### The Territorial Intelligence Process: A Humanistic Path and a Realistic Mediation for Development of Hybrid Territories

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**Aims**: This article aims providing structural, and deeper, answers to the words used in titled, how "The Territorial intelligence process can be considered as a humanistic path and a realistic mediation for development of "hybrid territories" because in first part, we have been working, researching, for more fifteen years in territorial intelligence field and secondly, because we have seen from the TICs development that territorial organizations in 21st Century are becoming hybrid, a mix made of physical (geographical) territory and digital territory and call for appropriate path to think about their future.

**Study design, Methodology & Place and Duration of Study**: We illustrate our arguments by drawing on five situations of PhD research conducted in the interval from 2004 to 2014 throughout E.U in general and in France, in particularly. New questions will Of course flow over following this argument and will be subject to later discussion. Reflecting the past six years (2008-2014) we should have to say, in addition on continuing direction of PhDs thesis about Territorial Intelligence, were fueled from the exercise of two local mandates, as Deputy Mayor, and for the second, as Intercommunity Advisor. With hindsight these six years, I have much appreciated the privilege, demanding to be able to discuss, compare, share with a background of a capital theorized on Territorial Intelligence and doing it with a practice in action, because in our sense, action, decision, project and system are the major characteristics and components of a Territorial Intelligence process to manage. Certainly, and because we need putting a fair distance between this recent (and finished yet) experience, and the facts we are preparing to relate through our academic practice.

**Results & Conclusion**: All aspects encountered during these years, for reasons we guess, and then because the programs involved are not yet all finalized, need extracting additional points for consideration in the future. In conclusion, we propose structural elements for a response and perhaps for a future program of development of hybrid territories.

**Keywords---** Hybrid territory, Local stakeholders, Local government, Territorial project, STICA (Socio-Technical Information and Communication Arrangements)

### **1. INTRODUCTION**

With this contribution we aim trying to provide structural answers to the question of the first part 1-Can territories be described as intelligent? In this section, we will see that it is proceeding with a slow investigation, progressive, complex and based on solidarity, leading to a logical communication part of a process, informational and anthropological, to allow the emergence of a structuring logic included into a comprehensive systems approach. In the following section, we will ask for an epistemological and methodological framework outlining research situations for their ability to produce meaning in a search process of actors of a territory to make it intelligent. In conclusion, we ask a few elements for a future research roadmap.

We will do it within relation of the proposal for a *Ecology of Communication* exposed and demonstrated by Abraham Moles (1995) in a book "*Structural Theory of Communication & Society*" whom we quote some extracts p.94 and following "*Ecology Science communication is the relationships and interactions between different species of communications activities within a closed area such as the time available for individual or social group dispersed in such a territory* ». "And stress it will be to achieve a description of transactional human activity, knowledge networks and systems."

### 1.1 On the beginning: the purpose of research is certainly an autobiographical concession

Before delivering answers to the questions raised by the introduction, it will be necessary to indicate that some elements of our journey, both personally and professionally, or extra-professional, enriched our proposal. In order to supply our immediate and future exchanges finally, projecting prospects and power line work, actions, successful programs, failed projects, project underway or in preparation.

A set of tool for reading and writing the territory based on personal and professional elements.

Of course, we will not develop these personal facts but they surely act as a foundation, no doubt about it, certainly, set of territorial tool reading that we propose in this article. This has resulted in a fundamental requirement: games player, with no real and fruitful contribution, without far looking, so do not concern us, and do not enter into this framework thinking. In this sense, the purpose of research or science "*The choice of the object of science is an autobiographical confession.* ». He interweaves autobiography and positive discourse Onfray (Onfray, 1997) and can be certainly an autobiographical confession.

Take action, a project, a program in Territorial Intelligence requires we accept to be potentially exposed to project failure but contemporary culture highlights the immediate result, quantitative performance and does not emphasize or so little, the virtues of learning from failure.

In contrast to this constant "*Taylorized*" culture, only a few constant points persist from one project to another one because there is no perfect formula and reproducible formulation. Here are a few constants over the identified projects.

The first constant means acceptance of a relatively long time horizon (at a time when the very short term appears to dominate and be the priority of action and units of measurement), the second concerns the permanent load of the human factor in its commitments, the latter, concerns the heterogeneous constant dimension (and so much better!) project in its objectives and skills he'll call for, he must orchestrate.

The latter contingent has to be connected with the electoral calendar. Interleaving in the territorial administrative division (municipality, inter municipal, township, city, state, region, EU) and maps, devices of all types of partners: FIRP (prevention of forest fires), PPRI (flood risk prevention), PLU (housing local plan), SCOT (territorial coherence scheme) plus countless unions, etc.) Pushover election with the other two terminals, start and end of term, unproductive and time-consuming of precious energy.

In our opinion and in result from our observation, these elements prevail in an action so called Territorial Intelligence. Therefore we must add another, our ability to rise in fertile networks experts and lay knowledge, so long neglected by territorial engineering.

On a professional level and to complete the elements put into the development of the toolset territorial reading as presented hereby, I must let you in after a scientific training, technological and military, I served in the French navy, then I joined the industry in France and abroad, finally, associated with several projects creating training courses, university or private sites, I joined the Higher Education and Research on pursuing a career. This journey and adventures in relation with gradually prepared me to practice interdisciplinary and highly anticipated by actions, projects and programs located in Territorial Intelligence, inter disciplinarily.

From this background we denote so that I do not belong to any elite corps or solely institution. This is a critical point for practicing Territorial Intelligence as we understand it because Territorial Intelligence does not accommodate with a mono or single culture and is expecting from the actors "say, do and be". (Austin, 1962) (Gramaccia, 2001)

#### In terms of responsibilities into the City

Under commitment for the City since 2008, and during two local elective offices (which has ended in March 2014), one of Deputy Mayor of a medium town, the second as Community Advisor from both of these missions, I supported some programms that helped me, either totally or partially, appealing to the lessons and feedback from the leading of Ph.D thesis about Territorial Intelligence, actions or programs in relation with.

