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Social Innovation in Energy Transitions

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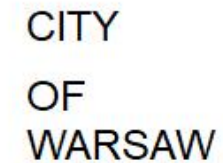
The SONNET project





SONNET project

Co-creating a rich understanding of the diversity, processes, contributions, success and future potential of social innovation in the energy sector



The SONNET project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 837498.

Conceptual framework and research question



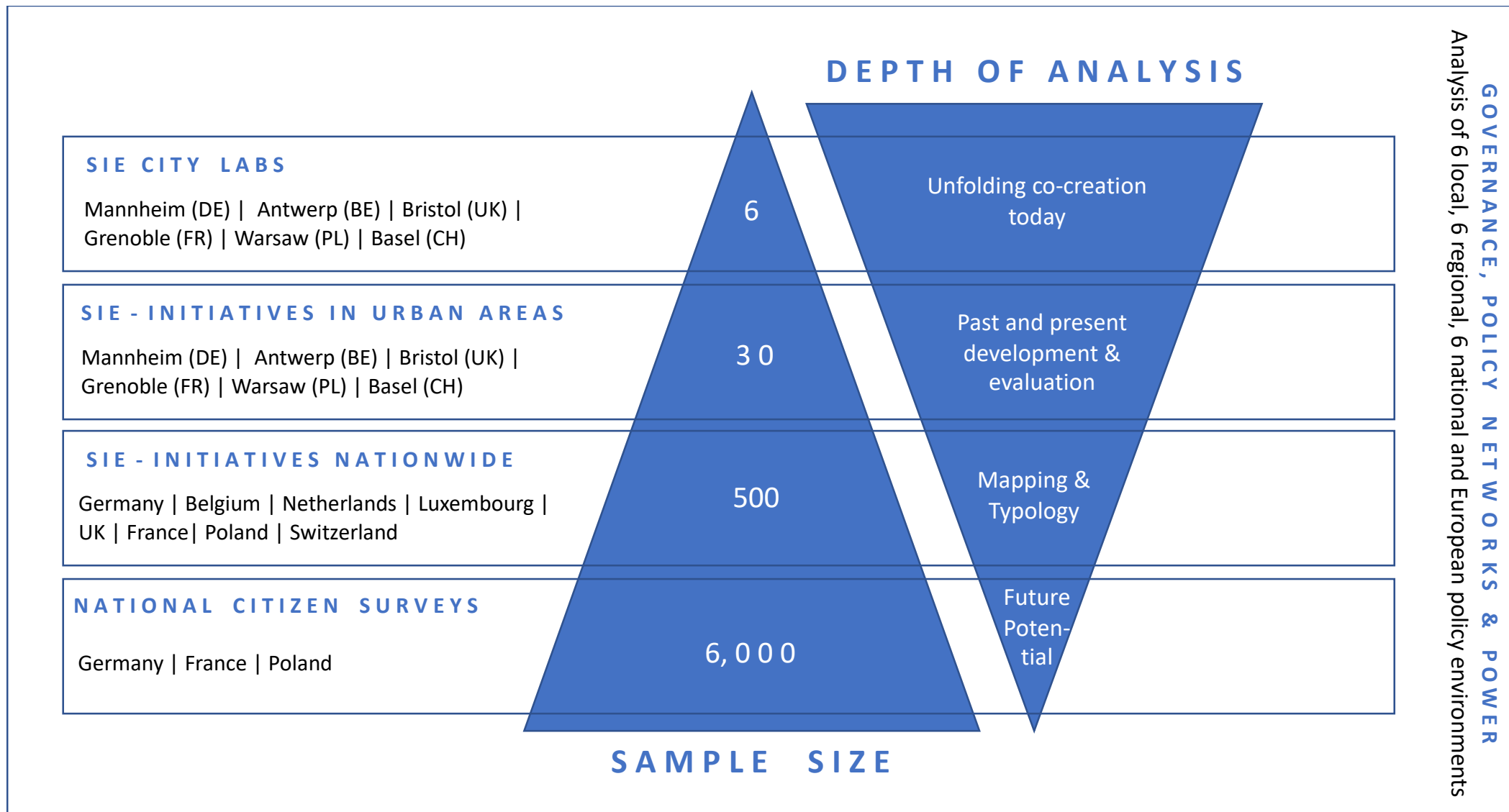


SONNET's definition of social innovation

Ideas, objects and/or activities that **change social relations** and involve new ways of **doing, thinking** about and **organising** energy.

