

# L'Argentière-la-Bessée

trAILs - Alpine Industrial Landscapes Transformation

Project Studies in the Summerterm 2019
Chair of Landscape Architecture and Industrial Landscape
Prof. Dr. Udo Weilacher
Department of Architecture at Technical University of Munich





# **Content:**

L'Argentière-la-Bessée Project studies on the pilot-site in L'Argentière-la-Bessée1
trAILs Alpine Industrial Landscapes Transformation
Background analysis A comprehensive site analysis4
Master Projects: The Current Inga Borge, Tan Au Ca Nguyen, Fan Wen6
Land in SHAPE Qisu Li, Xiaoxiao Liu10
Osmosis Duygu Sinirlioglu, Qiman Yang14
Eagles, Bolts & Bricks Minghui Chen, Tanja Mauer18
Findings and prospect 22

# L'Argentière-la-Bessée

Project studies on the trAlLs pilot-site in L'Argentière-la-Bessée

Situated in the south-east of France in the middle of the Alpine range lies the village of L'Argentière-la-Bessée. Within the deep valley of the Durance river and a mountainous landscape with nearby summits exceeding 3.000 meters, it is meanwhile a famous location for whitewater championships or used as a starting point to go hiking and skiing. But it's origin is industrial, as it was the former center for aluminium production in the Upper Durance Valley before its' closure in the 1980s. The former Péchiney site in L'Argentière-la-Bessée is one of four pilot areas of the re-

search project trAILs (Alpine Industrial Landscapes Transformation, see following page) and is also the focus area in the master studio at the Chair of Landscape Architecture and Industrial Landscapes of the Technical University Munich in the summer term 2019.

In the context of tourism, brownfiels are often seen as negative elements that must be erased from the natural environment. With a museum for the Fournel mines and a discovery trail, the work on promoting the industrial heritage is in progress, but still, more is required. Meanwhile, the Péchiney site has partially been reoccupied by trade companies and various service and commercial businesses, but large parts are still out of use and an overall concept is missing.

The task for the master studio was to develop a transformation concept considering landscape architectural design on the relevant scales and addressing a perspective for the social, ecological and economical development of the region at the same time. In order to get in touch with the subject, a group of nine international landscape architecture students visited together with Prof. Dr. Udo Weilacher, the Projectmanager of the trAILs research project Marcello Modica and teaching assistant Martin Augenstein the site in May 2019. During their stay the students had the opportunity to thoroughly analyze the site and get an overview hiking up to the clock-tower. In a cooperative workshop the students did also elaborate first visions for the site transformation and shared them with project partner CAUE\* 85 de Vaucluse, CAUE\* 05 des Hautes-Alpes, key local stakeholders like the Mayor of L'Argentière-La-Bessée and representatives of the Communauté de communes du Pays des Ecrins (CCPE).

After the project excursion, four teams of Master students started to work on suitable transformation concepts. The results show different approaches such as extending the river bed to solve future flooding an strengthen the identity, establishing an industry campus and a community center shaped like a continuous landscape or creating an attractive place, not only for tourism but mainly for the local people. The final projects will be integrated in the trAlLs Test-Design workshop foreseen for November 2019.

\* Conseil d'Architecture d'Urbanisme et de l'Environnement

The tower is one of the most charactersitic remnants of the post-industrial factory site



# trAlLs

# Alpine Industrial Landscapes Transformation

The decline of traditional heavy and manufacturing industry is occurring nowadays even in peripheral and less urbanized regions, such as the Alps. Here, in the so-called "green heart of Europe", this process is leaving behind impressive former productive landscapes of relevant size and complexity: Alpine Industrial Landscapes (AILs). The potential value of AILs in terms of sustainable development is strongly connected to Alpine-wide ecological, economical and social key challenges, such as the regeneration/improvement of blue and green infrastructures, the reactivation/upgrade of regional economies and the promotion of local identity and cultural heritage. However, at the present only few AILs have been reused and transformed for these purposes, mostly those located in proximity or within large Alpine cities and urban agglomerations, where good accessibility and a rather developed socio-economic environment have allowed so. The majority of AILs are indeed to be found in small municipalities and economically marginal contexts, burdened by financial, technical and planning limitations.

The project trAILs - Alpine Industrial Landscapes Transformation, initiated in 2017 by the Chair of Landscape Architecture and Industrial Landscapes of the Technical University of Munich and officially approved by the Interreg Alpine Space Committee in April 2018, aims to generate significant knowledge about AILs and to develop and test sustainable transformation strategies applicabile and replicable in the whole Alpine space.

To achieve these objectives, the project builds on a strongly multidisciplinary and transnational partnership combining proved expertise in the fields of landscape architecture and environmental sciences (Technical University of Munich, University of Ljubljana), spatial planning (Polytechnic University of Milan, Vienna University of Technology) and socio-economic sciences (University of Verona) with regional and local Alpine



The transnational partnership of trAlLs around the Alps

communities represented by regional development agencies in Austria (VESTE/Styria), Italy (LAMORO/Piedmont), France (CAUE84/PACA) and Slovenia (BSC KRANJ/Gorenjska).

The foreseen activities are structured around four work packages. The first one (Map AILs) deals with the implementation of an AILs database starting from the data available in the project pilot regions and the subsequent development of an interactive GIS web-based platform to visualize the current situation across the whole Alpine Space. The second and third work packages (Assess AlLs and TestAlLs) are based on the project pilot sites (Eisenerz/AT, Borgo San Dalmazzo/ IT, L'Argentière-la-Bessée/La-Roche-de-Rame/FR, Tržič/SLO) and focus respectively on the comprehensive and multi-criteria assessment of AILs actual conditions and the development of a test-design procedure for AILs transformation. Test-design, in particular, represents a core activity of the whole project, since will bring together project partners, regional stakeholders, experts and international observers in a participatory planning process taking place on-site through a workshop format of several days. The last work package (Manage AILs) will transfer the generated knowledge to end-users through the establishment of an AILs knowledge exchange, information and decision support platform as well as the publication of a methodology handbook and a learning module for advisory and training activities.

