИСЦИПЛІНИ

ВІСЬОКІВНИЙ ВІСЬОК

1. ОБОВ'ЯЗКОВІ ОСВІТНІ КОМПОНЕНТИ

1.1. Високі загальні навчальні

1.2. Високі професійні навчальні

Transport Logistics

Workbook

BATUMI, 2019

11

# How we get there

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- ▶ A selected group of Academics will spend approximately 1,5 month in each EU University involved in the project and will be supported in preparing the materials for the Master classes.
- ▶ Technical visits to institutional bodies involved in smart transport and logistics for cities
- ▶ A selected group of EU visited PC HEIs for more than 1 week for teaching and training activities.
- ▶ Distance Learning Courses in Advanced SmaLog
- ▶ Regional cycles of seminars involving UA and GE staff



# Achievements (1)

► 54 PC academics visited EU Universities

	2018-2021
University of Rome Tor Vergata (Italy)	13
“Sapienza” University of Rome- CTL (Italy)	11
Silesian University of Technology (Poland)	18
Hochschule Wismar (Germany)	12



*Academics visiting the full automated metro line C in Rome*

# Achievements (2)

► EU academics visited PC  
Universities (17 visits)

	2018-2021
O. M. Beketov National University of Urban Economy in Kharkiv (Ukraine)	3
National Transport University, Kiev (Ukraine)	4
Lviv Polytechnic National University, Lviv (Ukraine)	2
Zhytomyr Polytechnic State University, Zhythomyr (Ukraine)	4
Batumi State Maritime Academy, Batumi (Georgia)	1
Georgian Technical University, Tbilisi (Georgia)	3



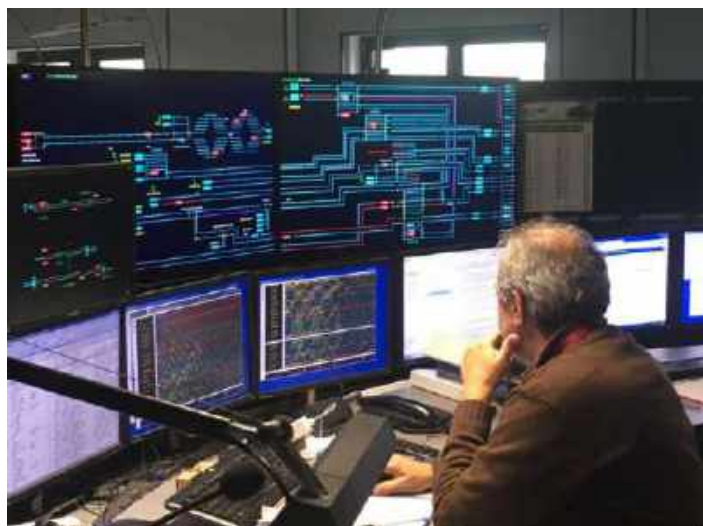
Academics visiting the NTU, Kiev, Ukraine



Academics visiting the NUUE, Kharkiv, Ukraine

# Achievements (3)

## ► Technical visits



*Rome*



*Katowice*

*Wismar*



*Rome*



# Achievements (4)

- 73 staff members from PC HEIs participated to advanced courses and passed the evaluation test (*distance learning advanced course*)

	2018-2021
O. M. Beketov National University of Urban Economy in Kharkiv (Ukraine)	17
National Transport University, Kiev (Ukraine)	26
Lviv Polytechnic National University, Lviv (Ukraine)	8
Zhytomyr Polytechnic State University, Zhythomyr (Ukraine)	6
Batumi State Maritime Academy, Batumi (Georgia)	13
Georgian Technical University, Tbilisi (Georgia)	2
Other	1





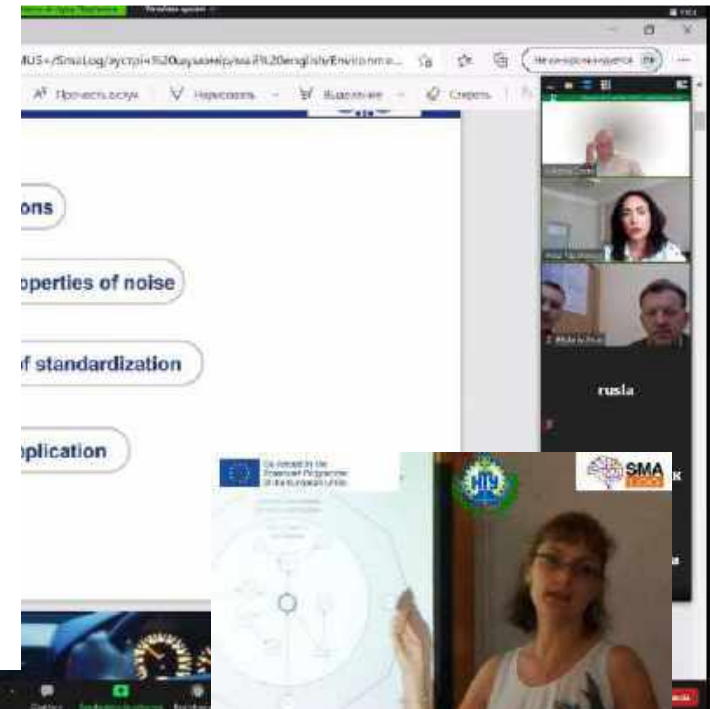
# Achievements (5)

