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1.1. The project summary

Project Number ¹	823952	Project Acronym ²	TREND
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One form per project

General information	
Project title ³	Transition with Resilience for Evolutionary Development
Starting date ⁴	01/06/2019
Duration in months ⁵	48
Call (part) identifier ⁶	H2020-MSCA-RISE-2018
Topic	MSCA-RISE-2018 Research and Innovation Staff Exchange
Fixed EC Keywords	Research & open innovation, competitiveness, Urban sociology, urban theory, urban studies, global cities, territorialisation, Economic geography, Scientific computing and data processing, Urban and regional economics
Free keywords	Evolutionary economy, Spatial Planning, Innovation, Building Resilience, Open access
Abstract ⁷	
<p>The joint Exchange programme is based on a research proposal finalized at strengthening the regional capabilities in triggering, implementing and managing Transition Management (TM) strategies towards driving “resilience-building” processes. The main aim is to combine Transition with Resilience for Evolutionary Development (TREND) of different territorial contexts. It is expected to produce a novel concept encompassing “resilience-building” processes and Transition Management strategies based on the Evolutionary Economy’s assumptions. The TREND analysis will draft from the preceding MAPS-LED project, which pointed out the territorial dimension of the innovation. As an outcome, three levels of spatial investigation are distinguished within the EU-US broader contexts: I) Internal areas, II) Leading regions, III) Regions in transition. Moreover, the diagnosis will assess the potential drivers of TM strategies including: I) territorial milieu, as successful factor assessed in preceding MAPS-LED and CLUDS projects; ii) resilience, conceived as the ability of systems –people, communities, ecosystems, nations – to generate new ways of operating new systemic relationships; iii) crisis, which hit local defined areas, conceived as opportunities, including: migration flows and economic crisis. Relying on the strong existing CLUDs research network and its International Doctorate URED, the TREND project is expected to add value to the current knowledge about regional economic diversification. By moving forward the MAPS-LED project’s outcomes concerning the Entrepreneurial Discovery Process (EDP) and the Knowledge Based Urban Regeneration (KBUR), the TREND will provide the Open Access Toolkit: a web platform accessible by community users, policy makers, investors and financial stakeholders. The Open Access Toolkit will provide a set of indicators regarding 1) context, 2) result, 3) performance as metrics of resilience-building process within TM strategies.</p>	

1.2. List of Beneficiaries

Project Number ¹	823952	Project Acronym ²	TREND
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List of Beneficiaries

No	Name	Short name	Country	Project entry month ⁸	Project exit month
1	UNIVERSITA DEGLI STUDI MEDITERRANEA DI REGGIO CALABRIA	UNIRC	Italy	1	48
2	UNIVERSITEIT UTRECHT	UU	Netherlands	1	48
3	ARISTOTELIO PANEPISTIMIO THESSALONIKIS	AUTH	Greece	1	48
4	UNIVERSITA DEGLI STUDI DI PALERMO	UNIPA	Italy	1	48

1.3. Workplan Tables - Detailed implementation



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1.3.1. WT1 List of work packages

WP Number ⁹	WP Title	Lead beneficiary ¹⁰	Start month ¹²	End month ¹³
WP1	Transition Management and Resilience” in the Evolutionary Economy Perspective	2 - UU	1	12
WP2	Transition Management and Spatial Planning: towards a new territorial dimension of the Cohesion Policy	1 - UNIRC	13	24
WP3	Responses to external shocks: case study analysis through a resilience perspective	3 - AUTH	25	36
WP4	Open access Toolkit: a new gateway for regional transition policies	4 - UNIPA	37	48

1.3.2. WT2 list of deliverables

Deliverable Number¹⁴	Deliverable Title	WP number⁹	Lead beneficiary	Type¹⁵	Dissemination level¹⁶	Due Date (in months)¹⁷
D1.1	First Scientific Report "Evolutionary economics and Regional Resilience"	WP1	2 - UU	Report	Public	12
D1.2	WEB PLATFORM	WP1	1 - UNIRC	Websites, patents filling, etc.	Public	12
D1.3	Data Management Plan (DMP)	WP1	1 - UNIRC	ORDP: Open Research Data Pilot	Public	6
D2.1	Second Scientific report - Symposium Proceedings	WP2	1 - UNIRC	Report	Public	15
D2.2	1st Progress report	WP2	1 - UNIRC	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D2.3	Mid-term Meeting	WP2	1 - UNIRC	Other	Confidential, only for members of the consortium (including the Commission Services)	14
D3.1	Case Study Report	WP3	4 - UNIPA	Report	Public	25
D3.2	Third Scientific Report: Open Access Toolkit	WP3	3 - AUTH	Report	Public	33
D4.1	2nd Progress report	WP4	1 - UNIRC	Report	Public	37
D4.2	4th Scientific Report: Second Symposium proceedings	WP4	1 - UNIRC	Report	Public	39
D4.3	Final Case Study Report	WP4	2 - UU	Report	Public	45
D4.4	Open Access Toolkit	WP4	3 - AUTH	ORDP: Open Research Data Pilot	Public	48

1.3.3. WT3 Work package descriptions

Work package number ⁹	WP1	Lead beneficiary ¹⁰	2 - UU
Work package title	Transition Management and Resilience” in the Evolutionary Economy Perspective		
Start month	1	End month	12

Objectives

- O.1.1_ To build an assessment methodology suitable to disclose which are the drivers and hindrances mostly affecting Transitions and Resilience-building processes;
- O.1.2_ To build a panel of data on past development trajectories and transitions occurred, gathered through official open sources both in the US and in the EU, thus, keen to support a comparative analysis of the US and EU case studies through a shared set of indicators;
- O.1.3_ To allow the knowledge transfer among partners on economic diversification, regional economic resilience and transition management particularly during the kick-off and the 1st mid-term meeting and through the construction of the Web-Platform;
- O.1.4_ To train Early Stage Researchers on economic diversification, regional economic resilience and transition management by attending lectures at the NEU;
- O.1.5_ To disseminate the research goals throughout the larger stakeholders’ community through the open day, allowing to capture their specific needs and past experiences.

Description of work and role of partners

WP1 - Transition Management and Resilience” in the Evolutionary Economy Perspective [Months: 1-12] **UU**

WP1 concerns the background knowledge to build the conceptual framework. This is expected to produce a novel concept encompassing “resilience-building” processes and Transition Management strategies based on the Evolutionary Economy’s assumptions. Stemming from data concerning past transitions trends, the framework will identify main challenges and drivers concerning transitions. In so doing, it will pave the way to pursue ground- breaking objectives, to be achieved through a rigorous and evidence- based empirical work delivered in WP2 and WP3.

The work Package is organized in four activities: Research, Training, Dissemination and Management.

Research:

- Developing the transition management framework of evaluation.
- Building the preliminary set of indicators for analysing the case studies
- Building the research operational tools
- Selecting the case studies
- Knowledge sharing among EU and US Experienced Researchers through networking activities and the web-platforms

Training

- Training of the Early Stage Researchers through education on evolutionary economy, research and innovation, spatial planning and social innovation delivered at the NEUSEP
- Participation of ER and ESR – Kick-off meeting at PAU

Dissemination

- Participation of ER and ESR at the First International Workshop in Utrecht
- Participation of ER and ESR at international conferences to discuss the preliminary findings from the theoretical framework.

- Organization of the first Symposium at PAU

- Delivery of the Dissemination Plan

Communication

- Organization Kick-off meeting
- Delivery of the Communication plan
- Update of the Communication Plan

Management

- Organization of the first mid-term meeting
- Preparation of the inception report
- Preparation of the 1st WP deliverables

Task "1.1" (Utrecht, PAU, NEU)

- Total number of Person Months allocated = "10"
- To build a database suitable to highlight economic, social and environmental indicators which depict a dynamic trend in regional contexts. Regional S3 will be assessed in regard of their impacts

Task "1.2" (PAU, AUTH, NEU)

- Total number of Person Months allocated = "10"
- To estimate which are the indicators mostly featuring occurring trends keen to analyse the Transition Management strategies

Task "1.3" (UTRECHT, UNIPA, NEU)

- Total number of Person Months allocated = "10"
- To build an evaluation grid which gathers the sensitive indicators mostly affecting Transition Management and Resilience building processes unveiling hindrances and drivers in past transitions trends

Task "1.4" (ALL)

- Total number of Person Months allocated = "10"
- Construction of TREND web platform, suitable to be used as knowledge sharing means by all participants (restricted area) and the communication tool (open area) for the larger community

Task "1.5" (ALL)

- Total number of Person Months allocated = "10"
- Construction of TREND transferable methodology –based on comparative perspective of indicators

Task "1.6" (ALL)

- Total number of Person Months allocated = "12"
- Desk preliminary analysis of the case studies available based on qualitative and quantitative indicators assessment

Task "1.7" (ALL)

- Total number of Person Months allocated = "12"
- Construction of open Access Toolkit for the data gathering in particular using survey form and interview forms to gather qualitative case study data.

Task "1.8" (UTRECHT)

- Total number of Person Months allocated = "3"
- Dissemination of the WP1 Preliminary outcomes through the participation in international conferences for all researchers

Task "1.9" (PAU)

- Total number of Person Months allocated = "3"
- Delivery of Communication Plan, the first update of the Communication Plan and the Dissemination Plan

Task "1.10" (PAU)

- Total number of Person Months allocated = "3"
- Delivery of Inception Report, 1st Management Report, 1st Mid-term Meeting Report and Progress Report.

Participation per Partner

Partner number and short name ¹⁰
1 - UNIRC
2 - UU
3 - AUTH
4 - UNIPA
5 - NORTHEASTERN UNIVERSITY
6 - Louisiana Tech University

List of deliverables

Deliverable Number ¹⁴	Deliverable Title	Lead beneficiary	Type ¹⁵	Dissemination level ¹⁶	Due Date (in months) ¹⁷
D1.1	First Scientific Report "Evolutionary economics and Regional Resilience"	2 - UU	Report	Public	12
D1.2	WEB PLATFORM	1 - UNIRC	Websites, patents filling, etc.	Public	12
D1.3	Data Management Plan (DMP)	1 - UNIRC	ORDP: Open Research Data Pilot	Public	6

Description of deliverables

D1.1 : First Scientific Report "Evolutionary economics and Regional Resilience" [12]

The Scientific report contains the first result coming from the International Workshop and includes a preliminary set of indicators for analysing the case studies; a building block for research operational tools and selection of the case studies

D1.2 : WEB PLATFORM [12]

Construction of the TREND Web-platform, suitable to be used as knowledge sharing means by all participants (Consortium) and as communication tool (Public) for the larger community of interested stakeholders.

D1.3 : Data Management Plan (DMP) [6]

According with the Guidelines on FAIR Data Management in Horizon 2020, the data management plan will be organised, following the template, in 5 components: 1.Data summary; 2. Fair Data; 3 Allocation of resources; 4. Data Security; 5. Ethical aspects.

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS1	Kichoff Meeting	1 - UNIRC	1	The Kickoff meeting is addressed to: 1.organise the operational timetable of the research 2.discuss the theoretical framework for the research activities of WP1
MS2	1ST International WORKSHOP	2 - UU	4	An introductory meeting with academic sector, local stakeholders and public audience to: 1) present and promote the project; 2) intercept the demand for a transition management framework for lagging regions in post-2020 scenario; 3) investigate the hurdles and drivers of Resilience scenarios in urban contexts.

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS3	1st Assessment meeting	5 - NORTHEASTERN UNIVERSITY	9	The First Assessment Meeting is addressed to: 1. Training activities at Northeastern University 1- Selection of Case studies 2- Set up the contents of the scientific report. 3- Delivering of management report.
MS4	First Symposium	1 - UNIRC	12	The First Symposium will be organized within the 4th edition of Metropolitan Perspective Symposium at the University of Reggio Calabria. The Symposium will be structured according with the topics of the TREND project with a call for paper under peer review with the Procedia Elsevier Publisher. The objective is to disseminate the theoretical background of the main topics, namely Transition management, Resilience and Evolutionary development towards post 2020 perspective.

Work package number ⁹	WP2	Lead beneficiary ¹⁰	1 - UNIRC
Work package title	Transition Management and Spatial Planning: towards a new territorial dimension of the Cohesion Policy		
Start month	13	End month	24

Objectives

- O.2.1 _To build a sound and evidence-based methodology to assess territorial constraints and enabling factors toward transition policy making;
- O.2.2 _To allow the knowledge transfer among partners about: 1) the effect of the space on related/unrelated diversification, 2) the weight of the territorial aspects in regard of resilience building processes towards new equilibriums, 3) the role of the networks in supporting “path-resaping”;
- O.2.3 _To train Early Stage Researchers through the field work on case studies, delivered under the supervision of the staff at NEU and at LATECH.
- O.2.4 _To disseminate the research goals throughout the larger stakeholders’ community through midterm meetings, allowing to share and assess the preliminary findings.

Description of work and role of partners

WP2 - Transition Management and Spatial Planning: towards a new territorial dimension of the Cohesion Policy [Months: 13-24]

UNIRC

WP2 concerns the creation of an evidence- based and users- oriented framework, based on the selected case studies, with respect to the spatial factors and governance affecting the opportunities to set up local “path-resaping” processes. The work Package is organized in five activities: Research, Training, Dissemination, Communication and Management

Research:

- Implementing a preliminary methodology for mapping and assessing the case studies
- Data gathering
- Data analysis

Training

- Training of the EU Experiences Researchers through joined research work with US colleagues
- Training of the Early Stage Researchers through research field
- Undertaking analysis on the Boston case studies

Dissemination

- Updating the dissemination Plan
- Participation of ER and ESR in international conferences to discuss the preliminary findings from the Boston case studies

Communication

- Updating the communication plan
- Organisation of the Midterm Meeting with the participation of the Research Executive Agency (REA) official

Management

- Organization of the 2nd assessment meeting
- Preparation of the 2nd WP deliverables

Task "2.1" (PAU, UNIPA, AUTH)

- Total number of Person Months allocated = "18"
- Data gathering from the case studies selected in the WP1, conducted by implementing Social Network Analysis (regional networks, local and individual relatedness) as well as in-depth interviews, surveys and workshops

Task "2.2" (PAU, UTRECT, AUTH)

- Total number of Person Months allocated = "18"
- Data analysis conducted by the assessment of territorial aspects (GIS) based on spatial and organizational factors belonging to the transition management theoretical framework

Task "2.3" (ALL)

- Total number of Person Months allocated = "18"
- Reporting principal lessons learned from the case studies investigated in EU/US contexts to advance the construction of the open Access toolkit.

Task "2.4" (NEU, PAU)

- Total number of Person Months allocated = "18"
- Delivery of 2nd assessment meeting to discuss and assess preliminary findings from case study analysis

Task "2.5" (ALL)

- Total number of Person Months allocated = "18"
- Dissemination of the 2nd WP2 preliminary outcomes through the participation of researchers in international conferences.