With this approach, the project will support local and regional stakeholders in the complex process of sustainable AlLs transformation, providing them with clear strategic planning tools for the future as well as with hands-on experiences. Several institutions have already expressed their interest in the project activities and outputs, and thus joined the project as observers. Among them, the Regional Authorities of Bavaria, Lombardy, Piedmont, Auvergne Rhône-Alpes and Provence-Alpes-Côte



Representatives and project partners guided the students and teachers of the design studio over the site

d'Azur, the Slovenian Ministry of Spatial Planning and Environment, Alpine-wide organizations such as the Permanent Secretariat of the Alpine Convention and CIPRA International, and the universities of Graz, Zürich, Bergamo, Grenoble and Lugano.

Marcello Modica
Prof. Dr. Udo Weilacher

The project is founded within the EU-Interreg Alpine Space Programme (Priority 3 - Liveable Alpine Space, Specific objective 1 - Sustainably valorize Alpine Space cultural and natural heritage) with 2.187.400,30 Euro and will last until April 2021.

More information, news and events can be found on the project website: https://www.alpine-space.eu/projects/trails

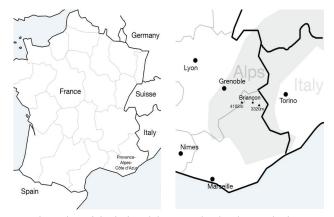
# **Background analysis**

# SITE L'ARGENTIÈRE-LA-BESSÉE

The industrial history of the area started at the end of the 1700s with mining of galena (lead) in L'Argentière and in the beginning of the 1900s, the aluminium and calcium (metal) industry arrived in the Upper Durance valley, selected due to the availability of hydroelectric power. It rapidly became the most advanced industrial sector in the area and the most important economic sector which led to a 'golden age' from 1950 to 1970. Starting in the 1970s, the heavy industry slowly died out.1

Today, there are abandoned industrial buildings from the 1930s to 1950s like offices and hangars in the center of the site, in various conditions, but with clear historical value. Parts of the long factory building with steel cladding along the Durance from the 1970s, are now used by trade companies and signs presenting the industrial history have been placed on the factory buildings and discovery trails, presenting the town heritage the town.<sup>2</sup>

- 1 c.a.u.e de Vaucluse 2018, p.7 et seg.
- 2 c.a.u.e de Vaucluse 2018, p.29 et seq.



Location of the industrial conversion landscape in the region Provence-Alpes-Côte d'Azur in North-East France



The site is bordered by the municipality of L'Argentière-la-Bessée in the North and West and the river Durance in the East

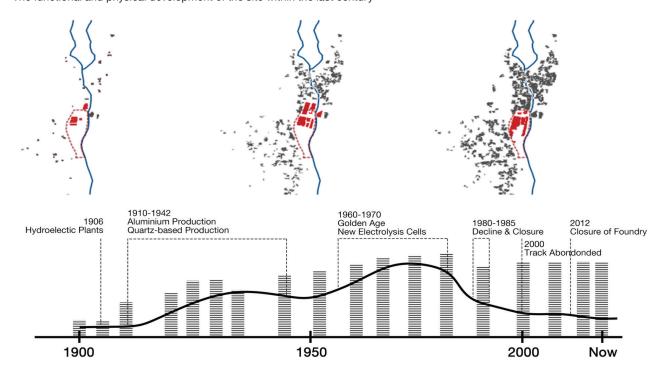
### **ECONOMIC AND SOCIAL SITUATION**

A serious loss of jobs followed the closure of the factory in the 1980s. The town population fell to 1.800 and has meanwhile risen to almost 2.400. With the loss of its economic drive the Region had to find a new direction: at the interface between sunny Provence and major Alpine summits the Region shifted therefore its economic focus from industry to tourism. In the early 1960s, the construction of the Serre-Poncon reservoir just downstream of the valley after Embrun contributed to the development of tourism during the summer in this part of the department. The largest artificial reservoir in France provided the neccessary hydroelectric energy and ensured flood control in the valley. In the 1970s the development of winter sports gained speed with the creation of over 20 ski resorts of various sizes in the two mountain ranges on either side of the valley. In parallel with this economic development of the mountainous region, two parks were created, the Écrins national park in 1973 and the Queyras

regional nature park in 1977. Preservation of the natural heritage and landscapes in the two mountain ranges made a significant contribution to the attraction of the region in terms of summer tourism.<sup>3</sup>

But with the focus on tourism the Region ist now strongly depending on the seasonal peaks of tourists in winter and summer, with the negative sideeffekt of a high proportion of seasonal jobs that are not appealing as a long-term career. So one of the biggest tasks today is to keep the younger active population in the area. Therefore, the local governments aims to develop activities and economies outside of the touristic sector. General aim is also to improve accessibility, mobility and communication.

The functional and physical development of the site within the last century



### NATURAL CONDITIONS AND LANDSCAPE

A great geological diversity is characteristic for the Écrins mountain range, with metalliferous veins and quartzite in the peripheral areas. The profile of the Upper Durance valley has steep slopes and a flat bottom, which is typical for valleys with glacial origin. Within the valley, L'Argentière-La-Bessée is located on one of the main open areas. Even in the mountainous areas the influence of the Mediterranean climate is clear as evidenced by the fairly low precipitation levels. The Upper Durance valley, is subject to a series of climatic influences, mainly determined by the altitude and the orientation of the slopes. Given the north-south oriented layout of the valley, south-facing slopes with villages and fields on the lower slopes and north-facing slopes covered by beech and fir forests, shift from one side of the valley to the other depending on where they lie in the meanders. The Durance also creates a real flooding risk for the towns and villages along the river, that's why the project area is protected by a high wall facing the river bed.4

The former factory during the 1950's



<sup>3</sup> c.a.u.e de Vaucluse 2018, p.7 et seq.

