

UNWTO 10TH WORLD CONGRESS ON SNOW AND MOUNTAIN TOURISM

21-23 March, 2018, Escaldes-Engordany, Andorra

The MonViso Institute

**A real-world mountain laboratory
for research, education and entrepreneurship
in sustainability transitions and systemic design**

Ostana, Valle Po, Italy

Tobias Luthe

Web of Life



Università
della
Svizzera
italiana

Measuring, Implementing and Communicating Sustainability in Mountain Tourism

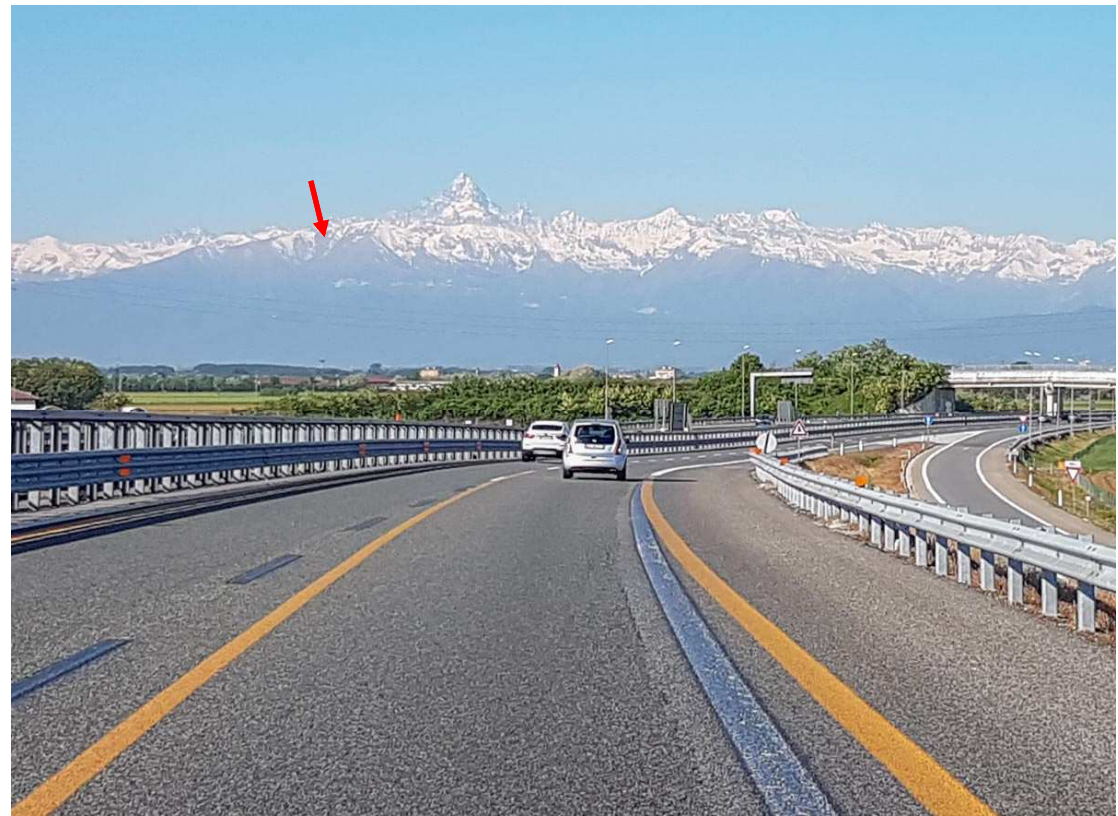
Building a meta-network for comparable assessment and communication of sustainability

 Search



 **GROWN**
Outdoor Creativity Lab

**MonViso Institute – evolving campus is located in Ostana,
Occitan Alps at the border of Italy and France**
Valle Po, origin of the river Po, at the foot of Monte Viso (3842m asl)





