

1989

2010

2022

2030

2050



How to develop strategies of adaptation to climate change based on a foresight exercise?



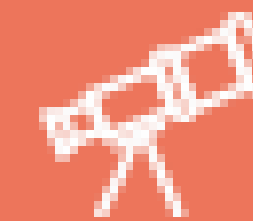
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What could the vine and wine industry look like in 2050?

How to develop strategies of adaptation to climate change based on a foresight exercise?

Patrick AIGRAIN, Benjamin BOIS, Françoise BRUGIERE, Eric DUCHENE, Inaki GARCIA de CORTAZAR-ATAURI, Jacques GAUTIER, Eric GIRAUD-HERAUD, Roy HAMMOND, Hervé HANNIN, Jean-Marc TOUZARD, **Nathalie OLLAT**



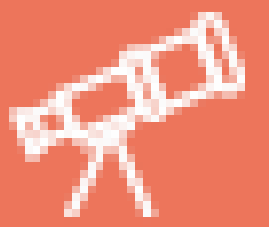
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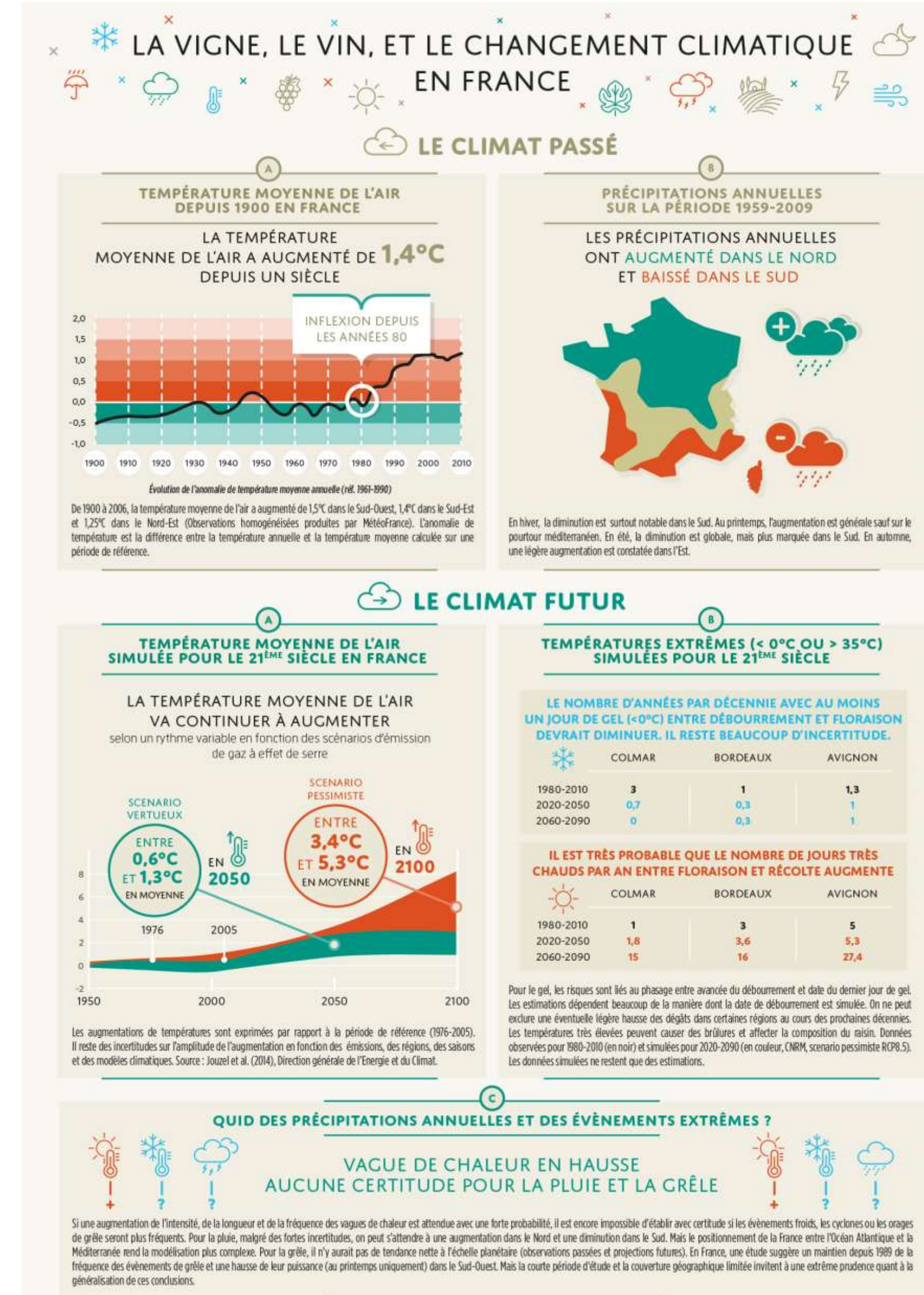
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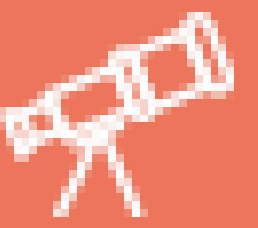
In the frame of Laccave project

« Long term impacts and adaptation to climate change of the french wine industry »

- Laccave : A national scientific project to study the impacts and the adaptation to climate change
- 23 laboratories and state organisations for Agriculture and Appellation defense
- Disciplinaries studies about impact and adaptation levers
- A foresight exercise to develop a multidisciplinary approach, raise the awareness of the industry and help it to make decisions in the context of climate change