<sup>4</sup> c.a.u.e de Vaucluse, p. 11

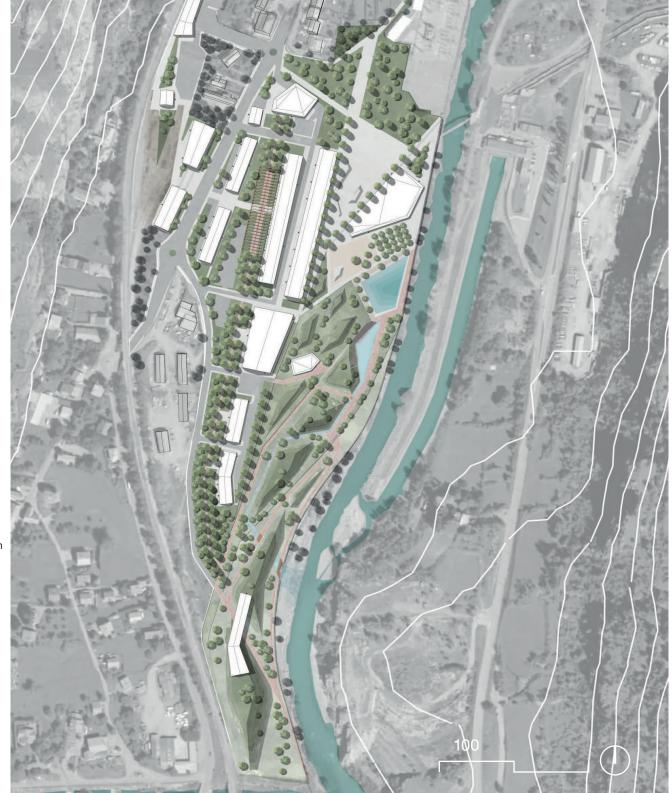
# THE CURRENT

Inga Borge, Tan Au Ca Nguyen, Fan Wen

Since the downfall of the aluminium plant, located on the Pechiney site, there has been an unclear strategy on how to move on, and the city is in a stagnant state. The region has invested in tourism, but this is neither a secure nor a stable source of income for the future. The competition is too big. A new strategy is needed to lead l'Argentière in a new direction which will be beneficial for its community and its surroundings, Les Pays-des-Écrins.

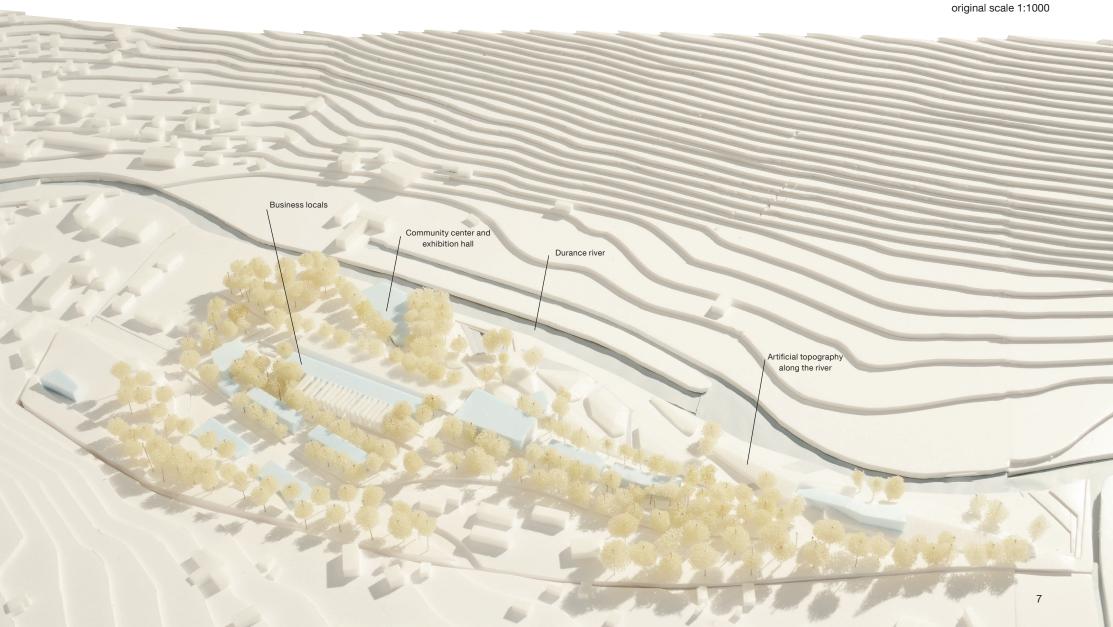
Following the concept "The Current", L'Argentiére is taken on a journey on inviting the water back into the city, and at the same time bringing economy, equity and environmental aspects into the city, creating a more sustainable and livable city for all. The challenge of making the river Durance more accessible to the community is tackeled by bringing it into the site, slowing it down, making it safer and more attractive, while at the same time dealing with the flood problems happening both within the site and further down in the river system. The solutions that will be suggested, is not only meant for l'Argentière, they are also meant to inspire other places with the same problems. Bringing in the water will not only deal with the flooding issues. It will also provide with a new identity, that is strongly needed in l'Argentière. They hold on strong to their aluminium legacy, but with the industry shutting down 30 years ago, it is time to look forward and give life in the city a new meaning. With a new and more futuristic vision for L'Argentière, both the inhabitants and the tourists will get many new opportunities, whilst also contributing into the new aspects of climate change.

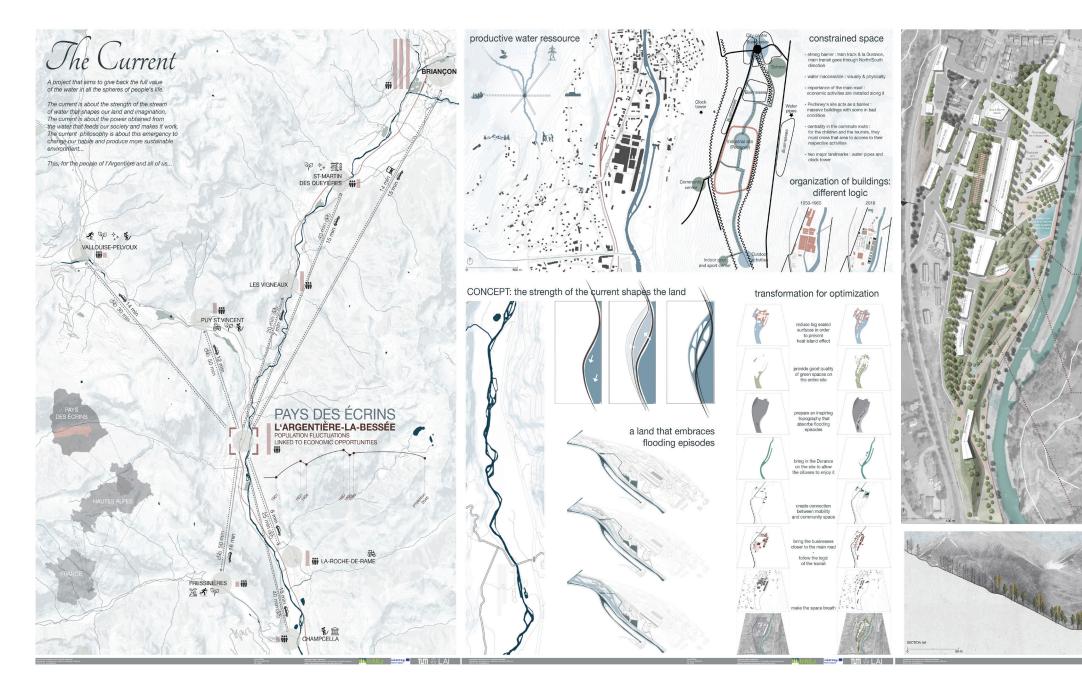
Through this project, a new and positive vision is presented for l'Argentière, showing that there is no need in losing hope for the post-industrial alpine landscapes right away.



