



Trinity of change agency and opportunity spaces

Placing place leadership into structural explanations and other forms of human agency



The question

- Why do some regions grow more (or less) than others with similar structural preconditions?
- What is the role of human agency (incl. place leadership)?

Agency

“The ability of people to act, usually regarded as emerging from consciously held intentions, and as resulting in observable effects in the human world”

(Gregory et al 2009)

Methodology

How to study?

How would it be possible to study agency/structure relationship?

Regional Growth Against All Odds (ReGrow)

Extreme cases - regions that have, in certain periods, grown significantly more/less than what could be expected given their structural preconditions – outlier regions
(Grillitsch, Martynovic, Fitjar, Haus-Reve, 2021)

Photo by Jannes Glas on Unsplash



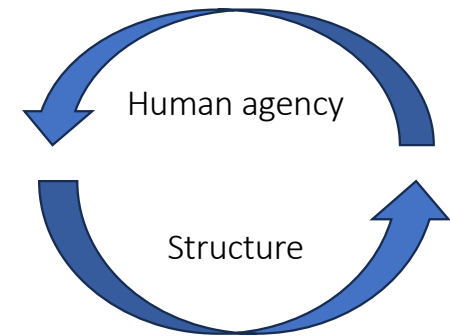
We see city and regional development as a world of becoming, as open-ended, complex and unpredictable

Agency is best studied in its full complexity by situating it in the flow of time and structural preconditions

An option?

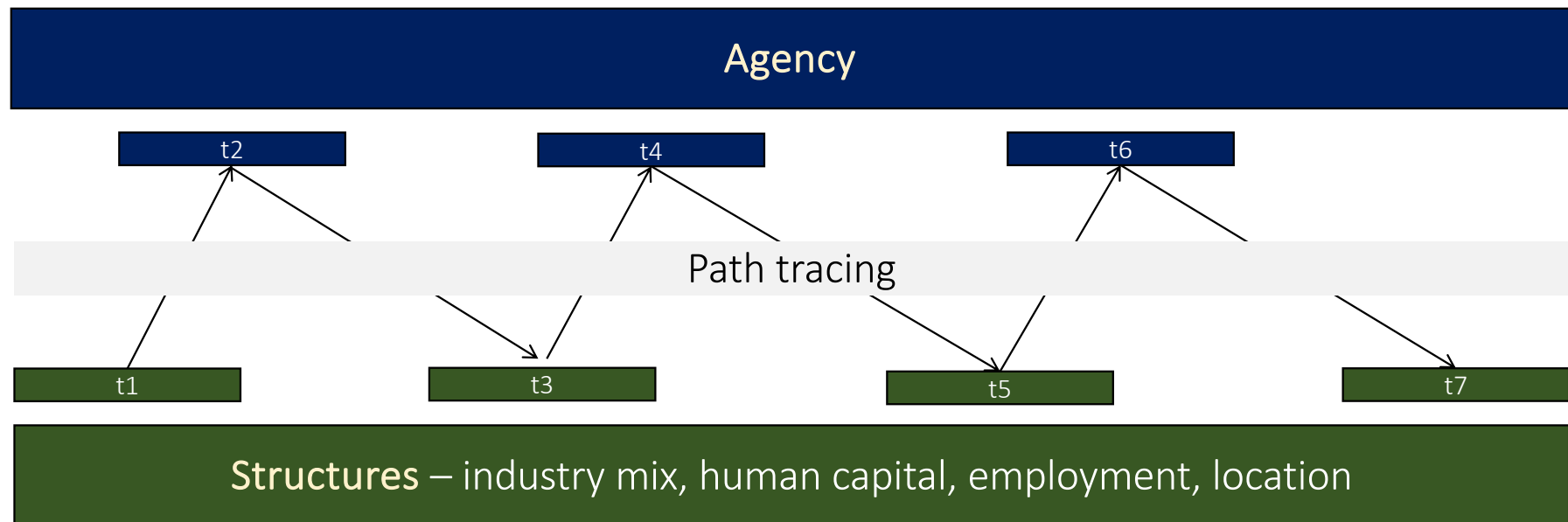
Agency and structures as Anthony Giddens see it

- The **theory of structuration** is a social theory of the creation and reproduction of social systems that is based on the analysis of both structure and agents without giving primacy to either.
- The duality of structure refers to human agency and social structure each acting as an enabling condition of the other



Giddens's theory is very hard to operationalise for an empirical study!

Analytical duality of agency and structure (Archer 1982)
for the investigation of why and how structures condition
agency, and how agency subsequently changes or
reproduces structures (Sotarauta & Grillitsch, 2023)



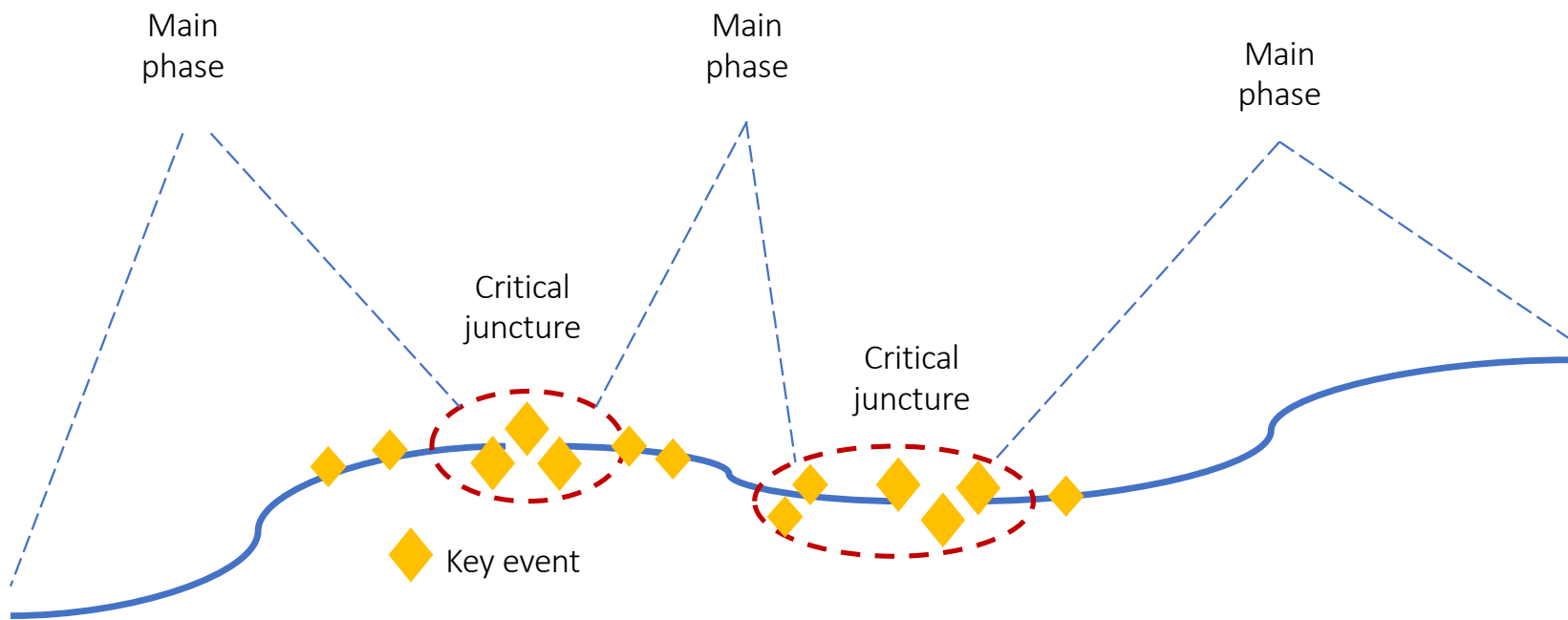
Path tracing

(Sotarauta & Grillitsch, 2023)

- not only shows whether something changed, but **how** and **why** changes took place (Punton & Welle, 2015)
- identify and examine intermediate steps in a process for making inferences on how a process unfolded (George & Bennett, 2005; Beach & Pedersen, 2013)

- 1) identify key events
- 2) present event sequences
- 3) specify dependencies in temporal sequences
- 4) evaluate basic assumptions of final causality, a generative mechanism or plotline for identification of the plot
- 5) present a coherent pattern integrating various elements of the identified process

(Poole et al. 2000)



Criteria that determine whether a system is at a **critical juncture** or not:

- **multiple processes** - a variety of outcomes is conceivable
- **contingency** - several future events are possible, which cannot be predicted precisely
- **timing and sequencing** – temporal order of events is identifiable
- **inertia** – a new main phase is again resistant to change efforts compared to situation during a critical juncture

(Pierson 2004)

Key event is an identifiable activity that allows inferences to be made about the actors performing the act

(Makkonen et al. 2012)

Key events are either changing a direction of a process or maintaining it.

Multiple key events lead to a critical juncture, some of them taking place prior to or after a critical juncture.

