

3rd International Symposium

FORMAL METHODS IN ARCHITECTURE

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**A new pedestrian bridge
between Vila Nova de
Cerveira and Goiàn**

A new pedestrian bridge between Vila Nova de Cerveira and Goià

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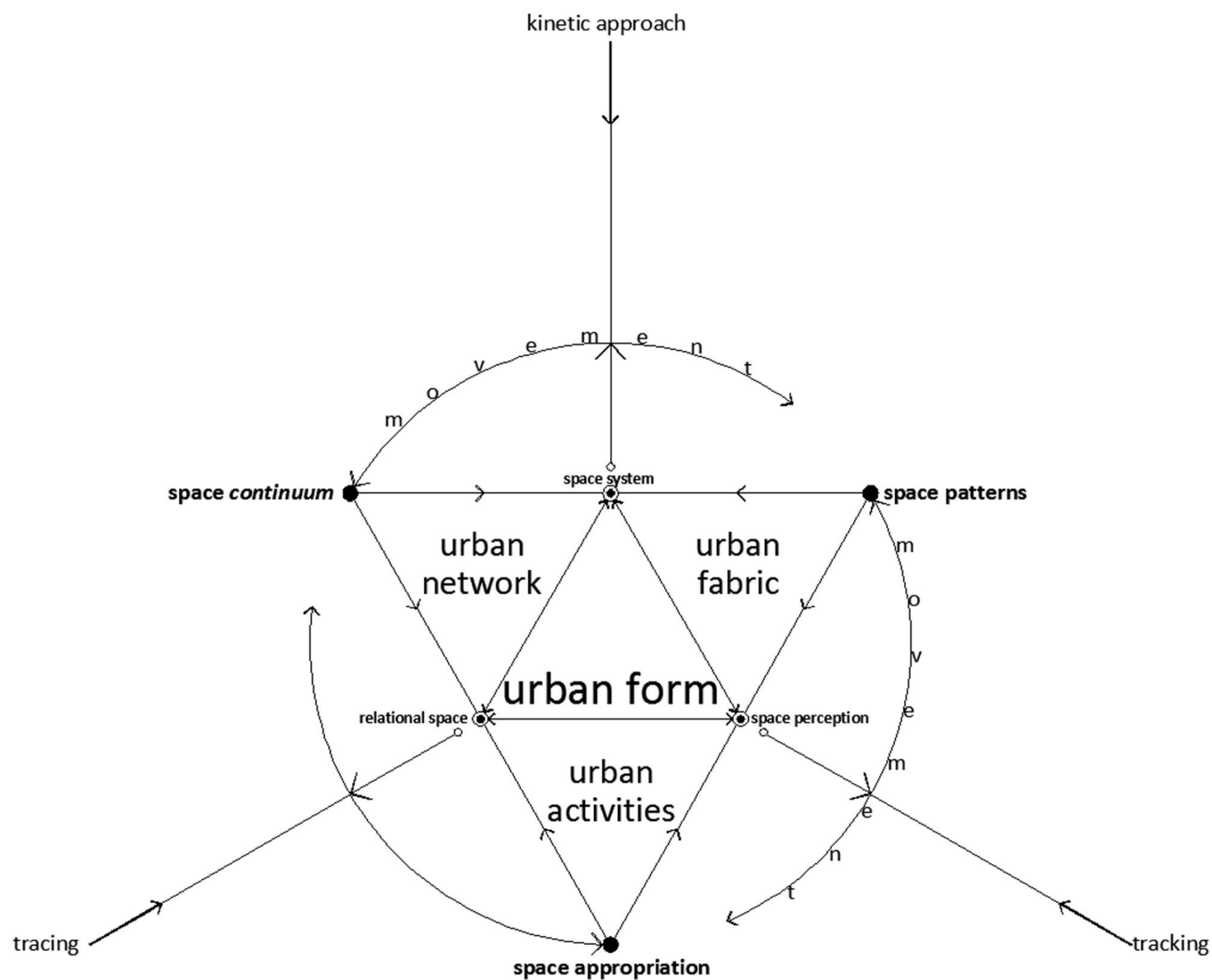
A new pedestrian bridge between Vila Nova de Cerveira and Goià