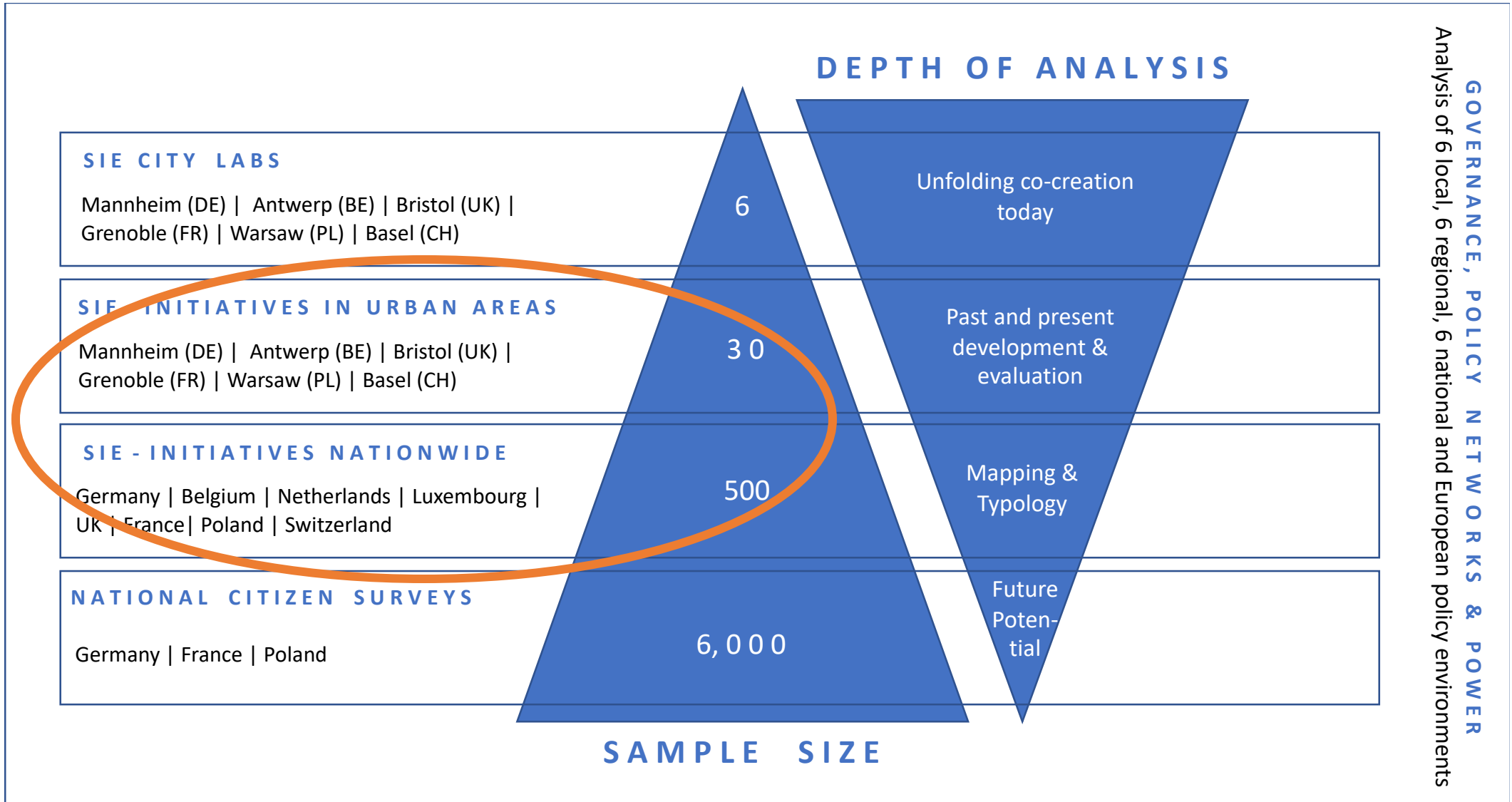


SONNET research design : a multi-method approach





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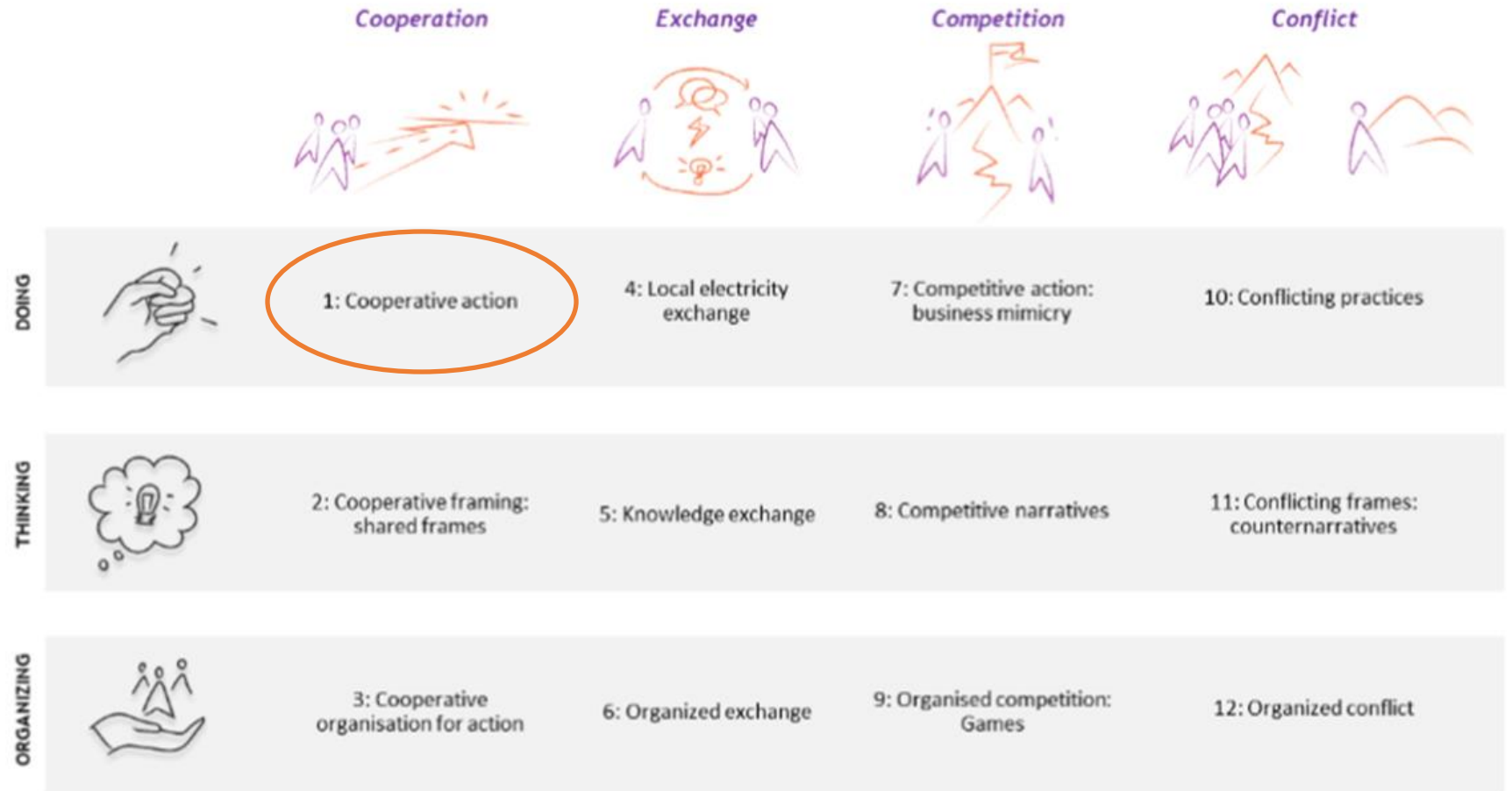


