Venice: the death & life of the great Italian city

a way foward

Farrow

The Venice Aqua-emerald Archipelago Plan proposes a farsighted and practical way for the island city to address the 'two floods' which have had devastating effects over the last 50 years: floods caused by global warming and rising sea levels; paired with the flood of people and mass tourism, which has made the physical and social fabric of the city extremely brittle. Then came Covid-19 which brought the city's economy to its knees.

This document is a summary of the research and planning completed with the Universita' IUAV Venezia and Professor Davide Ruzzon, Claire Daugeard, Tye Farrow and Carolin Vogelei titled "A Saluto-Systemic Approach to Urban Design: An Explorative Study on Venice", and further developed and elaborated by Farrow Partners Architects.

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Image: the Venice aqua-emerald archipelago of new and existing islands.

The plan includes the creation of a 32 kilometre new waterfront urban park destination created out of a an archipelago necklace of new and existing islands, acting both as the as a rising sea level barrier as well as a social asset for the dense, ancient city.

Image: the Venice aqua-emerald highlight necklace islands

Venice Aqua-emerald Archipelago Design Strategies

widening the frame:
archipeligo necklace of new & existing islands

sense of coherence:
creating a flood & cruise ship barrier

enlarging urban space – blue & green space
new 32 km long new de-central park, new physical & civic opportunities

going local - economic & exporting opportunities
park dotted with pavillons featuring agri-tech food production

Design Strategies Summary

stimmung
park divided into quadrents that reflect stimmung of seasons

range of active and passive nature experiences for venetians
biophilic, hortaphilic allotment gardens

elements of enriched environments – like enriching relationships
used to 'tune' the park & pavillion experience towards salutogenic health

existing venice design concepts: retreat qualities, new green space (roof tops & public space)
enhanced blue space (swimming & canel sides), reinvent canals for active transporation (water bikes)
Going local (canal side vegetable boat stores), more start up, maker/artizan spaces; diversified culture

Contents

Image: Venice today, aerial view

Introduction:
Venice, distinctive among Italy's and the world's great cities,
is at a crossroad

Distinctive among Italy's great cities, and those worldwide, Venice consistently is rated as one of the world's most beautiful cities; renowned for its architecture and artwork; a UNESCO World Heritage Site; setting of several important Renaissance artistic movements including operatic music, symphony, and the birthplace of Vivaldi.

Over twenty million tourists visit Venice every year for arguably for one reason: stimmung – atmosphere and mood – that which is "invisible, intangible, elusive, without physical limits, unstable, instinctive, highly subjective to the individual, and often described through metaphors." And they will keep coming back to try and experience what is lacking in their own environments back home, because of the sensation of stimmung.

Venice is truly an example of a different way of life: a high quality of life with no cars, based on having to walk everywhere, a city-scale-place and yet small enough where one constantly bumps into and engages other citizens, in a very social atmosphere; with virtually no crime as measured against comparably sized cities; lived next to the therapeutic aspects of water; overflowing with significant culture, architecture and beautiful public spaces.

The campo, the social and civic heart of Venetian neighbourhoods, the remarkable stage used to celebrate the 'ballet' of daily street life; neighborhoods that are dense, diverse, beaming with vitality, mixed building types, form, and use; one of the greatest examples globally of urban living. But these neighborhoods, and quality of urban life, are under threat in an eerily familiar way as was described by Jane Jacob's in her seminal book "The Death and Life of Great American Cities" and her description of how vibrant neighborhoods and cities were being were being destroyed by politicians and city planners and their fixation on the 'two plagues': traffic and freeways.

Despite Venice's rich history, beauty, culture, and enviable urban form, as measured by some important metrics, Venice is a 'failed city.' Among other things, it is a metropolis that has lost seventy percent or more, of its resident population over the last 50 year. A crippling, unfathomable mass exodus of its residents from that which was a model city, leaving its social, economic, and building fabric in tatters. Bloomberg media in a recent article deemed it "the long, slow death of Venice . . .with no turnaround in sight." A state of decline that arguably is past a state that can be correct, or close to the brink of no return. The City of Venice politicians are not willing to change course; a direct consequence of years of choices in the name of money, seduced by the easy money that the mass, cheap, day tourism hordes bring which has resulted in the brittle mon-economy.

So how is it now that Venice, once the Mediterranean's paramount city state, is on its knees, with a worrisome future ahead? And how can its course be altered to a narrative of 'health causing' urban city life?

Image: The Grand Canal

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The Venice Aqua-emerald Archipelago Plan for the great Italian city lays out a path forward using human and health-centred strategies for designing complex urban systems

It starting point is the observations and experiences of the city both from a short-term visitor and a permanent resident point of view and the current issues the city is facing. Despite its striking beauty and atmospheric nature, the City of Venice suffers environmental issues, and an important shrinking of its population each year. Mass tourism, which economically sustained the city, enhanced the environmental crisis of the city, as well as its unsustainability. The on-going pandemic, Covid-19, has drastically changed the conditions of living in Venice. Economically in despair, the city is now in the midst of an important economical and occupational transformation.

Thus, realizing Venice to be a complex problem-tranced situation emerging from a variety of interacting variables and dynamics over a long period of time, we have approached the way forward through the lens of two approaches, both trying to help understand complex dynamics as well as facilitate health and vital thriving through a systemic approach to placemaking:

Firstly, that of a broader concept of health, claiming that the complex system of an urban habitat needs multiple circularly interlinked systemic levels of healthy action (physical/ mental, social, sociocultural, ecological, economic, and spatial health) in order to support the flourishing of human life.

Secondly, a health based systemic approach to a future direction for the City of Venice should refer to both, the process of designing and the formal ideas in architectural design. The implementation of a shared collaborative and participatory process, over a period of time, that will promote a transformation of narratives, the development of healthy habits and behaviors, and the revitalizing of the city.

The aim of this proposed way forward is that of inviting Venetians into imagining new visions of urban evolution and of opening towards a narrative of development and change. Options of development which, as a matter of fact, shall at the same time keep the connection and attachment to its history, culture and the qualities of life which make Venice the unique place that it always was and should remain. Only in this dimension, could Venice ever create a meaningful and coherent whole.

Image: Students protesting climate change

Born out of water - and threats

A manufactured city, an artificial collection of 118 linked mostly man-made islands, "The Floating City's" was born out of fear in 568 AD - by mainlanders fleeing the onslaught of the German Lombard tribe laying waste to northern Italy after the fall of the Roman Empire in the West - the Venetian Lagoon's tidal mudflat islands, with ever changing, hard to navigate channels, provided a naturally protected compound of islands to grow over time, for those seeking refuge.

The population peaked at 200,000 in the 1600's, 175,000 by the mid-sixties. It was the largest recorded flood which occurred in 1966 and initiated the first urban population exodus, from Venice to Mestre, the coastal area of the larger city. These Venetian inhabitants never returned, converting their homes to short term tourist rental properties.
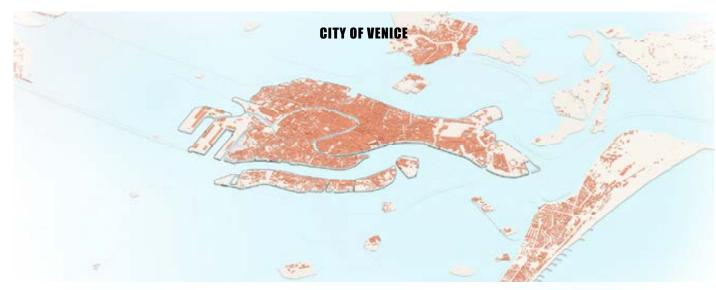
Today the city has a mere 55,000 permanent residents, which is shrinking at a rate of 1,000 residents per year. This has occurred as a result of an older population dying, and the remainder from people leaving due to expensive, and a lack of, available housing and few available jobs. Overlaid with the aging population, researchers at the University of Washington's Institute for Health Metrics and Evaluation in a recent study published in the Lancet, predict a 'jaw-dropping' global crash in children being born, with Italy projected to experience a dramatic population crash from 61 million today to 28 million by 2100.

Image: 1960 Population

Image: 2019 Population

Image: Evolution of Venice

The 'two floods' of Venice
Over the last 50 years, the city has suffered the curse of the 'two floods'; that of water and tourists, which has wreaked havoc on the physical and social fabric of the city, making it extremely fragile. Then came Covid-19 which has brough the city's economy to a halt.

Venice seemed to be stuck in a trap of two floods which in the public and political discourse apparently seemed to be related to intertwining circles of impact: the flood of water repeatedly coming and damaging the material base of the lagoon city; and the flood of tourists coming in daily and damaging the base of the urban economy relying and depending more and more on the income that would dominate and displace other sources of local economic stability.

Image: REUTERS/Stefano Rellandini

Emptied of tourists and with only a few inhabitants on its streets and campos, the otherwise overcrowded city became perceivable in long forgotten spatial characteristics and qualities again.

Equally the intertwined ecological impacts became obvious soon; clearer water and more fishes in the canals and the lagoon, clean air and bright colours, a silenced and slowed-down atmosphere, slowly growing attachment within the quarter-communities, inhabitants pointing out these newly realized "old" qualities of living in Venice.

What if Venice could move from its current fragile state, beyond resilient, beyond brittle: to an antifragile permanent condition?

According to the theory of antifragility by Nassim Nicholas Taleb (2012) the properties of a system can be assumed to increase their capability to thrive because of stressors, and shocks: when applied to city making, a system which might cause health on the different systemic levels. What if it occurred in Venice?

Current Threats:
The impacts of climate change
and a mono-economy

2

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The impacts of climate change and a mono-economy

Climate Change and Raising Sea Levels

Paired with urban depopulation, the city faces devastating climate change dangers; rising sea levels and ever more frequent record-breaking flooding, have rendering a third of all the buildings ground floor levels uninhabitable. 2018 saw one hundred twenty-one days of high tides, with seawater rising 80 centimeters above sea level. November 2019 saw the devastating "acqua alta" flooding, the second highest in recorded history. What was once a winter phenomenon is now occurring through late spring, most recently on June 4, 2020. By 2050 it is predicted that one third of all of Venice will be totally under water due to rising sea levels because of climate change. Add to this that financial institutions will not lend money to upgrade buildings which are at risk of regular flood damage, perpetuating a downward spiral of building decay.

The multibillion-dollar flood barrier known as MOSES, a single-use infrastructure system of mobile gates being constructed just outside Venice's lagoon as a protection from episodic storm surges, in development for twenty years, years behind schedule, has just worked successfully, during a testing trial in October 2020, however it still does not effectively address the root problem of ongoing rising sea levels due to climate change that threatens the city.

Image: Impact of climate change

Image: The MOSES

The Flood of Mass-tourism

As in water, the city is equally flooded by 50,000 tourists per day, more than the total yearly permanent population. Travel and tourism have become one of the world's largest and fastest-growing industries, outpacing GDP growth every year since 2010. Economic growth, middle class growth, paired with inexpensive airline choices, travel has moved away from just a perk for the well off. The top 20 destination countries alone account for 59% of all international trips taken. (Yeung, O., and Johnston, K. 2020, "Resetting the World with Wellness: Travel and Wonder", Miami, FL: Global Wellness Institute).

The negative effects of over tourism on Venice have taken effect, overcrowding, long queues, security barricades, throngs of international visitors, and street vendors selling mass-produced trinkets, commercialization of authentic sites reduced to a 15th-century theme park status versus the vibrant, creative and flourishing 'lived' city it once was.

 "Local residents are becoming resentful, alienated, and displaced, as their rents rise, their neighbourhood character changes, and tourism-focused businesses drive out local services while bringing few direct benefits to locals. Transport, energy, water, and sanitation infrastructure are overloaded. Over the long term, over tourism brings environmental degradation and puts at risk the very existence of the world's most loved cultural and natural treasures" (Yeung, O., and Johnston, K. 2020, "Resetting the World with Wellness: Travel and Wonder", Miami, FL: Global Wellness Institute).

Venice accommodates twenty-two to thirty million tourists visits every year, the majority who are day trippers from cruise ships, with less meal or meaningful spending, while increasing pollution and boat wake causing further damage to the building stock. Some Venetian citizens` initiatives (i.e. *"Venezia NON è Disneyland"*) broach the issue that current Venice appears a monoculture overpriced theme park, worst in the summer high season when there are Disneyland-style crowd control measures in place.

Image: 2019 Population

Image: Mass over-tourism & a mono economy

Image: Venice crowds

Skyrocketing Cost of Living

Paired with this, the cost of living and housing has skyrocketed because of low-to-no housing stock availability due to both building deterioration and short stay Airbnb rentals. Mass tourism has led to extreme property speculation; the price of housing in Venice is 12,000 euros per square metre compared to a house in the centre of Madrid which is priced at 3,650 euros per square metre.

A regular occurrence in Venice will see an apartment building with ten units, will have four used as Airbnbs, four used as offshore secondary homes and only two units (thus 20%) being used by people actually living in Venice.
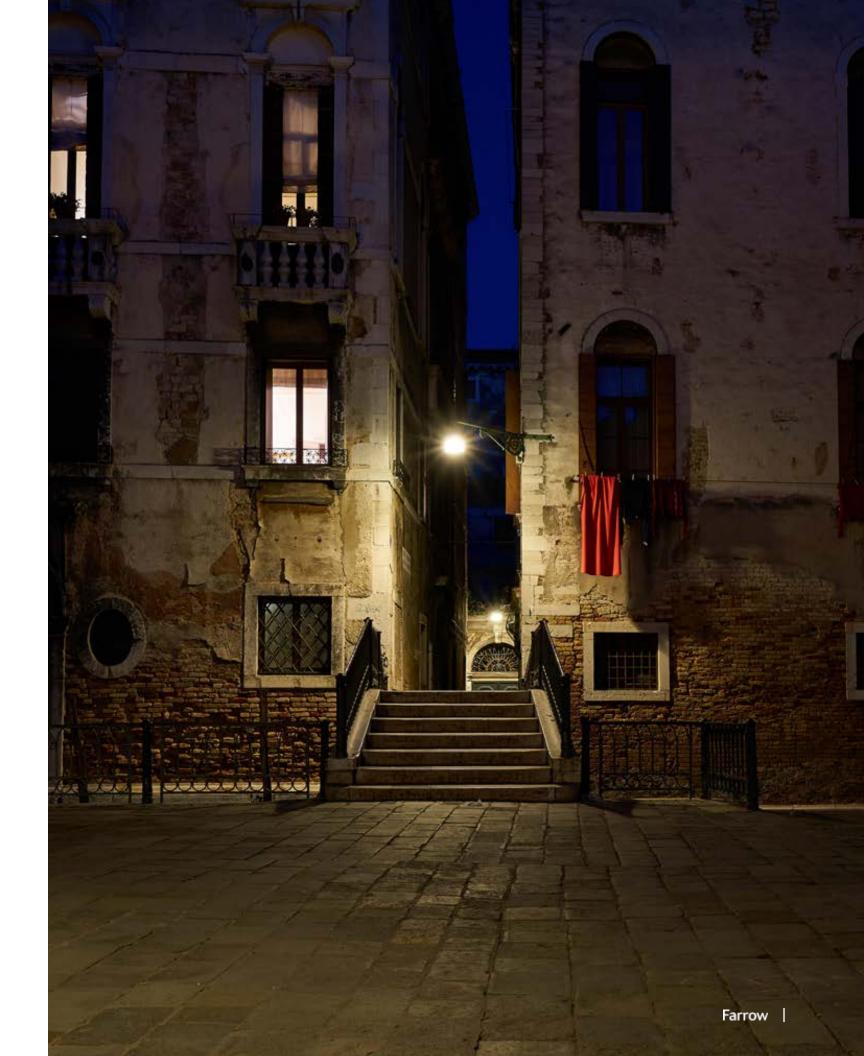
Working opportunities and community-based businesses have disappeared as local retail has been bought up by overseas companies and converted into tourist trinket shops. Municipal services for residents have been curtailed due to government funding limitations, diminishing the quality of life for those that have remained, further leading to the city rapidly becoming an overpriced theme park.

