HOW TO GRASP THE POWER OF THE PLACE: The TELLme Project and Metro-dology

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The Complexity of Contemporary Metropolitan Issues
Research Questions

A. Policies (government/sub national level)
B. Actions implementation through Metropolitan Architecture Projects

• How do we **structure the knowledge of the metropolitan region** when the infrastructure significantly alter the topography of the metropolis?
• How can a metropolitan project be **sustainable**?
• What does it mean **public and common good** at a metropolitan scale?
• Which metropolitan **dynamics generate the metropolitan landscapes**?
The Need for a New Training in the Metropolitan Discipline

(source: educationrickshaw.com)
TELLme
Training for Education, Learning and Leadership towards a new MEtropolitan discipline
ERASMUS+ PROGRAMME 2014-2020 KA2 - Strategic Partnership for Higher Education

Politecnico di Milano (Italy)
Universidad de Sevilla (Spain)
DOBA (Slovenia)
Universidad Nacional de Cuyo (Argentina)
Universidad Autonoma Metropolitana and Universidad de Guadalajara (Mexico)
Fondazione Politecnico di Milano (Italy)
ESta (Italy)
CIPPEC (Argentina)
CNR-IREA (Italy).
Metropolitan General Issues and Principle (MGIP)
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Metro-dology
Metro-dology

Problem Finding

Problem Setting

Narrative + Interpretation → Dynamics → Storyboards → Semantic Package → Cartography → Metropolitan Project

Vision of the Metropolitan Project

Systematic representation of the dynamic

Glossary

MGDP: translating narrative to data

Synthesized mapping across disciplines

Spatializing narrative

The lens to look into the metropolitan complexity
Metro-dology

- Problem finding
- Problem setting
- Problem solving

Narrative + interpretation → Dynamics → Storyboards → Semantic package → Cartography → Metropolitan project

GAP

Dynamics are identified in relation to the vision of the metropolitan project.

The lens to look into the metropolitan complexity.

Principle + operator - operation for the metropolitan project.

Vision of the metropolitan project.

Metropolitan Existing Situation Analysis (MESA)
Tools: Metropolitan Cartography and Semantic Package
Semantic package contains keywords expressing the important values of a metropolis and are selected by stakeholders (academics, local population, civil servants, decision-makers). Each keyword is defined in the glossary of the metropolitan discipline. It bridges between the Metropolitan Narrative and Metropolitan Cartography (quantitative/qualitative analysis).

Keywords are used to build data catalogues that allow us to represent territories and their dynamics in a spatial way. The rules of selecting data, Operator, and synthesising them into keywords is done previously on an abstract level through multidisciplinary research.
Tools: Semantic Package to Cartography

**Legend**

**Grey Infrastructure**
- Railways
- Pedestrian Path
- Municipal Road
- Internal Road

**Grey Water Management**
- Hydric Zones
- Tara
- Water catchment

**Settlement**
- Rural Settlement
- Farm
- Administrative boundaries
- Spatial green area

**Community**
- Migrant Flux
- Marginalization

**Grey Cover**
- Forest
- Broad-leaved woods
- Coniferous
- 0-1%
- 30-33.3%
- 55-66.6%
- 56.5-66.6%
- 75-95%

**Activities Recreational**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Agriculture**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Industry**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Tourism**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Educational**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Trade**
- 0-2
- 2.2-2.4
- 3.4-4.6
- 4.6-5.8
- 5.8-7.0

**Physiography**
- Morphology
- Morphology elements
- Lithography, Underground Ownership

**Blue Infra.**
- Body of Water
- Body of Water (over time)
- Ground Water
- Water Ground, Wheels
- Water System

**Borders**
- Administrative Boundary
- Enclosures
- Transition Zone
- Field of Action
- Practices of Citizenship

**Duty**
- Taxation
- Labor, Social Division, Income
- Labor, Social Division, Sectors
- Land Price
Tools: Metropolitan Cartography

DYNAMIC: Impact of delocalization of international companies threatening the equilibrium of the metropolis.