- Workshop on Town Planning
 - ‘*Trac(k)ing*’: tracing by tracking – a kinetic approach
- methodology developed within the Post-Doctoral Report
 - **(SELF)ORGANIZATION AND URBAN FORM:
COMBINING DIFFERENT MORPHOLOGICAL APPROACHES IN THE
STUDY OF MAPUTO** (FEUP, January 2015 | Vítor Oliveira (FEUP) & Isabel Raposo (FAUL))

http://issuu.com/dlvarq/docs/david_leite_viana_relato_rio_p_s-d

Book to be published in 2016

Maputo: (Self)Organization and Urban Form



‘Trac(k)ing’: tracing by tracking – a kinetic approach

- combines different morphological approaches on a flexible operating structure, presenting a no fixed hierarchy with multiple "inputs", and adjusting itself to the specific and most defining characteristics of spaces under consideration
- based on qualitative and quantitative methods, directing the focus on urban space not only from the physical dimension that sets it up – namely networks and urban infrastructure on the one hand, and the urban fabric on the other hand – but also on the urban activities

‘*Trac(k)ing*’: tracing by tracking – a kinetic approach

- relations between space *continuum*, spatial patterns and spatial appropriation
- space appropriation relates to the need to understand how space is dynamically used and/or transformed
- interdependence between space *continuum*, spatial patterns and spatial appropriation is anchored in configuration and relational logics synthesised in three multidirectional vectors determinant for the operational dynamics of ‘*Trac(k)ing*’ methodology, namely: space system; spatial relations; the spatial perception

'Trac(k)ing': tracing by tracking – a kinetic approach

- by tracking dynamics observed on urban spaces, triggered either by planning strategies or by the participation and individual initiative of citizens on the collective transformation of it, it's possible to set the type of relations that occur between spatial patterns, movement and social behaviour
- from the Theory of Social Logic of Space (Hillier and Hanson, 1984), the combination of configurational approaches within the *'Trac(k)ing'* methodology is justified inasmuch as the description of the space *continuum* and of the spatial patterns (based on the relationship between space perception and space appropriation)

'Trac(k)ing': tracing by tracking – a kinetic approach

- urban space:
 - it's not about what people think (or tell) about it
 - it's about how and what people do on it
- two types of syntactic analysis were adopted for the *'Trac(k)ing'* methodology:
 - axial and segments maps to compare topological and metric measurements
 - the study of isovistas' properties (also using the software UCL DepthMap)

‘Trac(k)ing’: tracing by tracking – a kinetic approach

- *‘Trac(k)ing’* methodology, in order to deal with the spatial perception of structures and patterns of the urban form, set a locative approach by tracing citizens’ flows and movements, their activities and means of spatial appropriation
- the result turns out in spatially dynamic mappings and dynamic maps (using software such as CartoDB)
- dynamic mappings are relevant to *‘Trac(k)ing’* methodology, since its combination with morphological approaches is one of the most important aspects framed within it

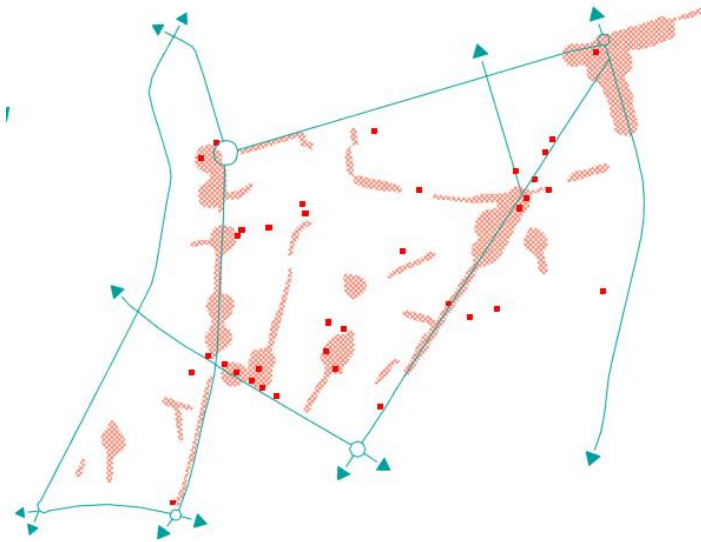
'Trac(k)ing': tracing by tracking – a kinetic approach

- *'Trac(k)ing'* methodology presents a more topological than typological bias resulting from the aforementioned locative component, which indelibly spots its operative logic
- it's important to track spatial experiences and urban dynamics accordingly shaped, by mapping them in order to give them visibility and representation in supporting elements along the execution of the plans
- the purpose of visibility giving has to do with the notion of granting them an existential dimension that should be framed and regarded in the development of urban management strategies

