FLUID DYNAMICS.
THE STREETS OF BANGKOK

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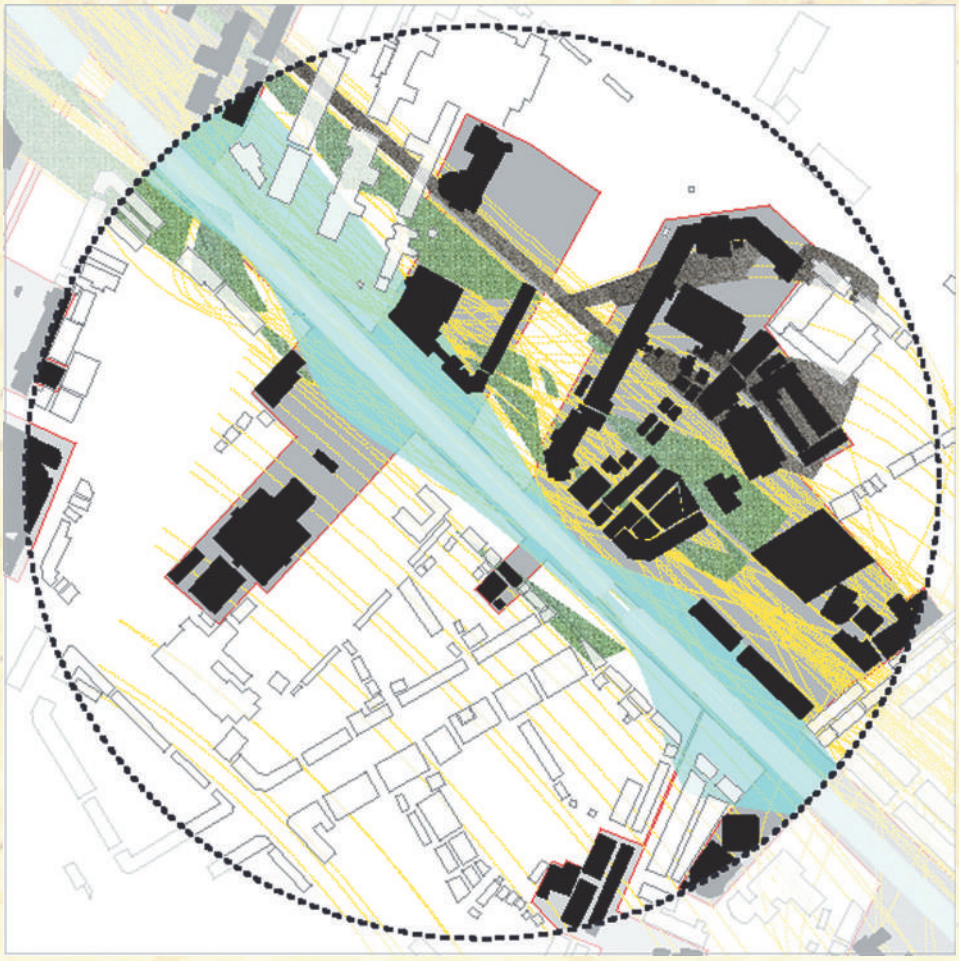