Lack of Employment Opportunities

The majority of those in their late 20's and early 30's are moving away from Venice for jobs, opportunity and different lifestyle choices. The city currently is not able to offer what these younger generations claim helpful to consolidate their adult life in Venice. A city with numerous centres for higher education, it would seem few students having completed their studies, choose to remain in the City of Venice to live and continue their working careers. The resulting population is older than the national average; by 2001, those over-60 had risen by 349% to 37% of the population.

"When I grew up here, Venice was crowded, but crowded with Venetians," says Aline Cedron, an editor and member of Gruppo 25 Aprile. The association is the largest NGO standing and campaigning for residents' rights in Venice. It is not a political party and its 3,000 members have decided to join forces irrespective of their political affiliations, social status or religious belief, working to wean Venice of tourism and return it to a stable, mixed use, sustainable city. Their view is that while Venice is a Venice world heritage site based on its physical assets, *"that without people living in the lagoon and preserving their houses, their special skills and that very fragile environment, such stones will collapse as an empty shell."* (https://gruppo25aprile.org/who-are-we/)

Venice in its past was a producer and exporter of

Low Export Base and Locally Producing Economy

food. The massive Molino Stucky factory on the western end of Giudecca island, built between 1884 and 1895, operated as a flour mill supplied by boats from across the lagoon and then also functioned as a pasta factory. In the early 2000's it was converted into a hotel and conference centre again feeding the monoculture of over-tourism.

Venice's export base today is very low and that which is imported naturally is extremely high, creating another fragile condition. With membership in the European Union, the import of foods that are not part of its core culinary habits, but also foods that are, come from somewhere else. The majority of honey comes from Eastern Europe and China; olive oil from Greece and Spain; inexpensive citrus fruits from Spain; garlic from China; and dairy products from Germany, and so on.

The 'Perfect Storm' of Environmental,

Economic, and Societal Devastation
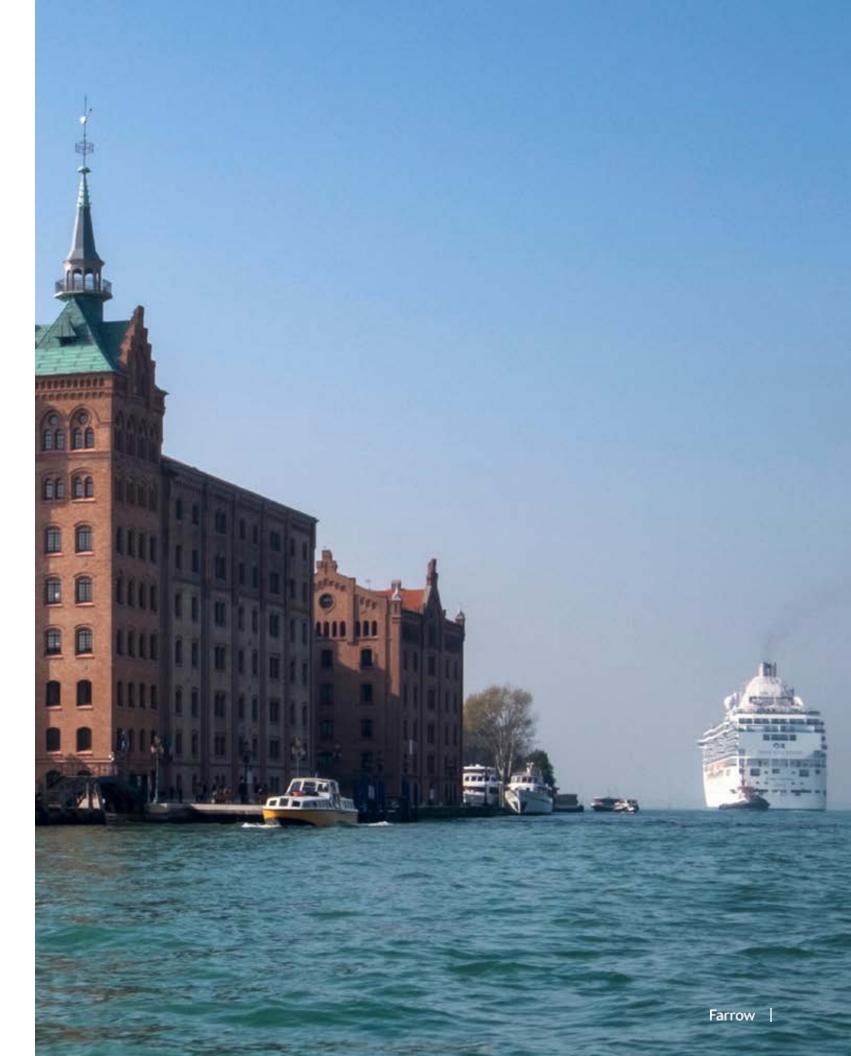
By late 2016, the city had a major deficit in its budget and debts in excess of €400 million and was effectively bankrupt. In June 2017, the State bailed out two Venetian banks - to prevent their bankruptcies, at a cost of twelve billion Euros.

With many traditional industries having wilted or left the city, a direct consequence of years of city municipal leadership making short term choices in favor of tourism and related untenable revenues, like an addict hooked on the drug of tourist's cash, the city is now more amusement park than its former self.

The Covid-19 pandemic has all but stopped global tourism to Venice, along with the city's main revenue source; a city now in the midst of the 'perfect storm' of environmental, economic, and societal devastation. The virus has not revealed anything new as to Venice's problems, it has simply acted as a mirror or a jet fuel accelerant poured on the social, environmental, and economic ambers that have been smoldering for many years.

Image: 2019 Population

Image: Economic & social impact

Systemic dimensions of urban health: ecological, societal, economic, physical and mind health

One core dimension of individual health and wellness - and the pursuit of holistic health - is "place". More specifically, of our physical space. Where one lives has more impact on one's individual health and well-being than the medical system. Beyond those episodes of serious disease, of course.

The design qualities of our environments that can enhance our ability to thrive - physically, mentally, ecologically, economically, socially, and culturally - can be consciously created. As a society, we can construct environments that meet deeply rooted biological, physiological, and psychological needs. We can create environments that reverse the surge of lifestyle-related diseases and alleviate the drowning of the human spirit. We can create holistic living conditions where we can flourish and prosper, instead of merely surviving.

The full range of design factors that influence our total health extend beyond the state of our physical well-being, beyond ecological health, to include qualities of place that affect our state of mind.
The design of every public space, building, campus, community, and every home must be judged in terms of its capacity to activate optimal health.
Over the past century, people have become numb to the harmful effects of denatured, disconnected, and dismal design. Numbed as we may be, we are nonetheless affected by the design of our physical environments.

Space is not neutral
Space is effectively a 'prescription', which can improve our health, or limit our ability to grow. The elements of a space are design ingredients that either enhance or erode our capacity to thrive. They have positive or negative consequences for our state of mind and neurological nourishment.

In any environment we inhabit, we must ask: how does this place make me feel? Does it cause health? How could it make me feel better?

Contributors to Optimal Health

Ecological health

Our 'ecological health' is affected by the demise of the natural ecosystem. While most initiatives in environmental sustainability have focused on the damage to our physical resources, only recently have we begun to address the full spectrum of human and natural environmental health needs.

The design community has responded with rating systems, checklists, and standards: the LEED Building Certification, the Living Building Challenge, the Delos WELL Building Standard, and the Fitwel Rating System. For the most part, these focus on quantitative assessments of the physiological impacts of indoor or outdoor environmental, and how qualities like air, water and light affect health and physical fitness. They have little to say about mind health.

Societal health

We can enhance our societal health through the way we create our neighbourhoods and communities. We can diminish societal inequities, limit food swamps, and create the conditions for people to connect and engage with others (those who are like them or not), in meaningful ways.

Health overlays the design of public spaces—in more ways than simply the physical design of public streets, parks, and urban squares. Design is a channel to represent and communicate the possibility of engaging and inspiring a spontaneous, generous social life that activates optimal health on a neighbourhood and city scale.

Economic health

Economists and governments until recently, have used Gross Domestic Product (GDP) as the metric to measure the health of an economy and the wellbeing of a country. In simple terms it is the measuring of the values of goods and services produced over a period in a defined area; then usually divided by the number of inhabitants to ascertain the GDP per capita, which then allows one to make assumptions as to the quality of life of the inhabitants of a country, assuming that a higher GDP translates into a better quality of life. However better standards of living do not necessarily translate into a better quality of life, thereby discounting important aspects such as the quality of mental, physical, cultural, civic and environmental health of any place at any point in time; effectively a reductionist way of looking at a complex systemic issue.

New Zealand Prime Minister Jacinda Ardern is one of several national leaders who is moving away from measuring their countries economic health using GDP and shifting to adopt the Happiness Index metric. This is a way of measuring economic decisions resulting in the health outputs of her country, which would encompass environmental health, psychological health, cultural elasticity, quality of living, and community vivacity as factors that would inform policy; a saluto-systemic way of measuring community-centered economic health.

Physical health

Design can disrupt physical health and trigger a tsunami of chronic disease - as can be seen (for example) from the zoning and planning of car-dominated suburbs. Or design can enhance health, as seem in New York City's Department of Design and Construction's "Active Design Guidelines."

The NYC document proposes a range of tools to enhance health, and reduce obesity and diabetes, through intelligent design choices which enable daily healthy lifestyle choices. Including design strategies that promote natural movement, though, for example, convenient and comfortable stairs that encourage stair use, or the location of building functions to encourage walking. Or facilities that support exercise, through pedestrian-friendly exteriors and massing, multiple entries, stoops, and canopies over streetscapes.

We know there are measurable qualitative aspects of design that affect psychological health - and as a result, physiological and sociological health. We can create intentionally, though design, a measurable dimension of "comprehensibility, manageability and meaningfulness." And, most importantly, we can create the 'sense of purpose', as framed by salutogenesis, that is a predictor of strong health and wellness outcomes, again related to the mind.

Mind health

Emerging thinking at the intersection of neuroscience and architecture reveals the fourth element that supports optimal health, the fourth leg of the "health table": mind health. Mind health can be positively affected through place-making. Mind health is an essential element of a strategy for regeneration that enables us to thrive and prosper, rather than merely survive.

Through design, we can connect the dots between psychological cognitive and pre-cognitive reactions that have physiological responses; these responses fundamentally affect human performance and our ability to grow.

The plan includes the creation of a 32 kilometre new waterfront urban park destination created out of a an archipelago necklace of new and existing islands, acting both as the as a rising sea level barrier as well as a social asset for the dense, ancient city.

Salus, the Roman Goddess of safety, welfare, well-being, prosperity - and health, has been used as a metaphor of Venice's economic, environments and societal health by creating mixed-use infrastructure.

Stabilizing and making predictable the natural water ecology from floods; diversifying the economy where it becomes a producer and exporters; and creating a place where young people can not only afford to reside - but want to state - a place of purposeful career opportunities and a future for raising a family.

The Venice aqua-emerald archipelago project, growing out of the constructed theory of emotion and elements of enriched environments, also included the following concepts:

Environmental health: mixed-use infrastructure to solve rising sea levels and flooding: The plan continues the tradition of forming islands out of the shallow Venetian Lagoon seabed, creating an 'aqua-emerald necklace' water (and cruise ship) barrier of new islands, wrapping, and connecting, the existing Venice, Murano, Le Vignole, La Grazia and Giudecca Islands. The new necklace, similar in concept to the Netherlands range of storm surges and rising sea levels protection devices, including dikes, dams, and floodgates all spanned by bridges in the tradition of Venice.
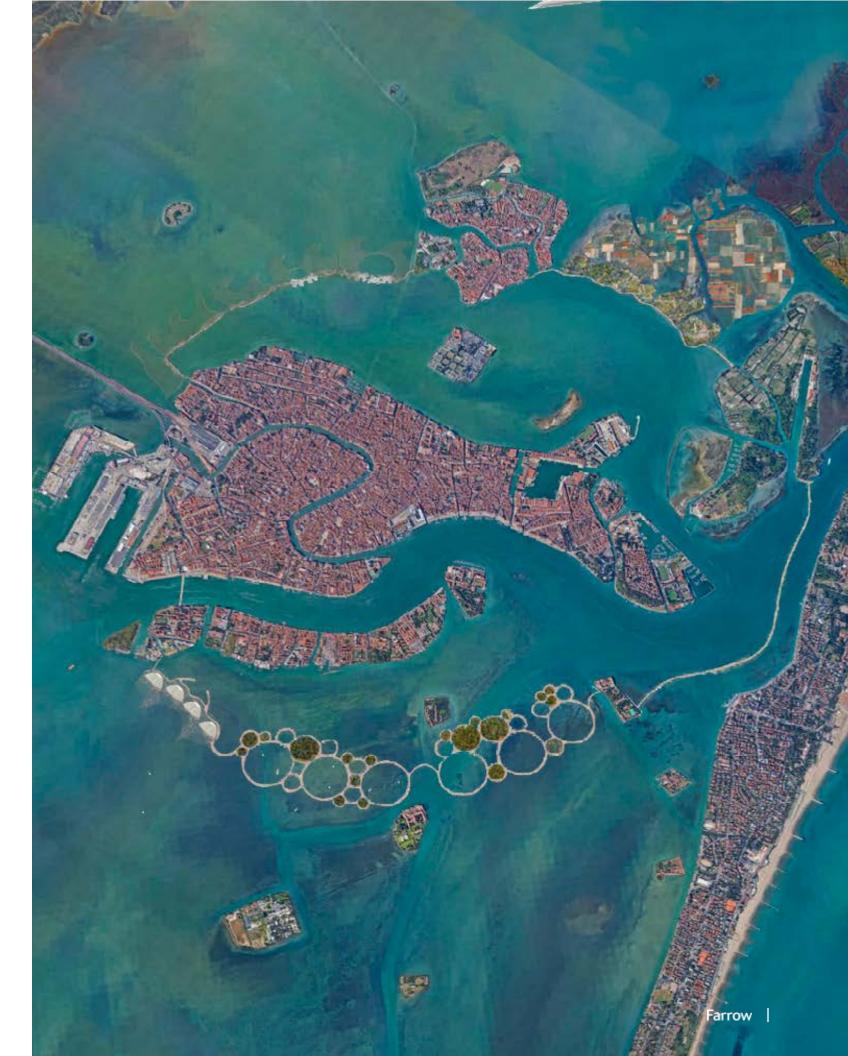
Like the historic city itself, the new islands will be manufactured and an artificial landscape, a new 32 kilometre long 'de-central park' landscape will be similar in creation to the artificial New York City Central Park of Fredrick Law Olmsted's hand.