Basic elements (Re: critical junctures and key events)

- **Key actors and their relationships**, a thread connecting agency to unfolding sequence of events and structures
- **Identifiable narrative voice**, a dominant coherent narrative and core narrators
- **Situatedness**, a specific context for narratives
 - Industry, governance, geography
- **Event-sequencing**, the key events demonstrating disruptions into a story world
- **World-making of actors** reveals meanings to pressures of events for actors undergoing disruptive experiences
- **“Canonical” frame of reference**, in other words the moral context

(applying Pentland 1999; Hermans 2009)

The theory

“The emergence of new development paths can be understood as processes of **distributed** and **embedded agency**”

(Garud and Karnøe 2003, Dawley 2014)

“Actors mobilize the past not necessarily to repeat or avoid what happened, but, instead, to **generate new options**

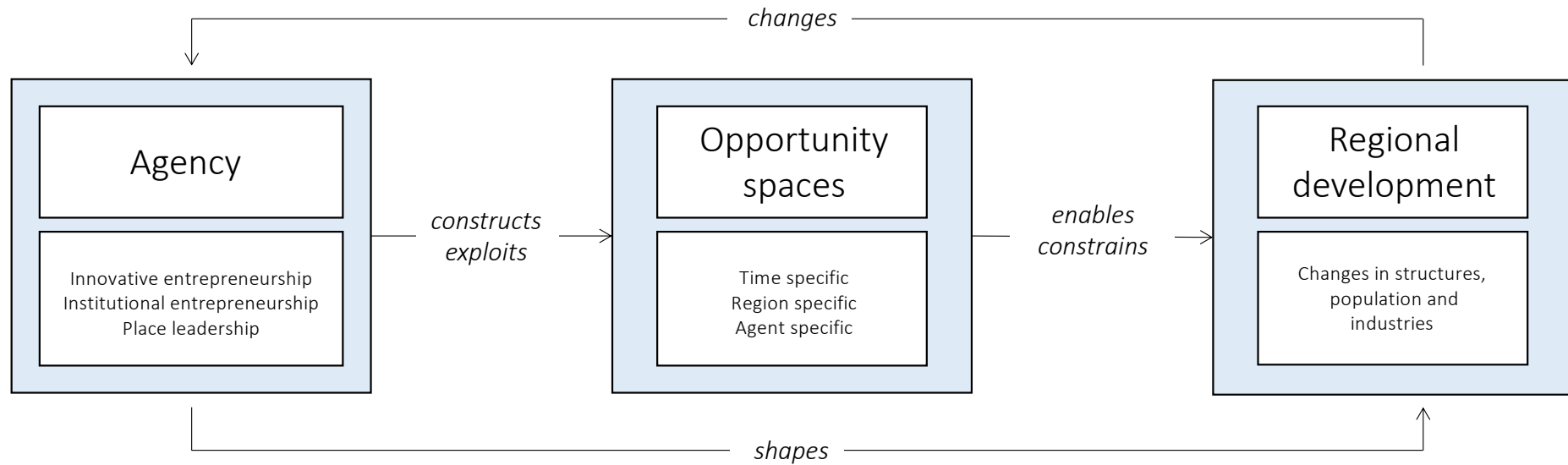
(Garud et al 2010)

“A temporally embedded process of social engagement, calling for a strong capacity to **interpret past habits and future prospects**”

(Emirbayer & Miche 1998)



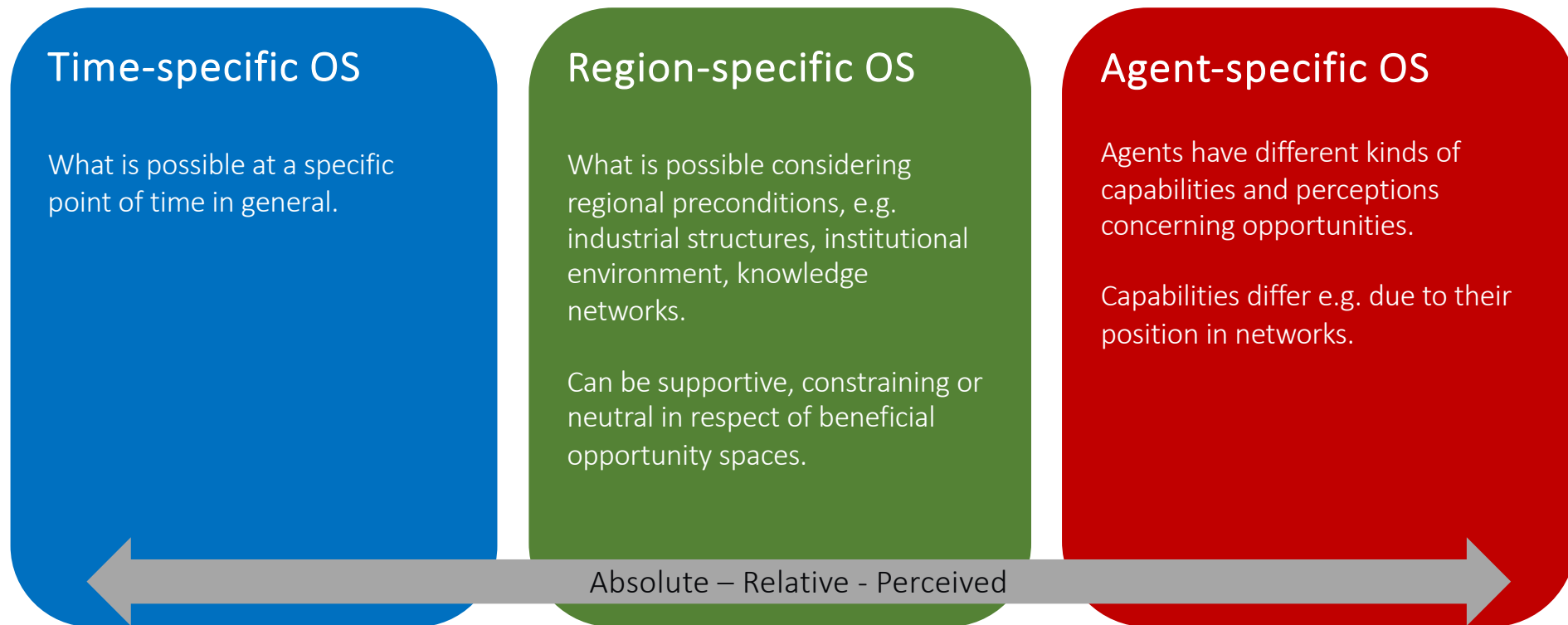
Trinity of change agency and opportunity spaces



Opportunity space

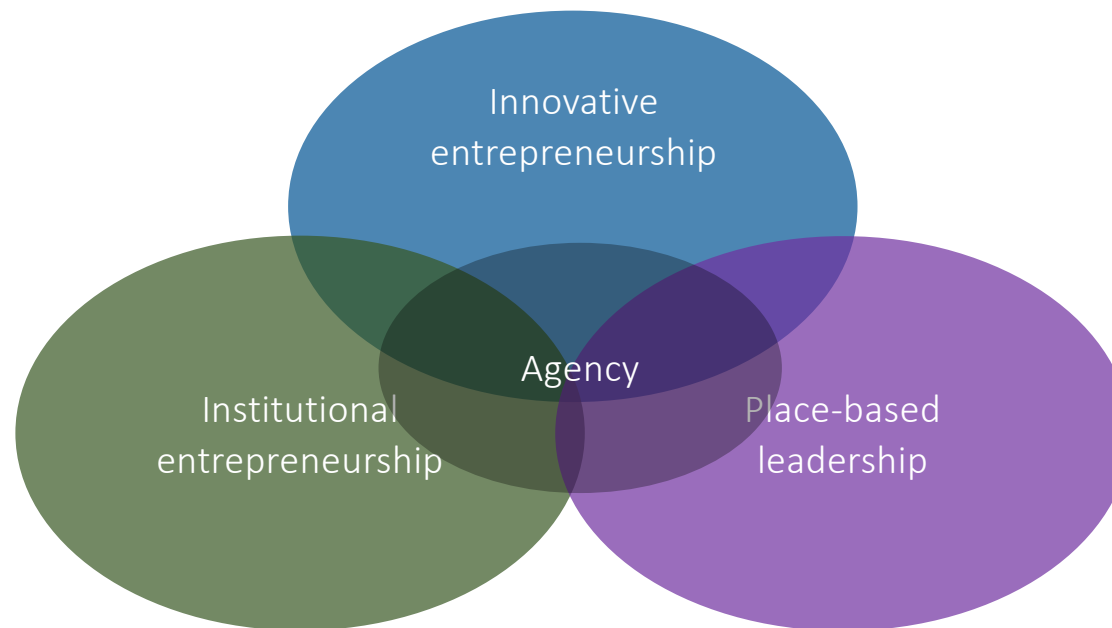
Opportunity space: the limits and possibilities of regional development in a specific place at a certain point in time.

‘Opportunity is a time or set of circumstances that makes it possible to do something’ (Oxford Dictionary)



Trinity of Change Agency

Connects three types of agency originating in different fields of literature



Entrepreneurship

Nexus of the present opportunities
and the presence of actors that
perceive and strive to realize them

(Shane and Venkataraman 2000)

Place leadership

Mobilization and coordination of
diverse groups of actors to achieve
collective effort for enhancement of
the development of a place

(Sotarauta et al 2017)

Institutional entrepreneurship

Challenging existing rules and
practices and work to institutionalize
the alternative rules and practices
they are championing

(DiMaggio 1988)

Institutional Theory and Institutional Economics-Based Institutional Entrepreneurship

(Pacheco et al 2010)

Dimension	Institutional Theory	Institutional Economics
<i>Nature of an entrepreneur</i>	<ul style="list-style-type: none">• Institutional entrepreneur is broadly defined as a change agent• No self interest required	<ul style="list-style-type: none">• Institutional entrepreneur is a change agent driven by economic motivation• profit-seeker; exploiter of economic opportunity
<i>Types of institutions</i>	<ul style="list-style-type: none">• Focus on informal and socially embedded institutions• Institutionalised practices, belief systems	<ul style="list-style-type: none">• Focus on formal institutions (property rights, government policy)• Codependency between formal and informal.