It was more precisely:

- Supporting the development of ISD (Information Systems Department).
- Prepare, assist communities for receiving Very High Speed Broadband and more generally the digital land planning.

- Conducting a Renewal schema five years along and this part of a backup plan associated with a neighborhood renovation.
- Setting up a Centre of Education and Higher Education for six years
- Pilot (as project manager) a digital departmental plan for land) SDTAN

For preparing this contribution, we delved into the material texts (co) produced in recent years (20 to 30 years), objects for lectures or articles, as sole author or as (co)-author and thesis lead as in return by immersing myself into years, of civilian and military professional past, past to serve in the industry and in the Navy and have allowed me to meet the environnement that we intend to describe in this article, we now characterize, define.

We have to stress as for each cited case we have had acted by combining, interlacing "*pieces of non-human with human ones*" on bringing specific skills, applied, and far from very different spheres.

Territorial Intelligence refers to action, decision, risk and systems.

#### 1.2 The life of a territorial intelligence project combines actions, decisions, risks and system

Some major, specific aspects can be used to design our work on Territorial Intelligence and mind it referred to and still alive:

-elements of culture from traditions that show our culture and commitment, a *resilience*, some say; (Levi Strauss, 1958) (Cyrulnik, 1989) (Bertacchini, 2012)

-elements-so-called scientific and technological skills, which, according to the encountered situations, we must add knowledge and know-how to structure a Territorial Intelligence action. (Polanyi, 1969) (Wood, 2005) (Bouchet, 2008) (Perrin, 2010) (Rmili, 2010) (Deprez, 2012).

- And some language elements used as for sense of territorial grammar (Jakobson, 1963) (Bertacchini, 2004), (Herbaux, 2007) (Maurel, 2012), (Bertacchini, 2013).

Territorial intelligence regularly leads us meeting elements of a system we will call territory, both immersed into a complex and competitive environment (Von Foerster, 1981) (Bougnoux, 1993), (Levy, 1997), to describe this whole structure has composed and whose logic dedicated to production of goods and services. Though we observe its organization and flows (outputs, inputs, media puts) that traverse, definition and negotiation procedures, formal and informal it finally adopts latterly, its representations whether expression of physical or digital elements.

Our work, our research meets contemporary news, repetitive announcements made closure of industrial sites and more broadly, any short-industrialization. To have experienced crises, both in the military area than in civilian sector, we measure, take into account the importance to identify, preserve, maintain, improve and pass forward the knowledge we place at the heart of our approach.

When an industrial site disappeared, when a military unit is closed, or its performances in the action compromised, capabilities (knowledge and skill) associated with men who held leave the host country or their survival itself is threatened.

We here discuss the operational skills Territorial Intelligence calls.

We discuss precisely territorial intangible heritage to create, maintain, preserve, stimulate because although territories are experiencing a life cycle disrupted, often exposed to either breaks, or a so-called digital divide that undermines the territorial value chain is ie the development of relationships apply to a range of jurisdictions. We have been living our daily lives and the land cannot be reduced only to expressions and digital productions rooted in the territory without physical.

In order to illustrate our previous remarks, we will bring a larger object expressed by *The Economist*, 12th April 2013 and which can be summarized as follows: "*the concern even occur in our 'developed' countries 'technological extinction*<sup>3</sup> *connected to a slowdown in innovation.*" Does it not therefore in a project of territorial intelligence, (co-) produce, connect; renew the fabric of this intangible capital midpoint of the project and source of our ability avoiding this technological extinction so as to fight against the decline phase which follows inexorably to the mature phase of a cycle of territorial life?

And, therefore, from what point can we describe the intelligent territory? What are the associated assumptions with a territorial intelligence process?

### 2. CAN THE TERRITORIES BE DESCRIBED AS INTELLIGENT?

Without claiming to answer definitively on this fundamental question, here are some structural elements of response that'll punctuate our reasoning. These elements also will draw in many and varied professional practices.

We will use a query to raise the issue of all."Indeed, why men posed, anchored or passage in one way or another on a territory, do they form a group project or otherwise deform, or take no action, to certain situations do opportunities, threats and risks?" (Bertacchini, 2004)

The idea of combining intelligence and territory had not yet expressed, though we do not catch the link because many elements were missing. It only was later, when our journey took us to participate in creation of trainings, the settlement of a Technology Department of University, in a territory without any university location, we will question thinking this fact which should logically be a factor of attractiveness.

The idea of combining intelligence and territory in our sense came to us after having read the work of Jayet and Wins (1993) on the process of locating companies, barriers to entry market, and then heard (or imagined?) expression territorial Intelligence (1995?), took in consideration definition given by Datar for spatial Development (1998), this definition associated information / communication and organization. We wrote two reports, the first, "*Decision of location and Local Development*." From the logical point of view of the entrepreneurship, has focused on modeling decision process of an entrepreneur who allows him to choose at a convenient time a territory to locate its business. The second report, in coordination with the first and seen from an institutional perspective of a Development Corporation, as it clarified the criteria for determining location of activity seen in the light of this analysis logic. Through publication of these two reports, we capitalized two logical analysis, one private, the second service. Beyond, formal, measurable criteria, we update a series of informal criteria that we decided to latter explore.

In the meantime, ICTs began to be widely disseminated and used abroad, therefore announced in France as a means for remedy for all ills territories or authorize developments so far inaccessible prior to arrival. Therefore, another question was about to break in parallel. "*How is it that certain territories were able to mobilize ICT to formulate their policy development or precisely how to explain that certain territories would happen and others do not? While the accessibility of ICT, equipment, networks, was now made possible of?* "(Bertacchini, 2000, 2004).