"An unmistakable irony creeps' vine-like through Olmsted's landscape theory: It takes a lot of artifice to create convincing "natural" scenery. Everything in Central Park is man-made; the same is true of most of Olmsted's designs. They are not imitations of nature so much as idealizations, like the landscape paintings of the Hudson River School. Each Olmsted creation was the product of painstaking sleight of hand, requiring enormous amounts of labor and expense." (Nathaniel Rich, "When Parks Were Radical", The Atlantic, 2016 "https://www.theatlantic.com/magazine/archive/2016/09/better-than-nature/492716/)

The water contained between the new islands and the original Venice Islands will be lowered to its pre-1500's level, enabling stabilization, restoration and normalization of the existing building stock. Similar to other global initiatives including the 'Dry Line' in New York City, that mixes flood defenses with new park and recreation uses.

Image: Proposed archipelago, necklace of new & existing linked islands in the shallow waters

While the Dryline addresses New York City's vulnerability to coastal flooding with a protective 12 km-long infrastructural barrier incorporates public space with the high-water barrier doubling as parks, seating, bicycle shelters or skateboard ramps, the Venice aqua-emerald archipelago creates greater diversity of use including economic health solutions in the form of the argi-tech pavilions paired with ecological health infrastructure solution.

The Venice aqua-emerald archipelago necklace of mixed-use flood protection infrastructure intervention based on the Salus idea of safety and welfare – as well as health and wellbeing - address through a mixed-use solution, contrasts with the MOSES flood barrier, a single use infrastructure solution, only effective for storm flood surges, but not effective in lowering water levels because of rising sea levels due to climate change.
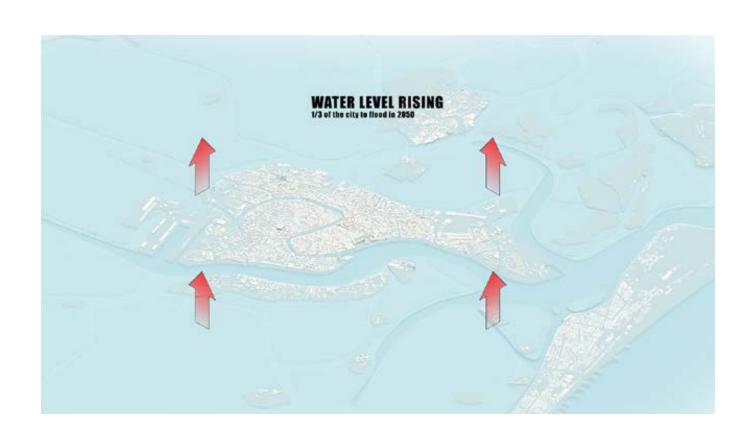
Economic health - green employment and exporting strategy: Different from the single use MOSES flood solution, this flood infrastructure will offer the Venice population a new 'De-central Park', a highly organic, artificial 'manufacture countryside' as a counterpoint to the urban ancient city, consisting of much needed: leisure park space (a want of the 20/30's aged population) which summonses, inspires and enables movement; naturalized wetlands and fish, flora and fauna habitats; and new employment opportunities in the form of agi-tech pavilions consisting of range of natural and glasshouse non-GM future food precision framing economy, creating new employment, food security and net export capacity. The existing cruise ship terminal is converted to a produce export centre.

Covid-19 has made abundantly clear the critical importance of our own physical and mental wellbeing, from healthy food, physical health, meaningful social interaction and how we shape our own habitats. And diets are reflecting this, shifting away from meat based to a greater plant-based menu. The Covid-19 infections in many meat processing plants around the globe has further amplified this further in consumers' minds, where we have seen terrible working conditions with the abattoir.

This has also resulted in a number of plant-based 'superfoods' sales doubling due to the pandemic, which is similarly occurring in other wellness sectors signs of a further structural- a permanent feature - as we emerge post-pandemic. Sustainable glasshouse food production methods, which also provide terrific working conditions regarding health and wellbeing compared to abattoirs, as a result, are growing as an important solution in both feeding our communities and becoming an economic engine on the road to prosperity.

The new glasshouse pavilions offer Venice a window into a food economy which is like what has occurred in the Netherlands, a dense country, located a mere thousand miles from the Arctic Circle to be the world's second largest food producer measured in values, second only to the United States, which is roughly 270 times larger in landmass. It also produces more than a third of all vegetable seeds produced in global trade. Plant growth and production, while economically important, the growth of plants is also ever changing by the season, quality of light, colour of the leaves and colour of the fruit and vegetables, in short very stimmung changed.

WATER LEVEL RISING
1/3 of the city to flood in 2050

Societal health strategy: Venice has an oversupply of building stock that can be used or converted into a range of options for living, office, start-ups, maker, workshops, artist studio and incubator space, mostly surrounding the historic 'campo' typology of a square, as a crossroads for a lively mix of uses including of social, community, spiritual, retail and housing. Craftspeople and artists, who represent a continuum with the city's past roots of textile, lacemaking, and glassworks, can help in creating a mixed economy along with a vibrant urban setting where people both work and live in the ancient city.

Individual health strategy: Venetians are in many ways' prisoners within their own city; reliant on the tourist for their economic livelihood, yet at the same time resistant to packed streets, long lines and negative effects on daily life of residents by day trippers and mass over tourism.

An new waterfront park: a 32 kilometre aqua-emerald archipelago necklace of connected new and existing islands creating Europe's largest new waterfront urban park destination, is a reinterpretation of Venetian Islands, a made versus 'manufactured' string of new islands added to the existing necklace, an act of "thinking through making versus making through thinking" (Tim Ingold, "Making", Routledge, 2013) as was the original creation of Venice, but this time that of a resilient model of environmental excellence and sustainability, against the threat of rising sea levels and environmental harm now threatening the city.

More than just a single use form of infrastructure like the MOSES Project, the new aqua-emerald archipelago necklace waterfront park is conceived of as a de-central park, a mixed-use accessible

and inclusive infrastructure that address not only the environmental health of Venice, but also the economic, societal and individual mind health of Venetians based on the stimmung of metaphorically and literally celebrating the four seasons of the year.

A set of islands with distinct, diverse, and memorable characteristics and experiences that celebrate nature, growing, change of seasons and the growing and harvesting of food in the form of an 'edible park'. The COVID-19 pandemic has put a magnifying glass on exterior park space in dense cities and the importance of ensuring there is adequate green space that is accessible, inspiring, and linked to the concepts of health and wellbeing.

The primacy of movement: Maxine Sheets-Johnstone in her book "The Primacy of Movement" discusses how "experience is the bottom line of knowledge . . . not abstract but grounded on affect and movement . . . it is grounded in the fact of our being . . . animate organisms. It is thus grounded in animation. When we are dead, we precisely no longer experience. We are no longer animate." This is tied to her concept of a "mind in motion, a flowing unity of awareness, to a *mindful body* attuned to its surrounding world . . . our cognitions are continuously affected by what we remember, what is periphery as well as what is focal in our attention, and what we anticipate. Dynamics thus aptly describe the nature of our knowledge, knowledge of ourselves and of the world about us."

Mindful body: The aqua-emerald archipelago necklace has its roots in the mindful body, versus embodied minds; to be alive one must be in a constant state of movement, intellectual or kinetic. From our first breath, we are designed for physical motion, paired with a constant stream of thought till life's end; the basis of activating optimal health.

LOWERING WATER LEVELS

ARCHIPELAGO

Primary urban design elements

FLOOD / CRUISE SHIP BARRIER

1. Flood and Cruise Ship Barrier:

A simple circular string-like flood barrier which lowers the water levels by approximately one and a half metres and also provides a barrier to storm surges. The necklace links existing islands and adds new islands, creating an emerald-like necklace of islands of different shapes and uses. The islands are separated by water course locks spanned by pedestrian bridges, allowing the porous nature of small to medium sizes boat traffic, which presently exists between and around existing islands, while also creating a 'cruise ship barrier' and wake protection from such large shops to the historic islands of Venice. The creation of rising sea level barriers, as a result of global warming, is now a global phenomenon for waterside cities, including New York City's eleven kilometre flood protection project called the 'Dry-Line.'

The proposed necklace both protects Venice against floods and storm surges, while also creating social and environmental benefits to the residents of the city with a new mixed-use waterfront park system 32 kilometres in length. Instead of a single use infrastructure approach such as the MOSES flood barriers that only protects against storm surges, this green infrastructure cross breeds environmental resiliency measures with social and recreational activity that enhance the quality of experience for all the cities inhabitants.

This design solution is one that creates flood protection while also enhancing social, economic, and ecological infrastructure for Venice, while avoiding the single use purely engineered storm surge barrier infrastructure inherent in the MOSES infrastructure solution.

Like a pure circular necklace that is overlaid on a person's neck, shoulders and chest, the pure circular form is distorted as it confirms to the unique contours and shape specific of whoever is wearing it. Similarly, the aqua-emerald infrastructure bends, moves and responds to the immediate conditions of Venice, including lagoon bed depths, tidal flow routes, views to and from the existing islands, weather and seasonal light among other design criteria.

Preserving culturally important views from Venice:
The design of the new archipelago has been purposely been designed to hug the water to preserve important and culturally significant views from Venice to the Dolomite Mountains to the north, the Murano Islands to the east, the view to Venice Lido to the south east and the open lagoon views to the south and west.
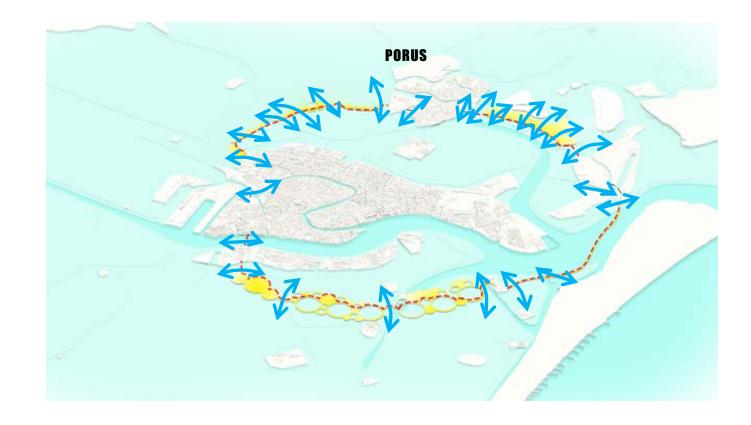

New York City 'Dryline', BIG Architects

PORUS

The plan includes the creation of a 32 kilometre new waterfront urban park destination created out of a an archipelago necklace of new and existing islands, acting both as the as a rising sea level barrier as well as a social asset for the dense, ancient city.

The new islands are divided by new locks, of varying size, to enable free flow of boats, and the new park system network is linked by a series of bridges.

1. Existing island and lagoon floor condition

2. Hollow honey comb system installed on lagoon floor

3. Hollow honey comb filled with dredged soil
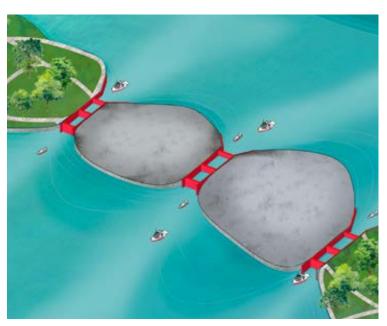
4. Locks built & internal water level lowered to historic levels

1. Existing island and lagoon floor condition

2. Hollow honey comb system installed on lagoon floor

3. Hollow honey comb filled with dredged soil

4. Locks built & internal water level lowered to historic levels

2. De-central Park:

The linked existing and new islands creates a continuous 32 kilometre necklace park system of active and passive green space for the City of Venice. Not a 'central park' like in most dense urban cities, this is a 'de-central park', like a countryside, in which residents of the city can 'leave' the built city to experience nature.

Range of recreational uses include: The new archipelago offers a diverse range of recreational and social spaces, uses and activities including: foot paths, winding walkways, biking ways, running routes, sports fields, playgrounds, dog off leash running parks, winter skating park, outdoor fitness equipment areas, rock climbing walls, gentle hiking hills and new topographies, flexible open areas, performance and art spaces, amphitheaters, lounging and lookout areas, picnic and barbecue areas, naturalized areas, soft sea edge nature preserves used as outdoor education classrooms, bird sanctuaries, salt marsh pools, filtered swimming ponds, fishing areas, lagoon promenade, boating, water bike and canoe rentals areas, coves for water concerts and movies, allotment gardens, rain gardens, micro farms and flower markets, community gardens and allotments; along with sustainable economically profitable uses such as agri-tech crop development located in 'agri-pavilions' throughout the necklace waterfront park system; in effect creating an 'edible park'. It is important to note that no vehicular traffic roads will be provided on the new archipelago; all access and servicing will be provided by boat traffic.

During the pandemic and the new reality of living with Covid-19, parks have become much more essential to people's daily lives. The recently released Canadian City Parks Report looked at what was happening in parks in twenty-seven cities and discovered that the pandemic had created tremendous pressures on exterior park space and given them a new sense of life and importance.

The report found that eighty percent of the people surveyed said that the green open space was very important to their mental state of mind during the pandemic when one is dealing with isolation and anxiety, leaving a lasting impact on how we view, and use park space. Similar reports have occurred around the globe, setting the conditions for a new park culture, like that experienced in the mid 1800's and the work of Frederick Law Olmsted city park systems.
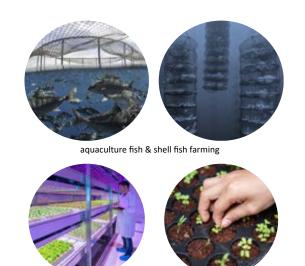
ARCHIPELAGO

3. Active Precision Agriculture and Aquaculture Pavilions:

The aqua emerald archipelago will also support a small range of sustainable commercial activities located in 'agri-pavilions' through the waterfront park. These activities will provide creation of sustainable, real, and rooted 'green' job opportunities for Venetians based on active precision food production.

