



# **New Equilibrium**

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"In the Great West of France, territories that are covered with a crystalline base show a bBcage organisation of space, linked to the history of agricultural modes which settled on these lands. Indeed, their soils were often heavy and poor and mainly valued by mixed farming system in which the hedge (the Bocage structure) played the role of fence and made it possible to facilitate water retention and the maintenance of slopes."

http://www.paysages.pays-de-la-loire.developpement-durable.gouv.fr/





The Stud Farms economy is an important one in the Pays d'Auge. Horses, owners and riders from all over the world meet in these famous places - such as the Haras du Pin, below, for the CCI\*\*\*

https://www.haras-national-du-pin.com/



# Geography, landscape and agriculture

The Pays d'Auge, in French Normandy is slowly receiving new inhabitants, tourists and industries that are willing to take advantage and benefit of these beautiful and (yet) less crowded landscapes.

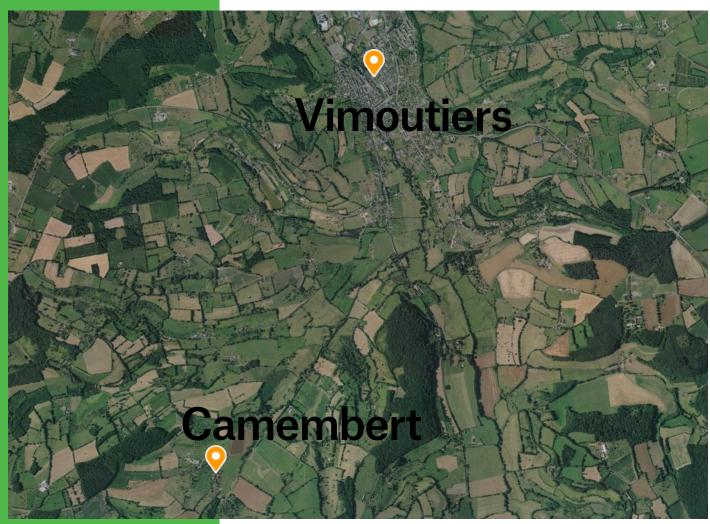
Unfortunately this happens more and more and very often without taking into account the identity of the place as well as the landscape management in place. Like the Bocage structure, for example, which is a typical landscape feature of the region and which recently tends to disappear from the aerial pictures. It unfortunately results in a conflictual relationship between local inhabitants, workers and the newcomers, as well as the new massive cultures and industries. Alongside, climate is also becoming urgent. Wether it is about the condition of the soils, ground water storage, vegetation and energy consumption.

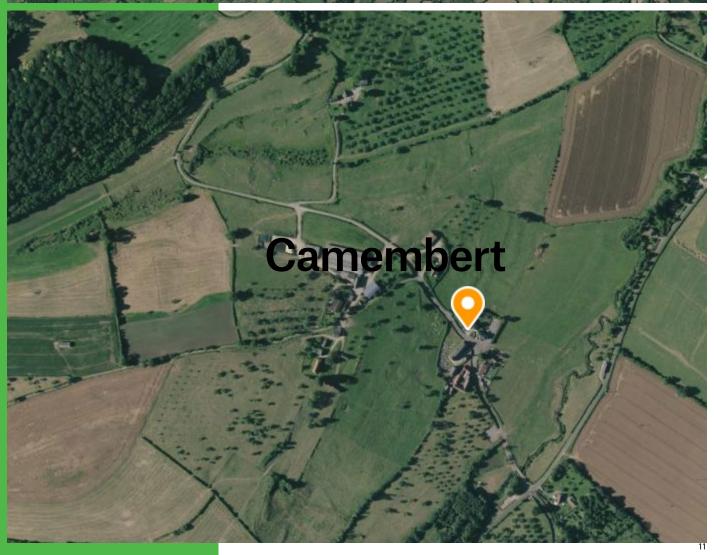
The challenge is about the anticipation and the needs that this region will have to support but in a comprehensive and holistic way. It is time to associate these new needs with the identity of this territory, in order to transition toward a resilient society. Because of climate migration,

saturated cities, (world pandemics?) the emphasis on 'healthy living', mutations in the working habits, the relocation of industries in smaller cities and rural areas, territorial marketing focused on landscapes, localism, agro and eco-tourism, or just trends, more and more people will be moving to these rural areas. The same goes for food production. Production is growing as the population continues to expand and it has a direct impact on the region. I believe that the opportunities for all parties lies in a clever understanding of the region's identity throughout all its attributes and how it can serve housing and agriculture in their new forms, but also the industry, the urban/rural fabric, as well as commerce and production on a local and global scale. The context we are evolving in is a reality and needs to be tackled. Indeed, there is no document yet that anticipate on what is going to become a serious spatial and landscape issue, hence my desire to reflect on it.









The Pays d'Auge is a vast area, where valleys are mainly occupied by cows, peacefully grazing under apple trees in front of "Colombage" houses. This territory has various atmospheres which can be defined in three main landscape structures. These structures gather the complete features of the territory (through its landscapes, the cultures and agriculture it allows, as well as the architecture in place) and illustrate the richness of this specific geography.

#### First Landscape Structure:

The Valleys adjacent to the Vie and the Touques rivers are heavily encased in the chalk board soil of the Orne and form two grassed corridors. The level difference between the valley bottom and the upper plateau is about a 100 meters. The valleys bottoms are relatively flat and their widths fluctuate between 500m and 800m. This landscape is rather open and organised in large plots of around ten hectares and mainly grazed by cows. These geometric pastures are

organised in strips bordered by hedgerow slopes. The rivers of the Vie and Touques are drawing small meanders and their banks are accompanied by discontinuous riparian forests. The roads are often bordered by low shrubby hedges made up of hawthorns, hazel ash, blackthorn and black elderberries. This rhythmic and harmonious landscape is historically dotted with low Colombage farms traditionally consisting of one to three bulky buildings.

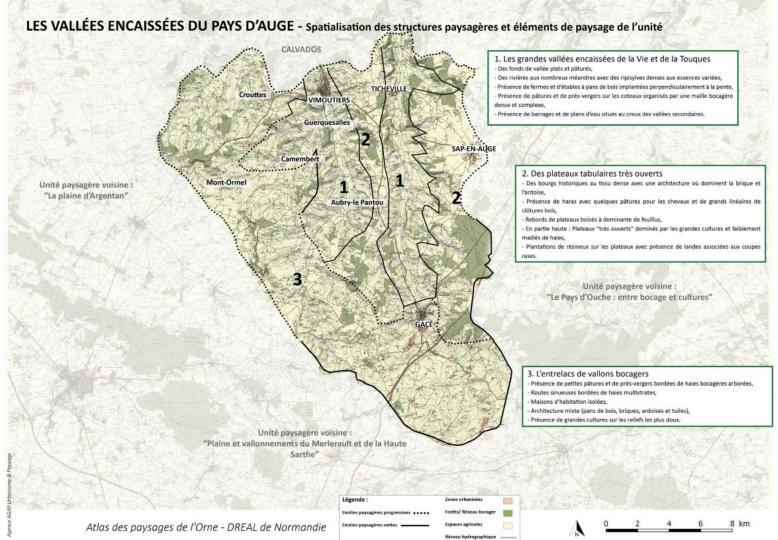
#### Second Landscape Structure:

Open tabular plateaus for field crops and stud farms. These plateaus are characterised by open landscapes where flat and wooded horizons are intertwined. These mixed landscapes are made of large geometric plots, exploited equally between cereals, grasslands and coniferous woodland. The plateaus limits are mainly wooded and with a consequent relief which contrasts with the landscape of the valleys. The architectural characteristics are heterogenous, houses and farms are

made of bricks, Colombages, limestone, slates or tiles. The stud farms - which are typical of this area - have developed on the plateau since the middle of the 20th century, mainly because of its ideal condition for the animals and their control. They gradually replaced the old pastures of cows and sheeps.

#### Third Landscape Structure:

The interlacing of Bocages Valleys. This structure forms a harmonious landscape characterised by wide terrain movement. The successive bumps reveals smaller variations in altitude and gentler slopes than in the principal Valleys. The main rivers eroded the chalk soil board and shaped a soft and ample territory. The hillsides are covered with a hedgerow grid that frames the grassy landscape, which is dominated and used by permanent meadows for cows and sheeps. To a lesser extent some plots are cultivated for wheat, barley and corn and some still host some orchards. Numerous hedges accompany small winding roads

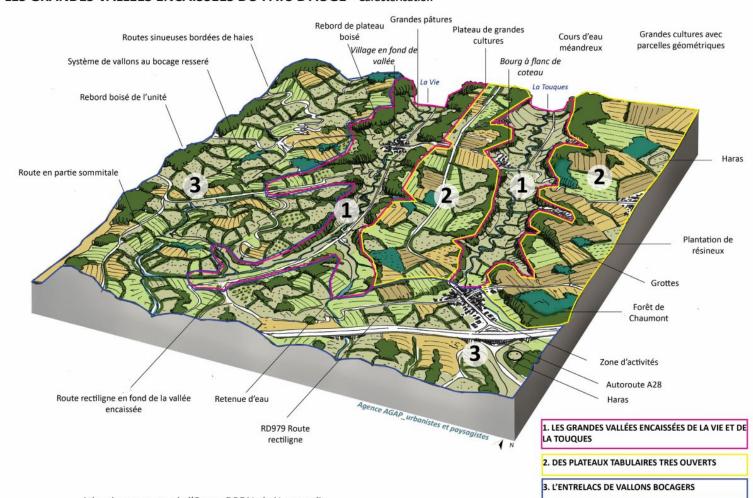


that follow the undulations of the relief. These ridges are wooded with deciduous plantations of conifers and cherry trees. On the less rugged slopes, lands with deeper soils are cultivated with wheat, oats, corn silage, rapeseed, etc. This type of crop has favoured the regrouping of plots and the elimination of hedges. The architecture is here again quite diverse: eras, styles, means and materials are mingling. Thus, in the heart of Vimoutiers and Gace (two main cities of the region). post-war reconstruction buildings stands next to 19th century hotels with a heterogeneous treatments of the facades. Detailing the different landscape's structures of the Orne region is helping us defining what is essential and what represents the Terroir of the region. The Colombage structures are one of the important features, as well as the high number of orchards and fruit trees growing in the valley slopes, the production of grains, the typical amount of studs. their architecture and the neighbouring farms.

#### How the agriculture has influenced the modern identity?

Agriculture is the important subject of this reflection as it plays a major role in the ongoing changes but also, future scenarios concerning the Pays d'Auge. Indeed, France, in the first half of the 19th century, suffered from the first agricultural revolution of modern times. Routine agriculture, at a community pace, has been transformed into agriculture of progress highly supported by agronomy, hence intensive agriculture. The new science of agriculture recommended agrarian systems without fallow whose ambition was to double the productivity. This way, the rotation of the fodder with the cereals would produce some surplus which would increase the breeding of herbivores and produce more animal products. These improvements were also permitted by a larger workforce and new machines. But in France, modernisation was uneven. This uneven factor created a strong contrast between ancient and modern. Concerning the agriculture, all these aesthetic qualities were being reflected in the fallow system, and the big open fields with no fences. This fallow system had a very slow rotation process compared to the modern one. Nature was being treated like a human being who needs moments of rest and not a material that you can manipulate as you desire it. Indeed what is called Bocage as a structure, hence trees alignments were and are used to define the crops divisions, in random ways and shapes. It was forcing mens to work in a communal way, according to this natural crops divisions. The idea of property, control and ownership came with the modern settlements, fences and closures. This detailed "chapter" helps understanding the importance of the Terroir when it comes to production and food and what has been lost over times. Indeed, the Pays d'Auge region's landscape is readable through its cuisine, where there are as many cheeses as there are different valleys, and as many recipes as there are farms, Ciders and Calvados.

#### LES GRANDES VALLÉES ENCAISSÉES DU PAYS D'AUGE - Caractérisation





























# **Agro-region?**

Next to these facts, The Pays d'Auge, as many other rural territories, is lagging behind the urban centers because of a lack of attention in planning and their unanticipated growth. This often leads to a lack of living quality, services and facilities, in digitalization, innovation, technologies but also infrastructures and networks.

In other words, theses territories are becoming less and less appealing even though we've never needed them so much.

I have observed this place for 27 years now and I know and believe that the Pays d'Auge as a lot to offer. Its soil is fertile and well-tempered and water is almost never scarce. Biodiversity is great and important, ecosystems are numerous, agriculture is graved into history, its society is united and strong, used to work hard and there are a lot of unique and beautiful places.

This is for these same facts that I am wondering why no one ever bet on this region regarding the future, research and innovation. I am honestly afraid that if politics and planners continue to stand still regarding the future of this area, it will only keep on decreasing its strengths and unique qualities.

Based on what makes this area strong and unique: Could it be a viable scenario to think of its future and its influence on a regional, national, European or even global scale? Food, agriculture, epicureanism, true nature, working with land, with the seasons, with





history, with natural materials, working with animals, education, culture, cooking, transmission, effort,...

Should these qualities not be highlighted and transmitted throughout the greatest audience possible?

I am an urban designer that sits between two ways of planning. The French way, which tends to be quite conservative, repetitive and which would like to make sure not to upset anyone, let alone make enemies...

And the Dutch way, which is going full speed towards efficiency, innovation, experiments, at the risk of losing some of the human connections when it comes to food, nature and its production.

I also truly believe that there should be an answer that balances both planning approaches. This is why I would like to reflect on a project that would bring and the innovation and efficiency, and the cultural, historical and human connection factor.

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An "Agrotech" region in the Pays d'Auge, which valorize its identity and place it on an international level of knowledge and innovation within the agricultural sector.

Transforming this declining region into a unique and world known location for agricultural innovation and research

Stirring up its economy and attractiveness while responding to new needs such as: the rural/urban question and ensuring a sustainable future in this domain while learning from the identity of the Pays d'Auge.

Through an in-depth study of the positive attributes of the region: What makes it different or unique what defines its terroir. In-depth study of its strengths and weaknesses in different fields such as: infrastructure, network, energy, production, facilities, services.

Building up a project where these agricultural landscapes are serving the new Agropolis, where innovation, knowledge and research institute are entering the landscape, as well as new facilities and housing in different stages and phases.

Building an infrastructure, environmental and economical scheme which can convince the area, the region or even the state, as the strategy should will concerns and apply on many scales. From the village to the image of the country on an international ranking.



# AFIGINSIS

Culture, heritage, society, economy and urban forms

## **Agriculture**



THE ORNE IS A DEPARTEMENT WHERE A BRICULTURE & FOOD INDISTRY ARE DEATING I IMPORTANT & GENERATES LOTS OF JOBS? (11 the French Ranking).

BUT the new of exploitation is ging where the surface goes 7 ...

MILKIS THE PRINCIPAL ACTIVITY BUT EXPLOITATIONS ARE > (LACTALLS!)

SPACE FOR WEST WITNEE IS INCLEASING ... BUT WE KNOW IT IS NOT SUSTAINABLE IN THIS AREA-



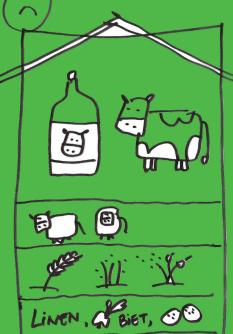
A GRI CULTURE IN NORMANDY;

to 1. of the territory

= agriculture

(millions)





x CHEESES (COWMILK)

X BUTTER & CREAM

x APPLES (CIDER & (AUGODOS).