In order to initiate this investigation, we decided to define, compare, measure what we would call later the *formal capital* of two territories close enough with characteristics, we then propose an evaluation of local capacity for action (associated with a function) model inspired, derived by the meta-model of Schwartz (1994 et seq.) Among the elements that have helped feed the work and publications on territorial intelligence, we note that traditionally they fed of economy, geography, Science and Technologies of Information and Communication (ICT) and connected with knowledge management. Links with business intelligence and ICT are often cited in current definitions of territorial intelligence. The territorial intelligence systems (ITS) need to use the traditional process of information transmission and information technology and communication through the Intranet or Internet Web sites, documentation, information systems geographical data and analysis.

But these elements borrowed, equally relevant, did not meet our expectations because they do not address the informal criteria mentioned above and do not allow us access to the organizational capacity that mentioned the definition of Datar (Op.Cit). Our expectation (Or Quest?) was firstly meet the work of Edgar Morin by reading "*Introduction to complex thought*" (Op.Cit) It follows a progressive investigation. Slow, complex and inclusive.

### 2.1 Slow investigation in progress, progressive intricate and integral

Subsequently, we discovered the life course of this researcher, Resistant, Humanist and finally read page 124 of the same book "lived solidarity is the only thing that allows increasing complexity." This phrase, powerful, connected, in our view, both ends of a "complexity and Solidarity lived process."Likely in response to a territorial further complicated environment, and perceived as such by many actors met, policymakers broadly and territories face disruptions in their life cycle.

Because the territory environment made of such components as human, technology, financial, legal, mutated, in our view, became more complex. But complexity and its corollary, uncertainty, scare and practice, though expected by interdisciplinary and multidisciplinary projects or problem to solve, does not exist culturally. Knowledge required on part of those in charge to define, implement and monitor achievements of local politics has also changed. How then do orchestrate these movements to build an intelligence, which we call for in reference to a territorial development of the local movement from localized mobility or latent resources? We will strive presenting now and always in touch with our combined experience as a researcher and actor, prior assumptions local commitment or in other words "*How, in a*"

development perspective, to mobilize local resources having been beforehand detect their potential deposits? And by what logic and communication based on prior assumptions which happen to engage this movement?"

### 2.2 Communication logic to be revealed, to lead and to structure

Territorial intelligence field of contemporary research, like many areas of research, encounters problems of interaction between systems (1972) as well as numerous interdisciplinary implications have to write Mucchielli (2004) that "*the years will tell us whether Information and Communication Sciences will manage to strengthen their interdisciplinary.*"

Therefore, and by extension, we could argue that to qualify for the spatial dynamic of their content, local organizations, communities essentially, has to detect and then combine the expertise available, localized and / or mobile, physical or dematerialized (digitalized.) This inventory work is made for structuring their capital resources and intelligence with a view to achieve a development policy. Connecting this formal capital, latent or revealed, is not achieved in all cases and we could not at this stage yet speak of territorial intelligence business because we do not understand the logic of the communication process in work that would allow information to give meaning to data exchanged by actors. We will now consider or prior (s) in an attempt to territorial development that we meet in a hypothesis.

From the work of both economists and Jayet Wins (1993 and 1996), we proposed the following hypothesis: "The existence or nonexistence of a network of relationships between local actors can prove to be a barrier or a catalyst in the construction or reconstruction of the territorial link. »(Bertacchini, 2000) This relational grid, physical or virtual (digitilized) can help mobilizing local skills around a shared goal, a logical communication, and in the case of complementary skills to gather, to facilitate their acquisition by a user appropriate learning. Thus, since there recognized inequalities of access to territorial development process, it produces asymmetries in the mechanisms evaluation of the authors of local history. Based on this hypothesis, the spaces involved in the way their organizational mediation does not have access to all the same capacity development. In other words, they do not have the conditions for recognition and shared communication that do not engage in a co-constructed process that we have termed informational and anthropological because their logical structuring development.

### 2.3 Informational and anthropological processes structuring the development of the territory

When these inequalities generate asymmetries in the evaluation mechanisms of the authors of local history, the information provided, exchanged their members are tainted with disabilities, lack of direction, distortion of their content and prove their inability to form the relational network for the conduct of the organizational mediation. In this situation the territorial data remains "*a sign or set of signs without attribution of meaning*» (Toffler, 1991) and may not be information that" *when received in the communication process.* "(Lamizet, Silem, 2004).

A priori, the history of these local actors are not allowed to or prohibited from investing in their future. A posteriori, when the exchanged information is not credited, disability content of information exchanged does not favor joining the network communication. Therefore, the relationship displayed but not shared around this objective, logical shared communication can not reproduce and permanently impair the Territorial Enhancement. Building social link fails, the constitution, the transmission of intangible heritage group does not occur. Attempt mediation, humanist essence qualified territorial intelligence, we propose may prove to be an answer and so we need to continue rebuilding what has allowed us time to lend this process, fed this ability to "choice, freedom, uncertainty.»

Prior to sharing experiences then comes from our conception of reality and our knowledge of the information held by the local history tank. This would involve the qualified local, real tank informational and anthropological history, or what we understand this reality. If written as Watzlawick (Op.Cit), common sense suggests that we can, as a result of our investigation and understanding of the real world, discovering objective reality, our conception of reality is no longer an "image true "*what is outside of ourselves*". It is, always according to Watzlawick (Op.Cit) necessarily determined by the process that led us to this design and any purported reality is the construction of those who believe they have discovered and studied. In other words, "The environment as we perceive it is our invention. "(Von Foerster, 1973, p.74). Or more precisely "*A growing body of new knowledge suggests that what we call reality is actually something we construct.*" (Von Foerster, 1973, *Op.Cit*) And this invention, the translation may prevent writing the territorial grammar understood as the structural model of communication proposed by Jakobson (1958).

Like any player, mobile and shared between various jurisdictions, as is increasingly the case today, territory leisure professionals, status, actual or virtual, we are immersed in a variety of environments, near, intermediate and remote. But, how do we live these territories and since it is our main purpose, how territorial intelligence is it in this answer?

