

*CONTRIBUTION TO THE APPLIED TERRITORIAL INTELLIGENCE: REASONED CATALOG OF
TERRITORIAL INFORMATION AVAILABLE ON INTERNET AND SOURCES IN EUROPE*

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Summary: This article gives a report on the territorial collection of information for the local actors in the whole of Europe (EU 27). It deals with various sources available in Europe in a centralized and decentralized way. An inventory was carried out for indicators selected within the framework of the method CATALYSE of confrontation of the populations needs with the services available to answer it. Various examples of information sources for the territories ("observatories") are also putted forward. The reasoned catalog treats methods of cartographic representation for the various indicators. It also highlights the variability of the indicators definitions according to the European suppliers, and the difficulties of harmonization and use.

Résumé : Le présent article fait état de la collecte d'informations territoriales pour les acteurs locaux dans l'ensemble de l'Europe (UE 27). Il traite des différentes sources disponibles en Europe de manière centralisée et décentralisée. Un inventaire a été réalisé pour des indicateurs (ou informations territoriales) sélectionnés dans le cadre de la méthode CATALYSE de confrontation des besoins des populations avec les services disponibles pour y répondre. Différents exemples de sources d'information pour les territoires (« observatoires ») sont également mis en avant. Le catalogue raisonné traite des méthodes de représentation cartographique pour les différents indicateurs. Il met également en évidence la variabilité des définitions des indicateurs suivant les fournisseurs européens, et les difficultés d'harmonisation et d'utilisation.

Keywords: Indicators, territorial information, Internet sources of information, definition of the indicators.

Mots clés : Indicateurs, information territoriale, sources internet de l'information, définition des indicateurs.

Contribution to the applied territorial intelligence: reasoned catalog of territorial information available on Internet and sources in Europe

I. Preamble

The use of contextual territorial information constitutes an important precondition to the implementation of certain projects. This production run of the existing data makes it possible to direct the strategies and contributes to bring coherence to the actions. It puts forward certain difficulties encountered within the territory, and thus makes it possible to act consequently. All the good practices concerning the installation of social or economic development strategies preach moreover a preliminary phase of diagnosis to identify with relevance the fields in which to act.

In order to conclude this big step, the actors of the development, and more particularly the local actors, are constrained to collect information near various suppliers. Their use depends largely on their accessibility, which includes the visibility of the data and their cost.

On a European scale, obtaining territorial information is confronted with the multiplicity of the suppliers of data. Each country has its national institute and at several government departments, regional or parapublic organizations, which increases, in the European Union containing twenty-seven countries, the difficulty of information spread. This multitude of distributors of data increases the complexity of the comprehension of the territories and of their dynamic. The collection of statistics is also less efficient and consequently more expensive for the users because of the multiple interlocutors.

The research undertaken between 2006 and 2008 concerning the European contextual indicators aims to inventory those and characterize their accessibility. The problems were treated under the angle of the complementarities of the method CATALYSE, which makes it possible to confront the needs of the populations with the offer of the proposed services, by taking into account the socio-economic environment (CAENTI, 2006d). To reach this aim, the method uses three types of data: the data concerning the needs for the populations obtained via a questionnaire, the offer of services (via lists) and finally the socio-economic data and contextual environments in order to describe the environment.

This paper contributes to the use of the indicators at the European level and to their treatment within the framework of their use by local territorial actors. The basic tool for the selection of the indicators is the European guide (CAENTI, 2006c). This paper also treats protocols of treatment and the relevant scale of representation of the indicators. It respects the calendar of research program CAENTI, carried out within the framework of the sixth European outline program (FP6).

After a development concerning the accessibility of the statistical and geographical data, we will deal with their scale of representation. Lastly, we will discuss the protocols of treatment of the various selected indicators, and we will conclude.

II. Sources of the contextual data

1 Territorial information and indicators

It is probably advisable - and before any discussion about the sources of information - to specify the meaning and the acceptance of the terms "territorial information" and "indicators". Territorial information is information for which the space component is important, it is possible to underline a covariance of the values of this information according to the position. Territorial information thus has a broad field of acceptance, a contrario of the term of indicator which gives specifically, and by definition, an indication.