The concept implements a process in which the Durance river will be integrated into the site, becoming accessible for people and preventing flood risks at the same time









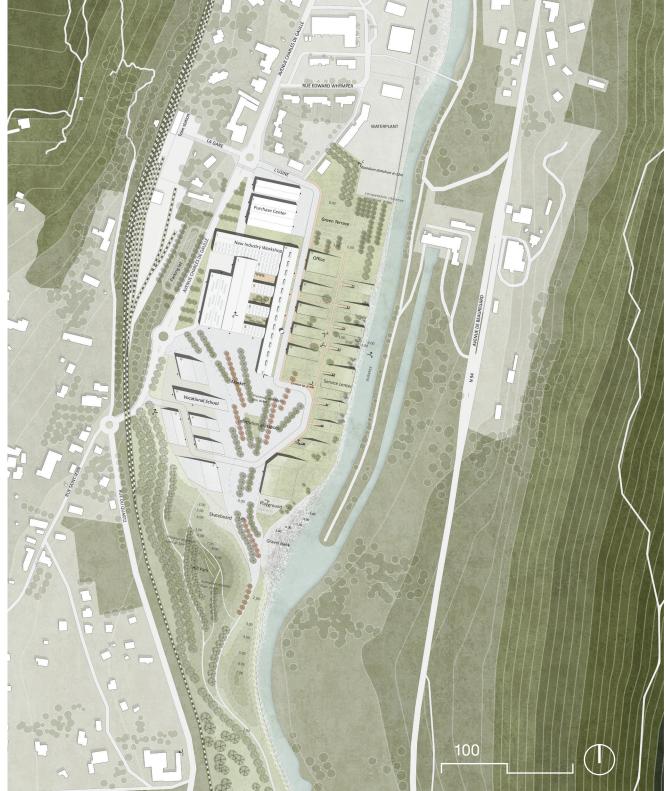
# **LAND IN SHAPE**

Qisu Li, Xiaoxiao Liu

The Pechney site could become a booster of local economy again, only through the all-over cooperation among seven villages and high-value-oriented upgradation in local sectors. On the basis of regional cooperation the analysis core zooms out to the Ecrin region. Resources of tourism, industry, education and local service are reallocated among the eight villages in the regional planning. The project area will play the role of a terminal service center with independent economic support from high-tech industry in the future.

Meanwhile the fast population turnover of Pays de Ecrins calls on a stronger sense of community belonging for people who live here, who work here and who want to find a real live here. The new design proposes a complex living center with an human-friendly industry campus and a vivid community center on site, shaping the site and surrounding valley as continuous landscape. So as to arouse inner proud and sense of belonging in people's heart by providing leisure, cultural facilities and pleasant environment for the introduced industry and people of Pays de Ecrins.

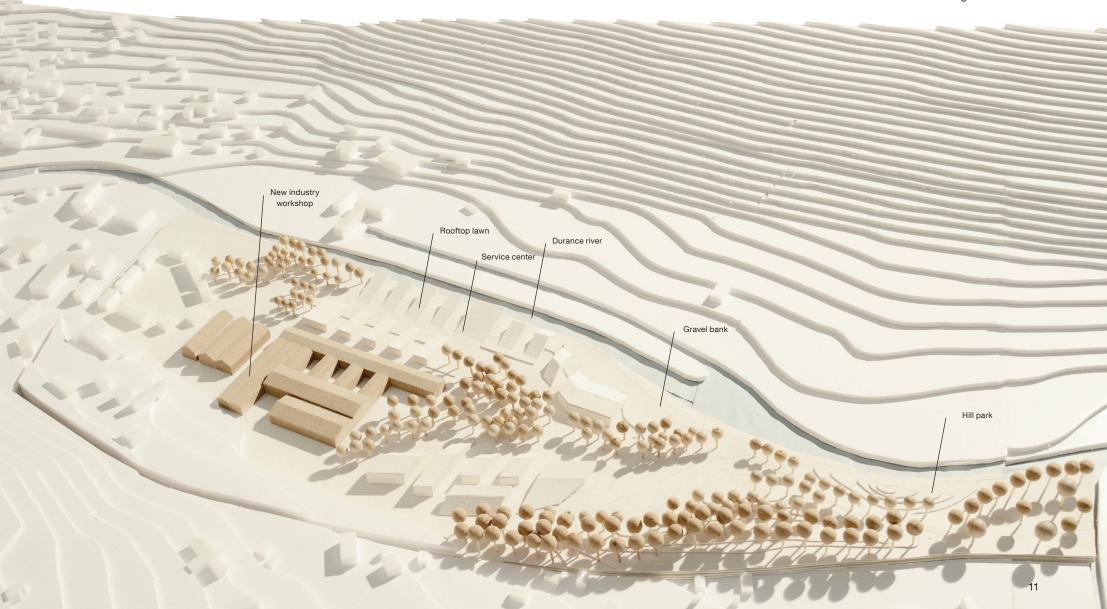
Confronted with challenging background, the project site provides opportunities in design aspect as an inviting gesture for the new era of the town. The spectacular rough valley gives people the inspiration to continue the beauty of the Alps and make the roughness of nature tangible on our site. Hence, the landform of the project site is reshaped in an artificial way to pay respect to nature and meet multiple demands as well, which might be a pioneer testified for typology and structural sectors. In this case, the economic benefit is no more the only standard on the site, while tourism is no more the only solution for this area. Sustainability, ecology, life of local people, landscape value are taken into comprehensive consideration for the new era in L' Argentière-La Bessée.

