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APPENDIX

Additional questions
Previously explored precedents, concepts, and schemes

In what ways can perception of proximity be augmented in order to create a sense of interiority?

How can a supposedly private activity be conducted in the open?

How can ephemeral & experimental material techniques be employed to create private interior space?

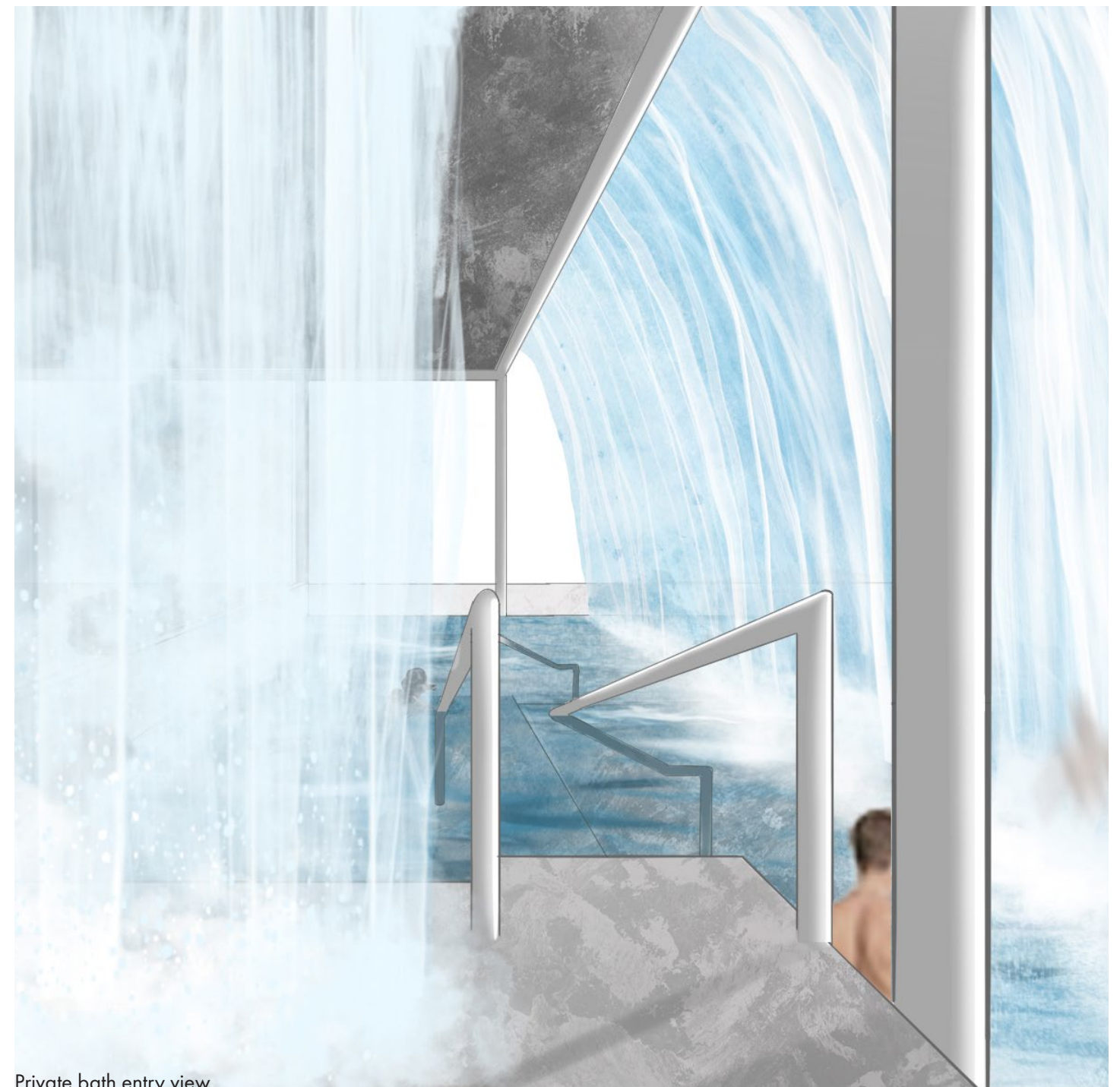


Imagine a bath house with half naked or naked people in the middle of a park, with no physical walls.



"Dine-out NYC" modules made by Rockwell Group.

This thesis defines "**Proxistance**" (proximity + distance) as the perceptual clash that occurs when something seems distant, but is close in reality, and vice-versa. This paradoxical feeling could instil a sense of interiority/privacy by augmenting one's perception of proximity using sensorial devices and boundaries. To test this idea, an **open-air bath house** was designed in a **Singaporean park**, using water transformation techniques to create a spectrum of privacies and sensorial experiences, rather than the traditionally used monolithic materials.

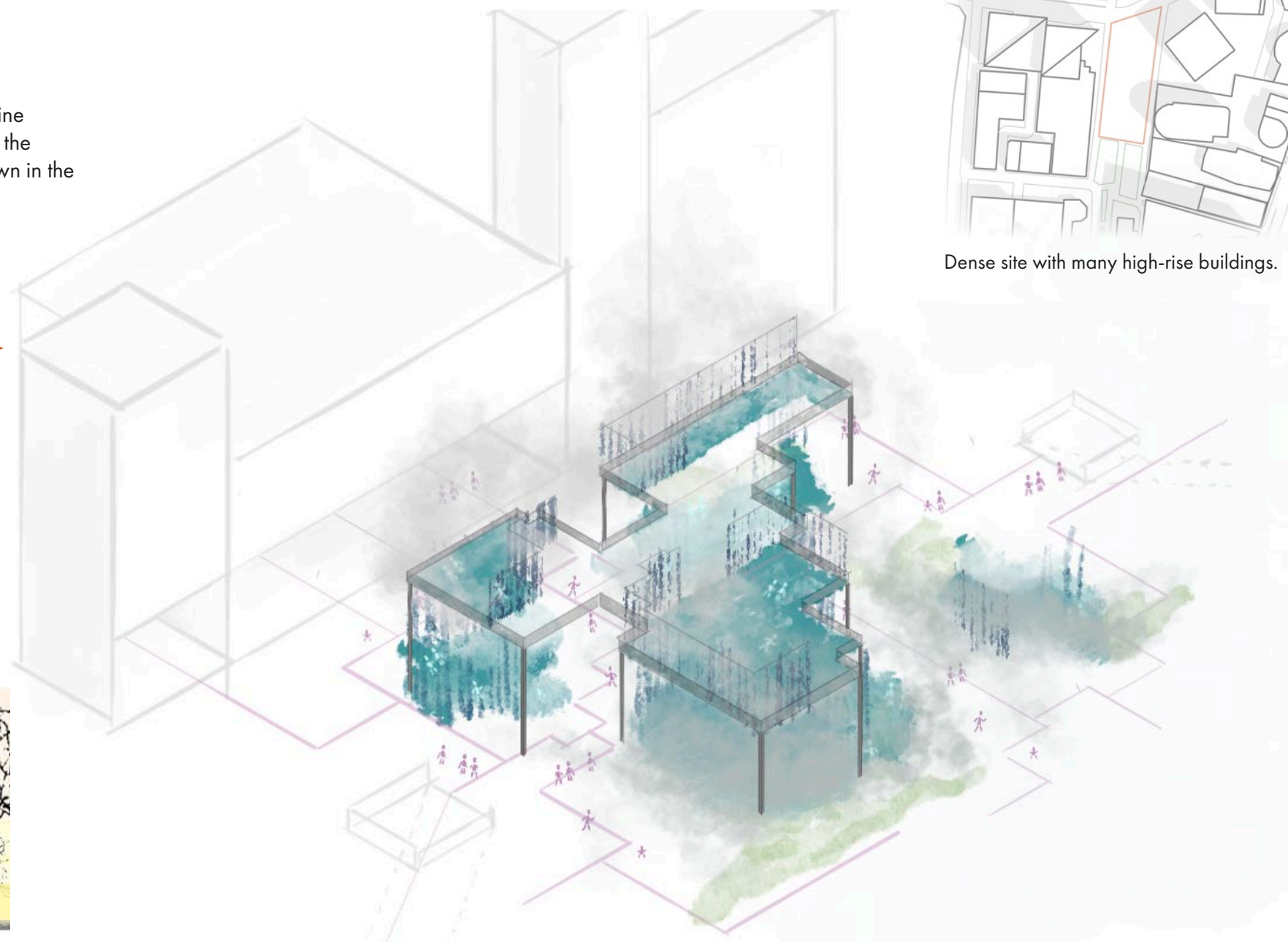
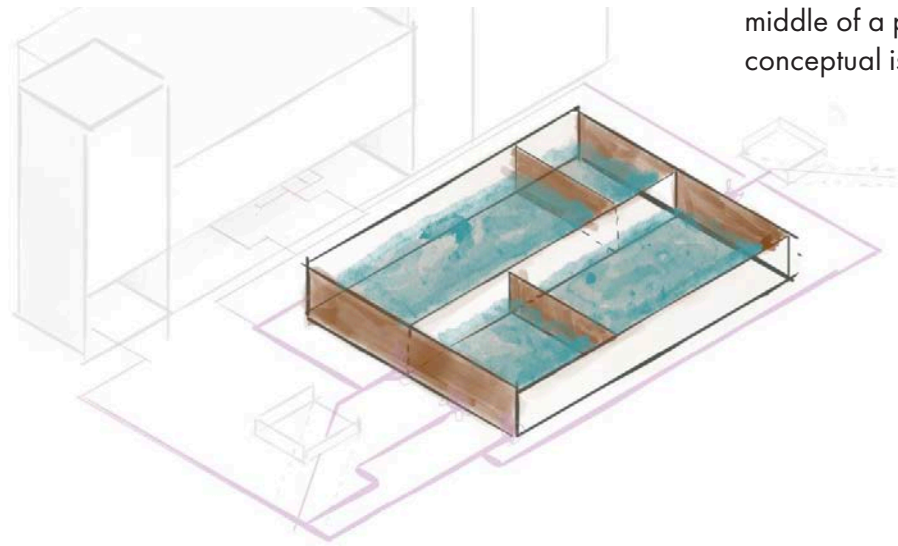


Private bath entry view

PROGRAM

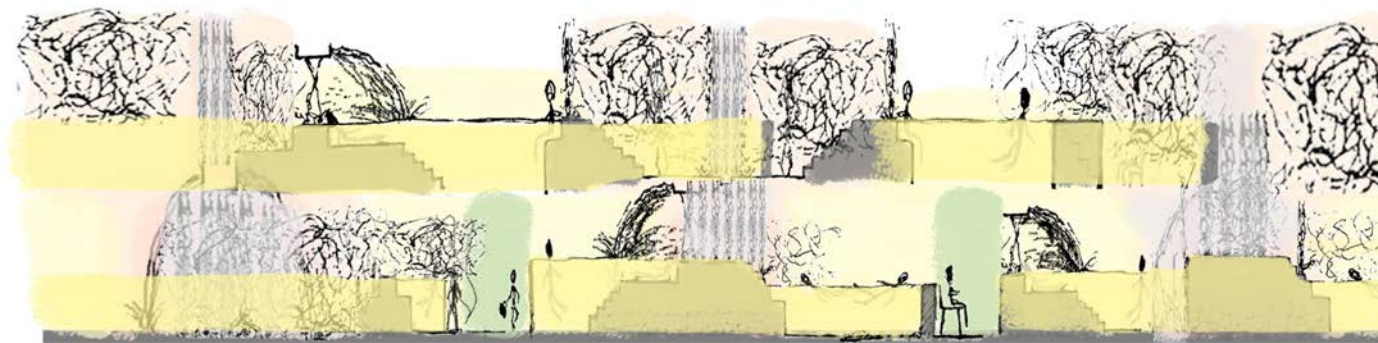
CONCEPT

The program is a bathhouse where its traditional programmatic requirements are subverted. Imagine a bathhouse with half-naked or naked people in the middle of a park, with no physical walls like shown in the conceptual isometric drawing on the right.



Dense site with many high-rise buildings.

Traditional typology: **Monolithic** partitions and **hermetic** enclosures interrupt circulation of outsiders.

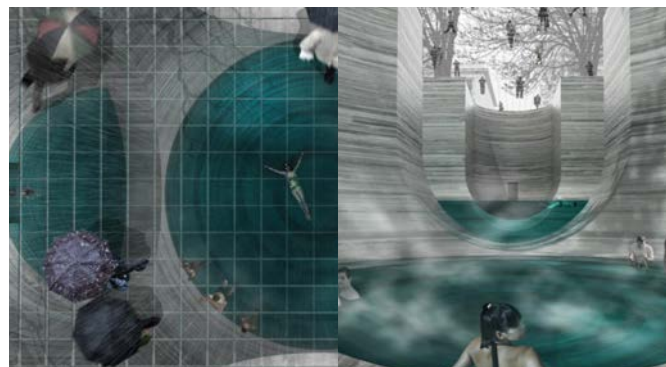


Conceptual Facade: **Porous nature** controls visible depth depending on vantage point.

Proxistance: **Porous, open air, multi-level (roofed) alternative.**

PRECEDENT

Thessaloniki's Wet Dream (proposal), **Not a Number Architects**, Thessaloniki,



- Sub Programs:**
- Canteens
 - Sanitary Facilities
 - Washrooms
 - Showers
 - Cloakrooms
 - Main Bathing Hall

"The public baths acquire the qualities of an **open air space** as opposed to the more **hermetic enclosures** of the traditional typologies."



"The activity in the pools is exposed at street level through a walkable glass floor giving the impression of bathers floating inside a temple. At the same time the hectic buzz of the city becomes a distant setting for the relaxing experience of bathing."

Although both parties are exposed, they are sensually abstracted from each other. Similarly, water and mist will be used to abstract bathers from the urban.

DEFINING PROXISTANCE

IDEA CONTEXT



Collage: Perception is subjective therefore reality is subjective.

PRECEDENT

10000 Moving Cities, Marc Lee, 2018, Seoul, South Korea



"Interactive Net based installation" - realtime projections on a few dozen white rectangular blocks of audiovisuals of a certain location around the world.

An example of a artificial intervention (a bridge rather) that augments the perception of proximity.

One feels nearer to an actually distant reality.

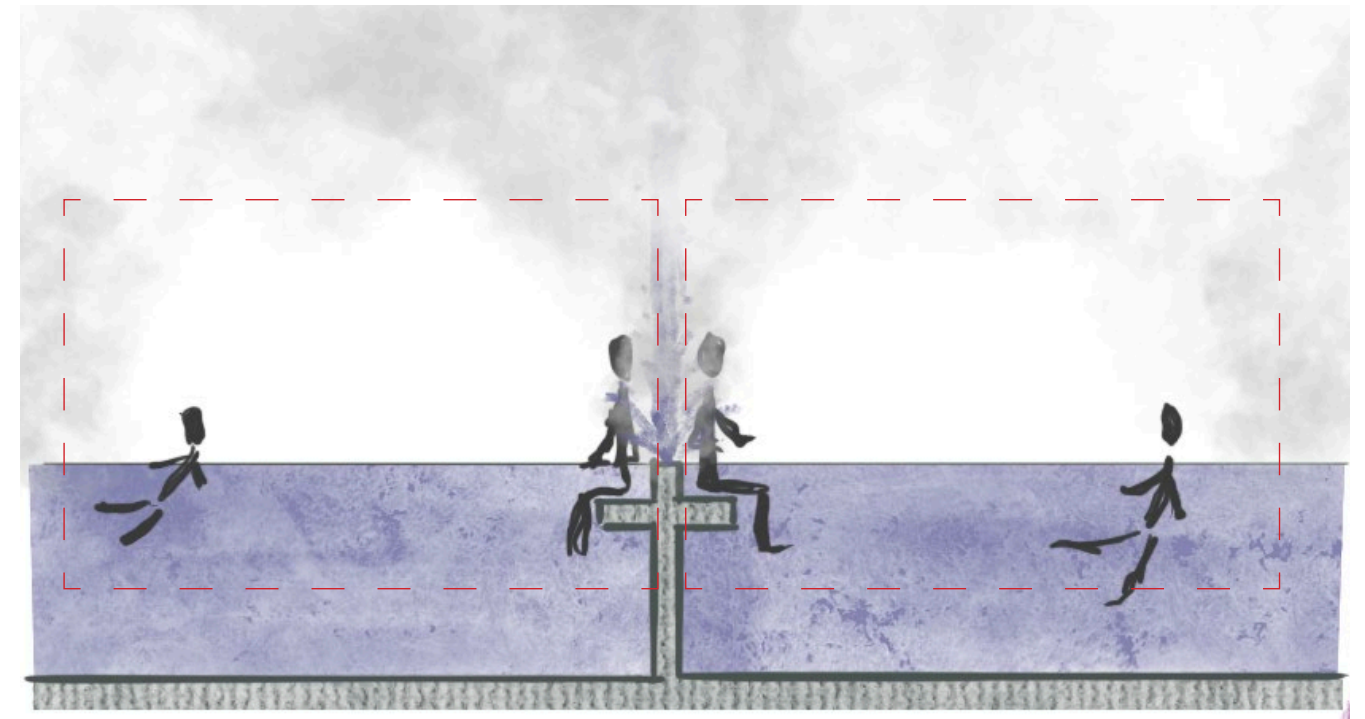
Or does abstraction of the world into a tangible scale cause a sense of detachment from the real world like when playing a video game?

BATH HOUSE APPLICATION

Bath house users concealed (feel distant) from outsiders

Reality is one's perception of the stimuli presented by their immediate surroundings. This makes reality so subjective. In the context of this thesis, no matter how near two individuals are, curating the stimuli and their immediate surroundings can trick them to not know that the other person is near them.

In the diagram below, although the two users in the middle are near each other, their perceived reality doesn't allow them to acknowledge each other's existence, whereas the outsider can see the whole picture and make different assumptions.



The two users in the middle sitting back to back, associate themselves with the swimmer in front of them rather than each other.