OOSTANA-OOSTANO



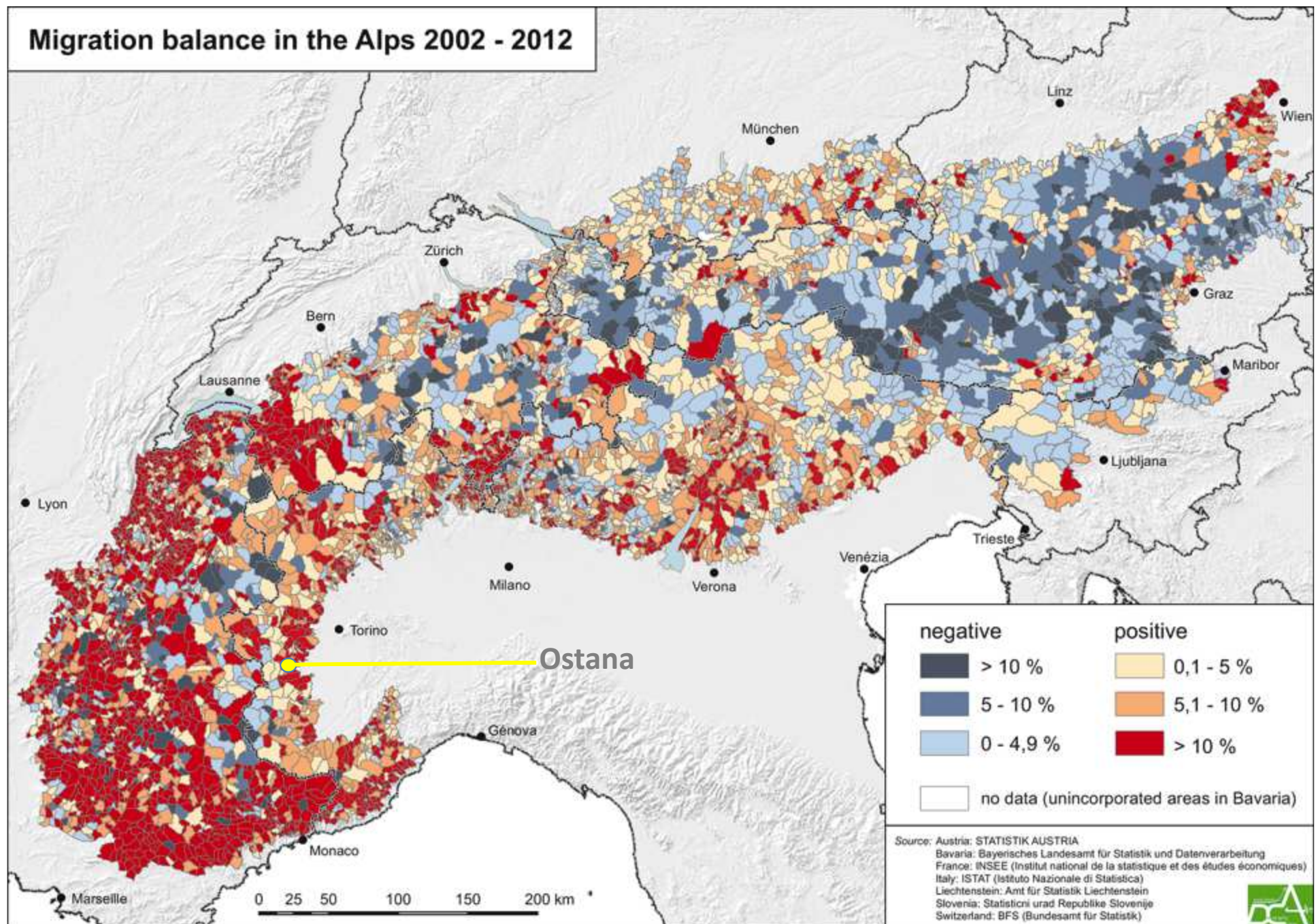
Tobias Luthe Photograph

Crisis and system breakdown

Graphic 1. demographic changes of Ostana municipality from 1861 to 2011 based on Italians Census records



graphic by Maria Anna Bertolino on Istat data



Löffler, R. et al. (2014). New Highlanders in Traditional Outmigration Areas in the Alps, JAR, 102-3

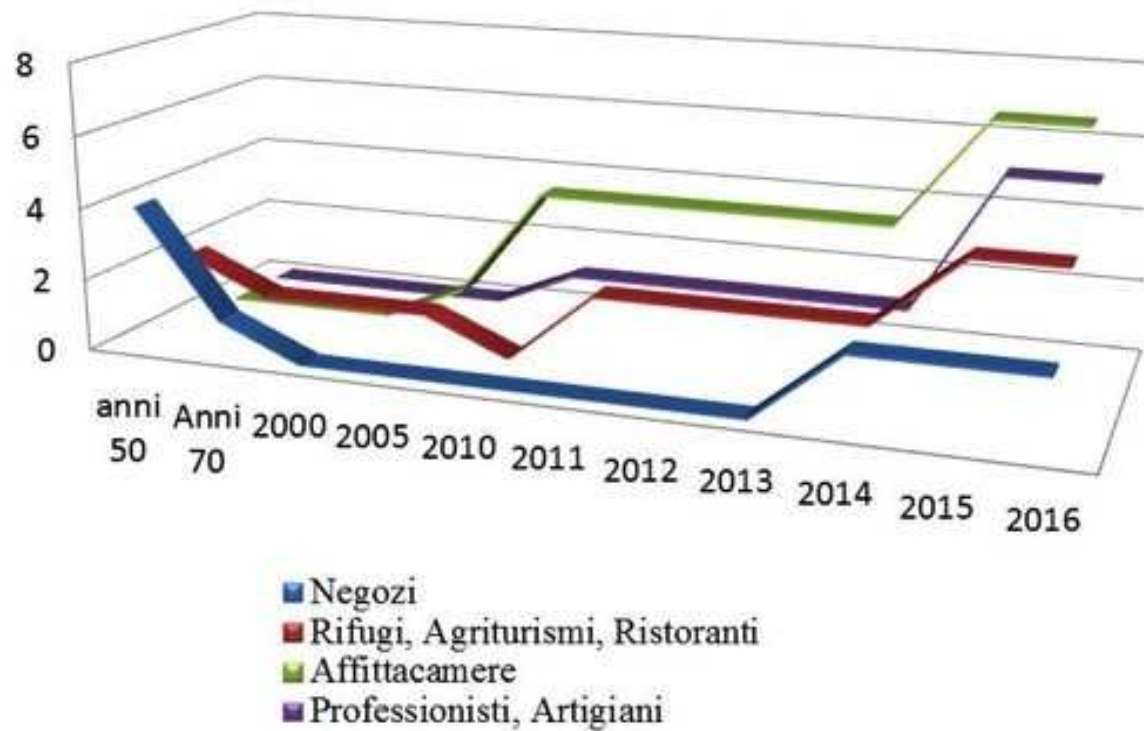


Abandoned areas need to regain a resilient economy

Smaller, more diverse, flexible, adaptive > circular

Strengthened re-organization after crisis

La rinascita di Ostana in cifre: le attività produttive.