X LINEN (TEXTILE)

x PREI, WEAK



· Nor of horses



POP. IS GETTING OLD

LESS BILTH

LESS EDVCATION

MORE & UNEMPLOYMENT

MORE RETIRED

LESS JOBS

LESS FARMING

MORE VACANT DWENINGS

POP. IS LOWERING

LESS CLAFTMENS.

LOW DENSITY

LESS STUDNING

FEN STUDY OPTIONS

WORKING / LIVING ON ± LOCATION

CAR IS PREPERRAD FROM FAR.

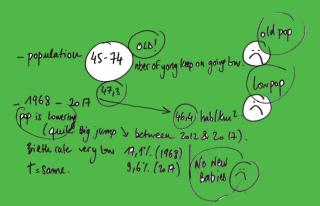
# Society



- 1. WORKERS 28,5
- 2. EMPLOYEES 28,3
- 3. INTER. POF 22,4
- 4. INTOIL 8,5
- S. CEMPTHEN. 7,6
- 6. FARMBES. 4,5

weild in Such a region no? (+ unemployed) (+ legited)

(+) 34,41/. WORL + LINE / SAME SPOT.



(Joss)	Loot		2017 (cont.(3)
PARMELS	2,71.	<b>→</b>	21. (i) (estarmer)
Craft men traders business landers	321.	SAME	3,74 (But not much) (few)
Managors, intelle	3,1%	SIME	3/11. (not much)
inter passession	10,5%	SAME	(0,(7).
emplogees	14,27	SAME	<u> </u>
morkers	137.	->>	15,8%



LACTALYS DAILY INDUSTRY

TO FACTORY.

WORK.

COMMONTR: 2,2%. BIKE: 1,2%.

> PB: THEY NOW BIG POWNS IS THE MID FOR CONTENTED SHO FACTORIES!!

E: 112

\* SOURCE

2-17: 36,37

 $2 \rightarrow 17 : 96,3\%$  213 ore not continuing with studies

DEGREES! MOIT MOPKE HAVE NO DEGREE.

NONE: 30,5%. (± craftmen)

BAC: ASY. (bow!)

+2: 8,4%.

+3/+4: 5,5%. very low.

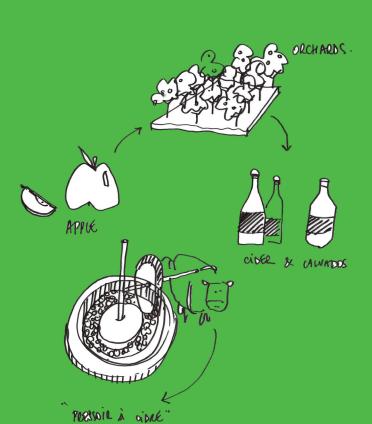
+5: 4,2% few shalles options.

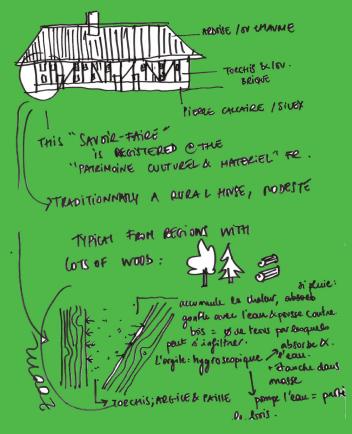
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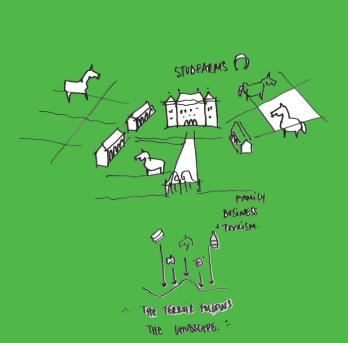


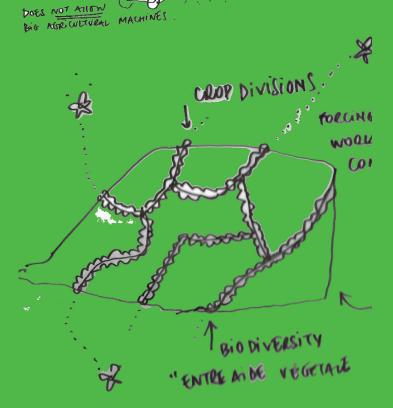
# Culture

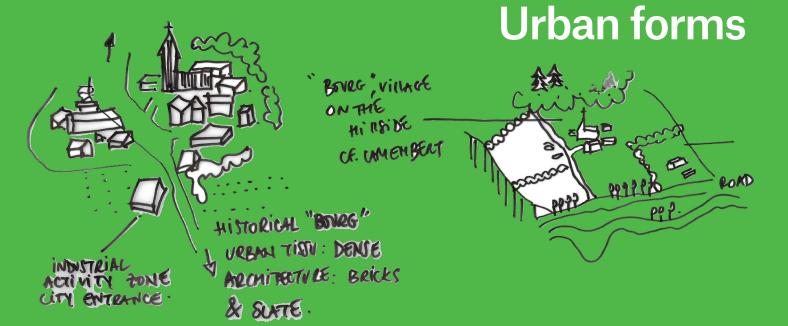


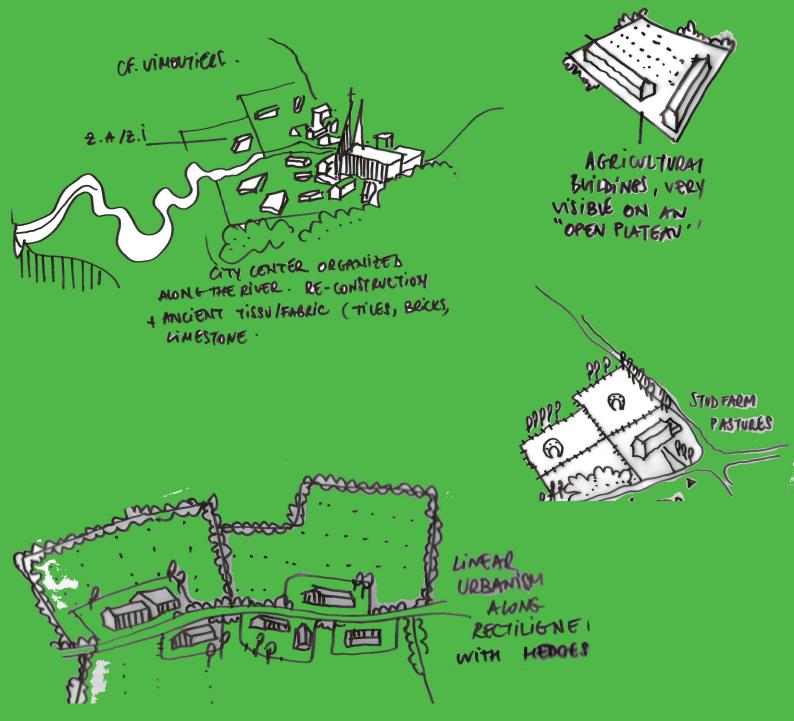














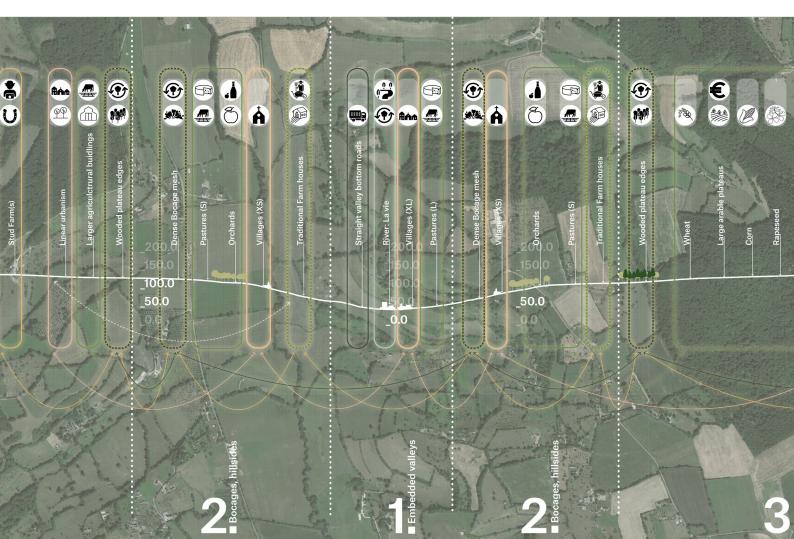


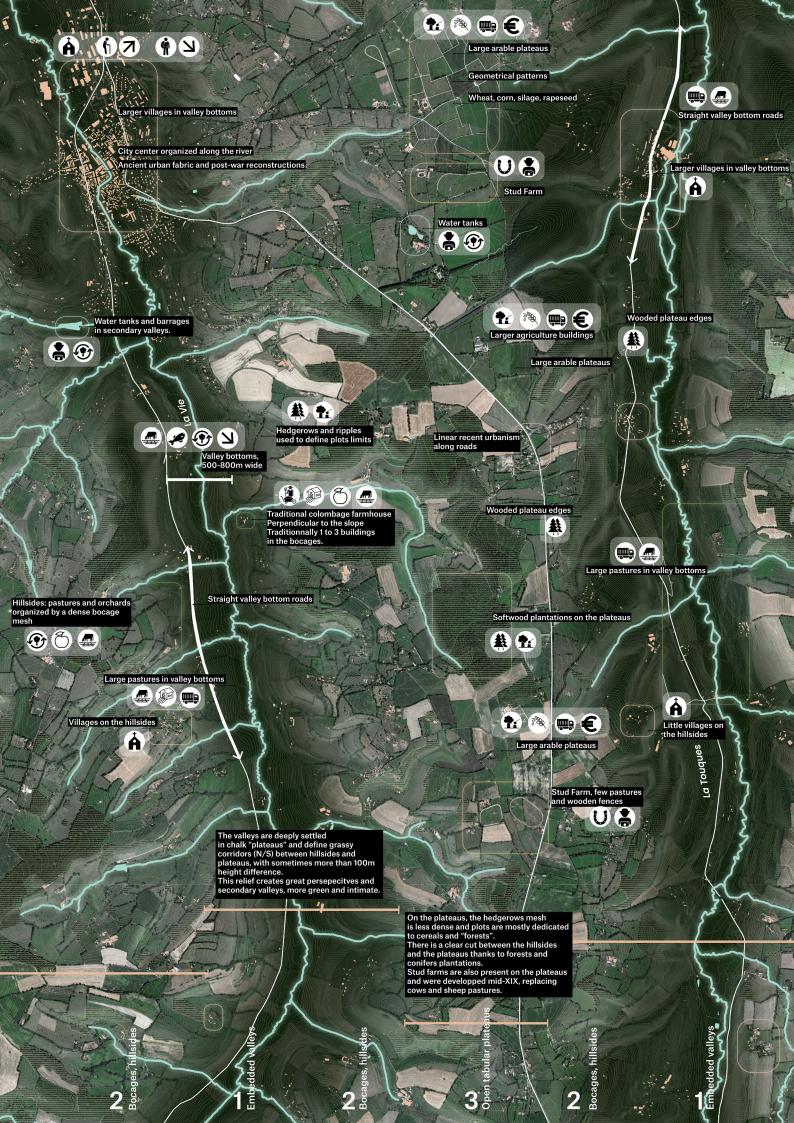
### 3+1 Stakeholders

The analysis of the region suggested some active stakeholders: The nature (it's environmental value, as well as its recreational one), Lactalis (big player in the dairy industry on a national and international leverl) and the farmers (local entrepreneurs, family businesses).

Why 3+1? Because next to these three existing stakeholders, there is this intuition of mine regarding a fourth one: An educational program specialized in the future of agriculture.

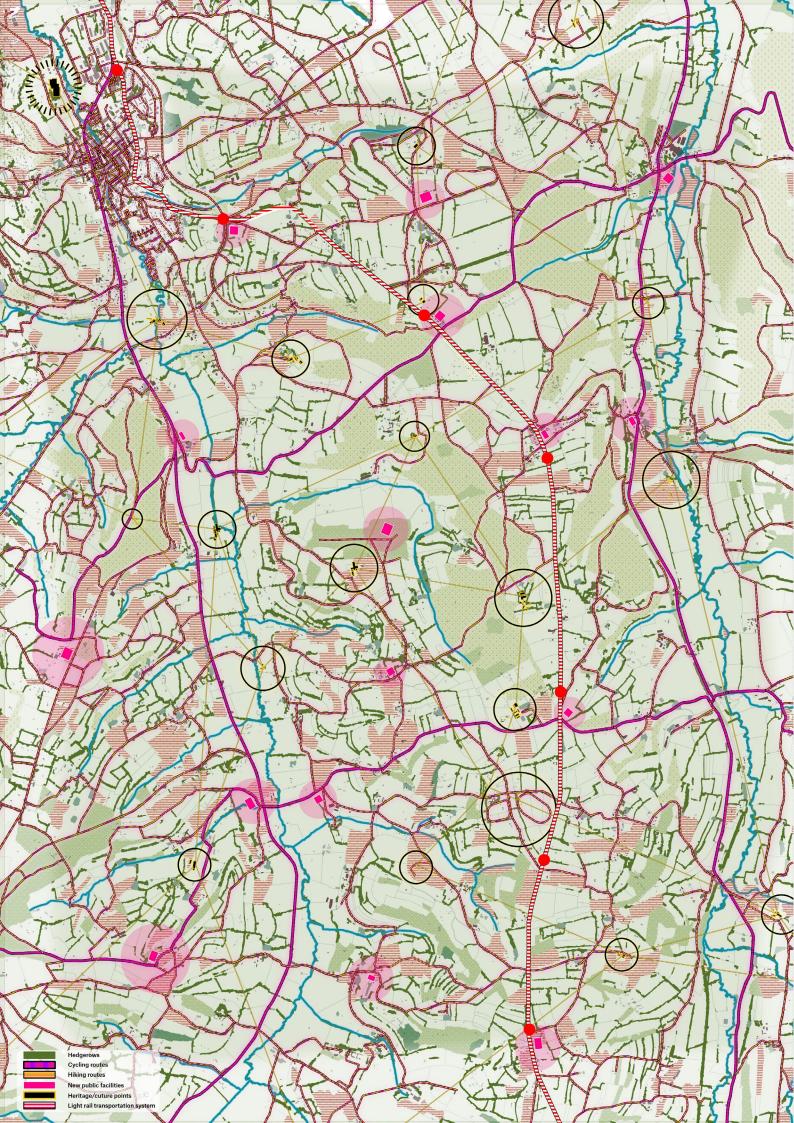
In this chapter these four stakeholders are going to be explored in depth through research by design exercises - extreme scenarios.

