

## **Draft**

Session 1: Session 1: Building trust and brand

### **Cooperating with other institutions to increase trust in official statistics (and statistical literacy)**

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Development of promotion of statistical literacy

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## **ABSTRACT**

*Disseminating official statistical data through partnerships, both formal (i.e. subscribed through formal agreements between different institutions) and informal (that is without formal agreement and for one-shot projects) has proven for Istat to be a successful way to make users grow in quantity and in the level of statistical literacy, so as to make them aware of the importance of statistical data.*

*Cooperating with other agencies is useful to make users understand how the value of statistics can be a support to larger projects. Partnerships also represent a relevant element for enhancing corporate reputation and trust in official statistics.*

*The paper will present an overview of statistical projects being carried out at Istat with the cooperation of other bodies. Projects under examination will focus on different kinds of partnerships. Some are the result of a structured and formal cooperation, for which Istat plays a precise role, such as the case of a school project going on from over 6 years. Others will show how a partnership based on a single edition of a competition can add value based on a shared topic and reach larger audiences, or a cooperation with other Research bodies can help to have a better overview of one's own and others' activities devoted to external users (Third Mission Activities).*

*Finally it will concentrate on the strategic value of partnerships to make users better understand how statistics can add value to projects, and how it can serve to really frame projects in the real world, that which is "measured" by official statistics.*

Several types of partnerships

*Formal*

*Informal*

Introduction

### *The role of partnerships to develop statistical literacy*

In line with the concept of official statistical literacy as a key to better understand the world around us and in line with what is written in Istat Statute, Istat cooperates with other institutions for statistical literacy projects, basically in two ways: 1) within a general framework of a large project or 2) upon occasional basis depending on opportunities or for specific topics.

An example of the first case is the **Memorandum of Understanding with the Ministry of Education** “to develop joint initiatives for quantitative-statistical literacy and to develop statistical analysis in the training and education Italian system, involving students”. On the other hand examples of the second type are several initiatives established on an informal basis, the most recent of which are **projects to be developed for projects involving students of the secondary school level** called “Percorsi per le competenze trasversali e l’orientamento (PCTO- **Pathway for transversal skills and orientation**)” having the aim to make students experience contacts with the labour market and future professions, also with universities as mediators.

Istat is developing more and more opportunities for partnerships as it considers that linking the value of official statistics to projects having not exclusively statistics as its aim is a chance to add value and significance to those projects. This approach goes hand in hand with the very function of statistics as a science, that is not to work separately but to work as a “serving/supporting science” for others.

According to the guidelines to develop statistical literacy at corporate level, Istat is actively engaged to foster the use of statistics in scholastic disciplines and, more generally, in the development of a quantitative approach to everyday life.

The **development of statistical literacy** is implemented through actions aimed at increasing the critical sense of the users through the correct understanding of statistical data and information. Constituent elements of this process are:

- the promotion of the paradigm of statistical research (fundamental in the process of acquiring knowledge through the empirical observation of reality);
- the orientation to the use and application of data and information produced by official statistics to a plurality of cognitive, decision-making and evaluation contexts;
- the development of a method for decision-making, especially in conditions of uncertainty, through the use of official statistics;
- the knowledge of the set of criteria that guide the activity of the statistician and of the researcher;
- the promotion of metadata culture;
- the attention to quality and its “certification”.

On these bases, Istat’s proposal on the development of statistical culture is based on four pillars:

1. to disseminate the pervasive and reasoned use of statistics within the curriculum disciplines, oriented to humanistic subjects and social sciences, as well as to the Stem disciplines (sciences, technologies, engineering, mathematics);
2. to equip the learners with a “statistical toolbox” and to develop the critical sense, the recognition of regularities (patterns), the capacity for synthesis (statistics) and the habit of interpreting reality through models;

3. to reach boys and girls outside the scholastic channel, through familiar and fun activities and methods (gamification);
4. to develop the quantitative and statistical interest and literacy of adults.

## Projects overview

The projects are presented in the following order, first the national projects, and then the one-shot projects, that is projects based on single occasions.

### *Formal National projects*

#### 1. Memorandum of Understanding with the Ministry of Education

**Memorandum of Understanding with the Ministry of Education:** the memorandum is the general framework within which, more or less, all the activities are included. It is a broad scope to develop statistics and quantitative literacy in the whole educational system in Italy and it is extremely useful to keep an alert on all activities Istat organizes at school levels, at all levels. One of the most effective actions is to bring notice of the activities to all Italian schools of that level through official channels, such as the Ministry of Education weekly newsletter.