Institutional Theory and Institutional Economics-Based Institutional Entrepreneurship

(Pacheco et al 2010)

Dimension	Institutional Theory	Institutional Economics
<i>Determinants of institutional entrepreneurship</i>	<ul style="list-style-type: none">• Political and social pressures• Legitimacy and power• Structure of the organizational field• Individual-level characteristics	<ul style="list-style-type: none">• Focus on functional and economic pressures<ul style="list-style-type: none">◦ Market conditions and transaction costs◦ Technological change
<i>Mechanisms for institutional change</i>	<p>Focus on:</p> <ul style="list-style-type: none">• Theorisation• Framing• Emphasis on collective action	<ul style="list-style-type: none">• Focus on contractual and self-enforcement strategies

Institutional Theory and Institutional Economics-Based Institutional Entrepreneurship

(Pacheco et al 2010)

Dimension	Institutional Theory	Institutional Economics
<i>Empirical focus</i>	<ul style="list-style-type: none">• Organisational field as the level of analysis• Focus on the <i>process</i> of institutionalisation and strategies employed	<ul style="list-style-type: none">• Emphasis on the <i>outcome</i> of institutionalization• Attention to unintended and negative consequences

The implementation

The first empirical step

- Differentiation between two components of regional development
 - one that can be **explained** by measurable structural factors, and
 - one that remains **unexplained** (and refers to the residuals in a growth regression)
 - Outcome: the estimation framework and analysis of all the sub-regions in three countries

The ReGrow Model

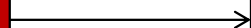
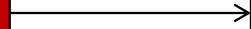
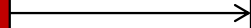
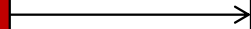
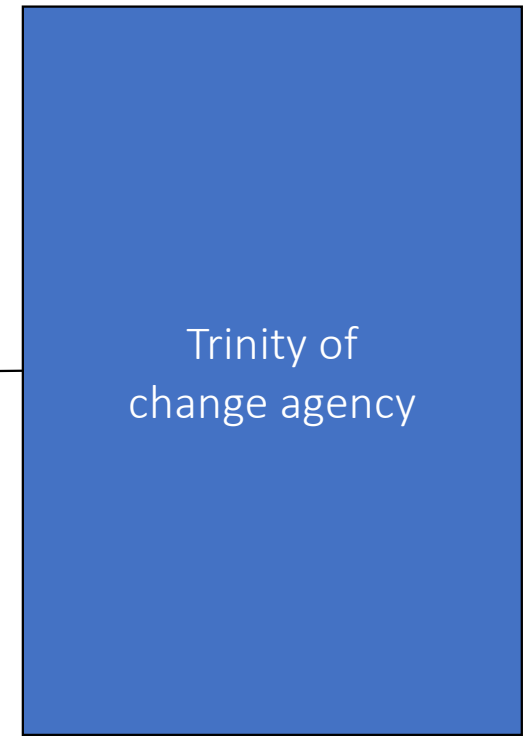
Independent variables
(quantitative)

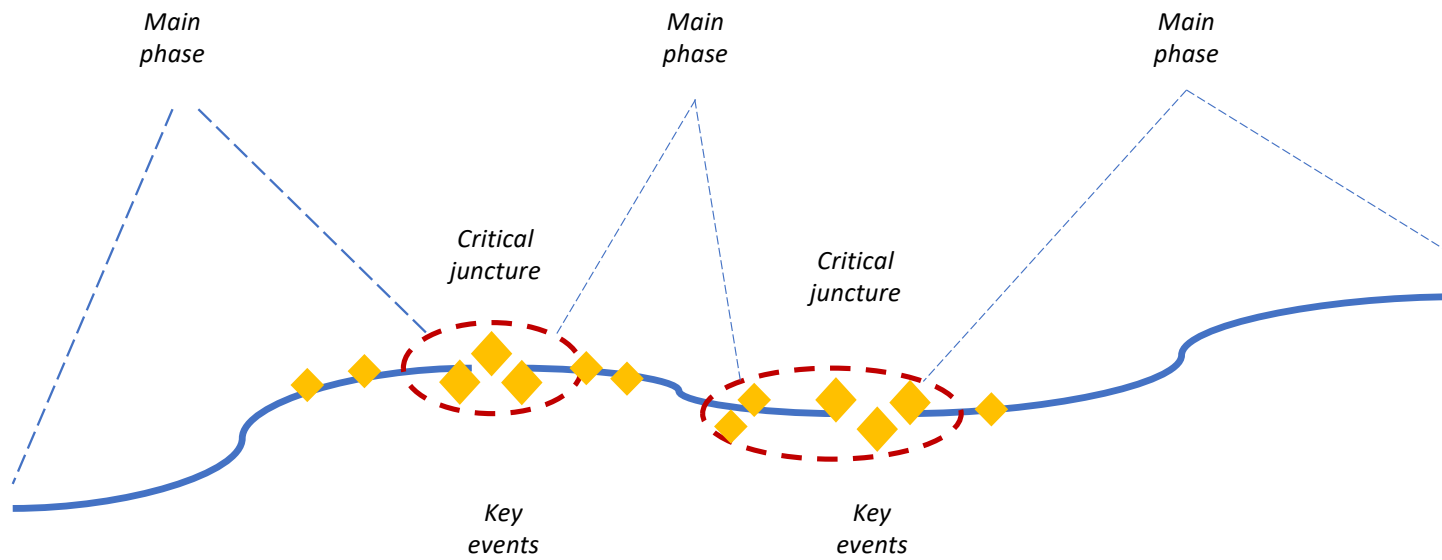


Dependent variable



Independent variable
(qualitative)



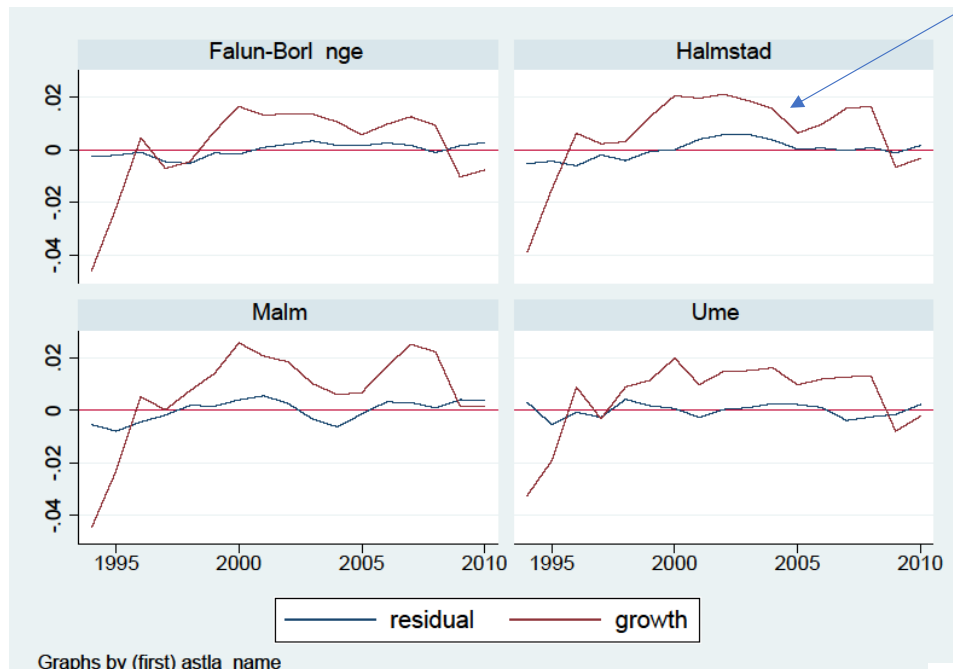


After considering structural factors, a part remains unexplained, which is captured by the residual.

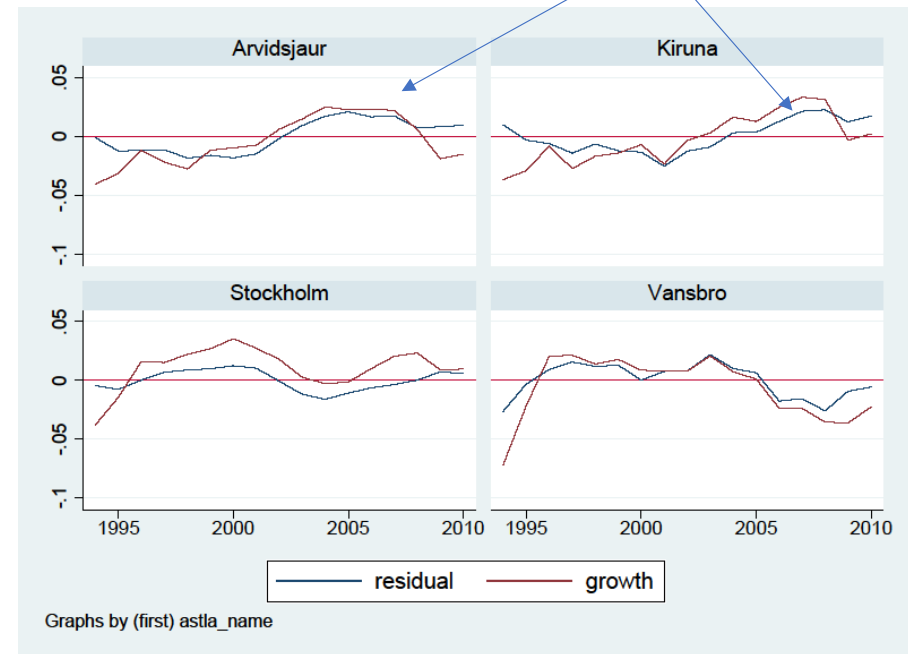
By plotting regional employment versus the residual, it is possible to see how much remains unexplained.