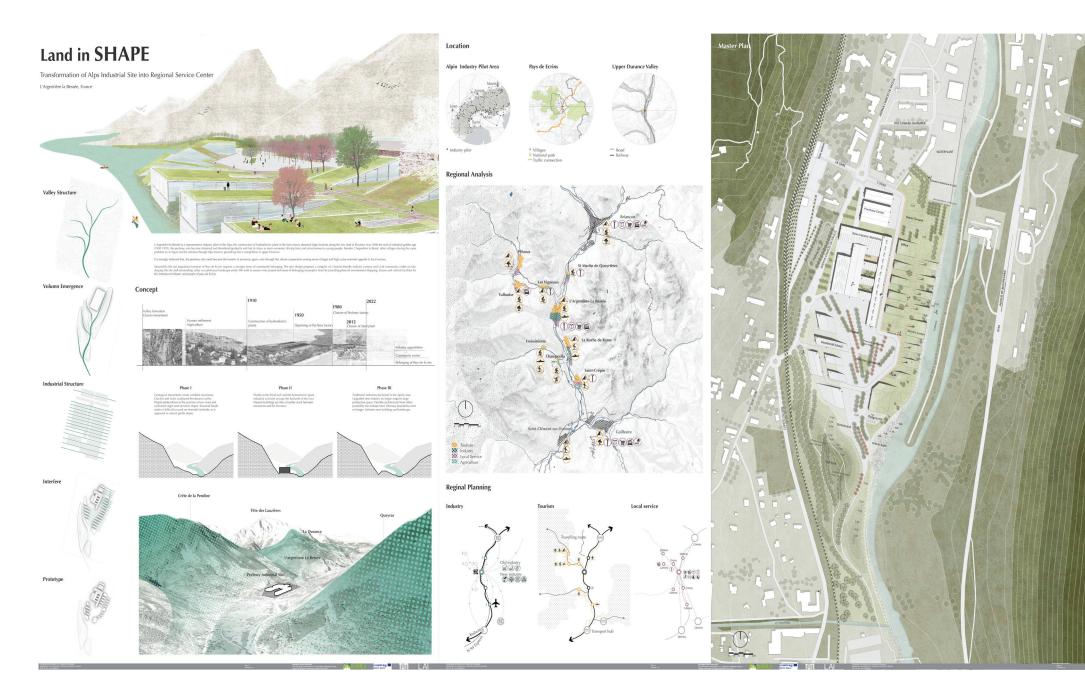


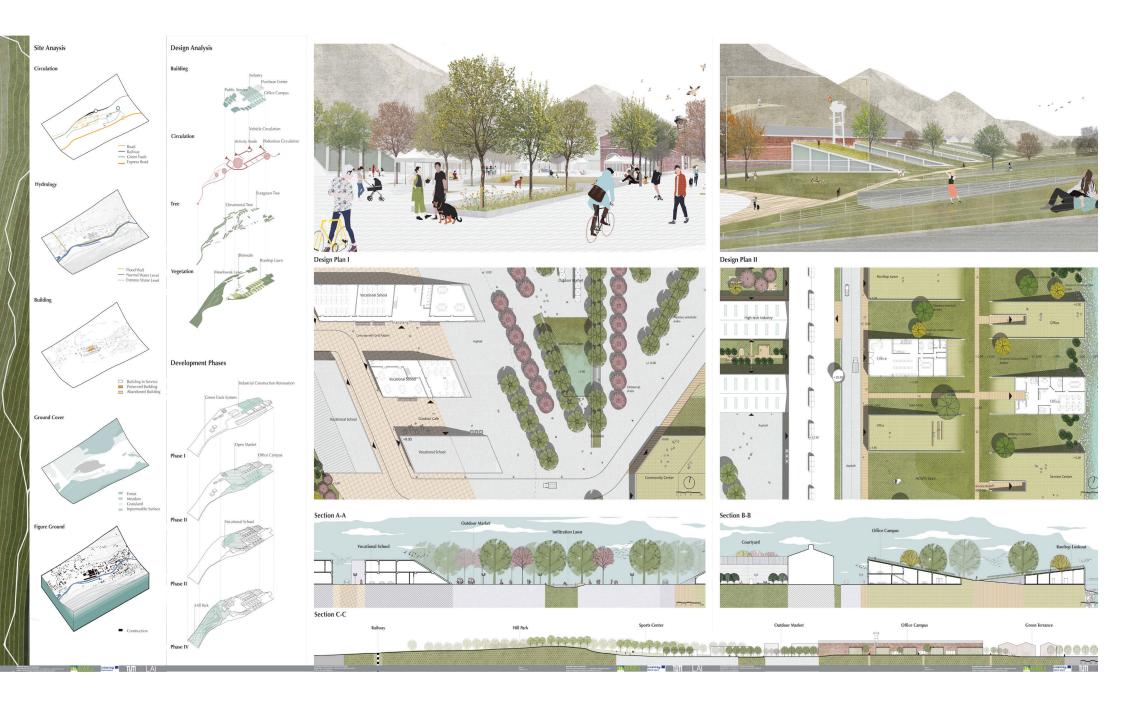
The concept transforms the site into a continuous landscape, which contains of a complex living center with an human-friendly industry campus and a new community center



original scale 1:1000







# **OSMOSIS**

Duygu Sinirlioglu, Qiman Yang

Just like many small villages in the industrial zone of the Alpine Alps, L'Argentière-la-Bessée also faces many challenges in terms of economy and social ecology. We firmly believe that only by transforming the industrial zone and transforming the surrounding environment and land use functions can we revitalize L'Argentière-la-Bessée. On the one hand, it helps to activate the local economic vitality through the transformation of the site and provide employment opportunities for the local citizens. On the other hand, it helps to transform the landscape of the site and renaturalize the old heavy industrial plants and also to create a unique Alpine landscape for the local residents. It provides a good place for social life, public events. This work designs and studies the landscape features of typical mountains and rivers and plants in the area and collected their elements.