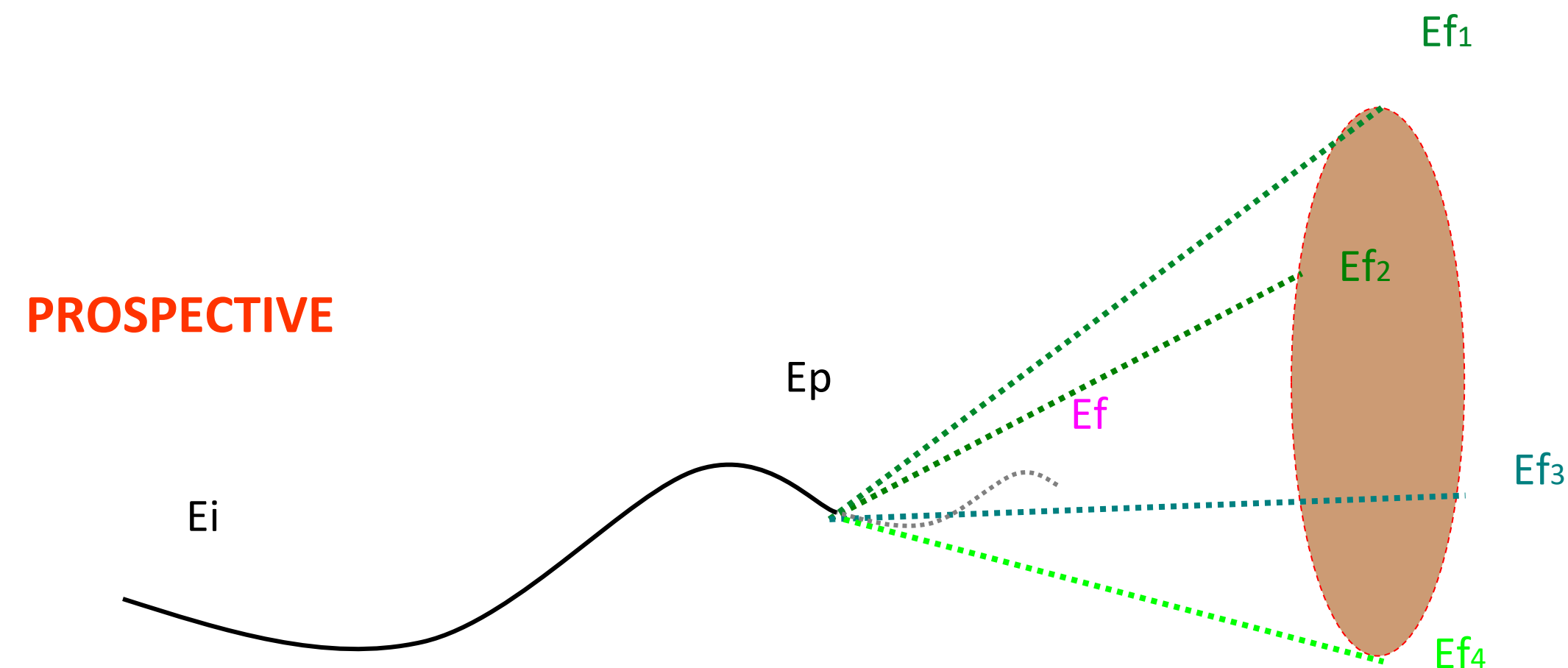
What is a foresight exercise ?



The future is not written, it can be partly built, based on the will of the actors and their organization.

A collective intellectual exercise to imagine « possible futures », based on variables strategies and the analyses of their consequences

Not a simulation, neither a prevision

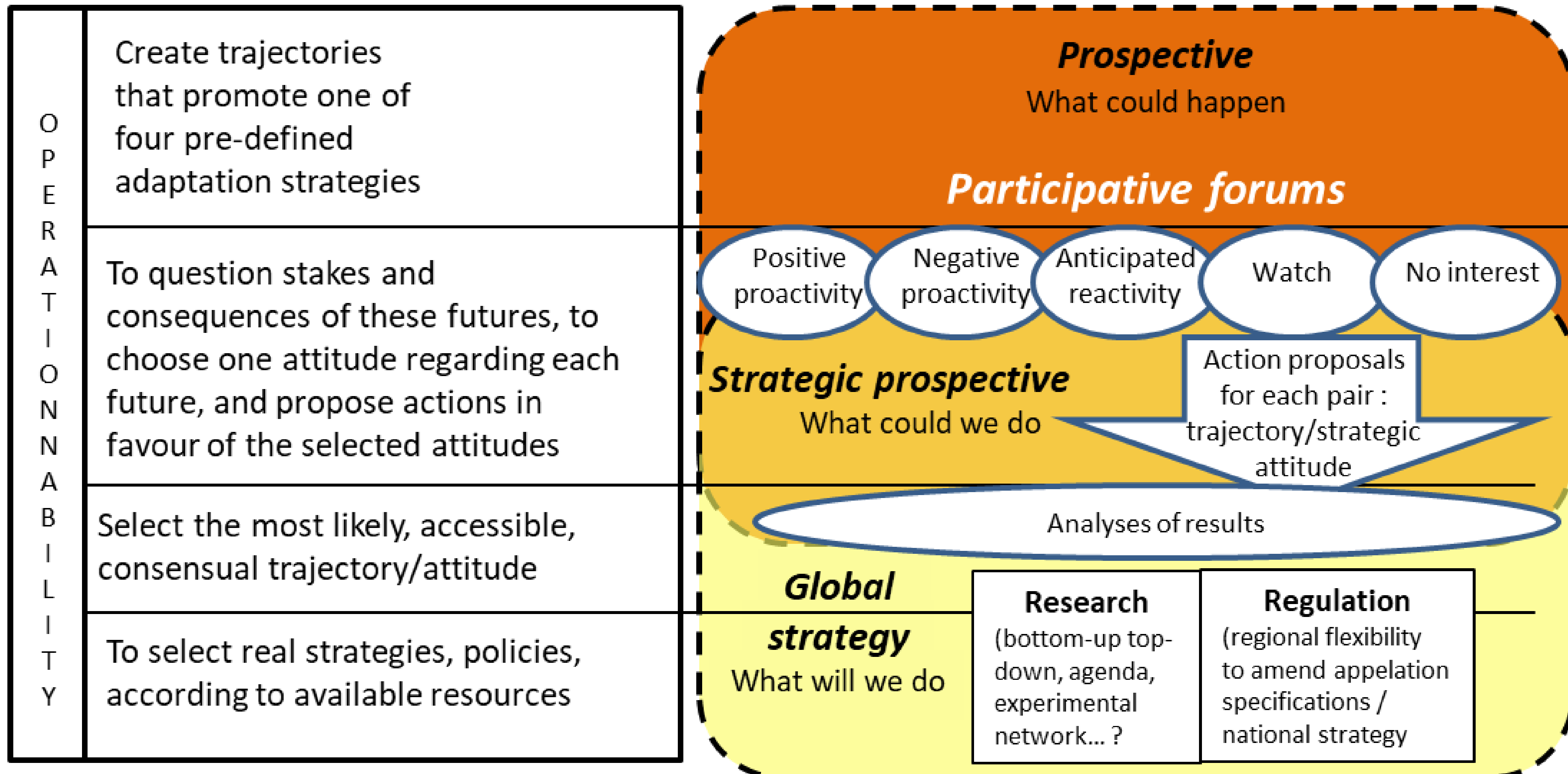
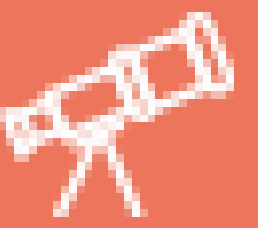