TECHNIQUES FOR EFFECT CREATION

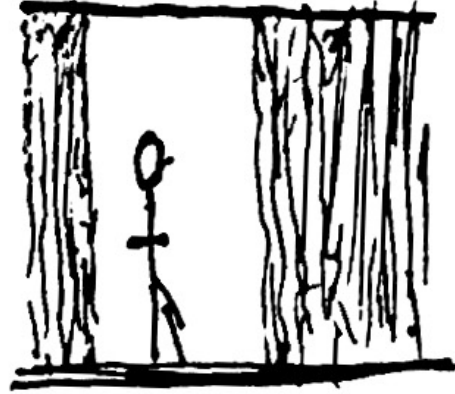
PREFERRED EFFECTS



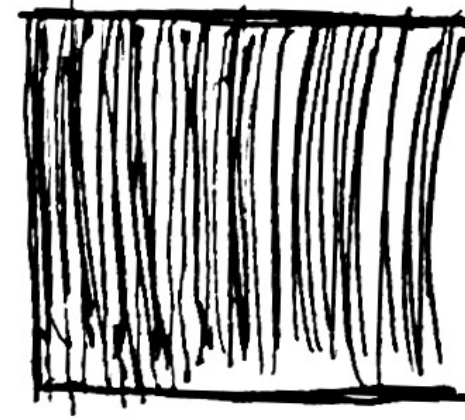
Mist
(occupiable)



Mist with light refraction
(visual cue)



Water (openings)
partially occupiable
(visual and physical cue)



Water (walls)
Inoccupiable
(visual and physical privacy)

PRECEDENTS

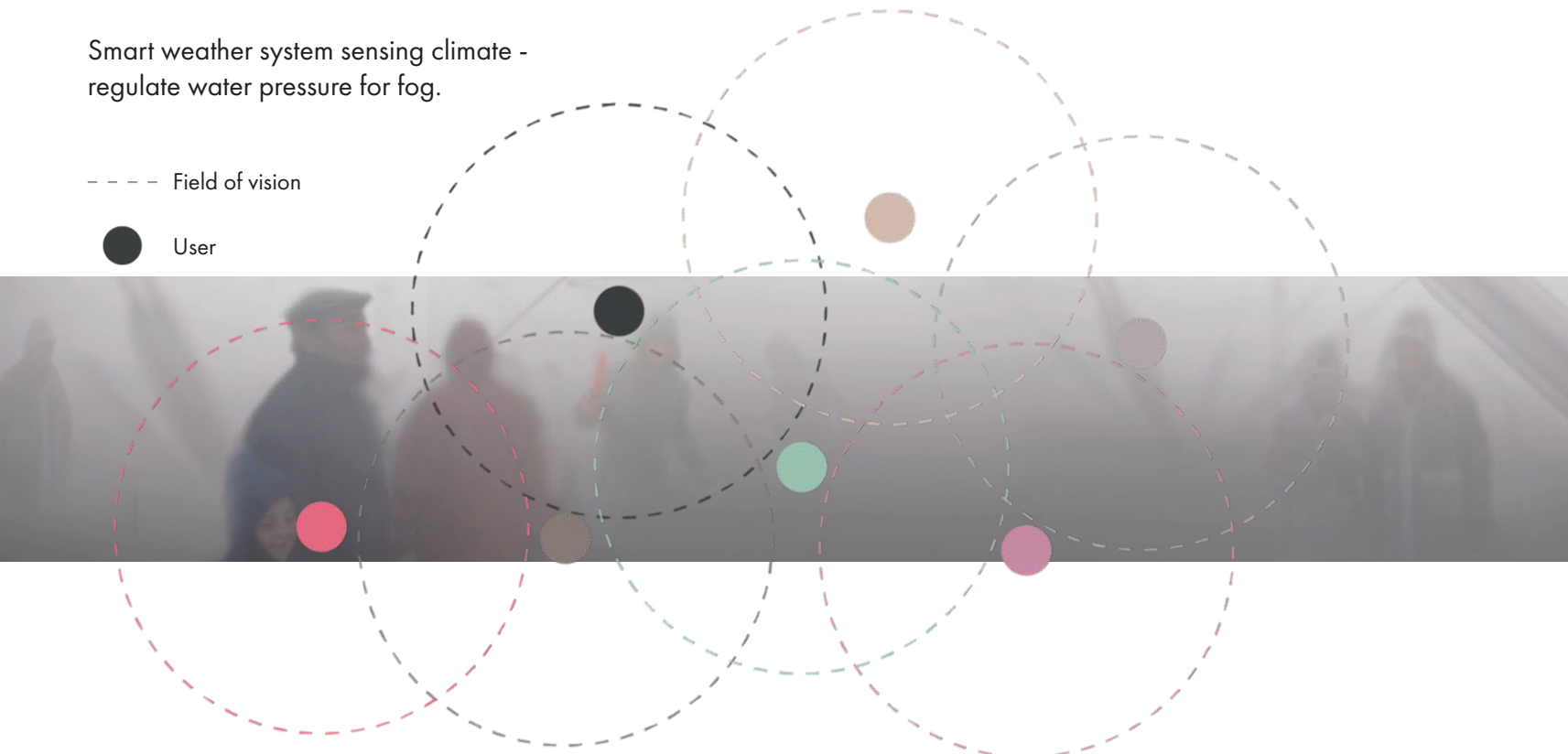
Blur Building, **Diller Scofidio + Renfro**, 2002, Yverdon-les-Bains, Switzerland

Pavilion with atmosphere of fog.

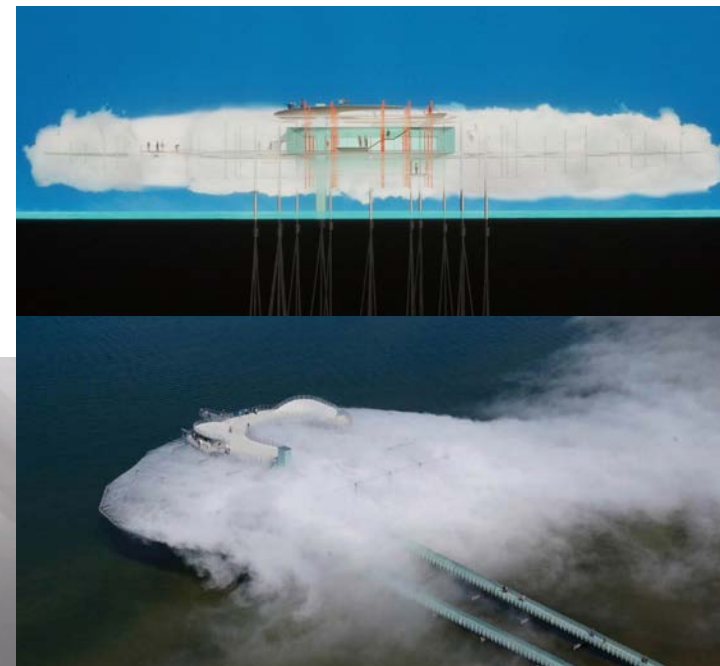
Smart weather system sensing climate - regulate water pressure for fog.

--- Field of vision

● User



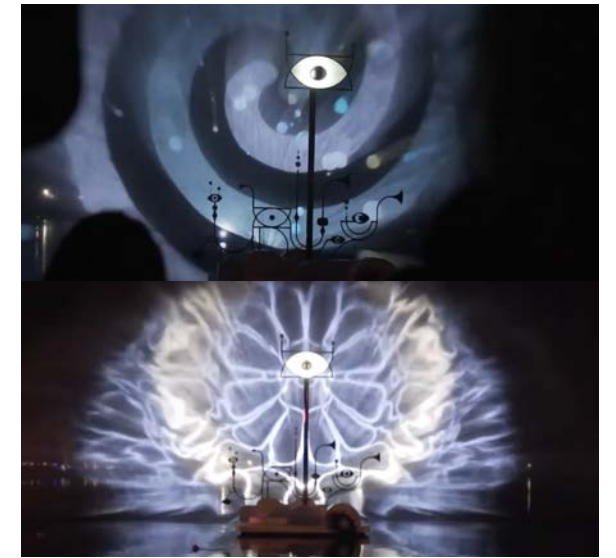
Even if users are near each other, their augmented perception of proximity will **trick users to feel a sense of privacy and solitude**. The **mist and its white-noise are effective techniques** of creating this effect.



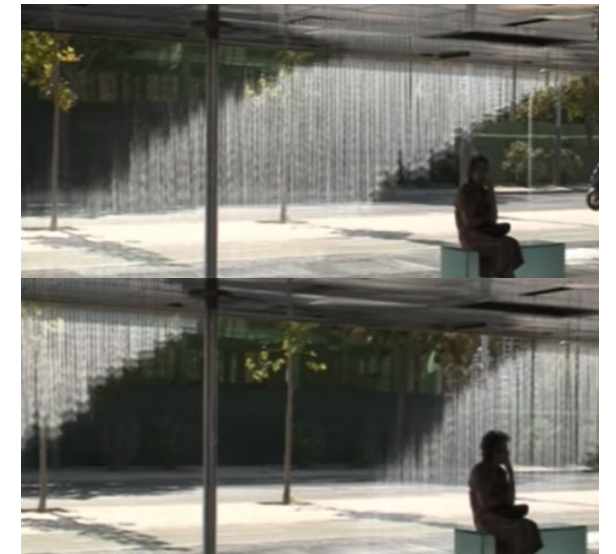
Optical "white-out" and the "white-noise" of pulsing nozzles.

Decidedly low-definition.

An experiment in de-emphasis on an environmental scale.



Periscopista: Interactive mist installation



Digital Water Pavilion: Controllable water curtains

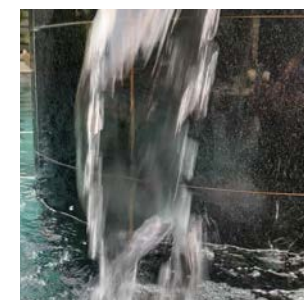
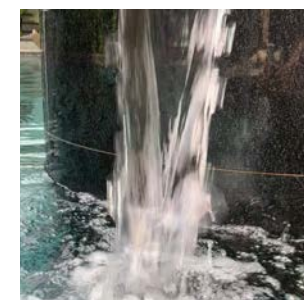
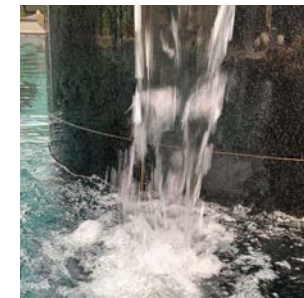
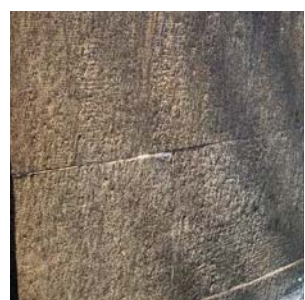


Rain Room: Rain that pauses at human presence

TECHNIQUES FOR EFFECT CREATION

WATER MATERIALITY CATALOGUE

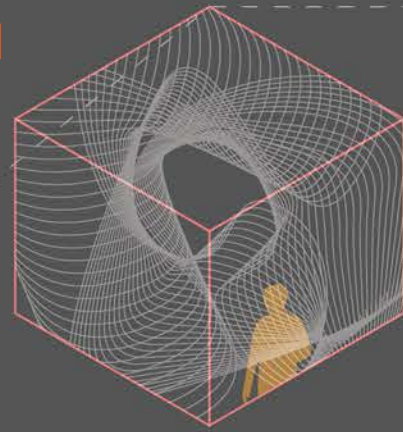
Inspired by the variations of water from the previous precedents, a video of water in different forms were studied. Attention was put into vehicular interventions of water, such as water jets, streams of water, etc. The stills show a spectrum of materialities made just from water.



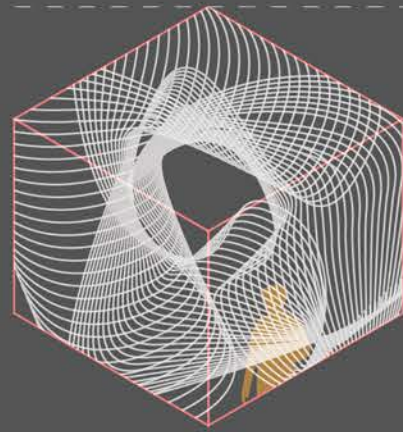
DESIGN STRATEGY DIAGRAM

KIT OF PARTS

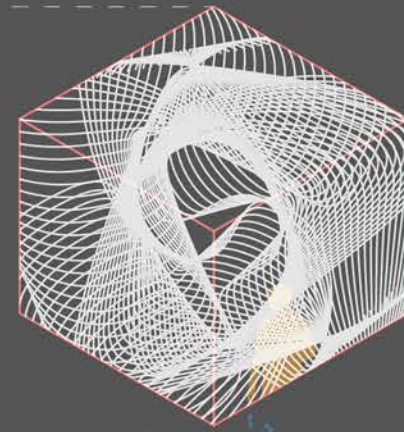
This diagram is a translation of the sensorial catalogue being used to create space. It suggests the overall bath house as a kit of parts of these liquid materialities.



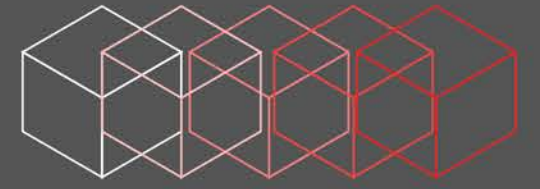
Mist



Mist + Light

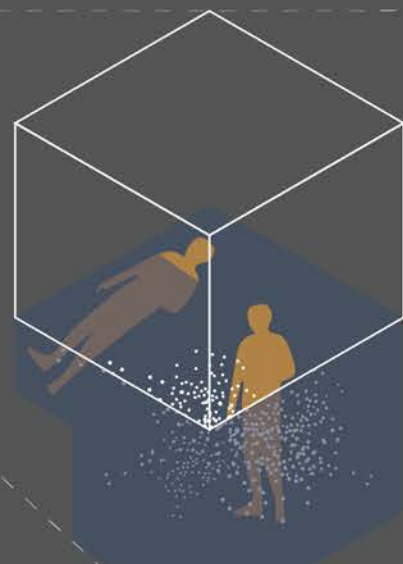
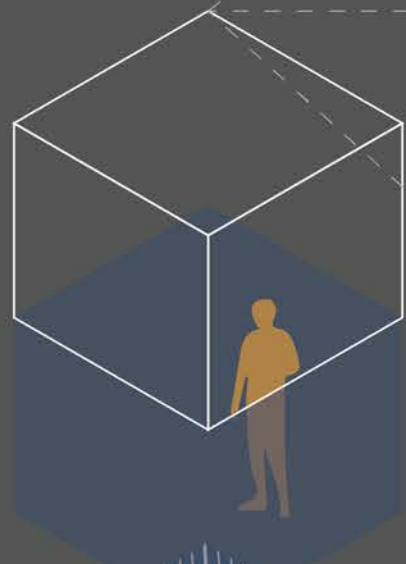