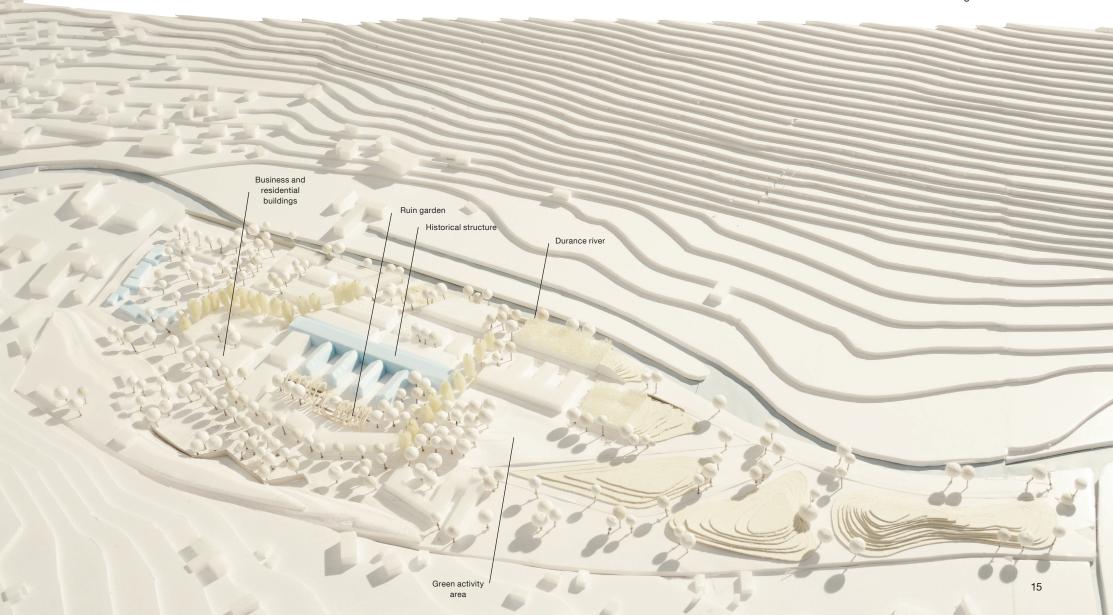
This work focuses on the mountain and river landscape elements of L'Argentière-la-Bessée, classifying and screening them and reusing them in the newly designed landscape. The design concept selected the cell membrane osmosis structure. The original site is in close proximity to the residential area, the industrial area, and the natural environment but lacks connections . The design work re-integration of the industrial area with the transition area of the residential area, the industrial area and the transitional area of the natural environment, so that the different areas thin the site not only have a close continuous connection between the spatial structure and the function. The entire design takes the structure of this industrial village as a landscape element. Together with the local architectural elements of the original natural landscape of the Alps it forms a new harmonious landscape. That is to achieve the purpose of renaturalizing the industrial brown field and providing an ideal working and living environment.

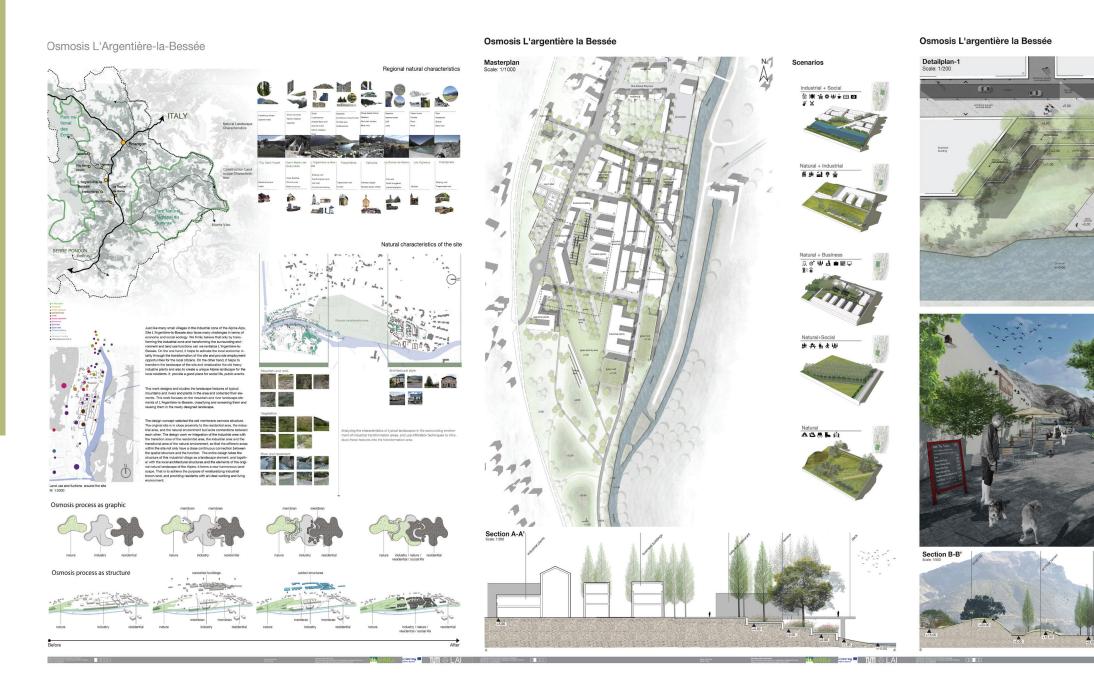


The concept tackles the lack of connections between the industrial area and the residential area by connecting the site with the transition area of the residential part, inspired by the natural process of osmosis through cell membrane structures