Ex: Jules Verne

Family of possible futures

- Each strategy is a result of the combination of many hypotheses related to the drivers of changes.
- Each strategy usually takes shape as a plausible story

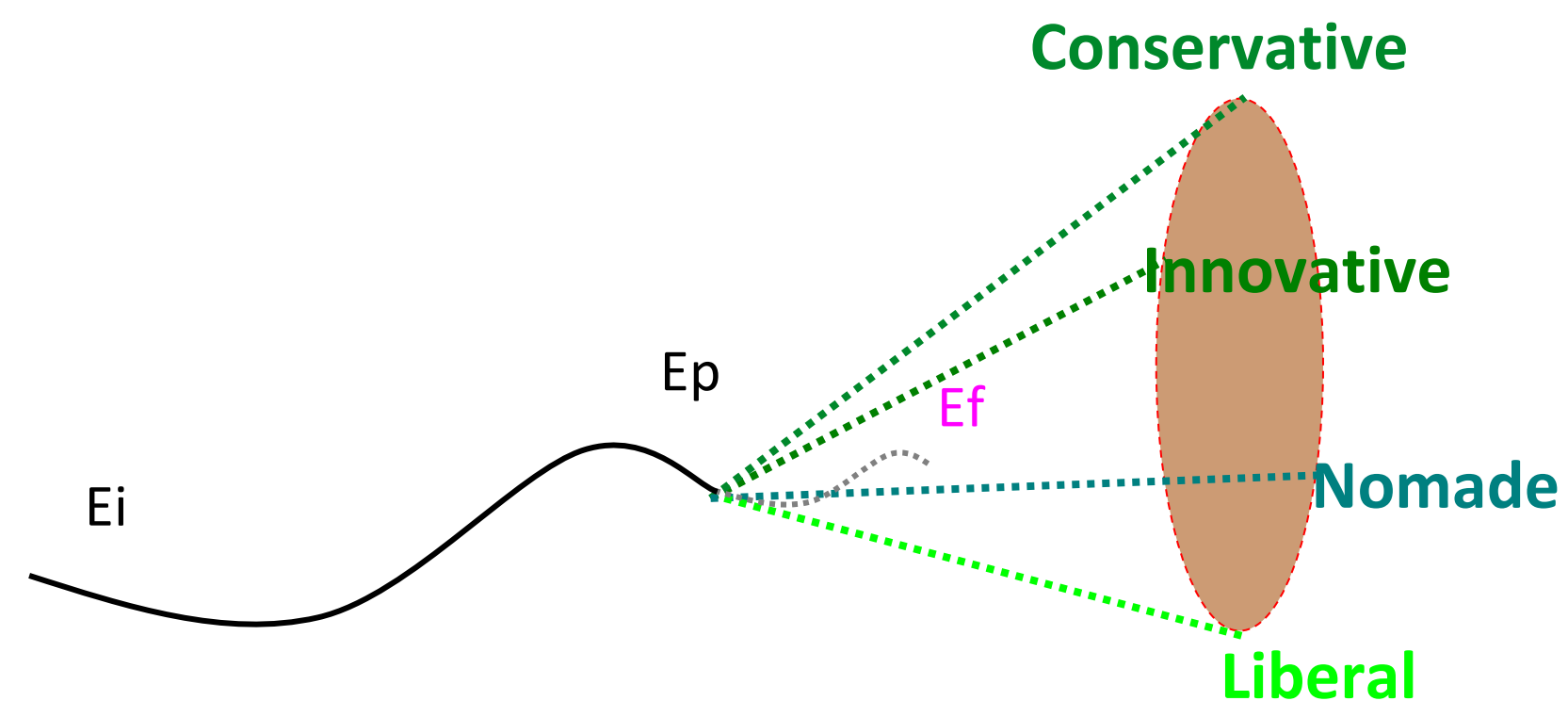
How to go from a foresight exercise to a real strategy and action plan ?



