



**The Role of
Universities in
Innovation and
Regional Development**

Regional innovation strategies as processes of knowledge combination

The case of the Creative Science Park in Aveiro

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Context & Presentation Overview

- PhD Researcher at the Regio Twente & University of Twente
- My PhD Research → why enthusiastic regional partnerships ‘get stuck’ and fail to progress...
- ... and what is the role of universities in this?



- Regional Strategies & Innovation Coalitions
- Conceptualising collaborative strategy making as a processes of knowledge integration
- Case study analysis of a coalition and strategy process

Problem Setting I: Regional Strategies & Innovation Coalitions

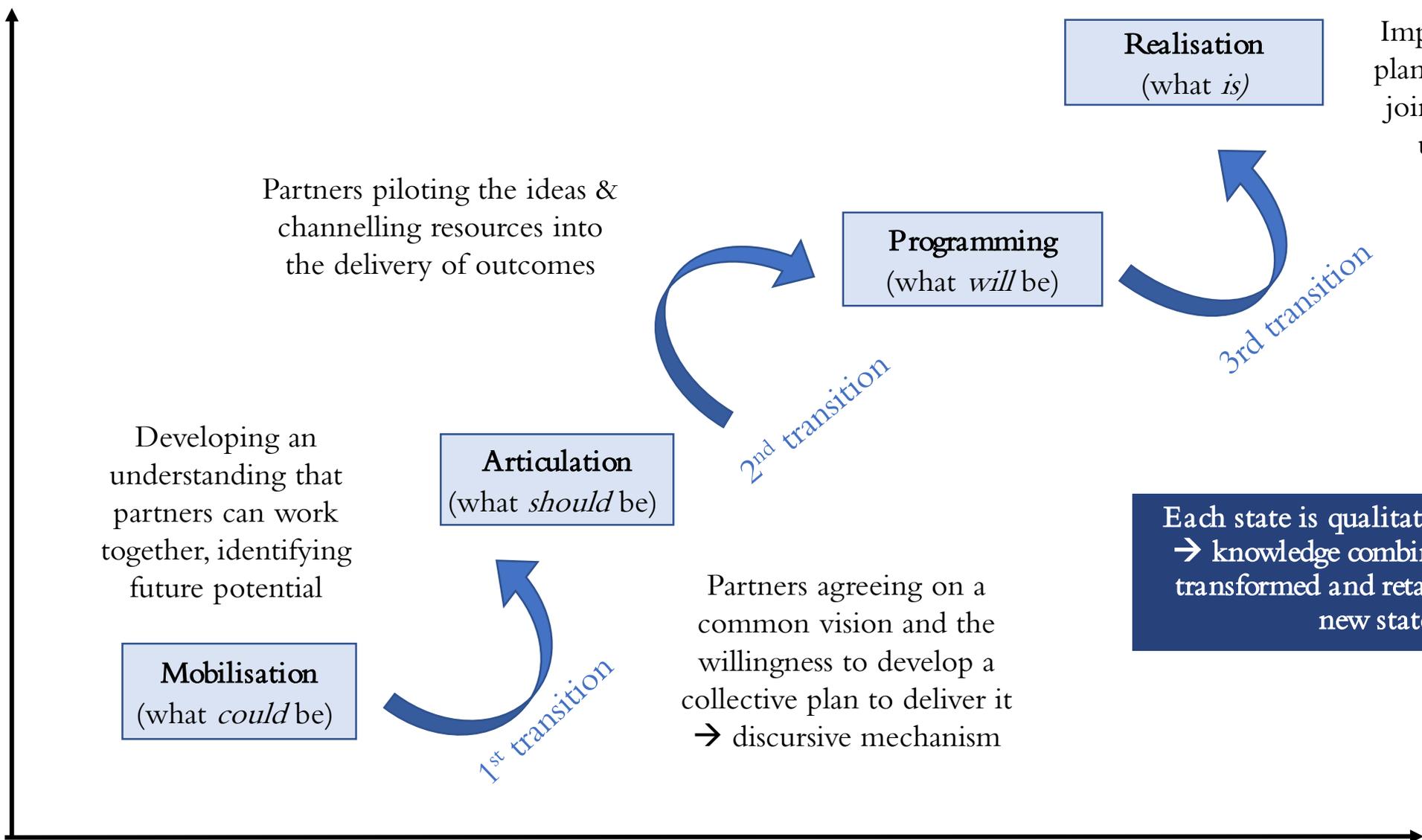
- EEG Background → How do regions develop? Why is development unequal? Can new regional pathways be deliberately developed? How?
- Introduction of regional innovation strategies that 1) set out a pathway to a clearly desirable collective future state and 2) identify the kinds of activities and interventions that are necessary to realise that desirable future
- Strategies delivered within multi-actor and multi-level governance systems, dependent on the past & involve a set of complex stakeholders with different capabilities (Laasonen & Kolehmainen, 2017) → regional innovation coalitions (RICs)
- Strategy making → process of generating, exchanging, managing and using “different forms of popular and expert knowledge” (Oliveira & Hersperger, 2018); combination of knowledge from “different sources, channels and geographical scales” (Grillitisch & Trippel, 2014)