Energy cooperatives as social innovation

e.g. citizens jointly own means of and participate in renewable energy production.

REScoop & International Co-operative Alliance principles :

- i) concern for community
- ii) voluntary and open membership
- iii) democratic governance
- iv) autonomy and independence





Research questions

- How do energy cooperatives and energy cooperative fields **emerge, develop and institutionalize** over time ?
- How has this process been **[co]shaped** by the outside institutional environment ?

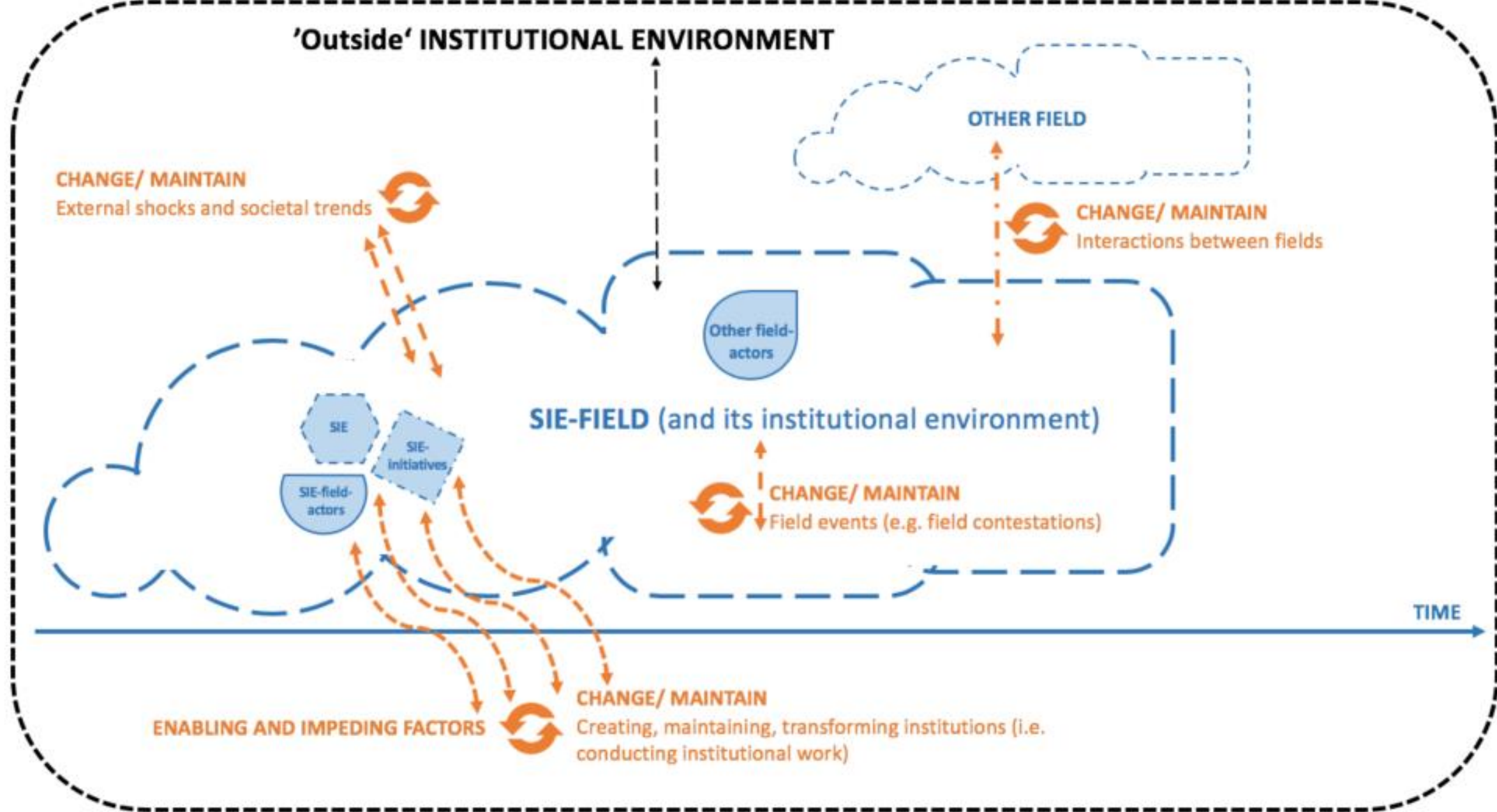


Figure 1: Summary of overall visual conceptual map for WP3