Structure explains growth

Growth but significant part remains unexplained



Examples of regions with low residuals



Examples of regions with hi residuals

	Declined employment	Increased employment
<i>Better development than estimated</i>	The period of perseverance (sinnittelyn kausi) <ul style="list-style-type: none"> • Joutsa sub-region 2001-2005 	The period of over performance (ylisuoriutumisen kausi) <ul style="list-style-type: none"> • Helsinki metropolitan area 1998-2001 • Jakobstad sub-region 2012-2015 • Salo sub-region 1996-2001 ja 2004-2008 • Koillis-Savo sub-region 2007-2011 • Pohjois-Satakunta sub-region 2004- 2007
<i>Worse development than estimated</i>	The period of sinking (Vajoamisen kausi) <ul style="list-style-type: none"> • Varkaus sub-region 2008-2011 • Keski-Karjala sub-region 2011- 2015 • Raahen sub-region 2001-2005 • Salo 2009-2015 • Eastern Lapland sub-region 2002-2006 	The period of under performance (alisuoriutumisen kausi) <ul style="list-style-type: none"> • Helsinki metropolitan area 2003-2006 • Northern Lapland sub-region 1998-2001

The second step

- Case selection (regions & time periods) based on step 1
- Selection principles
 - Extreme case selection (regions that are particularly good or bad in using their opportunities)
 - High variation of cases



The third step: in-depth case studies

- A critical incident and/or event-history analysis largely based on secondary material such as newspapers and reports
- Thematic interviews with core actors (180 interviews)

The fourth step – the case comparison

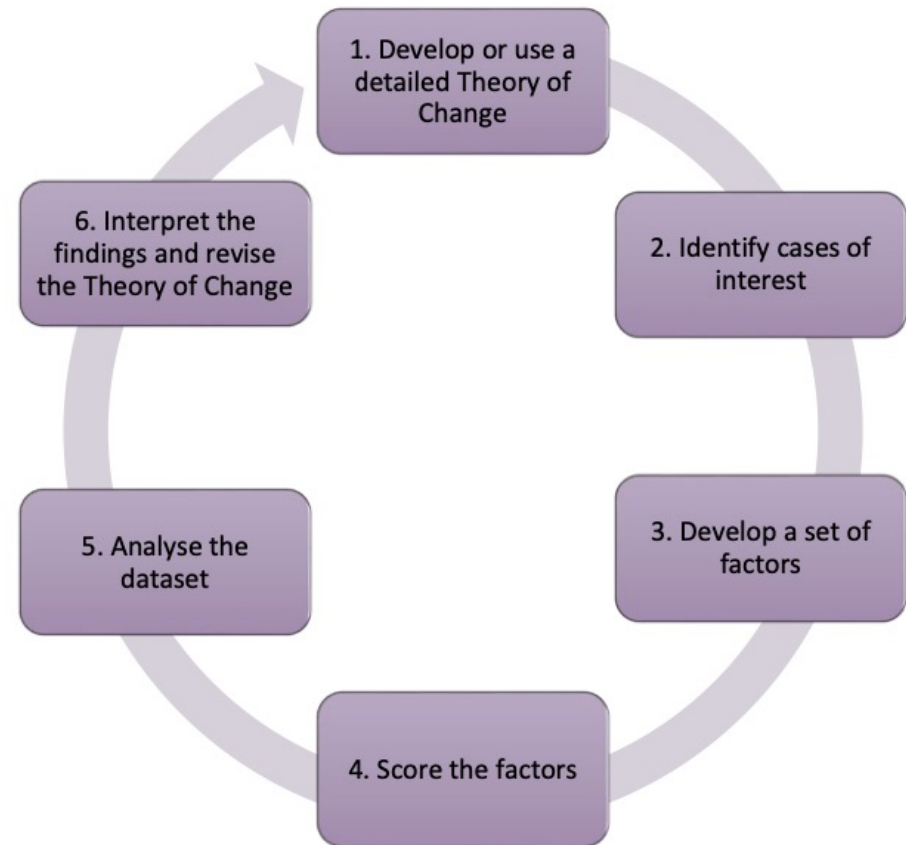
Qualitative Comparative Analysis (QCA)

- Bridges qualitative and quantitative analysis
- Requires in-depth knowledge of cases
 - But also findings that can be generalised across wider populations
- Respects the diversity of cases and their heterogeneity with regard to their different causally relevant conditions and contexts by comparing cases as configurations
- Based on two assumptions
 - Change is often the result of different combinations of factors, rather than on any one individual factor
 - Different combinations of factors can produce similar changes (Ragin 1984)



New path development explained by combinations of five conditions

- Regional preconditions for innovation and entrepreneurship
- Innovative entrepreneurship
- Institutional entrepreneurship
- Place-based leadership
- Crisis



Some results

Routes to path development



Route 1: Innovation-driven new path development in non-crisis times (innovative entrepreneurship)

Route 2: Institutional entrepreneurship driven new path development in non-crisis times

Route 3: System-based new path development in non-crisis times

Route 4: Trinity of Change Agency in crisis times

Route 5: Favourable preconditions combined with innovative entrepreneurship and place leadership in crisis times

Route 1: Innovation-driven new path development in non-crisis times (innovative entrepreneurs)

The success years in **Salo** (Finland): Nokia and Microsoft dominated trajectory

Jakobstad (Finland):

- Continuous innovative entrepreneurship inspired by local and international networks
- A gradual diversification of the industry, despite individual innovation often being of a rather incremental nature
- Collective and business-led place-based leadership



Route 2: Institutional entrepreneurship driven new path development in non-crisis times

Kirkenes (Norway): From iron ore mining to capitalizing on wilderness and location in the arctic

- Tourism as an industry not valued - industry fragmented, poorly developed - uncompetitive small firms
- Local entrepreneurs initiated more concerted efforts to change attitudes for tourism development

Arendal (Norway): known for its oil and gas service suppliers and the electronics industry

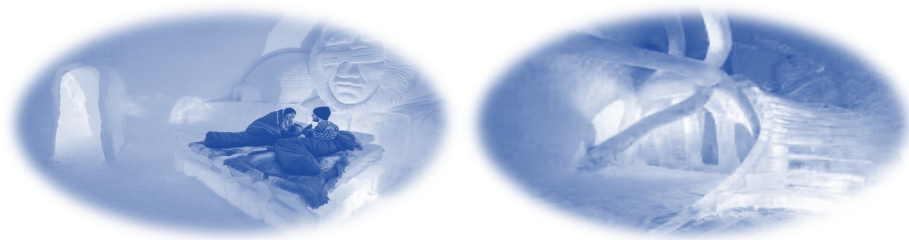
- The local and regional government, HEIs and firms worked to strengthen firm–university linkages.



Route 3: System-based new path development in non-crisis times

Kiruna (Sweden): an innovative entrepreneur kicked off high-end winter tourism by introducing the ice hotel 1989

- Institutional and innovative entrepreneurship shaped regional preconditions for what is today – local networks exploiting the new path



Route 4: Trinity of change agency (TCA)

Karlshamn (Sweden), the dominant food industry lost its position

- A number of actors from the municipality, higher education and business sector worked to shift industrial paths from blue-collar jobs to the knowledge economy

In **Mo i Rana** (Norway), institutional entrepreneurs played a role in changing the mindset, a precondition for the subsequent collective mobilization of resources (place leadership) and increased innovative entrepreneurship.



Route 5: Innovative entrepreneurship and place leadership embedded in strong regions

Ulsteinvik (Norway) - a global hub of offshore vessels - strong networks at the local, national, and international scales

- Favourable regional preconditions combined with innovative entrepreneurship and place-based leadership
- Firms, municipalities, and support organisations bundled at Ålesund Knowledge Park to mobilize support to finance and to provide the required competences for the reorientation

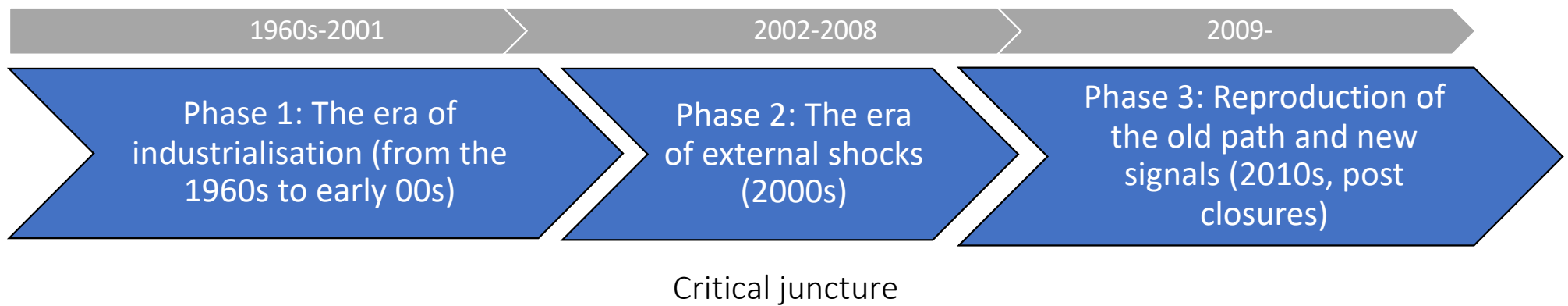


A Crisis - Eastern Lapland, Finland

- Population 17,000 people
 - Decreased by 31% from 2000
- Earlier pulp/paper industry and electronics manufacturing
 - Closure of Orion pharmaceuticals (2002), Salcomp electronics (2004) and Stora Enso (2008)
- Low number of SME's, growing tourism
- High unemployment rate



Development trajectory



"Entrepreneurial spirit is missing, and people are used to having big employers. Now they are waiting for the Bioeref to come ... when someone begins to plan entrepreneurship, the lack of capital is huge.