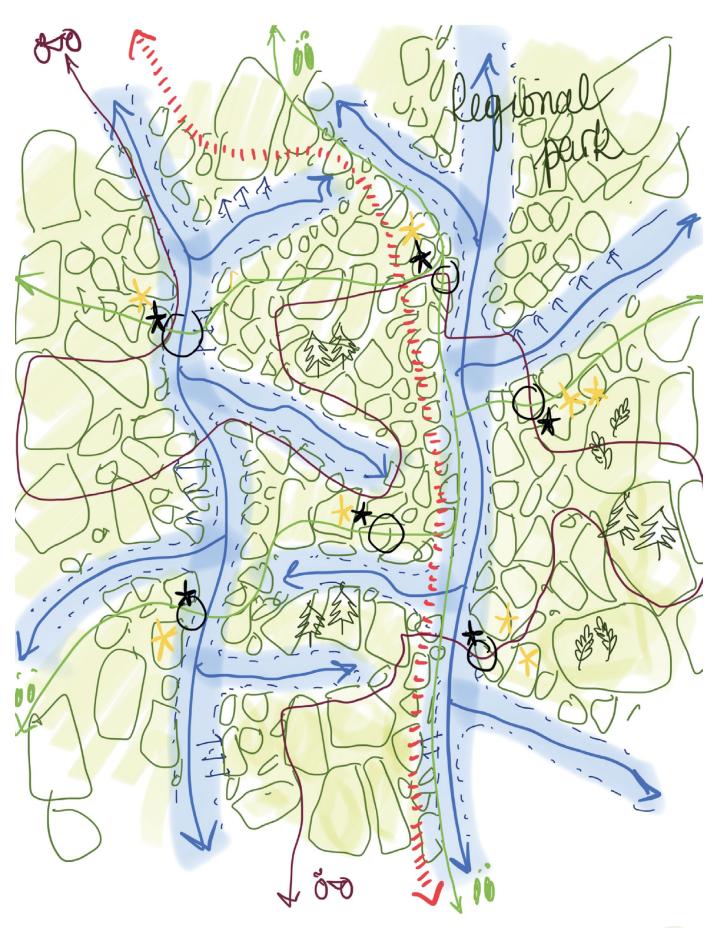




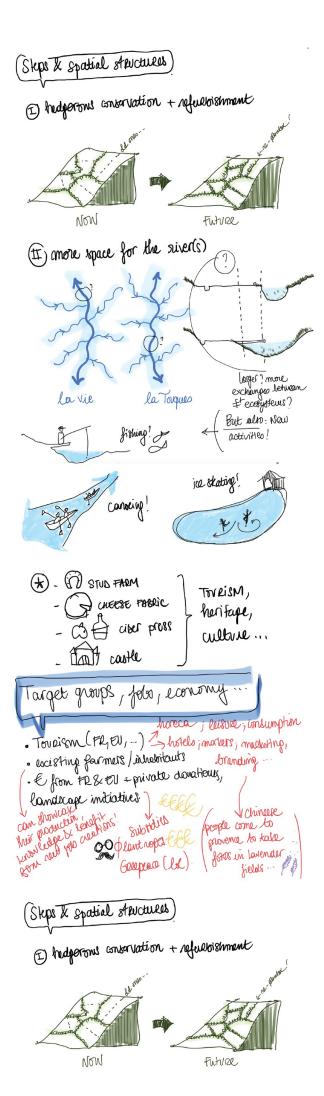
## Regional Park

"What if the region would become one large regional park" - financed by public money and private philantropics or companies wiling to "green" their images while sponsoring this new regional park. In this scenario, the priority is given to the environment, its preservation and its showcase. A new public transport infrastructure would allow visitors to travel through the valley, keeping cars and engines away, while a diversity of routes and path for pedestrians, bikes, fauna and flora would be developped throughout the valley and connecting main regional attraction to one an other and new programs (such as visitor centers, lookout towers and a foodcourt).





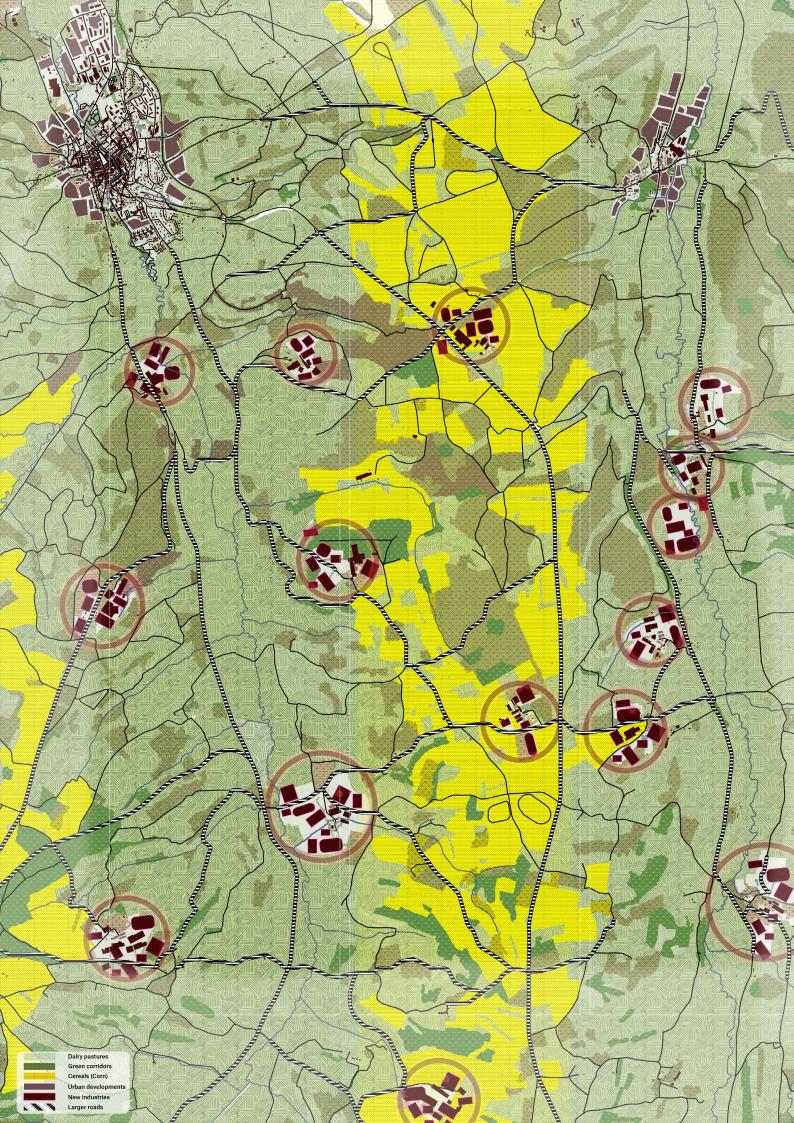
# **Regional Park**

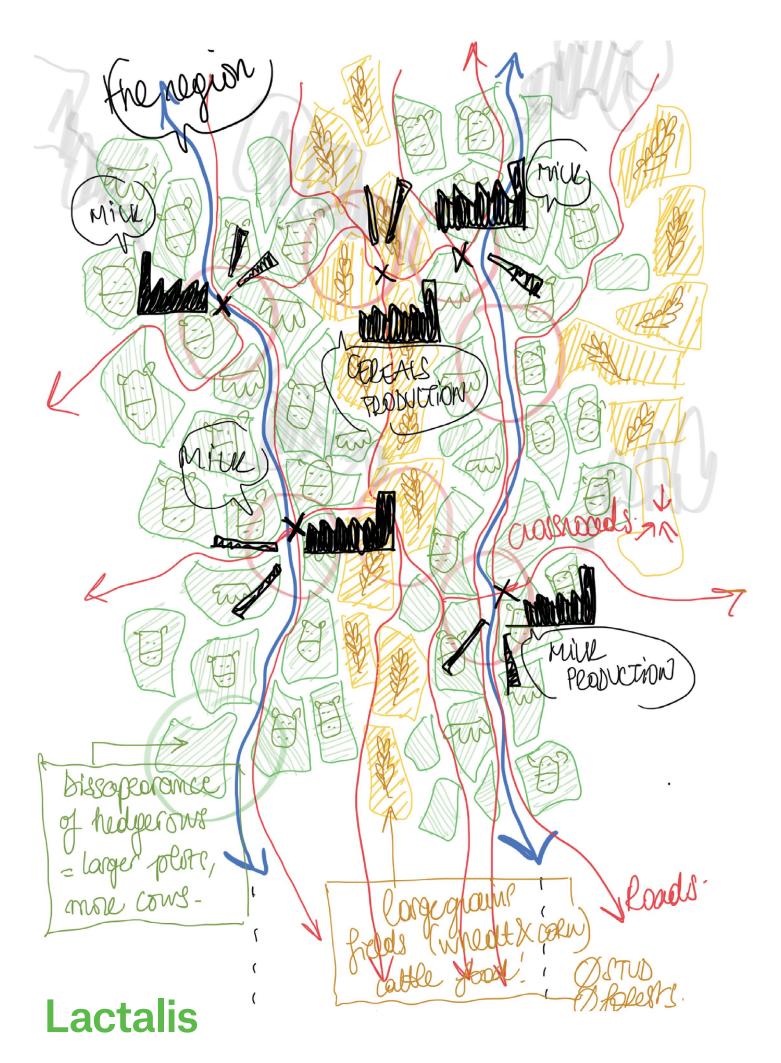


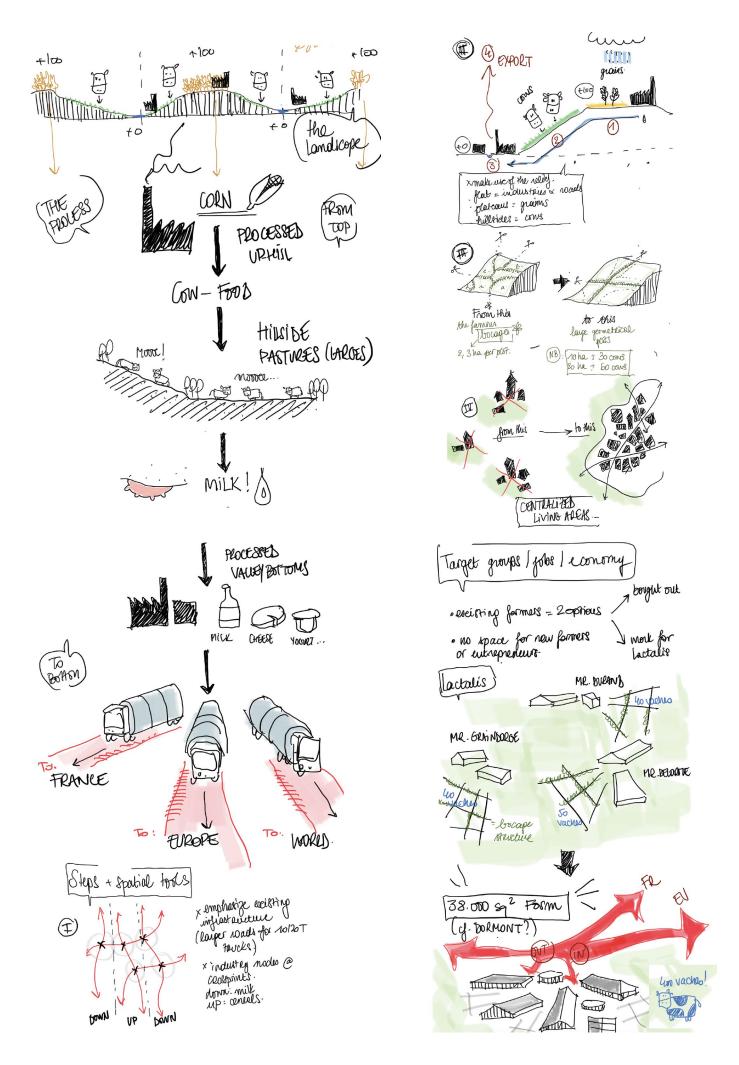


#### Lactalis

"What if Lactalis would take over the region?" In this scenario, the dairy industry is going to over-write the complete region. In the valley and on the hillsides, all Bocage structure will be destroyed, so the fields can be bigger and host more cows and larger machineries. The goal is to make as much milk as possible. The plateaus will be occupied by grain production and in this case: corn, the direct feed for the cattle situated downhill. There will be different factories's entities spread in the valley, close to the main roads (which would be enlarged for the use of 10tons trucks) and close to their fields. The city of Vimoutiers would see its amount of job growing in the dairy sector and the profile of the city would evolve as well, towards a productive city.

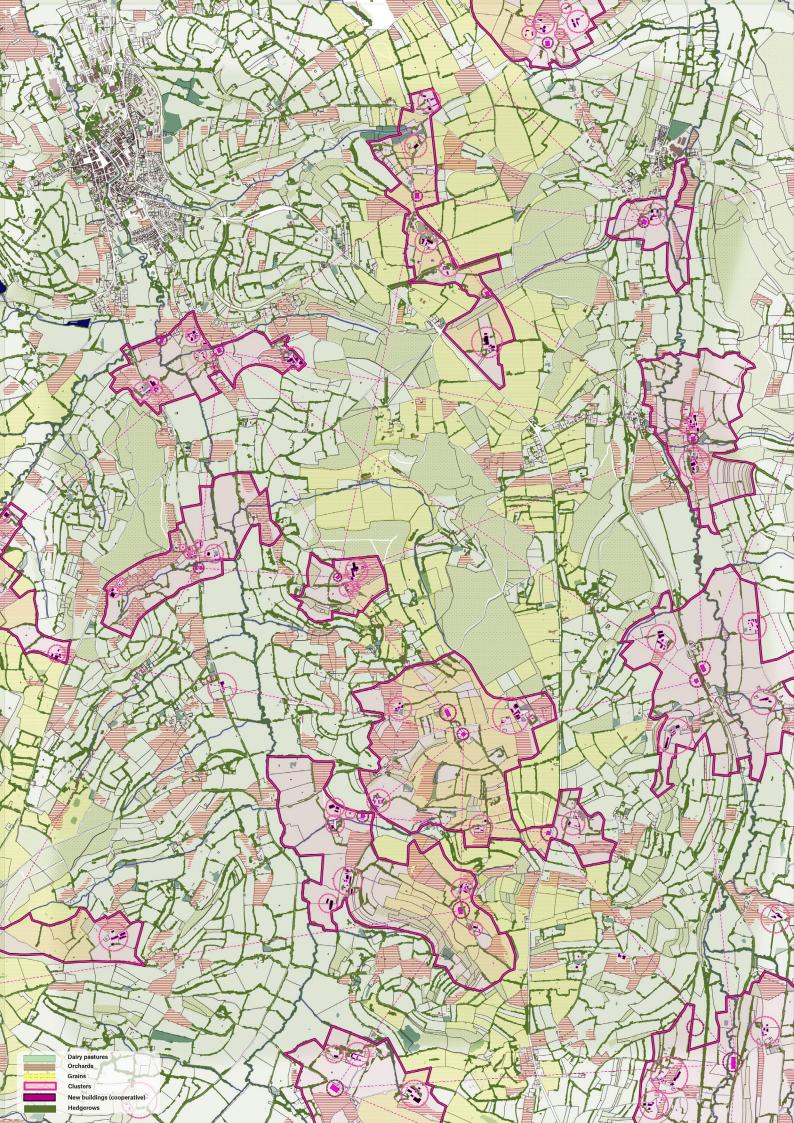




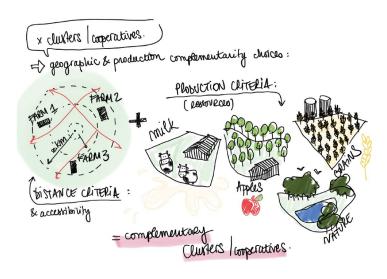


# Cooperatives

"What if the farmers would take over the region?" In this scenario, the farmers are joining forces in order to take the region away from Lactalis's hand and regain their "independence". In order to do so, they will define several productive "hubs" (dairy products, orchards,...), part of one cooperative where all money spend or earn is being put together and allowing them to develop their own production factories. This way, the farmers are able to keep on producing at their own pace, in their own technics and to sell their products to neighbouring cities and markets.