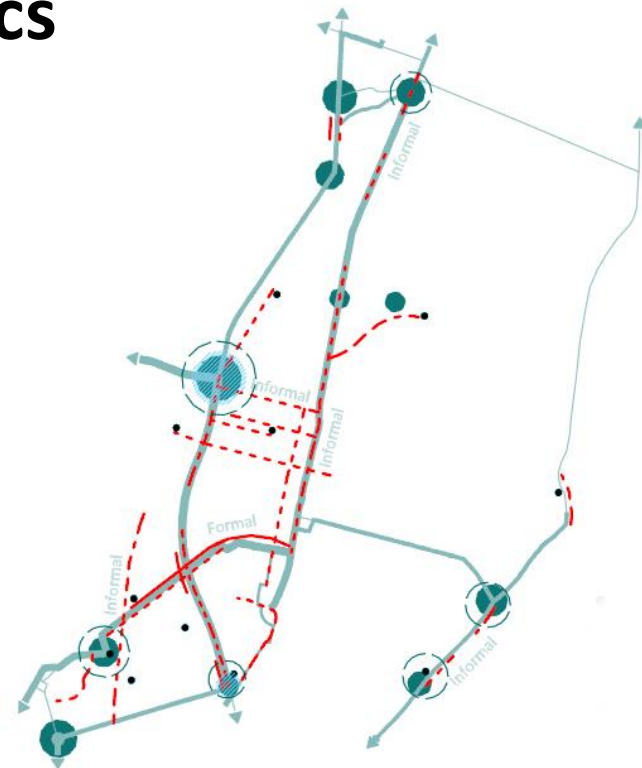
‘Trac(k)ing’: tracing by tracking – a kinetic approach

- urban form ->
 - > **urban *dynamic-form*** =>
 - spaces with integrated dynamics
 - axes with connected fluxes

»outputs :