## ► Webinars of teachers' experience exchange between UA and GE Universities

Data	Teacher	Topic
20.05.2021	<a href="#">Rossolov Oleksandr</a> Assoc. Prof, PhD Transport systems and Logistics Department O. M. Beketov National University of Urban Economy in Kharkiv (NUUE)	Lecturing with PTV Visum software in frame of SmaLog modules
26.05.2021	<a href="#">Iryna Tkachenko</a> Assoc. Prof, PhD Transport systems and Logistics Department O. M. Beketov National University of Urban Economy in Kharkiv (NUUE)	Environmental assessment of transport noise using VOLTcraft sound meter
26.05.2021	Assoc. Prof, PhD Ruslana Kolodnytska ZPSU, Department of Automobiles and Transport Technologies	"Smart Transport: Hydrogen Fuel Cells and Biofuels".
01.06.2021	Lidiia Savchenko, Assoc. Prof, PhD NTU	Concepts of sustainable logistics in the



ific flows using PTV  
hand modelling using

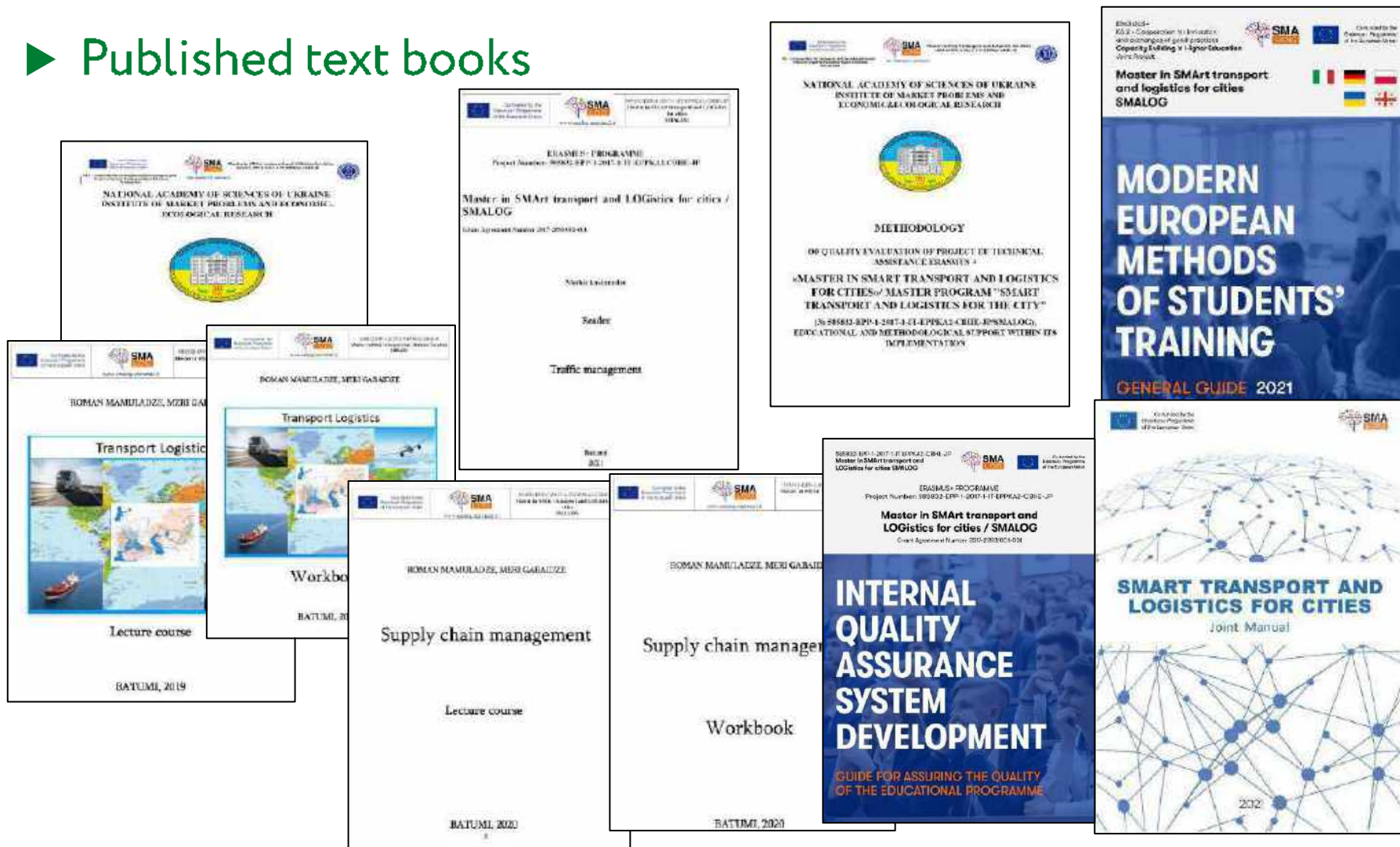


1st of June 2021 Open lecture  
"Concepts of sustainable logistics  
in the business context" 17



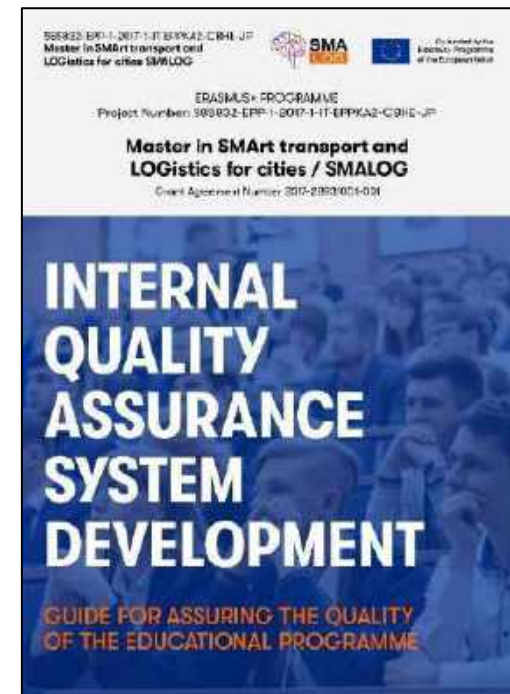
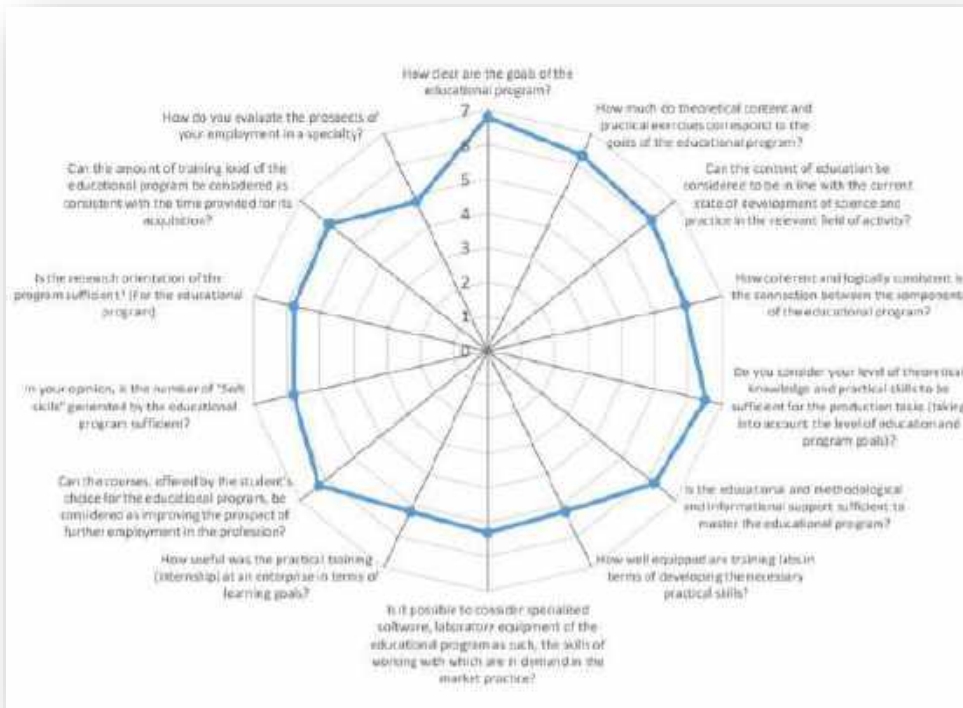
# Achievements (6)