Thick mist + Light

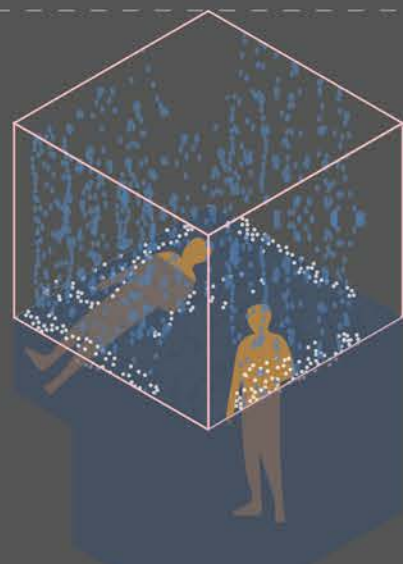


Quiet

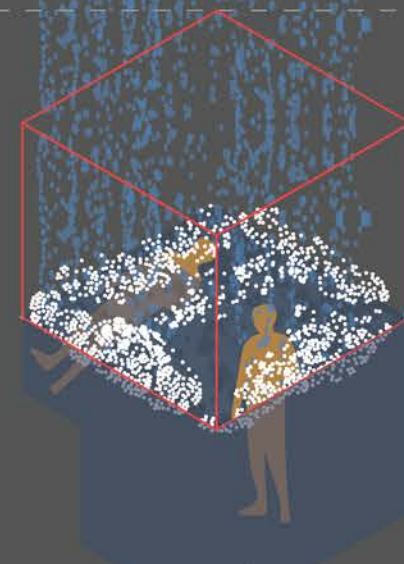
Surroundings almost inaudible



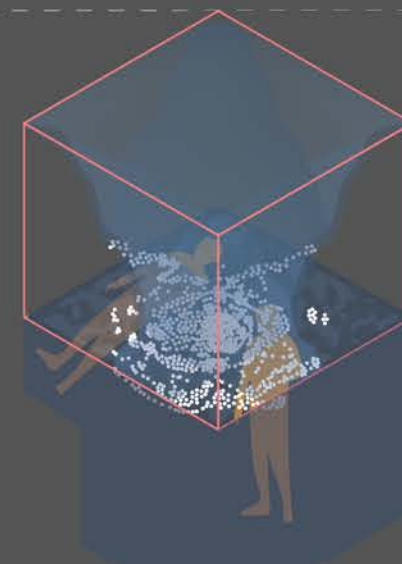
Underwater jets



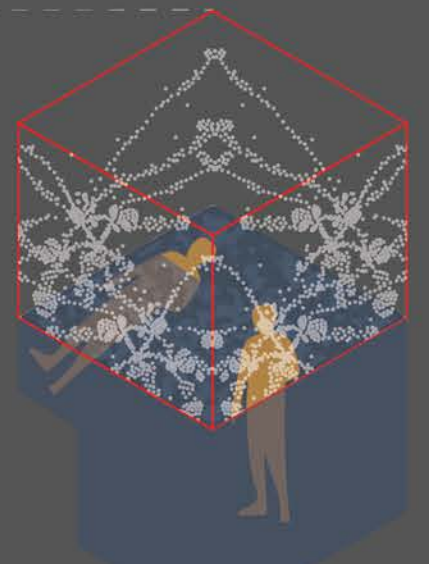
Falling droplets



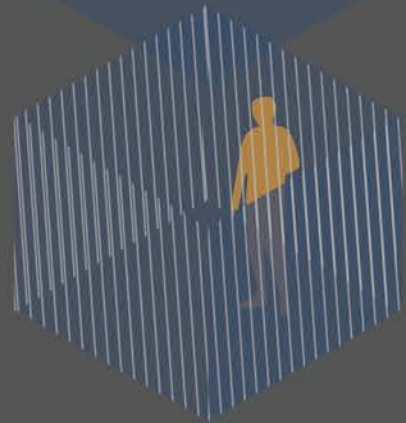
High falling droplets



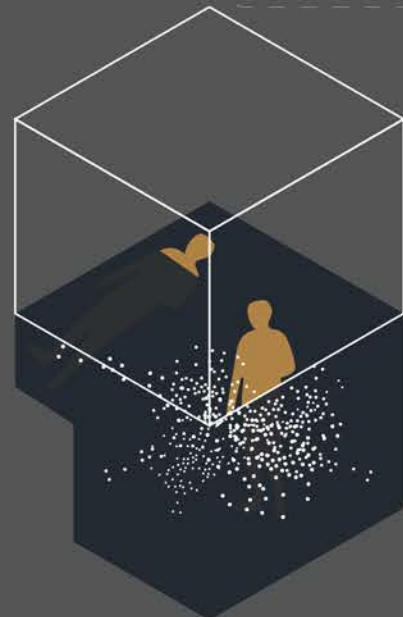
Falling stream



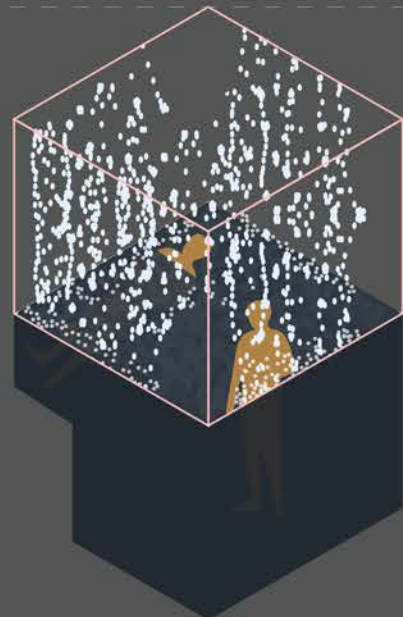
Jets above water



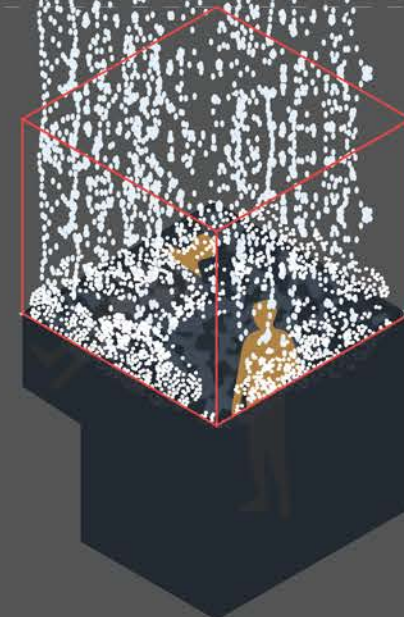
Water on rough texture



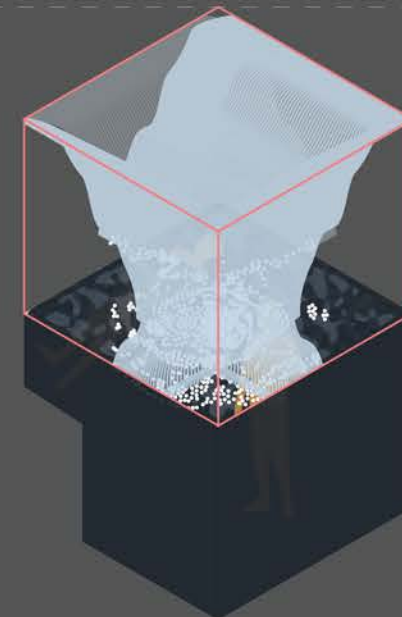
Underwater jets + light



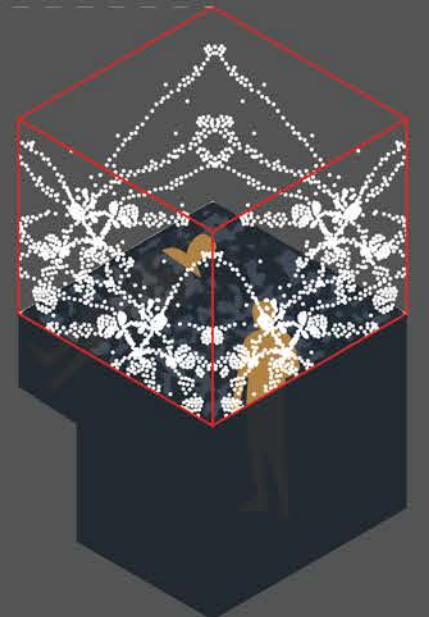
Falling droplets + light



High falling droplets + light



Falling stream + light



Jets above water + light

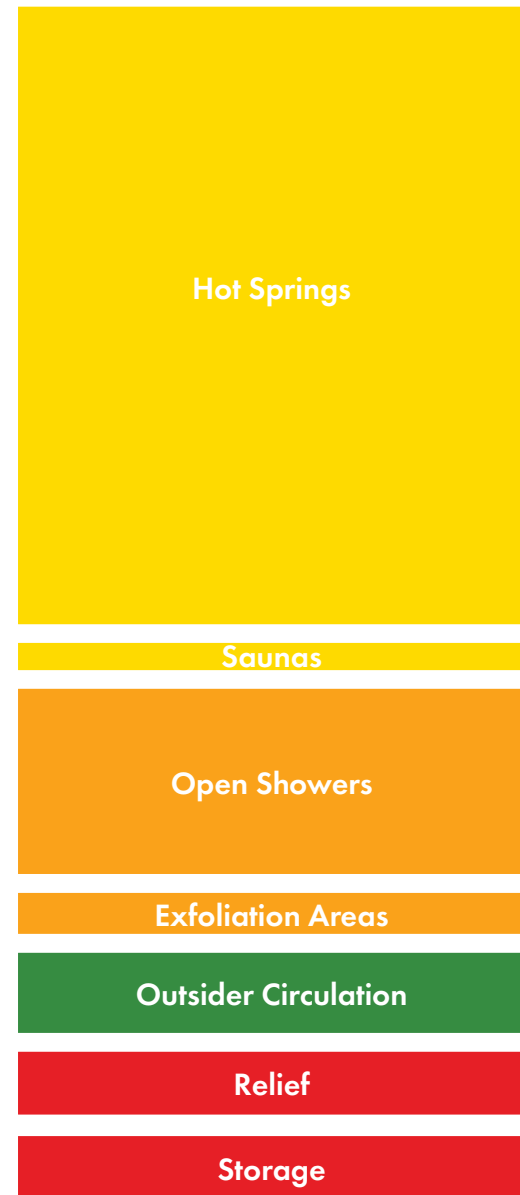


Level change

THRESHOLD TO INTEGRATE A POROUS BATH HOUSE

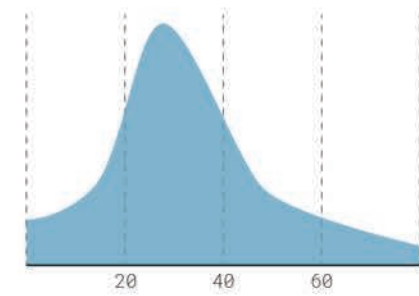
PROGRAM REQUIREMENTS

- Bathing (**BATHHOUSE**)
- Saunas
- Jacuzzis
- Hot springs
- Showers
- Exfoliating stands
- Relief
- Some form of storage (locker rooms)



Program distribution

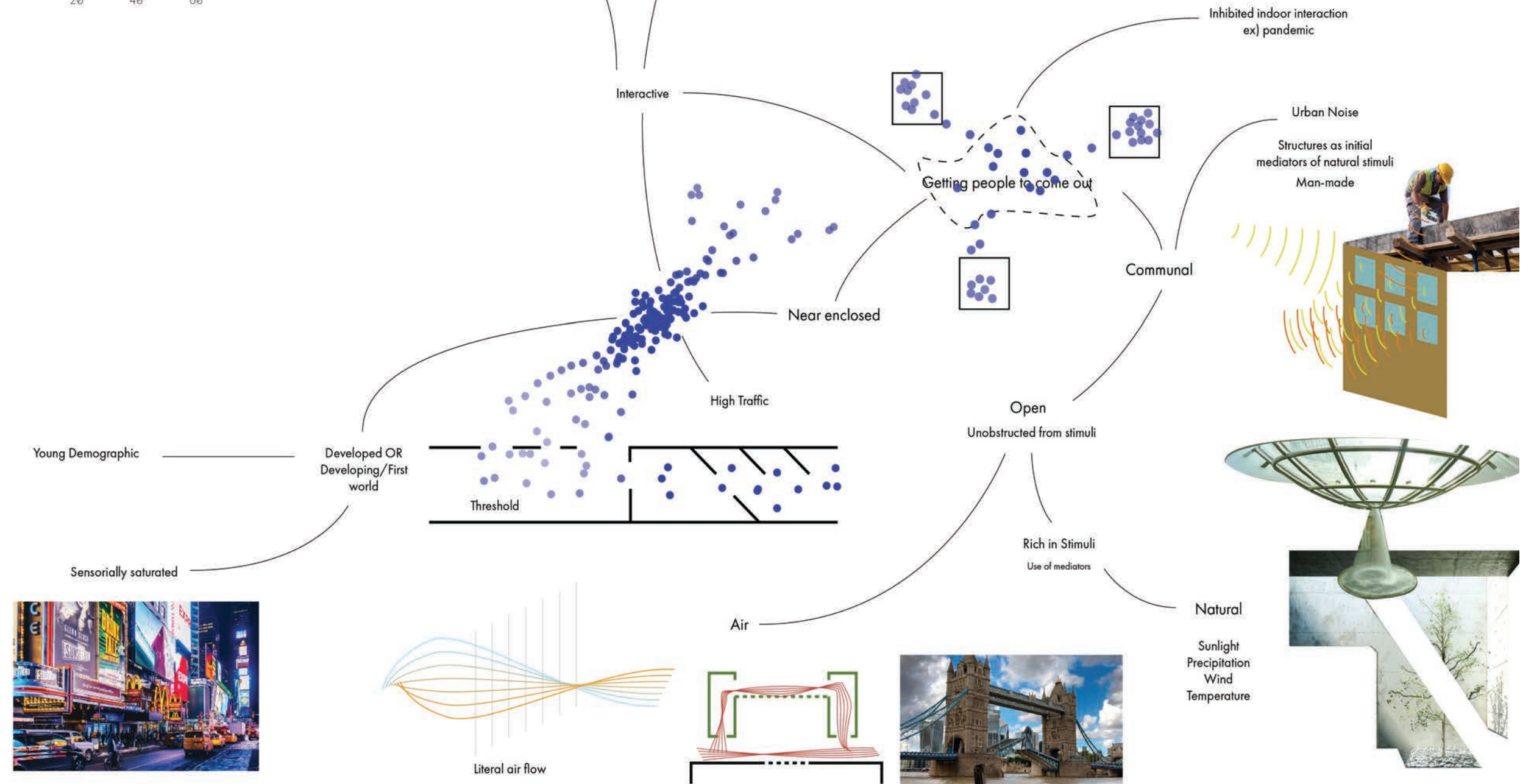
SITE REQUIREMENTS



Always moving around
Students
Startup teams
BUSY PEOPLE

consider places with busy programs that happen in the interior

Cafes
Studyhall/Libraries
Restaurants
Offices

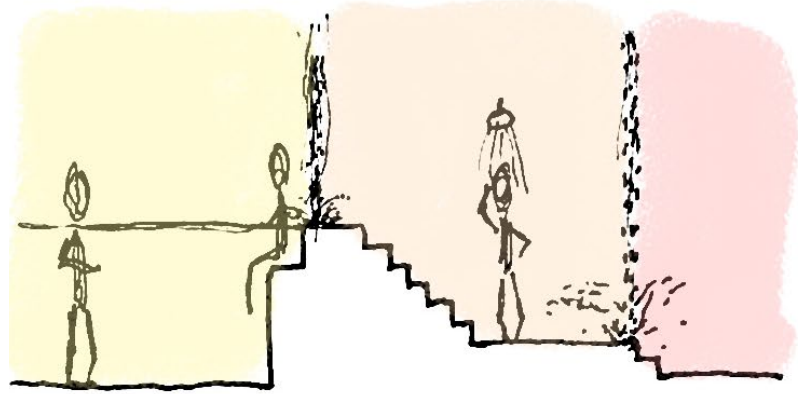


Site Taxonomy Diagram

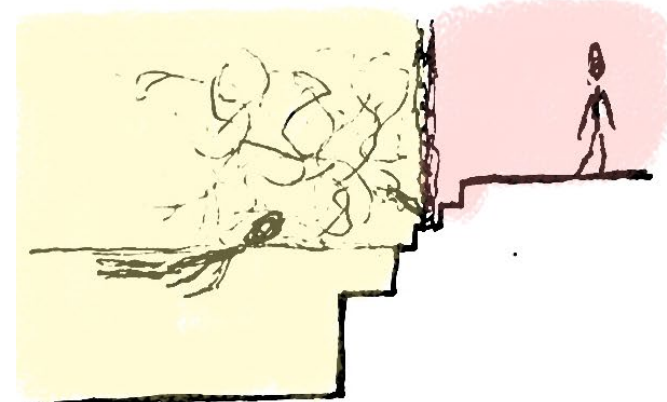
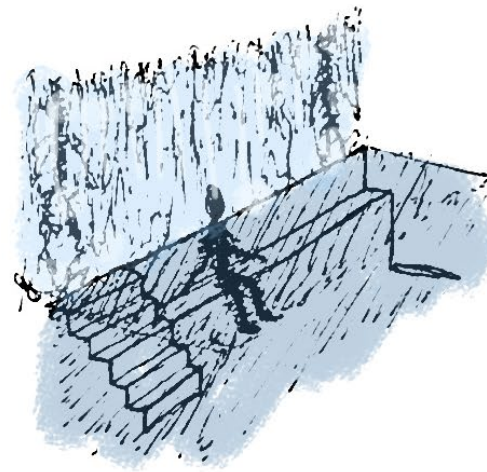
This bathhouse should be a widely **accessible**, welcoming space. It should encourage **relaxation**, and informal (**candid**) social interaction for various groups of people, from individuals, couples, coworkers, etc. It should be **open**, yet provide a **spectrum of privacies**.

TRANSITION CATALOGUE

ADJACENCIES OF MOMENTS STUDIED IN KIT OF PARTS



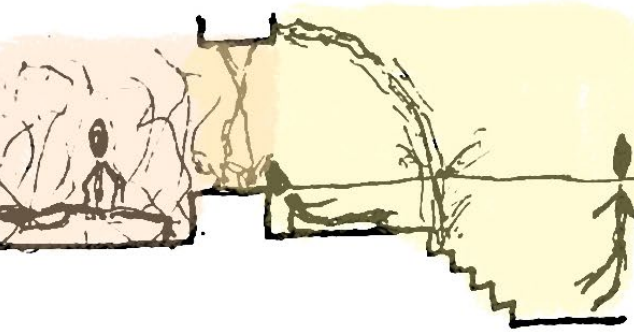
Bath - Shower - Locker Room separated by streams of water



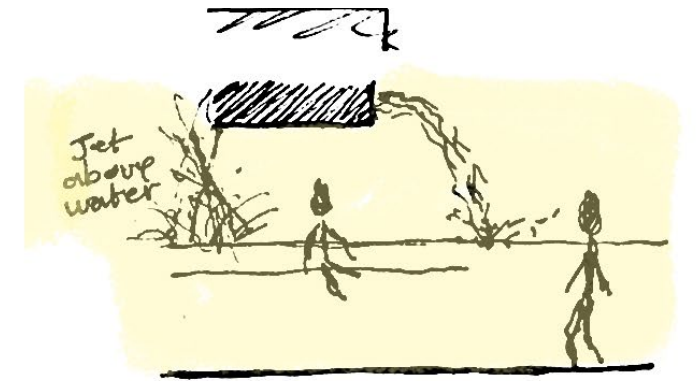
Bath - Locker Room separated by stream of water and mist



Bath - Sauna vaguely separated by mist



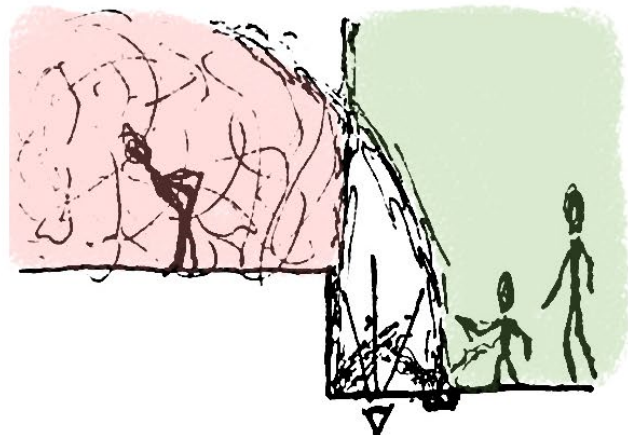
Bath - Exfoliation separated by mist, waterfall, and jets above water



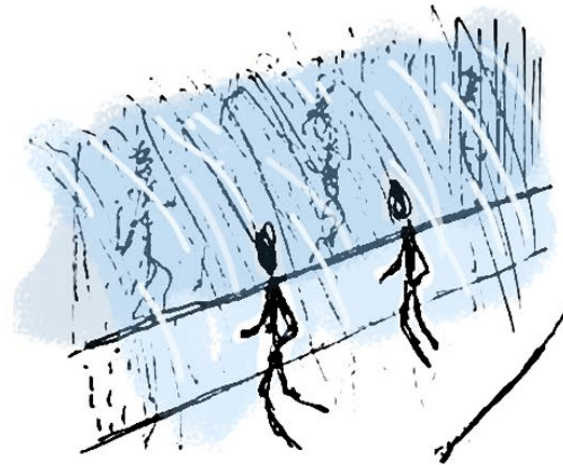
A nook inside the **Bath** separated by a waterfall



Bath - Public vaguely separated by water 'hiding' the user



Locker Room - Public separated by stream, waterfall, and mist, with light.



Bath - Shower vaguely separated by mist



Public - Shower separated by mist, stream, jets above water.

How can the 'parts' of the design strategy diagram be assembled to create spatial transitions in the bath house?

These transitions are developments of the "design strategy diagram". Spaces with different privacies are distinguished either harshly or vaguely depending on choice of liquid materiality.