to map dynamics



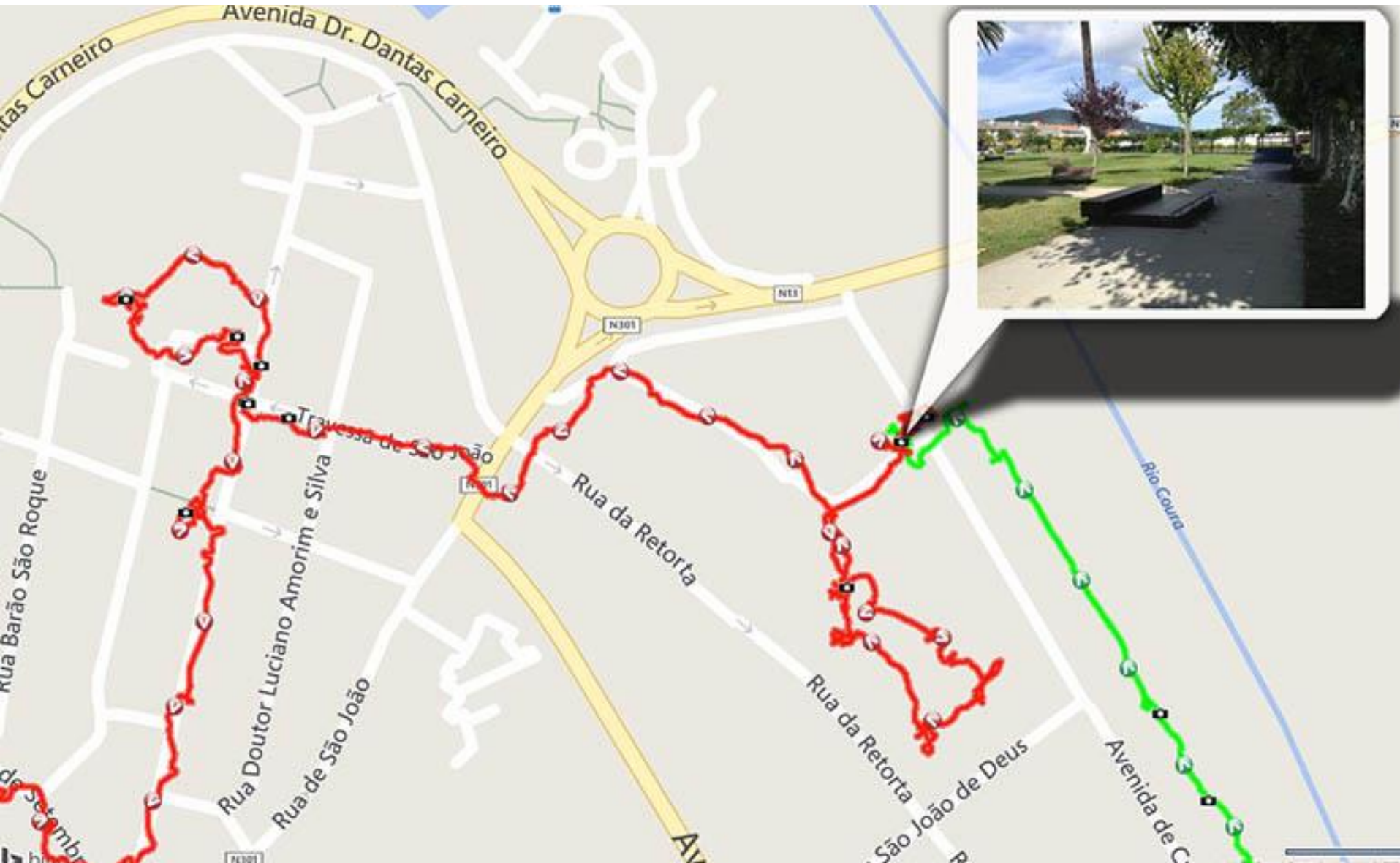


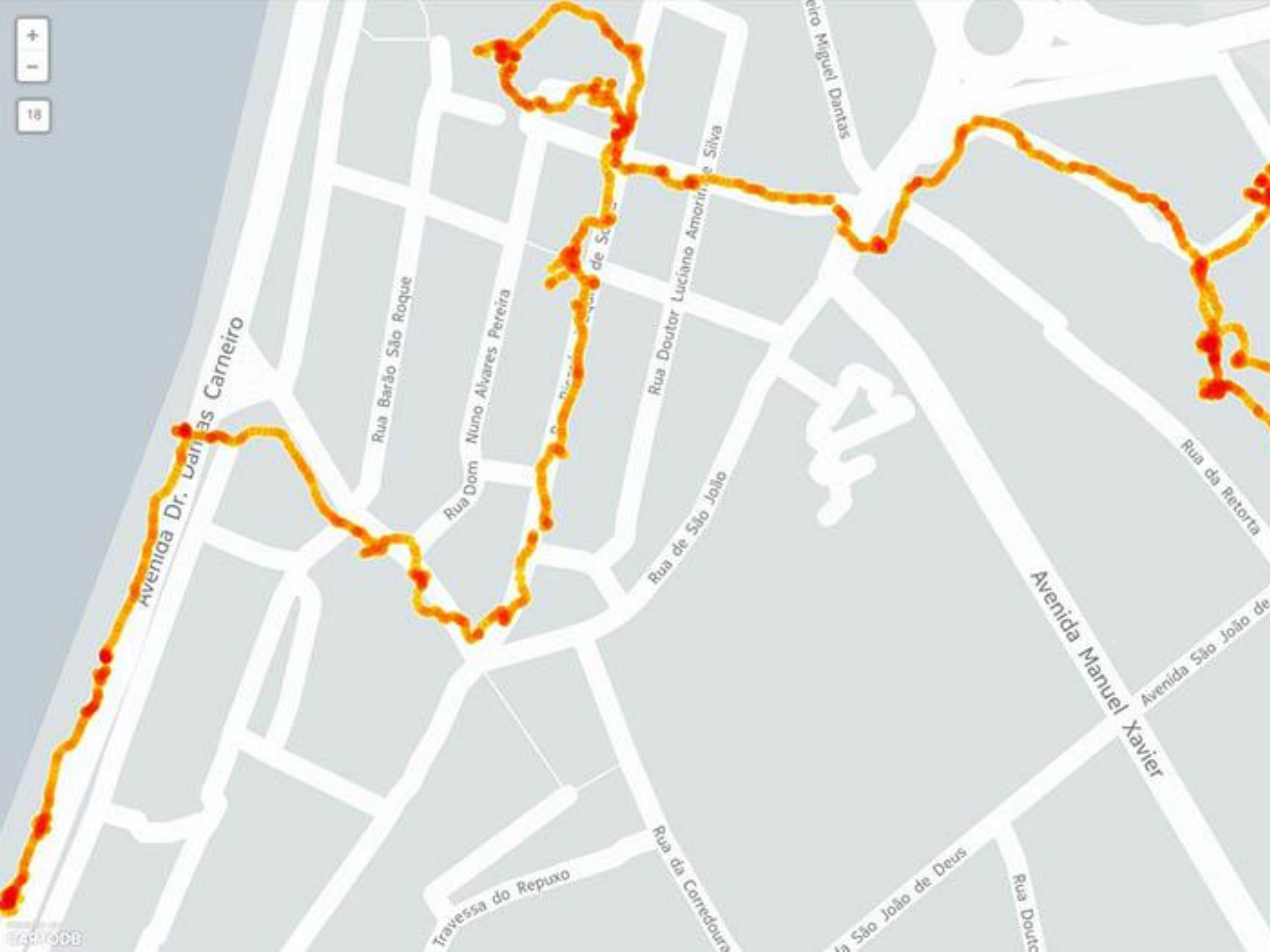
**to track
space appropriation**



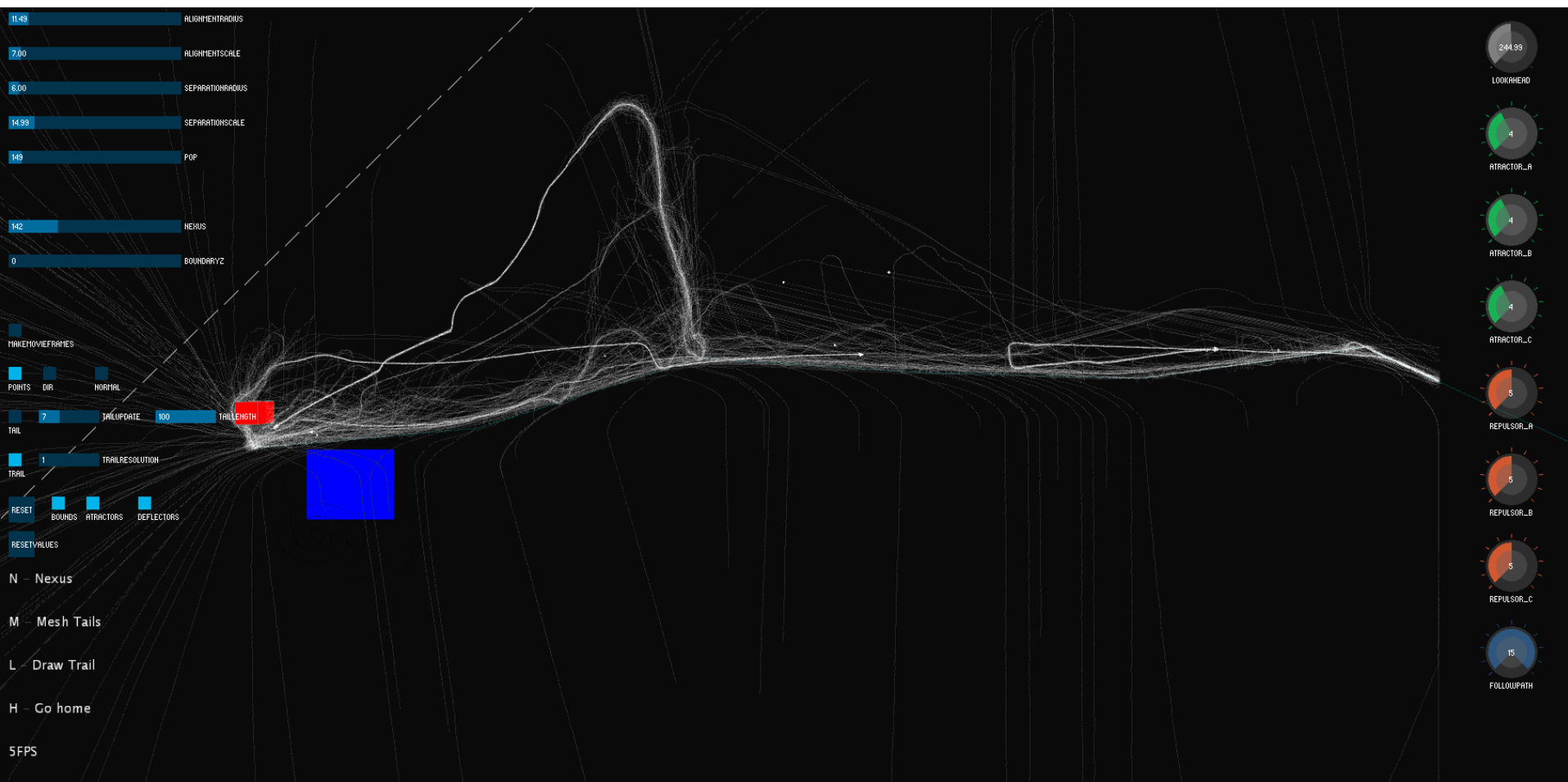
**to measure
Integration
connectivity**

to trace collaborative maps





to trace dynamic maps





to trace
“augmented”
cartographies

testing '*trac(k)ing*'