## ► Published text books



# Achievements (7)

- Improving of Quality Assurance Systems in local universities – Guidelines, external evaluation, feedbacks from students and teachers and stakeholders



# SmaLog laboratories

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**What:** *Laboratories* to support both training and research in smart transport and logistics for cities

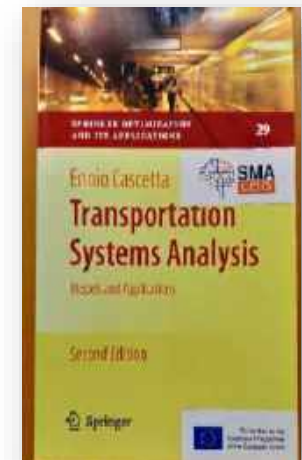
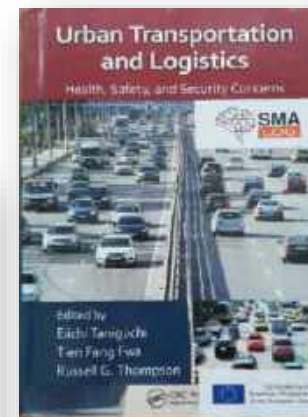
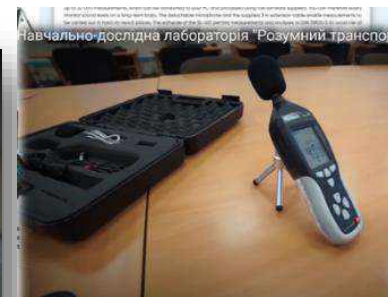
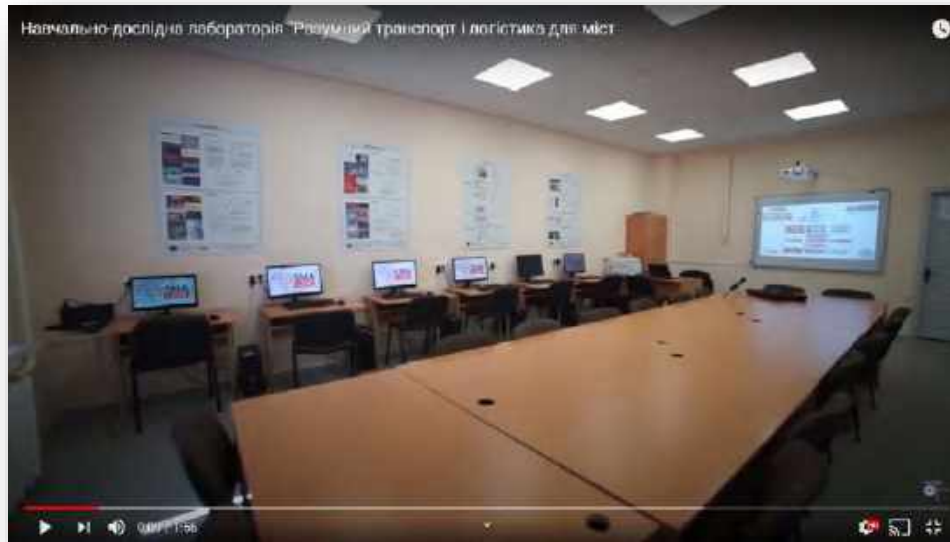
## How we get there:

- ▶ Investigating local needs and identifying innovation to promote
- ▶ Designing laboratories equipment according to real local needs



# Achievements (1)

- ▶ One laboratory for each of the 6 Universities
- ▶ *Equipment:* hardware, software, special equipment and books



# Newsletters, events, workshops & seminars

## What:

- ▶ Dissemination materials
- ▶ Dissemination events
- ▶ Workshops & seminars
- ▶ Meetings with local stakeholders

## How we get there:

- ▶ Assuring to bring knowledge to all potential beneficiaries
- ▶ Promoting dissemination events strictly answering to real local needs
- ▶ Promoting dissemination involving all potential beneficiaries of SmaLog