The agri-pavilions include: **hydroponics seed production** in artificial light conditions that carefully controlled lighting conditions to optimize the plants' photosynthesis; **glasshouse vegetable production** of a range of vegetables such as tomatoes, peppers and eggplants in controlled conditions that manages every aspect of production, which greatly reduces water use, virtually eliminates diseases and the use of pesticides and protects against extreme weather conditions; **aquaculture fish farms** which are different that traditional open-ocean cages that corral fish in suspended netting or pens that cause significant
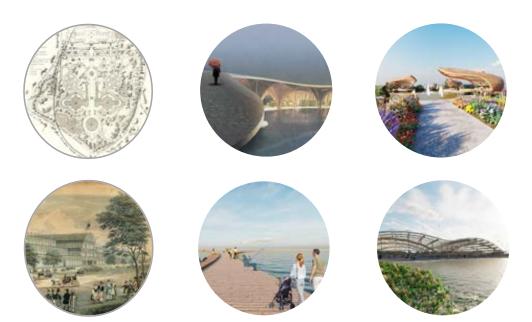
environmental damage, the water systems are 'land based' separated from the surrounding water and remove most of the waste from the water using recirculating aquaculture systems which are akin to filtration systems in a household fish aquarium, creating one of the most sustainable seafood choices available.

The agri-pavilions follow the tradition of The Crystal Palace at the 1851 Great Exhibition located in Hyde Park, London England. But instead of providing exhibition space to display examples of new technology developed in the Industrial Revolution, the agri-pavilions will showcase working examples of revolutionary methods of Italian food production through active precision farming and agri-tech methods; both providing a show piece and University research and specialized education program opportunities, but also producing food that will be taken on boats to the canals of Venice as pop up vegetable boats as well as exported by boat to other areas of Italy and beyond.

The necklace supports a range of sustainable production facilities & employment opportunities:
a) hydroponics   b) glasshouse agriculture c) apiculture d) aquaculture

aquaculture fish & shell fish farming

hydroponic seed & microgreen production facilities

glasshouse agri-tech vegetable farming

apiculture (honey) production – wisteria flower farms & flower market

PAVILLIONS-AGRITECH FOOD PRODUCTION

4. The metaphor of nature's seasons:

Four zones of the aqua emerald archipelago necklace: the necklace is broadly divided into four segments oriented to the four cardinal directions of north, east, south and west and each segment has its own mood, related to its location and overlaid with a seasonal 'stimmung' of Venice's own Antonio Vivaldi and his best-known baroque set of four violin concerti, Four Seasons.

The metaphor of nature's seasons, both as a physical characteristic and of the characteristics of life's journey, will be a condition of the necklace islands and their design characteristics. The eternal cycle of seasons is used as a metaphor of the dynamic journey of lives. This theme is like Antonio Vivaldi's four violin concerti, Four Seasons, which gives musical expression to the seasons of the year: integrating the most primal human aspects of life - the movement of time - the rhythms of the year and nature. The four seasons poses a moment of departure for a varied array of metaphors based on the exquisite sonnets thought to have been written by Vivaldi and inspired by the Italian painter Marco Ricci's renditions of the seasons in oils. The aqua-emerald island necklace takes its point of departure from Vivaldi's "Le Quattro Stagioni" concerti and sonnets as the design narrative.

The sonnets credited to Antonio Vivaldi and the inspiration for his Le Quattro Stagioni, begins with the energy of spring. For Vivaldi, spring or "La primavera," starts with the clarity of a classic spring day, accompanied by the choirs of birds and streams. It is interrupted by a sudden thunderstorm, but the singing of birds reappears, and the day ends with a lively country dance, and the residents revel in the reappearance of life after winter's bleak season.

L'estate or summer, begins slowly with oppressive heat and stagnant air making any human movement unwanted. Birds chirp lazily until a faint breeze begins, foreshadowing a severe hailstorm with punishing rain.

"L'autunno" or "Autumn" is again a period of clarity, like spring, along with parallel musical themes from the first movements. The farm workers celebrate the bounty of the land by drinking wine, the pace then slows to reflect the sleep that descends upon the workers full of vino. The end with the flurry, life, struggle, and death of an animal hunt; reflecting all the basic emotions and background bodily feelings of life's struggle.

The sonnets attributed to Vivaldi end with l'inverno or winter, that of a cold, shivering person, stamping his feet to stay warm. The middle sonnet then shifts to the joy of warming up inside next to a crackling fire. The final sonnet describes the chilly scene of people walking outdoors along an icy, slippery path, with the perils of falling through the ice to the freezing water below; like Palmer description of a season of rigor mortis and death's victory, without his belief in a time of setting the conditions for new life.

The archipelago necklace is broadly divided into four segments oriented to the four cardinal directions of north, east, south, and west.
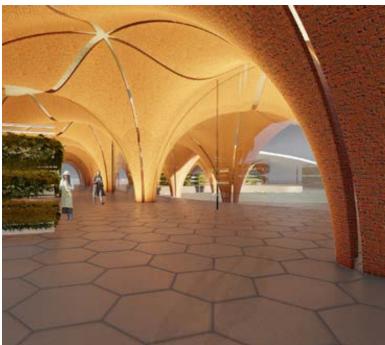

FOUR CARDINAL POINTS & MOOD OF SEASON

Northern Segment

Eastern Segment

Western Segment

Southern Segment

The northern segment

WINTER

hydroponic seed & microgreen production facilities | solidness, silence, stillness & intimacy | rocky hill hikes – grotto water side trail
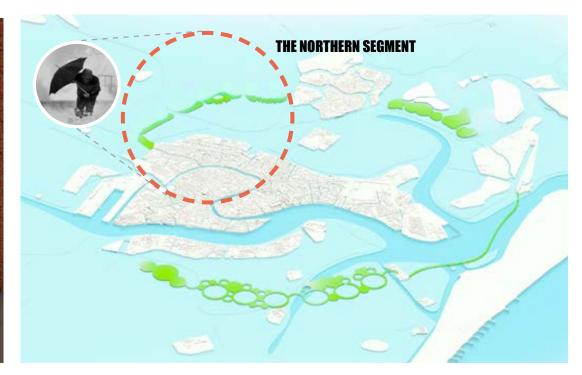
pavilions | mood | park activities

repose

elements

The northern segment, with its views to the snow-capped Dolomite mountain range north of Venice, takes on the mood of winter.

Its recreational park system includes foot paths, winding walkways, gentle hiking hills, rock climbing walls, lounging and lookout areas, stone coves and grottos.

Its agri-pavilions included: precision seed framing located in below grade vaulted agro-industrial buildings, capped with a stone public promenade with views to the snow-capped Dolomite mountain range. It is occupied by the ONO Exponential Farming company, a Verona based local - global leading start-up in the agri-tech zone which has developed the first 'seed-to-pack' vertical farming platform, which is a patented lean technology for hydroponic cultivation. Crops, insects, and algae move automatically inside the ONO module according to the growing requirements managed by ONO AI engine, which changes the current vertical farming paradigm from product to process.
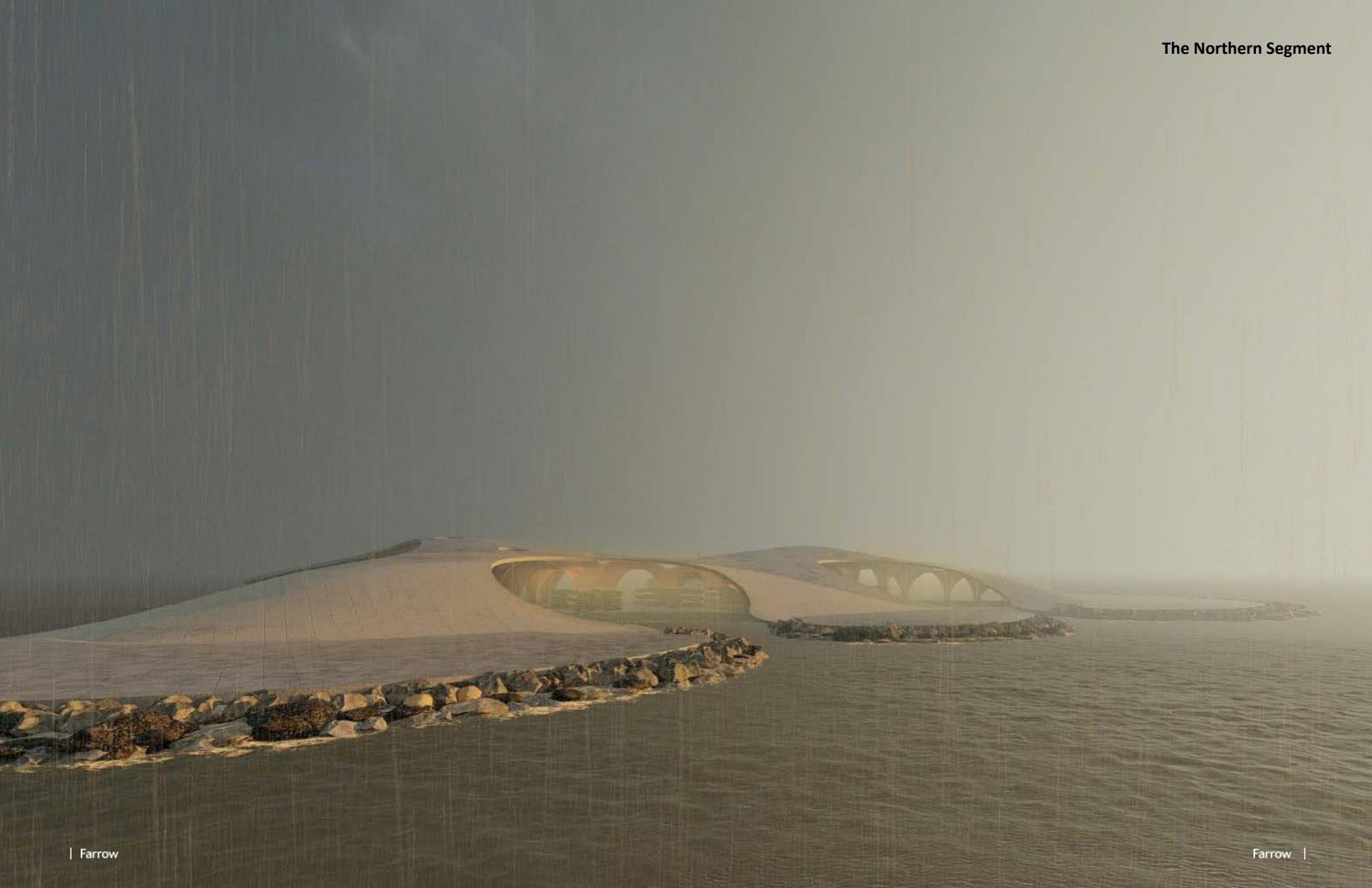

THE NORTHERN SEGMENT

The Eastern
Segment

The Eastern segment

SPRING

apiculture (honey) production + wisteria flower farms & flower market — pavillions

elements
optimism
mood
crouching

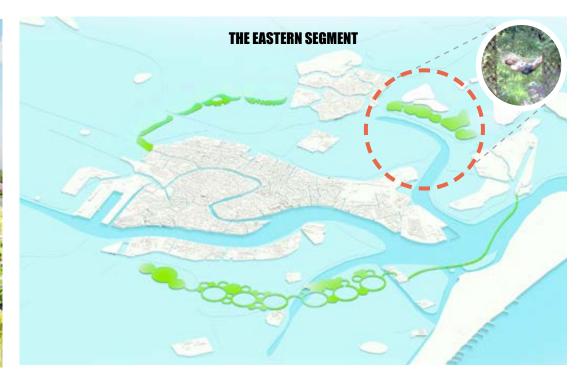lagoon sand flats trail + community allotment flower gardens — park activities

The eastern segment, consisting of the natural islands and agricultural Vignole Islands based on agricultural uses, is layered with the character of spring).

Its recreational park system includes allotment gardens, rain gardens, micro farms and flower markets, community gardens and allotments, biking ways, running routes, flexible open areas, performance and art spaces, amphitheaters, picnic and barbecue areas, naturalized areas, soft sea edge nature preserves used as outdoor education classrooms, bird sanctuaries, salt marsh pools, winter skating park, lagoon promenade, water bike and canoe rentals areas.

Its agri-pavilions included: apiculture, beekeeping, and honey production and along with open air wisteria flower farming, asparagus, artichoke, peas and traditional vineyard forms of agriculture uses, paired with public flower and vegetable markets.

CONAPI, based in Monterenzio, Bologna is the leading producer of organic honey in Italy. Indeed, over twenty percent of Italian organic honey is produced by beekeeping companies that belong to the cooperative.

THE EASTERN SEGMENT

The Southern
Segment

The Southern Segment

The southern segment, south of the La Giudecca Island that looks towards Venetian Lido Island which forms the edge of the lagoon, is primarily water with a scattering of smaller geometric islands, takes on the characteristics of summer.

Its recreational park system includes boardwalks, filtered swimming ponds, fishing areas, lagoon promenade, boating, water bike and canoe rentals areas, winter skating park, coves for water concerts and movies.

Its agri-pavilions included enclosed exterior fish framing pools surrounded by a public boardwalk trail network and enclosed filtered saltwater public swimming pools.
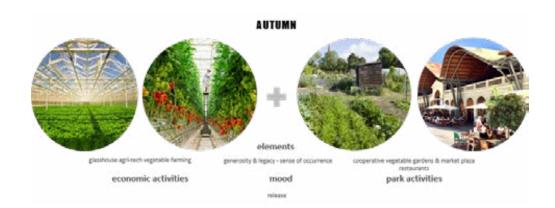
The Western Segment

The Western Segment

AUTUMN

glasshouse agri-tech vegetable farming | generosity & legacy – sense of occurrence | cooperative vegetable gardens & market plaza restaurants

economic activities | elements | park activities

mood

release

The western segment, off the coast and connected by bridges and locks to the western end of La Giudecca Island, with its history of large gardens, industrial uses such as the mammoth late 19th century flour mill and pasta factory, takes on the characteristics of the natural busy production of autumn.

Its recreational park system includes biking ways, running routes, sports fields, playgrounds, dog off leash running parks, outdoor fitness equipment areas, flexible open areas, performance and art spaces, amphitheaters, picnic and barbecue areas, naturalized areas, canoe rentals areas and micro farms and community allotment gardens.

Its agri-pavilions included: Glasshouse vegetable production paired with public plazas, food markets and micro restaurants and eateries.