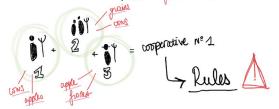


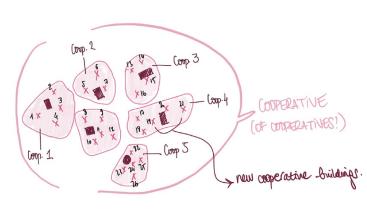






farmers are given the appollmity to make a notwork of compressives baked on the criterias of: distance acceptability production I numerica.





FARMER(S) GATHER & FORM A MICLO-COOPERATIVE.



By doing 80, they eater the MACLO-COOPERATIVE

- (I) THE MACAO-COOPERATIVE:
  - · AN PROFITS TO THE M. COOP! (COMMUNISM))
  - · Universal revenu \$\$
  - · BY FARMERS, FOR FARMERS
  - · SHARED HEALTH INSURLANCE
  - · SHARED PENSION >
  - · DIFFERENT MONETARY SYSTEM





, POSSIBILITY TO INVEST IN NEW STRUCTURES



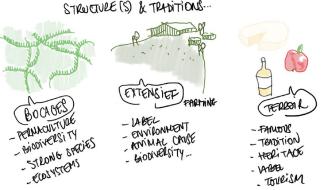
TOWARDS FULL INDEPENCY REGARDING LACTALIS

. RE-GAIN IN THE FARMING DOBSILIFE

ATTRACTION OF (NEW) STARRHOLDERS!
YOUNG, ENTLEARENCES, FAMILIES,...



· PEDFECT OF THE LANDSCAPE, ITS STRUCTULE (S) & TRADITIONS...

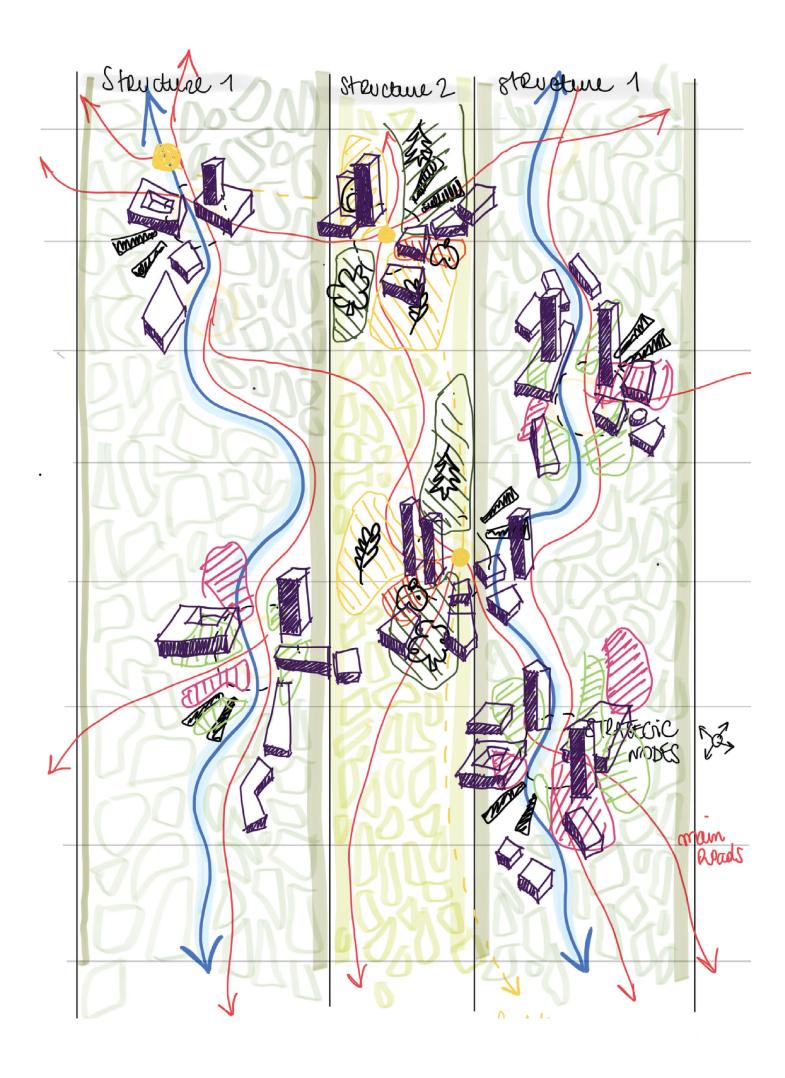


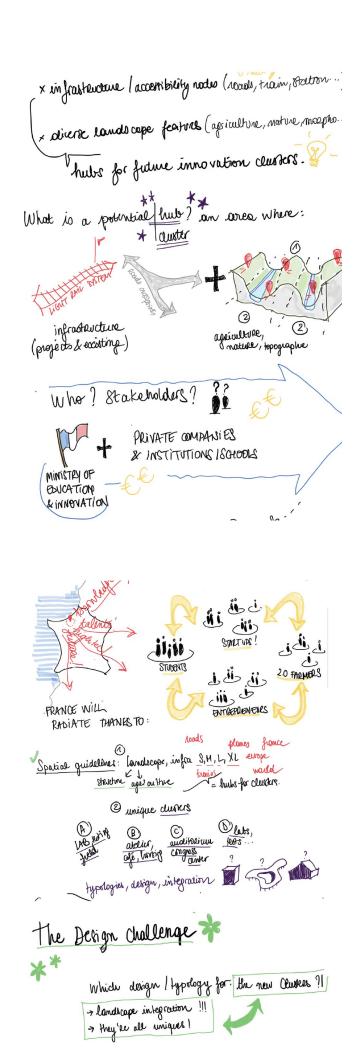
# Cooperatives

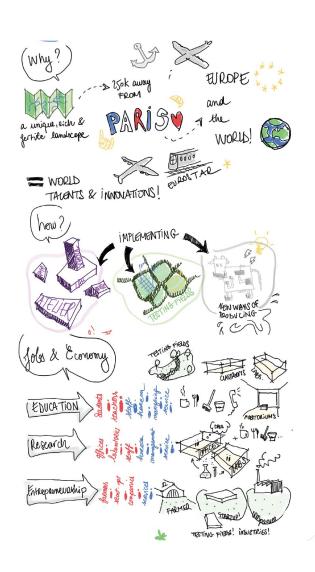
# University

"What if a University would take over the region?" In this scenario, European and French study program would realize how unique of an education they could be giving in this region. The Pays d'Auge has the potential to attract a lot of new talents when it comes to the future of agriculture. Thanks to a new public infrastructure that connects the valley to the rest of the country, the project becomes feasible. Also, the University chooses to spread its buildings and testing fields throughout the different landscapes of the valley as the conditions from one area to the other can differ an lot and offers a lot to experiment with.







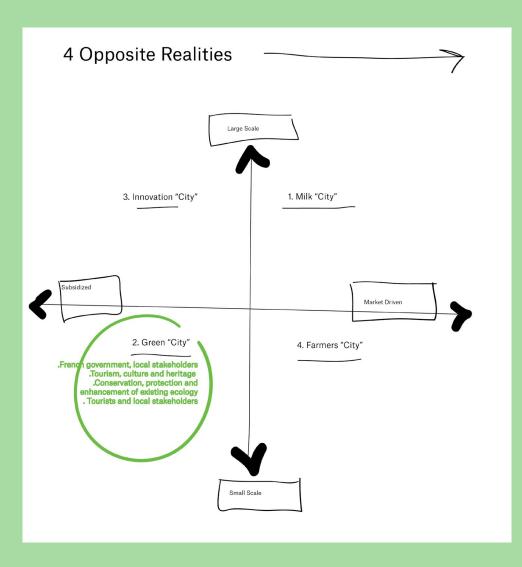


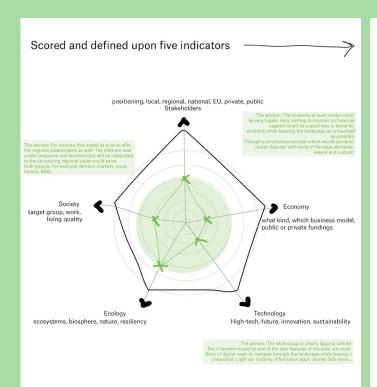
# University



# **Scoring models**

This research by design exercise lead to four scenarios which now needs to be assessed in regard of the needs of the region. This is what I am going to show in this next chapter, how and upon which criteria the scenarios are going to be "scored", in order to see which one should be kept for further elaboration or not.





#### That involve spatial consequences and choices

what does this means for: infrastructure, green and blue structures, housing, industry and amenities

#### **INFRASTRUCTURE**

New stations (refurbishment old lines/rails), light monility network, and new routes (bikes, pedestrians, hikes)

#### WATER STRUCTURE

Extension of existing water structures in favor of the local ecosystems and new leisure and touristic activities

GREEN STRUCTURE
Conservation, protection and refurbishment where needed of the Boacge structure,
biodiversit and ecosystems. New slow and resilient green routes through the landscape along the different structures.

#### HOUSING

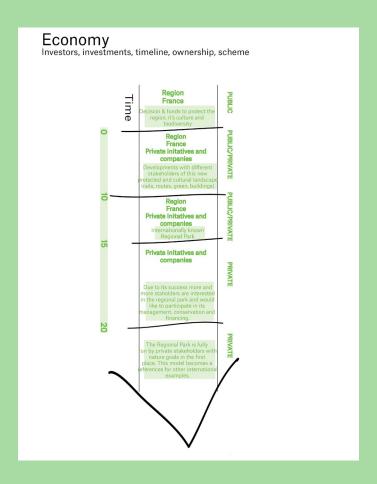
Existing housing conditions is not targetted but new forms of "stays" will develop. B&B, agro-tourism, camps, wellness, workshops...

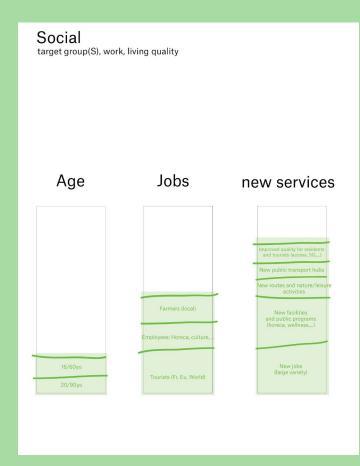
The industry of the region will remain but the emphasis will shift toward cheese culture and tourism which will generate some kind of ecomomy.

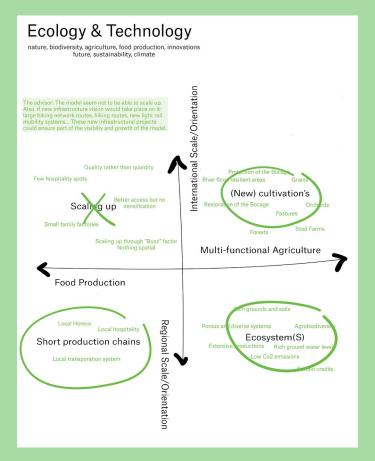
#### **AMMENITIES**

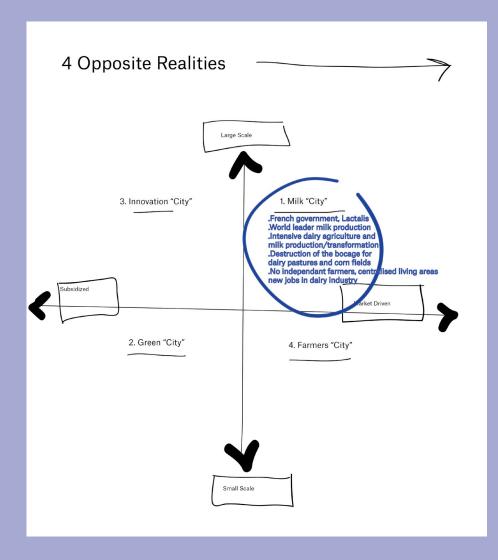
New jobs, tourism, horeca, culture. New ammenities, wellness, hotels, culture, foodcourts, local markets, common transport

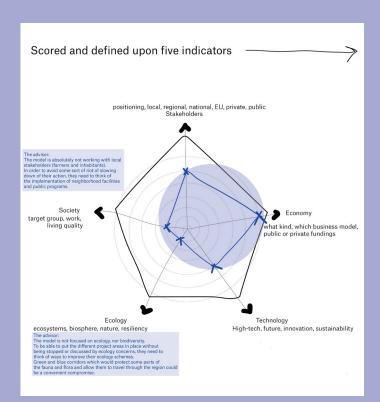
#### Stakeholders Public/Private and small or big scale Indicators's exploration al farmers Private Individual Cooperative : Donations, associations \_ Private Initiative \_ Private Company Subsidies: Rails, routes and public projects \_ Region (Goverance) \_ Nation (Goverance) $_{-}$ $_{-}$ Multinationals Tourists, image, branding $_{-}$ $_{-}$ Europe Tourists, image, branding $_{-}$ World











#### That involve spatial consequences and choices

what does this means for: infrastructure, green and blue structures, housing, industry and amenities

#### **INFRASTRUCTURE**

Larger roads for trucks, investments into larger road structures.

#### WATER STRUCTURE

No attention to water structures, reserves or rainwater, eventhough water will be much needed for the cattle and the corn cultures

#### GREEN STRUCTURE

Destruction of Bocage structures, larger fields, dairy and mono-culture, loss in biodiversity, heritage and weak ecosystems.

#### HOUSING

Existing smaller settlements will be attached to existing larger centers, to privilege pastures and agriculture. Very little working/living area. No mix between rural and urban.

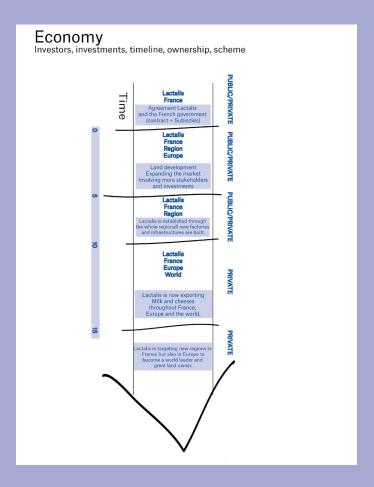
#### **INDUSTRY**

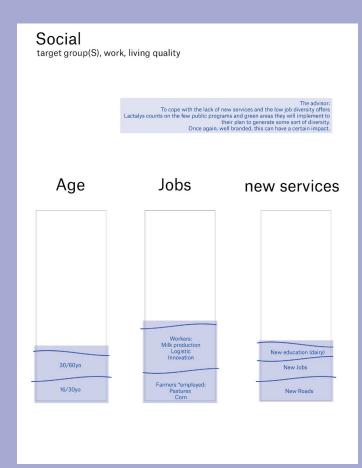
The region's economy will be structured around dairy production and corn production. corn to feed the cattle which produces milk which itself get transformed downhill and exported throughout France, Europe and the World.