# Achievements (1)

## ► Project website:

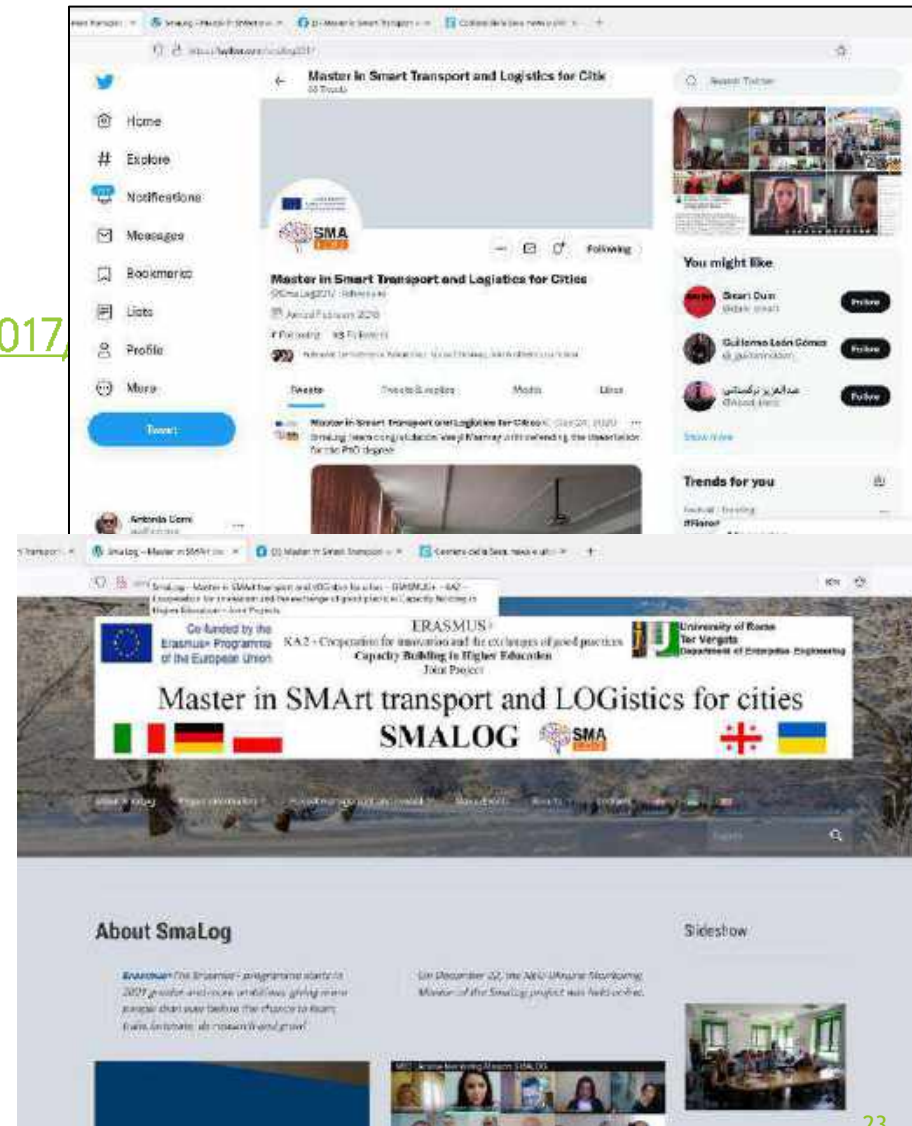
- <http://www.smalog.uniroma2.it>

## ► Facebook page and group:

- <https://www.facebook.com/SmaLog2017>

## ► Twitter page

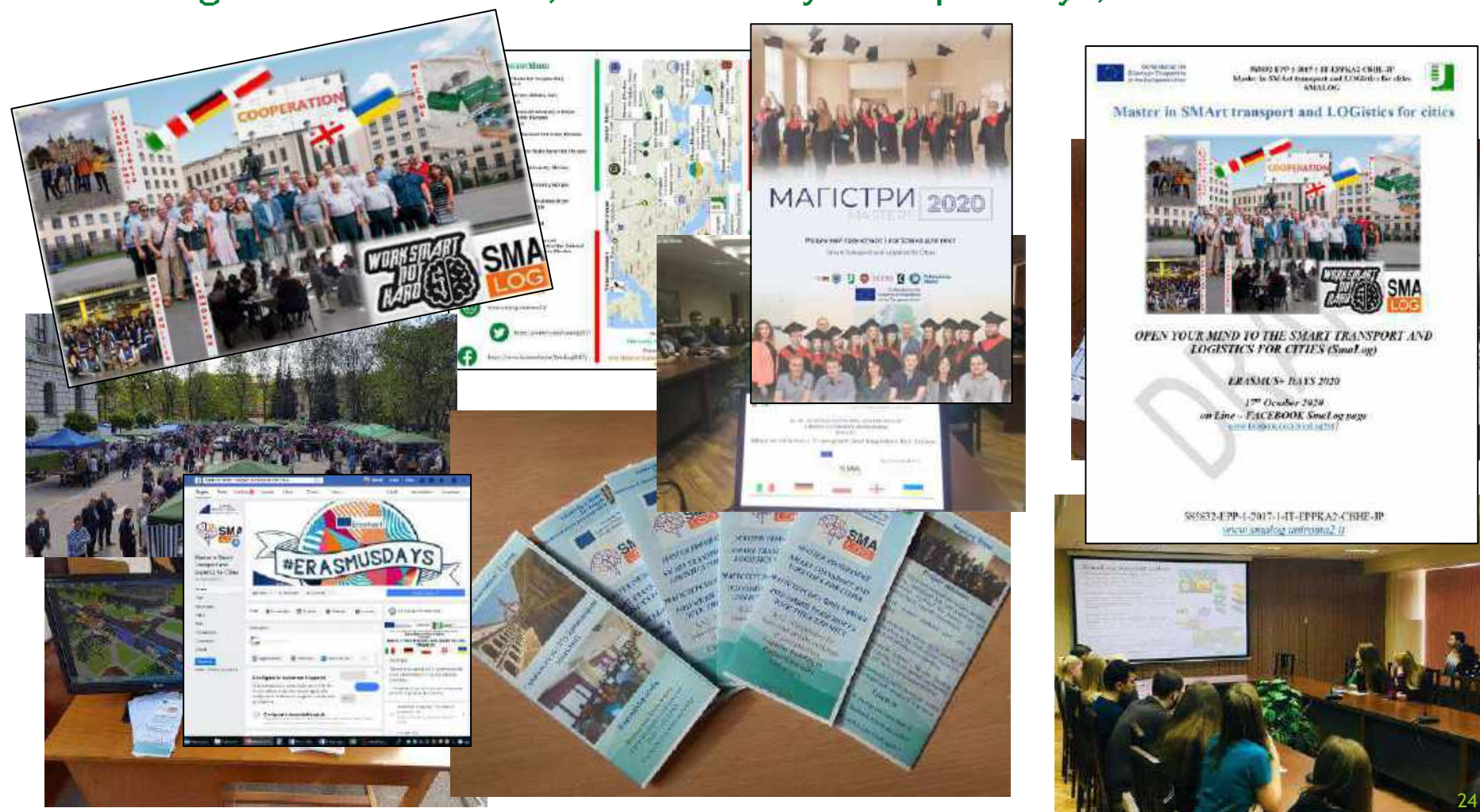
- <https://twitter.com/smalog2017>





# Achievements (2)

- SmaLog Master brochures, Erasmus+ Days & Open days, CBHE Virtual Fair





# Achievements (3)

## ► Seminars in local universities (about 30)





# Achievements (4)

## ► NUUE University meets local stakeholders

**August 2018: Kharkiv Meeting, Department of Infrastructure in Kharkiv, LTD "KOMKON TRAFIC"**



**November 2019: Kharkiv, The Director of the Infrastructure Department of the Kharkiv City Council gave an open lecture**



**March 2020: Kharkiv, branch meeting of leading specialists of TDV "ATP 16363"**



**March 2020: Kharkiv, Meeting with the official representative logistics company "GLOBAL OCEAN LINK"**



**March 2020: Kharkiv, Lecture by a representative of LTD "KOMKON TRAFIC"**



**September 2020: Kharkiv, Meeting with the official representative of PTV Group Ukraine Dmytro Bespalov**



<https://k-tsl.com/>



# Achievements (5)

## ► LPNU University meets local stakeholders

**October 2018:** Meeting and Master Programme publishing & presentation  
at Lviv Polytechnic National University

**June 2018:** Meeting at Lviv Polytechnic with stakeholders

**March 2019:** Smalog at the Ukrainian Scientific  
and Teoretical Conference

**October 2019:** Discussion of the mobility plan  
(Andriy Biliy, Deputy Director of the Department of  
Housing and Infrastructure of Lviv