Task "2.6" (PAU)

- Total number of Person Months allocated = "6"
- Delivery of 2nd Management Report, Periodic Report and the update of the Dissemination Plan

Task "2.7" (PAU-UNIPA)

- Total number of Person Months allocated = "9"
- Delivery of 2nd Scientific Repor – Symposium Proceedings

Participation per Partner

Partner number and short name ¹⁰
1 - UNIRC
2 - UU
3 - AUTH
4 - UNIPA
5 - NORTHEASTERN UNIVERSITY
6 - Louisiana Tech University

List of deliverables

Deliverable Number ¹⁴	Deliverable Title	Lead beneficiary	Type ¹⁵	Dissemination level ¹⁶	Due Date (in months) ¹⁷
D2.1	Second Scientific report - Symposium Proceedings	1 - UNIRC	Report	Public	15
D2.2	1st Progress report	1 - UNIRC	Report	Confidential, only for members of the consortium (including the Commission Services)	13
D2.3	Mid-term Meeting	1 - UNIRC	Other	Confidential, only for members of the consortium (including the Commission Services)	14

Description of deliverables

D2.1 : Second Scientific report - Symposium Proceedings [15]

The Symposium Proceedings will collect the selected papers accepted under peer review and presented during the 4th Edition of Metropolitan Perspectives Symposium.

D2.2 : 1st Progress report [13]

The progress report will be delivered according with the requirement of the RISE programme.

D2.3 : Mid-term Meeting [14]

The Mid-term Meeting, according with the GA, has the objectives: 1. To assess the general advancement of the project 2. To identify issues related to project implementation 3. To find the relevant solutions 4. To meet researchers seconded in the project 5. To make sure that all information provided to the PO before the meeting is accurate

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS5	First evaluation meeting	1 - UNIRC	13	The first evaluation meeting has the scope to deliver the periodic report.
MS6	2nd Assessment meeting	5 - NORTHEASTERN UNIVERSITY	16	The second Assessment meeting has the scope to organize the training and research activities at Northeastern University and to share knowledge among partners, researchers and phd students.
MS7	First progress meeting	6 - Louisiana Tech University	21	The progress meeting has the scope to organize the research and training activities at Louisiana Tech University, according with the result achieved in Boston.
MS8	3rd Assessment Meeting	6 - Louisiana Tech University	24	The Third assessment meeting has the objective to share the results of the first period .

Work package number ⁹	WP3	Lead beneficiary ¹⁰	3 - AUTH
Work package title	Responses to external shocks: case study analysis through a resilience perspective		
Start month	25	End month	36

Objectives

- O.3.1 _To test an evaluation framework suitable to discover how external shocks can provide latent opportunities to re-orient development trajectories;
- O.3.2 _To provide policy makers and planners with a tested methodology capable showing why the crisis, slow-burn processes and economic recessions can offer opportunities for re-orienting development trajectories, and how public investments can be efficiently addressed to kick-off recover strategies through windows of opportunities;
- O.3.3 _To allow the knowledge transfer among partners about the external shocks (crisis, slow-burn processes and economic recessions) can represent opportunities for re-orienting development trajectories particularly during the 3rd mid-term meeting;
- O.3.4 _To train Early Stage Researchers through the research work on testing the methodology;
- O.3.5 _To disseminate the research goals throughout the larger stakeholders' community through the 2nd workshop held at Thessaloniki (GR), allowing to share the research findings.

Description of work and role of partners

WP3 - Responses to external shocks: case study analysis through a resilience perspective [Months: 25-36]

AUTH

WP3 focuses on the opportunities to re-orient development trajectories in the aftermath of external shocks. It is expected to provide evidence-based guidelines.

The work Package is organized in five activities: Research, Training, Dissemination, Communication and Management Research:

- Adapt the Open Access Toolkit
- Apply the model to case study on transition management and resilience building

Training:

- Training of the EU Experiences Researchers through joined seminars with US colleagues
- Training of the Early Stage Researchers through research field work on the case studies

Dissemination

- Dissemination of the preliminary findings during the 2nd workshop
- Participation of ER and ESR in international conferences to discuss the preliminary findings from the case studies (Second Symposium)
- Updating dissemination plan

Communication

- Updating communication plan

Management

- Organisation of the 3rd Assessment meeting
- Organisation of the 2Nd Workshop Meeting (EU)

Organization of the second Symposium

- Preparation of the 3rd Scientific Report.

Task "3.1" (AUTH, PAU, UNIPA)

- Total number of Person Months allocated = "20"
- Development of the assessment open access toolkit, indicators and proxy values for each outcome of the case studies.

Task "3.2" (AUTH, UTRECHT, UNIPA)

- Total number of Person Months allocated = "18"
- Data Gathering and analysis to case studies with respect to resilience and shock analysis.

Task "3.3" (AUTH; PAU=

- Total number of Person Months allocated = "14"
- Updating the OpenAT in consideration of the principal lessons learned from the case studies investigated.

Task "3.4" (ALL)

- Total number of Person Months allocated = "10"
- Delivery of the 2nd Workshop to get local stakeholders feedbacks the Advanced findings of case studies

Task "3.5" (ALL)

- Total number of Person Months allocated = "10"
- Delivery of the 3rd Assessment meeting, to discuss and assess the preliminary findings from EU context

Task "3.6" (ALL)

- Total number of Person Months allocated = "10"
- Dissemination of the 3rd Scientific Report

Task "3.7" (PAU)

- Total number of Person Months allocated = "10"
- Preparation of the 3rd Mid Term Management report, Update Dissemination Report, Progress Report, Update Communication Plan, The Second Symposium

Participation per Partner

Partner number and short name ¹⁰
1 - UNIRC
2 - UU
3 - AUTH
4 - UNIPA
5 - NORTHEASTERN UNIVERSITY
6 - Louisiana Tech University

List of deliverables

Deliverable Number ¹⁴	Deliverable Title	Lead beneficiary	Type ¹⁵	Dissemination level ¹⁶	Due Date (in months) ¹⁷
D3.1	Case Study Report	4 - UNIPA	Report	Public	25
D3.2	Third Scientific Report: Open Access Toolkit	3 - AUTH	Report	Public	33

Description of deliverables

D3.1 : Case Study Report [25]

Report of case studies conducted during the first two years of the project

D3.2 : Third Scientific Report: Open Access Toolkit [33]

Principal insights from the case studies will enrich the Open Access toolkit providing keen indicators concerning territorial impacts on Transitions and Resilience-building processes.

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS9	2ND International WORKSHOP	3 - AUTH	25	The Second International workshop has the objective to disseminate the research findings from case studies and to present the main feature of the open access toolkit

Schedule of relevant Milestones

Milestone number¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS10	4th Assessment meeting	5 - NORTHEASTERN UNIVERSITY	28	1- Organizing the contents of the scientific report 2- delivering the management report 3- adjusting WP4 with regards of management and risk assessment
MS11	Second progress meeting	6 - Louisiana Tech University	33	The second progress meeting has the scope to organize the research and training activities at Louisiana Tech University, according with the result achieved in Boston. in particular this meeting has also the objective to organize each unit in participating to the second Symposium.
MS12	Second Symposium	1 - UNIRC	36	The Second Symposium will be organized within the 5th edition of Metropolitan Perspective Symposium at the University of Reggio Calabria. The Symposium will be structured according with the topics of the TREND project with a call for paper under peer review with the Procedia Elsevier Publisher. The objective is to disseminate the results and findings of the activities conducted for Transition management, Resilience and Evolutionary development towards post 2020 perspective.

Work package number ⁹	WP4	Lead beneficiary ¹⁰	4 - UNIPA
Work package title	Open access Toolkit: a new gateway for regional transition policies		
Start month	37	End month	48

Objectives

- O.4.1_ To refine the evidence-based methodology for recognizing and assessing potential opportunities to implement Transition Management strategies through urban/rural processes.
- O.4.2_ To test the Open Access Toolkit with its end-users (policy makers and planners) to support the decision- making process on building appropriate policy mix and activate Transition Management strategies.
- O.4.3_ To allow the knowledge transfer among partners the innovative methodology on TM strategies, particularly during the 3rd mid-term meeting, and the Symposium.
- O.4.4_ To disseminate the research goals throughout the larger stakeholders' community through the 4th workshop held at Palermo (GR).

Description of work and role of partners

WP4 - Open access Toolkit: a new gateway for regional transition policies [Months: 37-48]

UNIPA

WP4 concerns the interpretation of end-user's feedbacks and information towards the finalization of the open Access Toolkit, based on research results from WP2 and WP3.

The work Package is organized in four activities: Research, Training, Dissemination, Communication.

Research

- Finalising the Open Access toolkit.

Dissemination

- Dissemination of the preliminary findings during the FINAL Symposium
- Participation of ER and ESR in international conferences to discuss the findings and conclusions of the research

Communication

- Sharing findings and conclusions with the larger planners and policy makers community through the final workshop
- Implementing the communication tools according to the communication plan

Management

- Organisation of the 3rd Workshop Meeting (EU)
- Preparation of the Final Scientific Report.

Task "4.1" (All)

- Total number of Person Months allocated = "8"
- Defining the knowledge needed by the end-users to better introduce the open access toolkit technology into everyday lives

Task "4.2" (AUTH)

- Total number of Person Months allocated = "16"
- Refine the Open Access Toolkit to improve its user-friendliness by bridging the gap between Academic language and policy-making contributing to solving societal challenges

Task "4.3" (PAU)

- Total number of Person Months allocated = "4"
- Preparation of the final periodic report (PAU)

Task "4.4" (UNIPA)

- Total number of Person Months allocated = "10"
- Delivery of the 3rd workshop, during which to communicate with the local stakeholders the research findings

Task "4.5" (PAU)

- Total number of Person Months allocated = "4"
- Delivery of the Symposium Proceedings to share the research findings with the international larger community.

Task "4.6" (ALL)

- Total number of Person Months allocated = "4"
- Delivery of the result outcomes from Communication/Dissemination plans

Task "4.7" (UNIPA)

- Total number of Person Months allocated = "16"
- Preparation of the Lesson Learned Book for disseminating the final results.

Participation per Partner

Partner number and short name ¹⁰
1 - UNIRC
2 - UU
3 - AUTH
4 - UNIPA

List of deliverables

Deliverable Number ¹⁴	Deliverable Title	Lead beneficiary	Type ¹⁵	Dissemination level ¹⁶	Due Date (in months) ¹⁷
D4.1	2nd Progress report	1 - UNIRC	Report	Public	37
D4.2	4th Scientific Report: Second Symposium proceedings	1 - UNIRC	Report	Public	39
D4.3	Final Case Study Report	2 - UU	Report	Public	45
D4.4	Open Access Toolkit	3 - AUTH	ORDP: Open Research Data Pilot	Public	48

Description of deliverables

D4.1 : 2nd Progress report [37]
The progress report will be delivered according with the requirement of the RISE programme.

D4.2 : 4th Scientific Report: Second Symposium proceedings [39]
The Symposium Proceedings will collect the selected papers accepted under peer review and presented during the 5th Edition of Metropolitan Perspectives Symposium.

D4.3 : Final Case Study Report [45]
The Final case study report organizes the indicators suitable for the open access toolkit

D4.4 : Open Access Toolkit [48]
Output of the project: toolkit to steer TM strategies towards regional economic resilience

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
MS13	Second evaluation meeting	1 - UNIRC	37	The evaluation meeting has the scope to deliver the periodic report.
MS14	5th Assesment Meeting	5 - NORTHEASTERN UNIVERSITY	40	The 5th Assessment Meeting concerns the refinement of the assessment toolkit in basis of

Schedule of relevant Milestones

Milestone number ¹⁸	Milestone title	Lead beneficiary	Due Date (in months)	Means of verification
				end-user's feedback and needs assessed.
MS15	Third progress meeting	6 - Louisiana Tech University	45	The third progress meeting has the scope to organize the final results of the research activities for delivering towards the last international workshop in Palermo and for preparing the final periodic report.
MS16	3rd International WORKSHOP	4 - UNIPA	48	The 3rd International Workshop is the final event of the project in which the Open Access Toolkit will be tested among academic and non-academic sectors.

1.3.4. WT4 List of milestones

Milestone number ¹⁸	Milestone title	WP number ⁹	Lead beneficiary	Due Date (in months) ¹⁷	Means of verification
MS1	Kichoff Meeting	WP1	1 - UNIRC	1	The Kickoff meeting is addressed to: 1.organise the operational timetable of the research 2.discuss the theoretical framework for the research activities of WP1
MS2	1ST International WORKSHOP	WP1	2 - UU	4	An introductory meeting with academic sector, local stakeholders and public audience to: 1) present and promote the project; 2) intercept the demand for a transition management framework for lagging regions in post-2020 scenario; 3) investigate the hurdles and drivers of Resilience scenarios in urban contexts.
MS3	1st Assessment meeting	WP1	5 - NORTHEASTERN UNIVERSITY	9	The First Assessment Meeting is adressed to: 1. Training activities at Northeastern University 1- Selection of Case studies 2- Set up the contents of the scientific report. 3- Delivering of management report.
MS4	First Symposium	WP1	1 - UNIRC	12	The First Symposium will be organized within the 4th edition of Metropolitan Perspective Symposium at the University of Reggio Calabria. The Symposium will be structured according with the topics of the TREND project with a call for paper under peer review with the Procedia Elsevier Publisher. The objective is to disseminate the theoretical background of the main topics, namely Transition management, Resilience and Evolutionary development towards post 2020 perspective.
MS5	First evaluation meeting	WP2	1 - UNIRC	13	The first evaluation meeting has the scope to deliver the periodic report.
MS6	2nd Assessment meeting	WP2	5 - NORTHEASTERN UNIVERSITY	16	The second Assessment meeting has the scope to organize the training

Milestone number¹⁸	Milestone title	WP number⁹	Lead beneficiary	Due Date (in months)¹⁷	Means of verification
					and resaerch activities at Northaestern University and to share knowledge among partners, researchers and phd students.
MS7	First progress meeting	WP2	6 - Louisiana Tech University	21	The progress meeting has the scope to organize the research and training activities at Louisiana Tech University, according with the result achieved in Boston.
MS8	3rd Assessment Meeting	WP2	6 - Louisiana Tech University	24	The Third assessment meeting has the objective to share the results of the first period .
MS9	2ND International WORKSHOP	WP3	3 - AUTH	25	The Second International workshop has the objective to disseminate the research findings from case studies and to present the main feature of the open access toolkit
MS10	4th Assessment meeting	WP3	5 - NORTHEASTERN UNIVERSITY	28	1- Organizing the contents of the scientific report 2- delivering the management report 3- adjusting WP4 with regards of management and risk assessment
MS11	Second progress meeting	WP3	6 - Louisiana Tech University	33	The second progress meeting has the scope to organize the research and training activities at Louisiana Tech University, according with the result achieved in Boston. in particular this meeting has also the objective to organize each unit in partecipating to the second Symposium.
MS12	Second Symposium	WP3	1 - UNIRC	36	The Second Symposium will be organized within the 5th edition of Metropolitan Perspective Symposium at the University of Reggio Calabria. The Symposium will be structured according with the topics of the TREND project with a call for paper under peer review with the Procedia Elsevier Publisher. The objective is to disseminate the results and findings of the activities conducted for Transition management, Resilience and Evolutionary

Milestone number¹⁸	Milestone title	WP number⁹	Lead beneficiary	Due Date (in months)¹⁷	Means of verification
					development towards post 2020 perspective.
MS13	Second evaluation meeting	WP4	1 - UNIRC	37	The evaluation meeting has the scope to deliver the periodic report.
MS14	5th Assesment Meeting	WP4	5 - NORTHEASTERN UNIVERSITY	40	The 5th Assessment Meeting concerns the refinement of the assessment toolkit in basis of end-user's feedback and needs assessed.
MS15	Third prograss meeting	WP4	6 - Louisiana Tech University	45	The third progress meeting has the scope to organize the final results of the resaerch activities for delivering towards the last international workshop in Palermo and for preparing the final periodic report.
MS16	3rd International WORKSHOP	WP4	4 - UNIPA	48	The 3rd International Workshop is the final event of the project in which the Open Access Toolkit will be tested among academic and no academic sectors.