According to Levy (1997) the individual projects his inner reality in the world he sees, while being penetrated by him, through a circular interaction undermines the division between subject and object, and it allows or not, finding this

logical communication. The living self-organizes, provides his own goal, determines its own criteria of differentiation, action and 'calculates an uncertain environment by practicing a sort, selection or translation to the transformation of a disorder in his order (Bougnoux, 1993). It is for Territorial Intelligence to focus on structuring search logic often not collected (invisible) by the members we have assembled to form a project team.

### 2.4 A structural logic of the invisible information in operable communication

With the elements, complexity and solidarity experienced, intelligent communication, construction of reality, multidisciplinary approach, we formulate the hypotheses of territorial grammar within the meaning of the model formulated by Jakobson, as a point of departure and arrival, to form (co-construct) the formal territorial capital (Bertacchini, Op.Cit) prerequisite for the grammar in the sense of Jakobson (1963) and Levi-Strauss (1958) as the language of territorial organization committed in a territorial intelligence process. With an incidence, double, this territorial grammar will result territorial project feasibility and quality of the territorial grammar will result maturity of the project, well before the visibility of territorial project and its perception by actors will not be directly involved in the project, finally, will met the success factors of the project involved. We mention that this language must also be fed the resulting production of ICT use information technology and communication and promote the tools of "Web 2.0" for the consultation well as themselves, they can not completely substitute for good social relationships "real". (Perrin, 2010) (Deprez, 2012).

As we have indicated, the physical origin territorial levels, to varying degrees and multiple uses, integrated or integrate gradually (N) ICT blurring the administrative divisions while promoting the emergence of virtual territories (or dematerialized) (Perrin, 2010). Thus, so the "digital society" is built and reconfigures the value chain territorial. It is essential that these territories can integrate information technology and communication, it is also necessary that they nourish, at the risk of being marginalized on a national and international level and to curb their use for cooperation, particularly in projects related to sustainable development. The territorial intelligence process that can be described as information and communication territorial approach finds its full justification in assisting in the formation of capital formal territorial level (Bertacchini 2004 et seq.) In our opinion, and this was confirmed to us by the practice in shares during the last six years, the formal capital of a territorial level is the preamble to development policy, whether policy territorial capital follows from the logic of communication that the territory is chosen. It is therefore a logical characteristic of organization, communication and structuring based on the sequence of torque Information Communication invisible-operable 'and reflects both the sharing protocol communication activities individuals and transactional system of exchange used by individuals within the territory of the component systems. (Moles, 1995) (Cooren, 2001).

We see thus that the aspects are in fact just as much a part infrastructures, telecommunications networks to broadband (pipes) on media and content of scanned documents created with these tools. Such issues are relevant to all sectors of society, from education to the economy through health; World administering to the company, through the particular. It is therefore required that the territorial intelligence relies on a network of multidisciplinary skills held by local actors of culture and therefore, different codes. This is a crucial point. From this point of view, we must clarify the assumptions underlying the territorial grammar to enable the informational and anthropological processes that will engage and to share the logic of territorial communication.

We consider a point of view of Computer Science and Communication, and born of the observation of the practice of local actors, as anthropological information process involves the combination of three assumptions.

- The actors exchange information (energy generation individually and / or collectively);

- They give credit to the information received (capture-information exchange);

- The communication process engaged and established actors establish appropriate networks and transfer skills (mobilization and transfer of energy: the formulation of the project).

When into the territory these assumptions are met and checked, and that stakeholders have taken these three stages of assumptions, potential sources of skills can be identified with an action of information and communication authorities, the territorial logic of communication and mobilized in the context of writing one or more development projects. We believe that this is the preamble to the definition of a local development policy of preference endogenous responsive medium-term competitive relationship between the territories involved and would enable the anticipation, adaptation territories face a structural change their position on their life curve. In fact, it is a systemic approach well adapted to the situation described because understanding a process of learning to make.

### 3 - SETTING EPISTEMOLOGICAL, METHODOLOGICAL AND ILLUSTRATIONS OF ENDED RESEARCH

We found that the territorial intelligence, confirmed purpose and applied scientific field, is at the convergence point of information, communication and knowledge. Territorial intelligence reflects a relationship Space-territory which succeeds territoriality, as a phenomenon of appropriation or re appropriation of resources, and finally, allows the statement of the territorial project when the territorial level happens to make it. From an epistemological and methodological point of view, the term certainly bold, territorial intelligence emphasizes the construction of a scientific object that ultimately leads to the development of a meta-model of the territorial system inspired by the work of Schwarz (1994, 1997 et seq.) For our purposes, this approach is not exclusively a systemic modeling associated with matrix territorial process, made of structuralism and functionalist in nature. Our work in Information Sciences and Communication and, as such, refer to social approaches, inter relational and systemic theory, that is to say, informational (information theory and energy associated attributable, among other ICT) finally, constructivism, that is to say a communicative approach with reference to territoriality and consists redials the territory.

We will complete this brief presentation by recalling, as already pointed out other work in other scientific disciplines, the study of a territory behind an initial uncertain knowledge underlines the importance of the project team skills in charge of its development. It is therefore necessary to emphasize the heuristic nature of this approach and for the ontological level we refer to a pragmatic territory and its actors, Researcher in its relationship with the Society. Finally, we believe useful to specify that territorial intelligence can not be limited and be reduced to a standby approach but is rather a logical project type 'Bottom up' which will attempt to display the elements of a pro-active or anticipatory attitude risks and disruptions that may affect the territory which will inevitably occur.

Caught in this systemic approach called "communicative" and with his help, we have clarified the theoretical position of the researcher-actor we can seize the meta model Schwarz to monitor changes in its business planning of territorial intelligence in a theater with its rituals, heroes, symbols, values which constitute its history, the theater consists of an unspoken rhythm that exchanges between people. There mediation and capitalization of a culture of signs and postures (habitus "way of being",Bourdieu) (Bourdieu, 1994) p.24 establishes a grammar of communication (relates to learning, to impact of this learning on the last agent, the ability of these provisions give rise to social practices) and founded the identity of the local group. This observation is a crucial point of research on land issues in Quebec (Herbaux 2004 *in* Joyal) and us away from blissful prophecies about the roles of ICT (Sfez, 1999) and a concept of development where the territory physical 'and actors are absent to make way for a fully digitized territory (a territory with no geographic roots).