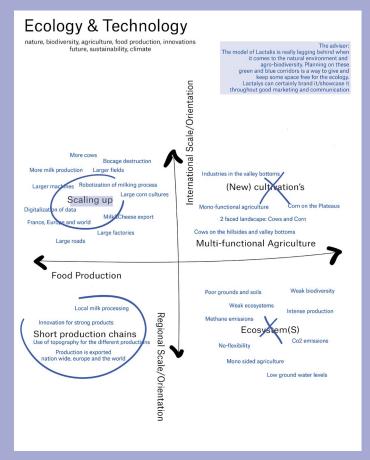
#### AMMENITIES

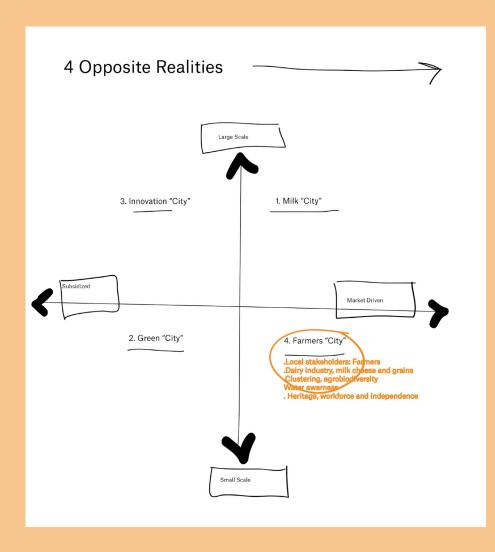
Better roads accessibility to the area, few jobs (in a very specific sector and for limited workers and skills) an international image for the region.

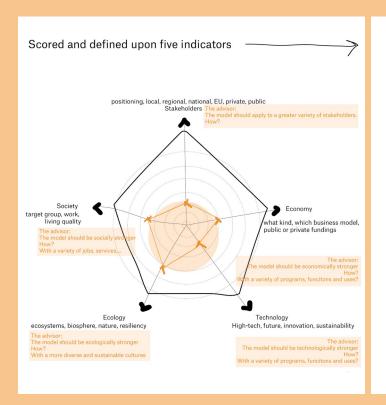
#### Stakeholders Public/Private and small or big scale Indicators's exploration The advisor: Lactalist must find a way to work with local stakeholders within their large vision and to relate their project and ambitions to the very scale and specifyties of the region. Maybe sticking to the iconic Camembert production, label and characteristics could serve a compromise argument. Private Individual Cooperative Private Initiative Lactalis \_ Private Company Public domain projects (road works etc) \_ Region (Goverance) Subsidy, contract and agreements Nation (Goverance) \_ \_ Multinationals Export, market and clients $_{-}$ Europe Export, market and clients World











#### That involve spatial consequences and choices

what does this means for: infrastructure, green and blue structures, housing, industry and amenities

#### INFRASTRUCTURE

Not on the agenda, no new routes or transportation means

#### WATER STRUCTURE

Rain water is collected and used for cattle, rivers and ground water levels are

#### **GREEN STRUCTURE**

Taking the best out of agrobiodiversity, agroforestry and permaculture

#### HOUSING

Not on the agenda, no new developments needed.

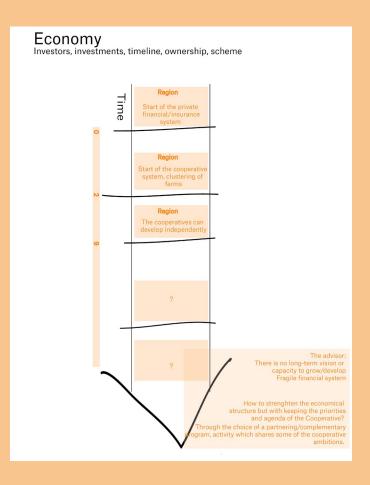
#### INDUSTRY

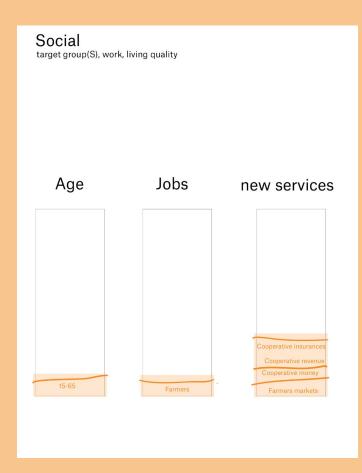
Mainly focused on milk cheese apple and grains, with no significant addition to it.

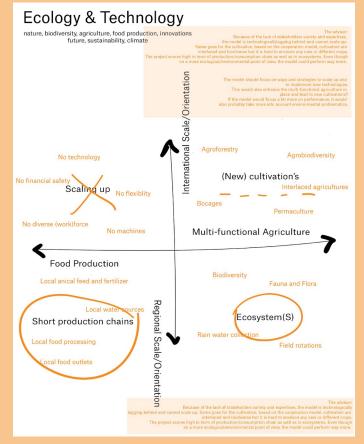
#### AMMENITIES

Jobs in farming, independence, image and pride. Universal revenue and collective health insurance

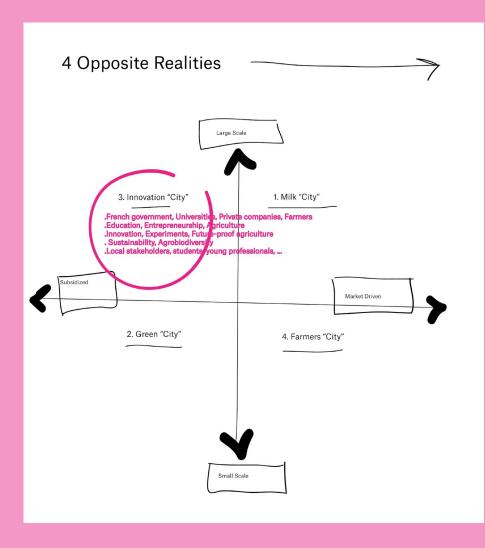
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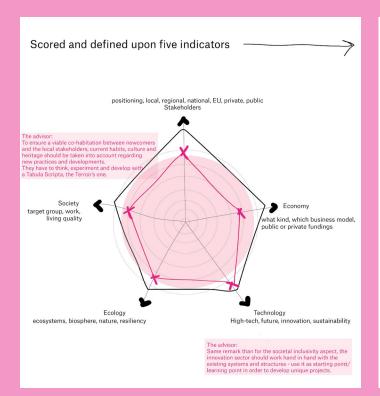






# **Jniversity**





#### That involve spatial consequences and choices

what does this means for: infrastructure, green and blue structures, housing, industry and amenities

#### INFRASTRUCTURE

Better accessibility: Public transports, Light-rail mobility, Pedestrians, Bikes, Green energies?

#### WATER STRUCTURE

 $Inclusive\ water/agriculture/innovation\ approach\ and\ systems\ for\ better:\ Ecology,\ biodiversity,\ climate...$ 

#### GREEN STRUCTURE

Enhancing the existing qualities of the landscape structure, learning from it, using it for experiments and innovations, enhancing the uniqueness of the territory

#### HOUSING

New developments for students, young professionals, guests residents and in a later phase, new families or newcomers.

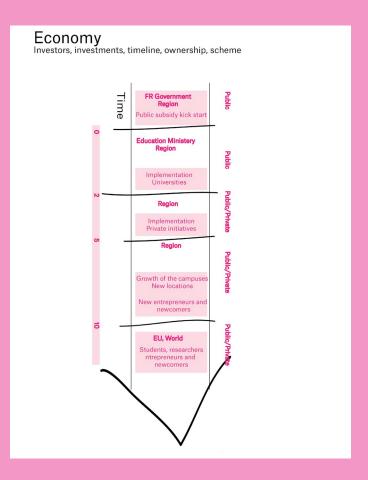
#### INDUSTRY

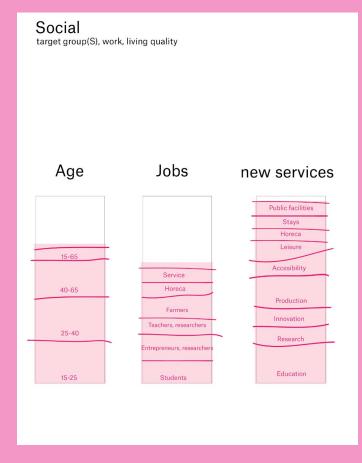
Agriculture based industries but targetting agro-biodiversity, flexibility in products and production, short circuits and low energy consumption.

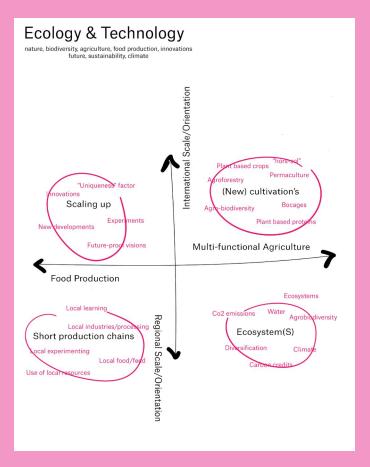
#### **AMMENITIES**

Schools, universities, amphitheatres, congress centers, horeca, hotels, living, public spaces, public facilites, gyms, leisure,  $\dots$ 

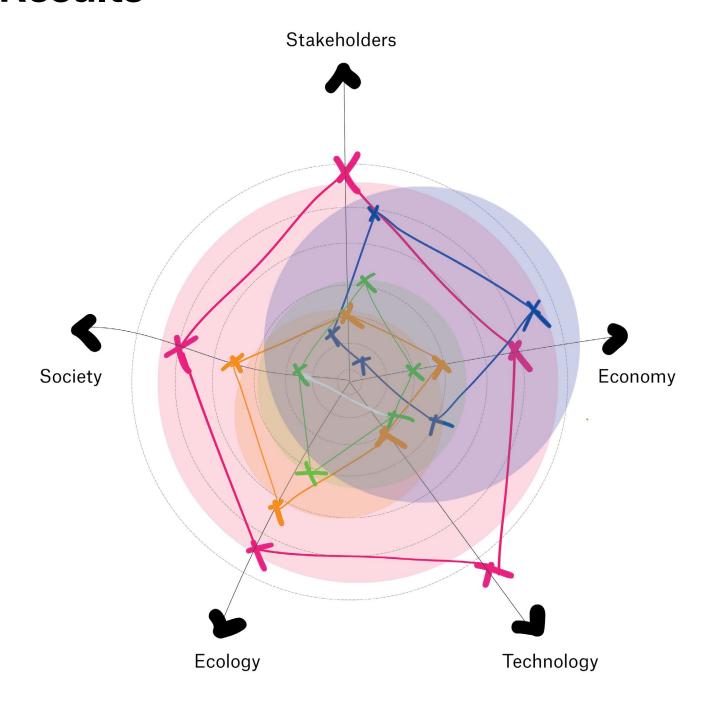
# Stakeholders Public/Private and small or big scale The cooperative system should not be out of the Description. Current cooperatives or forms of alliances should be taken into account into account into used to develop new projects and interesting alliances. Cooperative Universities, entrepreneurs Private Initiative Companies, lab's, Horeca... Private Company Calvados Region (Goverance) Ministere de l'Education FR Multinationals Universities, exchange programs Universities, exchange programs World





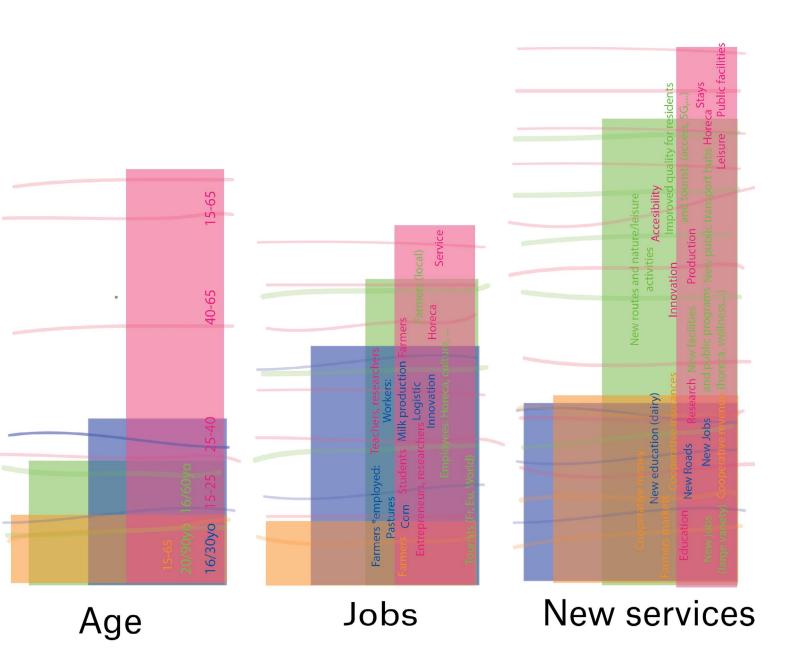


# Results



The four scenario lead to different results. Each one of these have qualities and pitfalls which can not be ignored. Also, looking at the bigger picture, one force is not stronger than the other, all topics (stakehoders, economy, technology, ecology and society) needs to be addressed fairly in order to work

towards an ugrade of the region. This is why it seems that none of the scenario needs to be chosen or abandonned. But the four of them needs to be combined, which means, finding a way to make them work together, despite their different agendas and powers.









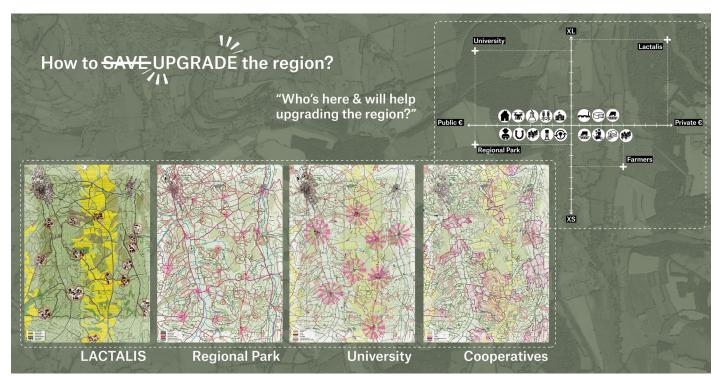
## **Business Model**

How will the four stakeholders work together in one integrated model and towards the same ambitions: Ecology, Society, Economy?