Maputo (FEUP) | Lisbon (ISCTE-IUL) | V.N. Cerveira + Goián (ESG)

WORKSHOP DE URBANISMO

'trac(k)ing: tracing by tracking – a kinetic approach'

conteúdos programáticos

MAPEAMENTOS COLABORATIVOS

PROCESSOS PARTICIPATIVOS E PLANIFICAÇÃO URBANA

DINÂMICAS DE APROPRIAÇÃO ESPACIAL E FLUXOS URBANOS

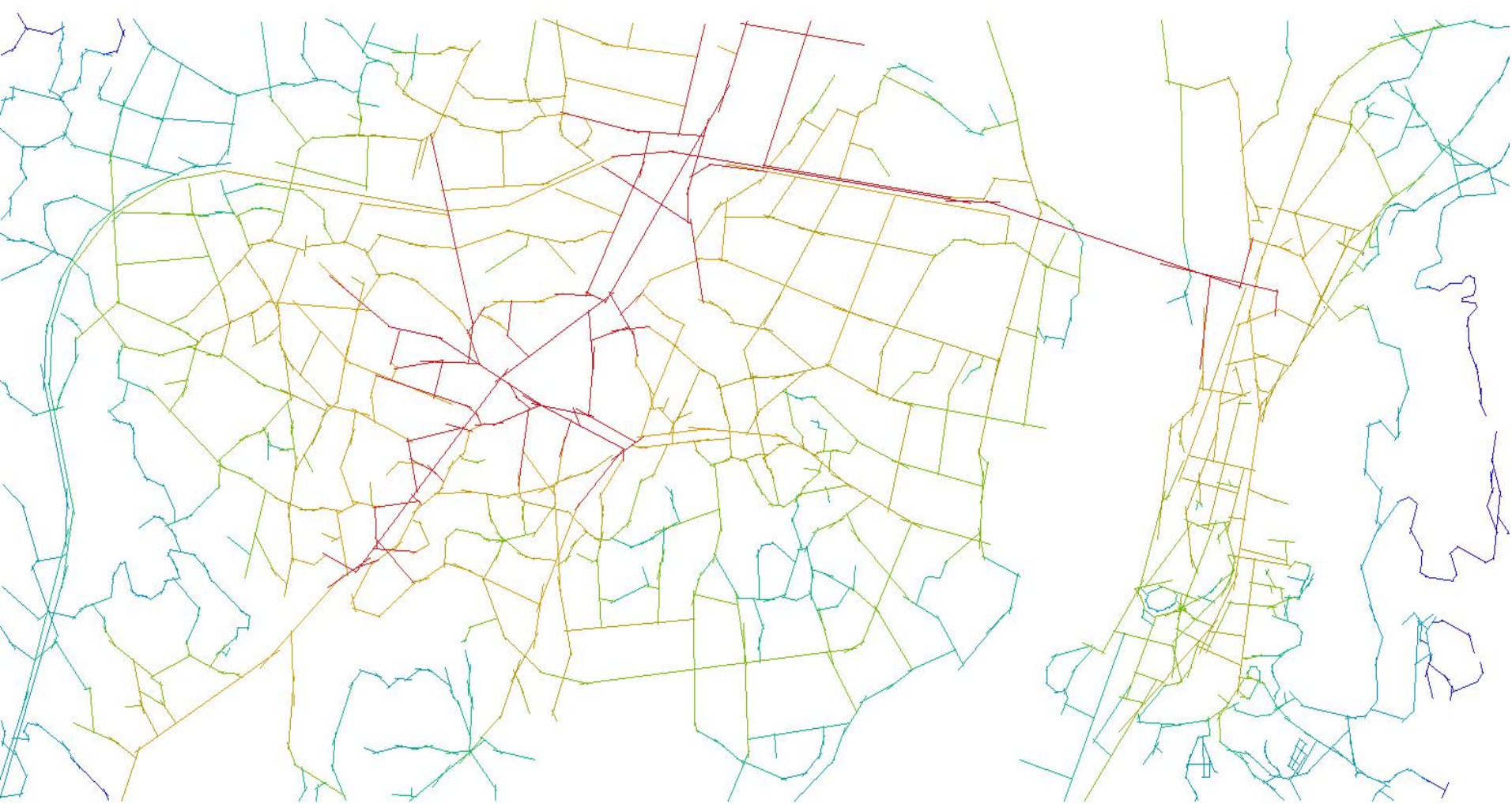
'GRAPHIC USER INTERFACE FOR SOCIAL BEHAVIOUR SIMULATION'