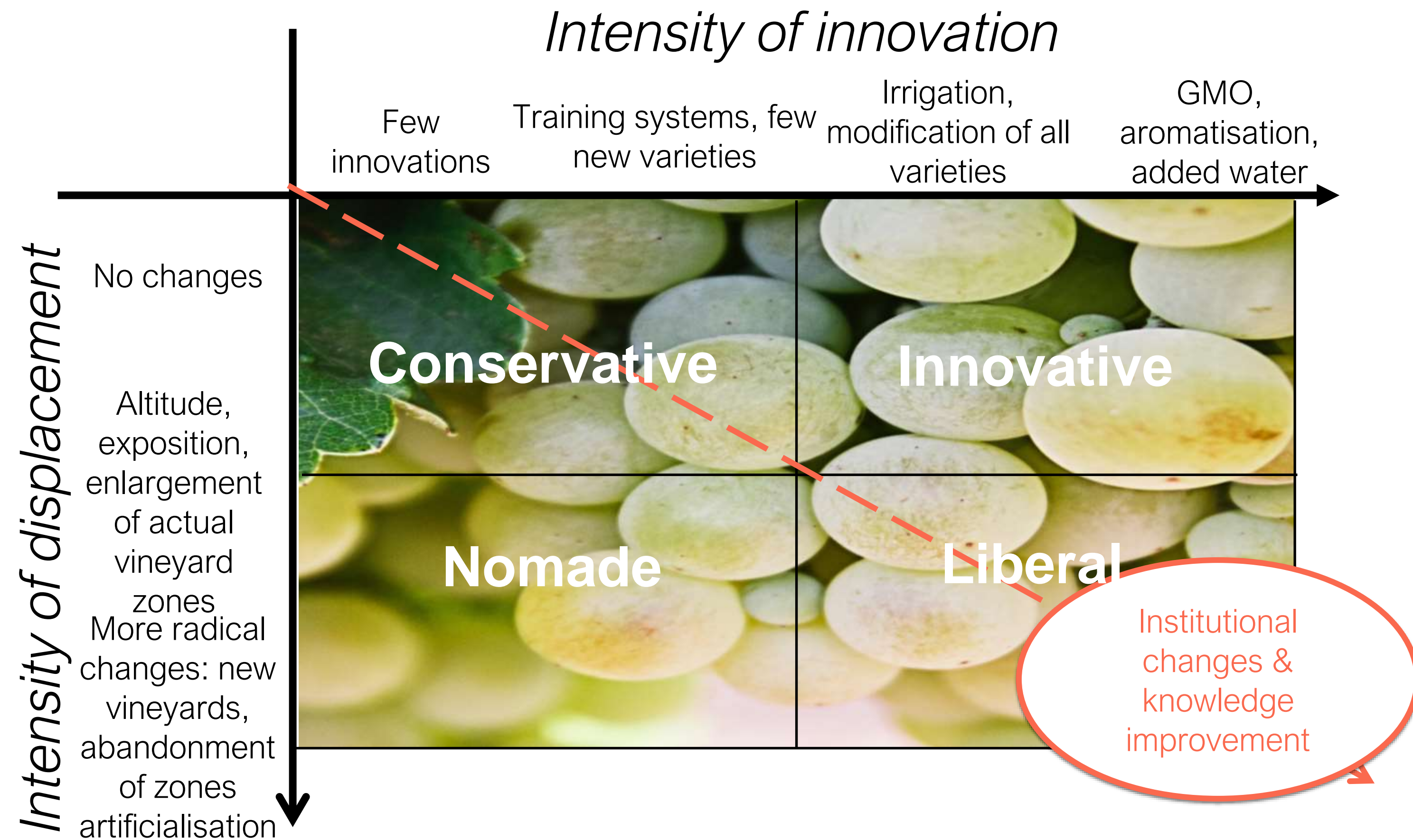


Climatic scenario RCP 4,5

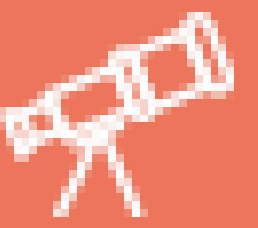
- + 2°C
- No important changes in precipitation but increase of grapevine water requirement
- Moderate increase of extreme events
- Various impacts in North and South
 - North : favorable impacts for maturity and yield, modification of wine types with less acidity, increased sanitary issues for vines
 - South : drought, lack of freshness, ripening under too warm conditions, new types of wines with high alcohol content
- 70 key hypotheses : technical, political, economical, internal or external, strong or weak drivers
- 1 trajectory (story) to reach 1 possible future



Main drivers of adaptation



Participative approach to evaluate what could be done ?



7 meetings with actors of the industry in 7 wine regions

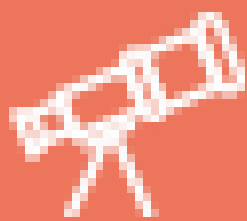
Bordeaux, Champagne, Burgundy, Languedoc, Côtes du Rhône, Alsace, Val de Loire





60-100 participants per meeting
Small working groups, connected tools

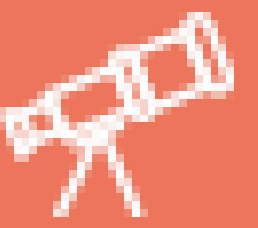
- Analysis of stake and consequences of each trajectory/future (per working group)
- Election of one strategic attitude per trajectory/future and proposition of actions in favor of the elected attitude (on individual basis)



Stakes and consequences of each strategy as perceived by actors



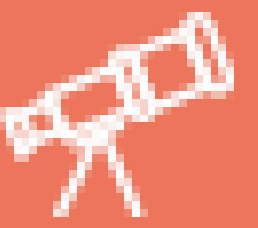
		
Conservative	<ul style="list-style-type: none">• Valorisation of diversity• Environment• French industry as a reference	<ul style="list-style-type: none">• Decrease of yield and uneven quality• No technical improvement• High price of wines• Loss of competitiveness



Stakes and consequences of each strategy as perceived by actors



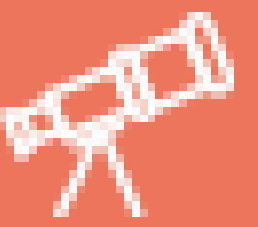
		
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Innovative	<ul style="list-style-type: none">• Innovations in many fields : plant material, oenology, marketing, packaging, services, types of wines, data-based• Combinations of viticulture types : classical, organic, precision• Modification of specifications for AOC	<ul style="list-style-type: none">• Need of fundings• Replacement of traditional investors by new ones• Loss of historical references• Loss of influence of AOP system



Stakes and consequences of each strategy as perceived by actors

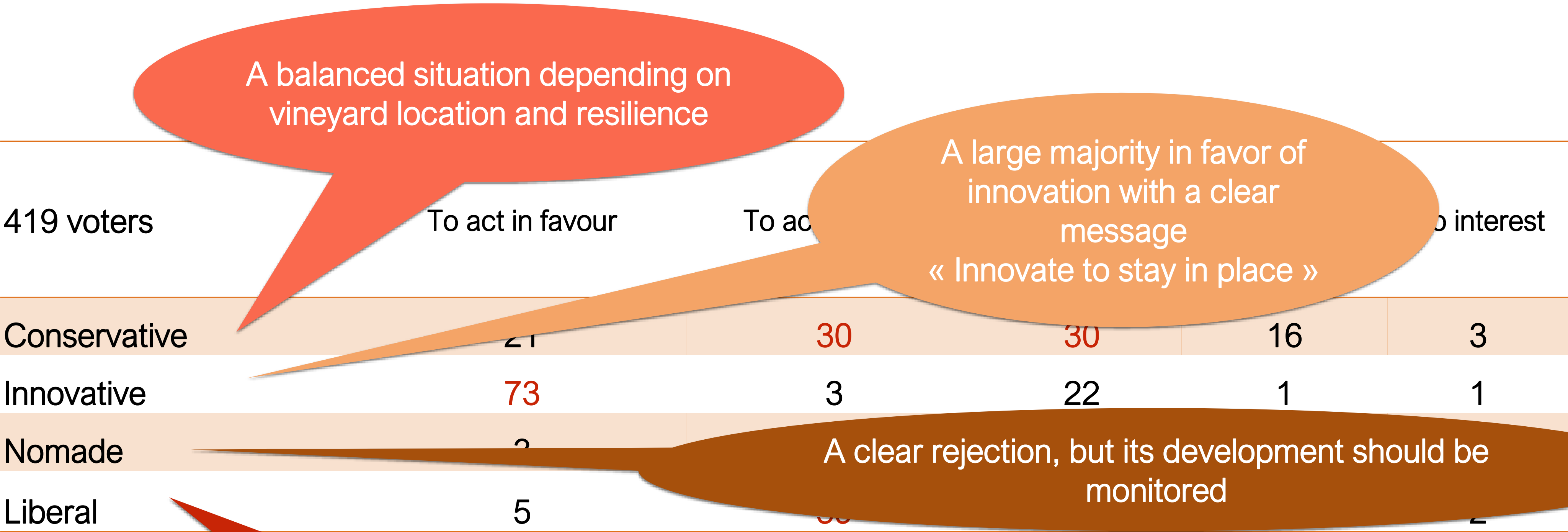
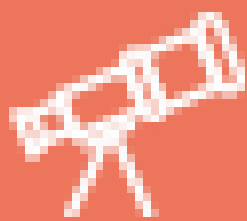