Methodology





Embedded case study approach

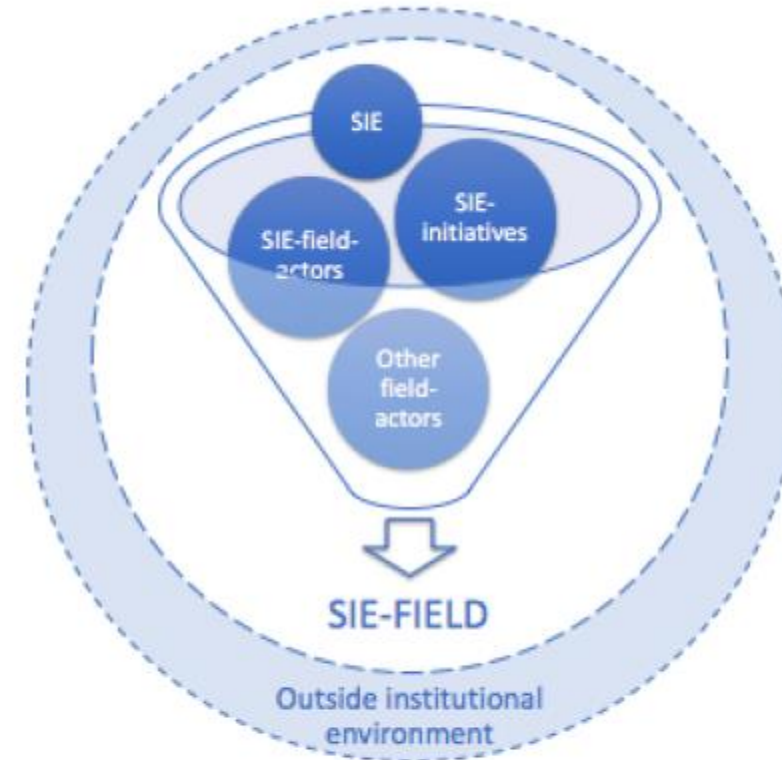
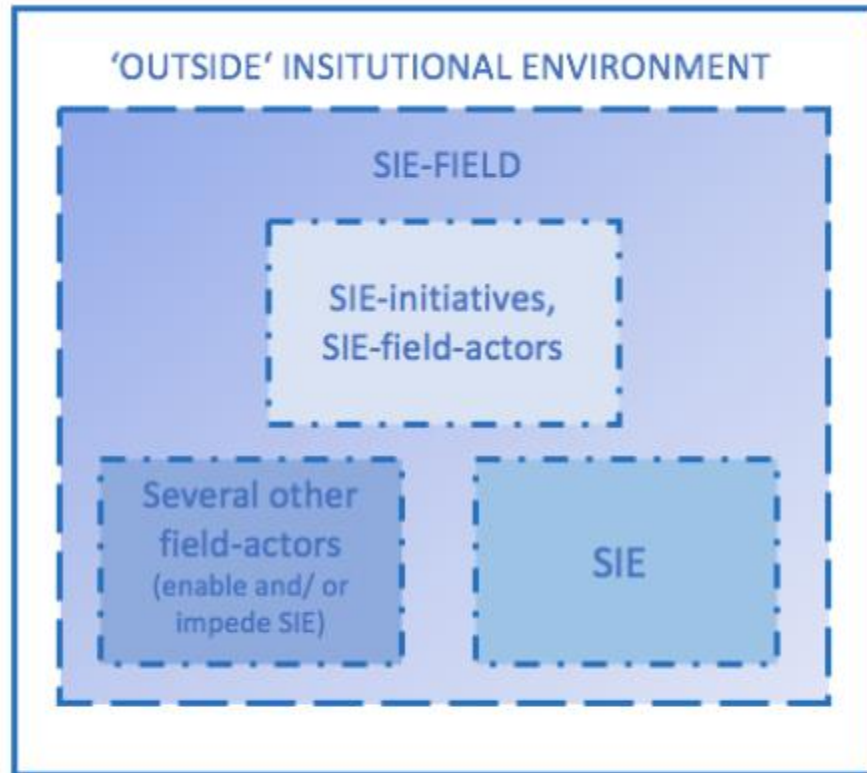


Figure 6: Two illustrations of SONNET's embedded case study design: Based on Yin's (2003) visualisation (see left) and a SONNET 'translation' showing the relations between the subunits (see right)



Chapter

3 countries

- France
- Germany
- Switzerland





Research steps

Fieldwork

- ~9 interviews per country
- Observation
- Documents
- Secondary sources

Case report

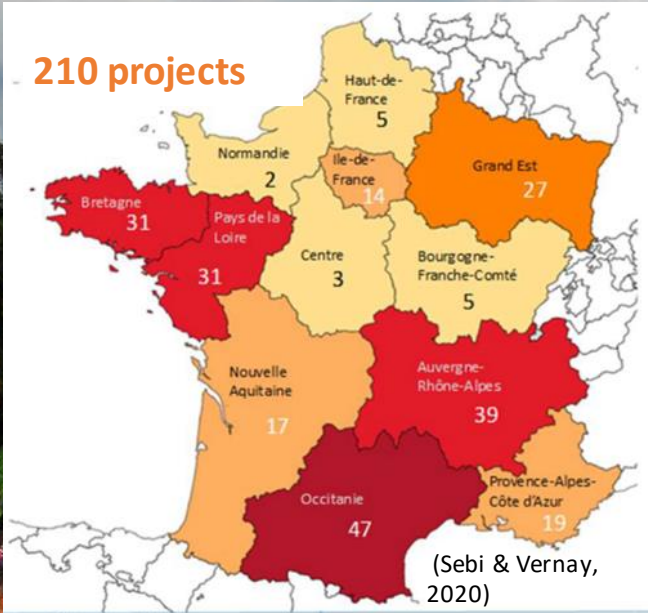
- Thematic analysis
- Innovation timeline

