

Workflow_Section4_2_Interorga_2modesNetworks

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Main goal and Data Description

Build the first network analyses on bipartite organization-city graphs and inter-organizational analysis with a 1-mode projection. 3 networks to study (data description chap2 and 3, repo chap 3):

- (1) ETMUN : ETMUN_Inter
- (2) URBACT : URBACT_inter
- (3) ETMUN + EUCICOP : EUCICOP_ETMUN_Inter

General Workflow

For each network, we proceed in 3 steps

- (1) Creation of relational data (igraph, incidence matrix) and main numerical summaries (dimensions, basic global indexes). Carrying out data filtering (level 1 cities or/and multiple affiliations of a city in the same organization)
- (2) 1-mode projection : work on graphs organisation-organisation. Compute a relative weight (edges) and a relative strenght (nodes), following the same logic as the degree normalizations specific to bipartite graphs. Graphs mapping.
- (3) Back to 2-modes network analysis : filtering out of some organizations (extreme values in step 2, thematic choices), compute local measures (centrality) and distribution of degree, try community detection
- (4) Bis : build geographical maps from community detection classifications data.

Here a sum-up

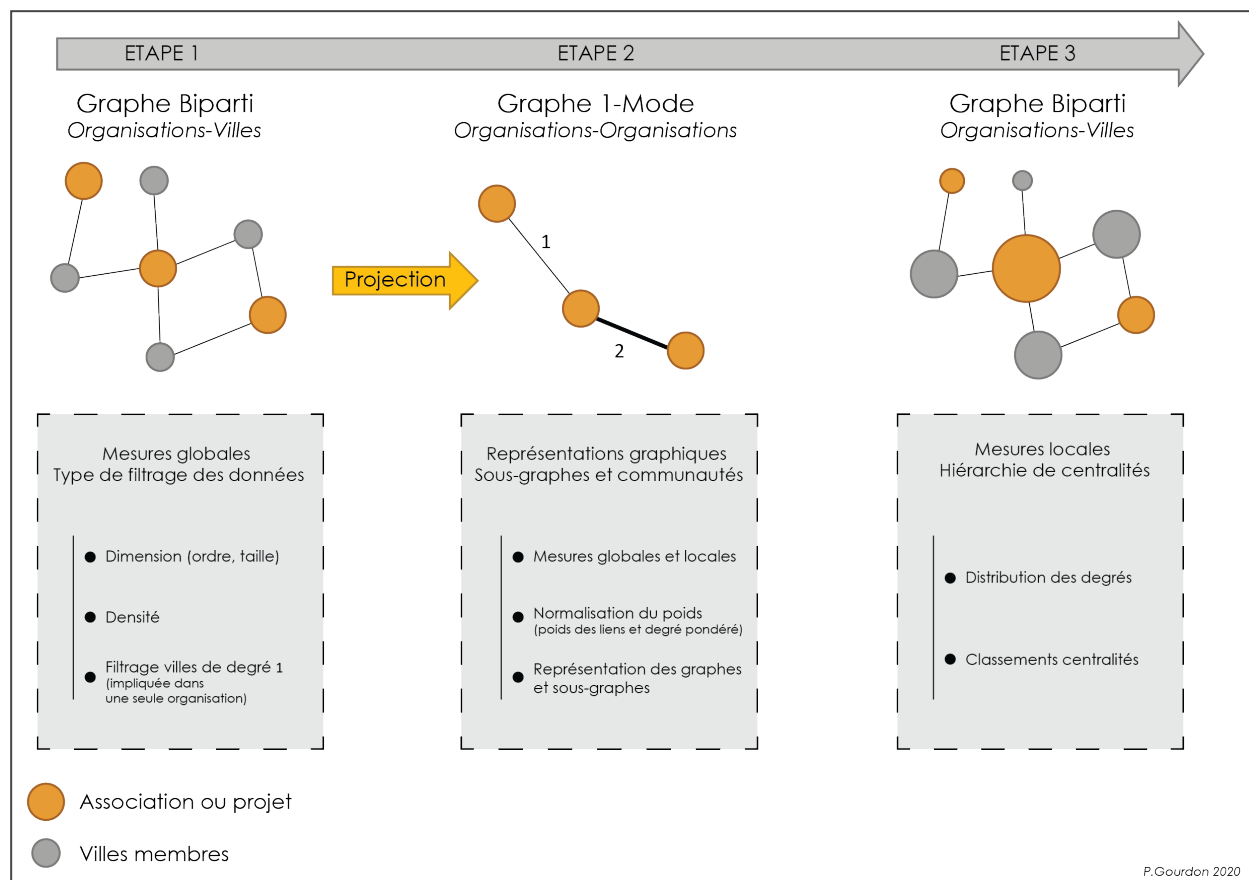


Figure 1: Chaîne de traitements pour l'analyse des graphes bipartis et inter-organisations