A new pedestrian bridge between Vila Nova de Cerveira and Goiàn



...now, a video...





integração global (R_n) – situação atual



integração local (R3) – situação atual



integração global (R_n) – nova travessia hipótese A



integração local (R3) – nova travessia hipótese A



integração global (Rn) – nova travessia hipótese B



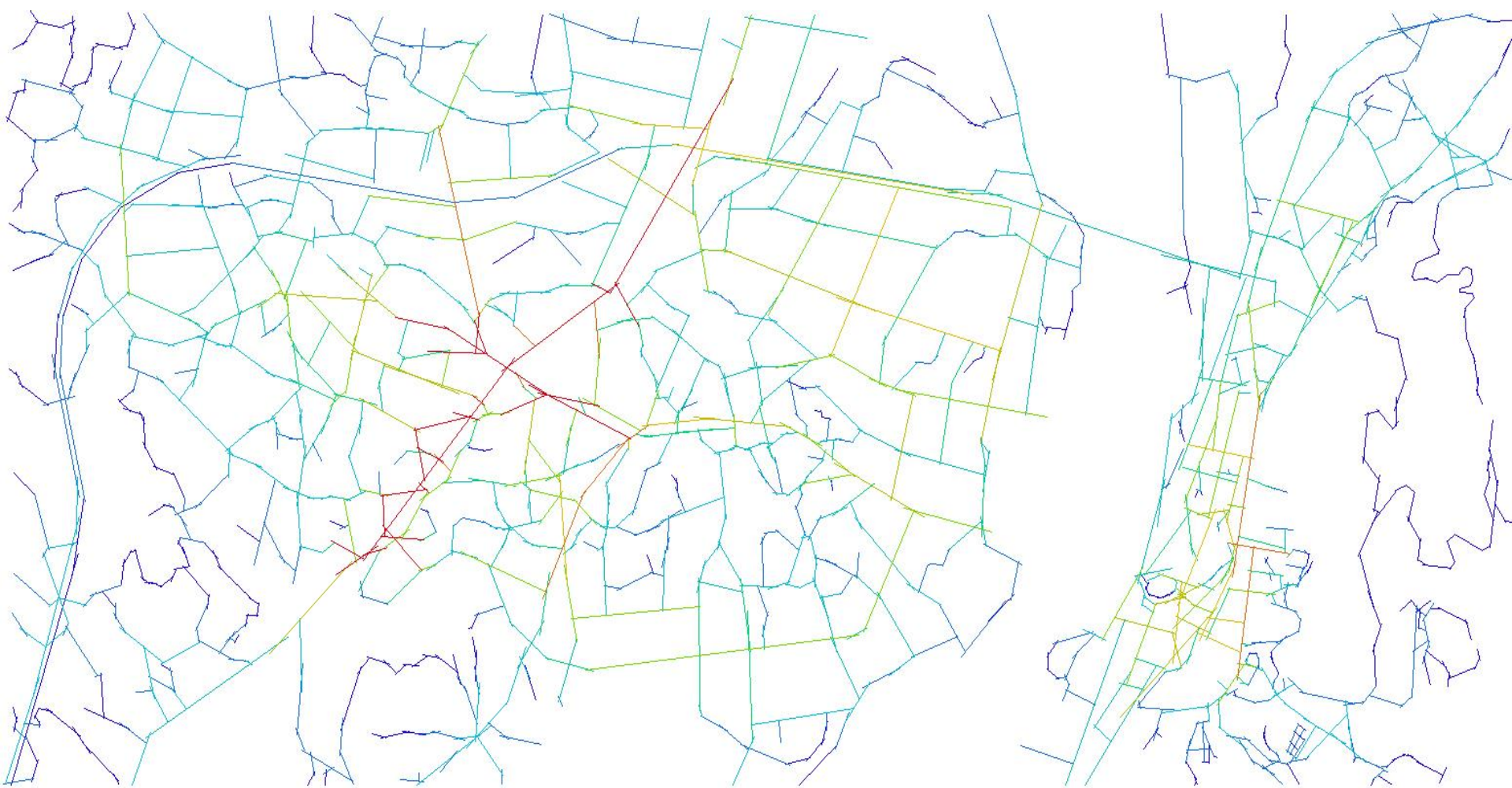
integração local (R3) – nova travessia hipótese B