		
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Nomade	<ul style="list-style-type: none"> • Opportunities for new combinations of soil/climate/varieties/practices • Opportunities for new markets • New actors • Enlargement of irrigated area 	<ul style="list-style-type: none"> • Fragility of traditional vineyards and associated activities (oenotourism) • High risks for quality • End of AOP system • Brand based system • Concentration of private actors : marketing, extension services, vineyards

Stakes and consequences of each strategy as perceived by actors



		
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Liberal	<ul style="list-style-type: none"> • Less administrative load • Innovations support yield and quality • New wines, markets, consumers, jobs, investors • Private support for extension services 	<ul style="list-style-type: none"> • Exclusion of small producers from private services • Industrialisation and loss of diversity, typicity • End of AOP system, less vineyards on hillside spots • Modifications in governance with loss of influence by growers • Unbalanced negative effects • Concentration of growers, salers, wine making units



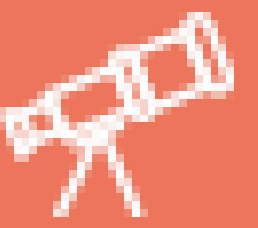
A balanced situation depending on vineyard location and resilience

A large majority in favor of innovation with a clear message
« Innovate to stay in place »

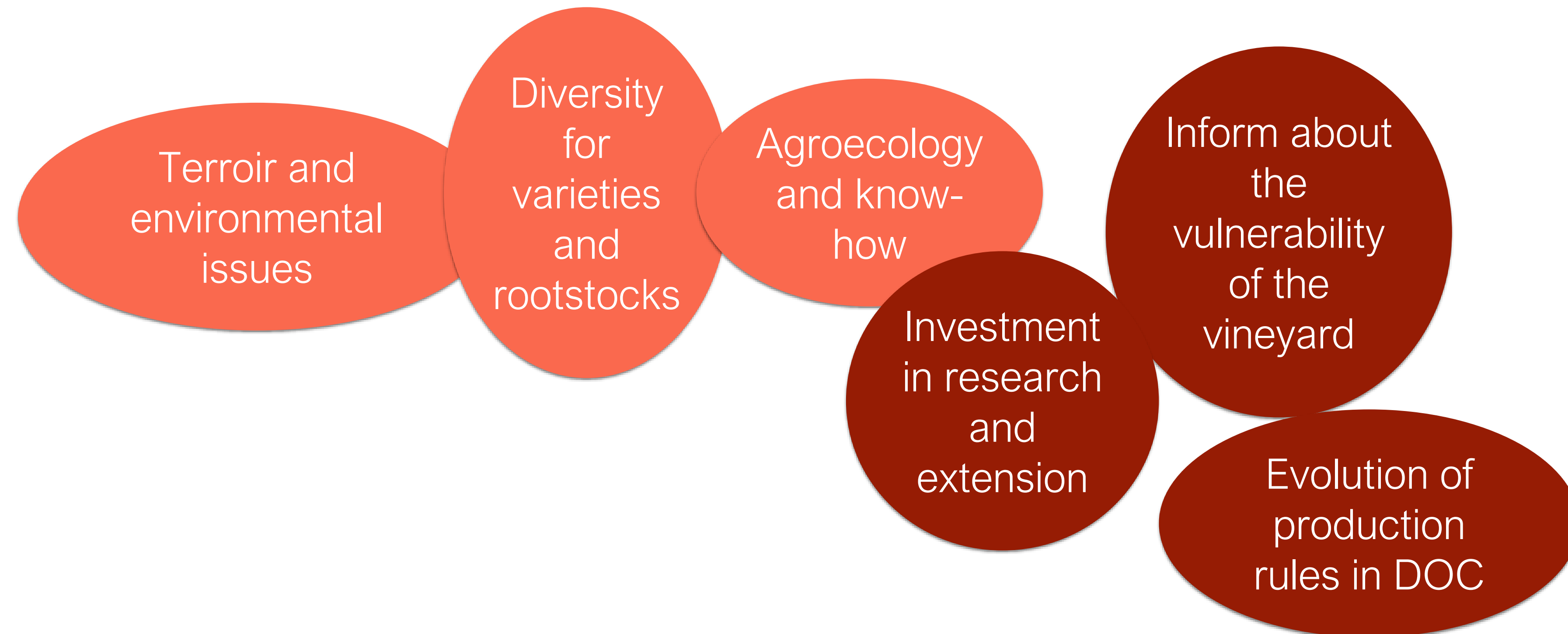
A clear rejection, but its development should be monitored

Large rejection and fear of disappearance of the french model

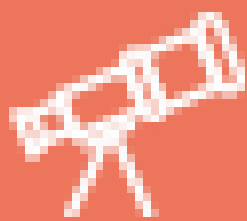
More than 2500 proposals to implement these strategic attitudes