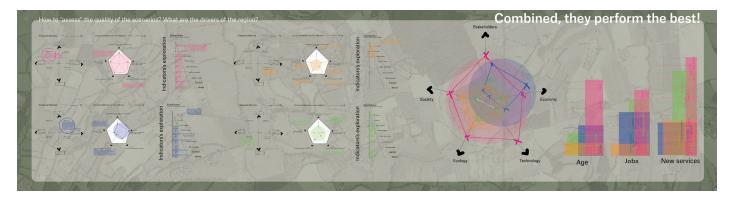
As the analysis showed us, and for many reasons, the region has a lot to offer. Its landscape, its Terroir, ... But is also facing an imminent decay. Society is getting old and lacks a lot of primary facilities, such as accessibility. Young people are living the region because there are too little jobs available and barely any studies possible. The only newcomers are expats or holiday home residents, which do not bring much to the region on the long term. Next to that, the environment is suffering a lot from Bocages destruction. Fauna and flora are the first victims of it. This practice also lead to more mono culture

and intense agriculture (grains), which slowly transforms the profile of the region while killing its biodiversity. The trucks necessary to the transport of goods throughout the valley are also too large and heavy for the type of roads and has for consequence more concrete and heat/drought problems in the summer. Finally, local farmers and entrepreuneurs are becoming less and less. Farmers have troubles to compete with bigger infrastructure and land price, and entrepreneurs are seeing less and less reasons to settle in the region when the market is already almost completely owned by one player: Lactalis.



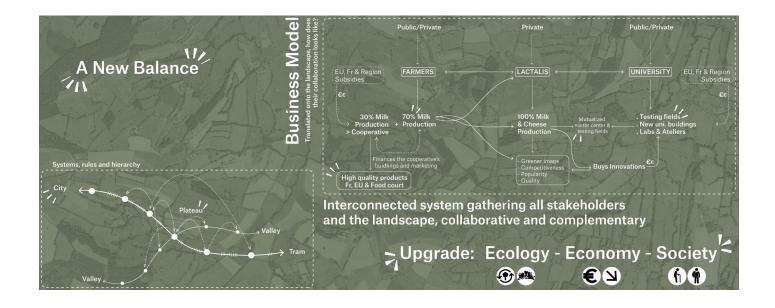
Because of its unique qualities, for the sake of the environment and because of our mission as designer, the question that comes to me is: How to save, if not upgrade this region? And how to proceed when there is already so much in place and for such a long time? Because of this reason, I decided to start by looking at who were actually the players of the region today, what were their forces, agendas and ambitions. I did this through the establishment of scenarios "What if Lactalis would take over the region". "What if the Farmers would take

over the region?", "What if the region would transform in one huge regional park?", and "What if a university would take over the region?". This last one comes from a personal intuition that I have for a long time already. Indeed, while countries like the Netherlands are at the forefronf of agricultural innovation, France is lagging behind while having amazing and unique territories to learn and experiment with. This is because of this idea that I decided to also test out the "powers" of a fourth stakeholder: a University.



Making these four scenarios was one thing but I also needed to be able to assess them, and to do so with my first goal in mind, the upgrade of the region. Which means that the scoring model had to assess the different scenarios and stakeholders according to forces which would have the potential to upgrade it. These forces are: Stakeholders, Economy, Technology, Ecology and Society. And from these I also decided to dig into different topic and look over the timeline of

these models, their financing, etc. The ambition was to become an "expert" of these four different scenarios, in order to advise which one would suit the region's best and which one not. The conclusion of this exercise was the following, all four scenarios had their qualities and pitfalls, but combined their performed the best. As the goal is to upgrade the region, I decided to keep them four and to find a way to make them work together.



The New Equilibrium. Thanks to an indepth stakeholder analysis, but also extreme scenarios for the four of them, I was able to define a business model which would satisfy each one of these stakeholders, while making them complementary. One could not function without the other which would make them participate to this new interconnected system putting them together, with the landscpae in a collaborative and complementary model. The New Equilibrium is a mix of public and private stakeholders, with different spatial impacts, financial leverages and ambitions - which somehow, and within

their own goals and agendas would perform for the upgrade of the region and its ecology. This New Equilibrium requires a complex system of rules, proper to every stakeholder, which belongs to the second part of the project. The strenght of the New Equilibrium is also that it relies on very little public money which would make its implementation realistic and fast, while public money remains uncertain and when it comes to the landscape and rural areas, quite scarce. Welcome to the New Equilibrium, a rural strategy for the Vallees, Coteaux et Plateaux du Pays d'Auge.



# Strategy - Hardware

Analysis, stakeholders, scenarios and scoring models are bring put together in order to create the New Equlibriun, a business model which will define rules and system, for each of the New Equilibrium layers.

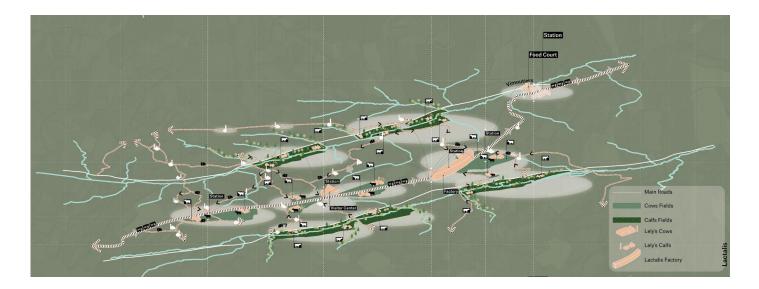
In this chapter, we are going to describe how these layers are working independently and together, in order to illustrate how complementary and integrated to the landscape they are. The layers that will be described are: Recreation, Lactalis, University and Cooperatives.

Alone or together, these layers have their own set of rules and systems, according to their powers and agenda while aiming for the same goal: nature.



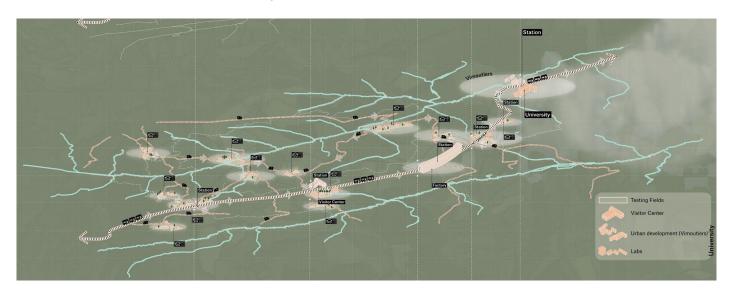
The first layer, Recreation, is the backbone of the project. This is where the existing qualities of the area are mapped and emphasized. But it went through some serious transformations. Indeed, the valley needs a very first intervention to see all intentions and stakeholders becoming true. For the good of the environment, as well as locals, newcomers and agriculture, the valley needs a better accessibility. And we are not talking about roads, as these ones are in duality with the nature in place. Actually, there used to be a railway line, connecting the Valley to Lisieux, which itself connects with Paris. With the agricultural revolution, the train quickly became obsolete and has been replaced bar cars and trucks. but today, such infrastructure is not enough and does not fulfill with sustainable and new environmental wishes for the region. This is why I have decided to install a new tram line, where the old railway line used to be, from Vimoutiers to the Plateaus of the valley, until the next city: Gace. This tram line will allow people and goods to be transported throughout the valley towards neighbouring cities and countries, while reconnecting the area to the rest

of the country. A complementary network of electric shuttles complement the tram line, perpendicularly, while bringing locals, visitors and students throughout the rest of the valley. This new infrastructrures also allows the (re) development of certain recreational features, such as a recreational path for pedestrians and bikes, with many hikes options, which also serves the fauna and flora to travel through the different landscapes. These routes connect destinations together. Existing ones, which are now revealed and accessible to locals and visitors, as well as new ones, such as the visitor center and few lookout towers. These towers are mostly situated in the different forests of the area, overlooking the valley or places to practice bird watching. There are also some heritage buildings connecte to the recreational routes, wether these are old Colombage farms, castles or stud farms. Some of them are available to visit, in some you can enjoy regional products, in some other you can stay over for a night or two. Also, these destinations also count few stud farms, which are very popular attraction in the region.



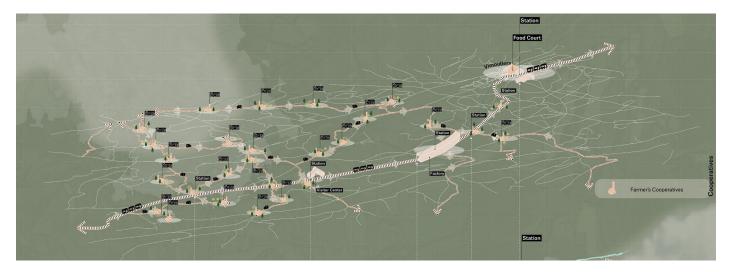
The second layer, Lactalis also went through some transformations. The main one is probably its factory, which is now situated along the tram line, for obvious transportation reasons. Transport trucks are and were to become a big problem for the valley and its environment. A concrete way to act on it is to place the factory on a spot where a big part of the milk is being produced, but also attached to the new transportation option: the tram. This way, the collection, production and transportation of milk and dairy product

is integrated and having less impacts. Also, the fields that Lactalis owns on the Plateaus are now only used for the cows, which are heavy animals that demand quite some maintenance - and proximity with the factory. Their calfs on the other hand, are located on the fields that Lactalis owns next to the river. The animals, are smaller, lighter, their waste is also of less of an impact, while they remain accessible thanks to the shuttles, that are travelling perpendicularly to the tram line.



The third layer, University, is the layer that completes and makes the New Equilibrium possible. The university is able to settle in the region thanks to the tram line, which connects and make it accessible to not only neighbouring cities but also countries. This is why most of the "traditional" university buildings, where the amphitheaters, classrooms and laboratories are, are located nearby the station, while participating to a restructuring of the city center. But the University also be-

nefits from unique testing fields, spread out in the different landscapes of the valley. Because there are so many different conditions laid over few kilometers, the University chose to have different "on site" testing locations, where the students can experiment with the landscapes and its conditions. Each testing location is connected to the tram line or a shuttle, and owns a laboratory on site. The visitor center is also part of the University.

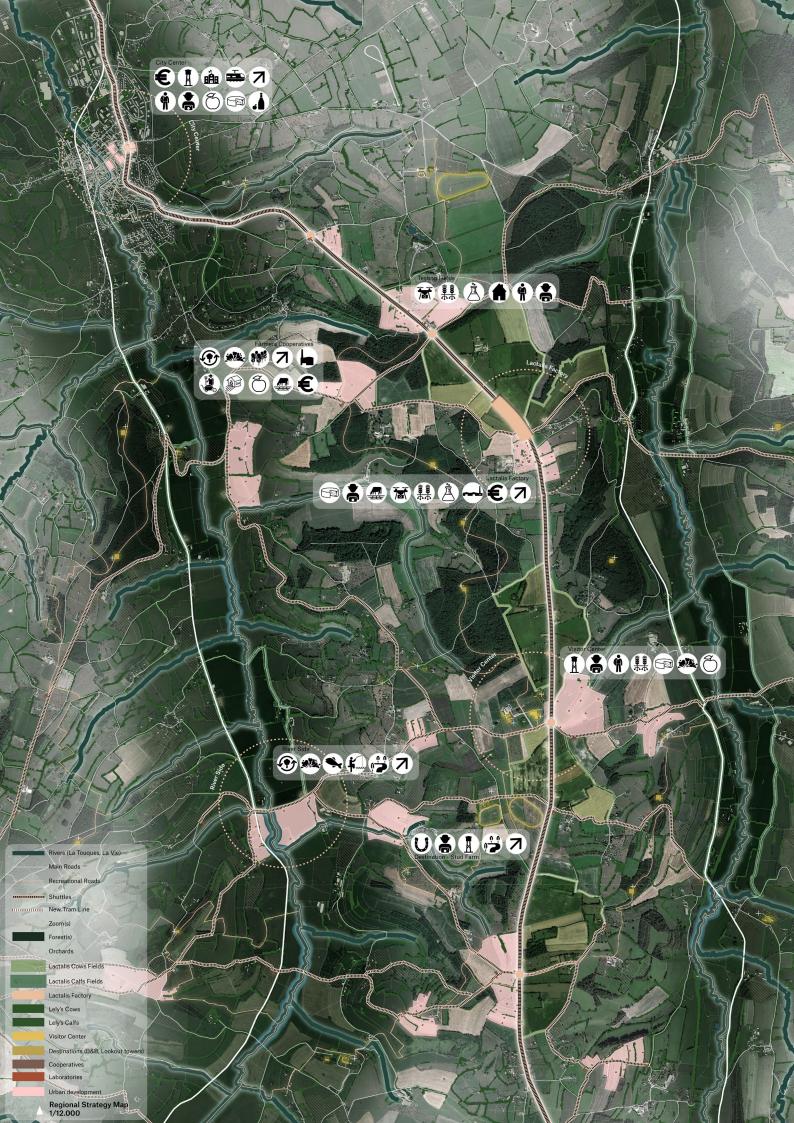


The fourth layer is the Cooperative one. The one of the farmers, which also sees some transformations happening. The farmers that will join the cooperative will be assigned to a "cooperative hub", where there will have the possibility to collect, store and transform their milk into the desired products. These hubs are within realistic distances from their farms and shared with other farmers.

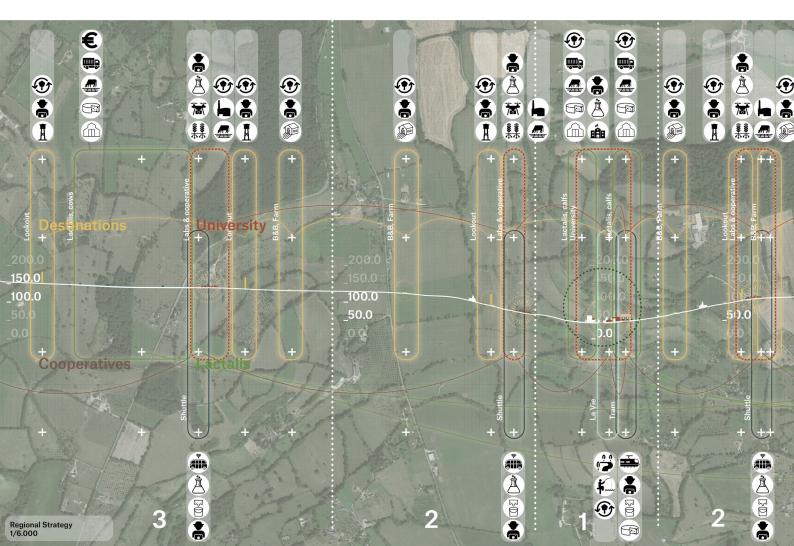
The network of shuttles is taking care of transporting the milk and other products in and out the cooperative - as well as to the Lactalis Factory. These production hubs allow them to keep on producing at their own pace, the product they want with the technic they want, and to sell them (or not) with the Food Court in Vimoutier, but also to neighbouring cities and countries.