ABSTRACT

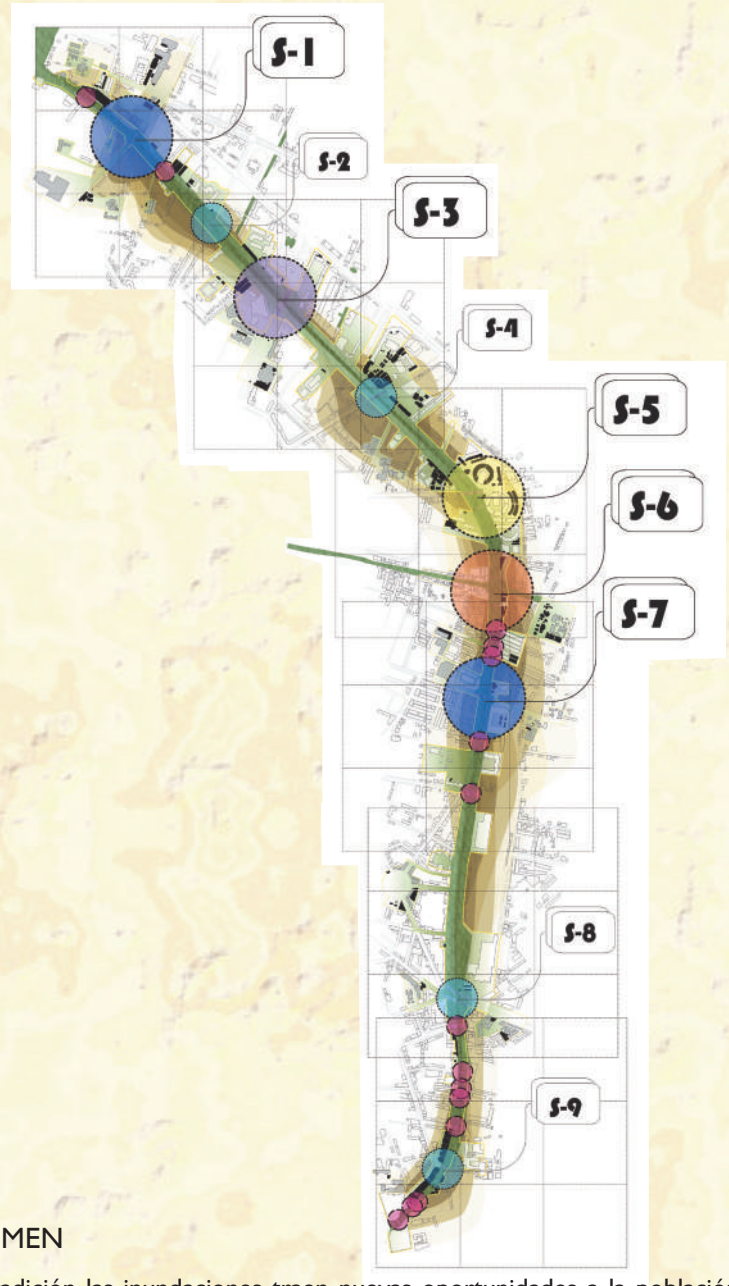
Traditionally with flooding came a series of opportunities that *Thai* people knew how to take advantage of; the seasonal monsoons triggered events and activities that cropped up progressively as the water rose. Shops and ground floor re-appeared in similar ways in the upper floors as waterways replacing the ground roads. Once the monsoon season was over, everything went back to the way it was. No destruction, no displacement, no waste. People and nature were prepared to adjust and adapt with this transformative aspect of the city. The project intention is to use this great potential as the inspiration that drives our proposal.

KEY WORDS

water ways – potential.

DINÁMICA DE LOS FLUIDOS. LAS CALLES DE BANGKOK

* Arquitecta USTA, 2004. Magister en Arquitectura y Diseño Urbano de la Universidad de Columbia, Nueva York.



RESUMEN

Por tradición las inundaciones traen nuevas oportunidades a la población de Tailandia, quienes conocen el modo de tomar ventaja de la situación; la temporada de fuertes lluvias introduce eventos y actividades paralelas al crecimiento de los causes de los cuerpos acuíferos. Comercio y suelo re-aparecen de forma similar en la superficie como caminos de agua remplazando los tradicionales senderos. Una vez terminada la temporada de fuertes lluvias todo vuelve a la normalidad. Sin destrucción, desplazamiento o deterioro. Población y naturaleza están preparadas para ajustarse y adaptarse a estas transformaciones comunes en la ciudad, para lo cual el proyecto propone usar este potencial como punto de inspiración que direcciona la propuesta.