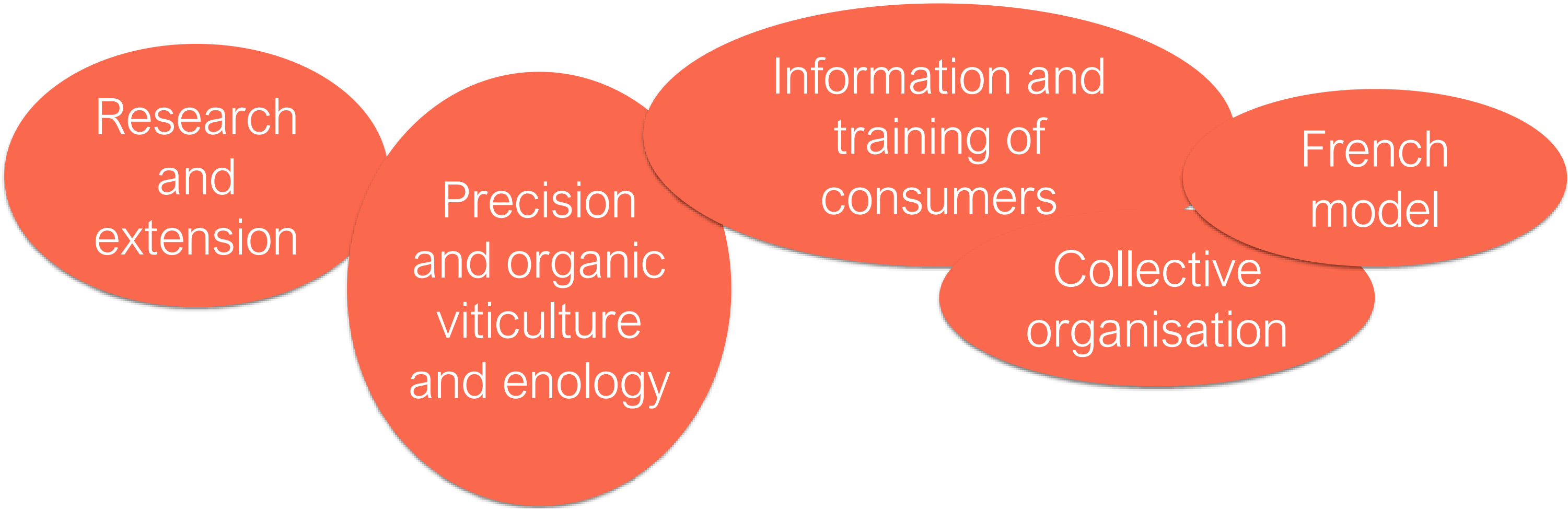
To act in		Number of proposals	Types of proposals
Conservative	+	152	<ul style="list-style-type: none">• To improve knowledge about terroirs and improve producer awareness about environmental issues• To develop the use of old varieties, clones, exogeneous varieties• To develop agrological practices , local how-knows, diveristy• To communicate about links between terroir and quality, to facilitate oenotourism, climate impacts
Conservative	–	171	<ul style="list-style-type: none">• To invest strongly and in a coordinated way with producers into research and extension• To inform about vineyard vulnerability to CC• To support technical changes and revisit AOP specifications



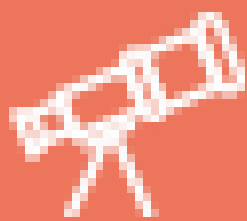
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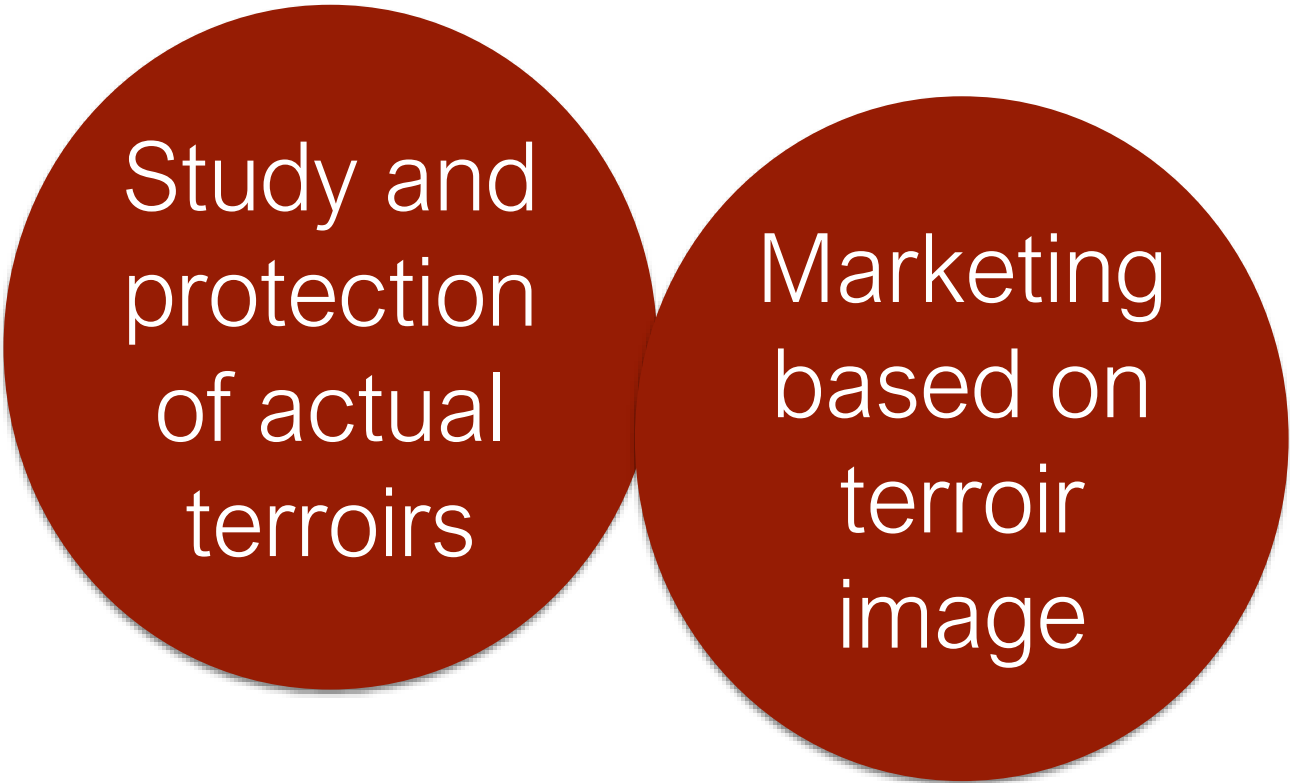
	To act in	Number of proposals	Types of proposals
Innovative	+	559	<ul style="list-style-type: none">• To work in favour of research and extension : resistant varieties resistant to diseases, adapted to drought, irrigation, dealcoholisation, mecanisation, new products, locally adapted• To work on precision viticulture and oenology without or with irrigation, and organic viticulture• To inform and teach the consumers about new types of vines, and acceptance of new technologies• To reinforce collective organisations to maintain the french model of family viticulture



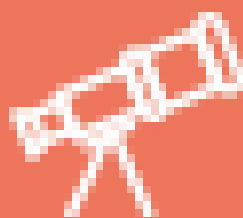
More than 2500 proposals to implement these strategic attitudes