integração global (Rn) – nova travessia hipótese C



integração local (R3) – nova travessia hipótese C



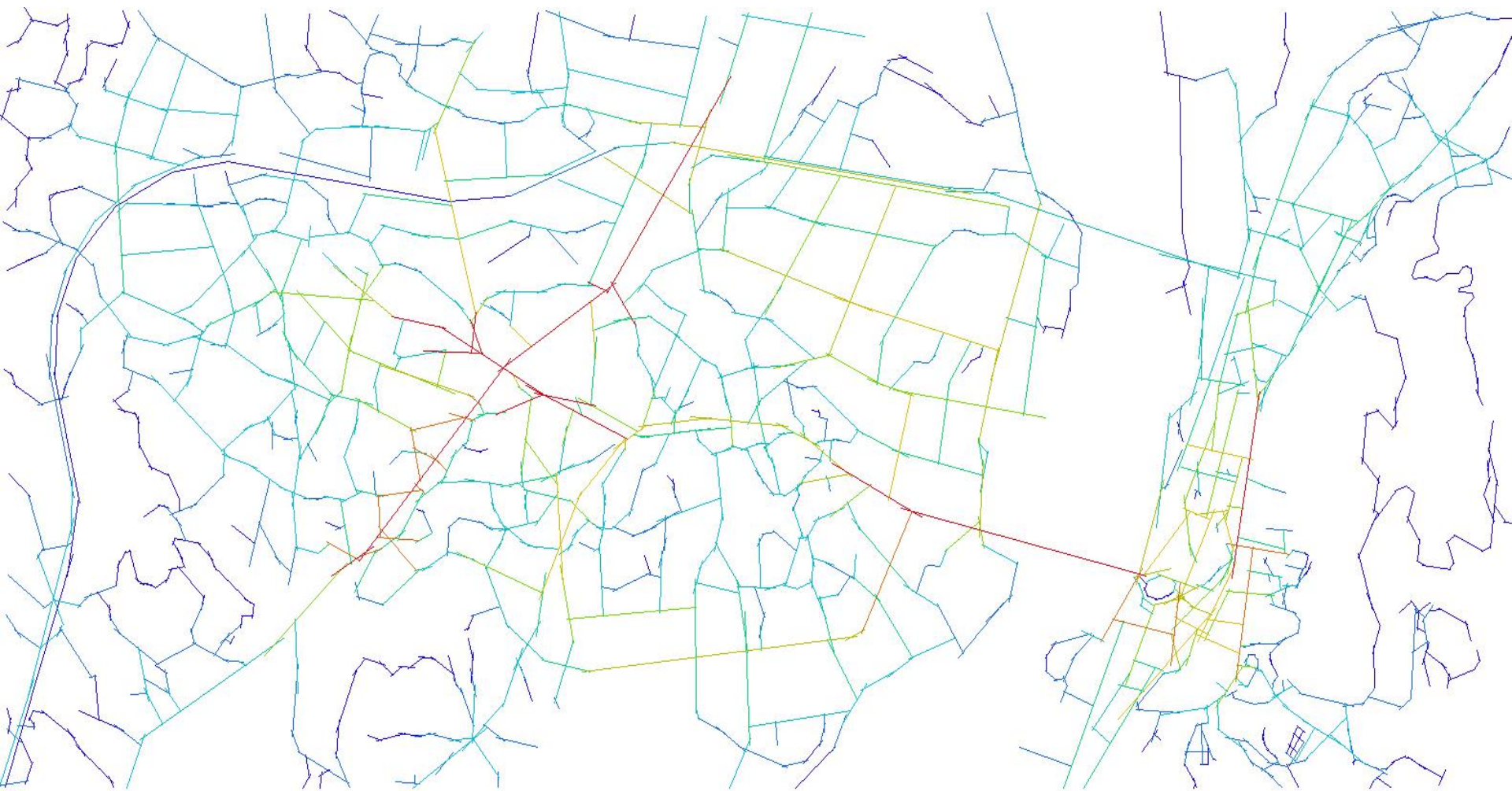
sinergia Rn/R local (R3) – situação atual



sinergia Rn/R3 – nova travessia hipótese A



Mapa axial: Goián / VN Cerveira => sinergia Rn/R3 – nova travessia hipótese B



sinergia Rn/R3 – nova travessia hipótese C



conetividade – situação atual



conetividade – nova travessia hipótese A



conetividade – nova travessia hipótese B



conetividade – nova travessia hipótese C



thank you