A SEQUENCE OF EXPERIENCES

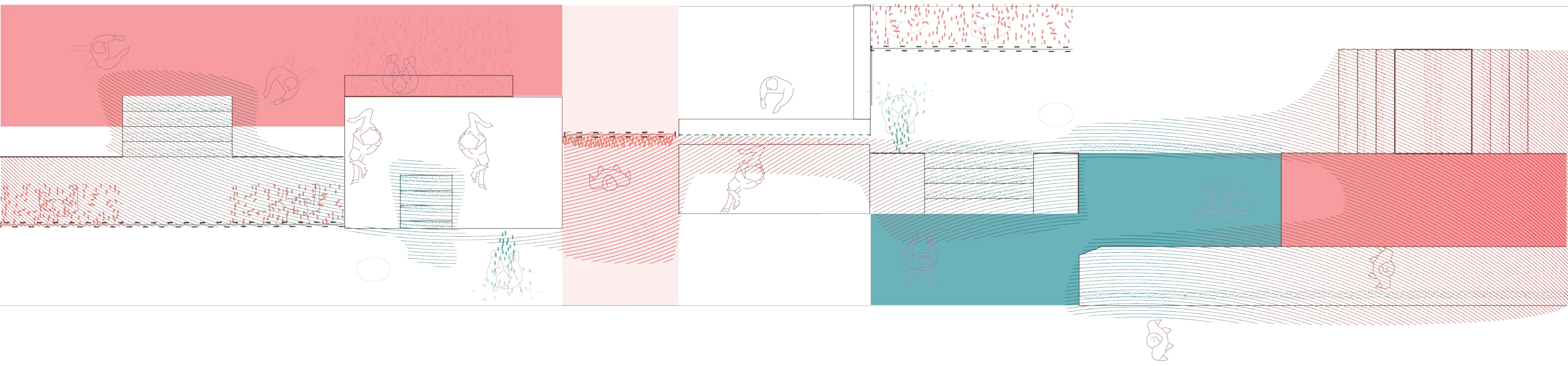
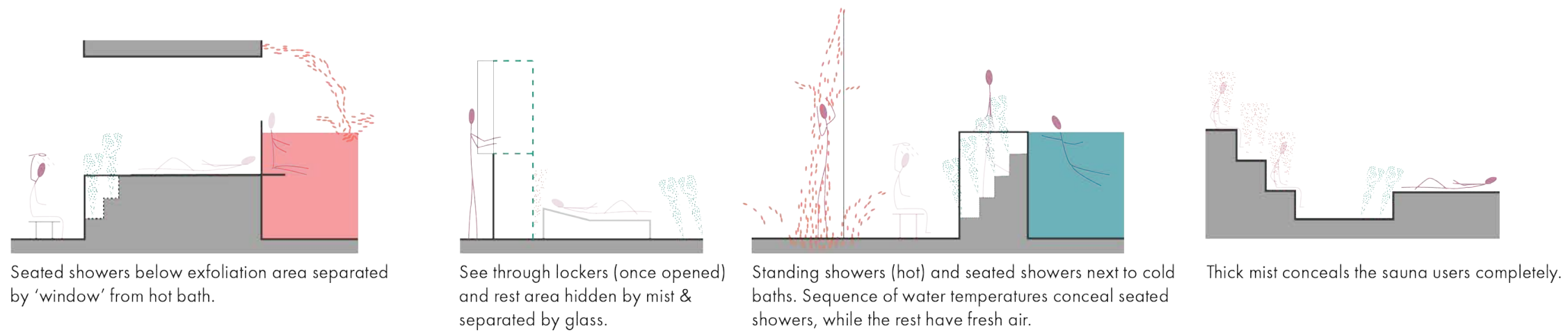
PLAN & SECTIONS

Catalogues informed sectional sequences.

Mist: primary element that conceals spaces in a flexible way.

Controlling mist direction = controlling vision and exposure.
Adjacencies of hot & cold tubs, showers, saunas, rest areas, etc. planned based on how the mist should flow around the space.

Layering these sections informed a thorough plan that conceals and reveals people, hence the feeling of proxistance.

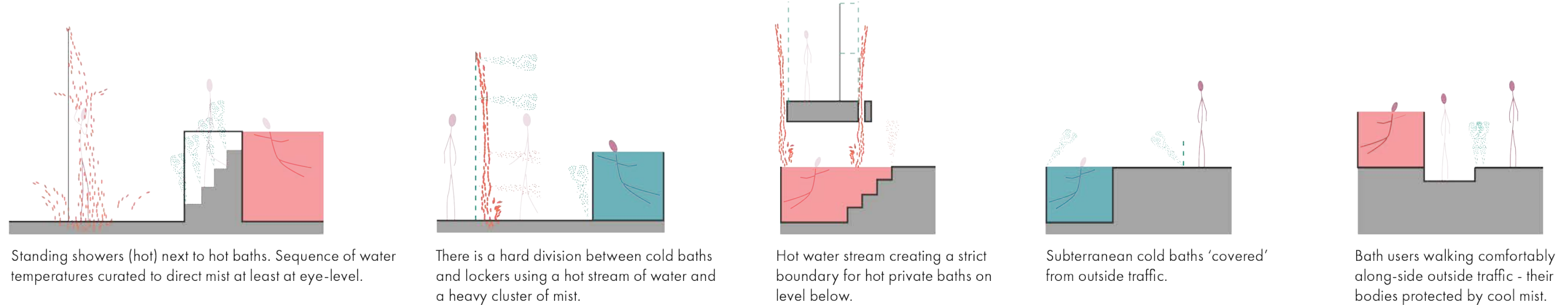


- Framework (Full height)
- Framework
- - - Glass Partition
- Level change

- Water Streams
- Mist Source
- ▨ Mist Direction

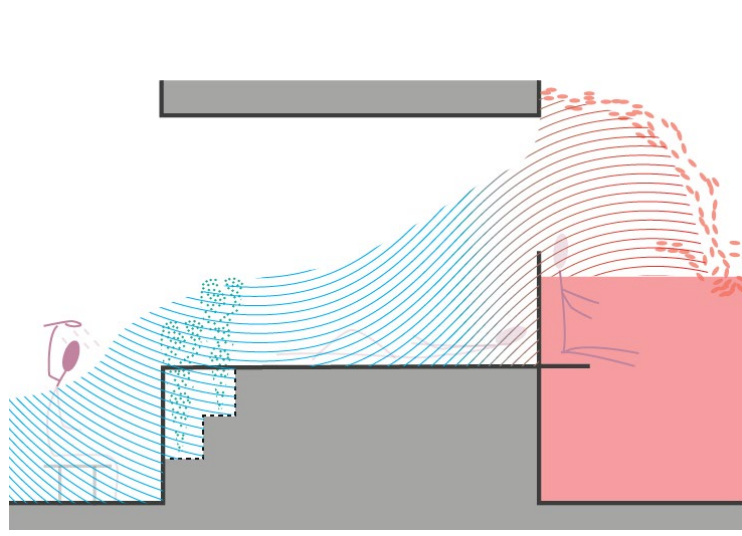
Hot Cold

Cooler temperatures cause water vapor to sink and humidity to increase

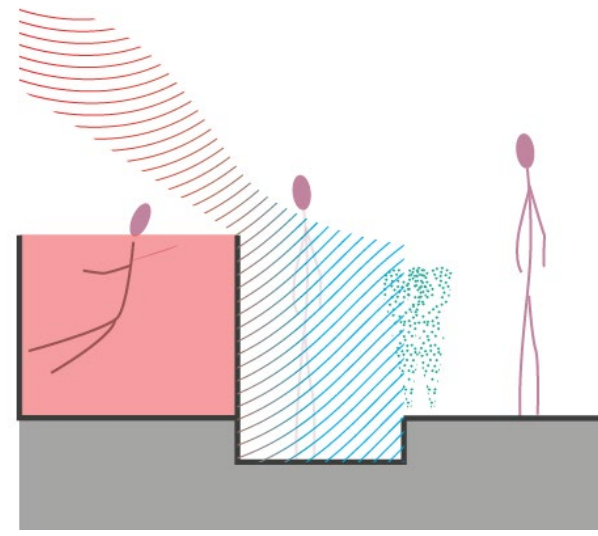


AGGREGATION OF EXPERIENCES

'SENSUAL' VIEWPOINTS & SECTIONS



Seated showers below exfoliation area separated by 'window' from hot bath.



Bath users walking along-side outside traffic - their bodies protected by cool mist.

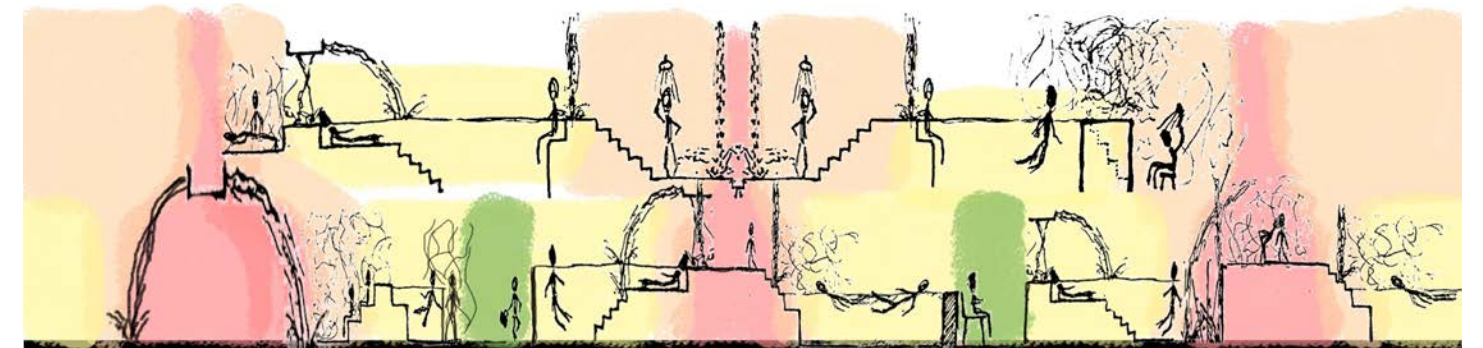


Perspective view of section (right)



Perspective view from sitting inside the 'waterfall'

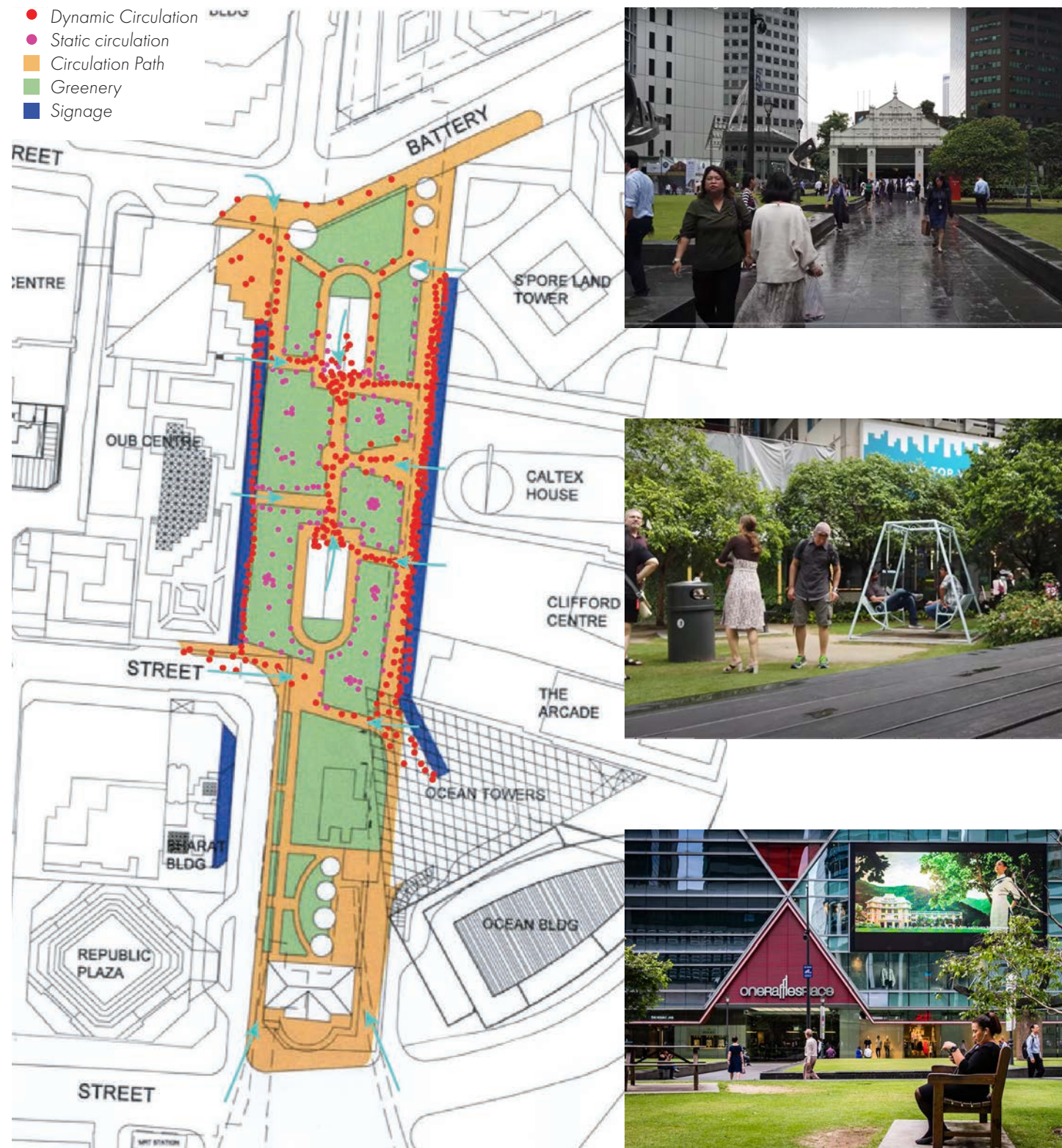
Below is a conceptual aggregation of sectional moments explored in the previous spread. This methodology is important when considering the horizontal **datums** required, such as **ceilings and floor heights** necessary for different activities.



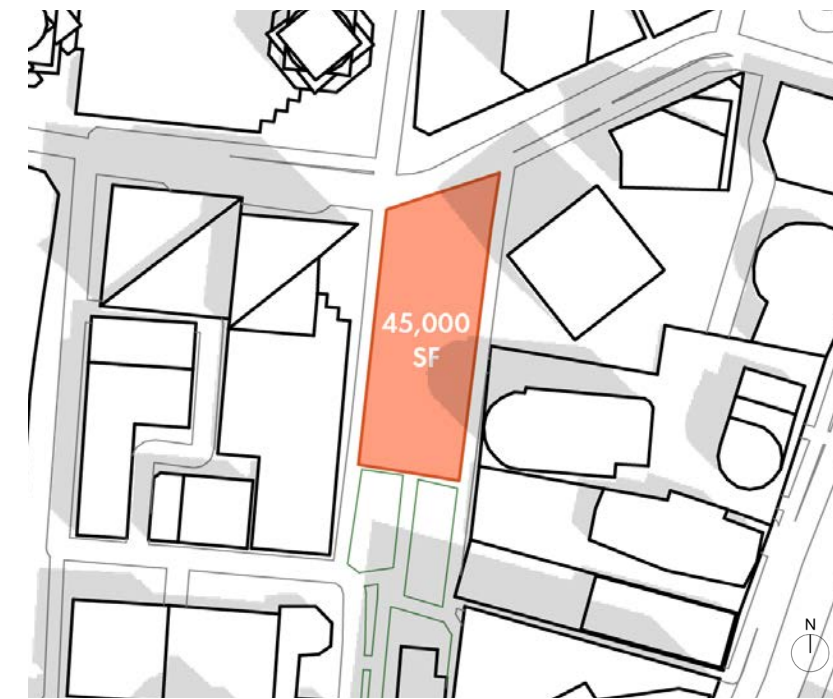
Conceptual Section: Potential loose sequence of sub programs.

PROPOSED SITE: DENSE, OPEN-AIR THRESHOLD

RAFFLES PLACE PARK, SINGAPORE



Existing site context map

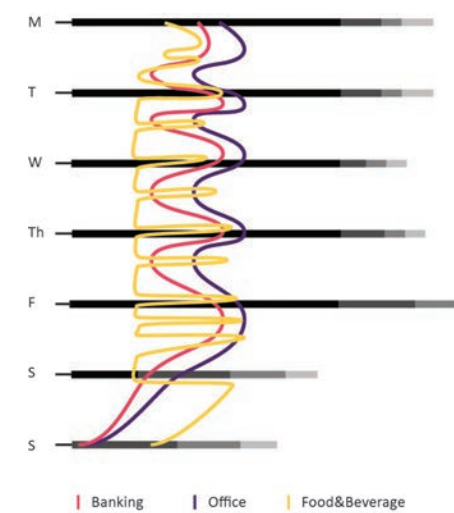


Square footage to be used

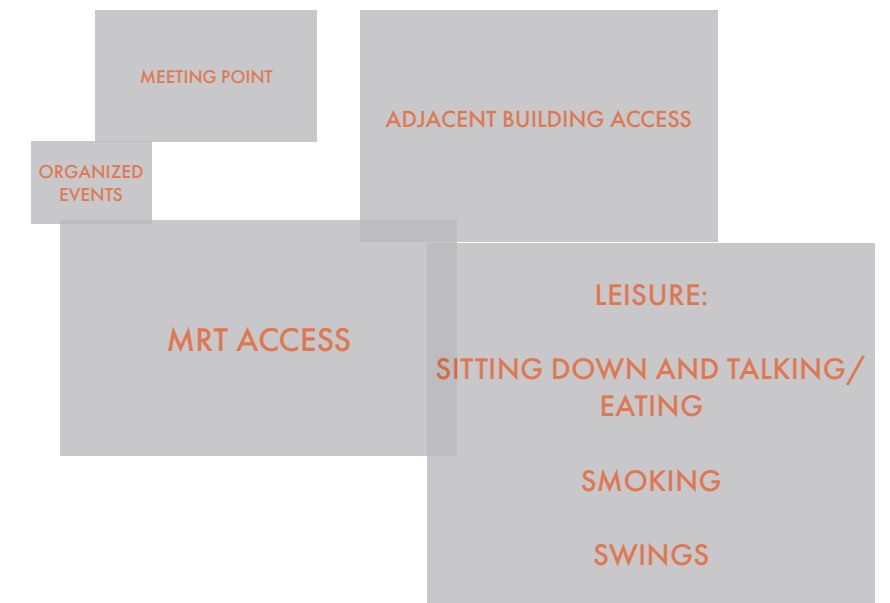
This proposition, informed by the earlier site taxonomy will be in Raffles Place Park Singapore.

The bath house wants to be a candid, informal meeting/socializing space, mainly for the bank employees, but also for the general public during the weekends. This open air space with dense traffic was chosen in order to integrate wall-less spaces that will not necessarily obstruct what is there already.

The park is a threshold surrounded by the busiest high-rise bank offices in Singapore, with lots of entryways including two subway stations.