#### 2. At the School of Open Cohesion

**At the School of Open Cohesion:** At national level the oldest project developed in cooperation with external bodies, excluding competitions such as the Statistical Olympiads and the Statistical Poster Competition (ISLP), is the “At the School of OpenCoesion” (A Scuola di Open Coesione – Asoc), which is based with the Cohesion Policy Department of the Italian Presidency of the Council.

Since the 2018/2019 school year, Istat has been collaborating with the civic monitoring project [At the School of OpenCoesion](#) (Asoc), aimed at upper secondary school students. The collaboration follows the [agreement](#) between Istat and the Cohesion Policy Department of the Presidency of the Council of Ministers, which as one of its objectives has “to foster the dissemination of statistical literacy, to provide an adequate in-depth study of research methodologies and the construction of synthetic indicators and to enrich students’ training during their educational path”. The agreement is currently being renovated for the third time.

ASOC is an innovative [didactic programme](#) aimed at promoting and developing in Italian schools principles of active and aware citizenship, through research and civic monitoring activities of the European and national public fundings. It started on an experimental basis in the 2013/2014 school year with seven schools, and in the in the whole period up to now it has involved 300 schools, about 3,000 supporting teachers, nearly 35,000 students, more than 1,400 monitored projects.

The programme is recognised as a Pathway for Transversal Skills and Orientation (“Percorso per le competenze trasversali e per l’orientamento“ – PCTO) and provides training credits to teachers who follow some modules, including the Statistical Literacy+ module.

The project is composed of four lessons, having the aim to make students in small teams monitor projects based on their territory and funded with Cohesion Funds. During the school year the teams

have to choose a project, design their way of acting to effective monitoring, analyze the territorial data and design simple statistical indicators to make clearly understandable the importance of completing the project, explore on the fields the status quo of the project and, last but not least, tell the story of their work, that is they have to measure themselves with the communication of data and statistics. The plan of the project is the following:

Lesson 1: design

Lesson 2: analyze

Lesson 3: explore

Lesson 4: tell the story

Lesson 2 is the virtual space where Istat's expert contribution is more visible, since students are supported by statisticians to find and analyze data, as well as guided to which data would be the most suitable to monitor their project.

In the 2019-2020 school year, the [European experimentation](#) started in Bulgaria, Croatia, Greece, Portugal and Spain, and in the 2021/2022 school year the experimentation within Italy-Croatia, Italy-France Maritime, Italy-Austria cross-border cooperation. From 2021-2022 school year the experimental project for primary schools run as ordinary, as the other types.

2022/2023 school year

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During the 2022/2023 school year, the collaboration with ASOC has continued. The agreement includes a dual training channel, on the one hand, support for schools through the intervention of territorial experts, and on the other, teacher training through the Statistical Literacy+ program, carried out by Istat thematic experts and recognized by the Ministry of Education.

The Statistical Literacy+ 2022-2023 course, consisting of four lessons, can be accessed as a webinar, with related supporting slides and any further insights.

### **3. Agreement with the Association of European Economics Education**

**Agreement with the Association of European Economics Education:** The agreement is currently discontinued but it was first signed in 2019 with the Association of European Economics Education (Associazione europea per l'educazione economica – AEEE Italia). The agreement was aimed at developing statistical literacy in schools and it was addressed to the training of teachers in secondary schools, mostly of the economic type.

The agreement is consistent with the framework of Istat's institutional objectives with regard to the development of statistical literacy. It has the goal of supporting the demand for statistical information through the dissemination of the Institute's heritage of information and the use of tools and methods useful for the correct understanding of official statistics data, with training activities aimed at the school system, including in digital mode.

The joint initiatives are intended for upper secondary school teachers and students, and aim to strengthen the different areas of economic education using data and methodologies of official statistics.

The most relevant deliverables of the projects were those regarding the 2030 Agenda

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### Didactic Learning Units on the Sustainable Development Goals of the 2030 Agenda

It is a section on Istat corporate website which contains Didactic Learning Units – (Unità didattiche di apprendimento - UDA) created for upper secondary school students on some sustainable development indicators on economic theme.

The aim is to offer modular learning paths in civic education that enhance students' statistical literacy and knowledge.