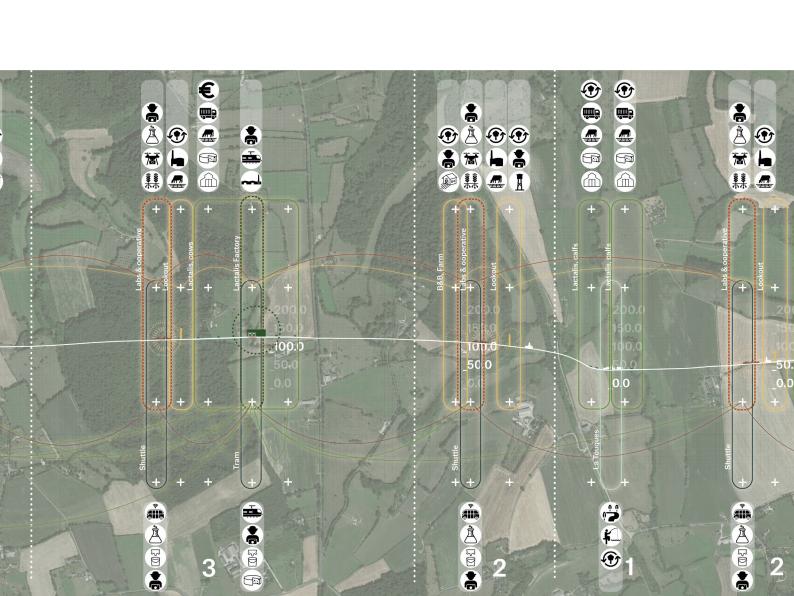
All these different layers can be integrated in one image, the masterplan that you can see on the right. If there should be a phasing, the tram line is inevitably the first infrastructure that should come into place. The tram line is nothing less than the backbone of the strategy, and makes possible all of its developments and transformations. The other elements need this framework to function,

but also need each other. The Factory needs the cooperative as much as the cooperative needs the Factory, which itself needs the University, while the city needs the University. This image is the one of the New Equilibrium, where every layers, stakeholder and elements finds its strategic place within a complex and unique valley.



An interconnected system gathering all stakeholders and the landscape, in collaborative and complementary ways.







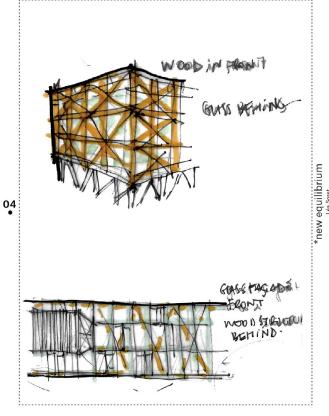
# **Spatial - Software**

Analysis, stakeholders, business models, rules and systems also translates into spatial and tangible designs, which is what this last chapter is about. So far, we have been describing the hardware, what makes this strategy possible while aiming for the landscape. Now we are going to describe and see how it can look like, and what are the qualities of such a metabolism. Four areas have been selected to represent what the New Equilibrium looks like: The City Center, the Lactalis Factory, The Visitor Center and The River Side.

#### CITY CENTER

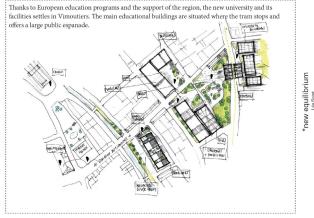
### **Vimoutiers**

The city center has a lot to gain from the arrival of the tram line and its station. Local inhabitants as well as newcomers (students, visitors), will be able to enjoy a city which is now properly connected to the rest of the territory, with attractive facilities. Indeed, more than a new station and its station square, their will be three new university building settling on the other side of it. Along the street that connects the city center to the station, this is where most transformations within the urban fabric will happen. Three buildings will be refursbished, the Brico will remain but there will be new dwellings and a Gym added to it. The supermarket will remain as well but once again, new dwellings will be added to it, as well as new qualitative public green spaces. The existing covered garden will be transformed into a Food Court, opened towards the south facing river side and where locals and visitors will be able to enjoy products from the valley and cultural events. Finally, the library will benefit from a little make over, thanks to the University. These strategic transformations are only possible thanks to the arrival of the tram line and will help restructuring the city center will bringing back new attractive programs and facilities for both locals and newcomers.



Architecture

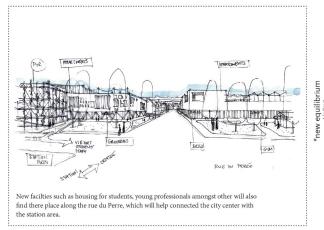
#### CITY CENTER

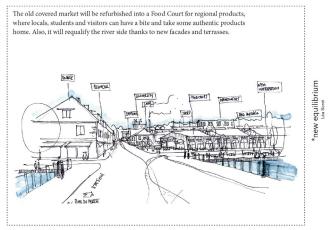


Vimoutiers

CITY CENTER

#### CITY CENTER

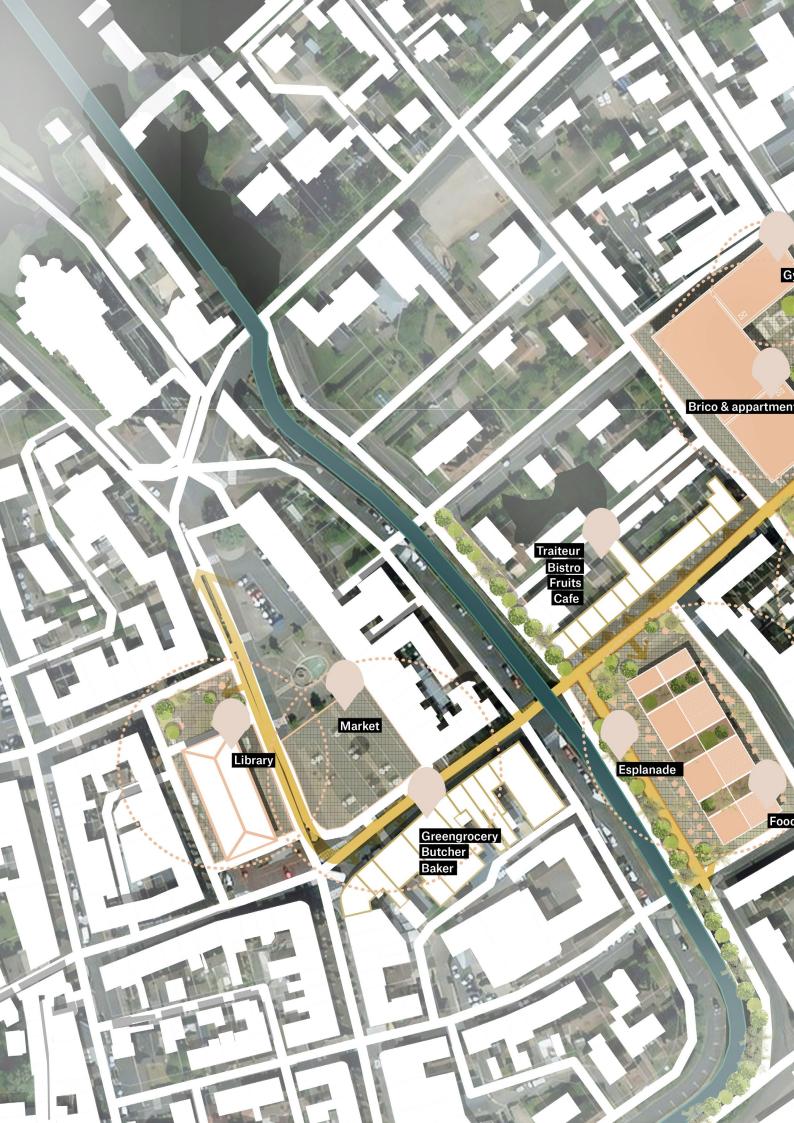




Vimoutiers

Vimoutiers



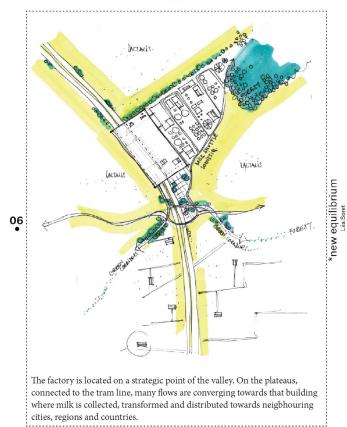




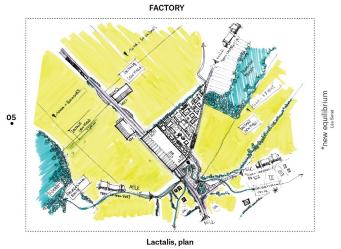
## **Factory**

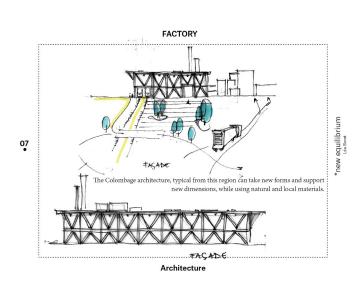
Originally, the Lactalis factory is located outside the valley, which implies that a lot of heavy trucks (10T and more) are travelling through the landscape several times a day. Thanks to the tram line, these flows can be reduced, and even more if the Factory benefits from the transport infrastructure directly. Which is why the Factory is now situated on the Plateaus, at the Tram and where most of its cows fields are located. It is also an end point for most shuttle lines, which are collecting milk throughout Lactalis's fields and the many cooperatives. The factory itself is organized according these flows, as in, in its first part, milk from all over the valley is collected, sorted out and securised. In the second part, the raw products are transformed in their final "forms" (Milk, Cheese, Camembert, Butter...), and in the third part of the factory, the finalised products are redistributed, thanks to the tram line, to neighbouring cities, regions and countries.

#### **FACTORY**

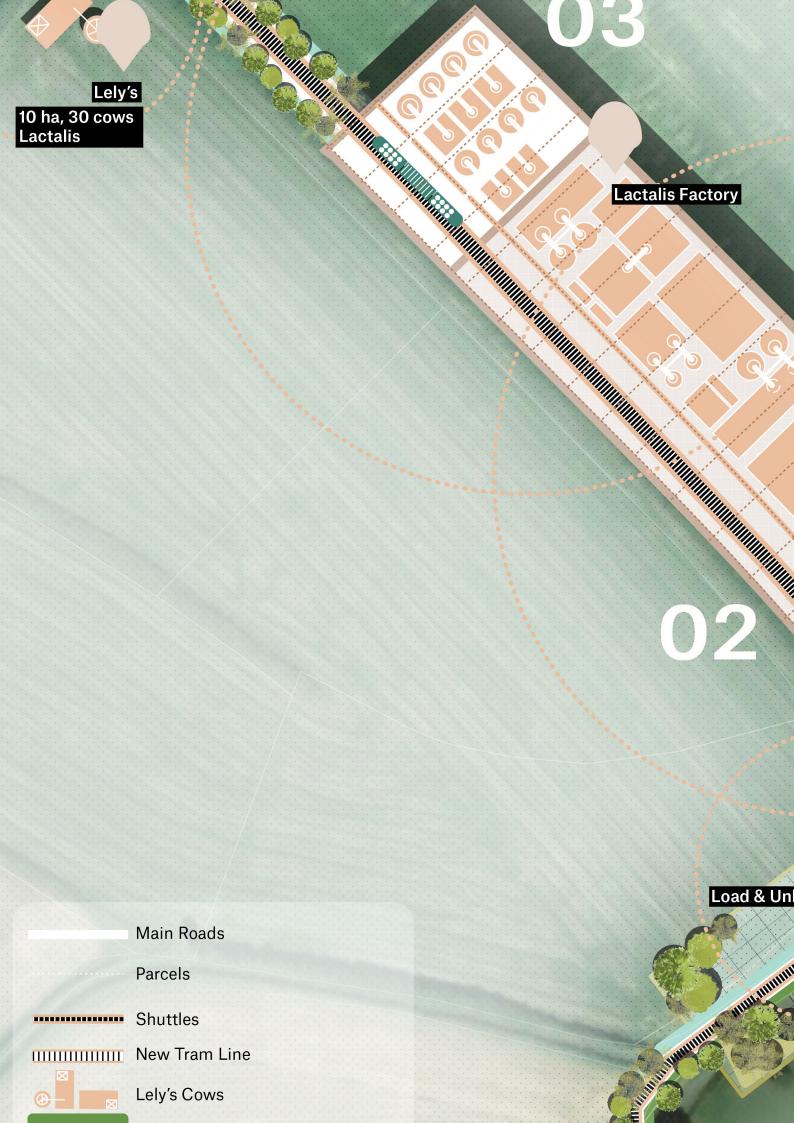


Lactalis, situation







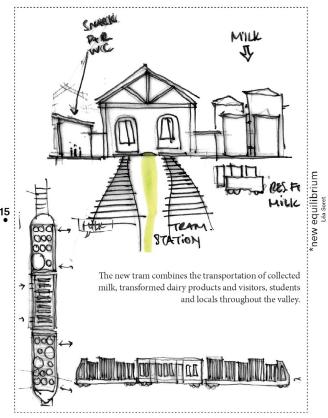




### **Visitor Center**

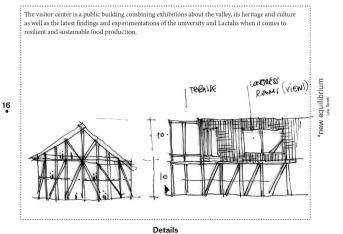
The Visitor Center is located along the main Tram line, 3 stops away (+-5km) from Vimoutiers city center. This way it remains accessible from the entire valley. It is surrounded by several "destinations", themselves connected by new recreational paths - also used as fauna and flora corridors through the landscape. It's position is not random and reminds us of traditional Colombage farms, positionned perpendicularly to the valley, made of two buildings and with a majestuous entrance sequence. The Visitor Center is a place where visitors, locals and students can enjoy a bite, but also learn about the valley, its landscape, terroir and production. It is also used as a place where Lactalis and the University can showcase their innovations and discovery when it comes to the future of agriculture and farming.

#### **INFRASTRUCTURE**

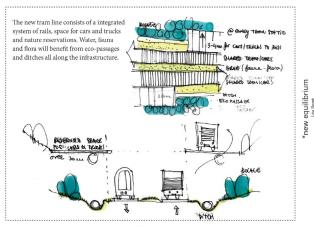


Details

#### VISITOR CENTER



#### INFRASTRUCTURE



12

Details

82



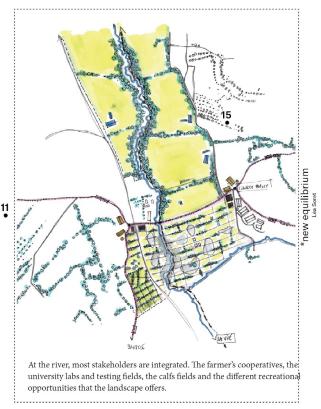




### River side

Most of Lactalis's calfs fields are situated along the two rivers, in their authentic Bocages structures. Although, a "grass filter" is protecting the stream from the pollution coming from the pastures, which also allows a new recreational path, that follows the river. From that path it is also possible to enjoy places where the stream is larger and where trout fishing is popular. The river side is also an interesting spot for the University and its testing fields. Because of unique conditions, students can test-out water related projects, while remaining connected to the shuttle and tram network. The shuttles collection point are also located where the farmers cooperatives are taking place, as the illustration on the right suggests it.

#### RIVER SIDE



Plan

### ARCHITECTURE For the labs, the visitor center, the factory as well as the new installations for cows and calfs. the architecture belongs to the traditional Colombage of the region, with moder twists when it es to waste, food and energy TASSBANX 14 CALFS SHETTPILL STANLES Details

with new recreational path are going to follow the rivers arms. They allow space to recreate, fish and observe the calfs in their CHES to BOLLES & OTHER TREE !