This place is not a region worth investing ... somehow, the atmosphere here is oppressive because of state dependency and the dependency on big projects. It's is just about waiting, and there is a lack of independent initiatives."

(a local developer)

The closure of Stora Enso's paper mill (2008)

Salcomp and Orion closed their plants earlier

"In print paper the market shrunk 7% a year in Europe... In regions where the demand drops, further investments are not profitable. And then the Russian wood tariffs and availability of Finnish wood... the purchase cost of lumber rose about 50-60% in six months.... Altogether, the changes in the field of Stora Enso cost 16,000 jobs globally, of which 50% were in Finland."

(a company representative)

"The pulp mill fell, and it was incomprehensible because it was a unit that was making profits for the mother company, was energy self-sufficient and in the middle of growing raw material. State-ownership was 35% and the state did not even use its power to save the mill in this situation."

(a national level politician from the region)

The closure of Stora Enso's paper mill (2008)

Why Kemijärvi?

- Decreasing paper consumption
- Environmental activists' contradictory calculations and lobbying efforts pertaining to the sufficiency of northern wood
- A large Swedish owner of Stora Enso supported the closure of Finnish units, as opposed to those in Sweden.

Defensive actions

- A social movement called 'Massaliike' ('Mass movement') to protest the changes
 - Led by the Chairman of the Municipal Board (a prominent formal place leader) and a few other leading actors
 - The core group also actively lobbied Stora Enso and Finnish ministers
- The Municipal Council of Kemijärvi offered to buy Stora Enso's facilities and machinery
- Abrupt structural change policy (ÄRM)



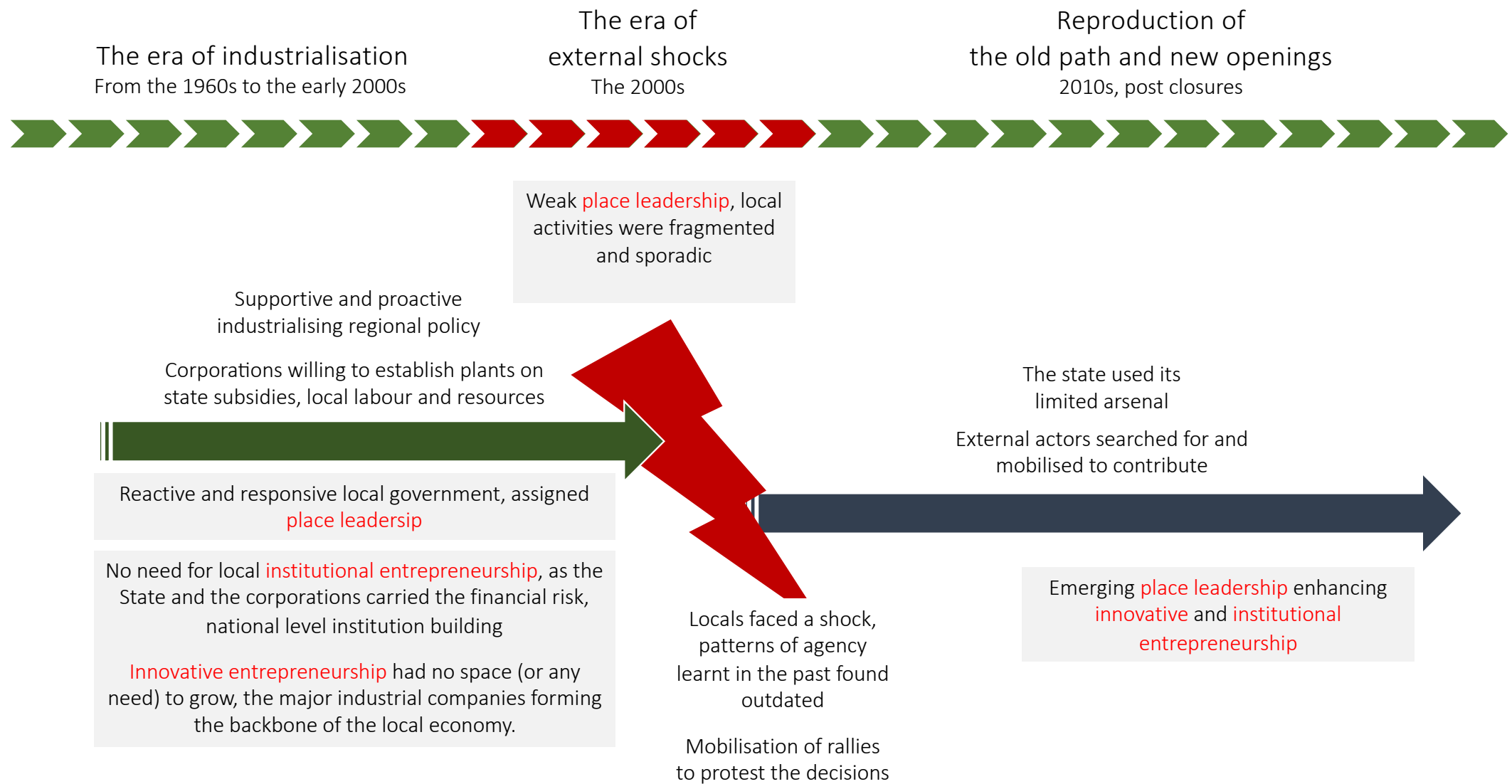
Towards Forestin Eco-industry Park

- The municipalities began to find a way to establish a new biorefinery - Kemijärven Kehitys Ltd coordinated activities - > the main aim to create an industrial symbiosis
 - Close collaboration with investigators from Aalto University and the National Centre of Circular Economy
 - Mobilisation of local SMEs to prepare for new opportunities (not successful)
 - Attraction of companies to move from elsewhere to the eco-industry park
 - Negotiations with the state to electrify the rail connection
 - EU-funded project

- The lead champion of the new mill had previously held a position as a forestry advisor in the Finnish Forest Center.
- But, the local political atmosphere was seen as rather volatile
- Distrust for 'southern masters' and the state

"We are so far away here. We are in a way united, but concerning the 'Masters of Helsinki', we don't like them. And we have proof that this is the right attitude." (a retired mayor of a municipality)

"When facing threats, there has been a lot to do together. 'Train rebellion' and 'Mass movement' indicate that... when there is a threat or something else, people have come together." (a person involved in social movements)



"Let's think about this really, a billion-euro investment. If we can take this to the goal – *when we can get this to the goal*, totally penniless people have just launched this. The development company gave the first small investment to this company.

We are not talking about any basic pulp factory here. It is just the compulsory bad thing here that we need to have, so that we can access the real high-value products."

(a development company representative)

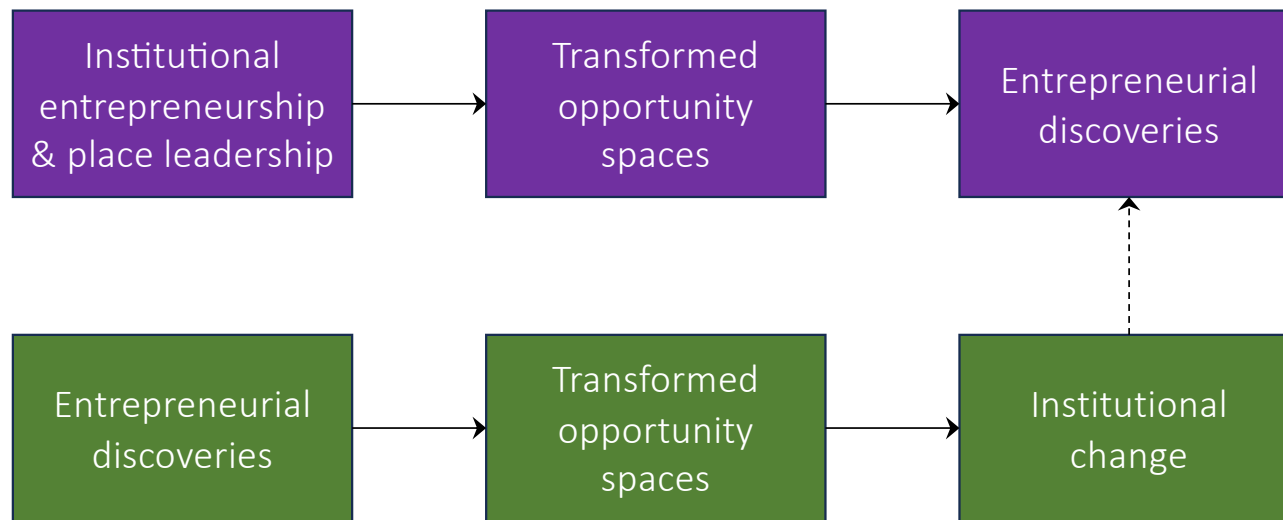
A Chinese state-owned company, Camce, backed by the Chinese National Investment Bank, was involved in negotiations, but eventually did not invest in Boreal Bioref.