Systems Transformation

Pioneering spirit – intrinsic motivation – systems thinking – wide knowledge base



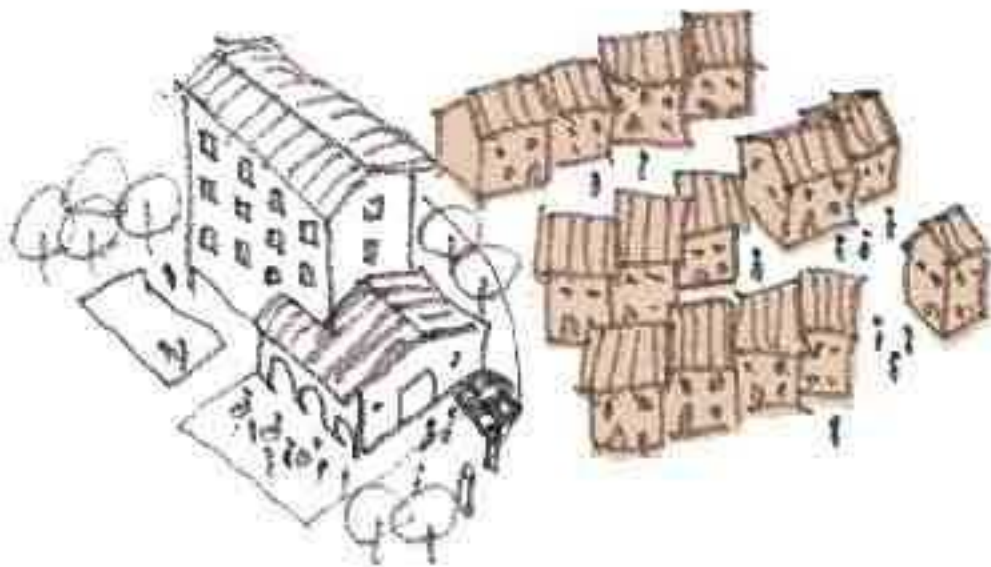
Rebuilding a community – the social hub and meeting point
Rifugio Galaberna for guests and the local community



Rebuilding a community – poly-functional building
a cultural center for local people, visitors, entrepreneurs,
co-workers and group activities

Systemic design of networked hospitality and accommodation

Albergo Diffuso – many small (private) rooms connect to a flexible accommodation network



Ordinary Hotel



Albergo Diffuso



Associazione Nazionale
ALBERGHI DIFFUSI

<http://www.alberghidiffusi.it>

The MonViso Institute

Vision & Goals



TRANSFORMING AN ABANDONED PLACE
INTO A LIVING LABORATORY FOR SUSTAINABILITY

[Learn about Serre Lamboi](#)

The MonViso Institute

Vision & Goals

DESIGNING A PLAYFUL HUB

FOR RESEARCH, EDUCATION, ENTREPRENEURSHIP IN SUSTAINABILITY

The MonViso Institute is advancing and promoting sustainability through research, education, design and entrepreneurship, by collaborating in international research projects, by offering courses and trainings on-site for local practitioners and to international university student groups, by providing design solutions, and through entrepreneurial initiatives.