However, the majority of the actors use these two terms indistinctly, which does not prevent at all that they determine implicitly what is an indicator and what is territorial information. The indicator is generally used to inform on a situation of development considered as positive or negative.

For example, unemployment rates, access to the health care, level of teaching (etc.) will generally be regarded as indicators, whereas the population by entity, the population by age (etc.) are territorial information which can difficultly been positively or negatively interpreted

Within the framework of our project, we were brought to make a selection of statistical data (“territorial information”) of which some can be regarded as indicators. By convention, we used the term “indicator” to speak about all this group of information.

2 Sources of the socio-economic and environmental data

The contextual data sources are very diversified. They are mainly function of the organizations of collection and information circulation set up by the States of the European Union, or the international institutions. Each State indeed has its own supplier of national data (statistical institutes or government departments), and many international institutions have their own office of statistics.

In the framework of the CAENTI project, information must necessarily be available for spatial entities at a lower level than the countries. Statistically, that corresponds to the European levels from NUTS 2 to LAU 1. The information distributed by the international agencies, limited to level NUTS 0 (country) is thus not very relevant for a later use, although the data can be used as comparative values (CHEN, *and al.* 2006). The only supracommunal institution disseminating contextual information with regional or infraregional scales is the Office of the Statistics of the European Union (EUROSTAT), which diffuses data for territorial cuttings from NUTS 1 to NUTS 3 widely and for free. No data can be obtained via this site for smaller administrative cuttings or more precise statistics. EUROSTAT collects, harmonizes, assembles and distributes the information collected mainly by other actors, in particular the national institutes of statistics.

This platform is however confronted with various problems. Our research (CAENTI, 2006b) showed that the availability of the data is variable according to the country considered and the required year. This irrefutable fact makes complex the comparative analyzes and makes null and void any certainty about the data availability. Moreover, if the major indicators are indeed present on EUROSTAT (population by entity, rate of unemployment...), others are lacking or need to be calculated.

The exploitation of the national statistical sites is thus necessary, on the one hand, to have the data at the local level (for example communes), and on the other hand, to supplement the offer of service proposed by the European Office of statistics. It has to be noted that the local actors cannot do without the national distributors in the local data retrieval. At most can they be helped by public, parapublic or associative observatories, which also collect data. These sources asked the question of the harmonization of the protocols of data processing between statistical levels on the one hand, and contiguous space entities having different statistical organizations on the other hand. The definition of the indicators differs between certain countries, although within the same entity the definitions are generally similar.

3 Examples of observatories in Europe

The data can also be gathered by a territorial observatory. These observatories are generally publics and works on the territorial development. They gather the statistical data for determined territories, analyze them and chart the results. They are important information sources for the local actors.

a. Institutional suppliers

A majority of the institutional suppliers of data also collect and manage information. Each country of the European Union has its own statistical institution, although those can take different forms. In certain countries, they act as an independent organism, in others it is a departments attached to a ministry.

The data are classified by topics, from the economy to the population, and passing by the environment, health, etc. The heading of the indicators available are mainly similar from one country to another (CAENTI, 2006a),

but the definition of the data can differ. For the simplest indicators, a homogeneity of calculation exists, but this one is not more valid for the complex indicators.

There exists also a great variability of the data presentation mode. Few statistical websites propose cartographic interfaces of data presentation, on the other hand many institutes present their data in non downloadable tabular form. The heterogeneity of the acquisition costs can also be underlined, since any data acquisition requires an investment in time and/or money. In a general way, more precise and particular are de data, the higher is the cost. Some countries make exception, for example the Netherlands or Denmark, where close to the entirety of the information is placed at disposal for free.

b. EIS

EIS is a European program partially financed by the program Interreg Euregio Meuse-Rhin. It covers the areas of Eurégio Meuse-Rhin (Netherlands, Belgium, Germany) for which it collects and harmonizes the statistical data. The harmonization must allow interregional comparisons and a setting in prospect for the actors, often involved in international cooperation.