	JAKOBSTAD	EASTERN LAPLAND
Place leadership	Shared and mutual Informally co-constructed Business community in the lead	Based on a few key organisations' and key individuals' visions Fragmented and sporadic
Mobilisation	Largely self-organising Occasional lack of coordination	A few key actors organise project-based development work
Strategic focus	Open: inclusive regional strategy	Focused: the forest industry, tourism second.
Mode of action	Proactive	Reactive
Perception of institutional change	Incremental: "doing things better" continuously	Abrupt: Pursuing radical changes
Spatial scale	Strong local activity and international orientation	Weak local activity, focus on national and international resources
Networking	Intensive local networks to reach international markets Strong international networks	Weak local networks

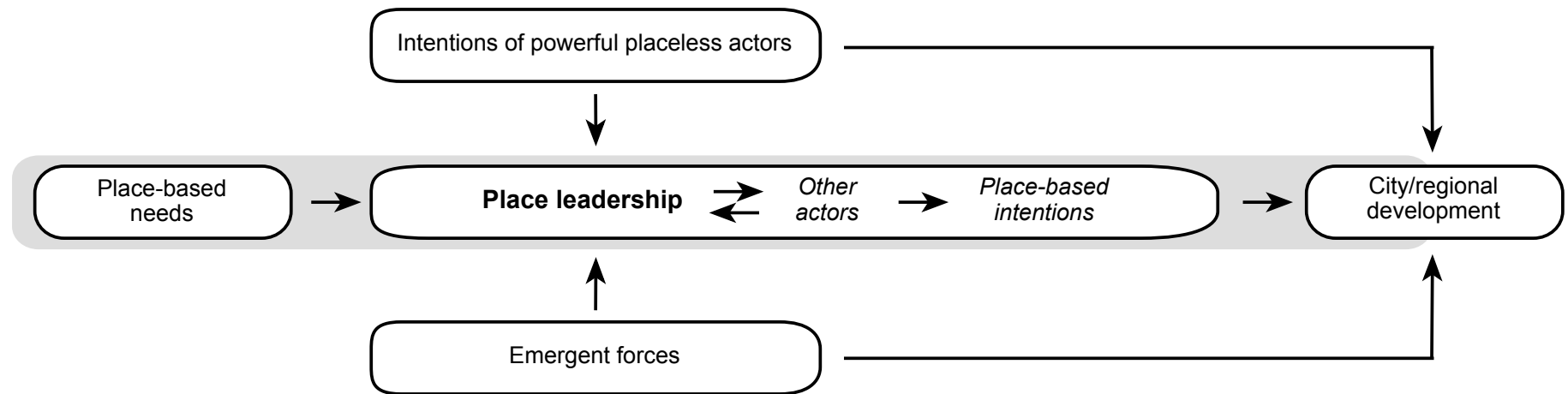
Institutional change and entrepreneurial discovery

A simplified illustration of two pathways



Place leadership as a nexus

Connection or series of connections linking two or more things



The town of Salo, Nokia and Microsoft as a case in point



Development trajectory in Salo / the main phases

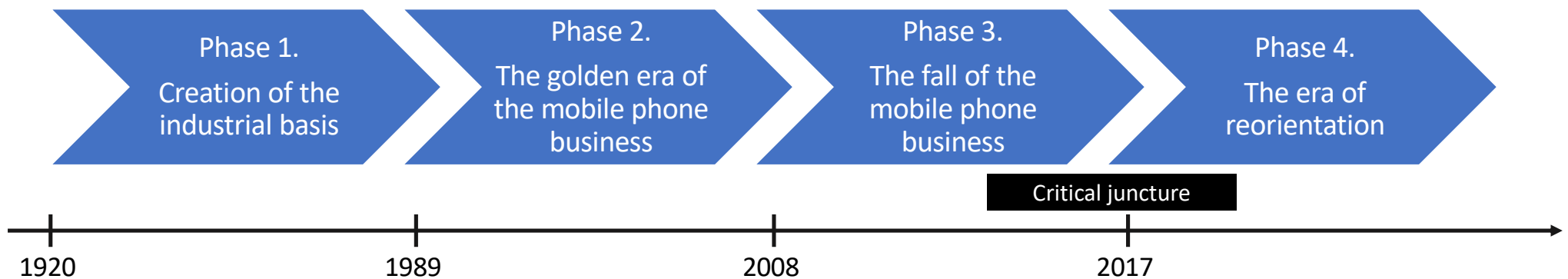
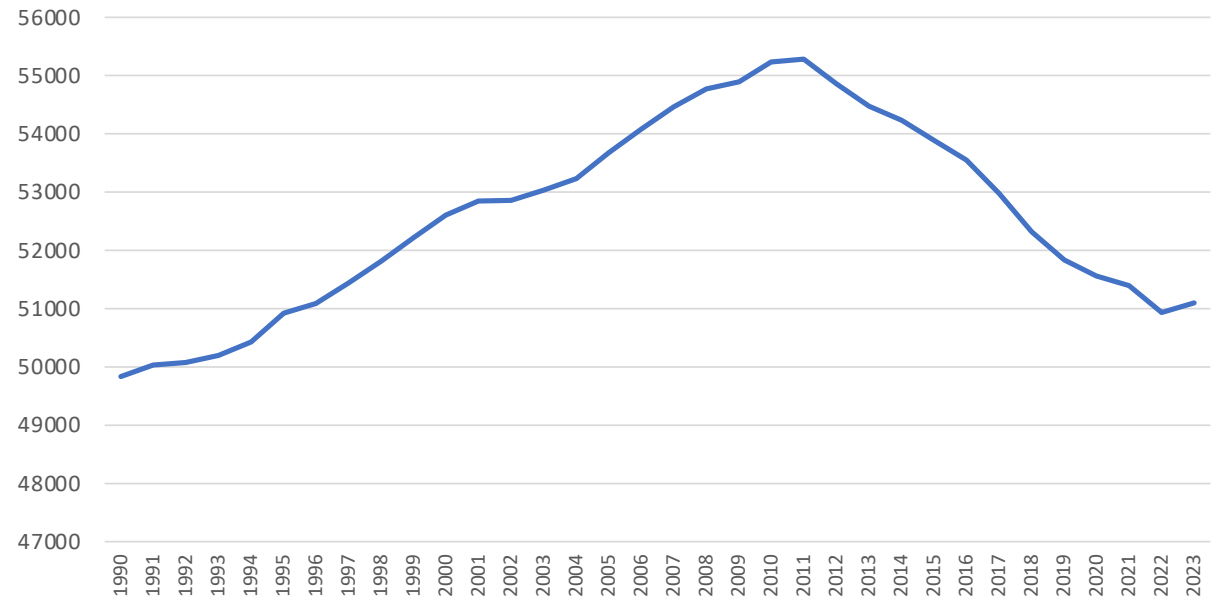
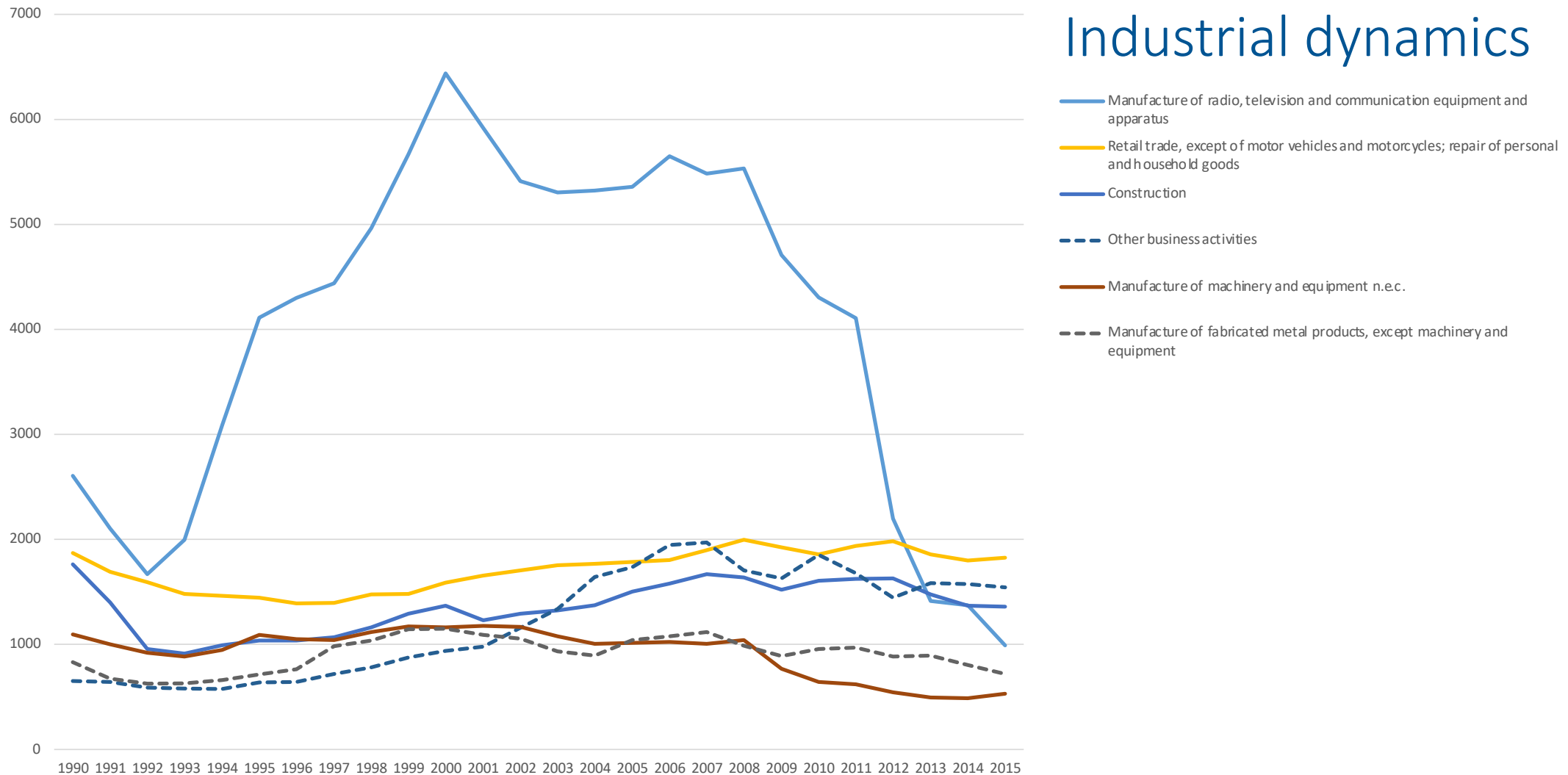