Cross-case analysis (ongoing)

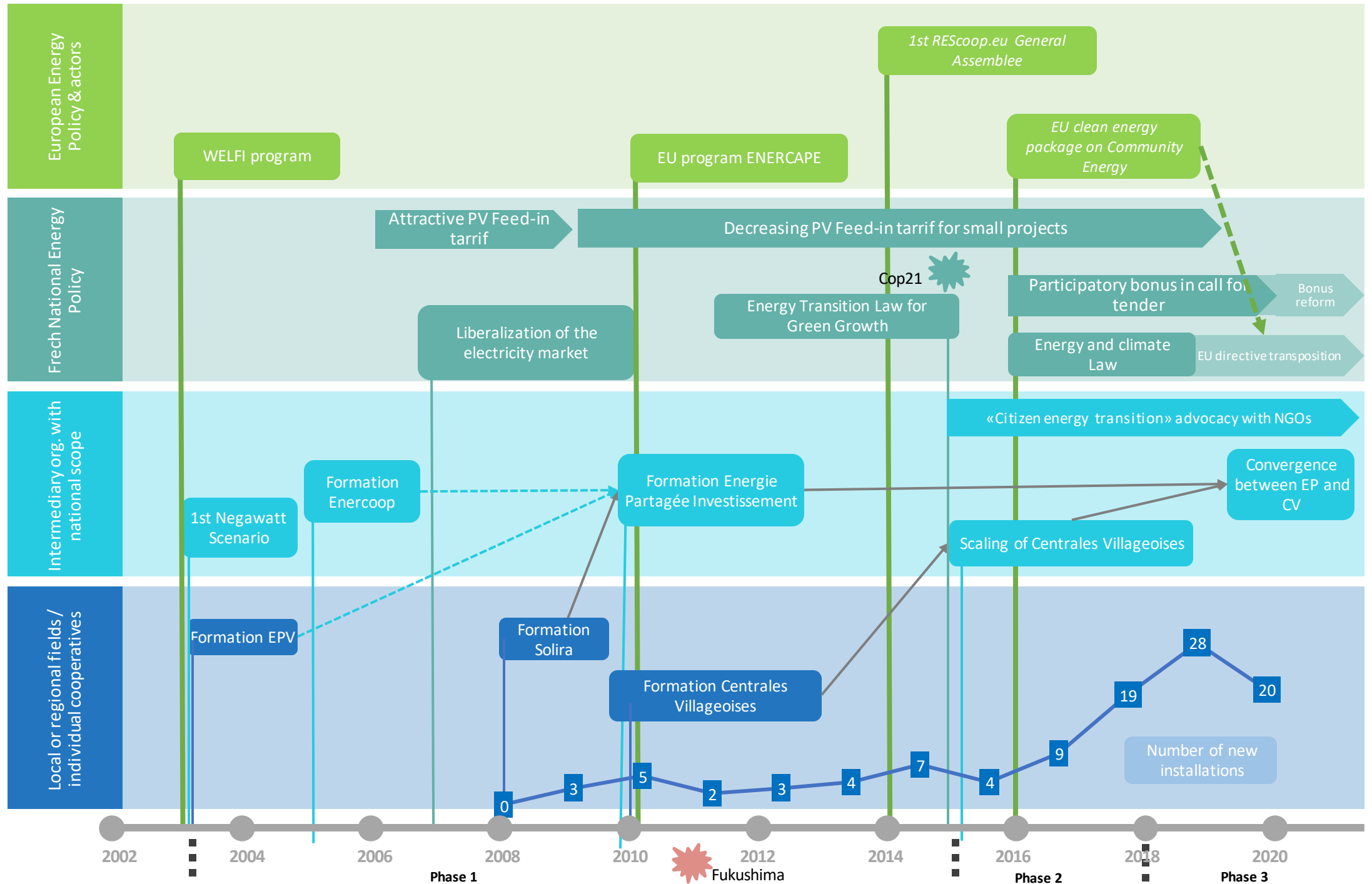
France



210 projects



- ✓ local focus
- ✓ non-speculation
- ✓ democratic governance
- ✓ ecology



Switzerland





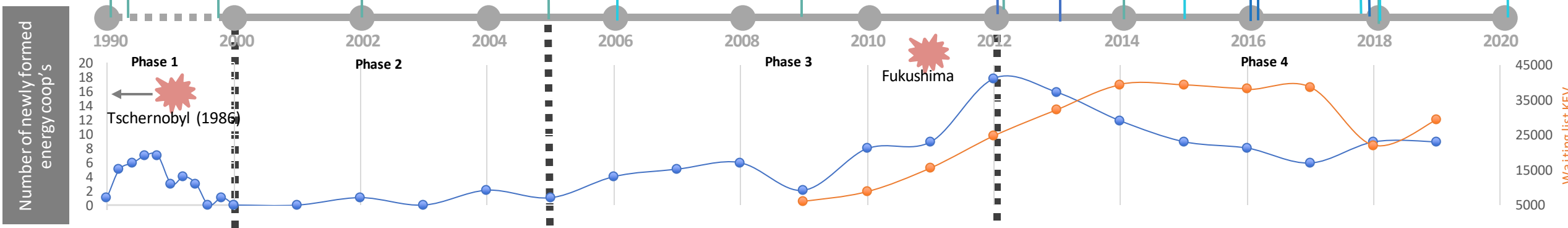
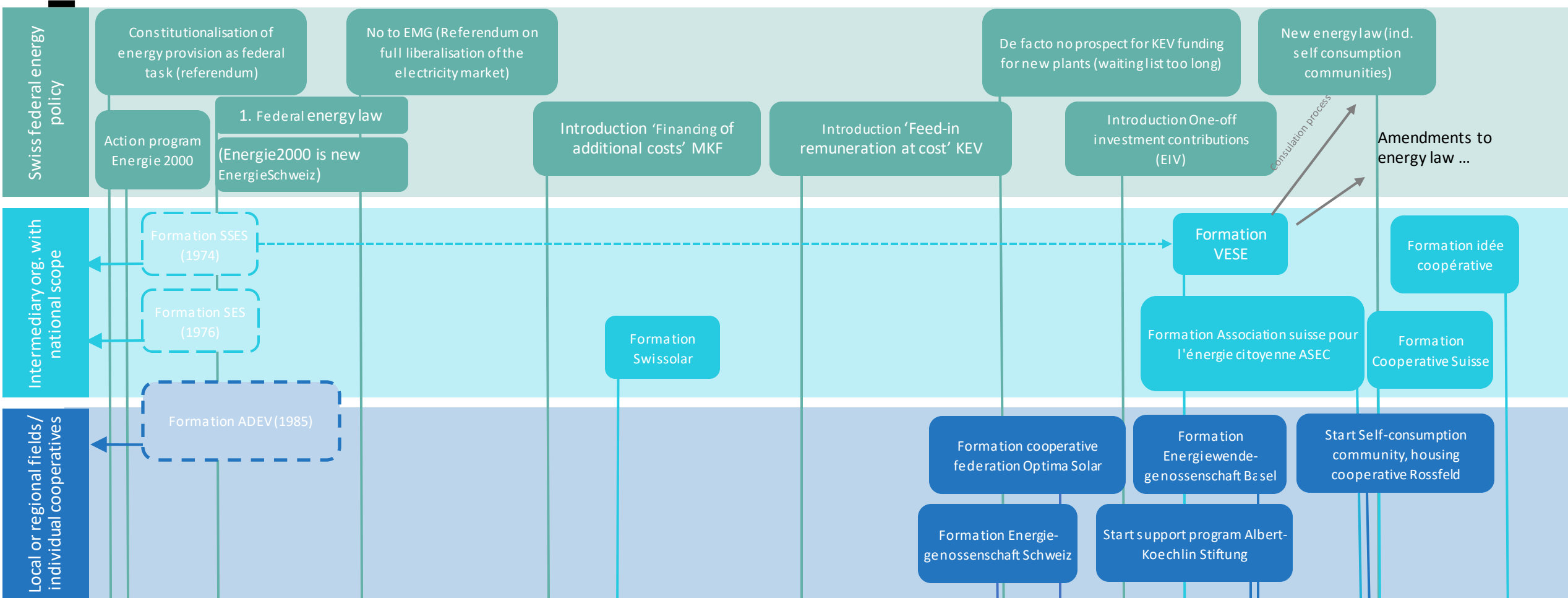
Energy cooperatives in Switzerland

- Cooperative (*Genossenschaft*) is well-established legal form corresponding to the ICA cooperative principles
- Cooperatives in the energy sector already engaged in electrification at beginning of 20th century (~100 still exist today as DSOs)
- 200 new energy cooperatives formed since 1985
 - initially shaped by anti-nuclear movement
 - mainly financing and operating roof-top photovoltaics
 - pursuing goals to expand renewable energy and to allow citizens to participate directly in energy decision-making and ownership at project level



