

TOLMA: Topo–Logos–Materia | A Topo-Sophical Intelligence Field

Reimagining Culture and Artificial Intelligence through Situated Urban Wisdom

I. Introduction: Locating Meaning in the Age of AI (3 minutes)

- In an era of accelerating artificial intelligence, cultural meaning, memory, and civic participation must remain central to urban innovation.
- UNESCO Creative Cities are uniquely positioned to pioneer AI approaches that are rooted in place, practice, and shared experience.
- The TOLMA framework introduces a new lens for understanding how AI can evolve in dialogue with the cultural and urban fabric.

II. Conceptual Foundations of TOLMA (5 minutes)

- TOLMA stands for Topo–Logos–Materia, and is conceived as a Topo-Sophical Intelligence Field—a field of evolving interaction between place, knowledge, and material grounding.
- It is composed of four interwoven layers:
 1. *Topoi*: Sites of symbolic, emotional, and civic concentration—places that hold collective meaning.
 2. *Logos*: Local knowledges, narratives, and epistemic fields that structure experience.
 3. *Materia*: The infrastructural and material foundations of intelligence—encompassing both cultural materiality and the physical substrates of AI (e.g., hardware, data centers).
 4. *Intelligence Field*: The dynamic interplay of human and machine cognition across these layers, situated in specific urban ecologies.

III. Application in the UNESCO Creative Cities Network (5 minutes)

- The UNESCO Creative Cities Network already embodies many of the principles articulated by TOLMA. Each of the eight creative fields contributes distinct forms of *topoi*, *logos*, and *materia*, offering fertile ground for place-sensitive, culturally rooted AI applications:
 1. **Crafts and Folk Art**: Embodied techniques, symbolic gestures, and material culture anchor local knowledge in tactile forms. AI can support intergenerational transmission, documentation, and innovation in traditional craftsmanship.
 2. **Design**: Urban space and object design create structured environments of meaning. TOLMA-informed AI can assist participatory design processes, spatial storytelling, and heritage-sensitive urban development.

- 3. **Film:** Cinematic narratives reflect collective memory and imagined futures. AI tools can enhance local film industries through cultural recommendation systems, script co-creation, and archive revitalization rooted in local contexts.
- 4. **Gastronomy:** Culinary heritage encodes ecological, historical, and social knowledge. AI can support sustainable food systems, recipe documentation, and immersive cultural experiences that connect taste with place.
- 5. **Literature:** Textual cultures hold memory, imagination, and linguistic diversity. Natural language models trained through a TOLMA lens can serve local authors, multilingual platforms, and inclusive educational resources.
- 6. **Media Arts:** The field where digital creativity meets public space and interactive culture. Cities in this domain are well-placed to pioneer experimental AI practices that remain community-driven and ethically grounded.
- 7. **Music:** Soundscapes and musical practices shape emotional landscapes and social bonds. AI systems rooted in local sound archives and performance traditions can amplify diversity, co-creation, and access.
- 8. **Architecture:** Built environments are material expressions of values, histories, and visions of the future. AI-supported heritage mapping, energy-efficient design, and architectural storytelling can benefit from a TOLMA approach to *placial* and symbolic intelligence.

IV. From Smart Cities to Wise Cities (5 minutes)

- The term “Smart City” often implies optimization and control. In contrast, the “Wise City” is a learning system—adaptive, dialogic, and plural.
- TOLMA supports this transition by grounding AI in lived experience and symbolic meaning.
- The model resonates with participatory governance and ethical foresight, offering cities a pathway to align AI development with cultural policy.

V. Prototype Use Cases and Policy Implications (5 minutes)

- **Transformative Tourism:** AI-generated itineraries based on local topoi and heritage narratives.
- **Digital Urban Twins:** Enhanced planning tools integrating community memory and cultural layers.
- **AI & Creative Industries:** Support for artisans, musicians, and designers through culturally grounded algorithms.
- **Youth Education Platforms:** Learning environments based on local stories, environmental knowledge, and digital co-creation.

VI. Ethical, Ecological, and Planetary Dimensions (3 minutes)

- TOLMA advocates for “**minimal dataset, maximum meaning**” strategies to mitigate the environmental footprint of AI.
- The framework is in alignment with UNESCO’s *Recommendation on the Ethics of Artificial Intelligence*, promoting dignity, inclusion, and accountability.
- It calls attention to planetary interconnectedness and the socio-material costs of AI infrastructure.

VII. Conclusion: Creative Cities as Laboratories of Situated Intelligence (3 minutes)

- **Creative Cities can lead the way in shaping AI ecosystems that respect cultural complexity and human agency.**
- TOLMA offers a generative, flexible model for building locally adapted, ethically robust, and symbolically rich AI frameworks.
- **An invitation is extended to interested cities and partners to explore pilot initiatives, research collaborations, and the collective shaping of a new cultural intelligence.**