Daily user traffic by demographic

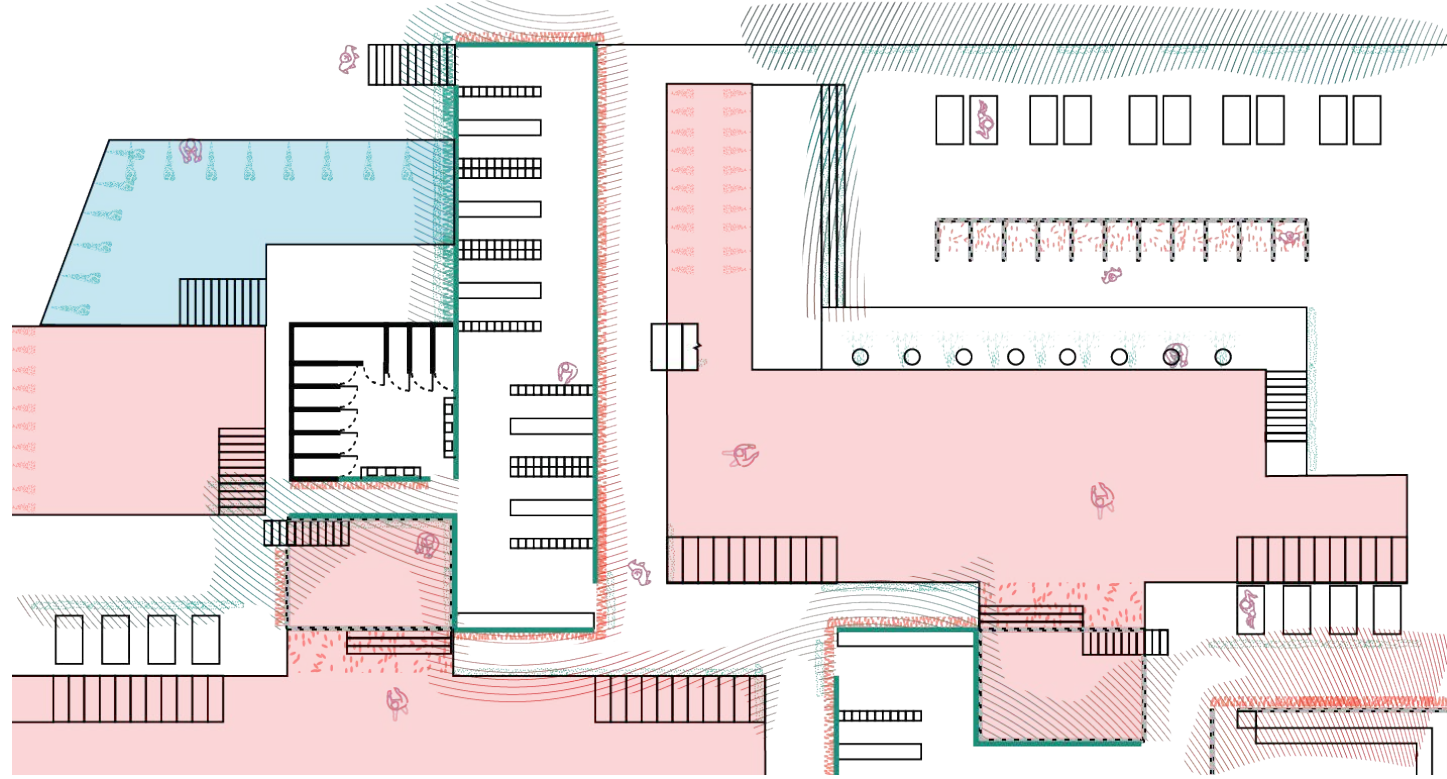


Activities performed by users throughout the day

REFINED AGGREGATION TECHNIQUES

SITE IMPLEMENTATION

The organization studied on the bottom right of this spread was tiled. The idea of a linear flow being interrupted by less porous programs (private) to reveal and conceal users was necessary to heighten the feeling of proxistance.



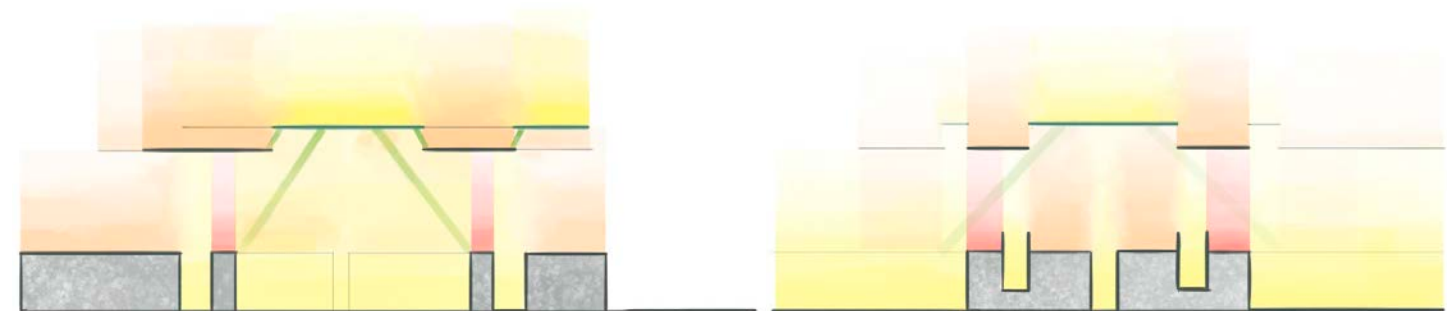
Detailed Plan: The temperatures of water elements are curated to control the direction of mist.

Above is an adaptation of initial aggregation ("sequence of experiences") considering visual & programmatic adjacencies required which were studied in previous spreads.

This organization was tiled and reflected.

Outsider circulation penetrates central core: a non-obstructive bath house.

- Public (baths)
- Semi private (showers)
- Neutral (rest areas)
- MRT entry points
- Private (Lockers)



Facade Adjacency Diagram: Only the floors of the baths touch the floor.

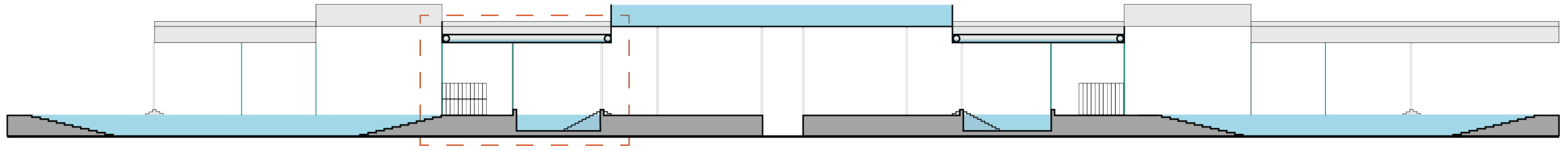
Section Adjacency Diagram: 'Roof' heights depend on privacy requirements directly below it.



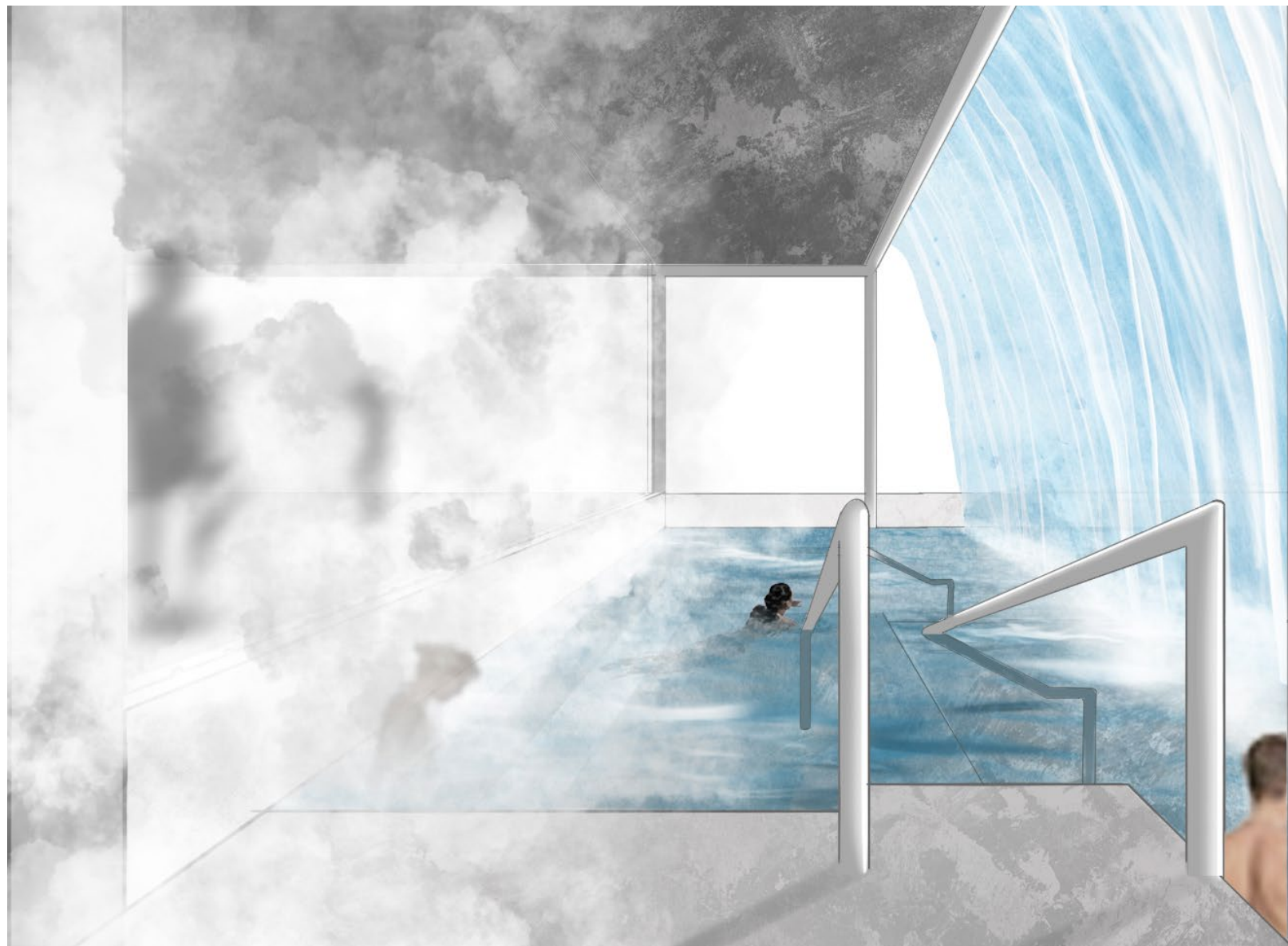
PRIVATE EXPERIENCES

RELATIONSHIP BETWEEN PRIVATE BATHS & LOCKER ROOMS

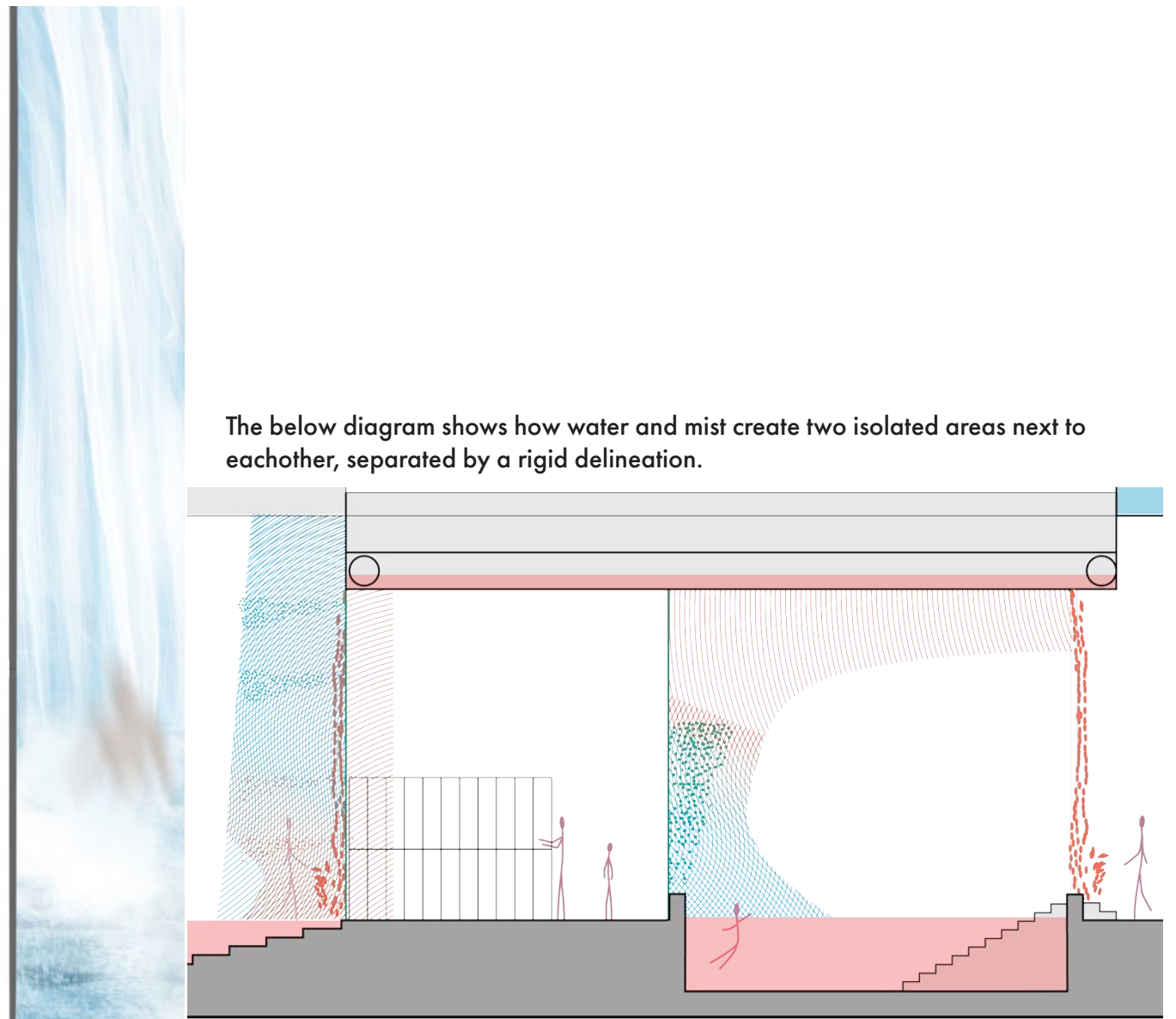
After showering, one may want to wind down in a private nook first, sensually isolated from everyone and everything. A safe space to zone out both mentally and physically.



Overall Section: No solid walls other than some glass



Perspective: Private bath entry (past initial waterfall). Mist concealing locker room.



The below diagram shows how water and mist create two isolated areas next to each other, separated by a rigid delineation.

Detail section: Locker & private bath adjacency

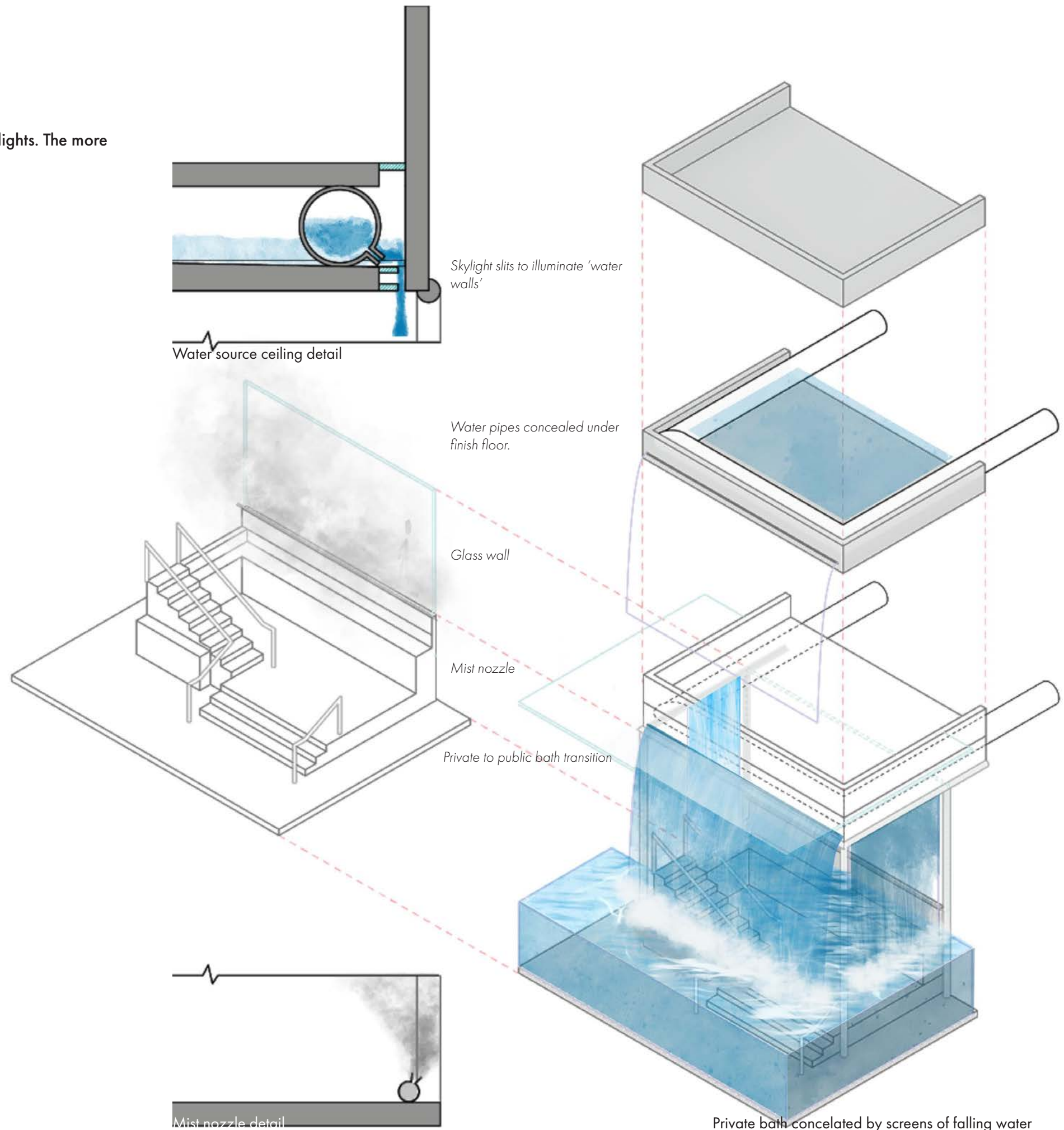
ANATOMY OF SOLID AND FLUID MATERIALS

STONE AND GLASS AS MEDIATORS

The water system is integrated in the 'roof'. Openings either function as waterfall openings, or skylights. The more parallel the light direction is to the stream, the more translucent/opaque the 'wall' becomes.