THE WESTERN SEGMENT

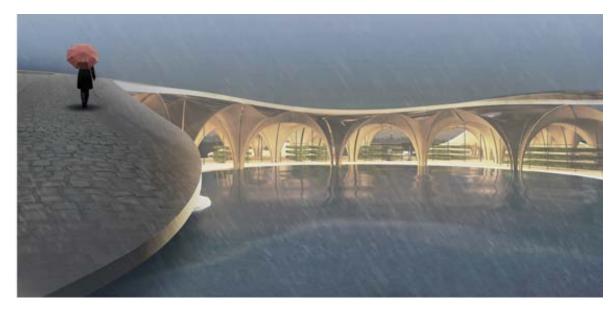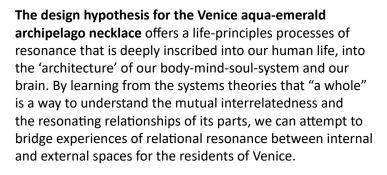**The design hypothesis for the Venice aqua-emerald archipelago necklace** offers a life-principles processes of resonance that is deeply inscribed into our human life, into the 'architecture' of our body-mind-soul-system and our brain. By learning from the systems theories that "a whole" is a way to understand the mutual interrelatedness and the resonating relationships of its parts, we can attempt to bridge experiences of relational resonance between internal and external spaces for the residents of Venice.

As such we can begin to offer spaces which carry the potential to feel like a good relationship to individuals, as different they might be. Following this line of thoughts, the "qualities of enriched relationships" can be translated into "elements of enriched environments" as seen in the characteristics of person-space relationships; mutually resonating interactions of the relational characteristics perceived in the outer space (environment) and the inner space (individual) as conceived by the theory of constructed emotion.

Popular narratives for the future for Venice?

In psychological terms, Venice`s multi-dilemma situation today seems to have led into a 'problem trance'. A state which gives perspective on a variety, yet problem-sustaining concepts from which any ways forward for Venice might be seen as only variations within same frame of reference: the view of and from within present Venice, that is from the systemic set of rules and concepts, interrelations, interdependencies, and action patterns which have been promising for a long period of time of the city`s life, and yet almost unrecognized. lost their helpful thrive over time, for at least fifty to sixty years, going along with tremendous changes on a larger system`s scale.

A "problem trance" means a natural and inherent difficulty in imagining-a-different-future vision for a system, if only been looked at "from within." That is, from within the boundaries of a long familiar frame of reference. To imagine a narrative of development and change in psychological terms, there needs to be the ability to create a widen the frame of reference for what the future might hold, looking towards a holistic healthy and thriving Venice.

Present popular ideas

Analyzing the media-based accessible information about Venice, the present ideas on coping seem to follow a common and widely-used intuitive concept of mainly *"linear" problem-solving*: that is, to reduce stressors and increase benefits the best way possible with the resources in place (the Moses flood water surge barrier); limiting boat traffic (and thereby creating less waves that would damage the stock of buildings); limiting cruise ships; implementing a day tax for tourists and attracting "better" tourism (with tourists that stay longer and are richer) in order to increase the financial city income, and the list goes on.

Yet, there the primary structural issues on a complex systemic level might not be sufficiently addressed by linear interventions: still, one third of the ground levels will remain at risk of flooding due to global warming, following the published estimates that by 2050 one third of Venice will still be under water (https://www.sciencedirect.com/science/article/abs/pii/S104061821630129X); the currently narrowed range of employment opportunities for all ages and especially the young seems not likely to change in consequence to the interventions, and young people thus might continue to leave the city due to these lacking life opportunities; neighbourhood shops then might be likely to stay tourist shops versus sustainable neighborhood amenities; still little available and affordable housing will exist due to the tourist Airbnb market; and mono-economy (tourism) basically will continue. In this scenario Venice might remain an expensive and brittle city, at high risk of a continuing mass depopulation, and the impacts could be assumed on the different circularly interdependent levels of an urban system.

A narrative of transformative development

So, what if Venice finally broadened the frame, in which options for intertwined complex solutions could be searched, and what if Venice began to imagine a new narrative of development and change? What if it chose to move away from a mono-economy of mass tourism, social media mania, and crass consumerism? What if the local Venetians were no longer outnumbered by tourists in their own neighbourhoods? And what if the Venetian residents were "reoccupying" their natural habitat, with the pause created by Covid-19?

The pandemic situation, as an externally caused "disturbance" of the global macrosystem, might be a rare chance to step back and reconsider a new narrative for the City of Venice, too.

Broadening the frame and creating a sense of coherence

What makes people healthy is the concept of Sense of Coherence. A sense of coherence grows out of the concept of salutogenesis which was first used and explained by the medical sociologist, Aaron Antonovsky, in 1979 in his book Health, Stress and Coping. The concept reframes health as a positive force rather than focusing on the diseases.

Applying salutogenesis to urban planning
Yet one of the problems of modern urban life conditions seems to be a growing disconnection between basic needs on the very personal human level and the provided surrounding living conditions on the social and environmental levels.

In salutogenic terms this might be considered a "dis-easing" form, a lack of coherence.
A deriving question thus might be: How can we come (back) to more coherent concepts of life? And how can a more interlinked, consciously human-based "design" of our individual, social and environmental spaces contribute to this?

For example, how can we make their affordances intuitively understandable and varying, in order to help us, to vitalizing or calming ourselves according to the very different needs we face in life (comprehensibility)? How would we make them easily accessible and flexible in use, bodily or sensually interacting with us (manageability)? And how can we make even urban spaces inviting us to reconnect with nature and its restoring effects, with ourselves (by body-movements, thoughts, memories), with other people, and even with an authentic rootedness of the

place in history as well as its alignment in presence and future (meaningfulness)?

In Venice's situation, Salus, the Roman Goddess of safety, welfare, well-being, prosperity - and health, has been used as a metaphor of Venice economic, environments and societal health by creating mixed-use infrastructure solutions that will be deepened in a second time. Stabilizing and making predictable the natural water ecology from floods; diversifying the economy where it becomes a producer and exporters; and creating a place where young people can not only afford to reside - but want to stay - a place of purposeful career opportunities and a future for raising a family.

Systemic Theory: how to thrive and evolve healthily as part of a coherent whole

Systemic thinking asks: How can an element, or subsystems, be understood in its context? What is the larger system like in which it is functionally embedded, as a part, and how is it interrelated with all the other systemic elements within this larger environmental context?

Looking at urban planning from a systemic point of view, a human habitat represents an "urban organism": a complex multi-layered system of mutually related and intertwined subsystems. These can be seen as different levels of environment:

- the **individual** person: with its health and needs, according to its passions, burdens, concerns or interests
- their direct **social environment:** family, peers and colleagues

Urban design is considered, and practically realized, as a process over time, from several years up to decades. It influences - consciously or not - various levels and subsystems of the urban system, affecting many inhabitants, involving a multitude of stakeholders.

-the larger **societal environment** with its sociocultural structure, institutions, and facilities: schools, administrations, transport, food supplies and cultural offerings
-the **ecological environment:** the state of green and blue-spaces, air and noise
-the **economic environment**: local businesses vs large companies and mono-economies, and
-the **built environment:** with its architecture to dwell, work, play or learn in, its streets and places.

All of these layers of environments are to be considered for a deeper understanding of an urban system.

Size and complexity of a system
Systems can vary according to their size and complexity: a *macrosystem* is defined as a larger system that influences several systemic levels or subsystems.

Thus Venice, a city, can be regarded as a large and complex system - embedded in even larger macrosystems, that of Italian culture - with multiple intertwining systemic levels whose interrelationships are organized in circular, interacting and thus interdependent processes.

A *microsystem* is seen as the nearest larger system embedding an element - for example of which the family would be for an individual.

Furthermore, systems can be categorized by the nature and quality or their various interrelations: a meso-system in this sense describes the relationships among several systems in a systemic environment.

Whereas an exo-system defines the relationship between two interacting systems which - by doing so - indirectly also effect on a third system; these "hidden" impacts of relationships on often unsuspected (as not directly linked) system parts are easy to be overseen in analysis.

A *chronosystem* is defined as a system - like the Venetian ecological system with its high and low tides - composed of significant life events (urban flooding by extreme tides) which do affect the adaptation of the whole (by damaging the material stock of buildings and the income from tourism). In the same way the mono-economy of tourism can be seen as a chronosystem impacting on the self-regulating abilities of a multi-levelled urban whole.

Towards salutogenic design on a systemic level: a saluto-systemic approach
Defining an urban habitat as a complex multi-layered system that has the potential to contribute to the thriving and flourishing of its inhabitants in a salutogenic sense, the goal is to seek to integrate the systemic approach into the salutogenic model and apply to both the architectural and urban design of the city fabric.

Health and well-being: a changing concept, localized in time and space
Throughout human history - until quite recently - our attitude toward public health and general "state-of-well-being" has been holistic: we have focused on maintaining a healthy diet and a healthy lifestyle. And, critically, on the design of our physical surroundings and habitations.

We are now entering the third era of public health, where we can activate optimal health by creating enriched environments, with generative elements that cause health. In this third era of public health, society is shifting to a wellness mindset, versus a "healthcare" mindset.

However, in the last hundred years or so, the holistic views have narrowed. We now focus on curing disease and injury, rather than on creating health. In 1910, the Carnegie Foundation funded an assessment of North America's medical education system. Their Flexner Report stated, in effect, that anything other than western, evidence-based medicine was witchcraft. This set the stage for today's disease-oriented, evidence-based pathogenic medicine. "Health" became synonymous with "health care". Our western, evidence-based model has extinguished the older, more comprehensive approach that links physical, spiritual and mind health with social well-being.

Over the same period, our views towards public health have also evolved. The American physician Lester Breslow, whose work had a large impact on public health, defined three eras of public health.

The first was the industrial period, up to the 1800s, when overcrowded cities were overwhelmed by communicable diseases. Lack of sanitation, access to clean air and other basic necessities led to the establishment of public health authorities. At that time, architects and urban and landscape designers worked together with public health officials to create healthier environments, including the park system. Urban design guidelines were created, to reduce overcrowding and improve air circulation and sanitation.

The second era of public health began in the 1940's, when the reduction of infectious diseases meant that people were living longer. The damping of the waves of communicable diseases led to an upsurge in non-communicable and chronic disease.

At present, our current healthcare system is consumed debating issues such as the efficiency of medical care, wait times and delivery systems—and overlooks the larger questions of how to move to a mindset of health-creating abundance, and how to move from illness prevention to a state of health activation.

The illness mindset is pervasive: a Google search for the words "cause health" generates countless variations on "cause health problems," "cause health abnormalities," "cause health risks" and "cause ill health". Nearly every link will be for health-care deficiencies and disease prevention. Few, if any, will lead to affirmative outcomes or on generating health.

Attitudes are evolving: The World Health Organization takes a broader, more holistic view when it defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."

Beyond "health" is the concept of "wellness": defined by the Global Wellness Institute as "the active pursuit of activities, choices, and lifestyles that lead to a state of holistic health". In other words, wellness emphasizes the holistic, active, embodied physical engagement that leads to mind/body health and well-being.

After a century of pathology-centric views, dominated by medical fears and phobias, we can aim higher. Instead of focusing on preventing disease and minimizing the spread of the viruses, we can focus on what creates mind health.

Attention is being paid to discovering the causes of health - to creating an "antifragile" state, whereby the system itself increases our capability to thrive against stressors, shocks, volatility, noise, mistakes, faults, attacks, or failures." In effect, a system that causes health - environmental, physical, economic, and societal health.

As an example of society's focus on disease over wellness, "pathogenic", the medical term that means "causing disease" is far better known than its counterpart, "salutogenic" which means "causing health".
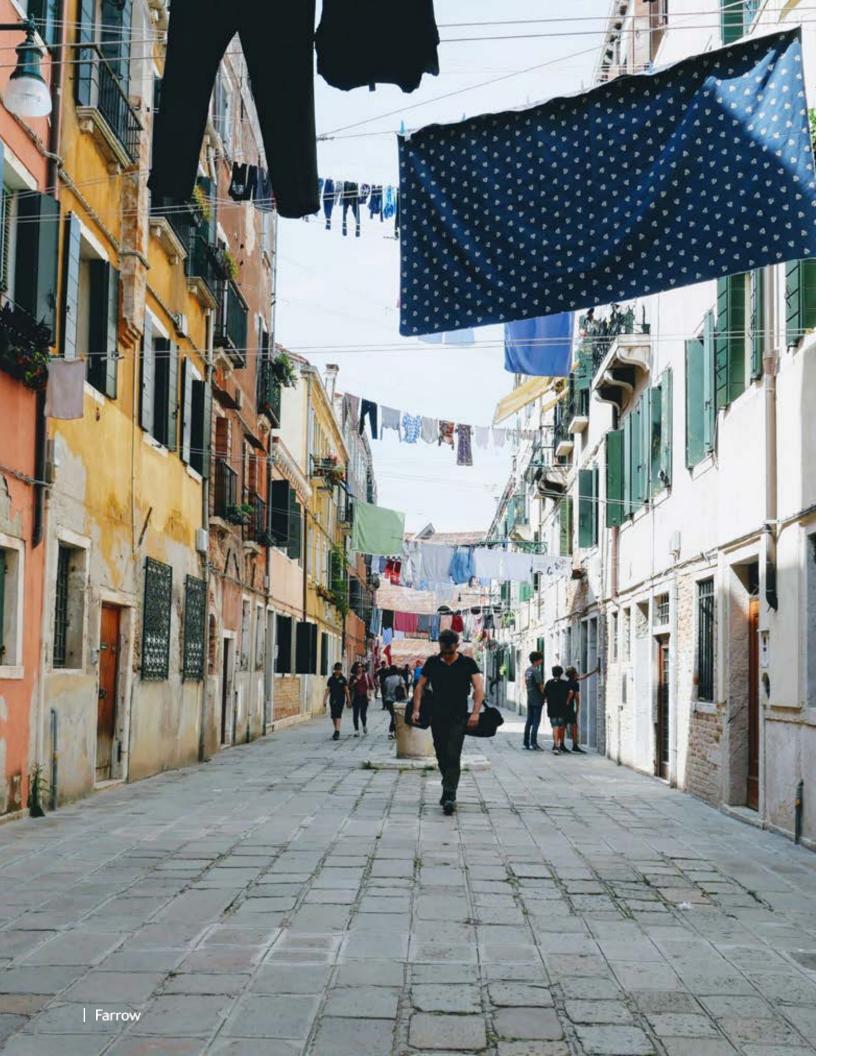
Salutogenesis, as a term, was coined by the medical sociologist Aaron Antonovsky, as a concept that reframes health as a positive force, rather than a collection of deficiencies. His pioneering research into the relationship between health and illness is outlined in two books, published in 1979 and 1987.

Antonovsky focused on the characteristics of individuals who were more resilient to the stressors of daily life, who, he claimed, exhibited a "sense of coherence" about life and its challenges; qualities that helped them cope and remain healthy.