Problem Setting II & Conceptual Framework

- Strategy making → not only a process of sharing knowledge, but creating new knowledge in processes that demand bargaining and compromising between different agents (Aranguren et al., 2015)
- Sotarauta (2018): *there is a need to investigate in a more in-depth manner the multi-actor strategy processes*
- Uyarra et al. (2017): *current failure to connect micro behaviour of actors to institutional evolution and change*
- **We reframe collaborative strategy making as a processes of knowledge integration between heterogeneous partners creating actionable strategic knowledge**
- Integration of strategic management literature (Clarke & Fuller, 2010) → regional strategy process as a knowledge combination process in which knowledges are combined to shift the ‘strategy’ between four different states
- not a linear pipeline, but a constructive struggle → what can / cannot be achieved in one state affects how it does or does not progress to the next (Aranguren & Larrea, 2011)

SCALE OF ACTION

rising complexity, size, costs, etc.



Each state is qualitatively different
→ knowledge combined has to be transformed and retained in each new state

TIME



Black holes in collaborative strategy making processes

- Why RICs may not produce regional transformation?
Partners find themselves trapped in what Sotarauta (2016) calls a strategic ‘black hole’ → repeating past successes rather than consolidating those successes into more widespread regional transformation
- mechanism underlying strategic black holes might be a failure in the knowledge combination processes → inhibiting the capacity to take future steps
- Falling into a strategic black hole as a process in which common visions are formulated and strategic goals identified, but strategy implementation and execution does not align with original plans
- **How can ‘actors within RICs’ develop and implement long-term regional innovation trajectories?**
 - explore strategy processes & make clearer diagnoses of why RICs are or are not creating strategies with the potential to change regional development trajectories
- Under which conditions may RICs fail to deliver regional transformation because they are unable to effectively combine knowledge?

Methods

- qualitative exploratory approach → single case study that allows sufficient detail in the analysis
- produce a synthetic narrative of the strategy process that can be stylised in terms of its architecture and compared against the proposed theoretical framework
- exploring a strategic development process that has suffered from slow progress to discover whether the reasons for this slow progress have indeed been knowledge combination problems within these different states

- fieldwork → January - August 2018
- primary data = qualitative semi-structured interviews - snowballing
- data was triangulated against secondary documents and archival records of interest

Aveiro Region & CSP

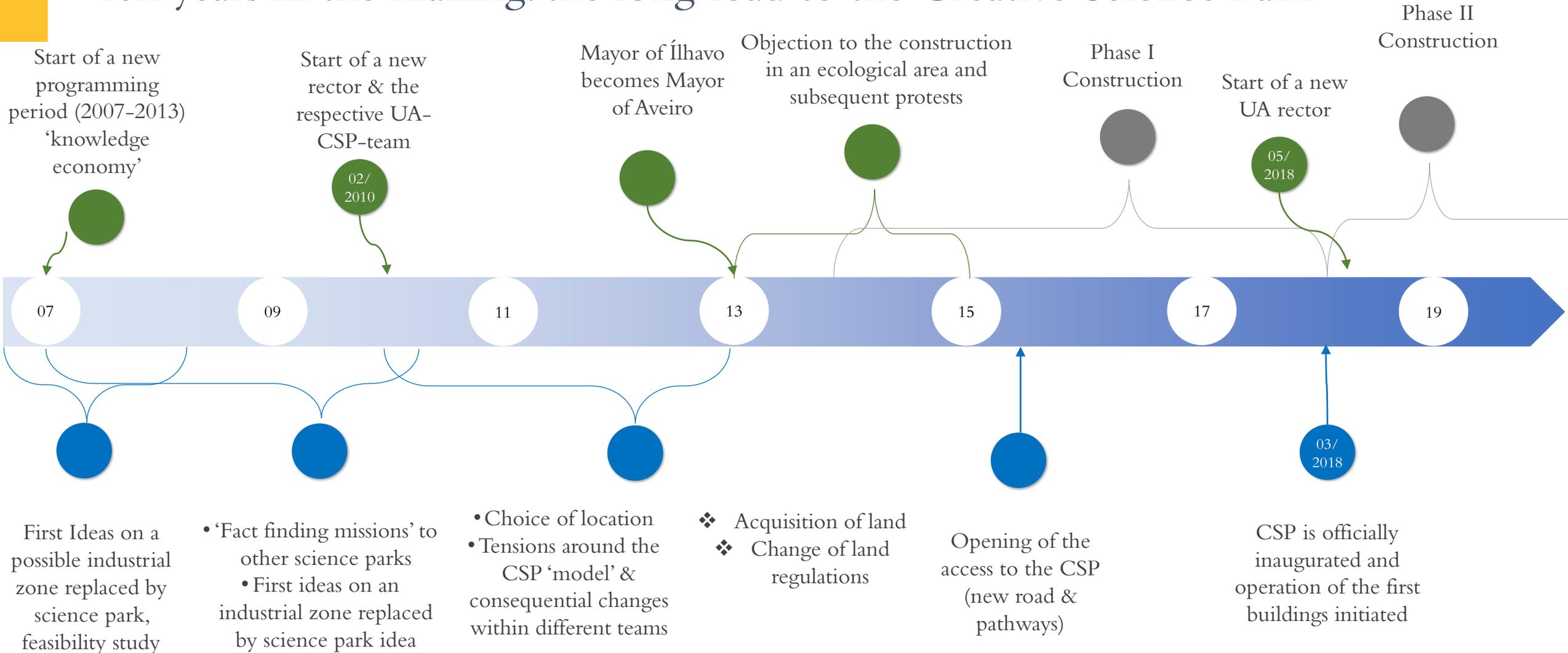
- 11 municipalities combined in the intermunicipal community of CIRA
- 370,000 inhabitants concentrated in a number of medium-sized cities
- peripheral in Europe, but rather strong in the Portuguese industrial context