1.3.5. WT5 Critical Implementation risks and mitigation actions

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
1	Research Related: Low quality of scientific deliverables	WP1, WP2, WP3, WP4	The Consortium Agreement overlooks the scientific misconduct and research integrity seriously; hence, the dissemination of research activities along in gold open access or in green open access publications as in article 29.2 in Annotated Model Grant Agreement.
2	Management Related: Conflict among the partners	WP1, WP2, WP3, WP4	The Consortium Agreement will be signed among the Beneficiaries prior accepting the Grant Agreement. The Partnership Agreement will be signed among the Beneficiaries and the TC partners prior accepting the Grant Agreement. The two agreements will be legally binding documents clearing roles and rights of each single unit.
3	Management Related: Financial deviation	WP1, WP2, WP3	In case of low engagement of ERs or ESRs to be seconded. The Beneficiaries would set specific calls within research units to involve more PhD candidates and research fellows to join the project.
4	Dissemination Related: Low engagement of target in the events schedules	WP1, WP2, WP3, WP4	Elaborate on outreach plans to better engage audiences.
5	Deadlines are not respected	WP1, WP2, WP3, WP4	The Coordination Unit keeps track of all deadlines and sends reminders to partners through regular Communication tools.
6	Delay in the implementation of secondments	WP1, WP2, WP3, WP4	1. Secondments' implementation will be monitored by a designated person at the level of each participant. At project level, the Coordinator will organise Skype meetings every 1-2 months to discuss the monitoring of secondments and collect any information about possible identified delays at participants' level, both at sending and hosting institutions. On the other hand, each Participant takes responsibility that the secondments take place as planned and reports immediately or maximum 2 months prior to the scheduled secondment any possible deviation to the Coordinator. 2. Once a potential delay is identified, action plans will be agreed at Consortium level or by the Steering Committee (where is the case). The Coordinator will inform REA about the solution found. 3. For secondments in third countries, the beneficiary will identify in time the human resources to be seconded and the necessity of visa. In order to avoid visa issues, administrative support and follow-up needs to be put in place several months prior to the scheduled secondment, so that the visa is obtained on time. 4. A chapter specifically dedicated to this risk and the method to implement upfront monitoring and continuous reporting will be included in the Consortium Agreement and in the Partnership Agreement accordingly.

Risk number	Description of risk	WP Number	Proposed risk-mitigation measures
7	Withdrawal of participants	WP1, WP2, WP3, WP4	-If possible, another participant from the consortium will carry out the tasks/WP of the withdrawing one. If not, a new entity with the same specific expertise could be included in the project upon agreement of REA.
8	Shortage of funding for third country partners	WP1, WP2, WP3, WP4	- Since only third country partners from specific countries can receive funding, the others will work to secure adequate actions (e.g.: national funds) and to ensure the transfer of knowledge for the activities they engaged in the proposal. A Partnership Agreement will be signed.
9	Delays in participants administrative achievements	WP1, WP2, WP4	- Workplan and guidelines, a set of procedures and templates to be available for all participants within the consortium
10	Staff turnover	WP1, WP2, WP3, WP4	- All participants will identify additional personnel with the necessary experience, not intended initially to be seconded in the project work, so that the risk is minimized.



**Marie Skłodowska-Curie Actions (MSCA)
Research and Innovation Staff Exchange (RISE)
H2020-MSCA-RISE-2018**

**Project Acronym: TREND – Project Number: 823952
Annex 1 to the Grant Agreement
(Description of the Action)
Part B**

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2. Excellence

2.1. Quality and credibility of the research/innovation project; level of novelty and appropriate consideration of inter/multidisciplinary, intersectoral and gender aspects

Specific objectives and the relevance of the research and innovation project to the scope of the call and in relation to the "state of art".

The joint Exchange programme is based on a research project integrated with a higher education agenda finalized at **strengthening the regional capabilities in triggering, implementing and managing Transition Management (TM) strategies towards driving “resilience-building” processes**. The main aim is to combine **Transition with Resilience for Evolutionary Development (TREnD)** in different territorial contexts towards a reforming process of **Cohesion Policy**. Relevantly, the **TREnD** project intends responding to the current debate concerning the post-2020 EU Cohesion policy as embedded in the following:

- *“Structural change across the EU requires a different policy and institutional focus on ‘ecosystems’ of open, interconnected networks of stakeholders, cooperating through strategic partnerships able to respond rapidly and flexibly to **technological, market and social changes**”;*
- *“The support of environment for such ecosystems will unavoidably need to be **tailored to specific national, regional or even local contexts**. Policy packages need to be integrated and coordinated, delivered at a national, regional and local levels, while being adapted to the needs of different territories”;*
- *“The **adaptation to the specific shocks** on regional economies generated by globalisation and market integration require differentiated (or place-based) strategies.” (Bachtler, Martins, Wostner and Zuber, 2017)*

The relevance of the research project lies in bridging **Resilience** as an ongoing process of change rather than a recovery to a (pre-existing or new) stable equilibrium state (Simmie and Martin, 2010) with **Diversification** as a leverage of regional resilience to absorb shocks and **Evolutionary Theory** based on “continuing and progressive change” (Krugman, 1996).

In this perspective, the innovative aspect stems from conceiving Transition Management (TM) as a keen strategical approach to translate the combination (Resilience, Diversification, Evolutionary Theory) into policy design and implementation. Hereinto few EU-funded projects have addressed TM in an environmental sustainability perspective. **TREnD is a ground-breaking proposal envisioning TM in the mentioned framework addressing regional economic diversification.**

The expected result of the research project lies in providing a platform in the shape of an Open Access Toolkit on the basis of capturing resilience and evolutionary path as policy designing factors. The Open Access Toolkit will provide a set of indicators regarding: 1) the context, 2) result, and 3) performance to best support the implementation of TM strategies in different regional/local contexts.

The proposal drafts from the preceding MAPS-LED project, which pointed out the territorial dimension of Innovation in Smart Specialization Strategy (S3) steering process and how S3 can be translated into spatially-oriented local development policies. Despite the novelty of the S3 concept, MAPS-LED highlighted how S3 implementation process needed an evolutionary approach to face continuous changes, crisis, and shocks.

Accordingly, the TREnD project reveals the need to diversify regional economic portfolio, which is deemed crucial by EU regions. The most advanced regions tend to minimize their own extent of being “path dependent” and so preventing the hazardous risk to fall into the “lock-in” phenomena. At the same time, the lagging regions seek to adopt the S3 towards filling the gap with their wealthier counterparts. Within this backdrop where the spatial development unevenness throughout Europe has been widening, the **TREnD** theoretical framework envisions the TM strategies as “co-evolving processes which progressively build up toward a revolutionary change on the long term” (Rotmans et al. 2001; Frantzeskaki and de Haan 2009; Loorbach 2010). By adopting the TM

strategies, the project seeks to leverage regional economic resilience: “the ability of a region or urban system to change its structure and function rapidly and successfully in response to a shock” (Simmie and Martin, 2010). This responsiveness is related to the capacity to develop new growth paths since the variety of industrial sectors works as a “shock-absorber” (Boschma, 2015).

Specifically, the research project seeks to:

1. identify and examine the factors enabling or hindering the Transitions strategies at a governance standpoint;
2. assess the territorial features critical to enable a resilient-building process;
3. unveils the unexploited potentials for “**re-shaping trajectories**” disclosed through the windows of local opportunities due to the external shocks regions are continuously exposed to.

The research proposal exploits and moves forward the findings of the MAPS-LED project, consistent with the connection of knowledge based urban development (**KBUD**) and Entrepreneurial Discovery Process (EDP). The MAPS-LED project demonstrated: a) innovation policy and urban planning act in a complementary way for supporting both knowledge dynamics and regeneration of local economy; b) case studies analysis from Boston, Cambridge and San Diego clusters allowed identifying the link between city planning initiatives and S3 by introducing the innovation-driven urban policy as an important phase of the EDP process.

Concurrently, **TREND** project harnesses “TM” as a medium for EDP by deepening the understanding of S3 in shaping the policies for regional economic development. The research project spreads knowledge about regional economic diversification by providing a platform in the shape of an **Open Access Toolkit** to policy-makers and policy-users (regional authorities, academics, stakeholders, and urban advocacy groups, etc.).

The TREnD partners will exchange staff members, early stage and experienced researchers around mid-yearly seminars/meetings, workshops, and a final international symposium. **The core of the network activity is driven by joint research activities on the following topics:**

- Innovation in transition management and resilience concept from an evolutionary economy lens;
- Innovation in transition management and spatial planning through a territorial dimension approach;
- Resilience Capacity building in the aftermath of external shocks.

The research project, based on the existing CLUDs research network of four EU and two US academic institutions, implemented in the preceding CLUDs IRSES and the Horizon 2020 MAPS-LED projects; brings forward further potential collaborations within the participating organizations. New first-tier HEIs, indeed, enrich the research network with their expertise portfolio to fit more with the project’s specificities. Furthermore, the TREND project will also add content and direction for the International Doctorate on Urban Regeneration and Economic Development (URED-IDP) set up under the CLUDs programme.

The partnership will be better equipped in selecting appropriate cases and steering evaluation framework which is critical for the outcome of the project: namely “Open Access toolkit”. Three Workshops will be held in USA partner universities one at the end of each of the first 3 years, in preparation of the final symposium. Four Meetings will be held in EU to disseminate and share results and to agree and prepare three midterm reports on specific and selected topics of the research.

The specific objectives of the Joint Exchange programme based on TREnD research project are:

1. Improving innovation and knowledge economy concerning regional economic diversification by testing and implementing a multi perspective approach to harness Transition Management strategies towards resilience-building processes;
2. Strengthening research partnerships through the mobility of researchers and technical staff by focusing on activities related to TREND on a variety of regional contexts;

3. Empowering the network of partners to exchange knowledge in the field of regional economic diversification, regional economic resilience and transition management by comparing USA approach to those deployed in the EU;
4. Improving expertise of the seconded researchers on S3 with respect to the regional governance, regional planning tools as well as on assessing techniques of potentials for “*Path re-shaping*” (especially with respect to external shocks) also by attaining training activities;
5. encouraging an exchange of best practice by knowledge transfer and pilot applied project on TREND approach;
6. encouraging dissemination activities by organizing midterm meetings, workshops and international symposium on intermediate and final results of the TREND research project.

The relevance of the joint exchange programme is twofold.

The former has been mentioned in terms of policy debate concerning the post-2020 scenario of the EU Cohesion Policy and the spatial development unevenness among the EU regions. Moreover, the project will take into account results and analysis of the study, concerning the future of Europe, to be adopted by the CoR plenary in 8-10 October 2018. Most of regional and local authorities “are in favour of reforming the current EU institutional set-up through strengthened multi-level governance” since, in their belief, “the strength of local and regional authorities lies in a unique proximity to citizens and the habit of involving a variety of actors in decision making to ensure optimal innovation and consensus”. Nonetheless, “resilience” and the urge to diversify are recalled in the 7th report of Cohesion policy released in 2017. In line with different development performance among EU regions, the **TREnD** project conveys 4 European universities representative of different governance perspectives.

The latter is related to the recent experience developed by main US cities in designing strategies toward resilience. The City of Boston has adopted a strategic Resilience plan in 2017 and, with the Imagine Boston 2030 Blue Print Plan adopted in 2016, concepts of adaptation and responsiveness of the policy are related to metrics useful for case study approach. Louisiana Tech University has recently experienced the Pierry Inc. Opens Innovation Hub, a New Pierry Office at the Tech Pointe Enterprise Campus with the aim of bringing Silicon Valley to North Louisiana.

Accordingly, the joint exchange programme pushes forward the knowledge in the field of transition management and resilience that are relevant topics brought underway towards post-2020 EU Cohesion policy.

Transition Management

The rationale behind TM aims at adjusting and adapting towards long-term solutions and defines it as “*a form of intelligent long-term planning through small steps based on learning and experimenting*” (Rotmans & Loorbach, 2010). By deploying an explorative and design-oriented approach, the TM moves at the crossing of complex systems with governance. It tends to generate participative co-evolution processes towards triggering broader scale innovations through small-scale actions. However, its complexity relies on the multiple domains, scales and levels transitions use to occur. In compliance with a cooperative ethos, the TM approach aims at engaging different actors in the context of policy making. Alike in the EDP process, the so-called “front runners” (individuals, companies, local governments) are considered catalysts for supporting the transition process by spreading in wider circles a shift in mind-set labelled as “transition visions”. Those front-runners are invited to take part at the “transition arenas” where stakeholders intervene upon a multi-level networks logic. In the early phase, the arenas are entitled to develop transition agendas (strategies and tactics) according to common beliefs shared by smaller groups of participants. Afterwards, broadening participatory process, they set operational and reflexive activities under a cyclical framework. During each cycle, TM-processes tend to contend with the regime assumed as “*the dominant culture, structure and practice embodied by physical and immaterial infrastructures*” (Loorbach, 2007) through four main steps of the cycle: *predevelopment*, *take-off*, *breakthrough* and *stabilization*. TM-processes generally take place under six phases: a) preparation & exploitation; b) problem structuring & envisioning; c) Backcasting, Pathways & Research Agenda; d) Experimenting & Implementing; e) Monitoring & Evaluation (Frantzeskaki, N. et al., 2011). TM

processes tend to promote the emergence of niches intended as “*potential sources of radical system changes (e.g. establishment of a new regime), TM aims to provide niche actors with the space and resources for experimentation*” (Rauschmayer, Bauler, & Schöpke; 2015). Consequently, “*such niches protect radical innovations against market selection and institutional pressures from a regime and allow actors to learn about these novelties and their uses through experimentation*” (Boschma, 2017).