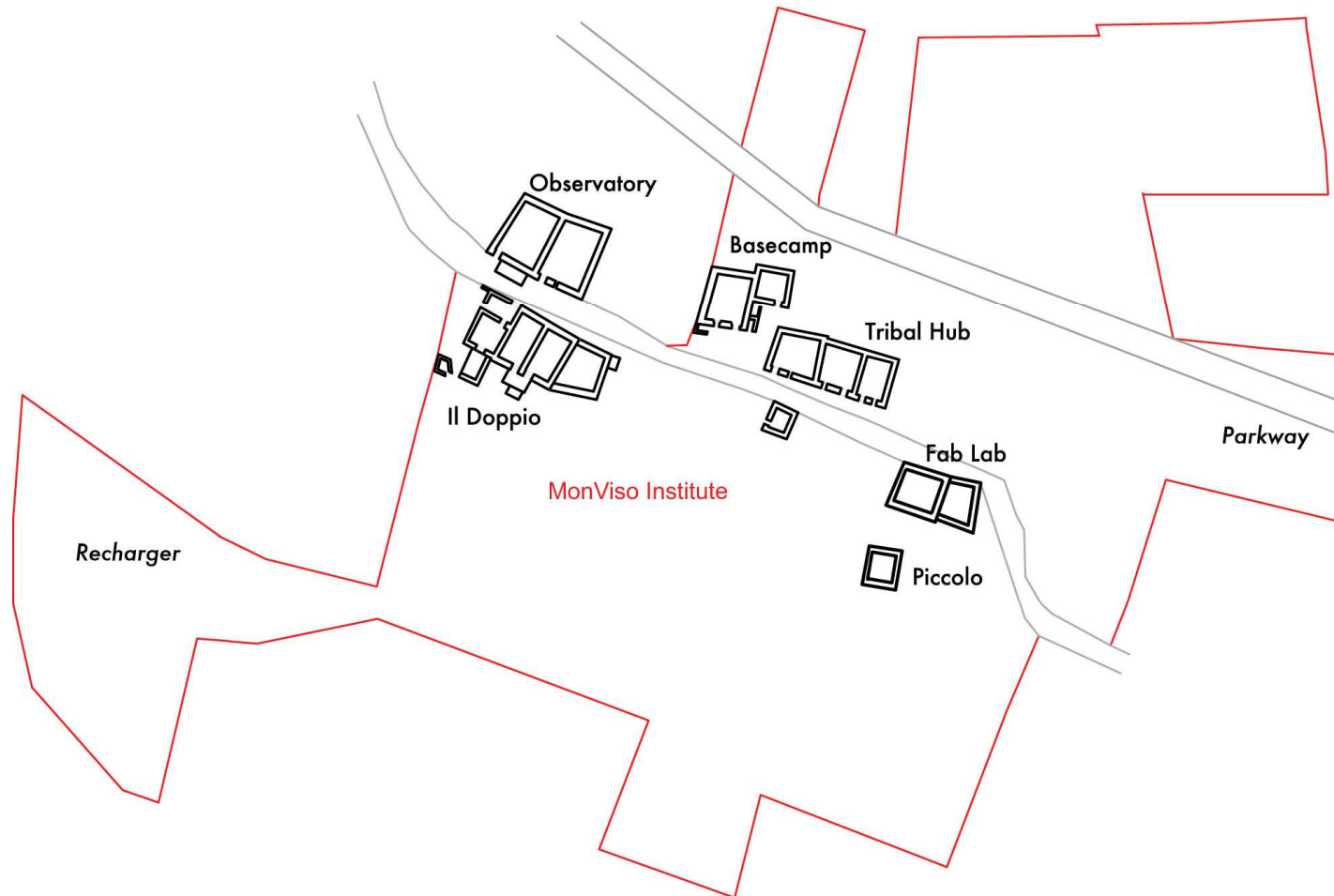
The MonViso Institute

Vision & Goals

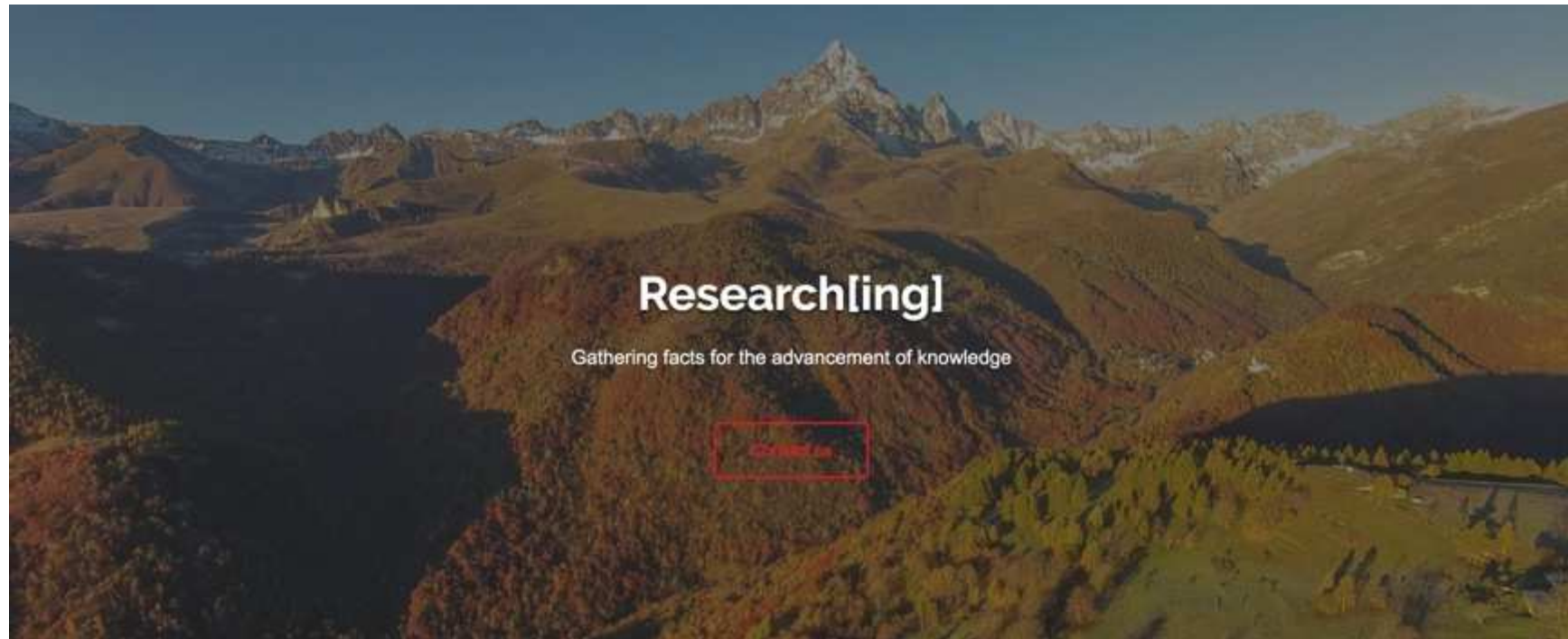


The evolving campus of the MonViso Institute

1450m asl



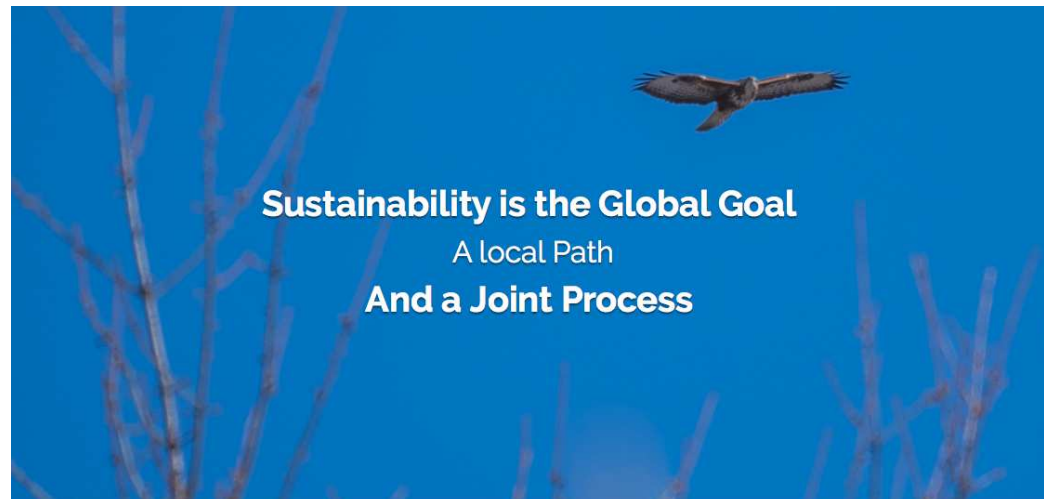
Transdisciplinary real-world laboratory research at the MonViso Institute



Resilience of mountain social-ecological systems...Alpine Urbanism...Smart cities...Energy transition...Forestry and wooden constructions...Cradle-to-cradle design...Responsible tourism...Environmental change...Circular Economy...Ecosystem Services...

Communicating and Learning about Sustainability

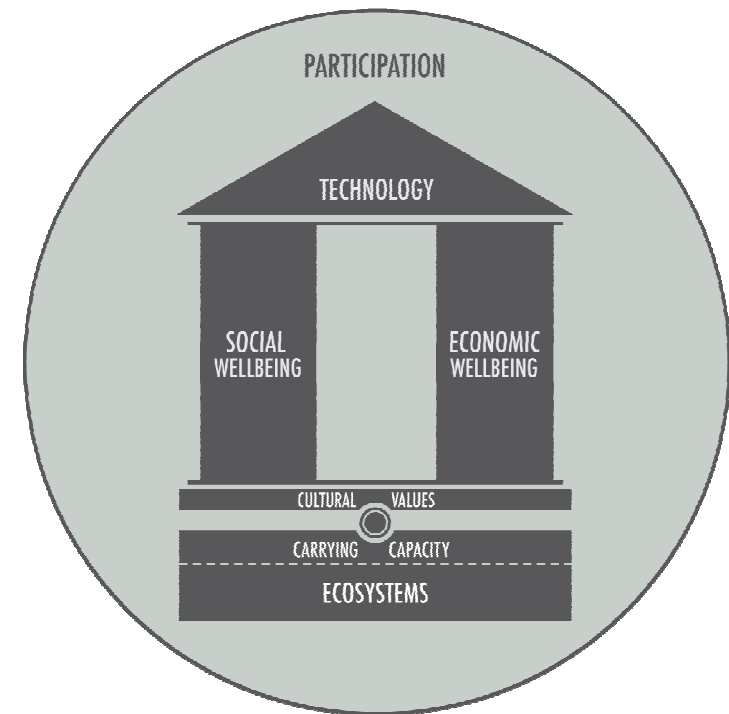
The *SustainaBuild* six-dimensional sustainability concept



FINDING A BALANCE

Live Happily, Respect Nature

The concept of sustainability is hugely complex, but let's try to keep it simple: we understand sustainability as living a good life without hurting others; even more so, living a happy life while contributing net positive to society and the environment. We have the responsibility to inform ourselves, to engage, to listen, to cooperate. The UN Global Sustainable Development Goals (SDG) are a universal directive, and we need to break them down to the local, the collective, the personal level. At the MonViso Institute, sustainability is an experience, and adventure, a real-time act of compromises and balancing decision making - under uncertainty. Sustainability is fascinating - living healthy on a low environmental footprint, preserving the beauty and genius of nature, respecting local cultural values as much as oneself, finding design solutions inspired by nature, meeting pals alike, making an income with an honest mind. While we engage in science of and for sustainability, we showcase practical solutions on the MVI campus that everyone can explore, critically question, experience, and share.



MVI Systemic Design Principles



Be systemic