**creative
science park**
aveiro region

- Creative Science Park Shareholder structure
 - scientific and technological system: Aveiro University (UA);
 - local government: CIRA, municipalities of Aveiro and Ílhavo;
 - institutional partners such as the Industrial Association of Aveiro (AIDA), & the Port of Aveiro
 - financial partners & companies

Ten years in the making: the long road to the Creative Science Park



Knowledge combination problems

| Phase | Progress | Knowledge combination problems observed empirically |
|--------------|--|--|
| Mobilisation | Producing a set of possible consensus points for an attractive innovative future | <ul style="list-style-type: none"> • UA provided important knowledge scoping out the science park notion allowing sceptical municipalities to agree that the idea of creating some kind of science park was desirable and would create regional benefits (in line with regional innovation priorities) • But the underlying problem persisted: Municipalities did not accept that creating a collective regional knowledge infrastructure would necessarily benefit some municipalities more than others, and could pose a risk of attracting companies from other CIRA municipalities |
| Articulation | Agreeing which of the consensus points should be chosen (including pointing to pilots as evidence) | <ul style="list-style-type: none"> • UA oversaw a process to concretise the choice to be made by municipalities, drawing on their wider knowledge networks, in which a model was chosen but for diverse reasons: • the understanding by UA of what a science park was (a dense support environment for firms to work with the university) did not agree with that of the municipality, who were attracted by the notion of a physical development |

Knowledge combination problems

| Phase | Progress | Knowledge combination problems observed empirically |
|-------------|---|---|
| Programming | Committing resources to be spend on activities that will take a step towards the brighter future | <ul style="list-style-type: none"> • The resurgence of the idea of the development as a real estate project led to a competition for its location, and the dissolving of the university knowledge partners, which greatly slowed progress. • The lack of knowledge coupling in the previous phase became evident here • Shift in project leadership & disengagement of further stakeholders |
| Realisation | Using the delivered 'infrastructure' to expand possible innovative futures as basis for new cycle | <ul style="list-style-type: none"> • The lack of a common position hindered sensible decision-making and saw execution bogged down, leading to a hybrid model being delivered, possibly even decoupled from the regional innovation system • lack of real convergence in the understanding of precisely <i>what</i> was to be achieved, reflecting both knowledge imbalances but also differences in interests, persisted in the project and ultimately slowed down its progress. <p>→ which variety of science park was created?</p> |

Conclusions I – Strategic Knowledge Combinations & Agency

- Failure to effectively combine knowledges at the initial stages – creating actionable knowledge, shared and understood by regional partners – creates tensions & divisions that can delay / undermine later progress
 - 2 competing versions of the science park (a regional asset vs local threat) → although effort was taken to help partners understand & accept the former, the latter persisted
- knowledge processes were material in influencing what emerged → CSP was built & it reflects elements of the two versions (individual businesses & regional clusters)
- Knowledge dynamic as a significant element of the exercise of agency
- the capacity to exert agency relates to the capacity to strategically deploy and combine knowledge & understanding
- Black hole may arise from partners believing that there is a shared understanding when indeed no such shared understanding exists?
- methodological problem in the study of agency in regional innovation strategy processes → partners sincerely believed in the early phases that there was a collective understanding of the CSP

Conclusions II - Different Actors in the Strategy Process

- University of Aveiro attempting to construct a common understanding of the CSP that fitted with its idea of being a globally oriented university strongly anchored in regional innovation networks
 - Tensions between different knowledge communities (with diverging interest and priorities) undermined the application of the knowledge available
- Different actors might bring difficulties into a regional strategy and path development processes → The university, not only an important knowledge provider, but also a complex and messy actor
- BUT despite the persistence of these two variants, the fundamentally good long-term relationships between the different actors were able to hold the RIC together to deliver a compromise solution
- give room to the important discussion of micro agentic behaviour and dynamics of regional stakeholder coalitions → need to consider the combination of individual actors' knowledge bases, activities, motivations and their involvement in the development of regional growth paths



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Thank you for your
attention!

Questions? Comments?



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