original scale 1:1000





# Osmosis L'argentière la Bessée Osmosis L'argentière la Bessée Section B-B'

# **EAGLES, BOLTS & BRICKS**

Minghui Chen, Tanja Mauer

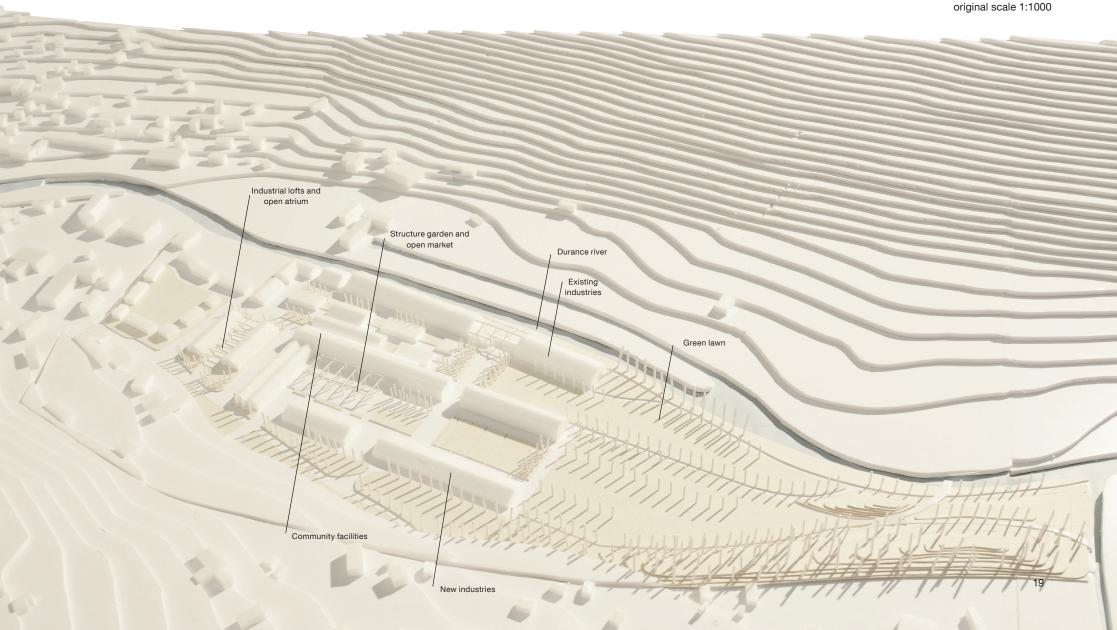
A small village in the French Alps has undergone many changes in the past hundred years. Within recent economic growth, the lack of social activities, and large unused space for future development, has left the municipality of L'Argentière-la-Bessée looking for the best solution to attract new companies to the site, deal with social problems and move the wild alpine flora and fauna closer to the city centre. This site has many potential areas that can be developed into attractive places, not just for tourism but mainly for the local people, to have some kind of meaningful relation to the site and there home town.

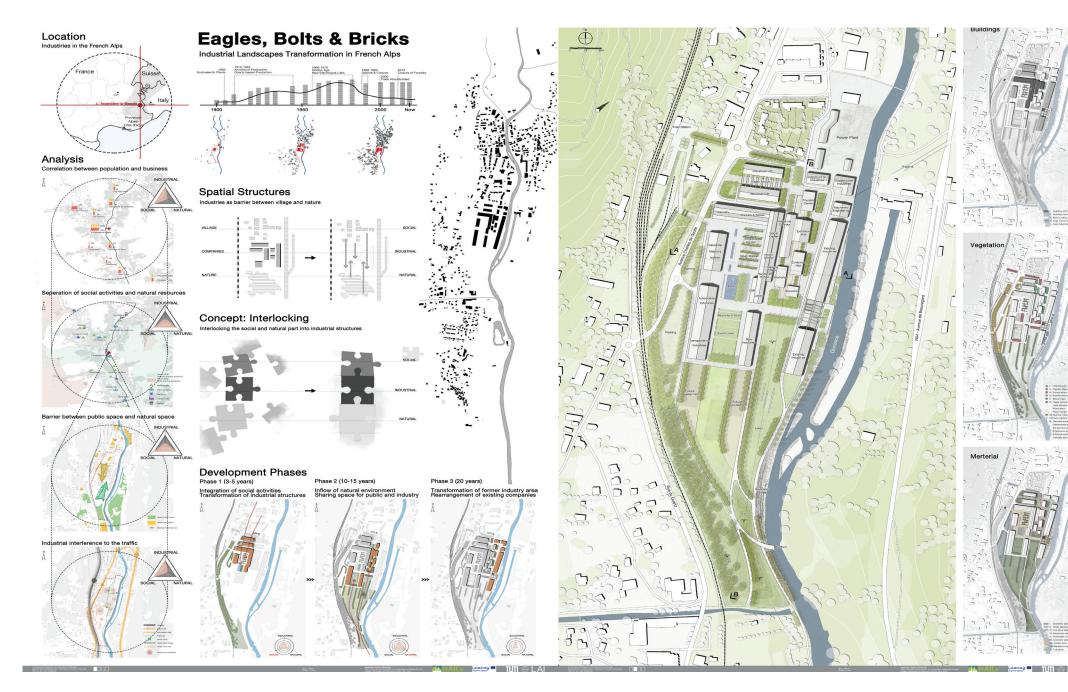
"Marie lives in L'Argentière-la-Bessée. Her story about the village, the site and the process the region currently undergoes, is representative for the concerns and hopes of the community of L'Argentière-la-Bessée according to the future development of the site. "When my husband Louis got a job offer for a CEO position of a small dyeing company in the remote village of the Alps, I couldn't imagine leaving Nice and the sea side. But Louis was very persistent and our family of four decided to move. Our kids were amazed by the idea of mountains and to them it quickly became an adventure of a lifetime. With the position Louis got an apartment in a newly build post-industrial loft. He quickly got used to a new schedule and I started working in a small book shop close by the dyeing company. On our first evening we went to the main public square, it was so lively and it wasn't long for the children to find some new friends in the social centre. Wile to two of us went for a glass of wine in a nearby café, we admired the structure garden and the feeling of nature being present in such an economically important location. As a family we often have picnics on a lawn close to the river banks and enjoy the sound of River Durance. I have to admit, I no longer miss the sea side or the fast life of a big city. After ten years of leaving in L'Argentière-la-Bessée we do consider it our home and we started to feel a strong sense of belonging to the community, its industrial heritage and the future we help to create."



The concept is based on the theory of the jigsaw puzzle by merging the edges of the induatrial site with its diverse context and implementing the overflow of three different activities which create the new structure of the site within the transformation process









# **Findings and Prospect**

Together with the fascinating landscape of the high Alps, its narrow valley and its proximity to the Durance river, the big scale of the former aluminium plant offered many complex challenges for the students to master. As there were already new usages established in some of the buildings that must be taken into consideration, the site was no classical brownfield, but a site already in transformation. So one of the first steps of the project, after formulating problems and aims, was to evaluate the given built structures and to decide which buildings could be kept, which should be transformed and which dismantled. Also the question of possible usages popped up throughout the whole design process. Spending time on site and to deal intensively with the place has always been one of the most important approaches in the analysis phase and helped the students in this regard as it also generated a solid basis for the following design process.