- PHYSIOGRAPHY
  - Morphology
  - Vegetation Type
  - Agriculture Type
  - Plot Size
  - Distribution of Plant Species

- BLUE INFRA.
  - Body of Water
  - Ground Water
  - Water Ground, Springs
  - Water System

- GREEN INFRA.
  - Protected Areas
  - Land Use
  - Factories
  - Factories, Processing
  - Factories, Farms
  - Landmark and Monuments
  - Collective Transportation
  - Factories, Animal Husbandry
  - Production

- GREY INFRA.
  - Road Network
  - Urban Area
  - Railway
  - Building Footprint
  - Access Gate
  - Basement for Parking

- BORDERS
  - Administrative Boundary
  - Enclosures
  - Transition Zone
  - Field of Action
  - Practises of Citizenship

- COMMUNITY
  - Migrant Flux
  - Marginalization
  - Ethnic Groups
  - Language Groups
  - Religious Groups
  - Feeling of Belonging
  - Gate Communities
  - Self-managed Communities

- DUTY
  - Transport
  - Labor, Social Division, Income
  - Labor, Social Division, Sectors
  - Land Price
Tools: Metropolitan Cartography

A set of maps showing the fundamental relationship amongst elements constructing the metropolitan system. They reveal the metropolitan structure by layering physical aspects of geographic, historical, and geometrical data. Protocol maps are used as a base for discussing the dynamics in the problem finding phase. All metropolises have the same set of maps that are comparable.

A set of maps representing the spatial impact of the process of ongoing metropolitan dynamics identified during problem finding phase. The maps are used as a base for deciding the operations necessary for the metropolis. Each metropolis has its own set since the dynamics varies from one metropolis to another.
Tools: Metropolitan Cartography

METROPOLITAN DIMENSION

SETTLEMENT DIMENSION
GUADALAJARA CASE STUDY
Guadalajara Training Lab

- February 2019
- The aim of the training lab was to test the problem finding and setting of the Metro-dology by identifying the issues and dynamics of the metropolitan region with the local government, academia, and local stakeholders, and verifying them with the Metropolitan Cartography tools.
Problem Finding: protocol maps

[Types of Protocol Maps]
- Elephant skin
- Golden Map
- Green-grey Infrastructure
- Risk
- Urban Biography
- Borders
- Landscape Unit
- Ecosystem Services

[Outputs]
- Structural plan ver. 1 (Metro Matrix)
- Structural plan ver. 2 (SDGs based)
- Strategic Plan
- Metropolitan Acupuncture Chart
  - city system
  - hinge point system
Problem Finding: strategy

The New Metropolitan Axis of Villa Corona - Acatlan de Juarez - Tlajomulco de Zúñiga (XL Scale)
Problem Finding: strategy

The New Metropolitan Axis of Villa Corona - Acatlan de Juarez - Tlajomulco de Zúñiga (L Scale)
Problem Finding: strategy

The Field of Action Between Villa Corona and Acatlan de Juarez (M Scale)
The expansion of settlements within the valley and the development of small centralities due to a robust localisation of mining centres and productive food processing industries
Problem Setting: Procedure Maps

**PHYSIOGRAPHY**
- Morphology
  - Morphology, elevation
  - Lithography, soil degradation
  - Lithography, Underground Ownership

**GREEN INFRA.**
- Protected Areas
- Vegetation Type
- Agriculture Type
- Plot Size
- Distribution of Plant Species

**BLUE INFRA.**
- Body of Water
- Body of Water (over time)
- Streams
- Ground Water
- Water Ground, Spring
- Water Ground, Wheels
- Water System

**GREY INFRA.**
- Road Network
- Urban Area
- Railway
- Building Footprint
- Land Use
- Factories
- Electricity Grid
- Light System
- Parking Area
- Access Gate
- Basement for Parking
- Social Facility
- Recycle Spot

**BORDERS**
- Administrative Boundary
- Enclosures
- Transition Zone
- Field of Action
- Practices of Citizenship

**COMMUNITY**
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- Gate Communities
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**DUTY**
- Taxation
- Labor, Social Division, Income
- Labor, Social Division, Sectors
- Land Price

**SHOCK**
- Air Quality
- Disease
- Pollution, Air
- Pollution, Water
- Pollution, Soil
- Pollution, Noise
- Pollution, Light
Conclusion: Direction for Problem Solving

• The main result of the Guadalajara Training Lab was that we identified a metropolitan axis between Villa Corona and Tlajomulco with intermediate points for migrants before arriving in Guadalajara;

• The project needs to be further developed as a sustainable accessibility project that allows the community to experience the environment while avoiding the risk of isolation, and the creation of tourism on which it is possible to invest energy and resources to improve cultural and landscape heritage (definition of the urban-rural linkage pattern instead of TOD)

• A following step of evaluation needs to be pursued to render territorial criticalities and assets and to help future policy-making processes or ad-hoc interventions.
THANK YOU FOR YOUR ATTENTION

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