Reflected Ceiling Plan: Skylights to illuminate 'water walls'

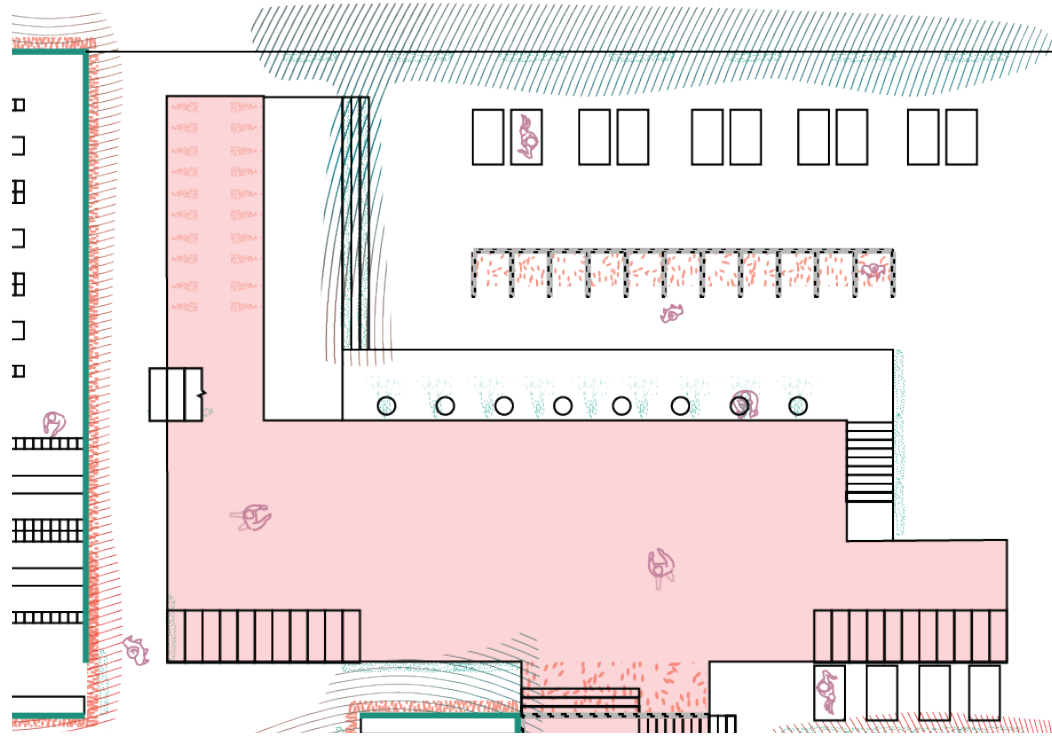


Private bath concealed by screens of falling water

SEMI-PRIVATE EXPERIENCES

SERVING VARIOUS BATHING NEEDS

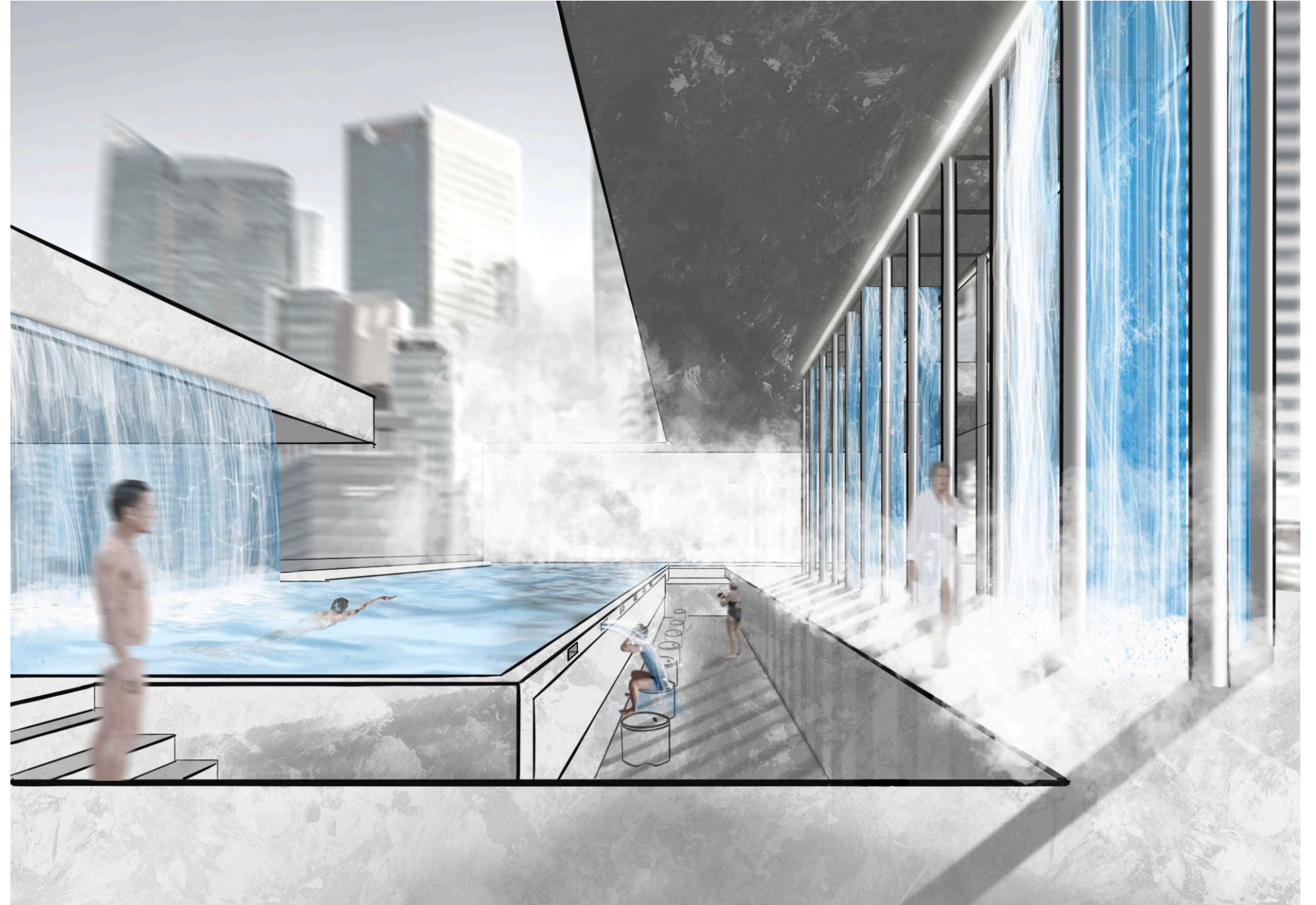
Raffles Place Park serves users with a diverse demographic. Therefore the bath house should provide different options for bathing. How do these shower spaces interact in a porous environment integrated in a dense urban fabric?



Detail Plan: Open baths & showers

Standing showers are more common in Singapore because of its western influence. Including seated showers are equally important. It is quite common in some asian bathing practices to accommodate users with high blood pressure. It can be dizzy after soaking yourself in a hot bath for a prolonged time.

As outlined in the "anatomy", the water is provided from slits in the stone that bridges the water from the embedded pipes to the user.

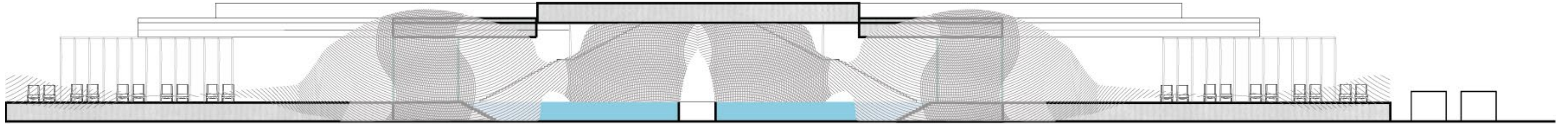


Perspective: The user can choose to swim, shower seated, or standing.

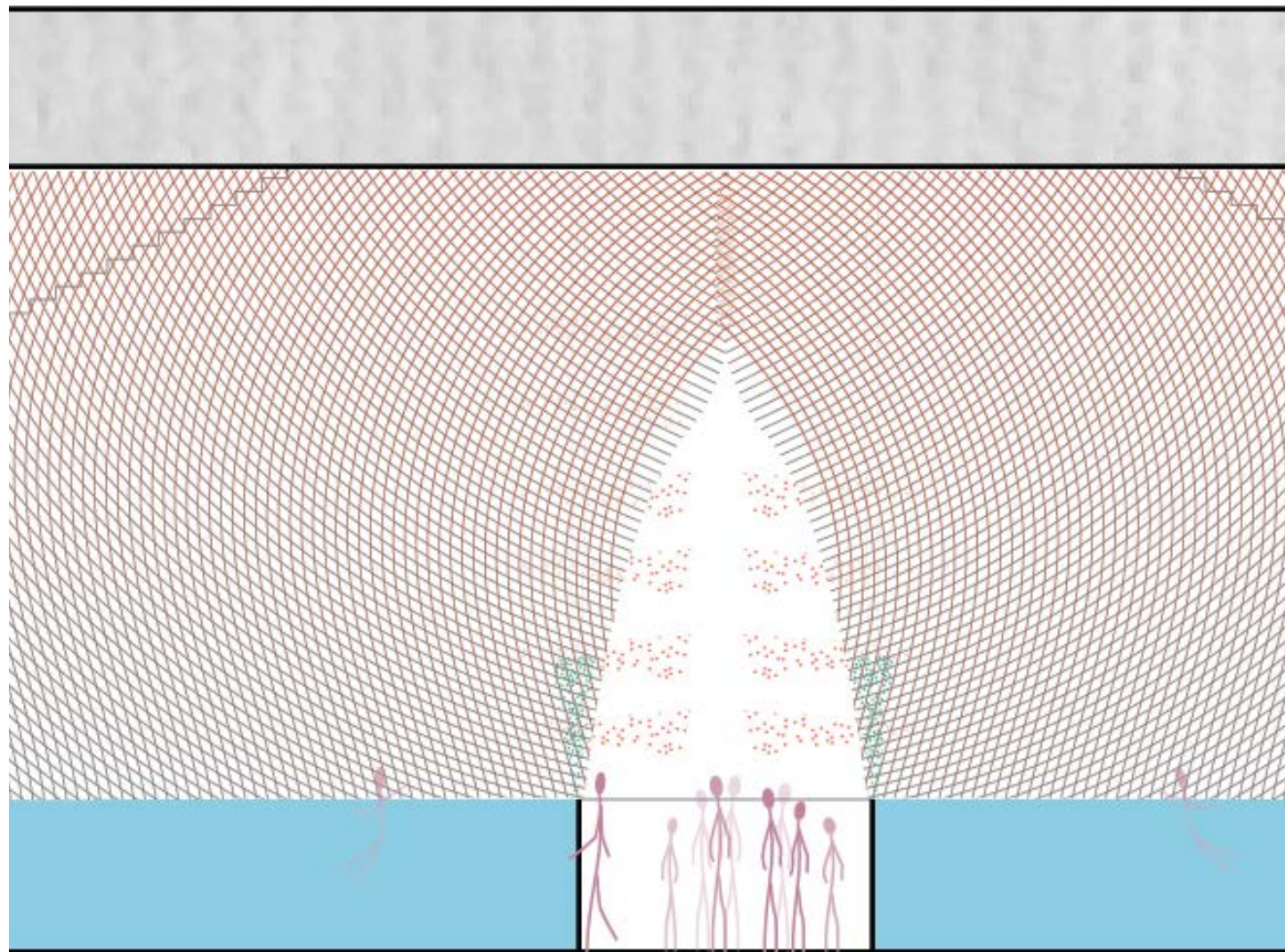
PUBLIC EXPERIENCES

WATER, MIST, AND BATHING SUITS AS VISUAL CUES OF SEPARATION

How the bath house doesn't interrupt the pre-existing circulation for the public. It would be a pain for busy office workers to take the long way to catch the subway.



Facade: Mist outline as a porous facade, revealing and concealing portions of the bath house.



Detailed facade: The stone ends at eye level. Above eye level is mist as ambiguous delineation.



Conceptual view from an outsider



PROXISTANCE IN THE SITE
THE PARK, BUILDINGS, AND THE OCEAN

When in the park, one would not notice the ocean 2 minutes away, because in between there are layers of buildings and small roads. There aren't any walls or fences, but the perception due to the vantage point makes them not notice the ocean. This fascinating proposition might merely be a reinterpretation of what has already been happening for many years in this site.

APPENDIX

ADDITIONAL QUESTIONS

What could be the role of **fully sensorial environments** in the age of digital communications?

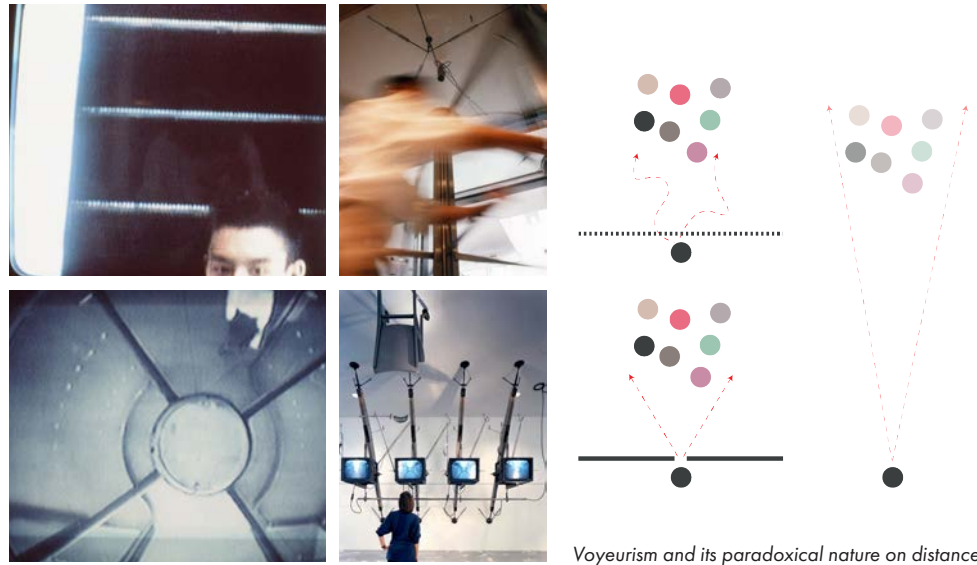
- Augmented Reality
- Digital technologies that replicate reality - targeting different sense not just visual
- Could we design an environment that is stimulating despite eliminating the visual element?
- Perspectives/subjectivity

Can an **interior be truly public**? What aspects of private life could be made public and vice versa?

- Implicitly exclusive public spaces
- Is privacy something made up for a false sense of security (we are under surveillance all the time)
- To what extent can boundaries that separate private space be blurred, and how?
- To what extent can privacy be created in a public threshold?

PRECEDENTS

Para-site, **Diller Scofidio + Renfro**, 1989, MoMA, New York



"Parasite" is an installation, or otherwise a manifestation of the three definitions of a parasite laid out in "The Parasite" written by Michel Serres. The Parasite is interpreted as a "biological", "social", and "technological" specimen. The more relevant definition in terms of exposure is the "social" aspect. This aspect deals with the 4 screens seen on the top left image that show the viewer a live feed of the doorway.

"the social parasite entertains its host to earn welcome at the dinner table, the installation offers the entertainment value of voyeurism to a public unwittingly drawn into an interrogation of vision"

Voyeurism
Distance vs. Proximity

Aerobanquets rmx **Mattia Casalegno**, 2018, Manhattan, New York



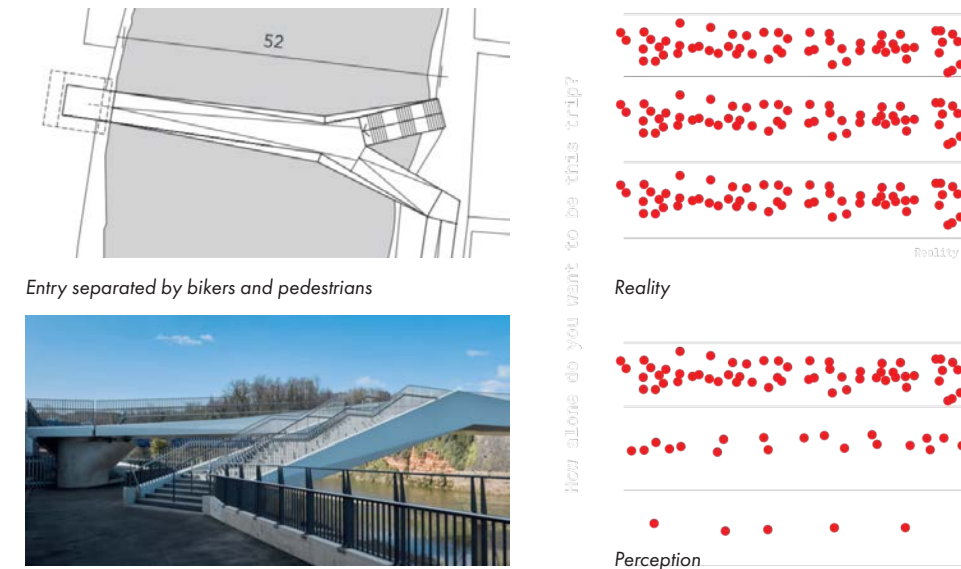
Food eaten with VR headsets augment audio-visual senses, intensifying or even possibly altering normal sense of taste.

Visuals are random 3D geometries based on taste parameters of the food

A completely different experience in interacting with food

If vision affects taste, can we use senses to affect visual perception of space?