As we outlined earlier, the creation of an enabling environment is a pre-requisite to any emerging innovation society. A primary objective is to create local institutional terrain behavioral, informational, where players can express their perceptions, enrich their knowledge, skills and assert their influence on the development process; it relates to the political environment, the recognition of a local authority, technical and administrative instrumentation and social remobilization of local actors, the manner in which information is at the center of these reports. But we find in at the intersection of Territorial Intelligence and Sustainable Development programs that these methods of exchange and dialogue are difficult to provoke, to train and maintain. Preferences are moving towards the more easily operable communication in the couple we cited below "actionable information-communication invisible."

This approach planning is to define the conceptual framework for the support of a democratic process ascending and spatial proximity (whether the product contacts face to face or remotely via digital Relations) is at the heart of this territorial specificity. It is not necessarily involving social identity and proximity, but involves a first stage of construction of a new territory, through a gradual process of emergence of territorial appropriation, it is accompanied and promote. This appropriation phenomenon of symbolic representation by which human groups think their relationship to a physical space, can only be built by the progressive integration of a local feeling, through a collective mental process. Brunet (1990) teaches us that the consideration of only lived space has shown its limits and that the emergence of a territorial identity can not be reduced to an economic, social or cultural activity devoid of common political existence or administrative recognized. The only aspect of lived within the premises, are neither progenitor nor constitutive of the territory and it is here that the territorial intelligence offers a humanistic way of mediation.

Territorial identity can not be reduced to a more political or legal identity rooted in a place: there must be this and something more: a conscience (Brunet, Op.Cit). It is well to local political space (Levy, 1997), in which the actors feel responsible and where to play power relations (Bourdieu, 1980) for its appropriation (Raffestin 1981) emerge. Durkheim, (Durkheim, 1977), p.138 advance "For that votes express anything other than individuals, so they are driven from the principle of mind"

At the end of this epistemological return, which wanted to restore our scientific progress and ask an epistemological framework, we proposed the following definition of territorial intelligence (Bertacchini, 2004) "*Regular and continuous* 

informational and anthropological process, initiated by local actors physically and / or remote resources that appropriate space by mobilizing and transforming the energy of the territorial system capacity project. Therefore, territorial intelligence can be likened to the territoriality resulting from the phenomenon of appropriation of resources of a territory then consists in the transfer of powers between categories of local actors from different cultures. " This collective capacity, territorial intelligence, planning to anticipate disruptions that will reach during its life cycle, to seize the opportunities that arise, requires the implementation of an evolving culture and is well upstream of the visible area project by actors who are not involved from the outset in the future project. Territorial grammar, formal territorial capital will flow whether the project and the quality of this grammar will result feasibility of the project itself. That is why we place the scope of territorial intelligence well before what we design, the communicable visibility territorial project, and its perception by external actors and as an informational and anthropological process, that is to say, with a structuring capacity. This reinforces the need to write the co-constructed formal territorial capital because of its quality will take place the meeting of key success factors for the development project. And in writing this formal territorial capital, signs and data involved in the production of meaning in the evolution of regional culture because together in a process of communication.

### 3.1 Signs and data as meaning producers in the process of territorial project

This change of relations and exchanges, a logical project must be backed by another signal processing and information (Gramaccia, 2001) (Wood, 2005), (Herbaux, 2006 and 2007). Communicate differently participating in a joint project is on the individual links and changes the relation to each other, so the exchange relationship out daily to access a shared project of otherness then there capitalization and valuation of individual missions; this sharing and putting into perspective the conjectures are all opinions based on analyzes of assumptions that provide formal and semiotic relationship of continuous and interactive flows, the group. Organizational culture takes, by recursive aspect, a sustainable profile. Signs, data representations are then called as producers of meaning (Maurel, 2012). While covering a period of more than fifteen years in research, we are now discussing some situations for illustration of this statement. We made the choice of four researches conducted in French specific region as Nord-Pas de Calais region, Rhône Alpes, Languedoc Roussillon Region and Paca (Provence Alpes Côte d'Azur).

### **3.2** Application in Nord-Pas de Calais Region. Territorial intelligence: from a general representation to a concept of finality (Herbaux).

It came from an experimental territorial intelligence component (Herbaux, 2001 and subsequent) in the North of France (Lille, countries of Pévèle and Audomarois countries) and in part of a research commissioned by the French State. Anticipating threats in the business world was a leitmotiv of work, apprehension, formulation of potential risks, the role of information transmission and the impact of information technology and communication (ICT) on the regional economy constituted a field of constant questioning. We now set out the assumptions associated with this research.

### Hypotheses testing

Research in this context do not mark themselves in an established model of knowledge transfer but rather observing concurrent approaches that establish modalities for knowledge sharing. To do this, we asked first three working hypotheses related to the assumption of synthesis:

-Hypothesis 1: the perception of threats and future ruptures is effective for the actors and the population of the territory. -Hypothesis 2: Information and Communication Technology (ICT) is an essential approach for sharing information within the territory.

-Hypothesis 3: the territorial intelligence process is related to priority processing of information on the economic fields.

And finally, the hypothesis of synthesis: "Territorial intelligence is within the territory between information and communication processes." Herbaux deduced an appropriate definition of territorial intelligence. "

"A change in the local culture based on the collection and sharing between all actors signals and information to provide the decision-maker, and timely, judicious information" (Herbaux 2002 onwards)

The concept of information processing applied to the territory by the action research implemented in the Nord Pas-de-Calais in 2001.