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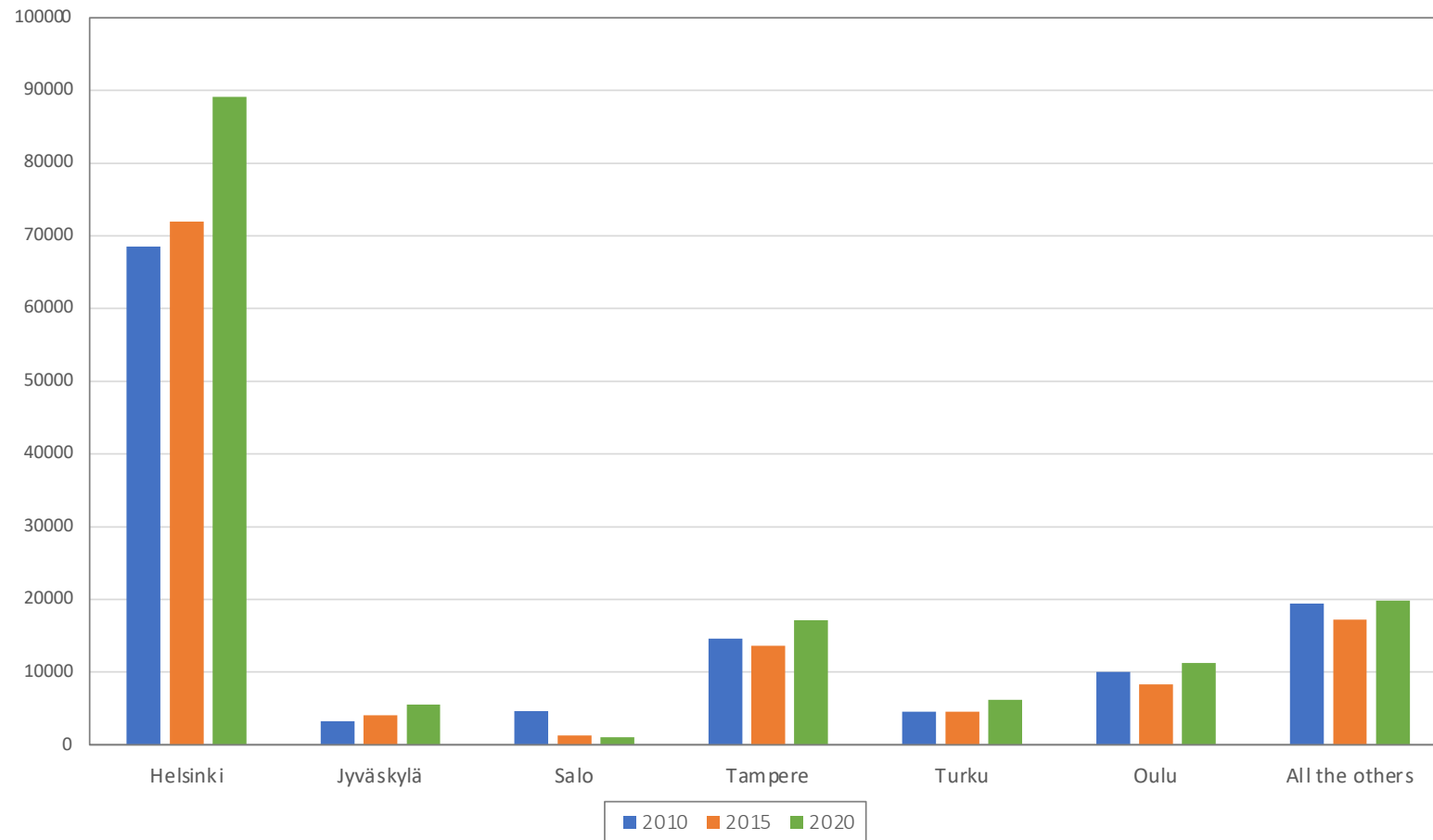
Population change in Salo



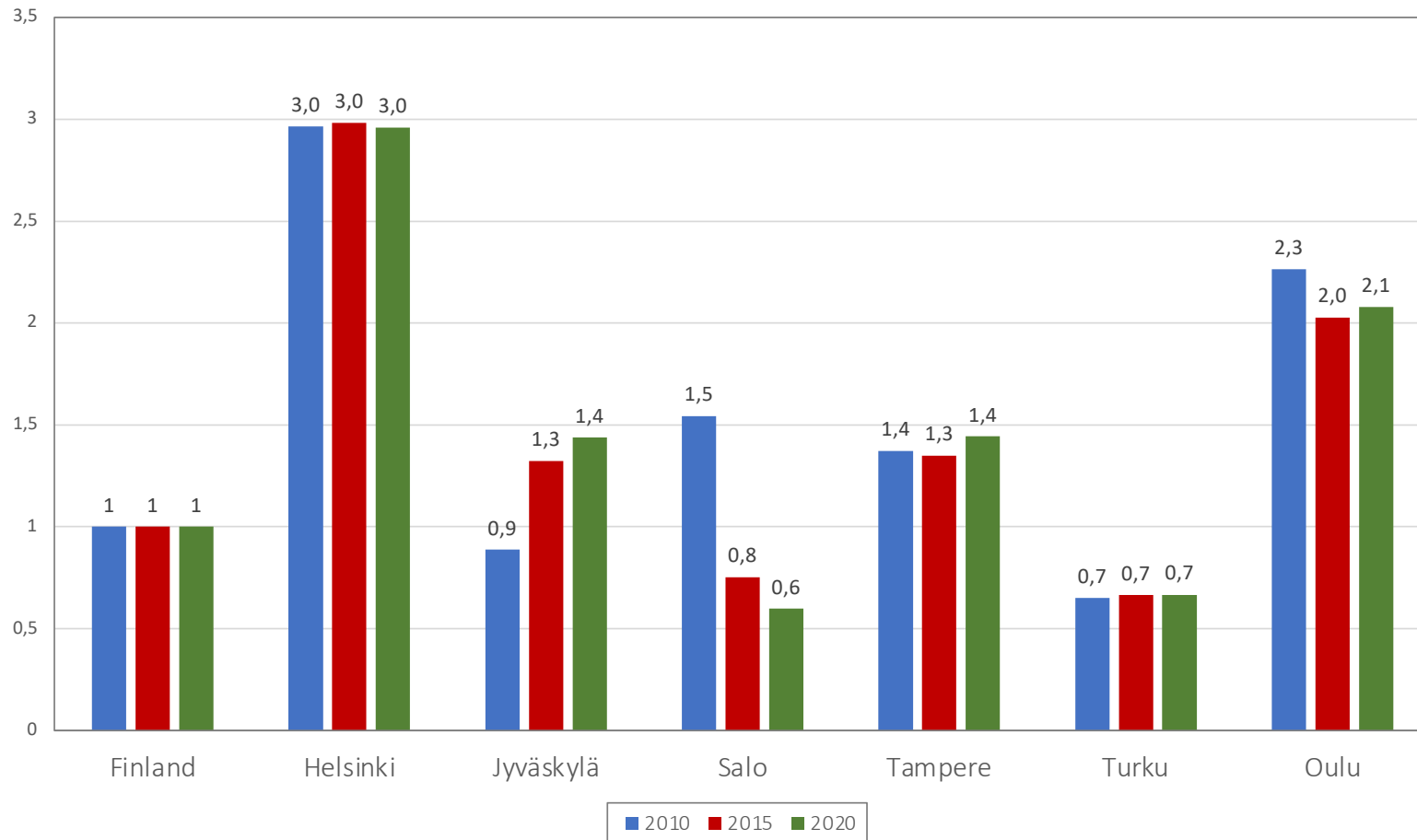
Industrial dynamics



The most ICT specialised sub-regions in Finland, employment



The most ICT specialised sub-regions in Finland (Location Quotients)



$$LQ = \frac{e_i/e}{E_i/E}$$

Where:

e_i = Local employment in industry i

e = Total local employment

E_i = Reference area employment in industry i

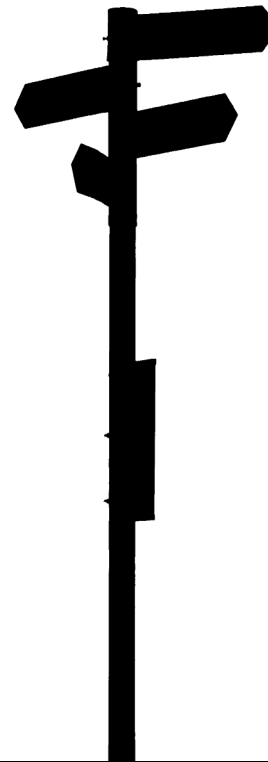
E = Total reference area employment

It is assumed that the base year is identical in all of the above variables.