This high experimentalism endeavour by TM processes seems to well fit with need aforementioned: diversification and discover of new growth trajectories. However, the extreme adaptable nature of processes, the long-term period framework (minimum 25 years), and the high variety of variables affecting the strategies might constitute relevant flaws of the TM concepts. In fact, TM processes do not explicit “*clear-cut objectives or normatively defined principles to steer the process of transition dynamics towards a more sustainable world*” (Rauschmayer, Bauler, & Schöpke; 2015). Shortcomings of the model concern the metrics regarding both the impact of the processes and the indicators for the shifts among phases (Rotmans & Loorbach, 2010). Finally, taking stock of past experiences, the large scale systemic changes due to TM still seem questionable (Loorbach, 2010).

Resilience

Regional economic resilience has been heralded as “the ability of a system to adapt, reorganize itself and change its path of growth” (Kakderi and Tasopoulou, 2017; Martin, 2012). This definition, among others, embeds the Schumpeterian belief which rejects equilibrium-based economic approaches. In fact, the concept has recently been interpreted in an evolutionary perspective “as a permanent process of adjustment and change, and the positive contribution of change to structural improvements” (Wink, 2014). Alike the cluster life-cycle, resilience-building processes can be interpreted as continuous trade-off between a shift in the short run towards unfolding a new growth path, namely the “adaptation”, and the capacity of the system to adapt in the long term, marked as “adaptability” (Pike, Dawley and Tomaney; 2010). These two concepts along with the knowledge base inherent of the territory, seem critical to explain the nature of the regional economic variety, namely unrelated/related (Boschma, 2015). In fact, regional economic variety works as a “shock-absorber” and it is directly proportional to resilience at diminishing the local-input-output linkages (Martin, 2012) and, in turn, the exposure to the risk of “path-dependency”.

Despite a growing interest on the regional economic resilience, and its relevance in explaining “the capacity of a region to develop new growth path” (Boschma, 2015), the concept deserves to be better defined in respect with a time framework regarding the resilience processes, with their legacy from the past trajectories, their place-based metrics, their impact measurements.

The TREnD project’s rationale is **to provide critical mass to manage the continuing and progressive change by building a logical framework featuring metrics of Resilience and TM**. In this view, the project is expected to move forward the current state of the art by building an “**innovative bridge**” among the nature of diversification, the extent of “**resilience and TM**” processes implemented.

Drafting from the TREnD rationale, the involvement of each partner will reflect different aspects which will be aggregated to form the overall research project.

The USA partners include the Department of Economics (Northeastern University, MA) with respect to the regional diversification in US context and the Department of Innovation and Economic Development at Louisiana Tech University (Ruston, LA).

The EU partners who are involved in different aspects of the development of spatial planning and evaluation analysis of the transition management framework.

- **The Department of Heritage, Architecture and Urban Planning (PAU, University of Reggio Calabria, IT)** will focus on the evaluative framework of transition management and resilience-building through the knowledge-based urban development (KBUD) and Entrepreneurial Discovery Process (EDP); It will be linked to the **Institute for Research on Innovation and Services for Development (IRISS) of the National Research Council of Italy (CNR)** (IT) under the definition of “Entities with a legal or capital link”. This

consolidated cooperation was firstly launched under a MoU subscribed in 04/28/2011 within the framework of the CLUDs project, the fields of interests of this cooperation are: place-based regeneration processes and civic economics drivers; participatory-collaborative processes and stakeholders and network analysis; balanced and equitable local development with a specific focus on marginalized cultures and areas.

- **The Department of Economics, Business and Statistics (SEAS, University of Palermo, IT)** will advise other partners in the fields of statistics, management and business. Its focus would be in seizing windows of local opportunity to switch diversification towards new development trajectories in the aftermath of shocks (WP3).
- **The Department of Economic Geography (Utrecht University, NL)** would be specialized in researching on the relatedness, knowledge complexity and regional economic diversification in European regional contexts.
- **The School of Spatial Planning and Development (Aristotle University of Thessaloniki, GR)** will focus mainly on links between innovation ecosystems' characteristics and regional economic resilience and the development of an online open access innovation platform offering different visualisation capabilities of aspects related to resilience (OpenAT).

Methodological approach highlighting the types of research and innovation activities proposed and their originality.

The originality and innovation in the methodological approach stems from conceiving Transition Management (TM) as a keen strategical approach to translate the combination (Resilience, Diversification, Evolutionary Theory) into policy design and implementation. The research activities are expected to build the logical framework to introduce the metrics concerning Resilience and TM.

The research project will be developed during the first phase by considering the pulled-out results of Research and Innovation Strategies for Smart Specialisation (RIS 3) regional plans whose lifespan will end by 2020 and the findings of cluster analysis carried out from the MAPS-LED project in US context (Boston Metropolitan Statistical Area). Upon an evolutionary perspective, the analysis will be based on retrospective longitudinal studies addressing ongoing trends and, in a broader time framework, past or current transitions trends. The characterization of regions will be defined with a set of indicators (socio-economical) concerning the past development trajectories (e.g. Path-dependency) and the local degree to shift into a related/unrelated diversification.

The network of EU and US institutions, set up as an enrichment of the CLUDs and MAPS-LED projects, will investigate (through an exchange knowledge approach), how lessons from the clusters and from the current challenges on S3 in Europe can be highlighted from an evolutionary perspective.

The TREnd project will be conducted over two stages: both generating inputs for the definition of integrated actions and for building, incrementally over project lifetime, the structure of TM metrics connected to the Resilience building process to be implemented through the Open Access Toolkit (OpenAT). The OpenAT is conceived as a useful pilot guide for post 2020 cohesion policy. The experimental phase (second stage) of the OpenAT will involve three lagging regions and one leading region in Europe.

The general framework of the research programme will be organised across four main topics:

1. Evolutionary Economics *recognizing that the dynamic process due to innovation and research defines different equilibrium path that can be better explained by the territorial response.*

Past development trajectories (e.g. RIS3 for European case studies and US cluster); Relatedness; Variety; Local tacit Knowledge; Embeddedness in Territorial Knowledge dynamics;

2. Resilience *Factors related to the governance systems in terms of adaptive process*

Local and national policies; Institutional capacities; Rate of entrepreneurship; New firm formation in the region; Access to credit.

3. Transition Management *Strategic and tactic approach to response to shocks and crisis*

Time, Frame and scope of Transition; Screening of the policies and legislations in the relevant policy field/s; Networks; Composition of Transition Arenas; Windows of local opportunity disclosed in the aftermath of shocks;

4. Spatial Planning *the features that each context can express in different way*

Availability and Accessibility to Public urban areas; Availability and Accessibility to vacant spaces; Urban/regional link.

The research activities according with the four mentioned topics are structured into 4 phases.

The phases have the objective to correlate the theoretical approach stemming from the evolutionary economy topic with the necessity to give a practical explanation of resilience and transition in terms of indicators and metrics.

1. The first phase, indeed, will lead to unfold critical factors, drivers and hindrances, which define Transitions and “Resilience-building” processes. Upon an evolutionary perspective, the analysis will be based on retrospective longitudinal studies addressing ongoing trends and, in a broader time framework, past or current transitions trends both in EU and US. The characterization of regions will be defined upon a set of indicators (socio-economical) concerning the past development trajectories (e.g. Path-dependency) and the local degree to shift into a related/unrelated diversification.
2. Relying on this analysis, the second phase will unveil the impacts of the territorial aspects in regard of “resilience-building processes” towards new equilibriums, namely new patterns of territorial development. An evaluation framework to address study cases will be set up in both the US and the EU contexts. It will be rewarded much emphasis on governance aspects including: local networks, transition arenas, and role of external actors. Both qualitative and quantitative approaches will be implied to the case studies analysis which will be developed through data gathering (e.g. interviews and surveys) and data analysis (e.g. social network analysis). In addition, spatial analysis will be conducted to gauge the effect of the “space/place” on related/unrelated diversification through indicators, previously deducted from literature. These indicators will be projected into GIS mapping database to help link the theoretical framework to the Territorial/urban dimension of Cohesion policy in an evolutionary perspective.
3. The third phase will sketch out how external shocks can provide latent opportunities to re-orient local development trajectories. The case studies will be assessed according to the “*backcasting*” approach in order to fully exploit the window of local opportunity disclosed in the aftermath of shocks and to design TM.
4. The fourth phase will be incrementally developed over project lifetime to upgrade metrics of TM and Resilience building process to be implemented through the Open Access Toolkit.

Inter/multidisciplinary types of knowledge involved, where applicable.

The research project involves a diversity of beneficiaries and partners which allows a common ground for an interdisciplinary approach that collaboratively will work to developed knowledge transfer and sharing between the integrated team of the **TREnD project**. Resting on wide areas of Experience of research members as follows:

- Expertise on Spatial planning and regional planning;
- Expertise in Economic Geography and innovation strategies concerned with transition management;
- Expertise resilience capacity building and relatedness with regional economic diversification;
- Expertise in Urban contexts to transcend disciplines of resilience paradigms and urban challenges;
- Expertise on web-based platforms for policy advice and implementation offering knowledge-based policy advice.

The previously built network of long-term collaboration in the MAPS-LED and its’ graduate fellows and current international Doctoral students (URED-IDP) act as an essential part of team members that have formation in Economics, Spatial planning and urban regeneration. Moreover, the competency of new participating organizations (**PAU-AUTH-UTRECHT-SEAS-NEUSEP-LU**) ensure to bring forward an intra-sectorial knowledge-based economy and society.

Gender aspects in research activities

With respect to the European Commission Recommendations, the planning of activities is aimed at ensuring gender equality in three aspects: research team, decision-making panels, and a balanced dimension in research content. According to the Commission recommendations, the planning of activities is aimed at ensuring the 40% of the under-represented sex in all its expert groups, panels and committees, particularly under Horizon 2020. At this purpose, gender balance has been taken in account both in the composition of the single research groups of experts (**PAU: 2M/2F Utrecht: 3M AUTH: 3F SEAS: 2 M/1 F NEUSEP: 2M/1 F LU: 1M/2F**) and in the key-roles covered in the Consortium of Beneficiaries (2 f and 2 m as unit coordinators), by reaching the 50% among the beneficiaries and the 44% in the overall expert group. The overall coordinator of the research is female.

The ESR groups for the field work organization will be ensured to follow at least 45% of the under-represented sex in all single research groups.

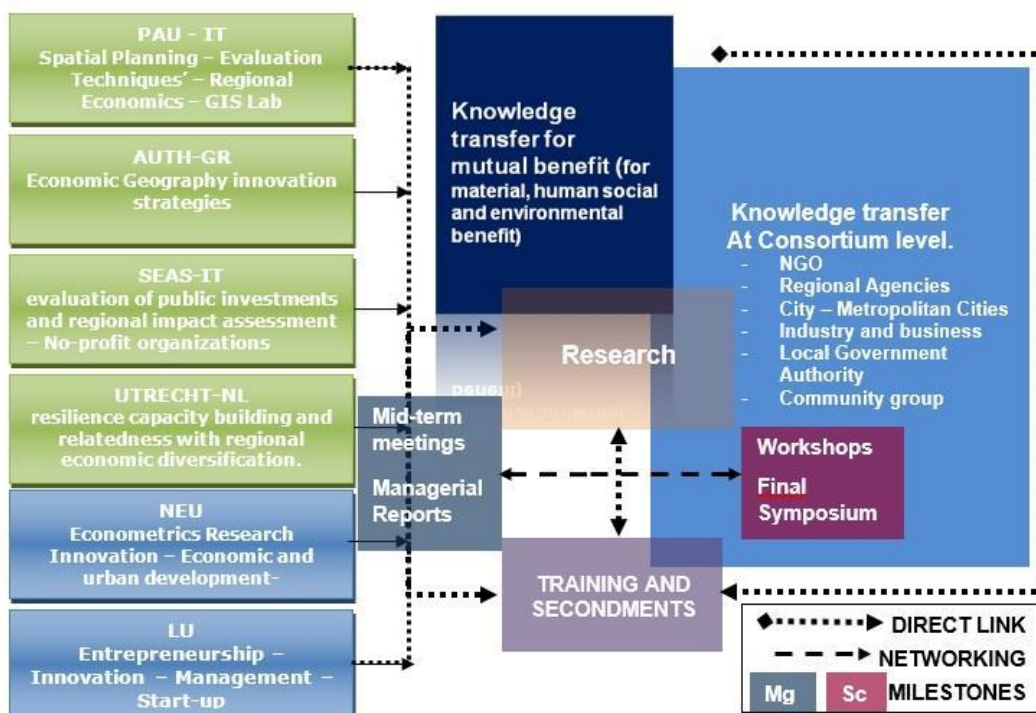
2.2. Quality and appropriateness of knowledge sharing among the participating organisations in light of the research and innovation objectives

Approach and methodology used for knowledge sharing.

The approach that will be followed in order to set up the knowledge sharing methodology aims at achieving the best result in terms of:

1. Strengthening the international network of Academic Partners collaboration;
2. Enhancing career opportunities of active research staff;
3. Maximizing the research impact in terms of the influence on policy makers and larger resilience and transition management community.

The multi-disciplinary approach of the **TREnD** Project requires a synergetic methodological framework between partners to pursue the knowledge transfer in an aligned manner with the cross-fertilization in planned secondments, workshops, mid-term meetings and research-related activities. That, at the heart of MSCA-RISE program, develops the skills of involved research staff (ERs and ESRs) to the highest quality of know-how to get transferred on person-to-person level, organizational level and at the system level. The following figure shows an appropriate approach and the methodology involving managerial and scientific milestones that will be used for knowledge sharing and transfer based on partners competences, experience and complementarity in the research project fields.



In compliance with the related methodology and the research project work packages, all the activities are subdivided in three sections research, training and secondments, communication and dissemination activities (*as defined in further sections 3.3 and 3.4*) as follows:

Research:

TREnD web-based Platform will be designed and constructed during the First work package of the project, in order to bring in conjunction partners and allow a constant interaction by posting on-line documents, research ideas, and working papers drafts. On a longer term, the platform will serve to construct the **open access toolkit** aimed to visualize the different indicators analysed from the case studies. At the heart of the platform, a streaming area will help partners to jointly connect through video conferences, follow-up meetings, and specific workshops and project deliverables. EU researchers, **jointly with US Partners, will write down papers and peer-reviewed Publications on comparative research issues**, to better disseminate the project internationally.