The model used is based on a recursive pooling signs that stood in several registers from the individual ones to the collective; address the threat, it allows a shorter space and time in transmission and interpretation of signs. We should note that this approach applied to the local inhabitants, disrupts the normal pattern of transmission for the detection of threat; informal, tacit and confused emergency, access to explicit, structured and continuous deliverable. Arguably, this

approach is gradually changing a culture of local. Indeed this new posture of territorial actor that he participates in different local project. The frame of shared project now supplies watermark daily searches and they jostle in this canvas culture internal to the area and its hierarchical system.

## **3.3** Application in the Rhône Alpes Region. Networks & collaborative practices: towards an epistemography construction of knowledge online. (Bois, 2005)

In this research, conducted in the Rhône Alpes region, the central objective was to organize the collection of know-how recognized by an old profession, but scattered, by a community of builders in mud-clay, form of networks actors holders of such knowledge to individuals, structuring knowledge identified to finally make them available, accessible, visible and therefore make them ready to be solicited, usable.

This research therefore associated networking to allow collaborative practices through the construction of online knowledge and to provide tools for community builders in mud-clay by combining Human and Non Human, Territory physical with the virtual Territory, local and remote Actor present, the knowing and doing, secret revealed, identified and latent, and to allow the meeting by mediating between actors, of professionals with non-professionals, knowledge holders with old and scattered ones with users/manufacturers in information retrieval and documentation in connection with past and special techniques of building. Bois (bois, 2005) described the methodology of making what he called the online attic of knowledge.

(Bois, 2005) outlined the methodological mediation that led to the organization of this dynamic encounter between actors and know-how.

1. The dynamics studied and restored find us the assumptions of territorial grammar: exchange information, credit to perceived information caught, and then mobilization of credited information for establish the communication process to deliver online training information.

a. A very concrete experience of manufacture online attic of knowledge.

- b. The conditions of collaborative writing.
- c. The use of knowledge attic for online training.

2. The contents of the attics of knowledge. The first question is concerning the online documents bearers of knowledge. We have to identify the best writing and organizations for these documents are properly indexed by similar search engines.

a. The second explored *topoï* is concerning interweaving human and tools for production of documents bearing knowledge. The generic name for this dynamic system is imagined attic of knowledge.

b. For this experiment we studied the hypermodern episteme from three books: "Words and Things" of Michel Foucault, "We Have Never Been Modern" by Bruno Latour and Peter Sloterdijk "Spheres trilogy".

This method was applied to the manufacture of an Online Attic of knowledge on building earthen-clay by a collaborative practice with a STICA (socio-technical of information and communication arrangement). Artifacts of this research are two prototypes Attics of knowledge, an application in PHP MySQL JavaScript for dialogue between authors and users of documents describing the intertwining between humans and tools during the collaborative process.

# **3.4** Application in the Provence Alpes Côte d'Azur Region. Coexistence of territories: the physical space under the test of the virtual one. A relational cyber metric approach issued from a territorial intelligence process. Perrin (2010)

This research was conducted on several research fields, but the most important of these research areas was the territory of the PACA (Provence Alpes Côte d'Azur) Region and follows a study sponsored by the Regional Council of PACA in order to assess the regional public Web.

As territorial intelligence proposes to better understand how to realize the phenomenon of appropriation of territorial resources, it uses the social approaches through the relational aspects. We are committed to identifying new territories assemblies, combinations and interactions are made between physical and virtual new territories incorporated areas.

This research has been based on three theoretical foundations: the theory of complexity, metric information analysis, and territorial intelligence. The questions associated with research made us wonder about the principles of coexistence and cohabitation of physical and virtual aspects (Quéau 1993; Dubey, 2001), which can be seen in our realities: - What kind of cohabitation between the dimensions of physical and virtual territories? - Should we consider a combination of the territories and what forms are the interrelationships of physical and virtual territories? - Do virtual networks are, act as an extension of the physical networks or do they answer to its own logic and condition, able to give them some autonomy? - Are they able to finally turn have an influence and impact on the physical networks? It is to highlight the coexistence of physical and virtual territories and bring items that can enlighten us on assumptions based our research. As we have seen

in our results, the virtual territories reproduce partly physical and geographical aspects which they are drawn. However, it has also been observed in contrast, in the virtual world, a degree of autonomy that gives these territories characteristics that become their own.

## **3.5** Application in Languedoc Roussillon Region. Signs, data and spatial representations: elements of meaning in the drafting of intercommunity territory (Thau Basin). (Maurel, 2012)

Local territories are subject to forms of development increasingly dictated from the upper scale, based on the paradigms of the global economy and sustainable development. These local areas are indeed a relevant level to respond operationally to these issues of global proportions. The question then is how these areas can, in this context, also promote endogenous development that makes sense for local actors.

### Spatial representations and their potential of mediation

The concept of territorial intelligence mobilized in this context is an informational and communicational approach to territorial development. From this point of view, territories are represented using the Schwarz meta-model as systems able to emerge and become more complex to deal with an uncertain environment. In this approach, the systemic and constructivist paradigms we deepen the potential role of the geographical dimension, via spatial representations, in the devices of information and communication at the level of inter territories, assuming that it has the potential for mediation.

### STICA and mediations: boundary objects enhancing local knowledge

"Mediation" has, as means power of articulating these actors and heterogeneous strategies or antagonists using the STICA "socio-technical information and communication arrangement", studying communication situations and different forms of mediation that it allows, as well as learning that may arise. Spatial representations, as constituting STICA media products offer a variety of semiotic properties and features even if they are still most often methodological unthought-of in professional routines of territorial cooperation. They may be in particular boundary objects within the meaning of Star S.L., Griesemer J. (1989), Flichy (1995) between heterogeneous worlds and allow enhancing the knowledge of local actors from the moment green design information (Moles, 1995) is adopted.