Everything is connected - think and design systemic to take more effective action in tackling wicked sustainability challenges.



Think big & act direct

Our challenges are globally connected but require direct, local action. Walk the talk.



Find Leverage

Action is urgently needed - being efficient is good but not enough. Go for what is most effective, having most leverage.



Use low tech & high brain

Use low tech, simplified, passive and mechanic solutions where possible, for less embodied energy and easy maintenance.



Learn from Nature

Nature offers genius design solutions with billions of years in evolution, functioning in closed systems, where no waste exists.



Respect local knowledge

Often, local people know their terrain and can tell us solutions that work, if we listen carefully.



Re-fuse, Re-use, Re-cycle

Less is more. Let's re-think consumption and work towards zero emissions and zero waste.



Design with carbon

Products and Services designed to minimize carbon flows over entire life cycles may well be the most effective tools to slow down climate change.



Transfer knowledge and build capacity

Share trusted knowledge and valuable experience to involve, stimulate and engage others to support the sustainability transition



Be transparent

Facts are facts, there is no alternative truth to the current state of knowledge. Show your data and carefully interpret it.



Have fun do good

Follow your instinct and enjoy contributing to a net-positive impact.

Data collection – climate, social-ecological development, tourism

Top-down quantitative data collection & bottom-up qualitative experiences

A wide-angle photograph of a mountain landscape at sunset. The sky is filled with dark, heavy clouds, with a bright orange and red glow from the setting sun visible behind the mountain peaks. The foreground shows a dense forest of green trees on a hillside, leading up to a mountain ridge. The overall scene is dramatic and atmospheric.