Energy Perspectives 2035

Energy Strategy 2050



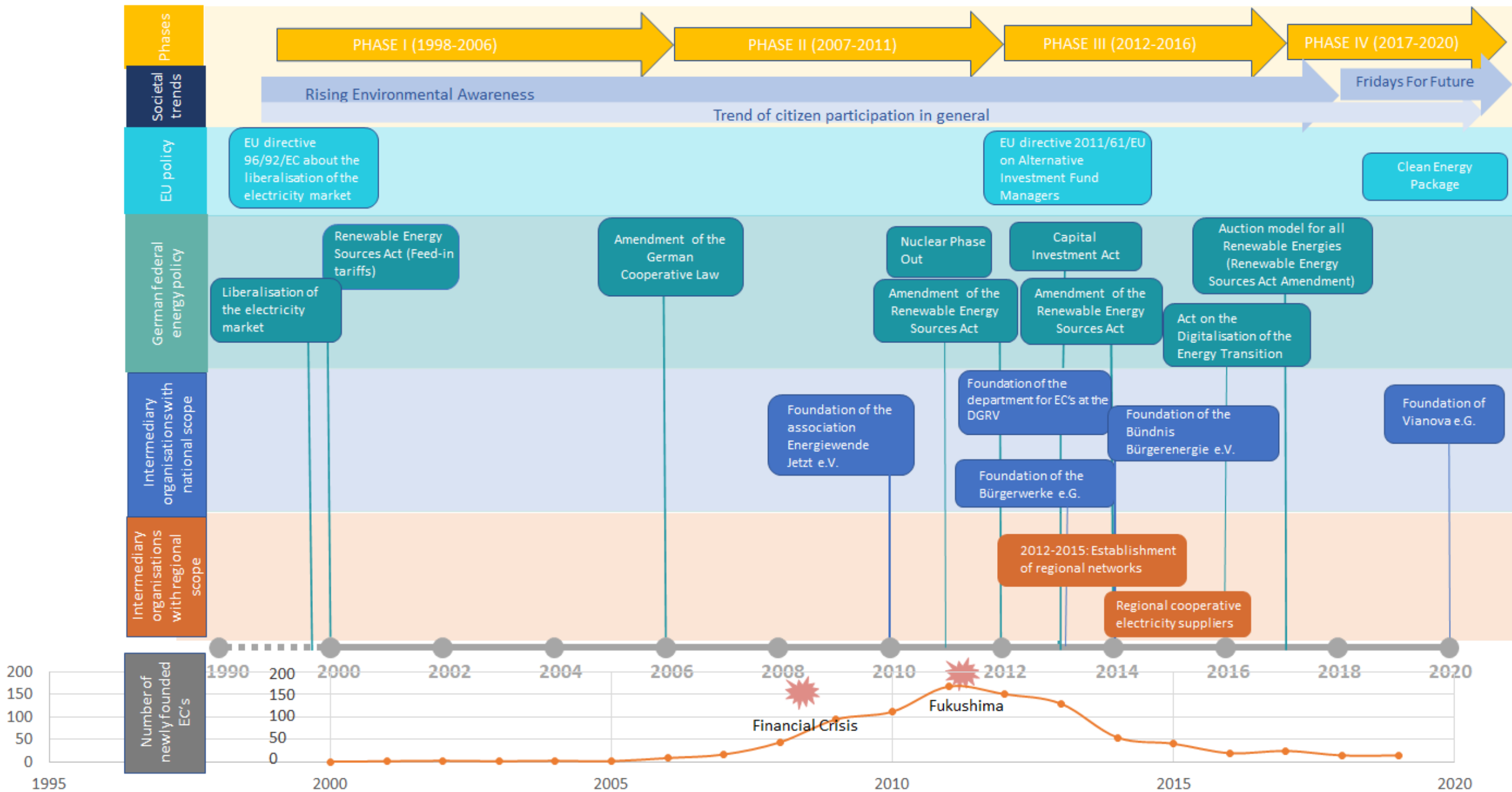
Germany





Energy cooperatives in Germany

- EC already existed in the 20th century to provide the rural population with electricity (today only less than 50 of them still exist)
- The majority of energy cooperatives today was registered after 2006
- Main aims:
 - decentralisation of the energy transition
 - democratisation -> enable citizens to participate in the energy transition
 - to keep the revenues in the region
 - direct use of their own energy



Country comparison





Cross-case comparison

All coops emphasis citizen participations

Energy coops goals is context-dependent

Institutional work VS Institutional structure	France	Switzerland	Germany
Goals VS energy system	<ul style="list-style-type: none"> Electricity mix: 92 % decarbonised (nuclear and hydro power) Anti-nuclear motivation (early phases) Discourses emphasising local economic benefits and citizen participation 	<ul style="list-style-type: none"> Electricity mix: 56% hydro-power, 35% nuclear, 4% wind and solar power Anti-nuclear movement, then energy transition (RE expansion) Focus on roof-top photovoltaics Citizen participation but broader social subordinate 	<ul style="list-style-type: none"> Electricity mix: 54% conventional, 46% renewables Goals of decentralisation, democratisation, local economic benefits, self-consumption Contribute to energy transition
Cooperative organizing VS legal framework	<ul style="list-style-type: none"> Social economy legal framework but limitations to apply it to energy Use of coop statute + bricolage + advocacy to change laws 	<ul style="list-style-type: none"> Well established cooperative statute Widespread use of coop statute Self-help within the field for the application of the cooperative statute 	<ul style="list-style-type: none"> Institutional form of cooperatives regulated in the German cooperative law (Genossenschaftsgesetz) Amendment to cooperative law Use of the cooperative statute
Advocacy VS policies	<ul style="list-style-type: none"> National RE support, FET, pushing and tender procedures Support of intermediaries by ADEME national agency and some regions Gatekeeping and definition work to frame "citizen energy" as policy target No specific energy coop national policy Successful REScoop EU translocal advocacy 	<ul style="list-style-type: none"> RE support, FET, then investment sub. Change of time compensated by municipalities or cooperation with local supplier Decisive conditions are set at the local level No explicit recognition of energy cooperatives (or similar concepts) at national policy level Advocacy in local energy politics through personal linkages Advocacy at national level not for cooperative form, rather renewable energy advocacy 	<ul style="list-style-type: none"> National RE support, shift towards tender procedures Support of intermediaries by several federal states Advocacy on the federal state level through intermediary organisations Advocacy in local energy politics through personal linkages and simultaneous board membership in different organisations

Adapted legal framework is an enabling condition

Support scheme for RE is an enabling condition

Support scheme & liberalization degree condition business models



Cross-case comparison

Intermediaries' structuration mirror states structures

Institutional work VS Institutional structure	France	Switzerland	Germany
Intermediaries structuration VS government structuration	<ul style="list-style-type: none"> • Unitary government (deconcentration trend) • National network coordinating regional networks 	<ul style="list-style-type: none"> • Federal government • Scattered regional and national networks without specific focus on energy cooperatives 	<ul style="list-style-type: none"> • Federal government • National networks (not all exclusively for energy cooperatives) • Several regional networks
Relation with private actors VS energy market structure	<ul style="list-style-type: none"> • Liberalisation (2007), electricity supply oligopole (decreasing), concentration trend on RE generation side, national grid monopoly • Cooperation with small developers, negotiations ongoing with big ones • Difficult relationships with incumbents (EDF) • Cooperative relationship between cooperative producers and cooperative supplier, sometime compensating absence of public support 	<ul style="list-style-type: none"> • Liberalisation (2009) for large-consumers only, 650 electricity providers with territorial supply monopolies (mostly in ownership of municipalities / cantons), big companies own majority of generation capacity • High dependence on providers due to pricing for fed-in electricity • Ambivalent relationships with electricity providers (conflicts & collaboration) • Collective lobby with some other independent producers 	<ul style="list-style-type: none"> • Liberalisation (1998), supply oligopole (decreasing) • Cooperation with project developers and companies • Cooperation with independent renewable energy providers and solar installars • Difficult relationship with the four big conventional energy suppliers
Relation with public actors VS public actors competencies	<ul style="list-style-type: none"> • Progressive decentralisation of energy competencies to local authorities • Alliances with parapublic energy agencies, local governments, public energy companies • Difficult relationships with national government, administration and grid manager 	<ul style="list-style-type: none"> • Initially municipalities' responsibility; progressive engagement of federal level; still broad municipal autonomy in energy policy • (Para)public suppliers have small scale • Often strong (support) 	<ul style="list-style-type: none"> • Energy policies mainly at the national level, influence of federal state policies • Strong linkages with municipalities (collaboration, membership of municipalities, personal links)