The distinction between causing health and preventing degradation is crucial. The 'cause health' view is focused on leveraging human assets and capabilities, regardless of their current state. It engages us in building on these strengths to optimize health.

Our interest in 'causing health' has never been higher. Now, with COVID-19, wellness has become the number-one priority for consumers and will likely remain so after the pandemic has passed. This is evidenced by the number of companies moving into the wellness sector.

According to the Global Wellness Institute, the global wellness economy was a $4.5 trillion market in 2018: "The industry grew by 6.4 percent annually from 2015–2017, from a $3.7 trillion to a $4.2 trillion market, nearly twice as fast as global economic growth (3.6 percent annually, based on IMF data). Wellness expenditures ($4.2 trillion) are more than half as large as total global health expenditures ($7.3 trillion, based on WHO data). The wellness industry represents 5.3 percent of global economic output." (https://globalwellnessinstitute.org/what-is-wellness/what-is-the-wellness-economy/)

Background data: experiences, observations, and data on Venice

As part of our process of research and design for Venice we used our three experiences and observations of the city to start. We then passed a questionnaire to inhabitants of the city, either born in Venice or arrived later in life and lived here for several years. The questions asked in the questionnaire were organized in three main categories: How was it to live in Venice before? How is it to live in Venice now? What do you think the future of Venice should be? Questions included the words and emotions felt towards the city, questions regarding the Covid19 situation and its impact on the city, as well as questions about venetian culture and traditions.

Observations of Venice: emergence of six main characteristics of the city

The observation and experience of Venice, along with discussions and answers to the questionnaires distributed to Venetians, led to highlight six important characteristics of living in Venice, which will be particularly considered with the Salutogenic theory focus. These elements are (1) the global condition of the city through tourism, (2) its uniqueness and cultural identity (3) the element of water and living on water, (4) its atmosphere (and stimmung), (5) its slowness and quietness and finally (6) its relation to wayfinding and particularly the notion of turning around in circle.

Each of these characteristics will be further developed and explained. With the sense of coherence, central to Antonovsky's theory, at the core of our understanding of these venetian's characteristics, we recognize the importance of reinforcing the inhabitants' connectedness to their city. The notion of connectedness is multilayered and is therefore expressed at different scales from the connectedness to (1) local history and culture, (2) nature, (3) the "whole" and the atmosphere, (4), the community (5), oneself and our own body.

Firstly, as described before, the City of Venice has been, for the past years, massively invested by tourism, cruise ships and day-trippers. The expectations and activities related to tourism drastically lowered the quality of life of the inhabitants who suffer from an intolerable density of tourists, declining their will to move in the city to avoid the stress of the crowd and the conditions of transportation. Not only the density but also the quality of the activities proposed declined in this cultural city.

Despite the tourism, Venice remains a city where communities are very present, in each of its quarter, which nourish a feeling of a small town, with strong traditional roots and pride for its identity.

Venice can thus be a **global town,** relatively stuck in time and in its tradition that have been "sold" as tourist attractions, with an immense global and international population.
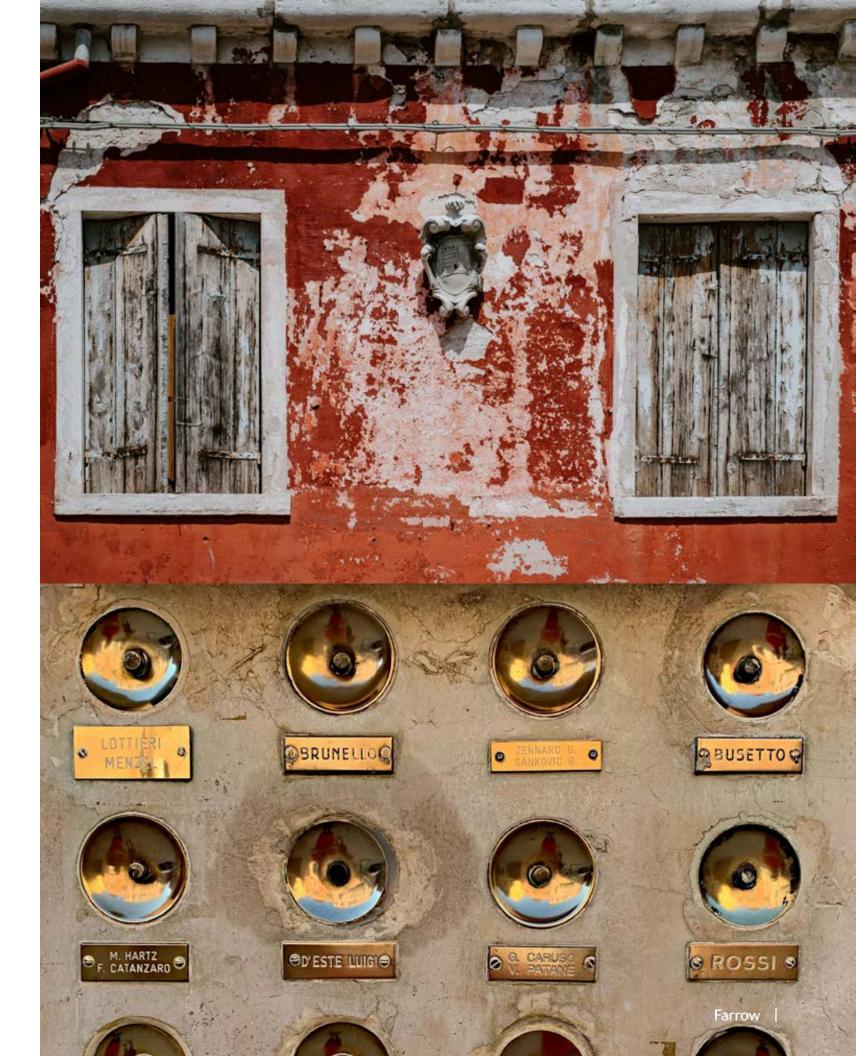
This unbalanced relation to globalization is of major interest from a salutogenic point of view. The city needs to recover its equilibrium and the population's sense of coherence of its environment.

Secondly, Venice, called for centuries La Serenissima, has a **unique identity**. From a salutogenic point of view we can hypothesize that Venice's uniqueness and its identity as a city that marked the history describes a generalized resistance resource for its inhabitants, who display a great pride over their city. Venetians can show different identities, from the artists and actors, passionate of arts and culture, to the craftsmen, building gondolas, without forgetting the large majority of Venetian working with tourists such as the "gondoliere". But no matter what their occupation is, Venetians are foremost islanders. Every islanders has a unique personality and identity that separates them from the "others". Jan Morris, when describing the identity of Venetians says, *"The venetians . . . have the introspective melancholy pride of people on their own, excluded from the fold of ordinary nations"; " The Venetian way is the right way, and the Venetian nearly always knows best"* (Jan Morris, Venice, Faber and Faber, 1960, p14). But not only Venetian have their identity, Venice itself has its identity, with the venetian Campos, its largely open façades constructed on water and its constant reflection on canals. The city and its issues are definitively unique.

One of the main uniqueness of Venice remains that it is on water. What are the impacts of **living on water,** for centuries, from generation to generation? What are the bodily feelings and the embodiments related to living on water? Certainly, it is imbued in the movements and habits of Venetians. No research has yet demonstrated the influence of living on water on the body and cognition, but we can already realize that the link between venetian and nature is particular. The beauty of the movements of water with the tides and the views on the long blue-stretch seems to be equally as restorative to Venetian than forests and parks for city-dwellers. The city seems in constant movement, as the water, despite its incredible quietness and stillness during the winter. According to Gaston Bachelard in "Water and Dreams, an essay on the imagination of Matter" (1994) water is a transitory element, in motion and constant transformation, deeply linked with emotions. Living on water also seems to heighten the connection to the elements, either moon, sun, or wind, since it is very sensorial (we see the reflection of the sun and the moon, we feel the tide as the water rises in the city, we can observe the wind on the canals, and feels it on the boats etc). How to meaningfully bring nature within the city in regard to the experience of Venetians?

This leads us to the fourth characteristics which is the link to the elements and the particular beauty of the city, which is amongst one of the main resources we can find in Venice. Its particular **beauty** and proximity to the natural element of water allow a deep sense of **stimmung** and a great connection to the circadian rhythms. The sunrises and sunsets are very visible within the city and confer a deep sense of time, days and seasons passing. Equally linked with the element of water and how it changes throughout the days and tide, Venice is alive and deeply sensorial, even sensual. This unique quality confers to its inhabitants and dwellers a particular sense of connectedness, not only with the city but also with oneself.

To support this feeling of connectedness, the fifth element that is characteristic of Venice is its **slowness, calmness, and quietness.** Thanks to its transportation means, the boat, and its winding streets, always leading us in different directions, the city always seem to bring us to the present moment, enhancing a deep connection to oneself, reinforcing a feeling of meaning through deepened and enriched experiences, as stated by Mark L. Johnson (2015)

Venice's natural calmness represents an important restorative resource against stress and helps to cope with eventual stressors, mostly with mass tourism that deplete its natural quiet atmosphere. As stated previously the city seems to help us feel recharged and balanced, and to activate the parasympathetic system thanks to its restorative qualities.

Finally, the last characteristic of Venice, coming along with its winding street, is its particular geography and construction with the Grand Canal dividing the neighborhoods linked to the mainland, and the others. Because there are only four bridges crossing the grand canal, it is very easy to pass everyday by the same places, even if we are going in very different directions at the end. **Wayfinding** is very particular in Venice since a lot of streets are dead ends, which can be a real maze for visitors and even for inhabitants. This particularity has its beauty, allowing wandering and enjoying getting lost. However, it can also confer to the city a redundant feeling, passing by the exact same places all the time, as for a little town or village, thus inhibiting a feeling of diversity and surprise.

An analysis on Venice and its challenges

The urban habitat of Venice is to be seen as a system with intertwining relationships defining its environmental resources and generalized resistance resources (which, from a salutogenic point of view are to be seen as potential impact factors on healthy and thriving relationships).

In the intent of applying the salutogenesis approach to the process of design, we have defined the different elements of the context in which we are building:
-What are the **external resources** available in the environment?
-How are these resources linked with a **sense of coherence** for the inhabitants?
-What are the elements in the environment that allow to create **meaningfulness, comprehensibility, and manageability**?
-What are the **inner resources** of the inhabitants, the community? And how can it relate to the external resources or to the environment?
-What are the internalized resources, or **generalized resistance resources**?

Along with the application of the salutogenesis approach one could as well study the factors limiting health and well-being, as described in the environmental psychology literature. Thus studying:
-The environmental stressors. What is creating stress?
-The limiting factors, or blocked resources?

A wider range of elements constituting the environments and the social context of Venice are important to assess. The resources present in the city, have two impacts according to the individual sense

of coherence: when the resource is coherent for the individuals, it can be internalized into a generalized resistance resource.

In other cases, it can lead to a blocked resource or a limitation. To illustrate this, let us take the example of place attachment and identity. While it is a fundamental social construction to feel proud of its environment, culture, and origin, like for the Venetian who feel very close to their incredible history and the uniqueness of their culture, it can as well lead to a state of stagnation in which the community or the city is not in movement anymore.

In that instance, evolution and change appear threatening to the population and its identity. In the case of Venice, we can wonder if the loss of this identity, because of the mass tourism and the "Disneyland" character the city has experienced in these last decades, isn't part of this strong reaction and protection?

The second step is to apply these observations on the design process and ideas. How to address and use the different resources in a meaningful way for the inhabitants to generate a healthy relationship with the environment.

The constitutive elements of health and stress in Venice

As part of our research, we use citations and opinions that came from questionnaires distributed to inhabitants of Venice. The data collected was as follows:

Resources

In every venetian mouth, the **beauty** of the city comes back. Words describing Venice are "majestic", "magical", "breath-takingly beautiful". The universe in which it seems to dive us in is particularly spectacular, not only for its architecture and the numerous exceptional details but also for the colors, the general atmosphere, the bridges, the water.

Not only beautiful the city also displays an incredible **connection to its elements**, mostly the water, which confers to the city a **sensorial** dimension deeply embodied. "Venice is a sensual city, and there is something physiological about the devotion she inspires, as though the very fact of her presence can stimulate the bloodstream." As explained by a citizen of the city, living for years in Venice, one can feel the city "Like a mother that embraces you timidly, from whom it is hard to break afterward". In his book Jan Morris even personifies the city, who becomes a "she", the most important figure, the one who fought for centuries for her prosperity, La Serenissima. As one of the questionnaire respondents said, "The city talks to you".

Indeed, the city is **unique.** The uniqueness of Venice gives to its inhabitants a remarkable identity, often linked to an important **sense of pride.** This influences the inner state of venetians leading to a healthy relationship with themselves and with the image of their city. "This peculiar national history lasted for a millennium, and the constitution of Venice was unchanged between 1310 and 1796. Nothing in the story of Venice is ordinary. She was born dangerously, lived grandly and never abandoned her brazen individualism."

Also widely described as a city where one can hear the silence, the city benefits from a feeling of **stillness and quietness**. Most particularly in winter because of the tourism during the other seasons, but the city still offers a very calming setting, once again thanks to its connection to water and the lack of cars within the city. Also, very quiet in terms of "visual stimuli", certain neighborhoods have almost no commercial shops, living the streets with only habitations and the local grocery shops and necessities. This allows the eyes to rest from the constant attraction of commercial shops. Only certain quarters, around the station, in Cannaregio or around San Marco, display a more active and stimulating environment. Since every quarter of the city benefits of the most important necessities, it is very common not to travel in the city at all and to remain in one's neighborhood. The city is also **slower** than other cities.

Sense of coherence

Understanding the factors and characteristics bringing a sense of coherence for a population can be challenging, especially when one did not have the opportunity to exchange and co-create with it. We can therefore only hypothesize the different elements bringing or depleting a sense of coherence for the Venetians.

The different activities still present in the cities, either for the arts and crafts of boats and gondolas, or for the famous skills of Venice such as the glass making, masks arts and the theater culture, provides an important sense of coherence for its passionate inhabitants. However, the opportunities to continue the art from generation to generation are scarce.

As explained earlier a large part of the population of Venice is leaving each year, most of them being the youth. One of the first reasons for that departure is the absence of job opportunity, and vision for a bright future. This lack of resources and **manageability** of their future depletes a sense of **meaningfulness** and coherence with their goals and life objectives.

The ecological and economical fragility of the city, being under water for numerous days during the year, does not provide with the vision of a safe environment and creates a lot of uncertainty as well. This creates an important imbalance between the internal state and objectives and the external environment, which becomes very unpredictable and does not allow control over it.