Training and secondments:

Early stage Researchers will be advised throughout their **secondment** periods by US partners' staff whereas Experienced researchers will ensure an adaptive knowledge sharing continuum. **Joint on-line meetings, workshops and mid-term meetings** will be organized, to ensure an increased set of skills, whether research-related or transferable-knowledge related in order to improve employability and career prospects to ERs. Hence, secondments will be allocated to EU researchers to better disseminate their work internationally and enhance the esteem of the Partnerships.

Knowledge transfer:

During Secondments periods, **TREnD ESRs from Beneficiaries (EU) working collaboratively with Academic partners (TC), on open-free-of-charge-access to end-user peer-reviewed scientific publications including: joint papers, Conference proceedings, open days Workshops and/or symposium manuscripts**. Meanwhile for the more experienced ERs, the carried R&I activities are expected to entrench their capacities to share and learn within the Consortium network as well as broader audience including: stakeholders, academics, policy-makers, grassroots organizations, and collaborative groups.

2.3. Quality of the proposed interaction between the participating organisations

Contribution of each participant in the activities planned

The principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, promoting open recruitment and attractive working conditions, are endorsed, and applied by all the partners. The Coordinator (PAU UNIT) includes –besides the scientific researchers- 1 Managerial Person and two Technical person who belong to the Research Office Administration of the University of Reggio Calabria.

The research team of each partner includes the following:

└ Beneficiary 1: PAU (IT)

8 ESRs are PhD students selected from the International Doctorate on Urban Regeneration and Economics Development, set up as a result of the CLUDs project IRSES 2010. **8 ERs** are subdivided into 5 researchers qualified in urban regeneration and economic development and 3 lecturers and professors with experience in economic policy and planning, evaluation of regional economics:

- expert in spatial planning, cluster policy and comparative research. Other staff from Reggio Calabria include:
- expert in GIS and Assessment methodology,
- expert in Rural Economic Development;

Entity with a legal link with the Beneficiary1: IRISS CNR (IT):

4 ERs who are experts in Urban planning, Local development; EU Cohesion policies, and Community engagement.

└ Beneficiary 2: UTRECHT (NL)

4 ESRs are PhD students and researchers in related topics to the research project; **4 ERs** are experts in Evolutionary economics and Knowledge transfer between regions, including:

- expert in regional economics, and innovation studies of regions and Society
- expert in Economic of urban transitions and Inter-organizational knowledge transfer, and Statistical models for network dynamics.
- expert on empirical innovation studies with focus on economic and technological transformation of urban regions through knowledge networks.

▢ **Beneficiary 3: AUTH (GR)**

4 ESRs are PhD students and researchers in related topics to the research project; **4 ERs** are experts in Urban and regional Innovation related to smart environments and systems, including:

- expert in multidimensional poverty and income inequality aspects related to urban sprawling processes
- expert in systems of innovation and smart innovation environments, economic resilience
- expert in computer science web technologies, and resilience.

▢ **Beneficiary 4: SEAS (IT)**

4 ESRs are PhD students and researchers in related topics to the research project; **4 ERs** are experts in Economic Geography and regional innovation policies, including:

- expert in Regional economy, access to funding, spin-off;
- expert in Regional economic modelling, local development, small business economics, evaluation of public investments and regional impact assessment;
- expert in No-profit organizations.

▢ **Partner 1: NEU (USA)**

- Expert in history of economic thought and institutionalist theory;
- Expert in econometrics, quantitative methods and regional economic assessment;
- Expert in labour market dynamics, public policy and urban affairs.

▢ **Partner 2: Louisiana Tech. (USA)**

- Expert in Business Accelerator, start-ups, technology commercialization, business development, and community partnership activities;
- Expert in assistance, management consulting, and educational opportunities for business innovators;
- Expert in entrepreneurship, self-employment opportunities.

The **TREnD** project is organized over two stages that generate inputs for the integrated action definition and the scenarios used to implement the project, and in particular the transition management approach. **The main networking activities will focus on supporting successful synergies between participating organizations in terms of cross-sectoral transfer of knowledge as well as planning and executing secondments.**

The first stage lasts three years and will deal with the theoretical part of the research and training activities. The second stage lasts one year and will deal with the practice and implementation part of the research.

Each stage has been structured in three common actions:

1. **Trainings** – related to the training activities the researchers should attain to develop the research project in form of secondments as e.g. courses, colloquia, conferences, etc.
2. **Meetings** – related to share common methodologies between partners and/or organizing research activities and respective tasks to develop the research project forward;
3. **Workshops** – related to exploitation, disseminating, and reporting of research results updates to targeted public audience and stakeholders.

With respect to the **networking** activities, those stages are designed to co-ordinate the different areas of expertise from Participating organizations and integrate the different strands of the Work Packages inline between the consortium. Activities will include:

• **Meetings (including the kick-off meeting) are mainly addressed to sharing knowledge among partners.**

These will strengthen the existing network of collaborators, set up originally under CLUDs and MAPS-LED projects. As well as reinforcing the long-lasting collaboration of participating institutions, by advancing innovative concepts concerning transition management and resilience. It

will also help the individual researchers by increasing international exposure, thus enhancing their potential in terms of career perspective. Furthermore, the meetings will address all the issues concerning the administrative and financial management of the research. **In particular, the meetings** will allow for the provision of direct feedback from the Research Executive Agency (REA) Project Officer, that will be invited to participate.

- **Workshops and the symposiums are mainly addressed to both partners and stakeholders interested in implementing the research results.**

This will enhance the potential impact of the research on the potential end-users by involving them not only at the dissemination stage, but also during the mid-term assessment stages of the research process. In this way, it will be possible to ensure that the best use of the research findings will be completed, by actively engaging the decision-makers throughout the whole research process to incorporate their specific needs for knowledge. As planned to be taking place periodically, every 6 months, will ensure an involvement from wider R&I community to generate a better expansion towards targeted peers of scientific, professional organizations and policy-makers, etc.

- **Dissemination and Communication Plan.**

The following *sections 3.3 and 3.4* explain in detail the Dissemination and Communication plans put in place to better advance the research Project outcomes; moreover, the network of collaboration between partners will allow a greater dissemination and Communication outreach. Working closely, partners are committed to ensure their results are collected and envisioned back into at the scientific community and the larger society. The main aim to better tailor-based transition plans that could be used by policy-makers and policy-users (regional authorities, academics, stakeholders, and urban advocacy groups, etc.). Hence, the main networking activities will basically focus on exposing the research activities to a larger scientific and civil community to better showcase to EU funding.

3. Impact

3.1. Enhancing the potential and future career perspectives of the staff members

Action contributes to realising the potential of individuals and provides new skills, enhances their knowledge and career perspectives.

The main goal of the research in terms of expected impact concerns the **construction of the Open Access Toolkit for the European Post-2020 Cohesion Policy**. The CLUDs projects funded by IRSES provided the origins and the preliminary cornerstone findings for the proposed network of MAPS-LED academic partners. Based on the preceding projects, **TREnD** relies on a network enriched in terms of expertise, experience and research capacity. The partners represent an internationally acknowledged interdisciplinary team who will capture stakeholder and policy maker attention in the timely topics debated.

The Open Access Toolkit for the European post-2020 Cohesion Policy is expected to enhance the regional administrative capabilities to trigger, implement and manage Transition strategies towards resilient-building processes. In a broader view, **the OpenAT will work as a “capacity building” tool towards spreading social innovation**. Nonetheless, a more reactive and responsive public administration is largely needed in a knowledge-based society to increase higher impact R&I outputs, leverage more knowledge and ideas converting into products and services.

Along with the expected impact to build the mentioned **OpenAT**, the International Doctorate plays the role of moving forward the process of strengthening stakeholders' involvement and decision-makers' engagement. In fact, the International Doctorate in Urban Regeneration and Local Economic Development (URED), hosted by the University Mediterranea of Reggio Calabria, as part of the Axis 5 (Internationalisation) of the ESF 2007-2013 adds a further prestigious dimension to the programme. Under preceding projects, more than 30 Early Stage researchers could exploit the opportunity offered by the combination of Horizon 2020-funded project and the URED program.

Nonetheless, the International Doctorate is open to all European young researchers through transparent and merit-based recruitment in line with the ERA requirements from the communication COM (2012) 392 final. It started as a pilot experience of synergy between IRSES and Cohesion Funds – ESF, as well as an example of the potential impact of the research in terms of stakeholder network activation and engagement, having included several stakeholders beyond the Region of Calabria including: the local Chamber of Commerce, the City of Reggio Calabria, as well as international practitioners of urban planning field.

Consistently, the **TREnD project**, and the network of academic partners will widen the international fields of expertise from regional economic diversification to knowledge and innovation within transition management strategies oriented to the place-based resilience building processes. This will enhance the potential of participants due to the new skills acquired in terms of innovative and cutting-edge tools that will be introduced within the educational path of the PhD international students.

The **TREnD project** envisions to provide new skills and boost career perspectives, through the creation as well as the implementation of the **Open Access Toolkit**, that would give exposure to the research work of all researchers. Moreover, TREnD researchers will be involved in defining the knowledge needed by the end-users to better introduce the open access toolkit technology into everyday lives. Therefore, young researchers would leverage knowledge acquired to inform and assist Regional and Local development officers.

The Open Access Toolkit for post 2020 European Cohesion Policy, would not only give exposure to the research but also provide the researchers with an **excellent leverage means for enhancing the impact of their research outcomes**.

the innovative competencies that could **both: 1)** be included in the delivery of **improved educational path for the International Doctorate students**, and **2)** implemented as **spin-off** across academic institutions and potential users: **a) Policy makers and decision makers involved in Cohesion Policy implementation; b). Regional and Local development officers;** c) local Development Associations and Groups of Interest (e.g. Grassroots organizations) related to the territorial development and in particular to the implementation of Transition strategies resilience-oriented; b) SMEs potential candidates as “front-runners”, keen to develop breakthrough technologies; d) transboundary actors interested in taking part at cross-cutting “arenas” (e.g. networks) for driving diversification; d) Professionals serving as consultants of the groups listed above.

Another important source of Enhancing the potential and future career perspectives is related to the international breath of the work that researchers would keep on feeding thanks to the secondments and network activities, by producing joined papers and publication and rising their international profile, thanks also to the cross-fertilization between disciplines covered by the **TREnD project**.

3.2. Developing new and lasting research collaborations, achieving transfer of knowledge between participating organisations and contribution to improving research and innovation potential at the European and global levels

The CLUDs network activated a virtuous process within the partnership, which drew in a number of associated researchers from institutions including Louisiana University, the University of Arlington, Texas and the University of California San Diego. MAPS-LED project reinforced the previous collaborative networks by adding new partnerships with the **ThinkLab** from University of Salford (UK) as well as the Italian Consulate in Boston (MA). Based on this international and intersectoral cooperative networks, and considering the new academic partners who joined the project, it is reasonable to expect **TREnD project** will build up new and enduring research collaborations.

Furthermore, the R&I capacities among partners will be cross-fertilized considering the transdisciplinary profile of the consortium, the intersectoral and/or international secondments and the networking activities implemented. In fact, the synergetic meshing of these exchange activities - meant to boost international, interdisciplinary and intersectoral mobility of researchers in Europe - and the focusing effect of the joint research and training activities – heightening European human

capital base in R&I - that bind the efforts within the **TREnD** project so effectively together. **TREnD** robust network will inspire new and lasting R&I innovation throughout Europe by appropriate dissemination/communication activities and 4 main networking activities scheduled to be held in Europe. Those events will be keen to gather attention from the European academic community and, in turn, seeding the evolutionary approach in a cross-cutting pathway.

3.3. Quality of the proposed measures to exploit and disseminate the project results

Dissemination strategy - targeted at scientists, potential users and to the wider research and innovation community - to achieve the potential impact of the project. Dissemination strategy, outreach plan and the activities envisaged to engage the public.

TREnD Dissemination strategy is going to be handled by an experienced Project Coordinator, working closely with the Partners. The goals of dissemination strategy are: a) Disseminate research as widely as possible; b) Develop messages which might work in different contexts: press releases, reports, newspaper articles, website page, etc., in order to achieve the higher impact on the broader community; c) Influence specific policies or policymakers around key aspects; d) Encourage participation among researchers; e) set up a consistent communication strategy which comply with the EC regulations and EU platforms ; f) Integrate the dissemination strategy into the self-evaluation process of the research implementation; g) Provide first clues on the potential impacts of the research results.

Main elements of the dissemination strategy include:

- A **dissemination plan** scheduled to be released in the 6th month of the project and further being updated iteratively on *18th, 30th and 42nd month* of the project, to ensure ongoing mixed-adjustments and maximize **TREnD** scientific activities' outreach;
- High-profile scientific **publications in open-access journals**, a **book** encompassing "TREnD lessons learnt" will be printed by the end of the project, and the publication of a **special issue** in a peer-reviewed journal related to the Symposium;
- Activities targeted at scientific community including meetings and conferences. In fact, **two Symposium** with conference proceedings, **three workshops**, and are scheduled to be held within **TREnD** dissemination activities. Those events – held both in EU and US – will: 1) stimulate further scientific debate involving academic representatives from HEIs in/outside of the networks; 2) allow researchers to gather feedbacks that can be potentially implemented as inputs for making the research strategy more context aware. 3) influence decision makers and policymakers around the novel concepts developed under the **TREnD** research;
- **the TREnD website**, Social Media customized channels (e.g. FB, Twitter, Youtube etc), e-newsletter, press releases, brochure, flyers will be deployed as main dissemination tools.

Expected impact of the proposed measures (e.g. addressing societal needs/challenges).

The latter objective is keen to fully exploit the impact of the **TREnD** project: the creation and the implementation of the **OpenAT** to strategize TM to trigger "resilience-building" processes towards regional economic diversification. The events will be targeted to the **OpenAT** end-users - the regional administrative officials - as well as grassroots organizations, professional organizations and practitioners suitable to take part at TM strategies. Moreover, all **TREnD** researchers will be committed to present papers in international conferences and peer review open-access journals, allowing the research results spreading internationally and their quotation increasing. Nonetheless, the international symposium will be related to the publication of a special issue in a peer-reviewed journal, as experienced previously in the two EU-funded preceding projects, namely MAPS-LED and CLUDs. Dissemination activities will be advertised through **the TREnD website**, Social Media customized channels (e.g. FB, Twitter, Youtube etc), e-newsletter, press releases, brochure, flyers. The tools will be adopted and tailored, through appropriate design and graphics, to better communicate the research activities and their results.

The planned measures for dissemination and outreach will lead to the following impacts:

- ❑ Through high-profile scientific publications in open-access journals MSCA will provide fellow researchers with a detailed insight into the progress being made by the TREnD project;
- ❑ Through the Web site, partners will be able to deliver up-to date information about ongoing research activities;
- ❑ MSCA fellows will create videoclips - permanently stored in Youtube project channel - spreading knowledge about their added-value gathered through participating at an exchange research project;
- ❑ Through the social media, **MSCA-RISE fellows** will extend internationally the outreach of dissemination activities as experienced with preceding projects.