**April 2020:** Meeting at Lviv Polytechnic with stakeholders  
(Open Days)



# Achievements (6)

## ► ZPSU University meets local stakeholders

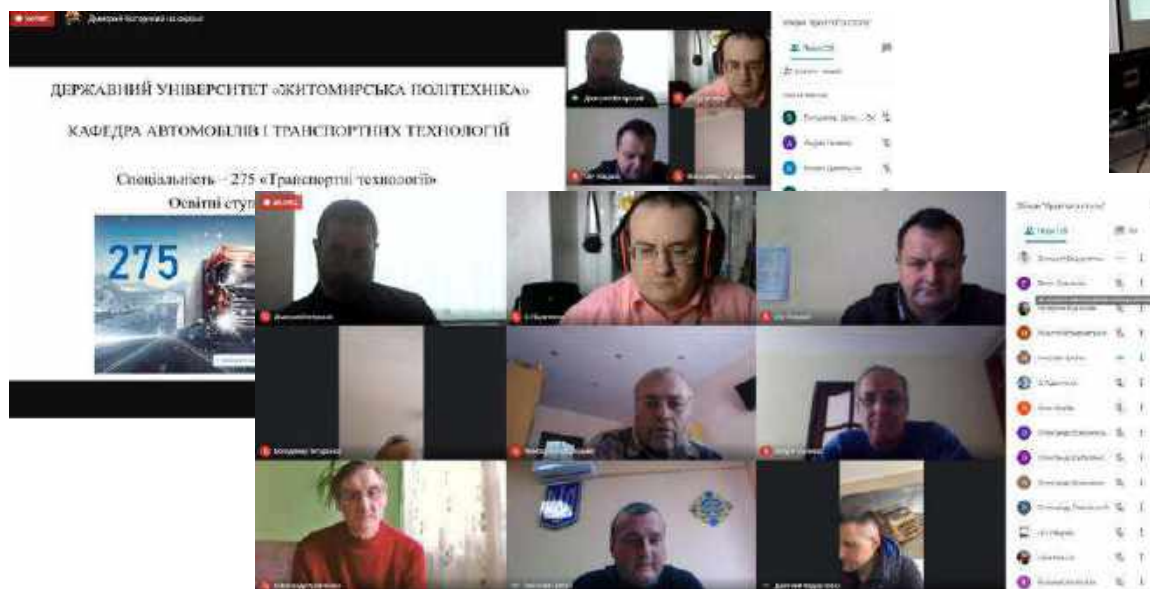
April, 2021: Zhytomyr, Online meeting with stakeholders:

<https://news.ztu.edu.ua/2021/04/kruglyj-stil-zi-stejkhoderamy-zaspetsialnistyu-275-03-transportni-tehnologiyi-na-avtomobilnomu-transporti/>

- Department of Transport and Regional Development in Zhytomyr region;
- PJSC Zhytomyr ATP 11854
- Ukrainian transport safety Department in Zhytomyr region;
- logistics company "Alfakom"
- PE "Sheriff"

April, 2019: Zhytomyr, Forum of employers (stakeholders):

- PJSC "Zhytomyr-Auto"
- PJSC "Zhytomyr Auto International"
- LLC "Veltest"
- PE "Sheriff"
- Zhytomyr regional department of road construction and infrastructure management
- Communal enterprise "Information center"
- Department of the State Service for Transport Safety in Zhytomyr Region





# Achievements (7)

## ► NTU University meets local stakeholders

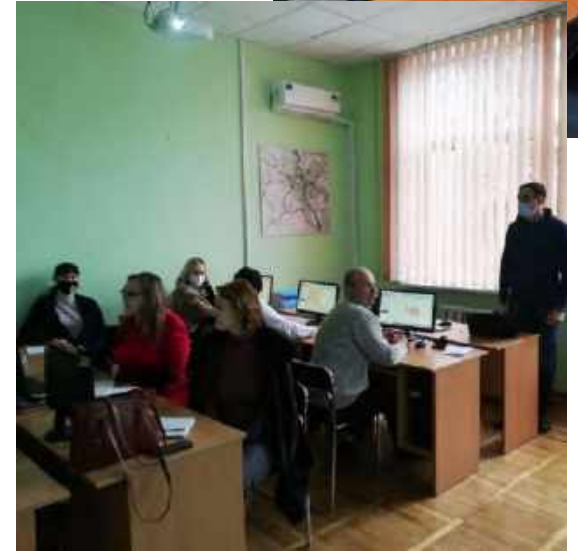
From 2018 to 2021, 9 meetings were held:

- "Institute of the General Plan of Kyiv" (2018,2019,2020)  
Transport modeling (PTV Vissim) and the use of its results in the development of the General plan of Kiev
- Department of the patrol police in Kyiv (2019)  
Practical activities to ensure road safety in Kiev
- A + S Consult GmBH (2019, 2020)  
Transport micromodeling algorithms using PTV Vissim software
- "Institute" Kievdormostproekt"(2019,2020,2021)  
Implementation of modern technologies for the design of transport infrastructure elements in the cities of Ukraine

"Institute" Kievdormostproekt"



A + S Consult GmBH



Institute of the General Plan of Kyiv

# Achievements (9)

## ► Department of Transport of Batumi meets local stakeholders

May 2018: Ministry of Economy of Adjara

May 2019: meeting with Ministry of Education

April 2020: meeting with Batumi Port

June 2020: Meeting with Employers,  
Maritime Transport Agency and  
City administration