#### *Learning Unit 1 - Goal 1 - End poverty in all its forms everywhere*

Sheet for the use of UDA Goal 1 in teaching activities

1. Historical background to the 2030 Agenda
2. Introduction to the interdisciplinary concept of overcoming poverty | Notes
3. Goal 1 indicators.
4. How to read Goal 1 indicators

#### *Learning Unit 2 - Goal 11 - Make cities and human settlements inclusive, safe, resilient and sustainable*

Sheet for the use of UDA Goal 11 in teaching activities

1. Historical background to the 2030 Agenda
2. Introduction to the interdisciplinary concept of inclusive, resilient and sustainable human settlements | Notes
3. Goal 11 indicators.
4. How to read Goal 11 indicators

#### *Learning Unit 3 - Goal 12 - Ensure sustainable consumption and production patterns*

Sheet for the use of UDA Goal 12 in teaching activities

1. Historical background to the 2030 Agenda
2. Introduction to the interdisciplinary concept of sustainable consumption and production patterns
3. Goal 12 indicators
4. How to read Goal 12 indicators

*Finance, Economy, Enterprise: teaching in the European context*

Istat's activities for the development of statistical literacy in schools (14 October 2019)

*Teaching materials from the Treviso Festival of Statistics and Demography 2019*

Statistical analysis of economic data: some operational proposals

Understanding and analysing the business confidence

Human capital and employability

The business confidence index

Linear regression for time series analysis

Teaching ideas for analysing economic data: How much do we really know about data? | Some relevant aspects of the Istat website.

#### **4. Italian Statistical Society**

**Italian Statistical Society:** a traditional cooperation between Istat and the Scientific Society is helpful in many ways: to organize the competitions, to disseminate activities to school and to universities, to plan seminarial activities.

### ***Informal National projects***

This type of cooperation is very fruitful as well even if not tightly structured, the projects involved have proven to be extremely successful over time since they depend on particular occasions where statistical literacy and statistical figures are needed.

#### **5. International Statistical Literacy Project**

**International Statistical Literacy Project-ISLP:** this project, regarding the creation of statistical posters for different school levels, has traditionally been carried out together with the Italian Statistical Society. For the 2022/2023 edition, which has recently finished with prizes awarded at the 64<sup>th</sup> International Statistical Conference held in Ottawa, an additional partnership regarding the topic chosen in Italy has been closed with the Council for Research in Agriculture-CREA (a research body of the Ministry of Agriculture). Istat decided to assign Agriculture as a topic so as to enhance the knowledge and use of agricultural data just released from the 7<sup>th</sup> Agricultural Census and also proposed to use the data produced by CREA, which is part of the National Statistical System, which regard the economic results of agricultural businesses. CREA provided data and assisted the teams for information. Researchers from CREA also took part in the jury which assessed the posters.

#### **6. European Researchers' Night**

**European Researchers' Night:** the initiative is based at European Commission level and it is held in the month of September every year. It is an opportunity for people working in the field of public research bodies to share the results of their work with citizens and students in many towns all over

the country. At Italian level there are seven agencies working with the grants of the European Commission and Istat collaborates with them on a demand-basis.

## **7. University cooperations**

Cooperation with universities is active for several activities. The most recent opportunities have come for training activities devoted to students at secondary school level: this a brand new activity for which Istat cooperation is required with specific modules on official statistical data, how they are produced, the quality process, how to make them circulate in stories

Istat for the School: materials and tools supporting didactic activities

(a cura di CIB-Sviluppo e promozione)

- Istat programmes for schools
- Learning materials (Olimpyads exercise as study materials to prepare for the competition)
- Statistical information through visualization and infographics
- The Moodle platform used for school

Official statistics and data literacy in current didactic activities: access, understanding, data treatment for possible use in the classroom

- How to search and organize data from official statistics (Surfing the corporate website)
- Istat data warehouses
- Telling stories from data
- Communicate and visualize statistical data with images
- Data journalism with official statistics

## **8. The Bank of Italy – Cooperation for the Money Museum**

**The Bank of Italy – Cooperation for the Money Museum:** this is an ongoing activity for a forthcoming exposition prior to the opening of the physical Money Museum of the Bank of Italy – currently the museum is virtual only. The exposition will last about six months and Istat collaboration has been requested to organize seminars on topics such as inflation, purchasing parity power, household consumption, in short themes which are of interest in this period of high inflation and connected with money and income, so that also to focus on economic and financial themes.

8. PCTO SAPIENZA
9. PCTO LUMSA
10. INDIRE
11. Banca d'ITALIA