From a pragmatic and empirical point of view, research and intervention on the Thau territory allows a micro level, to highlight situations of production and use of spatial representations in STICA and their effects in the process of territorial planning. We show how the deployment of a explicit representation of urban sprawl, first by quantifying and setting cards, then by operations mediation can make this issue initially blur a new object management within the territory. The potential mediation of physical 3D models of the territory, taken as "boundary objects", is also shown. Finally, two experiments valuation skills and local knowledge are used to validate the feasibility and the relevance of these approaches in an objective territorial intelligence, while stressing the tests to pass to the TK holders and gain legitimacy in professional routines of territorial planning.

### The corpus of research hypotheses

This prepositioning brings us to formulate a body of hypotheses bearing on both a global approach of territories taken in context encompassing and more pragmatic dimensions that fall within the territorial engineering, addressing the point of view of information science and communication.

### Hypothesis 1

The current dominant paradigms (global economy, sustainable development, society technologies information) paradoxically give full weight to local areas (inter country) scale in France).

### Hypothesis 2

Territorial strategic planning across inter generates a multitude of acts of communication between heterogeneous actors and mobilizes a patchwork of combined methods of animation tools of information and communication. The integrative concept of STICA socio-technical information and communication arrangement has a potential heuristic for understanding and operating in a unified way the informational and communicational dimension of territorial development process based on consensus.

### Hypothesis 3

Emergence of sustainable development gives a central role to the biophysical materiality territories and imposes eradicating compartmental approaches previously undertaken on a sectored basis.

## **3.6** Application into the Paca (Provence Alpes Côte d'Azur) Region. Contribution of information technology and communication (ICT) for organizing participatory public policy dimension. A democratic cyber sustainable development project from a territorial intelligence process. (Déprez, 2014)

Since October 2012, this PhD research is subject a contract of scientific partnership between the PACA region and the city of Vitrolles in which is conducted the research action and the results fed into a wider regional reflection.

He is questioning the wide game of uses which the technological dimension of territorial sustainable development projects is subject. The technical object is considered as the objective realization of a human effort of invention, construction and analysis is conducted in the modernization of public administration through the prism of the transition from computer to digital by changes authorized from Web 2.0. The focus is given to all local authorities in the PACA Region, engaged in a Local Agenda 21 (LA21), a Territorial Climate and Energy Plan (PCET) and an Agenda for Global Innovative Region (ACT). Indeed, the use of digital, to control information within territorial projects studied, can approach the web space in a dimension of sharing, first meaning of the concept of participation at the heart of sustainable development programs.

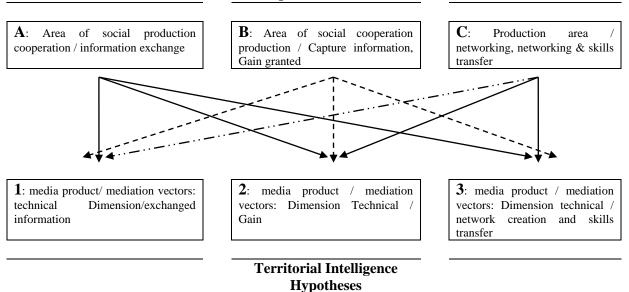
### Hypotheses / research questions

We now present the research hypotheses translated as a main question that will be detailed after presenting how we combine the three components of a STICA (socio technical information communication arrangement) (production areas / mediation / receipt) with the three assumptions of territorial intelligence (exchange / capture more value / networks, skills.)

>Do public administration rely on communication resources offered by Tics to make dynamic information?

> How organizing internal services of local communities in the management of sustainable development project, and its participatory dimension in the digital age?

> What characterizes the "process of sharing of objectives that the group in charge of spatial planning must share", which is a prerequisite for any concerted territorial policy (Bertacchini, 2009)?



### **Components of a STICA**

### Fig. 1: Proofreading assumptions: analysis of a STICA under territorial intelligence hypotheses.

We now clarify and detail the main questions of our research in terms of the components of a STICA cross with the assumptions of territorial intelligence.

A.1: Area of social production cooperation / information exchange

- Do Local authorities exchange information?

- What is the information content offered?

A.2: Social zone of production cooperation / Capture information, Gain granted

- Does Public information change the repository trades community?

A.3: Production area / networking, networking & skills transfer

- How local authorities do organize democratic dialogue?

B.1. Media product / mediation vectors: Dimension technical / information exchange

- Do digital tools used by local governments share information?

- What kind of information content is provided on institutional sites?

B.2. media product / mediation vectors: Dimension Technical / Gain

- Do local authorities use all communication resources of ICTs to boost the exchange of information?

B.3. media product / mediation vectors: Dimension technical / network creation and skills transfer

- Does the new discursive schema opened by using digital (Doueihi, 2011) allows the creation of links between main actors of the ecosystem area / community around the issue of sustainable?

- Does the website of local authorities allow it to engage a kind of dialogue within the organization?

C.1. Social zone of cooperation Reception / Exchange of information

- Is the local authority adapting to online engagement behaviors on the web to make it more visible and accessible exchanged information?

C.2. Social zone of cooperation / Gain

- What do public relations maintain with digital tools used by public administration?

C.3. Social Zone of cooperation / networking, transferred skills.

- What are the socio-technical means available to local actors to participate in the co-construction of sustainable development project implemented by the local community?

### 4. CONCLUSION: STRUCTURAL ELEMENTS FOR A RESPONSE AND PERHAPS FOR A FUTURE PROGRAM OF DEVELOPMENT OF HYBRID TERRITORIES

At the junction of action on the object, territory, and identity gained by territorial actor, territorial intelligence is thus a paradigm of meaning and identity because data is received in a process of communication (Lamizet, Silem, op.Cit). Thus, the territorial dynamics derives its existence from complexity of its networks (hypothesis 2) acting in the social debate and energy (hypothesis 1) implementation can scale territorial new object (hypothesis 3). Endogenous territorial innovation thrives on internal signals and external information flows. This is to tap into local history, informational reserve, to capture data streams to be treated in continuously and to detect the threat in time, seize the opportunity, finally, to promote the emergence of information process as anthropological.