March 2021: meeting with Port of  
Poti administration

June 2021: MoU signing ceremony  
with Ministry of Environment



# Achievements (10)

## ► Georgian Technical University meets stakeholders

May 2018: meeting with Ministry of Education

March 2019: meeting with Ministry of Regional  
Development

October 2020: meeting with Tbilisi City Hall

December 2020: Meeting with Employers of Land Transport Agency

March 2021: meeting with local transport research organizations





# Setting up SmaLog Networks

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## What:

- ▶ Build an international and national coordinated university research network on smart transport and logistics for cities involving local universities in the wider European network of research centres and universities
- ▶ Involvement of PC Universities in international smart transport and logistics for cities research

## How we get there:

- ▶ Involving the participation in high level conferences/workshops on smart transport and logistics for cities
- ▶ Submitting research works to high level journals
- ▶ Participation in exchanges of teachers/staff
- ▶ Starting PhD course accreditation involving foreign professors



# Achievements (1)

- ▶ Participation in high level conference on transportation and advanced educational issues
- ▶ Publishing in high impacting journal indexed in Scopus and WoS
- ▶ Participation in Fulbright Programme



# Achievements (2)

- Active involvement in thematic workshops were organised jointly with international (e.g. from Australia, China, Norway) experts on smart transport and logistics for cities







# Achievement (3)

## ► Agreements of cultural and scientific collaboration between each partner country HEIs and programme country HEIs

**GENERAL AGREEMENT OF CULTURAL AND SCIENTIFIC COLLABORATION**

**TOR VERGATA UNIVERSITY OF ROME**

**AND**

**LEPL TEACHING UNIVERSITY-BATUMI STATE MARITIME ACADEMY (BATUMI, GEORGIA)**

The University of Rome Tor Vergata, represented by the Rector Prof. Grazio Schillaci and the LEPL Teaching University-Batumi State Maritime Academy (Batumi, Georgia), represented by its Rector, Prof. Irakli Shorabidze, considering that the development of a cultural and direct scientific collaboration would be of mutual advantage to both institutions, agree to the following:

**Article 1:** Research and teaching collaboration of common interest will be activated.

Such a collaboration will be effected on terms of equality and of reciprocal advantage, allowing the possibility of defining other research areas by mutual consent, in view, however, of the possibilities available as well as of the experience acquired by the scholars of the institutions.

**Article 2:** In order to achieve the aims under Article 1, collaboration may be effected as follows:

- exchange of visit by experts;
- exchange of information, documentation and scientific publications;
- study meetings, seminars and courses on subject matters foreseen by the Agreement;
- exchange of researchers and teachers for period of teaching;
- exchange of students (graduate, PhD and postgraduate, Clinical Fellowship);
- exchange of administrative staff;
- joint implementation of research projects;
- drawing up of common study programmes aiming at joint degrees at all levels, recognized by both institutions;

**Article 3:** For the realization of points outlined in article 2, the reciprocal exchange of scientific staff is foreseen.

**GENERAL AGREEMENT OF CULTURAL AND SCIENTIFIC COLLABORATION**

**BETWEEN**

**THE UNIVERSITY OF ROME TOR VERGATA**

**AND**

**LVIV POLYTECHNIC NATIONAL UNIVERSITY**

The University of Rome Tor Vergata, represented by the Rector Prof. Grazio Schillaci and the Lviv Polytechnic National University, represented by the Rector Prof. Olexandr Shorabidze, considering that the development of a cultural and direct scientific collaboration would be of mutual advantage to both institutions, agree to the following:

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The expenses are to be met by the institutions, according to regulations.

**Memorandum of Understanding**

Between the University of Rome Tor Vergata and the Lviv Polytechnic National University

The University of Rome Tor Vergata, represented by the Rector Prof. Grazio Schillaci and the Lviv Polytechnic National University, represented by the Rector Prof. Olexandr Shorabidze, considering that the development of a cultural and direct scientific collaboration would be of mutual advantage to both institutions, agree to the following:

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# Are we closer to the target?

to strengthen the role of telematics in  
transport services for improving city  
sustainability and liveability

SmaLog  
Masters

Train the  
Trainer

SmaLog  
Laboratories

Newsletters,  
events,  
workshops &  
seminars  
(dissemination)

Setting up  
Smart Transport &  
Logistics networks  
IQAS  
Internalisation  
strategy  
(exploitation)



# Questions?

Tribute to our colleague Manfred



► A very big **THANK YOU!**

Дякую

Grazie

Dziękuję Ci



მადლობა

Dankeschön

# Contacts

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



[info@smalog.uniroma2.it](mailto:info@smalog.uniroma2.it)



Contact person (coordinator):  
Prof. Antonio Comi

[comi@ing.uniroma2.it](mailto:comi@ing.uniroma2.it)



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<https://twitter.com/smalog2017>

