



A cluster without geographical proximity ?

Textometry and social network analysis of the TENLOG cluster in Occitania

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Geographical proximity is often the first aspect that comes to mind when one considers issues of proximity, frequently portrayed as a virtue and a facilitator of economic and social relations. This notion is associated with short distances or the availability of transport means that makes it easy to connect two or more locations. It is mainly seen as beneficial for the development and harmonization of social relations, as exemplified by the approaches to industrial clusters (Porter, 1998), where geographical proximity is regarded as a key variable in the success and viability of these systems.

However, research on proximity has long emphasized that geographical proximity is not the only significant factor in spatial interactions, nor is it the only form of proximity. Other types of proximity, which are non-spatial in nature, come into play and interact with issues of distance or location (Torre & Rallet, 2005). They include social, institutional, technological, and cognitive dimensions (Boschma, 2005), which shape alternative ways of being close, sometimes even at a distance, as seen in social networks or diasporas. These are generally classified under the term "organized proximity," which highlights the importance of organizational variables in the functioning of human societies.



One might question the roles played by these two main categories of proximity, often considered complementary or closely intertwined at the local level, and their respective importance. This is particularly relevant in the context of industrial clusters, where their functioning is generally presented as the result of the interaction between the two categories of proximity (Torre, 2014). Proximities are thus a driving force in the coordination process, facilitating both the exchange of ideas among different actor spheres and the creation or maintenance of local networks. One way to explore this question is to study the functioning of a cluster where geographical proximity relationships are weak or stretched. Can it still function satisfactorily despite distances and geographical fragmentation?

In this article, we examine the case of the TENLOG logistics cluster, a rapidly evolving system located in the Occitania Region (South-west of France). This cluster holds strategic importance for the Regional Council, which is committed to ecological transition, and for logistics sector actors seeking competitiveness (Hesse & Rodrigue, 2006). At its inception in 2005, the initial cluster was based on shared rules among different actors, with a focus on transport along a geographical axis following the Mediterranean arc. At that time, there were multiple proximities in the cluster, as actors were located at short distances (geographical proximity) and simultaneously shared values and exchanged knowledge and expertise (organized proximity). However, in 2018 and 2022, the initial cluster was reformed and expanded; the new cluster now includes various actors who are often located several hundred kilometres away.

Then, the question that arises is the legitimacy of the participants belonging to the same system and the homogeneity of the cluster. Does the so-called TENLOG cluster make sense, or is it mainly artificial, due to the weakness of geographical proximity relations? Does the remaining of remote relations between the players lead not only to the loss of geographical proximity but also to the loss of valuable links and interfaces?

To address this question, we analyse the close relations at stake within the TENLOG cluster to determine whether the actors continue to work together and share the same values. Organized proximity depends on a set of factors that remain difficult to measure: norms, languages, systems of ideas, and interactions within a network of actors. We employ textometry (with IRaMuTeQ software) and network analysis (with Gephi software) to assess the level of organized proximities among the members, and to understand the logic of belonging and similarity, respectively. The complementary nature of these two