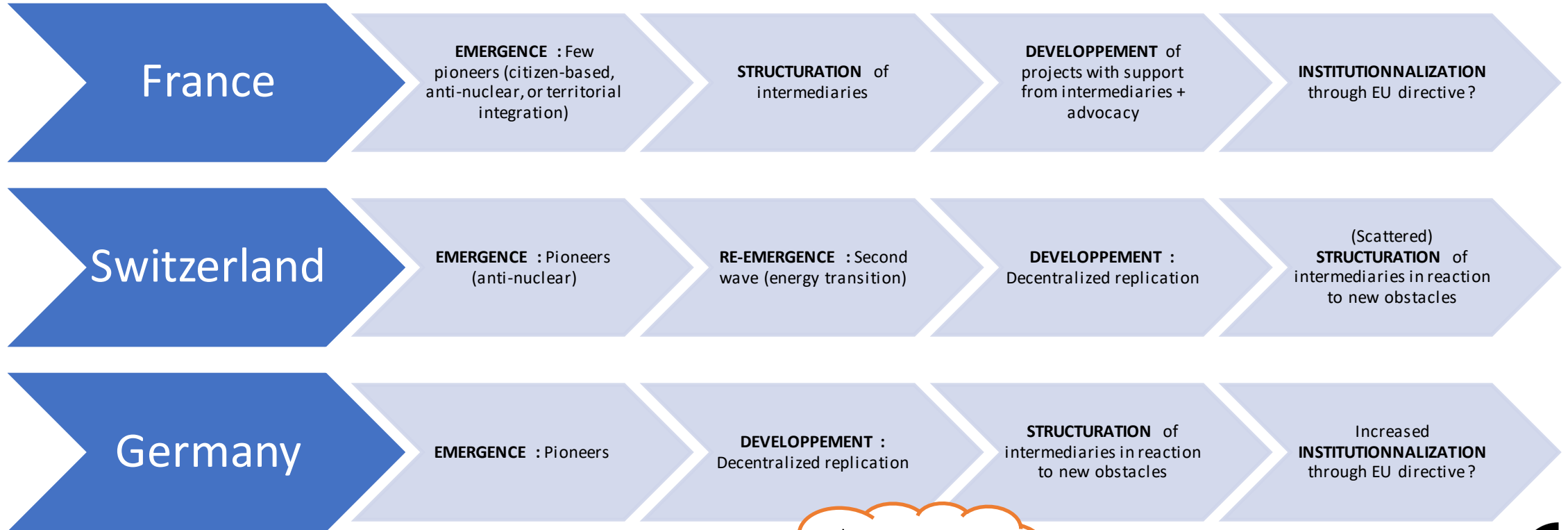
Cooperative find allies in some government levels (local+EU) to change another (national)

Support from para-public agencies is more stable than government support

Strong local support can slow field structuration, as there is less need for supra-local organisation and advocacy



Process comparison



Intermediaries emerge to raise obstacles



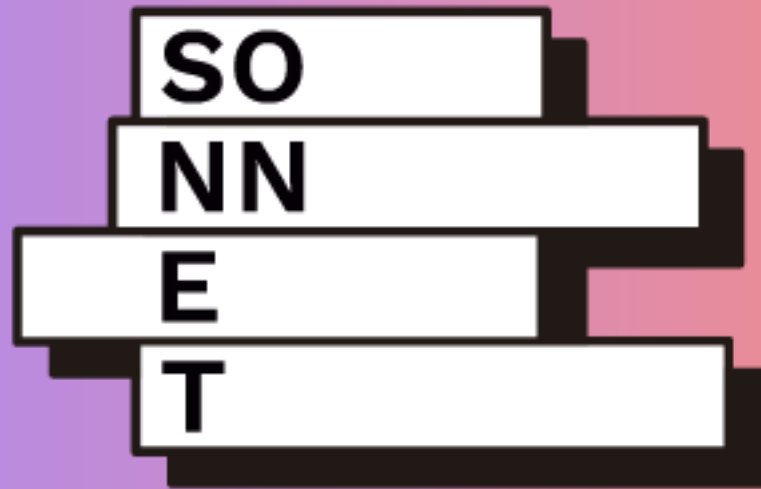
Results of comparative analysis (development of theses)

- Necessary/enabling conditions
 - Favourable RE tariffs
 - Legal framework making cooperative organisation of energy possible (including citizen fundraising, engagement of local authorities, liberalized market...)
- Conditions triggering emergence of local projects
 - Ecologist militants (anti-nuclear or other...)
 - Local or remote inspiring example, or discourses
 - Local counter-example (private actor prospecting)
- Conditions triggering emergence of intermediaries
 - Legal and administrative obstacles, or lacking support (need to lobby)
 - Access to funding



Future steps

- Continue comparative analysis
- Link with existing theories about social innovation processes
 - diffusion
 - scaling up
 - role of intermediaries
 - actors dynamics
 - ...
- Measurement of degree of institutionalisation ?



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Energy Transitions