Intellectual property rights aspects (if applicable) and exploitation of results.

Intellectual Property Rights (IPRs) management, including joint ownership, transfers of ownership provision and rules on access rights, would be ruled by the Consortium agreement to be signed by TC partners and Beneficiaries.

Exploitation of results from the TREnD research is expected to happen particularly within the Cohesion Policy post 2020, as follows:

- Insights from the TREnD assessment methodology could steer evaluation of S3 policies throughout all European Member States, thus contributing to make the Cohesion Fund expenditure more effective in the post-2020 scenario;
- Lessons learned on TM strategies and Resilience processes could be embedded in the construction and delivery of operational Joint Action Plans for the S3 implementation, by supporting a better focused strategy on target areas and on measurable objective;
- Lessons learned on windows of local opportunity could orient the implementation of TM strategies in both rural areas and the urban areas.

3.4. Quality of the proposed measures to communicate the project activities to different target audiences

Communication strategy, outreach plan and the activities envisaged to engage the public

TREnD Communication strategy is conceived to engage different audiences, including:

❖ **scientific community, policy makers and technical audience**

During the workshops, conferences and meetings scheduled, few sessions will feature **TED-style** talk to engage wider non-technical audience. The aim is to outreach young students and early professionals. Accordingly, the social media will be deployed to deliver up-to-date information about the projects. Moreover, MSCA fellows will attend public engagements with high-school students to boost the entrepreneurial culture among next generations.

❖ **non-technical audience across generations**

The activities as TED-style talk along with Social Media and juvenile graphic design brochures can effectively attract **younger audience**. At same time, MSCA-RISE fellows are expected to engage **senior audience** by: 1) writing op-ed and articles to be published on local newspapers; 2) participating in local radio or TV programmes; attend public meetings with Local Groups of Interests.

Throughout the whole project timeline, contents will be spread:

- on monthly basis through updated Webpage, Social Media;
- on six months basis (for each event planned) through press-release, e-newsletter, press releases, brochure, flyers;
- on yearly basis through public meeting with high-school students, op-ed on local newspapers.

Expected impact of the proposed measures.

The expected impact of the proposed measure is related to the above-mentioned main goals of the dissemination and communication strategies, more in details:

1. Impact on career development. All researchers will participate at least in the two international Symposiums by having the opportunity to publish at least two paper in the peer reviewed special issue. Furthermore, researchers are expected to send collaborative papers drawing from the research activities at least once a year.

2. Impact on the context awareness of the research. Dissemination activities are expected to produce feedbacks to be implemented in the adjustment process of the research process.

Impact on the user's community. Communication and dissemination strategies are expected to reach the interested potential users both at a local level and at a European level, by eliciting outsiders' interest on possible novel application in the Cohesion Policy through the website and other communication means. It is expected that as the previous academic network was able to actively engage two relevant stakeholders that turned themselves into funders for further research related activities (such as, in particular, the international doctorate), the current TREnD project would capture the interest of new stakeholders in all the European countries involved, to **make possible an effective local activation strategy in all the involved institutions**.

The planned measures are embedded into the Communication plan which **is scheduled to be released in the 1st month of the project and further updated iteratively on 12th, 24th and 36th month** of the project, to ensure ongoing mixed-adjustments and maximize TREnD scientific activities' outreach. Finally, the TREnD website with a professional look-and-feel and user-friendly navigation. Allow at meeting the communication needs of a wide range of users (media, policymakers, researchers, etc.).

4. Implementation

4.1. Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

Consistency and adequacy of the work plan and the activities proposed to reach the action objectives (research/innovation activities, training, transfer of knowledge, etc.).

TREND project will use an iterative of interdisciplinary and multidisciplinary work plan with respect to transition management to boost resilience from an Evolutionary economy perspective.

The purpose would be to develop a coherent work plan that allocates resources properly for the research activities and secondments towards the effectiveness and achievement of objectives of the research project.

The aim is to develop, test and refine this approach in an incremental and continuous fashion between research, trainings of ERs and ESRs, and knowledge transfer approach. **WP1** sets the stage and provides the frame of reference from which to develop the conceptual framework and assessment methodology to integrate Transition and Resilience building policies. **WP2** and **WP3** are performed in sequence and from the core of cyclic approach, since they are mainly finalized to the case studies analysis for the potential of the implementation of the transition management in a tailored-based approach on the local contexts. At the start of each research cycle, the results and conclusions of the previous cycles are incorporated into the following working package. This leads to a continuous refinement of the conceptual framework and Assessment methodology to resilience building and Evolutionary economy into a Transition management tailored-planning.

By continuous evaluation and synthetization, (better seen in Workshops with Community involvement and Stakeholders, as well as, the Mid-term meetings that help the consortium to consistently review the planned research activities) the results of the research get casted into the **OpenAT** for the field practitioners and policy-makers. The final and last **WP4** is dedicated to the design, development and testing of an online open access toolkit which will allow dynamic visualisation of different indicators and datasets for different areas and periods of time, with the purpose to facilitate knowledge-based policy making towards territorial cohesion and regional development.

The **OpenAT** will be empowered by the decision of the consortium to be part of "Research Data Pilot - Article 29.3 – Open access to research data". The **Data Management Plan**, as derivable,

will follow the template provided by Guidelines on FAIR Data Management in Horizon 2020, by included the 5 important contents: Data Summary; Fair Data; Allocation of resources; Data Security and Ethical aspects.

In terms of Ethics, data collection from desk analysis will include open-web data and is not subject to confirmation or compliance with US and EU legislation as foreseen for data transfer to and from USA. Interviews and questionnaires will be conducted in compliance with the Ethical guidelines applicable both in EU and in the hosting institutions and -as under the CLUDs project and MAPS-LED research methodology- will not regard personal data nor political opinions.

Credibility and feasibility of the action through the activities proposed.

The **TREnD** is organized in 4 WPs in such a way as to build a conceptual and logical frame to organize the operational work in planning activities. The development of the research is based on the right number of planning secondments that allows the exchange of knowledge to reach the main objective of research. That is research and innovation transfer in the field TRANSITION MANAGEMENT and RESILIENCE BUILDING.

The Credibility of the project is enhanced with the strong collaboration of the Consortium Partners on previous research, that as well is ensured with a risk management strategy to mitigate any problems in the project whether managerial or scientific. In line with the WPs, the amount of work involved and the staff availability for secondments will be balanced to ensure a smooth knowledge transfer between partners and the overall network of collaboration. The Secondments are distributed among the WPs with respect to the activities and the number of ERs and ESRs involved.

The Feasibility of the project is gone through developing a balanced WPs programme based on the synergies between partners and the parallel System of Scientific and Managerial Deliverables, *as shown in the following chart*. That in line with the Objectives of the project to be developed into Deliverables and Milestones in a timely fashion. The consistency put into the planned activities helps facilitate and maximize the benefits of the research exchange secondments and producing measurable, quantified deliverables that can be readily assessed.

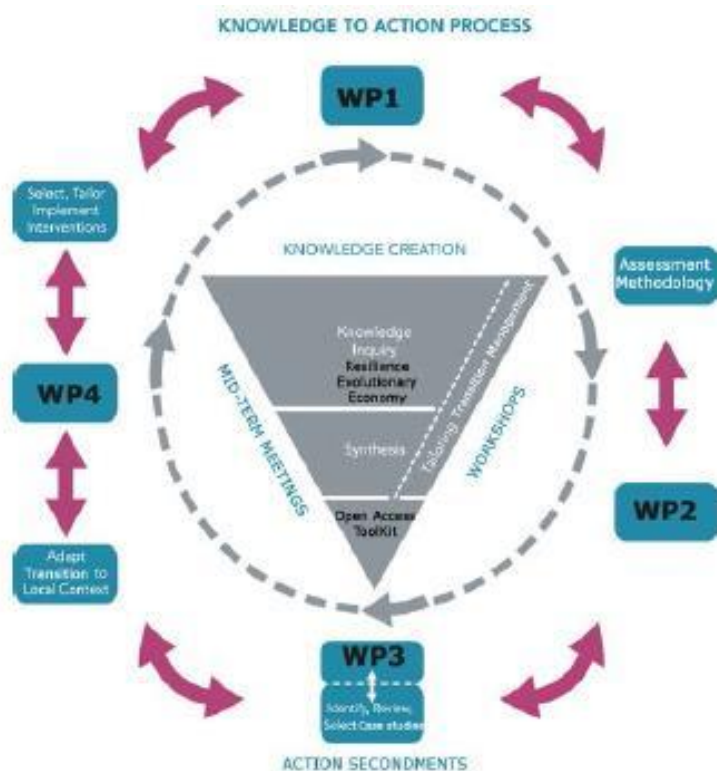
The organization of work-plan, articulated through the following milestones:

- 1 Kick off meeting keen to set the ground for upcoming research activities;

- the meetings suitable to periodically monitor, assess and – if necessary- adopt the mixed adjustments are set generally each 5 months.

- 3 workshops suitable to guarantee the ongoing dissemination of intermediate findings, to timely receive feedbacks from end-users and Stakeholders;

- 2 international Symposiums suitable to guarantee the communication and dissemination of the research findings to a higher scientific level of academics through the publication of conference proceedings.



4.2. Appropriateness of the management structures and procedures, including quality management and risk management

The **TREnD** project will be implemented following a **project management-oriented approach**, which will be based on the concept of the on-going evaluation aimed at monitoring, assessing and improving the research implementation process. The evaluation process of the achievement grade of the expected results, applied across the whole implementation phases of the research, responds to four fundamental objectives:

1. Minimizing the risk of turning from expected results and execute mitigation plans if needed;
2. Maximizing the quality of the research activities to reach the research results;
3. Maximizing the innovation grade reachable by the research project;
4. Increasing the research internationalization and dissemination.

The evaluation process is strongly based on a progress monitoring mechanism that will be tackled starting by the kick-off meeting. During the kick-off meeting (1st month) the **“first Management Report of the research project”** will be prepared by coordinators/WP leaders. It will be articulated on the basis of the work packages of the entire research. Moreover, each Work Package includes a **Managerial report** (else than Periodic Reports and Progress Reports As requested by Grant Agreements) that is responsible on following the track of changes of the research activities. These managerial reports planned to be yearly (*6th, 18th, 30, 42th and a Final Report*) to progress-monitoring the project, in particular, secondments timings, deliverables, Mixed adjustments between partners, as highlighted in Consortium Agreement.

The Report will include also specific planned Road Maps for each WP. The Road Map will define evaluation indicators settled to:

- a) Capture **implementation** risk and put in action mixed adjustments to guarantee the research objectives attainment.
- b) Define **implementation** tools by the configuration on innovative scenarios and new topics integration in the field of the research.
- c) Identify **knowledge transferability** criteria and revise the related secondments to facilitate the internationalization process of the research.

To support the management activities of the Road Maps, the Report will include the elaboration of the operative plan in form of a Gantt chart. The Gantt chart will include -for each WP- the information on activities such as: secondments timing, deliverables, milestones, critical points and resources involved.

Each road Map will include a section on **the Financial management strategy** that is undertaken by the Consortium and overlooked by the PAU Unit on behalf of Project Coordinator. The Operative plan of the research includes the Secondments implementation as well as the Mixed-adjustments to the action to reduce the risk and mitigate -if needed. However, the Coordinator's responsibility to liaise with respective financial administrative departments to ensure funds are correctly distributed to all partners in a timely fashion and better smoothen the Secondments implementation within Consortium.

Monitoring the Progress of the project will be organized as well in forms of Secondments reports. Each and every Secondment will result in a Secondment report to be submitted to Units Coordinators to keep track of research progress, secondments execution and information on the knowledge transfer between Beneficiaries (EU) and different partner organizations (in USA).

TREnD Project rests on a firm monitoring of risks and an embedded research quality approach. In addition to a clear, leanest-possible management structure, with the emphasis on Consortium responsibilities, team work collaboration and rapid communications to basically maintain the quality of research and managing the risk. The Coordinator PAU retains the final responsibility for the on-time delivery of all reports associated with the project to fulfil the Road Maps planned as below.

Road Map**Marie Curie action-code:**

Research and Innovation Staff Exchange (RISE)

Call identifier:

H2020-MSCA-RISE-2018

Section 1. Road Map – General information on the Grant Agreement

GRANT AGREEMENT	Project Title	Start Date	Acronym	Number	Ref. Ares	
DURATION IN MONTHS						
KEYWORDS						
ABSTRACT						
EUROPEAN PARTNERSHIP	Contact name		Organization/Institution			
USA PARTNERSHIP	Contact name		Organization/Institution			
FINAL RESULT						
GENERAL RULE OF RISE PROGRAMME						
FINANCIAL FRAMEWORK	Beneficiary/Participant org. Short Name	Staff to be exchanged (Total Number of - researcher-months)	Monthly exchange allowance costs per unit	Institutional cost per unit	Requested EC contribution	Grant Amount received by EC

Section 2. Road Map – Monitoring First midterm meeting

MONITORING MEASURE	Beneficiary/Partner Organization	Secondment	Research	Dissemination
PERFORMANCE/RESULT INDICATORS				
CONTRIBUTION TO THE GENERAL OBJECTIVE				
ACCOMPLISHED TASK				

Section3. Road Map – Management First midterm meeting

	Beneficiary/Partner Organization	Secondment	Research	Dissemination
LEVEL OF EXPECTED RESULT				
TRAINING AND NETWORKING ACTIVITIES Classes				
STRENGTHS				
WEAKNESS				
BEST PRACTICE				
MIXED ADJUSTMENTS				
FUNCTIONAL ORGANIZATION TO REACH THE OBJECTIVES				

Quality management, relating to the availability of adequate resources of the coordinating organisation in support of the day-to-day management of the project in accordance with the obligations described in the Grant Agreement.

An ongoing evaluation approach will be followed throughout the whole implementation process of the research project, by exploiting the potential of the mid-term meetings also in order to self-assess the latest results. External experts, in particular from the local stakeholders' community, will be invited, particularly during the open access toolkit testing and preliminary development phase.

The management plan of the exchange scheme is supposed:

- To ensure that the training activities are suitable to achieve the expected result within research programme;
- To ensure that the knowledge sharing process is feasible from the beginning of the activities;
- To encourage the efficient exploitation of research complementarities and synergies between the partners.

As concerns the first objective, the management plan will establish a system of local/host tutor who will be responsible of the ongoing training and research activities. To facilitate the management of these activities, midterm meetings will be held, almost each five months.

As concerns the second objective, the management plan will establish the construction of the Web-platform and the organization of the three workshops to be held at the start of the second, third and fourth year. The workshops will be open to a wider target audience and will focus on results focuses coming from midterm meetings; that ensures that the project monitoring cycles are bi-annually revised. The third and last objective is put in place within the **Road maps** to enhance the work organization and communication between USA partner organizations and EU beneficiaries.