To act in		Number of proposals	Types of proposals
Nomade	–	224	<ul style="list-style-type: none">• To study existing terroirs and areas at the border of AOP classified zones to evaluate their potential• To develop research and extension services in order to maintain actual terroirs• To re-inforce collective actions and policies to defend terroirs and avoid de-regulation on this issue• To develop communication about the positive impacts of the industry in relation with terroir : jobs, landscape, economy, culture



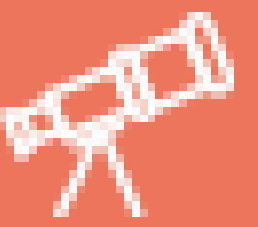
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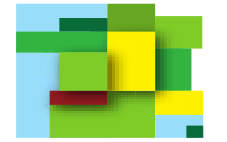
To act in		Number of proposals	Types of proposals
Liberal	–	308	<ul style="list-style-type: none">• To develop the control and the involvement of producers and their representative bodies on extension services, AOP and industry management• To save the definition of wine and its strong territorial link• To create strong brands with a leadership in AOP, to communicate on the link with terroir• To maintain regulation and support producers (especially the young ones) to get access to the land



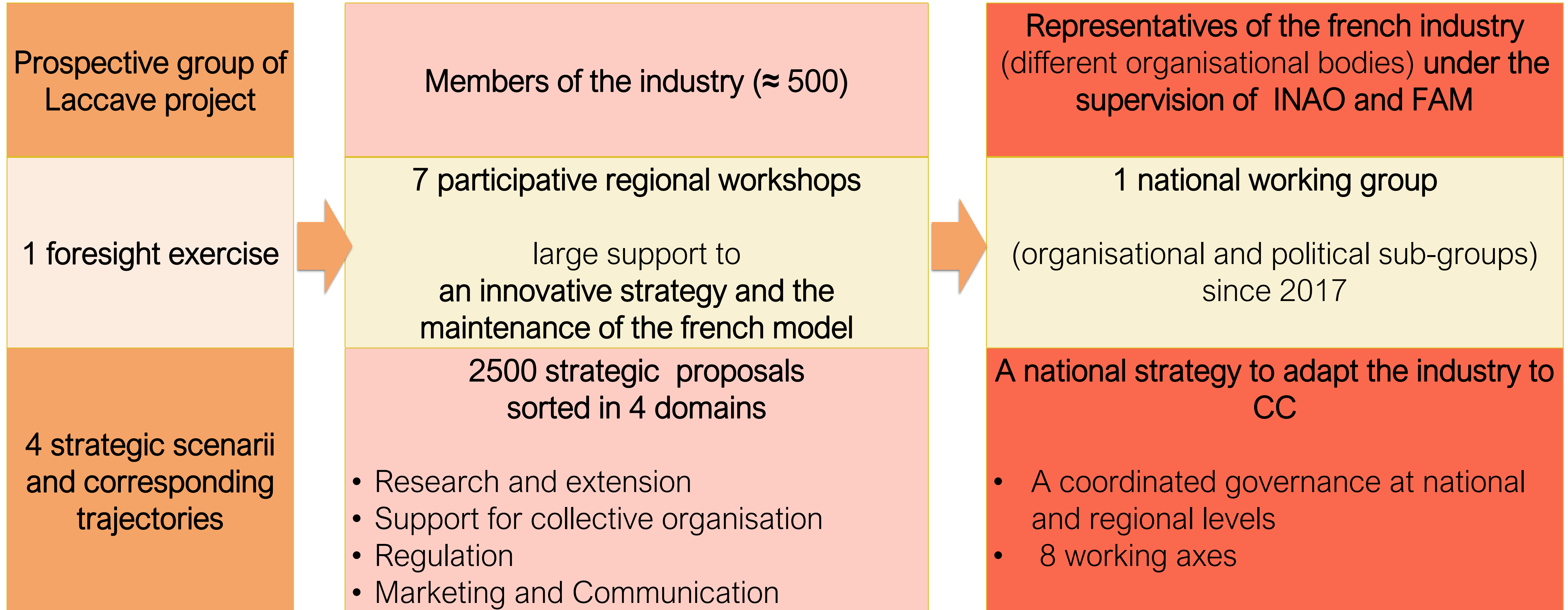
From strategic attitudes to a global strategy and action plan