The collapse of Nokia's subcontracting cluster

The closure of Nokia's mobile phone factory in 2012

- In 2007, Nokia and its subcontractors employed approximately 7,000 – 10,000 people in Salo
- The share of high-tech manufacturing of all employment was as high as 25%
- Nokia: 80% of local corporation taxes
- In the early 2000s, Salo's relative position in the 'Nokia cluster' began to weaken



- One by one, Nokia's subcontractors started to bankrupt or move away from Salo (-2000 jobs)
- In late 2009, the Ministry designated the Salo sub-region as an abrupt structural change region (ÄRM-policy)

"We can quietly prepare here when we see that we may hit the iceberg. We can begin to create something, but carefully.

We cannot do it publicly because of what might ensue. People would stop shopping; the supermarket enlargement would not happen.

We cannot do that. We would cause the disaster by ourselves"

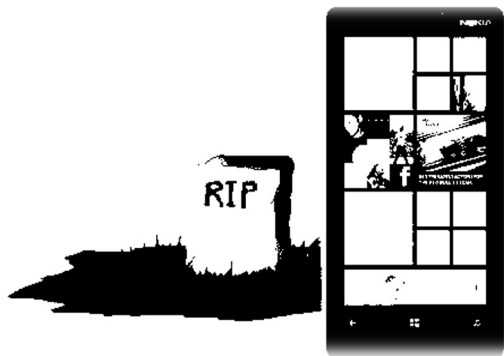
During the golden era, Salo had become a
self-sufficient and inward-looking small
town in the shadow of a corporate giant

>>>

Identity crisis

The closure of Microsoft's product development unit in 2015

- In September 2013, Microsoft acquired the mobile phone business division from Nokia
- In July 2015, Microsoft closed the product development in Salo (1,000 jobs)



- Appr. 80 start-up companies were established in Salo
- Former Nokia/Microsoft employees mobilised themselves and established a Smartsalo Association
- International marketing

The place leaders adopted a double-pointed strategy

- They worked to ease the transition of people from Nokia/Microsoft to other firms (crisis management)
- They worked to attract firms and investments, explore local firms' growth potential, and support start-ups (place leadership for the future)

The establishment of the Salo IoT Campus

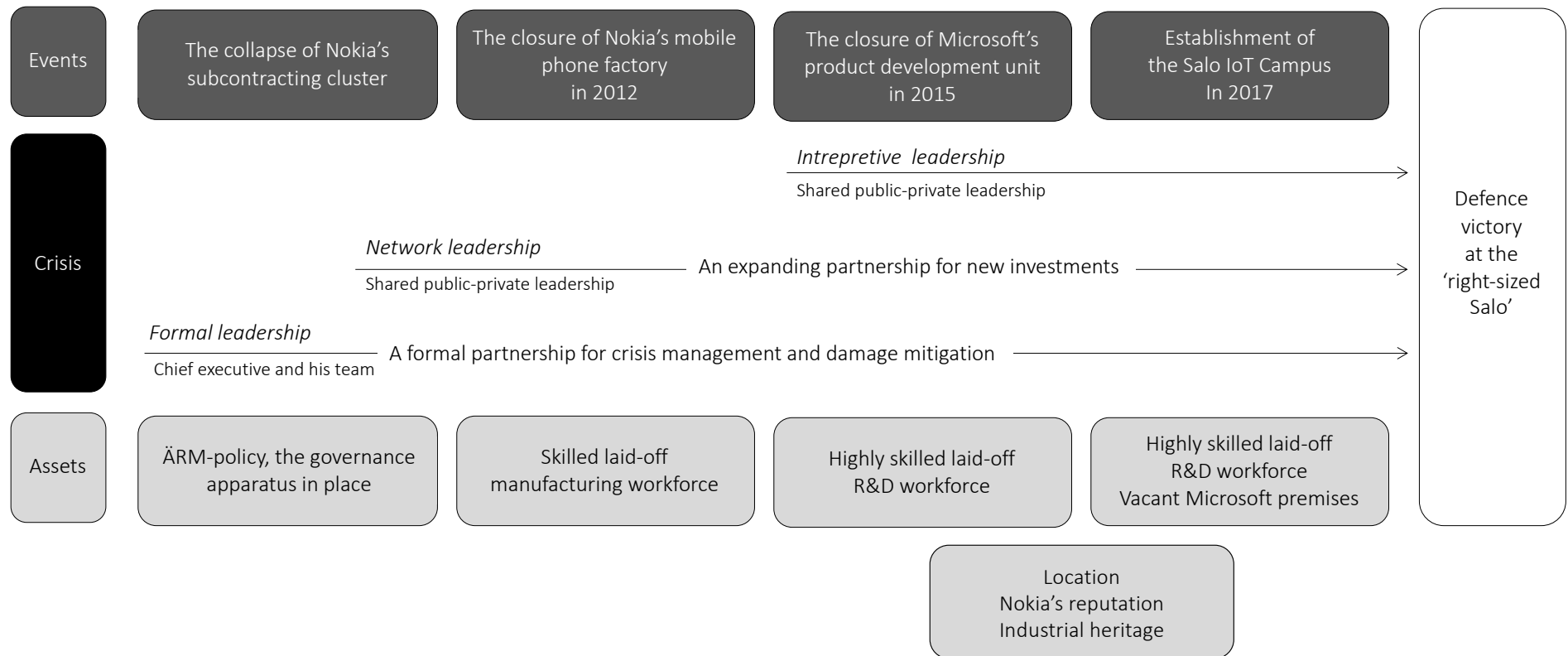
"We took the Town Board there - look, these are the premises that we are buying.

The Board members were stunned about the main square, like in New York or Silicon Valley or anywhere.

We did not know that we had something like that here."



Apr. 83,600 square meters of vacant space



Pre-crisis and post-crisis opportunity spaces in Salo

	Pre-crisis opportunity space	Post-crisis opportunity space
<i>Region specificity</i>	Embedded, long-evolved local expertise in electronics	Weakened as local expertise disseminated
<i>Agency specificity</i>	Rapidly expanding opportunities relying on Nokia	Relying on individuals' and small groups' expertise in IoT-related technologies
<i>Time specificity</i>	Expanding global markets in mobile phones	Introduction of iPhones and Android closed the former window of locational opportunities; IoT potentially opening new windows

The place leadership questions	Answers – Salo
<i>Who exercised place leadership through formal authority (position)</i>	The Chief Executive of the Town Council with the core group's capacity to mobilise public resources to mitigate the damage
<i>Who exercised place leadership through informal authority (person)?</i>	Ex Nokia/Microsoft employees mobilised themselves and set up a SmartSalo Association to utilise their professional networks and their capabilities to generate novel business activities in Salo.
<i>What kind of place leadership style was adopted and what influence strategies were used (process)</i>	First formal leadership, which quickly evolved to network leadership, and finally to search for a vision and new identity (interpretive leadership)
<i>Where did place leadership take place (place and institutional context)?</i>	A small sub-region in Finland, with a unitary governance system, strong central government accompanied with municipalities. Fairly good location in Southern Finland.
<i>Why was place leadership exercised (purpose)?</i>	To save Salo, to mitigate a severe crisis, and to construct a vision and strategies for the future.
<i>What was achieved by place leadership (outcome)?</i>	A defensive victory, a right-sized town.

Salo - conclusions

- The governance system is necessary but not sufficient for coping with a crisis
- Formal and assigned leadership is dependent on tapping into powers and capabilities beyond the reach of its sphere of action;
 - The capacity to create a vision, source knowledge, and mobilise assets being in the hands of other actors.
- We should be open to effective place leadership assuming varied forms in different places

Conclusions – we found cases

- Where **local conventions** are supportive for picking up new opportunities and taking risks –
> institutional entrepreneurship is not called for
- Where **institutional entrepreneurship** provided the grounds for mobilizing across actor groups and pooling resources (place-based leadership), leading to improved regional preconditions for stimulating innovative entrepreneurship
- Where **innovative entrepreneurs** succeeded in a market niche and engaged in developing the resources required in the region for further growth (place-based leadership)
 - This often called for a change in cognitive–cultural institutions (institutional entrepreneurship) to legitimize a new industrial path in a region

- Institutional change is creeping by nature
- Agency is not to be located in the attributes of individual actors but in the relationships connecting actors in an innovation system and institutional change of it
- Policy-makers have a role in institutional change but not a linear one -> the study of agency reveals the roles