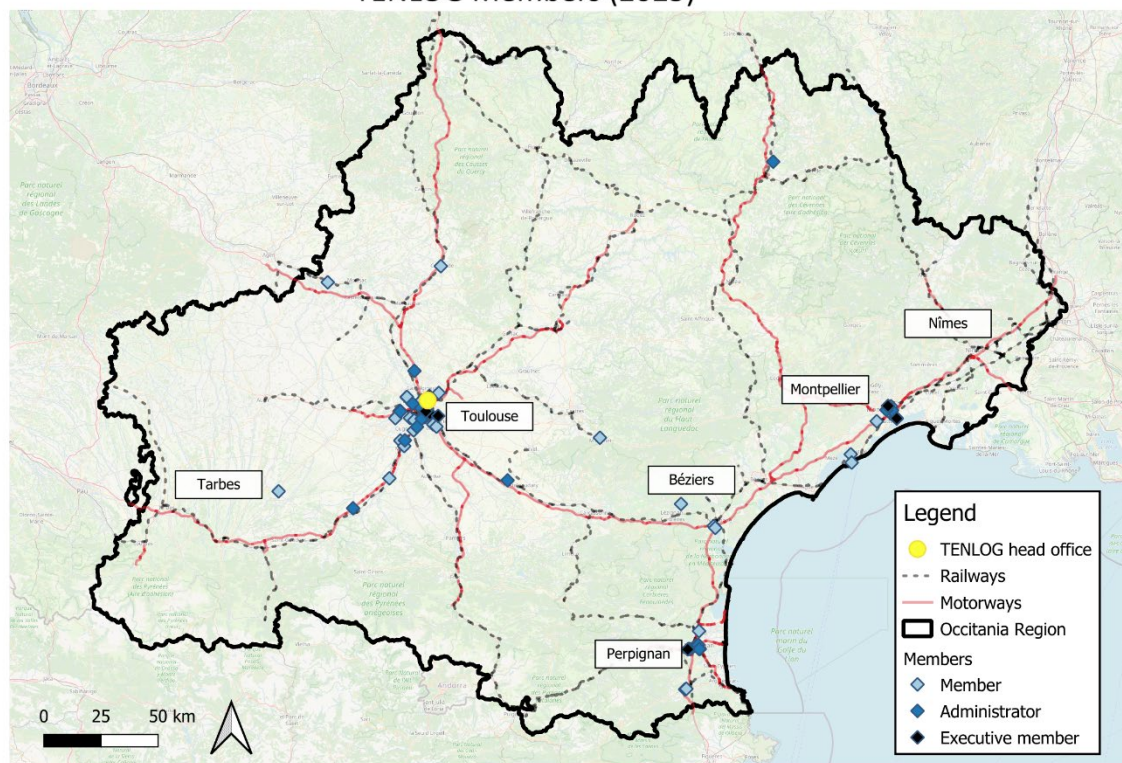


approaches lies in their capacity to evaluate an organization's potential for fostering integration and facilitating interaction among its members. Several methods are used: the Reinert method to determine lexical worlds, analysis of specificities, intertextual distances, and similarity analysis. Combined with Social Network Analysis, they provide valuable insights into the roles of actors in the clustering process. 40 semi-structured interviews, fully transcribed, were conducted during two campaigns: from 2019 to 2020, and in 2025. The resulting corpus contains over 304 488 transcribed words. We categorized the actors into six groups based on their professional or associative status: public officials (10 respondents), company heads (9 respondents), logistics staff (8 respondents), trade unionists and activists from environmental associations (4 respondents), cluster facilitators (6 respondents), and local politicians (3 respondents). These categories are justified by the discourse: except for the "business manager" group, actors within a professional category tend to produce relatively homogeneous responses. Other variables, such as age (ranging from 20 to 75 years) or gender, do not have a significant effect. Half of the respondents are members of the cluster, allowing for a comparison of the dynamics at work both within and on the margins of this system. To minimize biases, the guide was constructed with a time constraint: each interview lasted between 45 and 75 minutes. Additionally, the questions posed to participants remained consistent and open-ended to avoid any reformulation of the terms contained in the questions. Finally, a specific question in the interview guide addressed the interacquaintance between the actors, This helps us to describe the network of actors, even if the respondents did not mention this theme spontaneously.

First, we examine the approaches to proximity applied to the case of industrial clusters, before presenting the characteristics of the TENLOG cluster and the strategy for analyzing organized proximities. Our results show that, despite physical distance, organized proximities persist and that the challenges of "clustering at a distance" are not as significant as initially thought, allowing us to remain optimistic about its development. Our study has demonstrated that the TENLOG cluster was capable of maintaining significant and diverse organized proximity links, thereby facilitating numerous exchanges and opportunities for synergy among its members. This internal coherence remained strong, despite the geographical distance of some participants and the ongoing restructuring.



TENLOG Members (2025)



J. Le Van Suu and A. Torre 24/04/2025
Sources : IGN, OSM, Tenlog cluster

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