4.3. Appropriateness of the institutional environment (hosting arrangements, infrastructure)

The availability of the expertise and human resources, to carry out the proposed research action as well as the hosting arrangements/infrastructure.

As testified by the two EU-funded projects managed, the PAU Department of Reggio Calabria (IT) can effectively play the role of Coordinator Unit. Following the coordination of the CLUDs and MAPS-LED projects, Prof. Carmelina Bevilacqua is the coordinator. She is assistant professor in urban planning and has strong experiences in evaluation of public investment within structural funds programmes (Operational Regional Programmes all through 2000-2006, 2007-2013 and 2014-2020 periods). She, indeed, is component of the Unit Evaluation of public Investment of Campania Region since 2001. She is expert in both programme and project evaluation and in the

assessment of public investment spatial effects at regional and local level. The role of Vice-coordinator of the International Doctorate Programme in Urban Regeneration and Economic Development allows at strengthening the synergy between Development policy at European, national and regional levels and Research Programme, by stimulating the phd students towards understanding how making effective the research in fostering the structural changes. The CLUDs Lab is a place where young researchers can find opportunities to enhance their competence in both research and applied management of financial resources for regional development under EU funds. Moreover, the AUTH Unit experienced participation at H2020-funded project regarding Smart Specialisation Strategies. In addition, the Utrecht Unit participated at the project “JPI Urban Europe” concerning ‘Resilient Cities’. Furthermore, eminent scholars from the Beneficiaries Units feature outstanding publications records which reflect scientific interests coherent with the proposal content. Based on those premises, the Beneficiaries possess certified scientific assets and research capacities to develop the project coherently with the objectives stated hereby.

The research project will be supported by the IRISS CNR as Entity with a capital or legal link, since 04/28/2011 according to the MoU subscribed by the parties in order to develop research exchanges within the framework of the CLUDs Project, under Marie Curie Action IRSES 2010 7FP.

The CNR mission is to enhance knowledge and technology transfer within local development policies at national and international level by developing applied research jointly with a world-wide research and academic network. Since its foundation, the territorial distribution of the CNR Institutes has been established in the whole Italian territory with place-based specialization in order to enhance the impacts of research on the territory. The Institute for Research on Innovation and Services for Development (IRISS CNR) is based in Naples (IT) and covers, within the project, the following research fields: promote a more effective involvement of communities and territorial stakeholders within the decision-making process, share methodologies for improving the mutual exchange amid actors involved in the planning processes, address the engagement of local communities in order to feed collaborative pilot projects. The CNR will support the co-creation of the TREnD Open Access Toolkit in terms of improving the enabling-and-sharing platform by capturing the network dynamics and territorial trend. Finally, due to its strong relationships with local, national and European research institutions and local authorities, the CNR will be part of the knowledge and technology transfer by enhancing the effectiveness and increasing the impacts of the Open Access platform by developing pilot projects and collaborative initiatives.

Division of secondments between the EU Beneficiary – UNIRC and the organizations participating under a capital/legal link (Number of researcher-months):

Organisation Short Name	Sending arrangements	Hosting arrangements	Total
UNIRC (BEN)	89	10	99
IRISS CNR as Entity with a capital or legal link	16	8	24
Total	105	18	123

The Institute for Research on Innovation and Services for Development (IRISS CNR) will be in particular responsible for:

- Task 1: address the engagement of local communities in order to feed collaborative pilot projects during the organization of Workshops and Symposiums;
- Task 2: collaboration in defining the Data Management Plan, according to the template provided by Guidelines on FAIR Data Management in Horizon 2020;
- Task 3: collaboration in defining the survey tools according to ethical aspects.
- Task 4: defining a technological transfer strategy to make more effective the exploitation of TREnD Results.

Description of the necessary infrastructures and any major items of technical equipment (if required) relevant to the proposed project

The European partners as a team will be supported throughout the whole period of implementation of the Marie Curie grant by the Research Office of the University of Reggio Calabria, which will advise the coordinator in her role of Management Authority.

Nonetheless, each partner of the exchange programme proposal possesses an adequate structure in terms of equipment (workstation, software and plotter) to develop both training and research activities. They are all departments or school of prestigious universities either in Europe or in USA. In particular, the coordination unit located in Reggio Calabria will rest on the existence of a GIS Laboratory, fully equipped with GIS software and appropriate workstations. Moreover, the Utrecht University has been ranked as #1 in the Netherlands, #13 in Europe for its world-class facilities in terms of computer labs and other relevant equipment according to the 2017 Academic Ranking of World Universities.

The cooperation among all partners is assured by the website that will be built for the research and training activities. The website will collect all documents produced during the program, will be the principal instrument to share information and knowledge among partners and all who will be interested in it.

4.4. Competences, experience and complementarity of the participating organisations and their commitment to the project

The Complementarities/synergies between the partners is based on a cooperative approach for building the OpenAT: **a repository of indicators concerning resilience towards regional economic diversification**. As mentioned each unit possesses acknowledged expertise in different fields which would be meshed to carry on the project.

The Utrecht unit will be leading the project part relative to evolutionary economics and regional diversification. It will provide a solid base for building up econometric evaluation models to comply with the WP1 tasks.

PAU Unit will leverage its competence concerning spatial analysis to unfold keen territorial aspects concerning Transition strategies (WP2).

AUTH Unit possesses trustable proficiency in resilience processes as well as in software development (WP3-4).

The Unit from Palermo is expected to advise other partners in the fields of statistics, management and business. Its role would be keen in seizing windows of local opportunity to switch diversification towards new development trajectories in the aftermath of shocks (WP3).

Moreover, the TC partners will assist and support EU Beneficiaries on the basis of their distinguished expertise in urban and regional development (NEU) and innovation-led partnership (LU). The combination of specializations and skills is deemed crucial to harness the TREnD project which moves across disciplines including: geography, urban planning, economics and public policy.

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6. Ethics Aspects

6.1. Describe how the proposal meets the national legal and ethics requirements of the country or countries where the tasks raising ethics issues are to be carried out.

The **TREnD** Project will deal with different kind of data based on Interviews and data gathered from official and public Statistical databases warehouses at different geographic levels and countries to comply with the needed approach to address the implementation phases with legal provisions and societal norms.

The **ethics self-assessment** was conducted and taken into consideration of the EU beneficiaries and TC partners since the inception of the project in order to get the proposal ‘ethics-ready’ for funding. Consequently, the Consortium agrees to carry out the RISE action including the highest standards of research integrity and, in particular, avoiding fabrication, falsification, plagiarism and/or other research misconduct.

Personal data, during the project, will be treated according to the provisions of the Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data (DPA), and the Italian Legislative Decree No. 196/2003. From 25 May 2018, the Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation - GDPR) - (Regulation (EU) 2016/679) - is applied.

The objective of this new set of rules is to give citizens back control over of their personal data, and to simplify the regulatory environment for business. The data protection reform is a key enabler of the Digital Single Market which the Commission has prioritised. The reform allows European citizens and businesses to fully benefit from the digital economy.

After the entry into force of the General Data Protection Regulation, the definition of ‘personal data’ includes “any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person“ (see Article 4(1) GDPR).

Data gathered by the TREND Project’s members will be analysed and processed through different activities/methods, depending on the WP and the objective (see “data management”). The primary data will be structured and used in performing the open access toolkit web-platform which represents the final output of the Project. The Project will not focus on data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and the processing of data concerning health or sex life. Further, in the consent form will be requested the authorisation to the subject for processing the data provided.

OpenAT - Open Access Toolkit - represents the result of the TREND Project and will be shared with the local community, entrepreneurs, public authorities and administrations and other research institutions. The data are based on processed data and will be available at aggregate level and made available for specific evaluation and dissemination purposes.

Data collection and case study analysis are key methodological aspect of TREND project that use open-data driven tools. Ethical standards and guidelines of Horizon 2020 will be rigorously applied throughout the whole TREND project implementation, regardless of the country in which the research is carried out. Data will be formalized in structured database for the purposes of the project, and they will be findable, accessible, interoperable and reusable (FAIR).

TREnD adheres to Open Research Data pilot, and thus all generated data will be made publicly available, provided that such data do not represent any economic risk, or if partners cannot give critical information on the project’s progress to any concurrent entities, public or private.

The Data Management Plan (DMP) will be delivered at 6 month from the start of the project and updated in order to describe how TREnD project will collect, process, share and protect the data produced by the project partners. DMP will be consistent with the intellectual property right (IPR) policy (i.e., IP, confidentiality and publication provisions) and updated as any changes occur in the consortium policies.

The consortium hence declares its willingness to comply to article 34.2 in the Grant Agreement; hence obtain any authorisation required under European law and provide any documentation to the REA upon request.

6.2. Explain in detail how you intend to address the issues mentioned in the ethics issues table (Part A)

•Research **objectives** (e.g. study of vulnerable populations, dual use, etc.);

The **TREnD** project focuses on the creation of an **open access toolkit** on the basis of an interactive platform which shares data with different users, policy makers, end-users. The Data Management Plan provides regulations for the activities dealing with data, involvement of participants and project-internal procedure. It is important to establish a project environment that stimulates responsible behaviour and a reflexive attitude in relation to ethical issues. In this perspective, the Data management will include personal data protection issues that will be adopted by all the **TREnD** project's members. The objective of knowledge transfer into actions created by research activities will be used in the **OpenAT** in order to provide new services for local communities of entrepreneurs, local policy-makers and public authorities.

•Research **methodology** (e.g. protection of any personal data collected, consent procedures, involvement of children, clinical trials, etc.);

The TREND project relies on three level of data sources:

- (i) official and public statistical data warehouse at different geographic levels (city – regions – Country – EU- non-EU);
- (ii) on-line and face-to-face interviews;
- (iii) surveys.

The first includes statistical data, geographical data, demographic data.

The second include data gathered through interviews of public and private stakeholders.

The third include data deriving from observation, reports and inquiries.

At the end of the Project, collected data will remain in a repository for five years and participants can ask to delete the information provided by contacting the Coordinator of the TREND project.

The paragraph 6.3 explains in details the management of personal data collected and consent procedures.

•The potential **impact** of the research (e.g. dual use issues, environmental damage, stigmatisation of particular social groups, political or financial retaliation, benefit-sharing, malevolent use, etc.).

There are three main areas of concern with regard to the ethical management of the TREND project.

1. The project needs to work in accordance with legal requirements established by the European Commission and national authorities in the areas of inquiry, in particular concerning data protection and privacy issues;
2. The TREND project is a research project. Consequently, the project members need to display research integrity in their work, and adhere to common, established research practices, such as intellectual honesty, accuracy and transparency in their project activities;

It will be stressed also the priority need to avoid any source of discrimination (by gender and by race and etc.)

3. It is important to consider and reflect on the possible implications of the TREND project outcomes for research participants (individuals as well as institutions) and society as a whole.

Each member of the team will consider all these areas as utmost important to carry out the research project. These areas are guaranteed through internal procedures and the respect of European directives.

Data Management

The data in the TREND project ranges from aggregate, quantitative data to detailed qualitative data collected.

The WPs activities will be performed to fulfil the Ethical requirements, according to the research objectives to be pursued in each WP, as detailed below:

WP1 sets the stage and provides the frame of reference from which to develop the conceptual framework and assessment methodology to integrate Transition and Resilience building policies.

WP2 and **WP3** are mainly finalized to the case studies analysis for the potential of the implementation of the transition management in a tailored-based approach on the local contexts. A continuous evaluation and synthetization will be developed in Workshops with Community involvement and Stakeholders as well as in the Mid-term meetings that help the consortium to consistently review the planned research activities.

WP4 is dedicated to the design, development and testing of an online open access toolkit which will allow dynamic visualisation of different indicators and datasets for different areas and periods of time, with the purpose to facilitate knowledge-based policy making towards territorial cohesion and regional development.

The **OpenAT** will be empowered by the decision of the consortium to be part of “Research Data Pilot - Article 29.3 – Open access to research data”. The **Data Management Plan**, as derivable, will follow the template provided by Guidelines on FAIR Data Management in Horizon 2020, by included the 5 important contents: Data Summary; Fair Data; Allocation of resources; Data Security and Ethical aspects. The Data Management Plan (DMP) will be created and updated in order to describe how TREnD will collect, process, share and protect the data produced by the project partners. DMP will be consistent with the intellectual property right (IPR) policy (i.e., IP, confidentiality and publication provisions) and updated as any changes occur in the consortium policies.

New data generated by TREnD will include qualitative data from semi-structured interviews, focus groups, workshops and textual analysis. New datasets will also be produced by revisiting previous studies, reviewing national and regional secondary data. TREnD will additionally use and analyse secondary data gathered from public statistics agencies such as Eurostat and US Census Bureau and similar at national and regional levels. Data will be formalized in structured database for the purposes of the project, and they will be findable, accessible, interoperable and reusable (FAIR).

According with the Guidance of ethics of H2020- checklist table, *the 5.3 version (21 February 2018)*, the project fulfils the ethics issues checklist along with the tasks and WPs as reported in the following two tables, wherever the research activities will be performed and executed.

Table 1 – TREnD project Tasks and WPs

TASK	Tools used	WP	Ethical requirement Fulfilled
Data Collection	<ul style="list-style-type: none"> Spatial data analysis Longitudinal studies Desk analysis of official documents 	1-3	Data gathered based on an assessment methodology to fulfil a list of indicators from literature towards building GIS mapping database. Qualitative and quantitative data collected are organized in a logical and functional forms that help integrate the information
Surveys	Survey Form	1-3	Survey questionnaires will be conducted in compliance with the Ethical guidelines applicable both in EU and in the hosting institutions and won't regard personal data nor political opinions.
Interviews	Informed Consent form	1-2	The interview forms will explicitly confirm that no sensitive personal data is collected in the TREND project. If any is needed for the scientific integrity of the project, the nature of the data and the measures of implementation will be ensured compliance with the H2020 guidelines.
OPENAT	Online toolkit	1-4	The data integrated in the open access toolkit will rely on materials used only for research purposes and official open data collection.

Table 2 - Ethics Issues checklist table:

PROTECTION OF PERSONAL DATA		YES/NO		Information to be provided	Documents to be provided/kept on file
Does your research involve personal data collection and/or processing?		YES		Data deriving from interviews (interview forms and digital recording) and observation will be stored in the CLUDs Lab facilities at the UNibwrsity of Reggio Calabria (Desktops); Data will be protected through a password encryption; Informed consent form will be provided to the participants upon gathering	the Coordinatorr will require all the requested authorisations to the competent National Authorities both for personal data protection and concerning the processing of personal data in the electronic communication sectors.
IF YES:	- Does it involve the collection or processing of sensitive personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?		NO		
	- Does it involve processing of genetic information?		NO		
	Does it involve tracking or observation of participants (e.g surveillance or localization data, and Wan data, such as IP address, MACs, cookies etc.)?		NO		

6.3. Ethics Pre-Grant Requirements

Protection of personal data

The host institution must confirm that it has appointed a Data Protection Officer (DPO) and the contact details of the DPO are made available to all data subjects involved in the research. For host institutions not required to appoint a DPO under the GDPR a detailed data protection policy for the project must be kept on file.