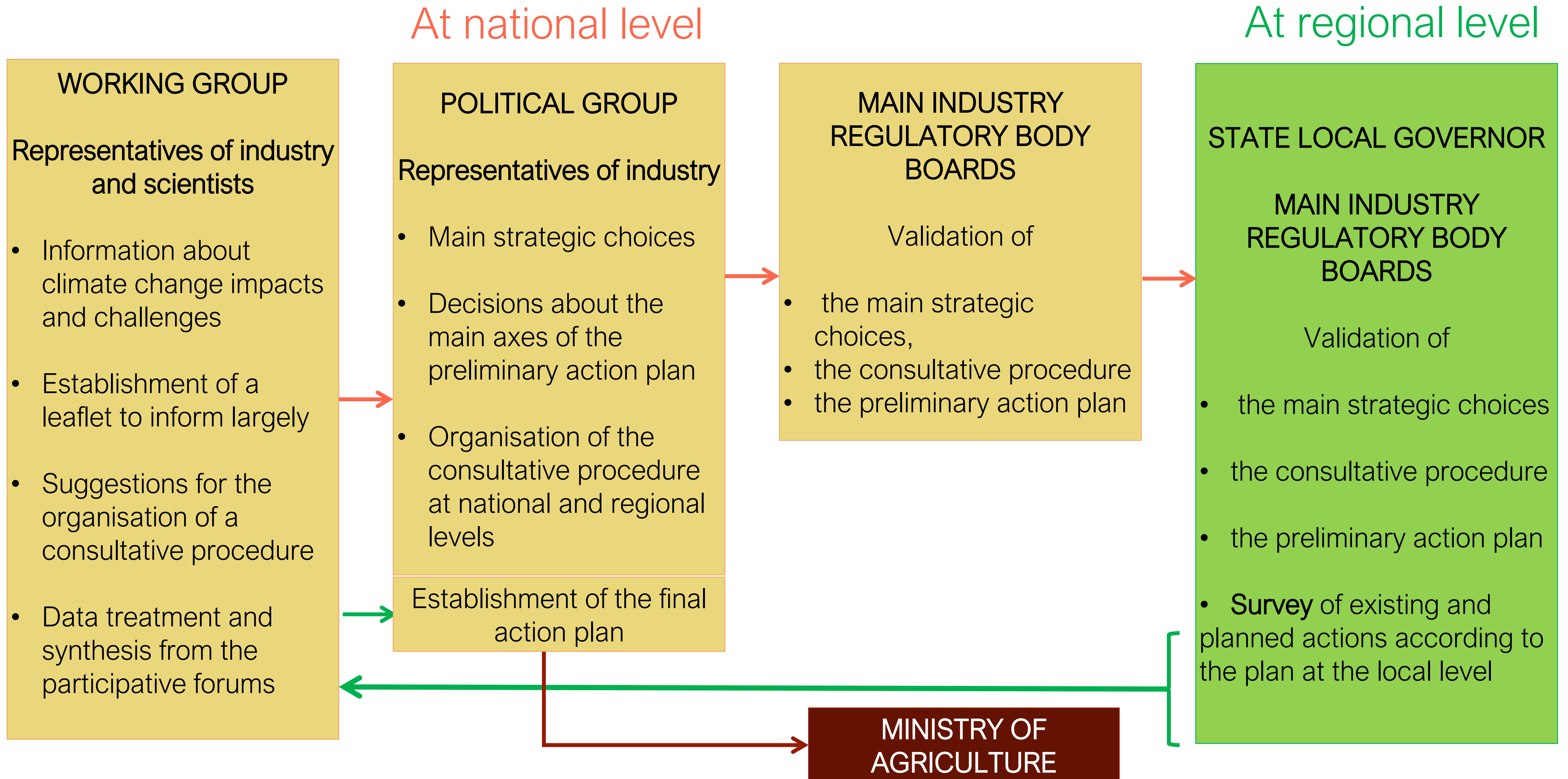
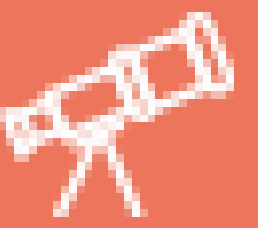
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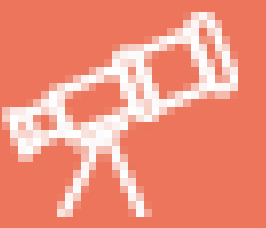


FranceAgriMer



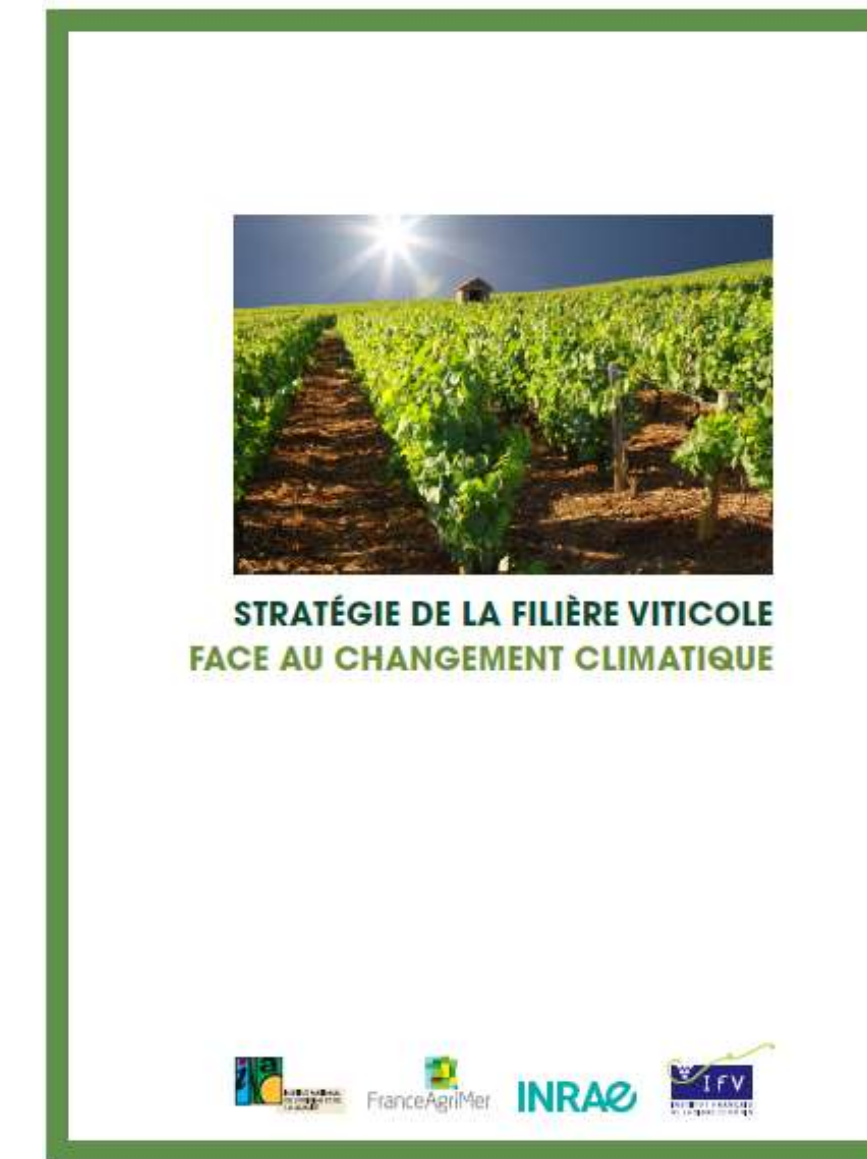
From strategic attitudes to a global strategy and action plan





« *To favour the innovative scenario with the goal to maintain the value of the products* »

- To improve knowledge about vineyard locations
- To adapt the conditions of production
- To improve the adequation between plant material and terroir
- To adapt the vinification processes
- To adapt to market evolutions
- To support Research and Extension, Training and Communication
- To participate actively to mitigation



<https://www6.inrae.fr/laccave>



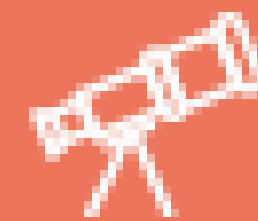
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Thank you for your attention





2nd ClimWine Symposium

XIV International Terroir Congress

3 – 8 July 2022 | Bordeaux, France



SAVE THE DATE!

Scientific program under construction
Website and registration opening in September
October 15, 2021 - final date for abstract submission



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