RIVER SIDE

To prevent the rivers from pollution, a system of grass filters

Landscape(s)

86





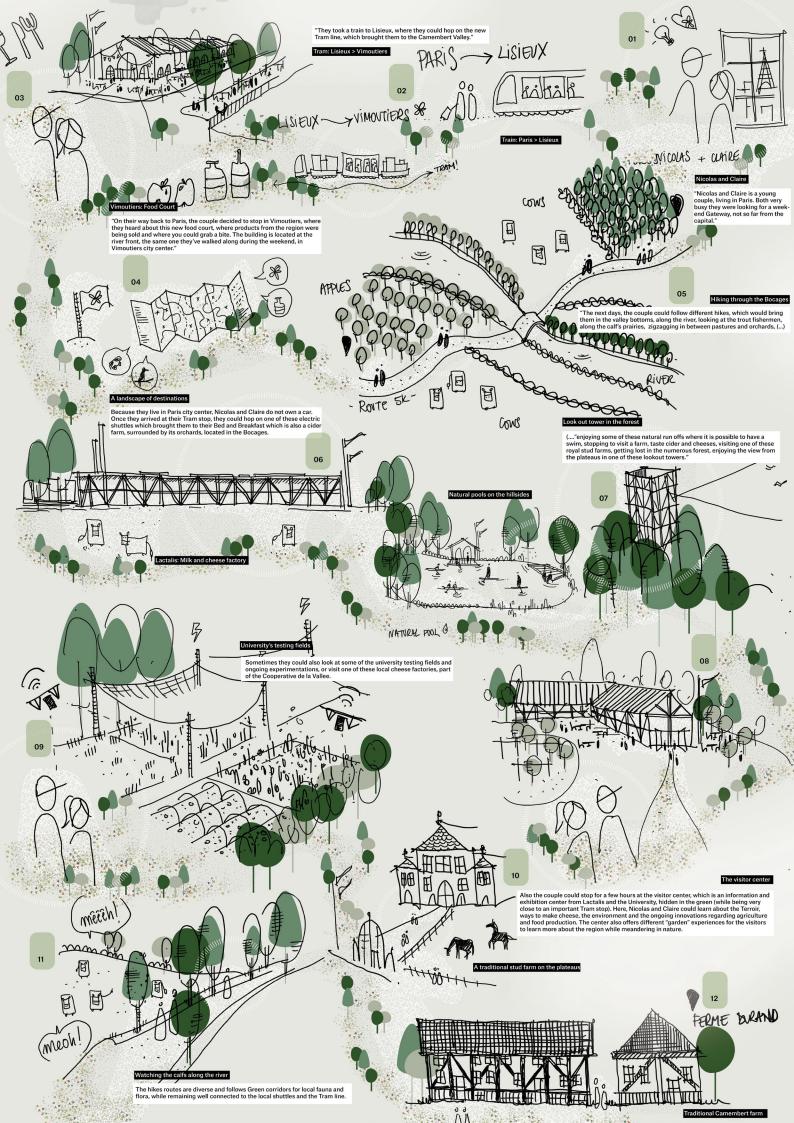
## **Personas**

- . Nicolas and Claire
- . The Durand Family
- . Jan the student

### Nicolas & Claire

"Nicolas and Claire is a young couple, living in Paris. Both very busy they were looking for a weekend Gateway, not so far from the capital. They took a train to Lisieux, where they could hop on the new Tram line, which brought them to the Camembert Valley. Because they live in Paris city center, Nicolas and Claire do not own a car. Once they arrived at their Tram stop, they could hop on one of these electric shuttles which brought them to their Bed and Breakfast which is also a cider farm, surrounded by its orchards, located in the Bocages. The next days, the couple could follow different hikes, which would bring them in the valley bottoms, along the river, looking at the trout fishermen, along the calf's prairies, zigzagging in between pastures and orchards, enjoying some of these natural run offs where it is possible to have a swim, stopping to visit a farm, taste cider and cheeses, visiting one of these royal stud farms, getting lost in the numerous forest, enjoying the view from the plateaus in one of these lookout towers.... Sometimes they could also look at some of the university testing fields and ongoing ex-

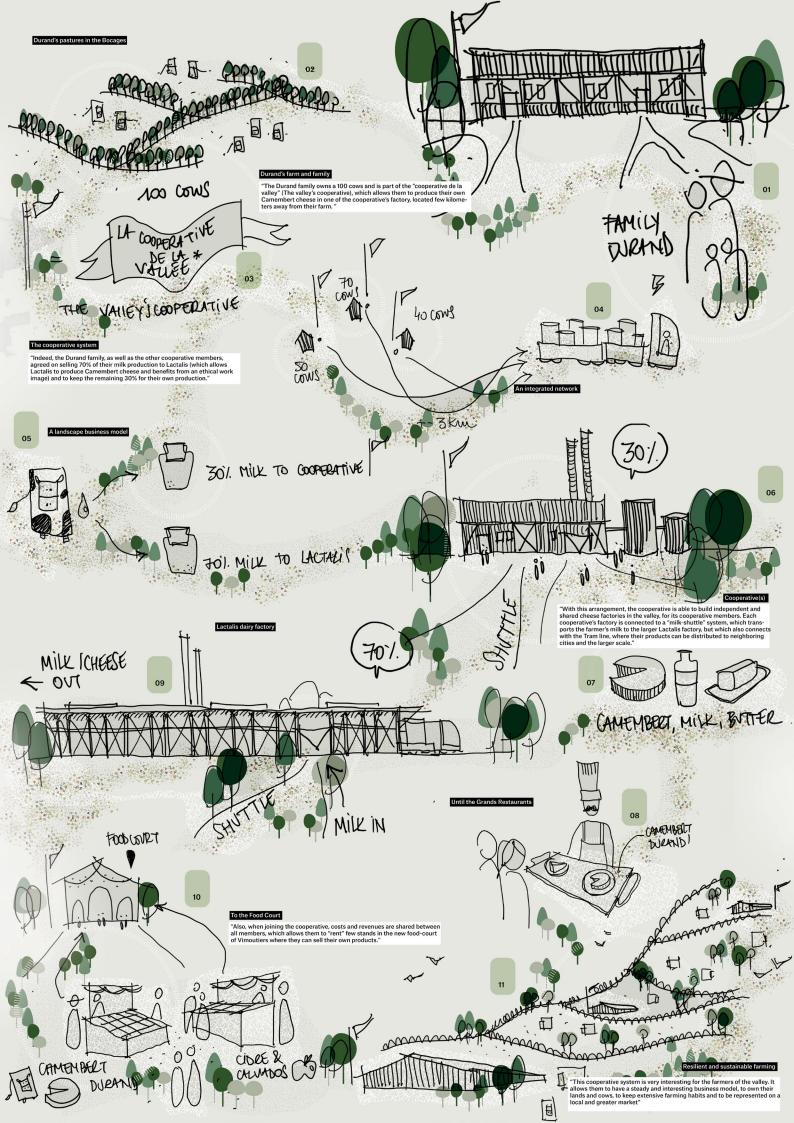
perimentations, or visit one of these local cheese factories, part of the Cooperative de la Vallee. The hikes routes are diverse and follows Green corridors for local fauna and flora. while remaining well connected to the local shuttles and the Tram line. Also the couple could stop for a few hours at the visitor center, which is an information and exhibition center from Lactalis and the University, hidden in the green (while being very close to an important Tram stop). Here, Nicolas and Claire could learn about the Terroir, ways to make cheese, the environment and the ongoing innovations regarding agriculture and food production. The center also offers different "garden" experiences for the visitors to learn more about the region while meandering in nature. On their way back to Paris, the couple decided to stop in Vimoutiers, where they heard about this new food court, where products from the region were being sold and where you could grab a bite. The building is located at the river front, the same one they've walked along during the weekend, in Vimoutiers city center."



# **Family Durand**

"The Durand family owns a 100 cows and is part of the "cooperative de la valley" (The valley's cooperative), which allows them to produce their own Camembert cheese in one of the cooperative's factory, located few kilometers away from their farm. Indeed, the Durand family, as well as the other cooperative members, agreed on selling 70% of their milk production to Lactalis (which allows Lactalis to produce Camembert cheese and benefits from an ethical work image) and to keep the remaining 30% for their own production. With this arrangement, the cooperative is able to build independent and shared cheese factories in the valley, for its cooperative members. Each cooperative's factory is connected to a

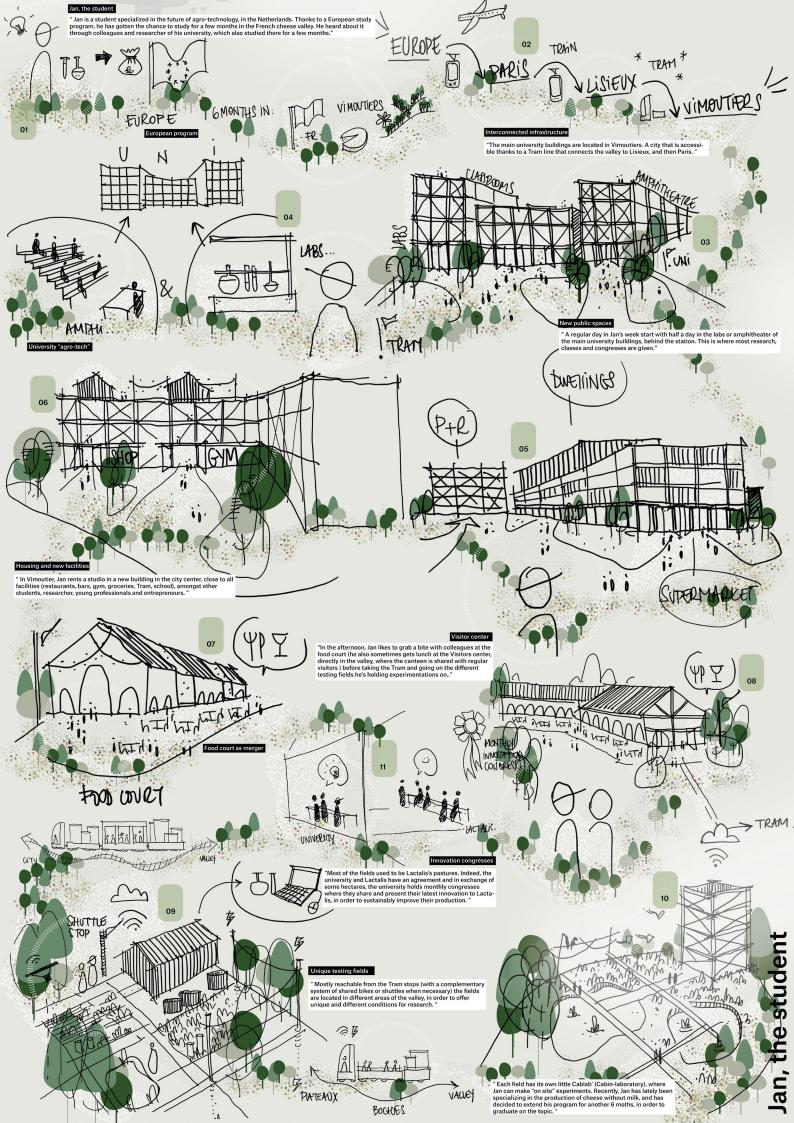
"milk-shuttle" system, which transports the farmer's milk to the larger Lactalis factory, but which also connects with the Tram line, where their products can be distributed to neighboring cities and the larger scale. This cooperative system is very interesting for the farmers of the valley. It allows them to have a steady and interesting business model, to own their lands and cows, to keep extensive farming habits and to be represented on a local and greater market. Also, when joining the cooperative, costs and revenues are shared between all members, which allows them to "rent" few stands in the new food-court of Vimoutiers where they can sell their own products."



### Jan, the student

"Jan is a student specialized in the future of agro-technology, in the Netherlands. Thanks to a European study program, he has gotten the chance to study for a few months in the French cheese valley. He heard about it through colleagues and researcher of his university, which also studied there for a few months. The main university buildings are located in Vimoutiers. A city that is accessible thanks to a Tram line that connects the valley to Lisieux, and then Paris. In Vimoutier, Jan rents a studio in a new building in the city center, close to all facilities (restaurants, bars, gym, groceries, Tram, school), amongst other students, researcher, young professionals and entrepreneurs. A regular day in Jan's week start with half a day in the labs or amphitheater of the main university buildings, behind the station. This is where most research, classes and congresses are given. In the afternoon, Jan likes to grab a bite with colleagues at the food court (he also sometimes gets lunch at

the Visitors center, directly in the valley, where the canteen is shared with regular visitors) before taking the Tram and going on the different testing fields he's holding experimentations on. Mostly reachable from the Tram stops (with a complementary system of shared bikes or shuttles when necessary) the fields are located in different areas of the valley, in order to offer unique and different conditions for research. Most of the fields used to be Lactalis's pastures. Indeed, the university and Lactalis have an agreement and in exchange of some hectares, the university holds monthly congresses where they share and present their latest innovation to Lactalis, in order to sustainably improve their production. Each field has its own little Cablab' (Cabin-laboratory), where Jan can make "on site" experiments. Recently, Jan has lately been specializing in the production of cheese without milk, and has decided to extend his program for another 6 moths, in order to graduate on the topic."



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## **Bibliographie**





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12th of July 2021, The additional comittee members:

Riëtte Bosch & Martin Aarts

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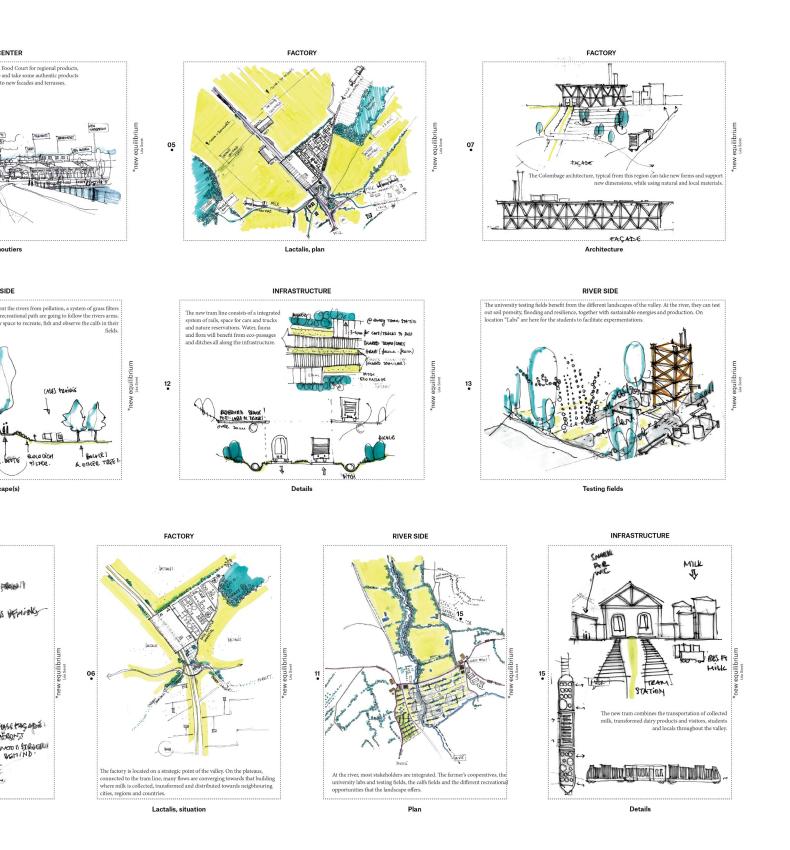
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