Another interesting aspect to look at for Venice is its particularity: being built on water. The city has entirely been built to be seen and used from and with boats. While walking in the city a lot of buildings and architecture are only showing the "backyards". Gardens and amazing entrances are all hidden on the canal sides. While navigating through Venice for those who own a boat creates a deep and intrinsic link with this heritage, it is more difficult for pedestrians to meaningfully use the urban space. Campos, for

example, were firstly thought to only be passed by, and not so much to rest. Some of them do not even have benches and are most of the year empty. Once again Venice is thus highly coherent and comprehensible for everyone circulating in boats, but it loses a part of its original function when it is solely walked. Rethinking the city from a pedestrian point of view would be an interesting step to bring more comprehensibility for all.

Generalized resistance resources
Amongst the resources that one could think the Venetian have internalized, the **sense of community,** the strong link to the **history of the city** and the pride coming from it, is probably the strongest. "This grand insularity, this isolation, this sense of queerness and crookedness has preserved the Venetian character uncannily". This strong identity gives to the venetians who decided to stay in the city a huge strength towards the elements and the difficulties. We could see how everyone coped with the Acqua Alta of November 2019, still having coffee standing at their local bars, boots on.
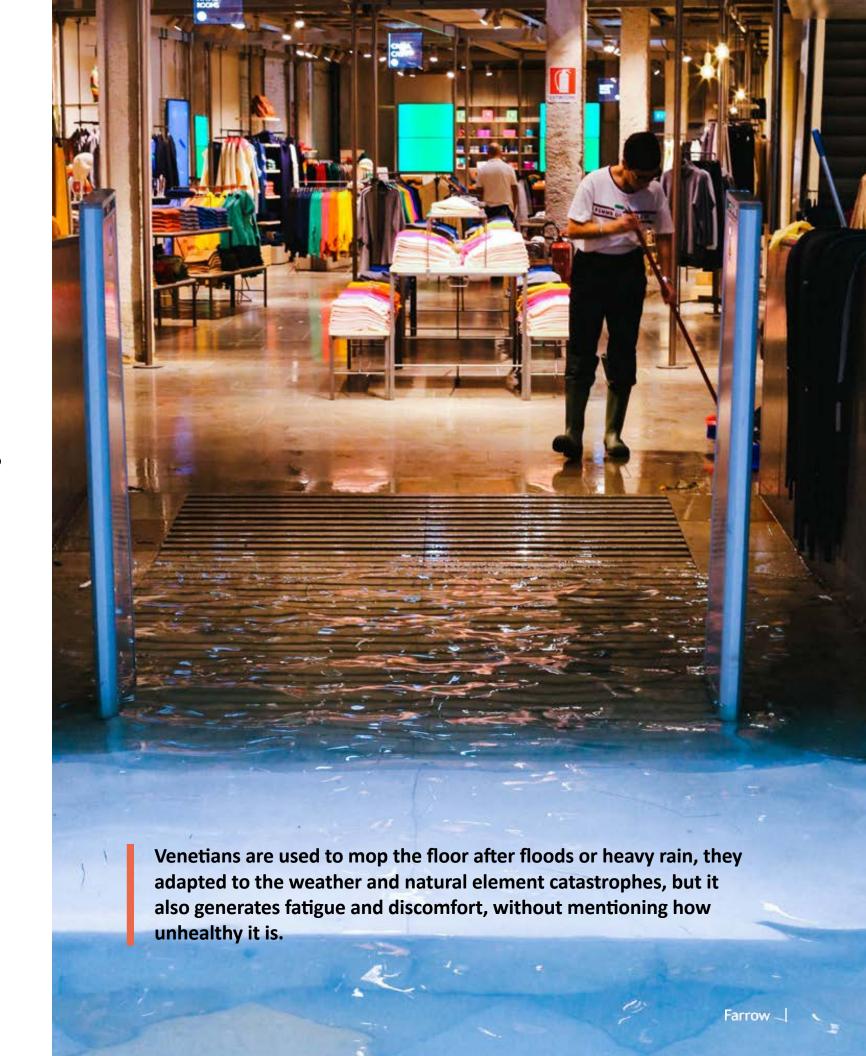
Not only the historical identity has an important influence on Venetians, the **geography** as well. The Lagoon also is an entity, a person, for venetians. La laguna is moody, she is alive. The prospect that it offers to the venetian is incredible, either far on the neighboring islands, or on the mountains. The blue stretch visible from all the bordering parts of the city gives the ability to observe around. Given that Venice is an island, it feels safe, enclosed within the water with the possibility to see the surroundings from afar. Even the mountains of Tuscany are visible from Venice on clear days.

Finally, the feeling of r**estoration and relaxation** that one could instantly feel while visiting Venice is deeply integrated in the lifestyle of Venetians. They know how to appreciate their time, stopping and chatting with the people encountered on the way, not hesitating to have a drink out of the blue. It allows an important connectedness with the city and with oneself. Quietness allows us to reflect and to feel aligned with our own emotions and sensations. Because Venice is very sensorial, and related deeply to the element of water, it seems to confer to this place a particular atmosphere.

Environmental Stressors
But the city also faces important environmental stressors, as presented, and explained throughout the thesis. First of all, the city suffers from **mass tourism**, from spring to autumn, and thus of **over crowdedness.** This has drastically lowered the conditions of life, for inhabitants to be unable to walk outside because of the amount of people in the tiny little streets. This creates unhealthy patterns and behaviors, residents feeling exhausted and alienated by the tourist, as well as reducing the ways to cope with the problem since they are unwilling to go out and appreciate the resource the city offers as well as a lack of activity, both physical and mental.

Of course, once again certain quarters suffer more than others. The city then becomes an attraction, its economy turns around tourism, and slowly loses the different services and activities that are meaningful to the citizens. Throughout the questionnaire given to the residents it is clear that Venice is losing part of its community and sense of place. It lost its "soul"

Venetians are used to mop the floor after floods or heavy rain, they adapted to the weather and natural element catastrophes, but it also generates fatigue and discomfort, without mentioning how unhealthy it is.

over the selling of its beauty to cheap tourism. One of our respondents rightfully said, "the city is no longer respected", while another explained, the city is now thought for "fast-paced, low-cost tourists", who are not interested in the historical identity and culture of Venice anymore. This is part of nowadays' Venice narrative that we will detail further later.

The second incredibly problematic stressor of Venice is the sea level rising, and the **flood** it generates within the city. It is now world-widely known that Venice is "sinking". Its **ecological fragility** is amongst the biggest environmental stressors, creating uncertainty for the future of all its inhabitants.

It also generates economical and technical issues because of the current flood and how it can affect the city, as well as the way it slowly destroys the architecture. Full of humidity the buildings, even if renovated and well-heated, can have a detrimental quality of air inside, and can be terribly uncomfortable in winter.

Limiting factors

Finally, we insert here what we can call limiting factors, or inhibiting factors, which would describe blocked resources or elements that are not considered as environmental stressors but that would still have a detrimental impact on a healthy lifestyle within the city.

As mentioned in the resources earlier, the beauty of the **identity** of being venetian, can for example, also have a negative influence on growth in a city, especially when it is a reaction to a threat, here the

loss of identity of Venice because of mass tourism. As answered by a Venetian born and raised in the city:

"All the pride I used to feel and share towards my origins has a bit disappeared as Venice is now a museum for tourists and students and it no longer belongs to us". It is interesting to notice that the notion of identity is here closely entangled into a feeling of belonging and owning. This same young venetian explained that however much he loves and cherishes Venice, he still knows that he wouldn't stay here all his life, similarly to a lot of young people who lived for years during their studies or for a job in the city. "There are essentially two types of Venetian: the one who would never step outside of Venice (and almost never do!) and the one who is not capable of being here probably because they need to experience a more open-minded environment . . . Ok Venice is Venice, but it's still a small island with lots of narrow-minded islanders!"

There lies an important challenge and issue for the city, its dwellers, and designers. How to let the city grow with its time and with nowadays needs, but by doing so respecting its strong cultural identity, that a lot of its inhabitants would never want to see change, even for a bit?

Venice and its inhabitants can be "difficult to get acquainted with at first, hard in the beginning to know its people, its custom" as explained by a young Italian from Florence, who moved to study and work in Venice. It appears that some Venetians created a barrier, a protection towards outsiders, in response to mass tourism and the threat on the "soul" of Venice.

Also, part of the incredible resource of Venice, its **slowness and quietness** can also have an important downside. Indeed, "every single "normal" action – a big shopping, moving from one part to the other one. - isn't to be taken for granted and may you always require a big effort," as explained by a young Italian who has been living for 8 years in the city. Simple daily activities that would be part of other dwellers habits, take a lot of effort and energy for venetians. In that matter Venice has almost the same resources as a small town. "As a young adolescent I remember always complaining about how Venice had not much to offer in terms of "young fun". Sport activities, outside parks, fun and cultural activities can be difficult to find in the city. Younger people might then choose to move to Mestre, the city it is connected to on the mainland.

Finally, associated with these same issues, the difficult circulation in Venice can have an entangling effect on the inhabitants, who slowly can limit themselves to their local store and neighborhood, thus avoiding walking for an hour to access the bio-store on the other side of the island. As beautifully written by Jan Morris in his book: "Venice is a maze of waterways and alleys, crooked and unpredictable, following the courses of antique channels in the mud, and unimproved by town planners. Until the last century only one bridge, the Rialto, spanned the Grand Canal. In the days before the motor road . . . who can wonder if the people of Santa Margherita, satisfied with their own shops and taverns, rarely bothered to trudge all the way to Santa Maria Formosa."

The urban system of Venice: first steps of exploring the structures and relationships

Looking at Venice as a complex and multi-levelled urban system: what could be important interrelating parts within the overall structure of the city which might help to understand Venice`s current situation? Which seemingly interrelating systemic levels or subsystems might play a significant role according to the nature of their connecting relationships, be it resourceful (i.e. synergetic resonances) or malfunctioning (i.e. boundaries, obstacles) to a naturally fluid process of thrive?

Narratives
In our initial research and exploration on "Venice, now and then", at first, we realized the tremendous and polarizing difference of narratives (told in the media by inhabitants or foreign residents as well as by national and international media), almost as a black and white picture:

The story of "Venice then" is communicated in as achievement- and development-narrative, a constant process of rising and becoming, emphasizing a skilled (16th to 19th century) urban community which is coping well and by the courage on co-creative autonomous meaning- and decision-making that thrives in its process of unfolding its own potentials.

In contrast, the narrative of "Venice now" is communicated in a mere deficit narrative, focusing on the decline of almost all past glories and the majority of former inhabitants, it is referred to as "a sinking town" in several aspects. Perceived current resources are attributed to the old narrative ("Venice then"), seen as inherited treasures still building the stock for contemporary living, materially manifest in the old

architecture and old crafts (there is wonderful new architecture in Venice, too, but it seems they lack a bit of the common emphasis the historical buildings and city outlay enjoy).

In terms of this deficit-oriented contemporary narrative, it seems all too consistent to build on tourism as the main source of economic living: foreigners who join the common view back, enjoying what inhabitants might be proud of. This present narrative of a "looking back" attitude seems to highlight especially the man-made cultural and manufactured quality of Venice, evidenced by its former leadership role, with a wish to have this preserved. At the same time this legacy seems to provide an intensely felt "presence of the past"; the past which thereby might frame the present.

But yet, looking at the feedback from Venetian inhabitants, another way of highlighting might come into awareness: the special way of life and the qualities of life, unique to Venice: its calmness, quietness, slowness, the connectedness to nature (especially represented by water) and the essence of life (as being aware of oneself and one' s own body as well one's embeddedness into a larger whole, represented by the elements, light and circadian rhythms).

These are qualities which are partly overlaid and therefore not effective in their resource-potentials anymore, but yet, they are still there. Those inhabitants who grew up in the lagoon would especially highlight the loss of these qualities and especially the loss of vital community life around the

Campo over the last thirty or forty years, during which their narrative seems to have changed a lot. Within this narrative, there is a great sense and fear of losing Venice in its core qualities, with its sensible soul and identity of place.

From our feedbacks and experiences, one might say there are at least two current narratives on Venice: the narrative of the "cultural (inherited) Venice" (which is sold to the tourists) and then the "felt (experienced) Venice" with its natural and sensually embodied experiences (whose potential resource qualities, in parts, seem to be paid as a price to mass tourism). In this sense, Venice shows, at its scale, what we can observe on the global macrosystemic scale, concerning contemporary thinking in the northwestern conditionings: still culture dominates over nature.

Systemic levels and their interrelations: explorations on Venice In today`s Venice, there are two main malfunctioning interrelations to be recognized, which do affect the adapting and self-regulating abilities of the multi-levelled urban whole: the frequent flooding by water and the almost continuous flooding by tourists.

On a macrosystemic level these are interrelated with global dynamics - flood of water with climate change and rising sea levels, and flood of tourists with globalization and easy mass tourism:

 -Rising water: frequency and height of acqua alta/ extreme floods; sinking of the city, resulting in a dependence on flood protection and money to fix the damages. This leads to damages on the stock of

buildings, dependence on safe income by ongoing mass tourism, dependence on external investments, which are not likely to come as there is no healthy future vision.

-Mono-economy: dependence on tourism that leads to loss of affordable housing (Airbnb market), urban facilities dedicated to tourist needs instead of neighbourhood structures; less attractive living conditions, rising living costs, risk of rising depopulation, thereby reduction of urban living structures (doctors, hospitals, schools, and theatres) and of employment opportunities.

-High import-rate: dependence on external supply of food and other life goods, which leads to more boat traffic and damaged stock of building, dependence from higher import prices with risk of rising living costs and more depopulation.

-Damaged stock of buildings, high fixing costs, leading to a dependence on more municipal capital (income) and external investments; resulting in stronger dependence on tourism as a main source of income, but yet an increasing stock of buildings unusable for living (due to humidity) and a reduction of affordable housing with rising living costs and rising depopulation at risk.

-Depopulation (specifically the younger generations), resulting in dependence on attractive employment opportunities, young living conditions and life opportunities, which leads to the need for communal expenses, more dependence on tourism.