St. Philips Footbridge, **Knight Architects**, 2019, Bristol, United Kingdom

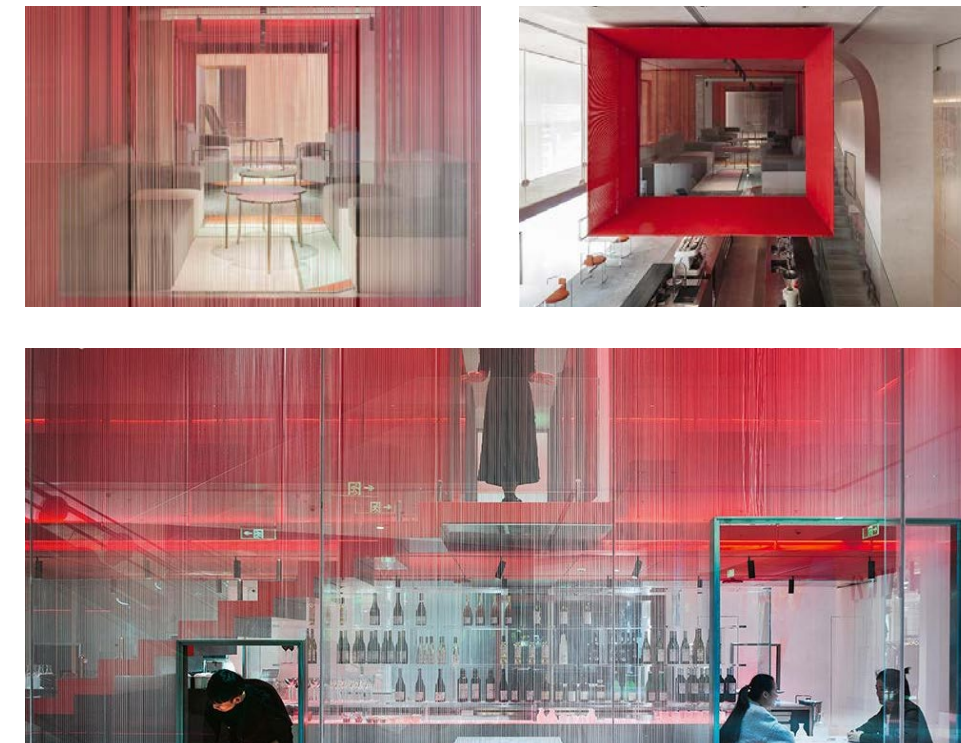


The bridge starts with a divided entry sequence that connects into one bridge. Logically speaking, the two users should amalgamate without any organization once they finish their respective entry sequences.

However, the gesture of the entry sequence continues to manifest in the remainder of the bridge as well. Even though there is no physical separation, the two users travel the remainder of the bridge as separate groups.

The diagram shows how lanes of different user groups travelling at different pace, mood, etc. can be created **without necessarily implicating a physical boundary**.

Doko bar **Waterfrom Design**, 2018, Shenzhen, China



"People desire the feedback that they receive as soon as they share real experiences on virtual platforms", Nic Lee explains, chief designer of Waterfrom. The mutually immersive character of both realms of life and the resulting ambivalent relationship between closeness and distance are the Leitmotif for the design of the Doko Bar.

Theatrical (Viewer vs. Spectator)

Sense of distance (even though in same auditorium)

Layers of translucencies

Thresholds and passageways, vertical elevation

Spatial Planning

APPENDIX

ADDITIONAL QUESTIONS

Is there a need for spaces which merely act as mediators of reality & surroundings instead of spaces that are sensually saturated in order to create a completely new and artificial environment?

- The increase of people with a lost sense of reality
- Exposure of natural stimuli = exposure of time.
 - Weathering
 - Refraction
 - Reflection
 - Diffusion
- A space that simply mediates natural stimuli. What experiential opportunities are available from such design?

What is the nature of private space (or the public realm) in the age of digital surveillance? In the age of social media?

- Digital Seclusion
- Spaces that contrast capitalism secluded from excessive marketing/branding etc. or at least environments that give the illusion that you are isolated from it
 - Nature
 - Hot springs/Bath houses
 - Nature Retreats
 - Sensually isolated
 - Therapy spaces
 - Prayer rooms/Religious spaces

PRECEDENTS

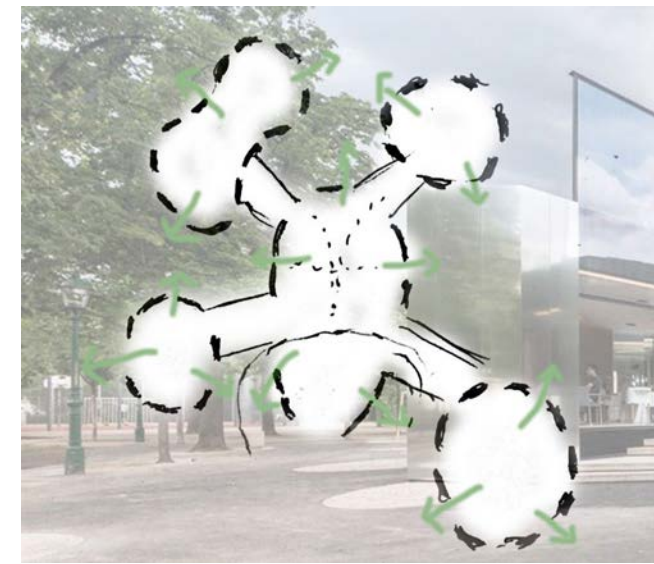
UCCA Dune Art Museum **Open Architecture**, 1989, Qinhuangdao, China



This museum is in a dune of sand. It's forms are inspired by the act of digging, which create organically shaped volumes that are interconnected, creating spaces that resemble caves. Caves are "the primeval home of man, whose walls were once a canvas for some of humanity's earliest works of art".

This precedent was studied as a space that "simply mediates natural stimuli". It is a space that is almost completely dependent on its natural stimuli, such as the sunlight and winds. The apertures based on the changing direction of natural light is indirectly also an exposure of time, which was an important issue explored earlier in this thesis.

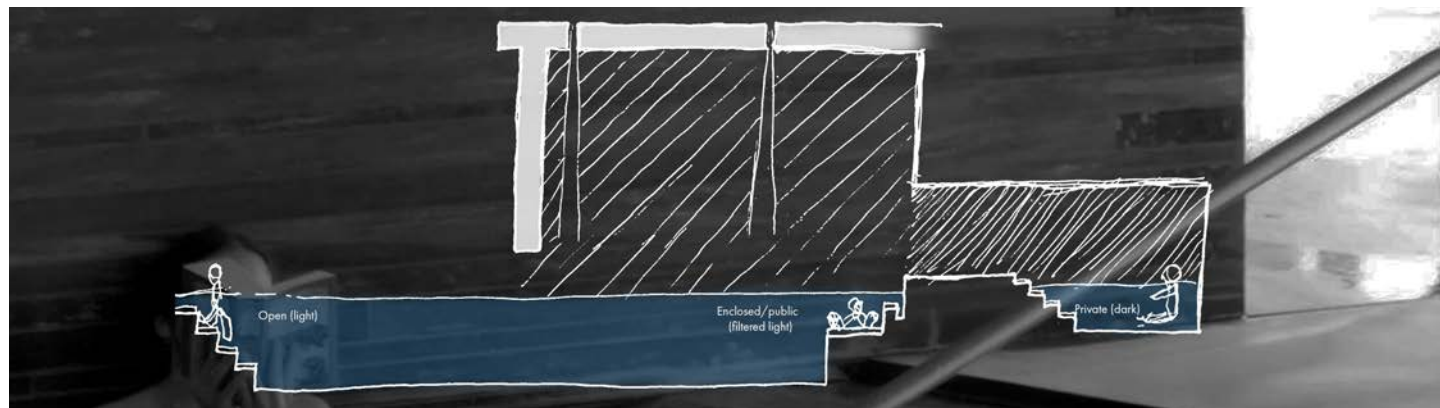
Steirereck, **PPAG Architects**, 2014, Vienna, Austria



"Large electric sash windows, and the slightly reflective metal façade that appears to be coated with dew, create a sense of visual closeness, providing guests with the highest levels of acoustic and thermal comfort while at the same time giving them the feeling that they are sitting outside and yet also at home."

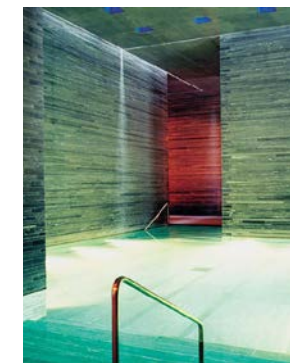
This restaurant's exterior and table arrangements are an example of augmenting the sense of one's perception.

The Therme Vals, **Peter Zumthor**, 1996, Therm, Switzerland



Audio

"Distant sounds are muffled through the stone all around, reverberating on the hardness of the surfaces. The sounds within the building are all enjoyable, the sound of water mainly; gently splashing as a body enters the pools, the sound of a bather emerging from water, the sound of the giant showers splashing water on the stone surfaces. The far off sound of the powering of the baths is a little like a distant ship engine."

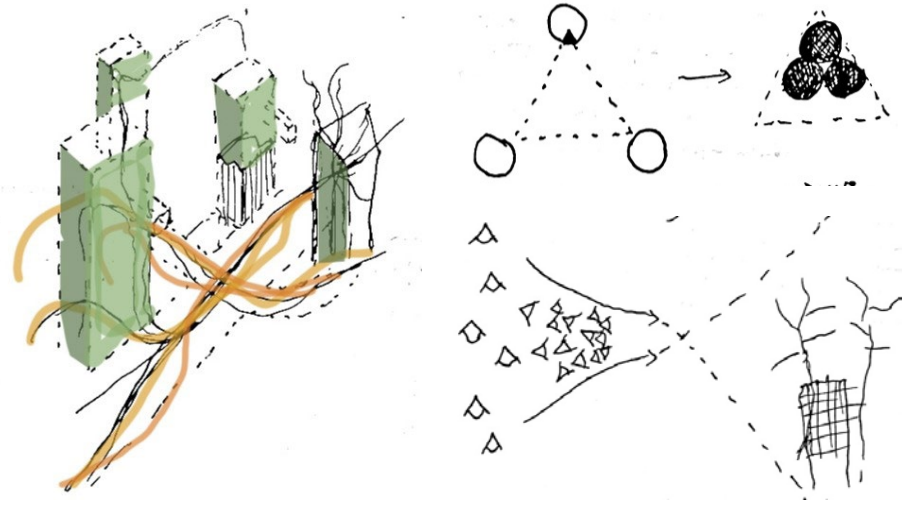


Visual

"Blackness and darkness in the Turkish baths are materials to be manipulated, reinforcing the atmosphere of mystery already hinted at in the changing rooms. By controlling darkness and by carefully lighting blackness, movements and rhythm of the bodies moving in the building are slowed. Walking, wading, showering - all motion is slow and deliberate. Eyes need time to adjust to the half-light. Fill in and elaborate the details not visible."

APPENDIX

PREVIOUSLY EXPLORED CONCEPTS



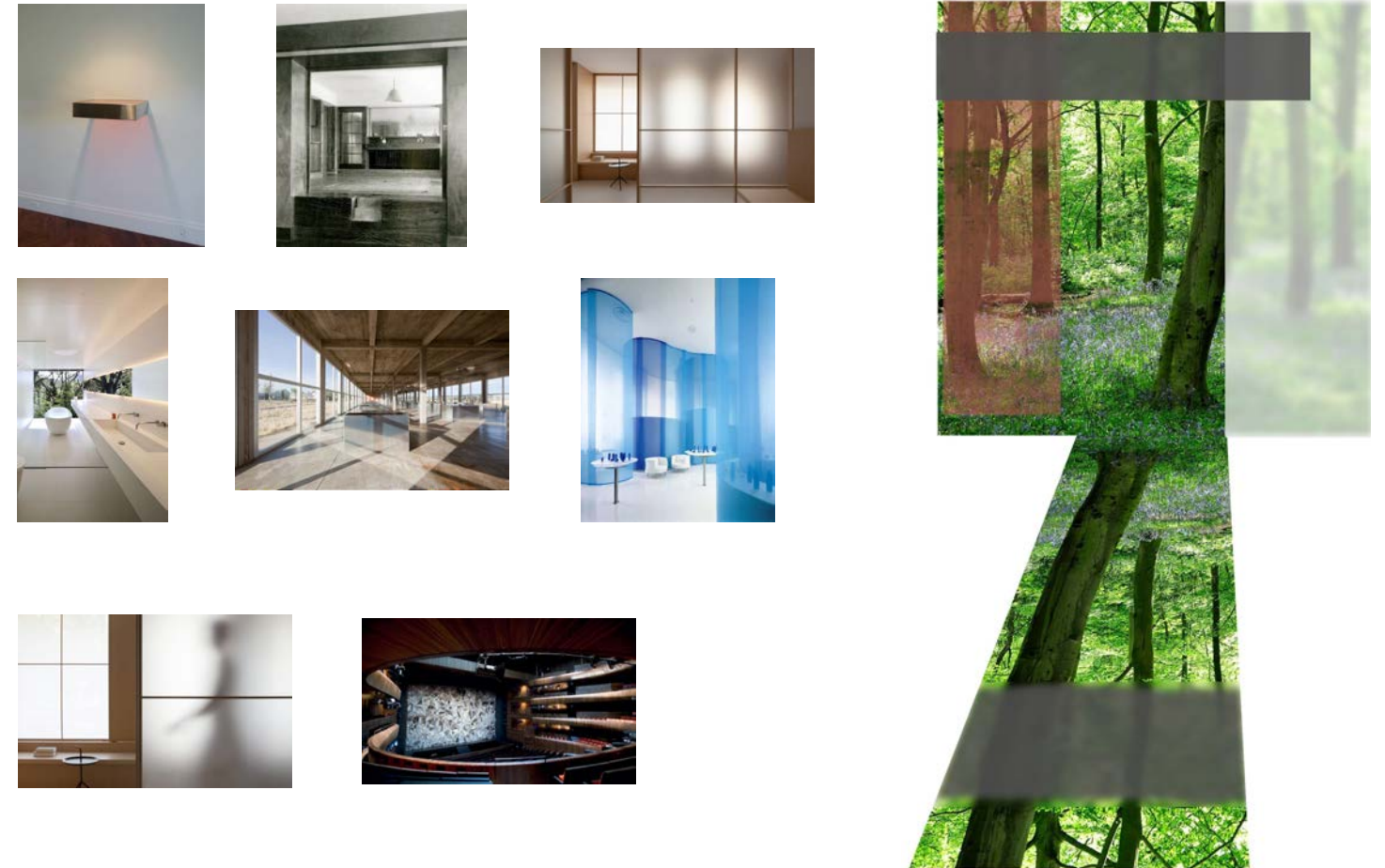
These are initial concept diagrams drawn as interpretations of reading excerpts in the research process.

These diagrams show the interpretation of the urban environment as a constantly changing dynamic fabric, framing of views, and voyeurism's role in visual perception.



Above is a concept collage that imagines a restaurant with a sense of interiority in Central Park. This was inspired by the movement "dineout NYC" where the pandemic is forcing the dining industry to propose more COVID-19 friendly dining practices.

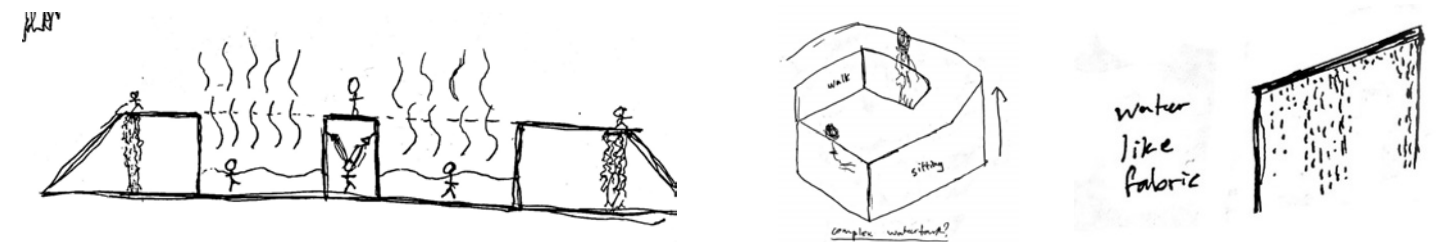
PREVIOUSLY EXPLORED MATERIALS



Prior to arriving at water as the primary material, these were some material precedents I collected in hopes of using it in the proposal.

The materials were chosen based on whether they had the multi-definition quality discussed in Giuliana Bruno's reading - Surface Tension of Media.

The image on the right of the precedents is a concept collage of implementing the material catalogue to augment visual perception of proximity and reality.



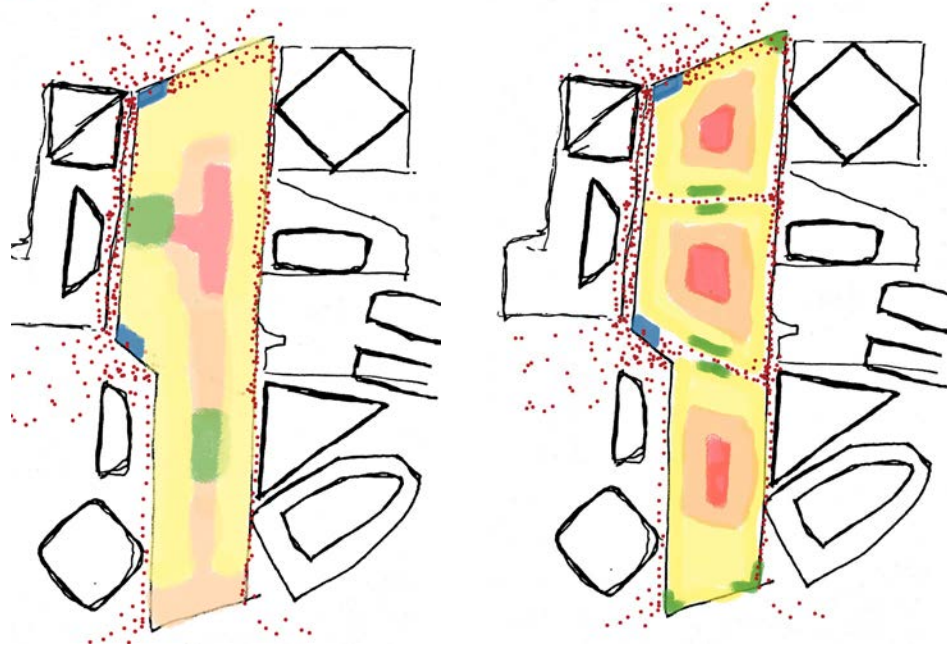
These rough sketches illustrate initial ideas in resolving "liquid architecture" spatially. Although they are very relevant to the thesis, these sketches were moved to the appendices when I realized that a research of sensorial qualities in water was a more imminent priority than spatial solutions.