OBSERVATORIES

The MVI is a data collection hub and positioned as part of an international mountain observatory network

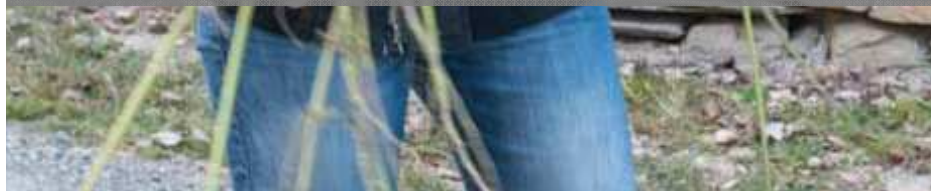
Experimenting with new mountain life styles – *Alpine Urbanism*



Why did you return to the mountains –
and what will keep you here?



New Highlanders
(Löffler et al. 2014)



Local mobility experiment with USI Lugano

Real-world learning of a Master student course in Ostana



Università
della
Svizzera
italiana

USI
Master in
International
Tourism



Comunità
di
Ostana

Ostana: Esperimento Sulla Mobilità

Sondaggio per Migliorare la Sostenibilità
del Turismo di Montagna



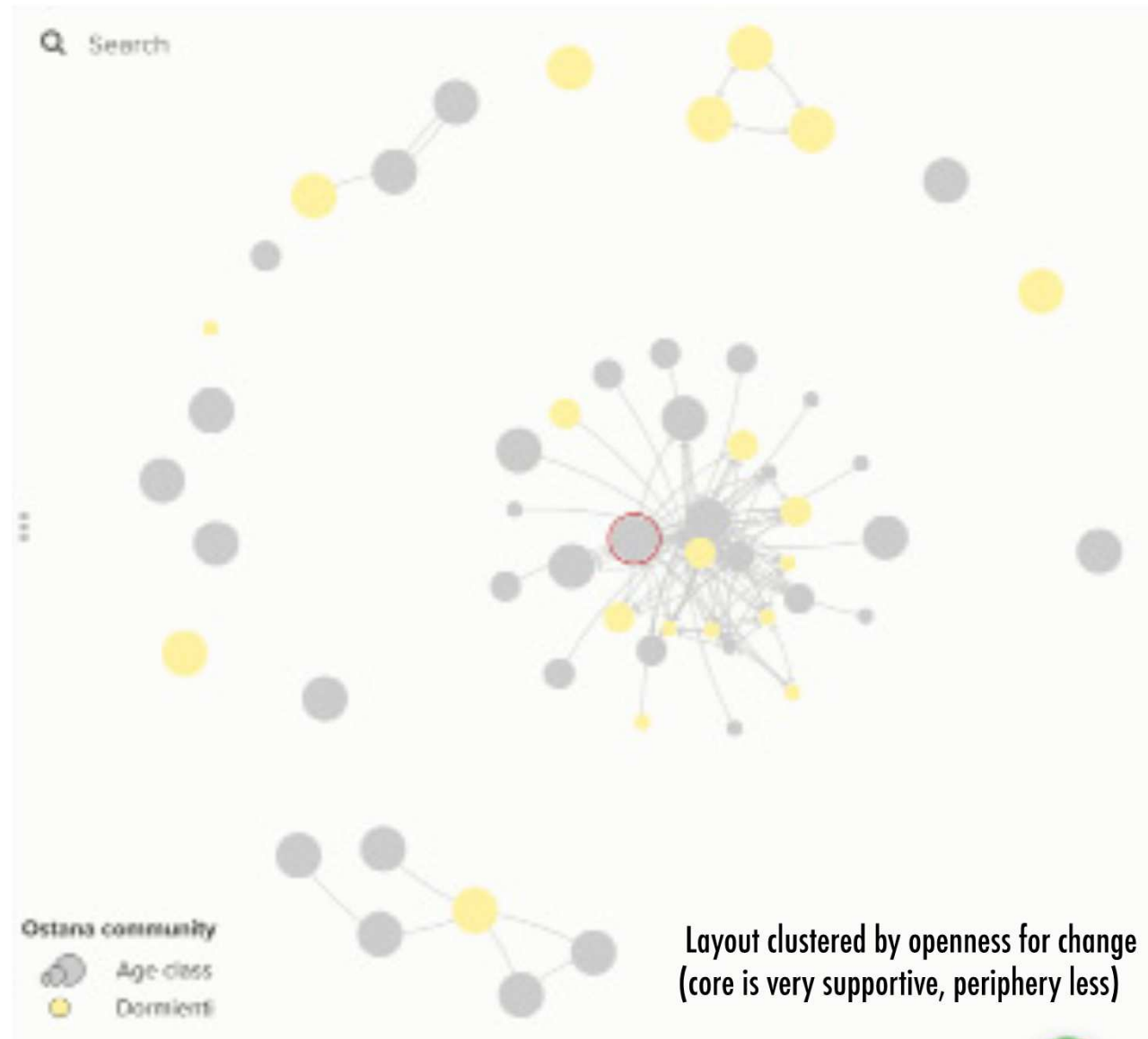
Demonstrating the vision before changing the existing

Gain mutual respect and TD support, long-time – involving MSc students



Social complexity – Master student research

Mapping the innovative potential of the Ostana community network (N=44)



Rich course program 2018 merging international scope and diversity *with local knowledge and place-based experiences*