-Little attractive employment opportunities (aside tourism), which leads to dependence on more (young) population; thereby leading to more part-time inhabitants (students, tourist and day jobbers), less residents forming the community life in the Campos; less attractive living conditions, risk of rising depopulation and aging population.
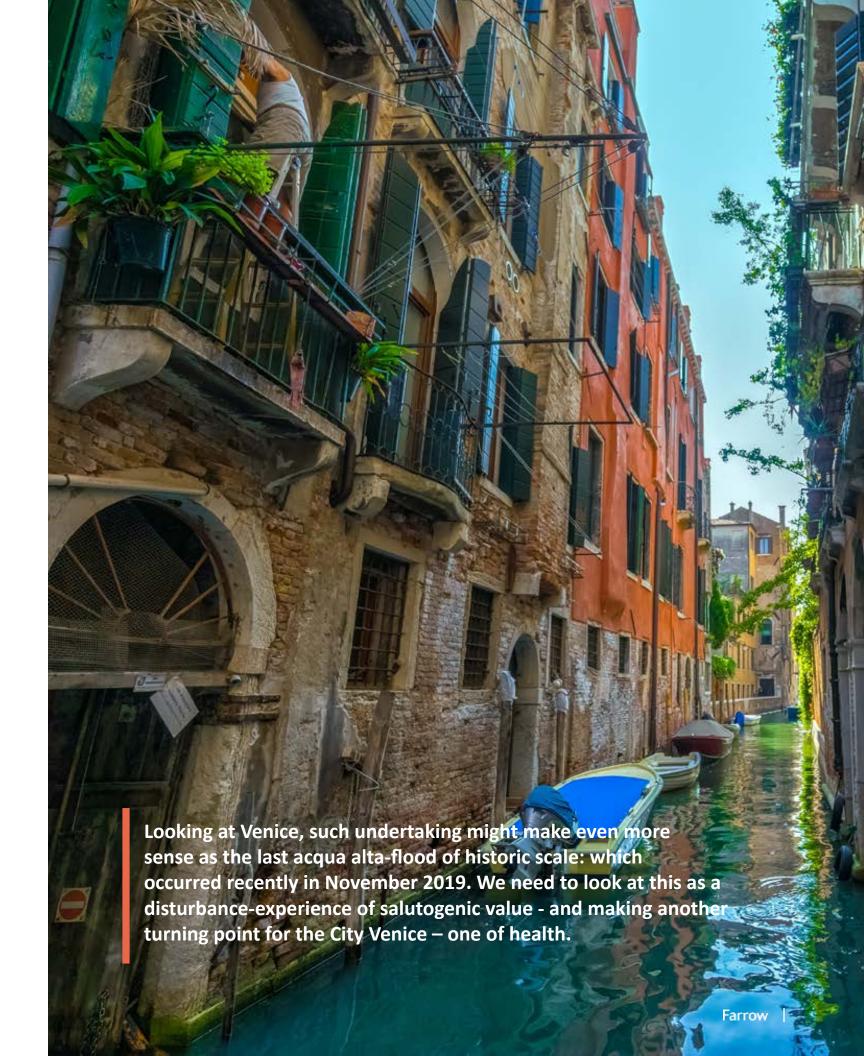
Systemic thinking and sustainability in urban planning

"Venice now" and *"Venice then"*: the narratives contrast. And yet, what happened in between? What happened especially during the 20th century when industrialization, two world wars, globalization and digitalization took place, with various impacts on the global macrosystem?

It may be that the turning point only happened with the lagoon exodus due to a terrible flood of 1966 and then the exploding mass-tourism during the last 30 years. But what if there had been other interrelating exo-, meso- or chronosystemic factors impacting. To learn and get aware about such, might carry the potential to guide the presence with even more farsightedness.

From the systemic perspective it would be an interesting in-depth historical analysis to gain a better understanding of the underlying, often long-lasting and well intertwined systemic processes and dynamics: This seems interesting not for the sake of a deficit-oriented view back, but in order to learn more about what kind of systemic pattern or coincidences (in structure and relationships) could be

regarded helpful indicator to start an accompanying participatory process for urban development. This might aim at rethinking and co-designing the presence while it is happening, in a still fluid manner, instead of getting aware of a manifest problem a few decades later, due to some self-masking exosystemic dynamics. To elaborate the attitude of systemic thinking, in the complexities of circular interactions and varying system`s levels, might be a challenge and yet a great asset complex for political officials, city municipalities and urban planners when facing the task of sustainable action.

Looking at Venice, such undertaking might make even more sense as the last acqua alta-flood of historic scale: which occurred recently in November 2019. We need to look at this as a disturbance-experience of salutogenic value - and making another turning point for the City Venice – one of health.

Saluto-systemic perspectives process design

Urban planning redevelopments face development processes with a complex, multi-layered and heterogenous system, occurring over longs period. And their results will persist for even long periods of time.

Looking at Watzlawick' s axioms on communication ("you cannot *not* communicate") and the effects of framing, it seems essential for human-based urban planning procedures to coordinate a collaborative process which involves inhabitants and the multitude of other cities' stakeholders: because how something is said - its framing - can impact on the perception and interpretation of *what* is being said as well as on the behavioral decisions to be taken on that base (Kahnemann, 2011).

We might even dismiss better problem-solving options if they were framed in a deficit-oriented way, and thus decide in favor of the worse options: the "prospect theory" by Daniel Kahneman and Amos Tversky (1985) points out that we react differently to a decision, if either a positive benefit or negative loss was associated as a result; as we tend to avoid losses, per sé, an imagined loss is perceived more important and therefore more worthy to avoid, than the imagination of gaining a benefit of equally height. Facing uncertainty, we therefore might tend to decide in favor of maintaining a status quo (no loss though) instead of a change and only an imagined prospect of a possible benefit.

Self-commitment towards decisions is much higher in participatory processes (Mittelmark, 2017). In other words: An environmental design element will

not unroll its possible effects as an environmental resource, if - for internal or external reasons - it is not interactively *used,* or not be used accordingly. It might even become a limiting factor, by having spent money and space for an unfulfilled design purpose.

Two "core" concepts for process design: widening the frame and experiences of resonance
Starting point of our design idea was "the problem trance" we realized coming along with our initial two-flood experience. Here we want to focus on two "core"- concepts for process design, both of which we consider helpful to facilitate internal ways out of the "problem trance" - which, for current Venice, can be seen as a narrowing deficit-narrative.

Two central challenges to face
Starting-point of our design idea was "the problem trance" which we realized in the context of our initial two-flood experience. During further analysis on Venice, we saw two main challenges to face for a collaborative and participatory process design which might help the Venetian population to open up internally, to really get engaged in the process and to widen their inner spaces, thus their familiar frame of reference, as a way of the problem trance:

Reframing: Creating inner space for evolvement
How can we invite the community of Venice into a *vision of vital urban development* and into a *narrative of transformative development* that would allow an idea of Venice continuing to move in time - and maybe even in space - without losing its soul and identity and reconnecting with a narrative of co-creation, self-efficacy, autonomy and pride.

This would be answering to a narrative of being stuck and trapped, of being bound to only re-act, to given and not changeable circumstances, in the sense of a more passive coping.

Future Visions of Venice: Creating safety and coherence within a shared process
How can we invite into a non-rushed and open *collaborative process* of approaching and appropriating new visions, both participatory and co-creative, that would allow the idea of a gradual and flexible transition along a longer timeline and with clear reference to the untangling needs of the developing urban communities meanwhile?

A state of "not-yet-knowing": the challenge of facing uncertainty
The widening of internal space refers to the process of opening and rethinking the current narrative by looking at it a wider frame, from a larger perspective. And to take time to collaboratively explore the whole picture from this new point of view which, in the first step, means to "question" the currently guiding narrative and uncover it as "just" a social construction, a shared concept: the way we altogether currently look at the "multi-lemma"-situation of Venice. But, to thereby relativize an old familiar narrative also rises a challenge: we need to realize, that the "safe" space of "the known" in fact seems relative – according to the perspective we take, at a time at a place. Stepping back from one narrative, thus means to relieve its former "truth-giving"- reading and thereby might lead to a vulnerable *state of uncertainty.*

To dare states of uncertainty is a most valuable aspiration in processes of transformative development, and therefore in process design: to have left one "fixed" or stabile position, already, but not yet have reached another, describes the process of transition, of exploring, of creative thinking, and being able to imagine into a variety of possible directions - if one dares to stay in this state for a while.

Co-creation in systemic process design thus is not about finding a "quick" solution as soon as one might have faced a field of concern. It is about leaving the deficit-narrative and a problem-trance as soon as possible, but once this delicate intermediate state of uncertainty ("not here anymore, but not yet there as well") is it about staying fluidly, and about exploring the variety of possible perspectives from this point of "in between". Research on the impact of psychosocial methods which try to facilitate internal human processes of transformative development show good evidence of its effectiveness.

Experiences of resonance: Qualities of supportive relationships in process design
Yet, to be able to face this challenge, it deserves a safe and supportive process. Research on the impacts of psychotherapy points out, that there are two important relational factors when looking at helpful and supportive relationships for states of transformative development: these describe facilitating relationships which offer: the experience *to be emotionally safe, understood and accepted,* and; the experience of *activated and accessed resources* within and by the relationship. The qualities of enriched relationships, selected to describe such

resonating experiences, to be in accordance to the neuropsychological factors of supportive relationships.

In this sense we consider it an essential task for process design to provide a collaborative, safe and supportive environment that might enable to open up and enter a co-creative process of re-imagining their habitat in a healthily thriving way.

Look into a desired future: explore new visions
To imagine the built space of Venice as a first step might bring up the current narrative, of Venice "as it is and was", and - as a hidden projection - "will be". Because this refers to our inner image of Venice, as we know the place. Yet at the same time, this narrative builds on stated premises which one, at second glance might like to put in question: Venice, has it always been like this? Looking at history, Venice has been in continuous transformative change throughout the centuries.

To look beyond, it might intuitively invite intro daydreaming, fantasizing: the *technique of envisioning a desired future,* the co-creation of inner images.

For a start one might present an image of the necklace of islands plain, with just the plane lands, and a question mark in the middle. New islands in Venice?

This in itself means thinking at a paradox scale, way too large: thinking beyond the "thinkable" and thereby already a helpful "paradox "situation, an opener towards co-creative processes. It brings up the "What if"-questions: supposed it was possible and there was space, protecting and giving opportunities;

how could that be? Suppose there was no flood of tourist, and no flood of water anymore; what would you wish, how would you experience Venice?

And, by a larger scale: what even, if there was a chance Venice was not to sink, entirely? What if measures could be finally found and taken to "really preserve" a unique human habitat (in the true sense of a World UNESCO Heritage) and not endangering it by celebrating its beauty (as sold to mass tourism) and yet not truly caring for its sensitive fragility?

The process of widening a frame is to realize and accept: What we do see as our future, as a start, is an assumption. It is an assumption which emerges from past experiences and their generalized projection onto the future. And yet a future, which is created by our very presence, by the way we are thinking right now, and which thus guides our action.

There lies a tricky treasure in there: the opportunity to choose. This is not about having a fact-based in-depth-analysis of a situation as a matter of fact. Yet in the contrary, it is about truly facing the problem in all its facets, micro- and macrosystemic layers and interdependencies. And to act on the whole picture, trying to think and act according to the nature of circularly intertwined processes which describe a principle of life, after all.

Urban challenges that need to be addressed

Challenges that need to be addressed:

Creating (inner and outer) space for evolvement:
inviting into a vision of development and a Venetian narrative of change that would allow a shared urban idea of moving in time and space without losing its soul and identity and to reconnect with a narrative of self-efficacy, autonomy, and pride
-Direction: to a narrative of being stuck and trapped, of being bound to react and cope more passively rather than by actively and flexibly deciding

Inspire more local independence in terms of economy and agriculture
Direction: answer to the economic dependence on high import rates of goods and food supply and on mass tourism as a main business pillar (this with high sales figures but relatively small amounts of profit and capital to stay within the Venetian economy itself, for further reinvestment and urban development).

Re-inspire an old Venetian tradition and yet currently new experience that internationality and visitors can serve as a source of sociocultural inspiration and economic thrive (instead of being perceived as a threat which is yet to be tolerated and from which the community of citizens is to be protected from).
Direction: to the collective concept of considering Venice a victim of fatal circumstances without self-efficient means of action to direct.

Invite and inspire to bodily movement and interaction with nature and urban spaces within the Venetian lagoon
Direction: to the (younger generations`) concept of considering Venice a city not fitting for modern lives.

Saluto-systemic perspectives on Venice: an urban design vision
The following architectural design project aim at applying both of our "core" design-concepts:

Widening the frame- External ways out of the problem trance
Addresses the challenge of inviting the urban community of Venice to widen its inner frame of reference. And to truly imagine the multitude of options that might be helpful to consider, in order to get out of a deficit-oriented problem-trance back into the fluidity of transformative development- as Venice always did for its vital thriving and flourishing.

Enriching resonance experiences in relating to space? Elements of enriched environments as a design tool
 Tries to bridge internal and external spaces by mirroring the characteristics of supportive relationships in environmental design: this follows the concept of resonating relationships, as a base of constructing a perceived quality of space (thus "the felt space") in a mutually resonating person-space-interaction: experiences of resonance in internal and internal spaces.

An Invitation
Discourses on transformative
development of Venice

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An Invitation
Discourses on transformative development of Venice

We are aware that the idea of a necklace of new islands in Venice - for its protection and further qualitative evolvement- might go far "beyond the thinkable". The imagination itself could be considered as frame-widening, as literally "space-opening": And thereby, as a first and important step, it might just bring to our common awareness, that our initial human impulse of feeling "repulsed" by an imagination of change -i.e.. by the idea, anything around Venice might transform, after all- leads us back to our own (often unwarily guiding) concepts and schemas of how things "ought to be".

And there is nothing wrong about this, it is a natural human tendency. Yet, if we are bound to discover, that our guiding concepts or schemas might not serve our human life and the well-being of the larger whole anymore, because they would not be in healthy resonance to the embedding macrosystem anymore. And if we are to finally accept, that our associated action patterns in fact endanger the larger whole and our habitats within, then we might take these discoveries as the "fairly unfair disturbance" that in saluto-systemic terms nurtures and thrives evolvement ever since.

For the urban community of Venice, it seems a good time to maybe rethink guiding concepts and coping strategies. And co-creatively imagine and explore varying ways that might inspire and help to face healthy further development and transformation. The continuing of current narratives and associated action patterns, it seems, do encourage threatful interdependencies within the complex multi-leveled system that Venice is. As such, it is in the course sinking.

In this sense, the Venice archipelago project offers an impulse, an invitation, an opener towards a shared and participatory discourse: about the widening of spaces and the opportunities of health-oriented thinking at an urban scale. Nothing more. And nothing less.

About Farrow Partners

Farrow Partners Architects

ts has gained international recognition for designing places that enhance our capacity to thrive—culturally, economically, mentally and physically. The firm has initiated a global "Cause Health" movement aimed at raising expectations for design as the basis for total health, which extends beyond environmental sustainability and physical health to encompass our mind health; connects the dots between neuroscience and architecture.

The firm's projects across North America, Asia, Africa and the Middle East demonstrate leadership in this visionary quest. The firm has been invited to present ideas at leading institutions including the Mayo Clinic and the Cleveland Clinic, as well as venues from Helsinki Finland to Auckland New Zealand. His portfolio includes multiple international awards for designing some of the most technically advanced facilities in the world.

The Stockholm-based World Congress on Design and Health identified Farrow as a global leader who is making "a significant contribution to health and humanity through the medium of architecture and design." Hospitality Design Magazine has deemed Farrow globally one of "nineteen earth champions and wellness visionaries who are changing what it means to do good."

More at www.farrowpartners.ca

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