Within 15 weeks, the master students worked intensively in the studio, building models, drawing plans, writing texts and discussing their approaches regularly with Prof. Dr. Udo Weilacher and his team. A special benefit to the discussion was the fact, that the group consisted of many different nationalities: Canadian, Slovenian, Turkish and Chinese master students contributed their individual experiences and backgrounds to a broad and critical discussion, that led in the end to a diverse range of possible solutions. Although the projects may show different levels of feasibility, they definitely encourage a valuable discussion about the future for the Pechiney site in L'Argentière-la-Bessée.

Our special thanks go to Thomas Kleitz and Claire Baradez from the CAUE 84 de Vaucluse for supporting us in organizing the excursion as well as joining us during our stay, together with their collegues Alain Mars and Annuncia Trischitta from the CAUE 05 and to Stéphanie Davin Poncelet from Communauté de communes du Pays des Ecrins (CCPE) for offering us the Maison du Canton for the workshop. We also like to thank the major Patrick Vigne for taking part at the final discussion as well as the Major of La Roche-de-Rame Michel Frison who gave the members of the Chair the possibility to visit the second pilot-site 'le planet' in La Roche-de-Rame. Finally we would like to thank Prof. Günther Vogt from the ETH Zurich for being our guest critic at the final presentation of the student's projects and providing is highly valuable feedback.

guest critic: Prof. Günther Vogt, ETH Zurich









The design studio of the TU Munich with project partners and representatives of the municipality L'Argentière-la-Bessée.

from left to right, top row: Thomas Kleitz, Fan Wen, Tanja Mauer, Claire Baradez, Alain Mars.

from left to right, central row: Xiaoxiao Liu, Qisu Li, Minghui Chen, Marcello Modica.

from left to right, bottom row: Duygu Sinirlioglu, Qiman Yang, Inga Borge, Tan Au Ca Nguyen, Martin Augenstein, Annuncia Trischitta, Stéphanie Poncelet, Professor Udo Weilacher.

### Sources

c.a.u.e de vacluse: WP T1 Pilot Profiles, vignon FR, 2018

Weilacher U., Modica M. (2019). "Transforming Alpine Industrial Landscapes". In: TUM Department of Architecture (Ed.): Review 2018-2019. München; pp. 52-53.

### **Image Credits**

- P. 1, Picture Remnanats of former aluminium plant with the characteristic tower and the Alps in the background, Foto: Martin Augenstein
- P. 2, Graphic Partners involved in the trAILs project, Graphic: Marcello Modica
- P. 3, Picture Design Studio site visit Péchiney, Foto: Udo Weilacher
- P. 4, (left) Maps of site-location in the region Provence-Alpes-Côte d'Azur in North-East France, Graphic: LAI
- P. 4, (right) Aerial Picture Péchiney in context of L'Argentière-La Bessée and river Durance, from: Google Maps https://www.google.de/maps/place/05120+L'Argenti%C3%A8re-la-Bess%C3%A9e,+Frankreich/@44.78 85914,6.5591249,1029m/data=!3m1!1e3!4m5!3m4!1s0x12ccab74b3468e59 :0x40819a5fd97aaa0!8m2!3d44.792924!4d6.559093 (04.11.2019)
- P. 5, (bottom, left) Graphic Development of the site within the last century, Graphic: Tanja Mauer, Minghui Chen
- P. 5 (bottom, right) Picture The aluminium plant during the 1950's / Vue aérienne de l'usine Pechiney de L'Argentière en 1951 © IHA Collection photographique de L'Aluminium français
- P. 22, (bottom, left) Guest Critic Günther Vogt during final presentation Foto: Jonas Bellingrodt
- P. 22, (bottom, middle) Students with Günther Vogt during Final Presentation Foto: Jonas Bellingrodt
- P. 22, (bottom, left) Guest Critic Günther Vogt and Professor Udo Weilacher during Final Presentation;

Foto: Jonas Bellingrodt

- P. 23, Design Studio with representatives of, Foto: LAI
- P. 25, Design Studio at a lookout point above Péchiney site,

Picture: Martin Augenstein

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Prof. Dr. sc. ETH Zürich Udo Weilacher

Emil-Ramann-Straße 6 85350 Freising Weihenstephan www.lai.ar.tum.de

# Supervision:

Prof. Dr. sc. ETH Zürich Udo Weilacher M.A. Martin Augenstein M.Sc. Marcello Modica Bernhard Schöner (modelling)

# In Kooperation with:

trAILs

# **Guest Critics:**

Günther Vogt (Professor ETH Zurich, Founder of VOGT Landschaftsarchitekten)

### Participants and Authors:

Inga Borge, Minghui Chen, Qisu Li, Xiaoxiao Liu, Tanja Mauer, Tan Au Ca Nguyen, Duygu Sinirlioglu, Fan Wen, Qiman Yang.

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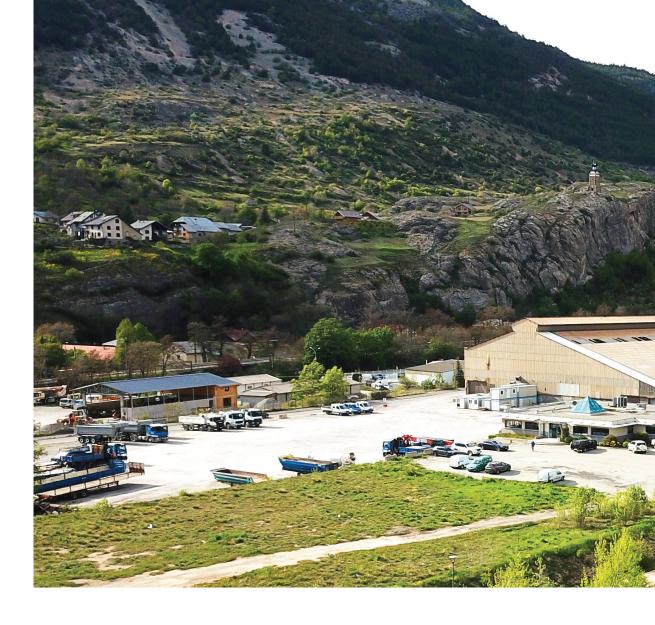
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Chair of Landscape Architecture and Industrial Landscape Department of Architecture at Technical University of Munich Prof. Dr. Udo Weilacher