The harmonization of the statistical data and the indicators is not going without problem: the task is long and can go up far in the process of data acquisitions (method of calculation, method of census...). It is sometimes necessary to take again even the base of the statistics, which take a lot of time and which is sometimes not very relevant. It is thus appropriate, according to the available time of realization, to wonder about the possibility of eluding the question of the harmonization.

c. IAAT

Created in 1994 in France, the main aims of the IAAT (Atlantic Institute of Town and country planning) are the realization of a mutualisation platform of the statistical data and territorial tools, and to allow the access to documents and studies useful for regional planning.

The documents are diversified: statistic tables, chart, working papers, instruments, etc. The topics approached go from the agriculture to the economy and from the demography to the environment.

III. Indicators for analysis and diagnosis: protocol of treatment

The indicators are virtually infinite: innumerable elements can be highlighted thanks to the construction of indicators based on population statistics. Their role is to give an account of a situation and to simplify the information by synthesizing it, by allowing a better communication and by authorizing cartographic comparisons. The guides treating the indicators underlines that those have to show the facts, and not to be an end in itself (VERMEYLEN, 2006). The selection operated in the indicators within the framework of the CAENTI project meets these objectives while taking into account the indicators flexibility constraints, their ability to be transposable, to adapt themselves to the inconsistencies and lacks of the data at the European level.

1. Correspondence between available indicators and the questions of the European guide

The experiment of the European data-gathering showed that it is not very probable to obtain indicators with a single definition for the Europeans countries. The generic terms of the indicators can induce in error by showing an apparent homogeneity of information, and thus comparability (CHEN *et al.*, 2006). It is thus necessary to carefully consider the statistical data resulting from the actions zones of different institutions.

The indicators were selected thanks to the intervention of territorial actors and of a multidisciplinary team taking care to take the work undertaken on the European guide into account. On the basis of a selection of 44 questions of the evaluation and diagnosis guide, 15 territorial indicators were highlighted. They can illustrate 20 selected questions of the guide.

Topic of the guide	Indicator
ID and territorial information	Evolution of population
Information about initial reception	Population by gender

	Population by ages groups
	Nationality
	Part of foreigners
	Composition of the household
	Family nuclei
	Education Level
	Activity status
	Tenure status
	Health status
Personal data and family unit	Marital status
	Income of the household
Housing	Area of the dwelling
Individual and social autonomy	Means of transport of the household

The local accessibility of these indicators was analyzed during preceding research (CAENTI, 2006a).

2. Relevance of the cartography for the representation of the indicators

The cartographic representation effectively answers many constraints of the information diffusion. Nevertheless, this mode of representation can be irrelevant in a certain number of cases. We distinguish from them two cases:

- When the number of entities represented is too weak or too important: in the first case, the reading of the chart does not allow an optimal legibility of the disparities, and in the second case, the abundance of information makes this one not very comprehensible.
- When the indicators have close and constant values, their cartography is obsolete and does not bring any appreciation to the visibility of information.

These reports have nevertheless to be moderated considering local specificities: certain very stable values in addition (for example population by sex) can vary in certain specific places.

Another problem can emerge from the contextual data which are carried out on the basis of classes (population pyramid...). Those can only be represented thanks to one deck of card representing each one a class, or pie-chart. The use of these processes tends to slow down the reading of information, or even to make those not very clear (in particular if the number of classes is important).

3. Identification of the relevant scale of the indicators representation

As highlighted (cfr. infra), the cartographic representation of the indicators needs a relevant territorial scale to spatialize the collected data. It is important to recall that the great diversity of the actors being able to use the method CATALYSE inevitably makes the search for a relevant territory particularly complex.

The relevant territories can have different sizes and structures according to the type of actor to which one addresses oneself. Certain associations using the method CATALYSE deal with restricted districts whereas others work with the national or regional scales. It is obvious that their territories are different and that consequently the scale of represented indicators is also strongly variable.

Moreover, each relevant territory for an actor will require a higher reference level allowing the comparisons for example with the regional, national or European levels.

These reports highlight the difficulty in finding a relevant and consensual territorial level which can be used by all the actors taking into account their own specificities.