The University of Reggio Calabria (coordinator of the TREND project) has appointed as the Data Protection Officer (Under Articles. 37 et seq. of EU Regulation 2016/679 on the protection of personal data GDPR)

Alessandro Andriani, Lawyer, employed at the University Office of legal and administrative affairs. The contact information are detailed as following:

Office: Servizio Speciale Affari Legali, Contenzioso del Lavoro ed Attività Negoziali (Legal and Administrative affairs);

Address: Salita Melissari Feo di Vito – Università Mediterranea di Reggio Calabria – Italy;

Phone:+39 0965 1691365;

Fax:+39 0965 27901;

E-mail: aandriani@unirc.it

The contact details of the Data Protection Officer will be made available to all data subjects involved in the research.

The Partner Organisations – Third Country Partners – Northeastern University of Boston (MA) and Latech University (LA) are not required to appoint a DPO under GDPR and a detailed data protection policy for the project will be kept on file.

A description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the data subjects/research participants must be include in the grant agreement.

Personal data (see Article 4(1) GDPR), eventually collected during the TREnD project, will be treated according to the national and EU legislation on privacy and data collection. The Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation - GDPR) - (Regulation (EU) 2016/679) – is applied. No sensitive personal data will be collected in TREnD Project.

The personal data may be collected during events organised by TREnD project partners and through interviews for research purpose. The personal data collection will be made according to the following technical measures:

- Before any data collection event and/or interview, participants will be informed about: (1) aim and scope of the event and the interview as well; (2) how their data will be collected, stored and protected and either destroyed or reused at the end of the research; (3) they will be requested to provide their informed consent in advance.
- Interviews and questionnaires will be organized in an “Interview form” that together with the “Survey Form” allows to collect data for the selected case study in Boston (MA) and in Ruston (LA), with respect the topic of the research.
- The qualitative and quantitative data are organized in the form of interview to selected actors who play official roles within the selected case studies.
- The anonymization of data will be sharply defined in the Data Management Plan, taking into consideration the data features, environment and utility. In particular, the data features concern two kind of sources: interviews and public/official data-warehouse for statistics survey. The anonymization techniques will be applied for data gathered through interviews. According with the consent form, anonymization of data will be ensured to remove personal identification information from gathered data. The responsible of the project (Coordinator) will apply a procedure to remove personal identification in the data entry process stage, by keeping the personal information (gathered by face-to-face interview) in a repository at the University of Reggio Calabria, in agreement with the Data Protection Officer requirements. In case of on-line interview, the anonymization techniques will be apply from the preparation of the questionnaire to the data entry process, by guarantee the anonymization of data related to the personal identification of the interviewed.

The organizational measures are supposed to offer the highest guarantees to safeguard the rights of the research participants:

- Data will be shared among the project partners and used for scientific purposes by the practitioners involved in TREnD Project, such as writing articles
- Data will be analyzed and presented anonymously, and finally will be filed and protected in the database included in the Web-based platform of the project.
- If a participant to semi-structured interview regarding research activities wants to remove the data already gathered, he/she has the right to exercise his/her rights by addressing the request to the Data Protection Officer appointed by the University of Reggio Calabria Coordinator of the project, within one month from the participation.
- The Web-based platform will be designed as Cloud and managed with a protected access protocol by the Università Mediterranea of Reggio Calabria, PAU Department.
At the end of the research project, the documents will be stored for five years, counting from the end of the project.
- Digital data will be stored in LAN server at the Università Mediterranea of Reggio Calabria, PAU Department. Paper documents will be stored in rotated security locker at the Università Mediterranea of Reggio Calabria, PAU Department. The LAN servers will be accessed with password by PAU Department personnel only. These data can be made available to other scientific practitioners at request. Università Mediterranea of Reggio Calabria, PAU Department is a body authorized to manage sensitive data pursuant to Presidential Decree (Italy) 318/1999.

In case personal data are transferred from a non-EU country to the EU (or another third state), confirmation that such transfers comply with the laws of the country in which the data was collected must be specified in the grant agreement.

When personal data are transferred from the US to the EU, it is confirmed that such transfers will comply with the laws of the country (the US) in which the data was collected.

In case activities undertaken in the US raise ethics issues, it is confirmed that the research conducted outside the EU is legal in at least one EU Member State.

Ethical standards and guidelines of Horizon 2020 will be rigorously applied throughout the whole TREnD project implementation, regardless of the country in which the research is carried out.

Detailed information on the informed consent procedures in regard to data processing must be specified in the grant agreement.

The informed consent procedures in regard to data processing are used for both the participation to the events organised by the TREnD project partners, and the participation to semi-structured interviews regarding research activities.

Informed consent is meant to guarantee the voluntary participation in the research, to address privacy issues. The informed consent process consists of three components: adequate information (e.g. research goals, event scope), voluntariness (e.g. possibilities to refuse participation) and competence (e.g. awareness of the consequences).

In detail,

- information on the Project will be provided to any participant, in an Information Sheet describing the purposes of the research, the organisation and funding of the Project, as well as information about what will happen with the results of the research;
- any participant will be given the opportunity to ask questions about the project and its participation;
- any participant will agree to participate voluntarily to the project;
- any participant will be able to withdraw her/his participation at any time without giving reasons and she/he will not be penalised for withdrawing nor be questioned on the reasons she/he has withdrawn;

- anonymization of data will be ensured to remove personal identification information from gathered data. It will result in anonymized data that cannot be associated with any individual. Any participant will be explained of the procedures regarding confidentiality;
- the **Data Management Plan** will describe in detail the procedures for the use of data in sharing, archiving, and for their dissemination and publication. Any participant will be informed about those procedures. The project findings are expected to be published within public reports. Anonymized data may be used in policy notes, conferences and workshops and as communication material;
- any participant will consent to use data gathered being stored and used for academic purposes, namely in the context of the TREnD Project;
- any participant will agree to sign and date an 'Informed Consent Form'. Consent forms and information sheets will be provided in English language. One copy of the form is to be given to Coordinator University researcher and one copy is for the interviewed to keep for his/her records. Consent forms (in their paper version) will be collected in a specific repository at the Università Mediterranea of Reggio Calabria, PAU Department
- any participant may exercise her/his individual rights on her/his personal data (including e.g. the right to access, the right to ask for rectification of, and the right to delete personal data) by sending an email to the Data Protection Officer (DPO) appointed by the University of Reggio Calabria Coordinator of the project. Any requests to exercise participant's rights can be free of charge and will be addressed by the DPO as early as possible and always within one month.

Data Processing. Primary data gathered by the TREnD Project's members will be analysed and processed through different activities/methods, depending on the WP and the objective (Table 1).

Within the WP1, data will be collected through desk analysis and literature review in order to carry out the conceptual base of the project.

The WP2 and WP3 will focus on case-studies to be developed during the secondments at the Host Institutions in the USA: Boston (MA) and Ruston (LA). Qualitative and quantitative data will be collected by interviewing (in person, by video/phone calls or online) selected actors who play key roles within the case. Collected data will be recorded within the "Interview form" and the "Survey Form", accompanied by the purposely-designed consent form.

The WP4 will implement the resulting indicators within the open access toolkit (Research Data Pilot art. 29.3 of the GA).

The Project will not focus on data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and the processing of data concerning health or sex life. Further, in the consent form will be requested the authorisation to the subject for processing the data provided.

Templates of the informed consent forms and information sheets (in language and terms intelligible to the participants) must be included in the grant agreement and kept on file.

Two templates of the informed consent forms are defined, the former in regard to the participation to interviews, the latter in regard to the participation to TREnD events.

Both templates are defined in the form of handout that introduces the participant to the research project and states the objects and ethical procedures that will be taken.

The Informed Consent Form includes the information sheet that provides clear, accessible and sufficient information to a prospective research volunteer so that they can make an informed decision whether to take part in the research.

In case of the participation to semi-structured interview, the participant will find a Research Ethical Consent Form that he/she needs to fill out and sign. The informed consent forms (in language and terms intelligible to the participants) will be included in the grant agreement and kept on file. The

Template of informed consent forms and the participant information sheet are provided as following.

Participant Information Sheet

[Headings – logo]

TREnD Project Transition with Resilience for Evolutionary Development

You are being invited to take part in this research project. We invite you to read this Participation Information Sheet as we would appreciate to discuss and share your specific experiences and views on the key topics of our project, about which you may talk to anybody you feel comfortable with. Please take some time to reflect on whether you would like to participate or not. If there's anything you don't understand in this information sheet, feel free to ask any questions at any time.

Purpose of the Project

The TREnD “Transition with Resilience for Evolutionary Development” project is based on a research project integrated with a higher education agenda finalized at strengthening the regional capabilities in triggering, implementing and managing Transition Management (TM) strategies towards driving “resilience-building” processes. The main aim is to combine Transition with Resilience for Evolutionary Development (TREnD) in different territorial contexts towards a reforming process of Cohesion Policy.

TREnD is a ground-breaking proposal envisioning TM in the mentioned framework addressing regional economic diversification.

Specifically, the research project seeks to:

1. identify and examine the factors enabling or hindering the Transitions strategies at a governance standpoint;
2. assess the territorial features critical to enable a resilient-building process;
3. unveils the unexploited potentials for “**re-shaping trajectories**” disclosed through the windows of local opportunities due to the external shocks regions are continuously exposed to.

This project has received funding from the [specific data on the grant agreement will be added].

The research project is carried out through a partnership between higher education institutions, University of Reggio Calabria (IT), Utrecht University, Aristotle University of Thessaloniki, (GR), University of Palermo (IT), Northeastern University of Boston, Louisiana Tech University.

Participant Selection

You are invited to contribute to this project due to your experience as a city representative, academic, representative of civil society, representative of private stakeholder.

Voluntary Participation

Your participation in this research is entirely voluntary. You can choose either to participate or to decline the invitation. You can withdraw at any time and request the data to be deleted or request access to the data, (including e.g. the right to access, the right to ask for rectification of, and the right to delete personal data) by sending an email to Data Protection Officer (DPO) appointed by the University of Reggio Calabria, Coordinator of the project, as specified in the section “Rights of research participants”.

Procedures and Confidentiality

The information collected is confidential and data gathered will be anonymized.

Any summary interview content, or direct quotations from the interview, that are made available through academic publication or other academic outlets will be anonymized so that you cannot be identified, and care will be taken to ensure that other information in the interview that could identify yourself is not revealed. Any variation of the conditions above will only occur with your further explicit approval, or a quotation agreement could be incorporated into the consent form-In this case, with regards to being quoted, please initial next to any of the statements that you agree with:

I wish to review the notes, transcripts, or other data collected during the research pertaining to my participation.

I agree to be quoted directly.

I agree that the researchers may publish documents that contain quotations by me.

Risks

The survey might potentially include sensitive and personal issues (i.e. political opinions, cultural values). These kinds of personal data shall be processed fairly and lawfully, and shall not be further processed in any manner incompatible with the initial purpose. Moreover, you do not have to answer any question that might make you feel uncomfortable.

Reimbursement

There will be no reimbursement for your participation.

Data storage

All data will be stored for five years, counting from the end of the project. These data can be made available to other scientific practitioners at request.

Sharing the Results

The project findings are expected to be published within public reports. The data, for example, will be used in policy notes, conferences and workshops and as communication material, according to the procedures and confidentiality statement.

Identification of investigators

If you have any questions or concerns about the research, please feel free to contact:

- Primary Contact Coordinator University of Reggio Calabria (IT): Carmelina Bevilacqua E-mail: cbevilac@unirc.it;
- Contact person at Utrecht University (NL): Pierre-Alexandre Balland, E-mail: p.balland@uu.nl;
- Contact person at Aristotle University of Thessaloniki, (GR): Chistina Kakderi, E-mail: christina@urenio.org;
- Contact person at University of Palermo, (IT): Vincenzo Provenzano, E-mail: Vincenzo.provenzano@unipa.it

Rights of research participants

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study.

If you have questions regarding your rights as a research participant, contact the Data Protection Officer Alessandro Andriani, University of Reggio Calabria. The contact information are detailed as following:

Office: Servizio Speciale Affari Legali, Contenzioso del Lavoro ed Attività Negoziali (Legal and Administrative affairs);

Address: Salita Melissari Feo di Vito – Università Mediterranea di Reggio Calabria – Italy;

Phone:+39 0965 1691365;

Fax:+39 0965 27901;

E-mail: aandriani@unirc.it.**Informed Consent Form**

By signing this letter of consent, you acknowledge that you have been informed on the purpose and nature of the research and that the information you provide will remain anonymous.

I, the undersigned, confirm that (please tick box as appropriate):	YES	NO
I have read and understood the information about the TREnD Project, as provided in the Participant Information Sheet		
I have been given the opportunity to ask questions about the projects and my participation		
I voluntarily agree to participate in the project		
I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn		
The procedures regarding confidentiality have been clearly explained (e.g. use of names, anonymization of data, etc.) to me		
The use of the data in sharing, archiving, dissemination and publications has been explained to me		
I consent to the data gathered being used for this study		
I agree to sign and date this informed consent form		

Name:		
Age:		
I confirm I am 18 years of age or over	YES	NO
Gender identity	FEMALE	MALE
Organization:		
Role:		
Date:		
Signature:		

Informed Consent Form

Participation to an Event of the Project when photographs/videos/tape recordings will be taken

[Headings – logo]

TITLE OF THE EVENT

Name:		
Age:		
I confirm I am 18 years of age or over	YES	NO
Gender identity	FEMALE	MALE
Organization:		
Role:		

Hereby authorizes***The TREnD PARTNER***

To Video/Audio Recording and/or Web streaming of the Event.

The TREnD PARTNER

undertakes that, in respect of any video/audio tapes made, every effort will be made to ensure professional confidentiality and that any use of video/audio tapes, or descriptions of video/audio tapes, will be for professional purposes only and in the interests of improving research activities.

There will be no reimbursement for Video/Audio Recording and/or Web streaming.

Date:
Signature:

If you have any questions about this event feel free to ask the Organizer at any time.
Data will be treated in compliance with national and EU legislation (GDPR).

Third countries

In case activities undertaken in non-EU countries raise ethics issues, the applicants must ensure that the research conducted outside the EU is legal in at least one EU Member State. This must be specified in the grant agreement.

In case activities undertaken in non-EU countries will raise ethics issues, the research conducted outside the EU will be legal in at least one EU Member State.