<p>07 MAY</p> <p>MONVISO MOUNTAIN OFFICE WEEK COWORKING - BRING YOUR WORK UP TO THE MOUNTAIN</p>	<p>26 MAY</p> <p>UNIVERSITY OF LUGANO MASTER COURSE TRANSDISCIPLINARY MASTERS COURSE IN SUSTAINABLE TOURISM, COMMUNICATION AND ECONOMICS</p>
<p>02 JUN</p> <p>BUILDING WITH HEMP, LIME AND CLAY LEARN TRADITIONAL BUILDING TECHNIQUES WITH INDUSTRIAL HEMP</p>	<p>20 ⁰¹ AUG JUL</p> <p>FEATURED</p> <p>72H PERMACULTURE DESIGN COURSE INTERNATIONAL PDC IN PARTNERSHIP WITH THE GERMAN PERMACULTURE ACADEMY</p>
<p>20 AUG</p> <p>MONVISO MOUNTAIN OFFICE WEEK COWORKING - BRING YOUR WORK UP TO THE MOUNTAIN</p>	<p>15 SEP</p> <p>ARRIVAL OF TRANSOCCITAN_1 BIKE SAFARI MONT BLANC TO MONTE VISO - A SELF-EQUIPPED BIKE ADVENTURE FINISHING EVENT IN OSTANA</p>
<p>23 SEP</p> <p>DEPARTURE OF TRANSOCCITAN_2 BIKE SAFARI OSTANA, MONTE VISO, TO FINALE LIGURE AT THE MEDITERRANEAN SEA</p>	<p>24 SEP</p> <p>MONVISO MOUNTAIN OFFICE WEEK COWORKING - BRING YOUR WORK UP TO THE MOUNTAIN</p>
<p>20 ²³ OCT</p> <p>VIEW FROM ABOVE FLY DRONES AND LEARN TO USE CRITICAL SYSTEMS THINKING TO TACKLE SUSTAINABILITY CHALLENGES IN A WONDERFUL ALPINE SETTING</p>	<p>27 ²⁸ OCT</p> <p>DE-CONFERENCE RSD7 A SLOW-DOWN AND CONNECTING WEEKEND RIGHT AFTER RSD7 CONFERENCE IN TORINO</p>

Tradition meets Innovation

Challenges? Technical Engineering Design – Social Innovation



Accelerating technological innovation
processes

testing and demonstrating building and
energy solutions in real



A modular combination of traditional
knowledge application

and modern plug-&-play elements
connecting research and industry

Traditional systemic design lessons

Keep the existing where possible



Cradle-to-cradle design solutions



Systemic Design – Evolution of Tradition



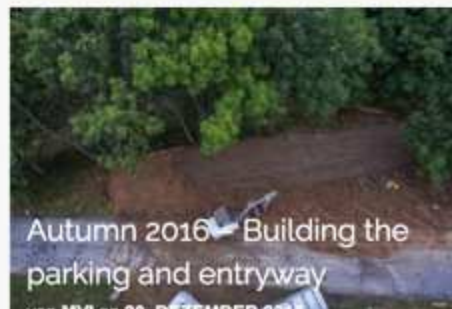
Visual bottoms of stone plates vs. grey coloured PV cells

Modern demand (overhang, insulation,..) requires new flexibility



Transformation Journal

Transparency and Participation



Promoting the nature- and sports tourism potential in the region

Connecting traditional Occitan culture with international inspiration

Ski traverse the wildest section of the European Alps through the unique culture of Occitania: From Mont Blanc (France), the highest mountain of the Alps, to Monte Viso (Italy), the highest peak of the Southern Alps referenced in Dante's Inferno.

GROWN
Outdoor Creativity Lab

TransOccitan ski safari
Mont Blanc to Monte Viso

270km on skis - crossing 17 ski areas
30'000m vertical downhill
3'000m ski mountaineering uphill

Ski the largest and most famous ski areas of France, and the smallest and most hidden treasures in forgotten valleys of the Italian border region. Tour through wild terrain, experience overnights in mountain refuges and boutique hotels, and dine with cheese and wine.




SUMMIT

POWDER MOUNTAIN



THEGUARDIAN.COM

Welcome to Powder Mountain – a utopian club for the millennial elite

When these young entrepreneurs bought a remote ski resort in Utah, they dreamed of an exclusive, socially conscious community. Is this...

TransOccitan ski safari – from Chamonix Mont Blanc to Ostana Monte Viso
350km on skis – 17 ski resorts – 3 days ski mountaineering – 8 days total



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Re-growing industrial hemp as an incubator for designing a circular economy

Building insulation fabric medicine cosmetics food paper soil improvement
tourism engineering (fibres, bio-plastics)

Hemp fibres from the MVI field in Ostana

Merging tradition with sustainable innovation



Winning two eco design prizes at ISPO 2018, Munich



The Consumer Choices We Make

Up to 50% reduced GWP while stimulating a circular economy in mountain regions

The Grown Hemp Ski "MonViso edition"

Regenerative design - 100% hemp fiber-Paulownia wood composite
Minimal ecological footprint - renewable materials with 0km potential
Positive contribution - restoring circular mountain economies