Divisions by statistical sectors are very heterogeneous following the countries and depend on different procedures of cuttings, which makes the transnational comparisons difficult, in particular because of the structural differences related to the representativeness of the populations included in each sector. Certain countries choose cuttings so that each zone contains a similar number of persons, whereas other countries define

cuttings thanks to the morphology of the urbanization zones. In addition, the data concerning these cuttings are rarely of easy access.

To illustrate the difficulty inherent in the smallest statistical cuttings, we can compare three European countries:

- Belgium has for smaller statistical division the “statistical sector”. This one contains from 0 to 6438 inhabitants. The sectors are primarily based on morphological limits of the urbanization, whereas some of them contain only unbuildable zones.
- In France, it is in fact the communes which form the basic statistical cutting if those have less than 10.000 inhabitants. The communes of more than 10.000 inhabitants are cut in IRIS sectors, which contain from 1.800 to 5.000 inhabitants. The IRIS sections are created on the basis of contiguous settlements with similar residences or characteristics function.
- In Spain, it is the sections, the rural districts and the districts which are on the basis of the statistical cartography.

We can add that certain countries have very few statistics on levels lower than the commune (or its equivalent).

The communal level seems to be a basic level both for the administrative and statistical data. At the communal level, the majority of the European countries have statistics for the various indicators. The definition of the communes through the countries of the European Union seems to be compatible with the research of a basic level, although this one is not perfect.

This basic level should not make forget that the majority of the actors, in particular those which work on a city or district scale, must have data more precise than those on a communal scale to highlight in a relevant and dynamic way, disparities or priority areas of actions.

4. Protocols of treatment and reasoned catalog

Various treatments and protocols of comparisons of the territorial indicators are used by the actors in very different situations and contexts. Some general remarks can be made concerning the mode of representation of the territorial indicators (CAENTI, 2008).

It is not an easy task to collect the same indicator characterizing a single topic in various countries. That is particularly true for the indicators relating to health, the teaching or the legal statute of the people belonging to the same group (households, cohabiting) (CAENTI, 2006b). Nevertheless, these indicators remain in their compositions mainly close. They can thus be mapped on a single principle. In order to avoid the user errors, it is necessary to refer to the metadata during the information diffusion: each user must have the calculating methods and the terms definitions for each indicator and each country. The experiments (European projects) show that the harmonization of the data between the countries is a task which cannot be done by a project such CAENTI.

Concerning the representation of the indicators, it is proposed to the actors to establish their representations on the usually accepted standards.

- Representation of the relative shares (pourcents, for thousand) or of the composite indicators (indicator 1/ indicator 2) via color areas. Those are preferably of two different colors to distinguish the negative and positive values, or of the indices around a pivot value.
- Representation of the absolute values (units) by proportional circles.
- Representation of the categories by the use of proportional circles (pie-chart) and divided according to the relative representations of the categories.
- Representation of the categories by cartographies by areas, for each category (or for only one if there are only two categories).
- Representation of the continuous indicators by graduated areas of color

It is preferable to propose the user reference values with the higher spatial entities. These values can be given via a table associated with the chart.

IV. Conclusions and prospects

Territorial information or indicators have to give an account of an aspect of the territory which it is relevant to underline. The analysis of the questions of the European guide made it possible to select among the multitude of indicators those which authorize a characterization of the socio-economic environment within the framework of the method CATALYSE, and which are moreover available near the traditional data suppliers.

The selection of 15 indicators representing 20 questions of the guide was followed by the search of the data characteristics. They show the necessary prudence which must be taken to treat and represent the data. Indeed, beyond the protocols of treatments, those can be built in various manners according to the countries. Only the European Office for the Statistics harmonizes its statistics for the whole of the data.

The lack of relevant indicators for local actors is underlined in our research. It refreshes certainly the question of the offer in terms of territorial information in the national or international institutes.

The variability of the definitions is vertical and horizontal. Vertical because the EUROSTAT methods of calculating can differ from the national institutes, and horizontal because the methods and definitions appreciably differ from one country to another. For its part, the observatories are an auxiliary data source, but which does not bring an appreciation for the selected indicators.

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