INTELLECTUAL OUTPUTS

OUTPUT 1:
Guide on educational needs in Europe and state of the art on the use of Systems Thinking in Digital Transformation and in Sustainable Development. It will deal with the production of an eBook related to the analysis of current educational needs in Europe and at a wider international level. This will start with a study on the state of the art on the application of Systems Thinking at large and with a specific focus on Sustainable Development and Digital Transformation.

OUTPUT 2:
Systems Thinking course creation. This IO is at the core of the innovation of the SYSTEMA proposal. It will develop the common language and tools to address two of (among) the hardest challenges we face today (sustainable development and digital transformation) by developing a systems thinking-based learning framework which will ultimately allow for the translation of cognitive hypotheses into practical experimentation using initial mental/causal maps and then by means of developing simulation models to test them (hence as a synthesis tool).

OUTPUT 3:
Course on Digital Transformation with Systems Thinking. The course will be designed to specifically account for a Systems Thinking approach to digital transformation. This course will develop the ability to evaluate the impacts of a transition to digital technologies, not only by considering the technologies themselves, but also by looking at their impacts on internal organizational processes and, above all, on external ones. It will also consider where the stakeholders of and organizations interact, thus determining whether a certain policy or strategy can be effective in delivering its final expected outcomes.

OUTPUT 4:
Sustainable Development course creation. The course will be designed to specifically account for a Systems Thinking approach to sustainable development. It will develop the learner's ability to evaluate the impacts of a transition to sustainability, not only by considering the concepts at the base of the proposed strategy/policy but also by looking at their impacts on internal organizational processes and, most of all, external ones. It will consider where the stakeholder of an organization interacts with the strategy/policy, hence determining whether a certain policy or strategy can be effective in delivering its final expected outcomes.

OUTPUT 5:
Evaluation of course outcomes. The evaluation of results will be performed with discussions and/or unstructured interviews and formalized questionnaires. Part of this aspect is to investigate whether the participants can detect archetypes in systems, can understand the notion of feedback loops, etc. Evaluation of the extent to which the participants better understand how sustainable development can be achieved. Evaluation of the extent to which the participants better understand the impacts of digital transformation. Experimentation with mock-up situations where one takes the role of the decision-maker. Such exercises offer insights into the trainee's frame of mind and whether he understands the systemic nature of certain situations. Finally, the consortium will attempt to evaluate how well the educators/participants have transferred the SYSTEMA method and material to their own programs.

OUTPUT 6:
Evaluation of the project results and final recommendations. The final Intellectual Output of the project will gather all the results that have been achieved so far and especially the results of the evaluation process. It will then produce a series of high-level recommendations relating to the educational impact of the SYSTEMA process and more generally the general adult education process. Considering the potential evolution of the job market, it will consider any evidence of the need for new skills in future professions.

TEAM

System Dynamics Italian Chapter (Italy)
http://www.systemdynamics.it

Intellegere (Italy)
http://www.intellegere.it

The Academy of Code (Ireland)
http://www.theacademyofcode.com

Centre for Social Innovation (Cyprus)
http://csicy.com

Kompass (Germany)
http://www.kompassfrankfurt.de

University of Macedonia (Greece)
http://www.uom.gr

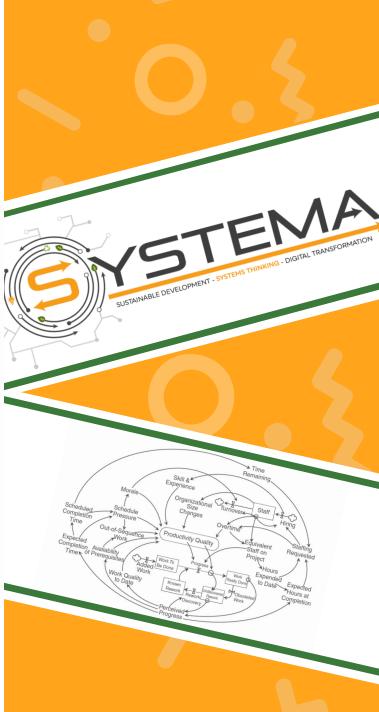**The Italian Alliance for Sustainable Development (Italy)**
http://asvis.it

COMMUNICATION

SYSTEMA

SUSTAINABLE DEVELOPMENT - SYSTEMS THINKING - DIGITAL TRANSFORMATION

WHICH GOALS DOES THE SYSTEMA TARGET

Create a deeper understanding about the complexity of sustainable development, and how it can be achieved through the ability to design policies that can lead towards it.

Explain how digital transformation can assist in the sustainability of an organization by designing processes that will ease the transition.

Increase the capabilities to communicate complex issues succinctly by acquiring systems thinking skills.

Create an extended network for the use and exploitation of the SYSTEMA training programme, including all its training material and platform services.

WHAT IS THE SYSTEMA PROJECT

SYSTEMA is an ERASMUS+ project that aims to bring the Systems Thinking approach into two very complex and highly topical issues such as Sustainable Development and Digital Transformation. The idea is to teach policy makers, professionals dealing with these issues, and younger generations how to abandon a "linear thinking" perspective and adopt systemic thinking when they have to face a problem or make decisions.

SYSTEMA
SUSTAINABLE DEVELOPMENT - SYSTEMS THINKING - DIGITAL TRANSFORMATION

WHAT PROBLEM DOES IT TARGET

Sustainable development will be a fundamental issue that will define policymaking in the 21st century. However, designing and implementing successful sustainable policies is an extremely complex process, due to their intrinsically multidisciplinary nature, as the problems that policies seek to address and tackle generally have long term horizons, and are characterized by deep levels of uncertainty, interwoven feedback loops, and lengthy time-lags between policy actions and their consequences/impacts. The situation is further hindered by the difficulties in experimenting with the application of such policies, especially because the risk of implementing an unassessed policy involves potential high costs. Furthermore, the rapidly evolving technology constantly creates new opportunities and threats that may render human actions ineffective. This limit could be overcome by correctly employing not only the latest digital skills and knowledge but also the way we rethink our digital approach (an example of this can be found in the recent Covid-19 crisis, that has shown the crucial importance of a digital transition of our society). There is the need to teach younger generations on how to view a system/policy holistically, by abandoning a "linear thinking" perspective when solving tasks, and thus acquainting them with Systems Thinking. In fact, as digital skills are a part of the wider Computational Thinking mindset, the latter can be seen as a part of the wider Systems Thinking discipline.

WHAT IS THE PURPOUSE

The central objective of the Systema project is the creation and provision of training courses on the topics of Sustainable Development and Digital Transformation based on the Systemic thinking approach. These courses are intended to be used by teachers, trainers, professionals, and policy makers to foster a move away from a linear thinking approach to decision making for younger generations. The project also aims to establish an extended network of practitioners engaged in the promotion of Systems Thinking as a forward-thinking approach to addressing related issues and to establish itself as a driving force on the path of change through the exploitation of the training materials and platform services.

PROJECT TIMELINE

1 **MONTH 1 TO 11:**
Identification of the Educational needs
Identification of Target Groups and Skill Gaps
Analysis of the existing educational programs

2 **MONTH 7 TO 16:**
Creation of the Training Courses:
Systems Thinking
Sustainable Development
Digital Transformation

3 **MONTH 17 TO 24:**
Provision of the Training Courses
to Target Groups

4 **MONTH 17 TO 24:**
Evaluation of the Training Courses Results
and evaluation of the project results