APPENDIX

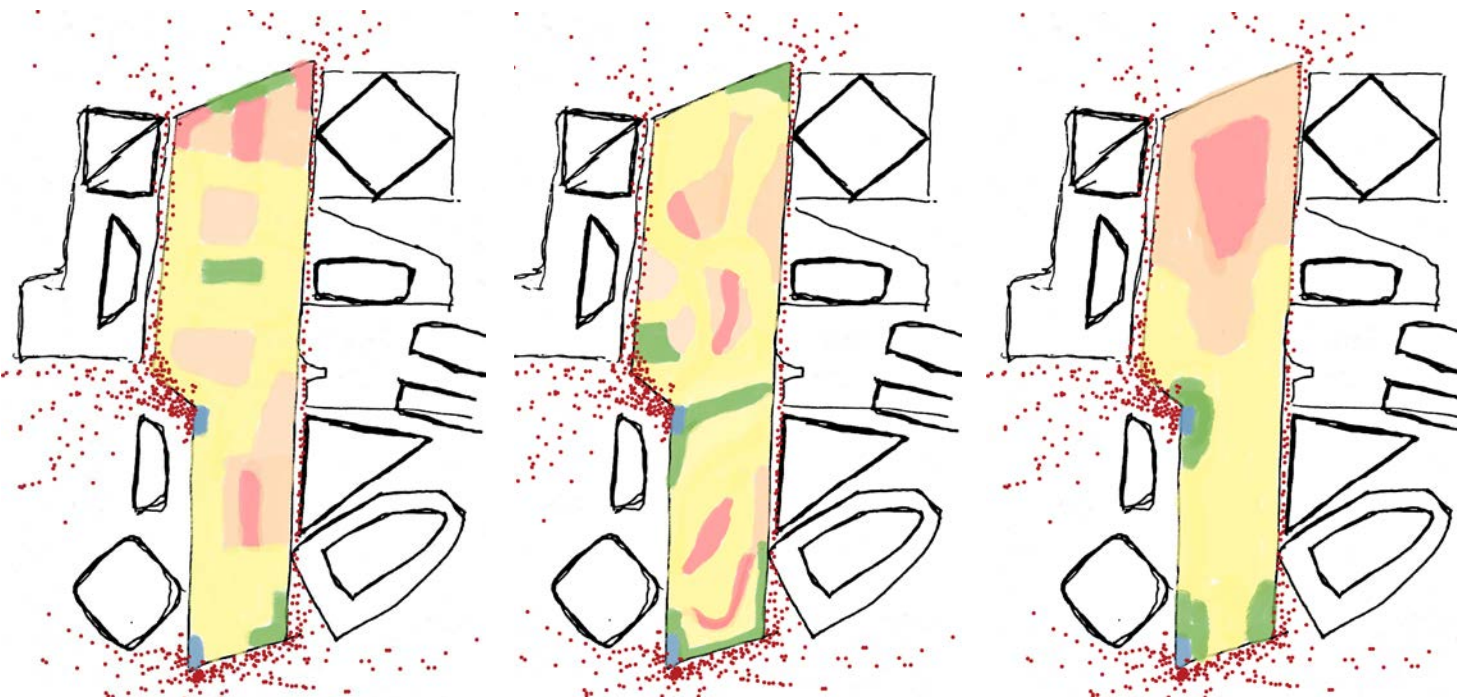
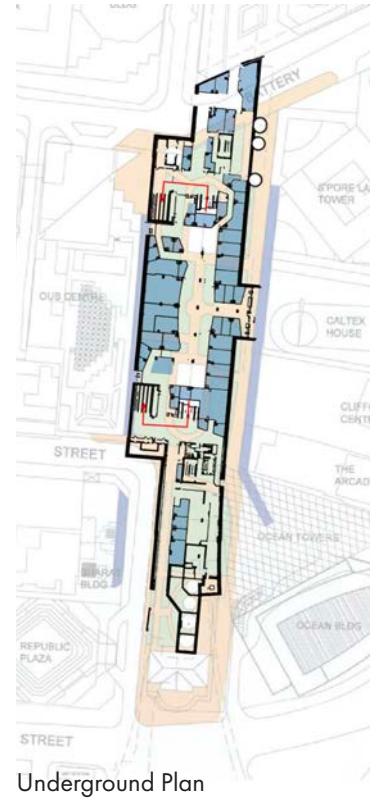
PREVIOUSLY EXPLORED SCHEMES FOR PROXISTANCE

- Public (baths)
- Semi private (showers)
- Neutral (rest areas)
- MRT entry points
- Private (Lockers)

The two techniques were based on two different positions of the MRT stations. Then, based on outsider traffic (including adjacent buildings), program was allocated according to its appropriate privacy levels.

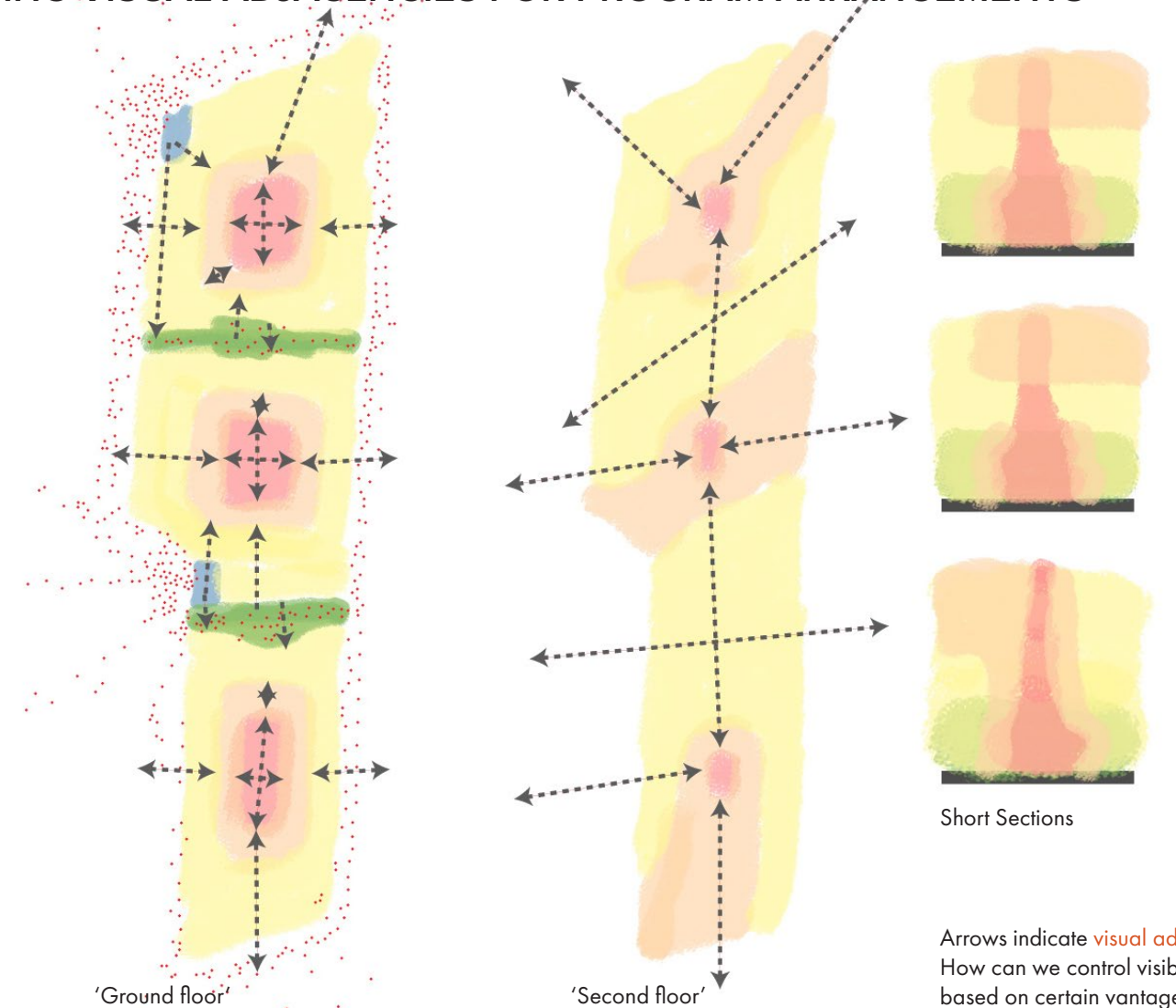


Scheme 1, 2: 'Cores' of private program. Rest of program radiating out in order of privacy.

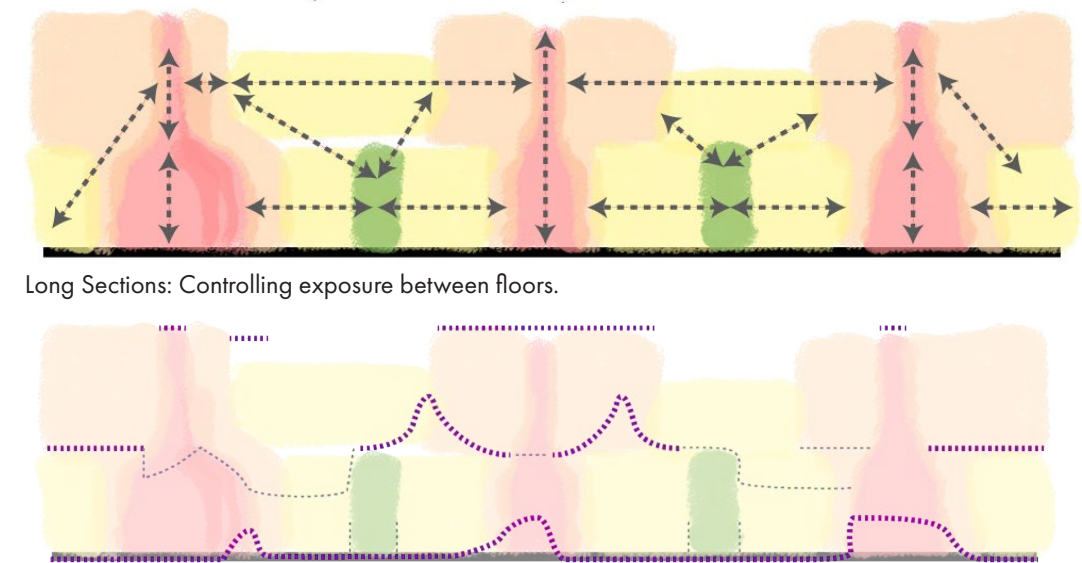


Scheme 3, 4, 5: Spontaneous, fluid allocation. Private programs away from high traffic, buildings.

USING VISUAL ADJACENCIES FOR PROGRAM ARRANGEMENTS



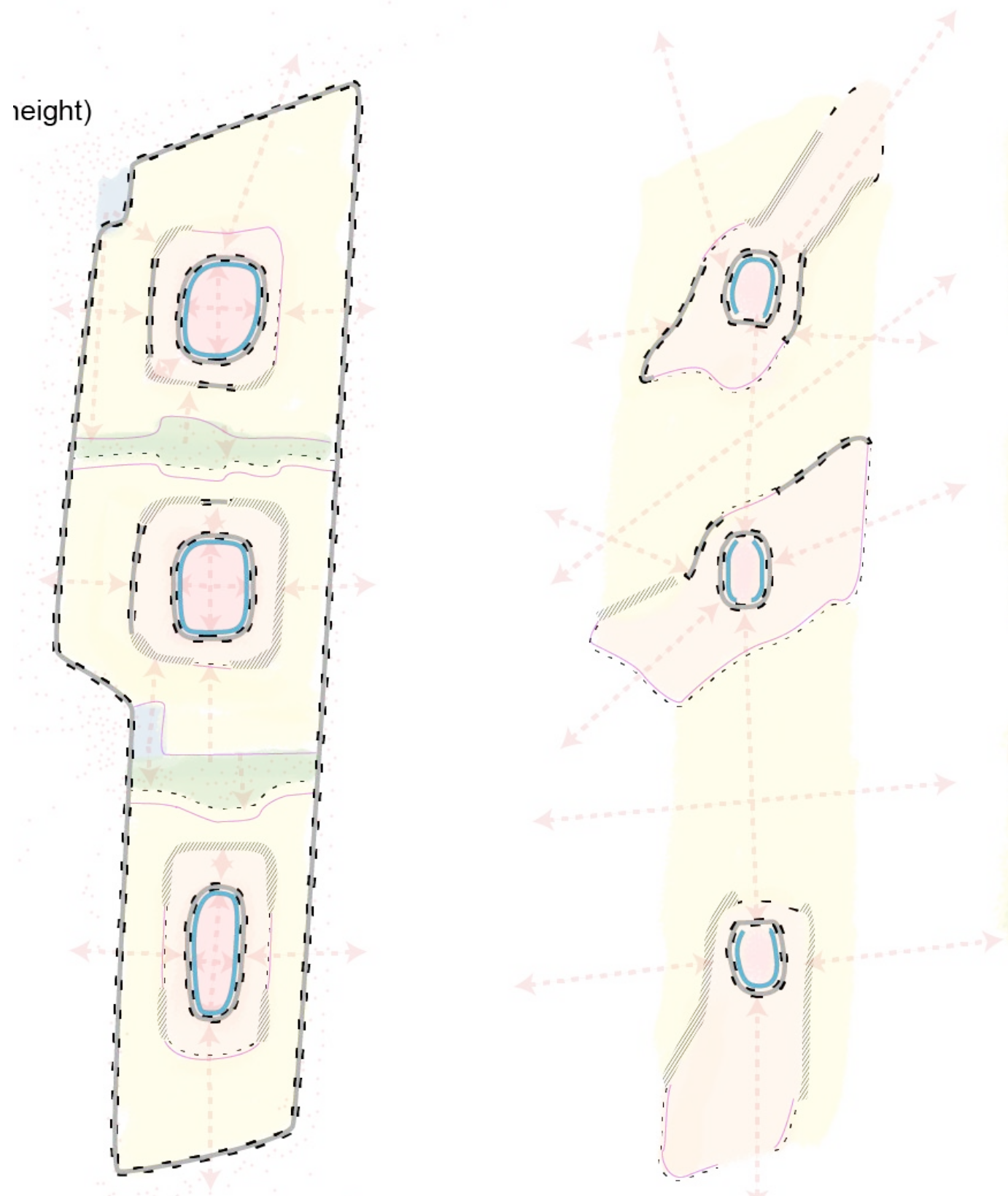
Arrows indicate **visual adjacencies**: How can we control visible depth based on certain vantage points?



This scheme is an adaptation of "scheme 2" where it allows circulation to seep in through the bath house. 'Cores' of private spaces and other programs radiating outward in order of privacy.

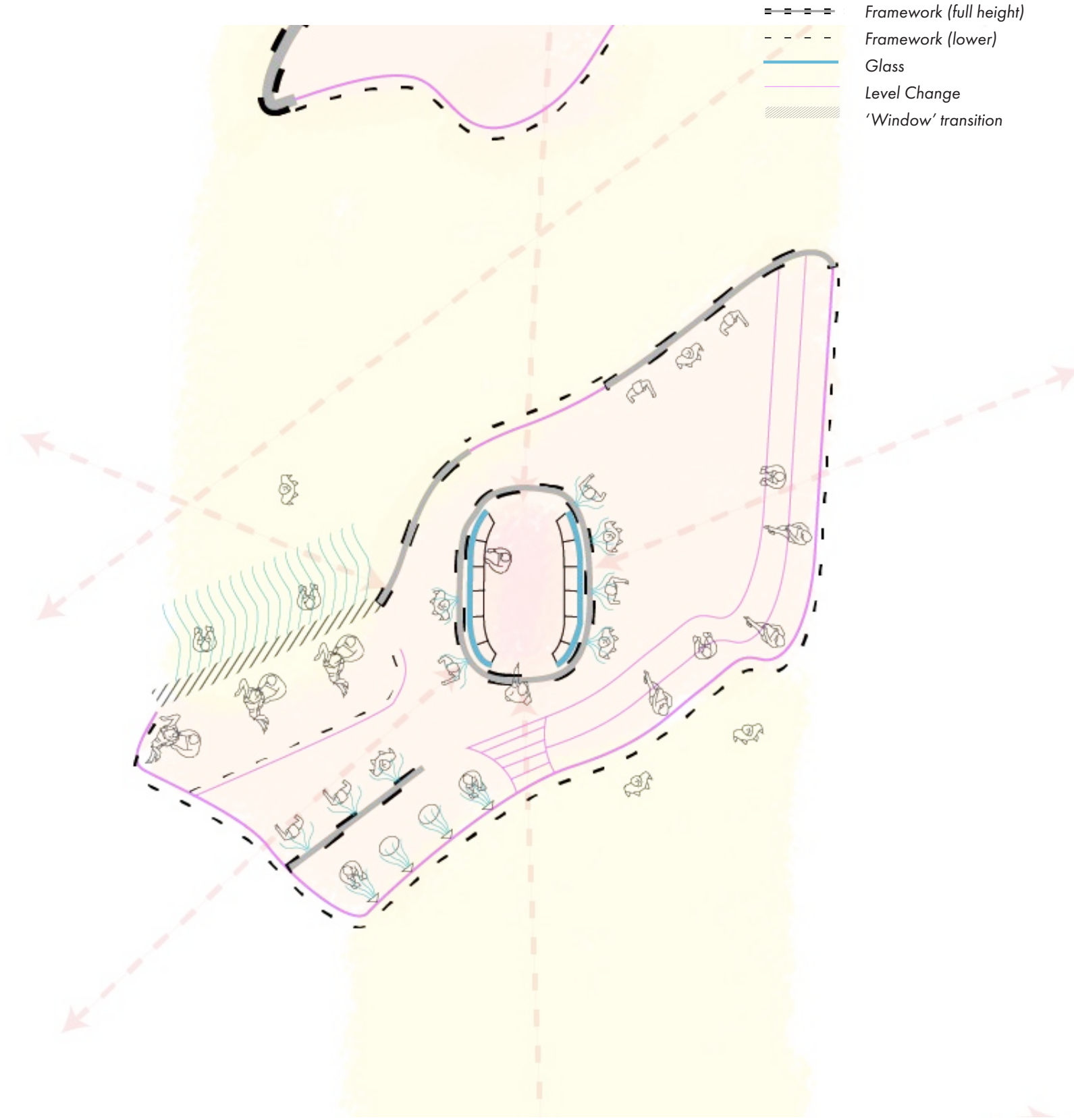
APPENDIX

PREVIOUS SCHEME PHYSICAL MATERIAL ANATOMY MAP



The necessary placement of physical materials to allow water walls and mist conceal and reveal certain spaces depending on visual adjacencies

DETAILED MAP



Zoomed Plan: Depending on visual adjacency, some 'sides' of a program are more porous than others.