Systemic Design: Research, Doing, Experience

A typical RWL learning context in designing eco-skis, on-site



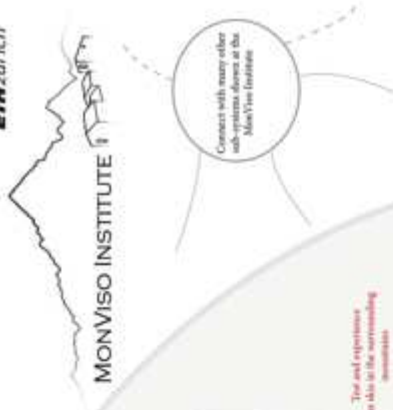
The MonViso Institute
 44° 69' 70.99" N 7° 18' 98.87" W 1450m asl
 Ostana, Val Po, Piedmont, Italy
monviso-institute.org



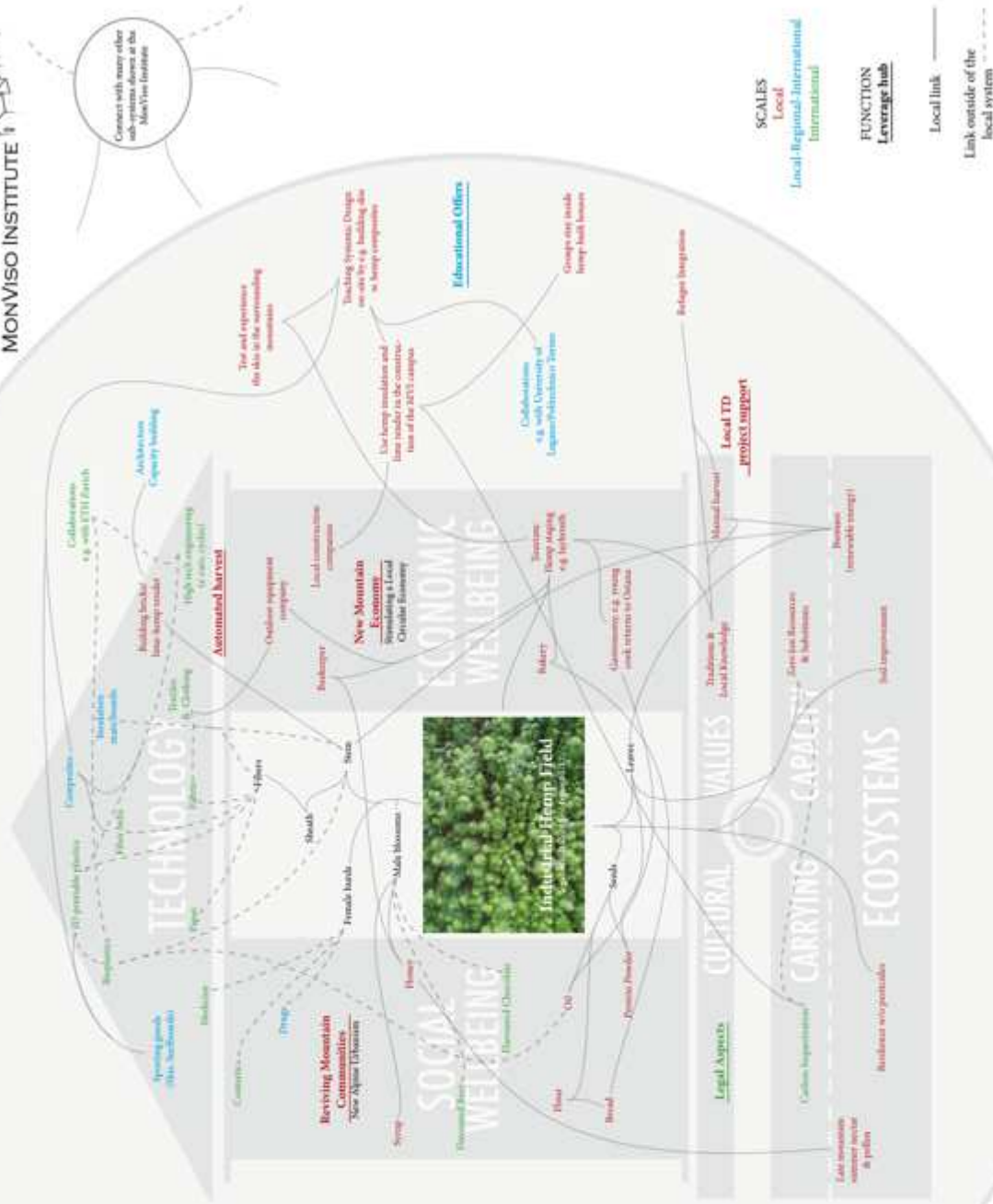
The MVI is a collaborative, interdisciplinary, systemic design initiative. YOU are invited to contribute with ideas, work force, funding, contacts, group visits and TD projects. contact@monviso-institute.org

A Real-World Mountain Laboratory for Sustainability Transitions and Systemic Design

Dr. Tobias Luthi, ETH Zurich, EDAC, Systemic Design for Sustainability, Email: luthi@ethz.ch
ETH zürich



PARTICIPATION



Setting the hemp system in context with sustainability transitions by arranging the nodes on the six-dimensional SUSTAINABUILD concept. Luthi T. and M. von Krieshuber. 2016. Building common ground in natural models of sustainability. Sustainability: The Journal of Record 9(3):247-254. DOI 10.1089/sus.2016.29068.tl.

Invitation to Co-Design:
 add a pencil and
 add nodes/links
 on the poster

Scales of Transformations

Abandoned houses – compound – community – valley - region



Meet, Experience and Co-Design
place-based systemic sustainability transitions
to incubate change-making in other places.



Grazie mille – Danke – Thanks – Merci – Tonte Grasie

monviso-institute.org