The answers are offering a bundle of new tracks to explore the concept of knowledge sharing. This capitalization of signs and information development perspectives, supply to local possible futures able to thwart the threat, uncertainty that territories will face during the course of their life cycle. The creation of this position is carrying the seeds of attributes anticipation of a democratic tool shared by local actors, involving them more closely to territorial strategic vision and that, well before the visible operable communication. The term local actor, for the shared resource, then makes sense and Researcher, in our point of view, also becomes a territorial actor because participating in transactional exchange protocol.

Finally, in order to more precisely reflect our orientation we still borrow from Davallon to try to better present our position. "Research in Information Sciences and Communication, is the ability to experiment and adapt concepts and methods forged in other objects within other disciplines." (Davallon, 2004, p 31). Territorial intelligence as we did perceive, practice, restore was enriched from many years of a process we can such call "trial and error" fed breaks, voluntary or otherwise, risks, crisis, hopes, misunderstandings toward the behavior of organizations, civil, military, commercial, non-commercial.

We tried to reconstruct the fabric of maturation of our research in territorial intelligence based on our practices, experiences, misunderstandings, unresolved enigmas and we wanted to offer you a frame of 'territorial intelligence' as a process of meaning for building hybrid territorial organization. A process of meaning that reflects ability of territorial actors to mobilize data, information and knowledge on contributing to (sustainable) development of a territory or as result of a collective effort through a retro-looking playback. We have proposed a territorial intelligence definition that makes sense in, and for, distinct occupational universe therefore trying to breakdown barriers of cultures to form compounds of expert and lay knowledge mixed networks that territorial engineering practices hold little or not at all.

The difficulty of this prospective and projective writing both lies in consideration of the most important constraint for all societies in history, access to energy (Odum, 1971) internal energy /external of a project, and the need for both combining the abandonment of part of the worldview of modernity - separation of world in actors, institutions and

territories - and adoption of a highly innovative vision that emphasis on mediation, network, translation and ultimately mobilizing collectively skills, but initially formed and grown individually, in an environment is favoring short term as in its reading of communication activities in individual practice emphasizing operable communication.

We here display the problem statement of territorial intelligence by using comprehensive systems approach to identify the logical structuring of communication that is to say, analysis on a system, territory, taken in a whole as a dual system consisting of "non-living and living", as a dissipation structure (Lotka, 1922) and Prigogine (1986) and refers to the complex systems technique as described by Morin, Lemoigne (1990 onwards).

And now, after having it heard so many times, and subjected to a question from a student, future doctoral or PhD student, I would say this if the question was asked me "can you explain us in a few words, phrases, summarize territorial intelligence?"

Here are today the main elements of response I would do to help my partner to catch the structured set (or to be structured), and for keeping on the structure that forms territorial intelligence.

I'll help in this by proposing an approach frame by using authors such as Rifkin, Latour and Morin.

A frame to approach territorial intelligence

At a Meta level of analysis

"The reality is clear: increasingly complex energy-intensive civilization that appears in history intensifies the pace, the flow and density of human exchange, and creates more connections between people." (Rifkin, 2011, p.29)

"The major economic turning points of history arise from the convergence of a new energy regime and a shift in communications. "(Op.Cit., P.40)

"The more complex energy civilizations allow humans to compress time and space. "(Op.Cit., P.44)

We note that a logical structuring of communication should be adapted to the situation imagined land to be developed enabling it to reduce inherent energy degradation territorial system and reorganize the structure of its communications.

At a meso level (Latour)

"It seems that we are required by" connections "that no longer resemble the registered social links. "Latour, 2010, p.14

"The worst thing would be to limit in advance the shape, size, heterogeneity and combining associations. "(Op.Cit., P.19)

"Which assemblies for these new assemblies? "(Op.Cit., P.375).

We conclude that only a systemic comprehensive communications approach will allow the emergence of a communication logic outlined above with a focus on structure meeting between expert knowledge and lay knowledge 'ignored' while demanding that deal with a break encountered by territory during life cycle, we have to recreate conditions of assemblies replaced actors.

At a micro level (Morin)

"The experienced solidarity is the only thing that allows the increase of complexity. "(Morin, 2005, p.124).

Finally, it confirms that in upstream of territorial project became visible and communicating (couple visible / operable communication information), endogenous inputs specific project stakeholders can help us solve this complexity.

But more importantly, when I engage in a project that is what I am trying to make him soak principles of Territorial Intelligence (the first head of the humanist vision that combine physical and digital territory territory for the development of a hybrid territory) I am particularly vigilant to gather what can be scattered to seek the lowest divider or when we adopted an IT attitude, the greatest common denominator.

This is where the Territorial Intelligence process can be likened to a humanistic mediation beyond a philosophical principle, a theoretical coup because it will become a necessity in view of reduced margins maneuvering and degrees of freedom looming less. We will have to tap resources in the player available and included in ecology of communication on which it has participated.

We deliver an extract words Bunker Roy published when he mentions the fate experienced by some excluded communities because they have never been associated with thinking about their future in Time 'VOL.182, NO.14 I 2013, page 42: « In order to accomplish amazing things, we believe, there is no need for pre-studies and expensive surveys by paper-qualified experts. The root of all developmental failures can be traced to the top-down business model, where poor communities are never consulted, taken into confidence or treated as equals. Ours is a bottom-up approach: we believe strongly in' communities taking ownership of the whole process. We mobilize and apply traditional, practical skills, knowledge and wisdom.../.."

We find for the translation part of the spirit of what we have tried to share with you that is to say, a development approach in which man, territorial actor, is recognized as a project partner.

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- <sup>3</sup>Publication of NIC (*National Intelligence Council*) in *Global Trends* 2030 qui, à l'horizon 2030, identifie les grandes tendances qui structureront le système international : libération de l'individu (*individual empowerment*), démographie, dispersion de la puissance (*diffusion of power*), problématiques d'énergie, d'eau et d'alimentation. Cette dynamique permet de dégager trois scénarii pour 2030 : « retour en arrière » (*reverse engines*), coopération (fusion) et désintégration (fragmentation).
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