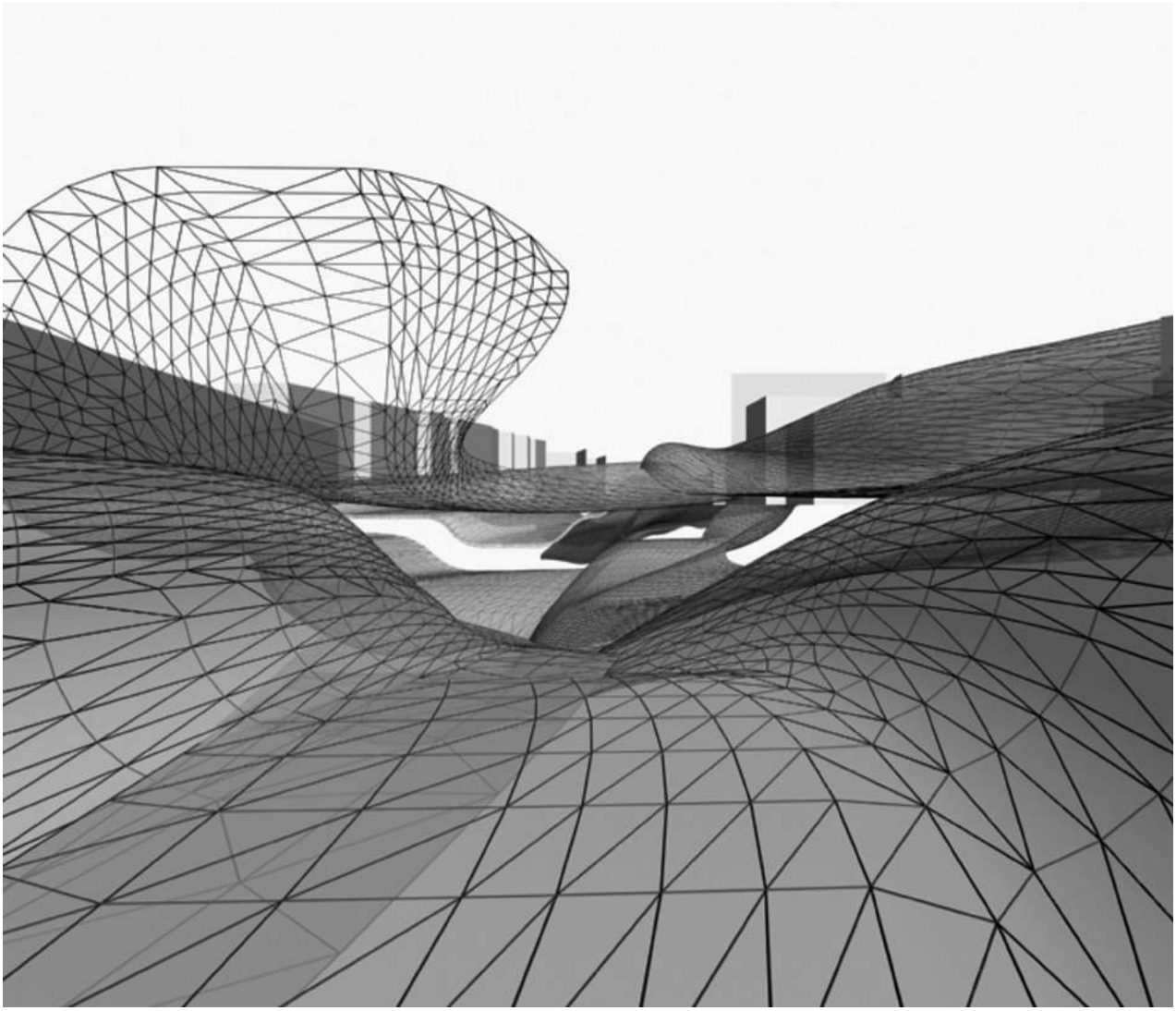
PALABRAS CLAVE

Caminos de agua – potencial

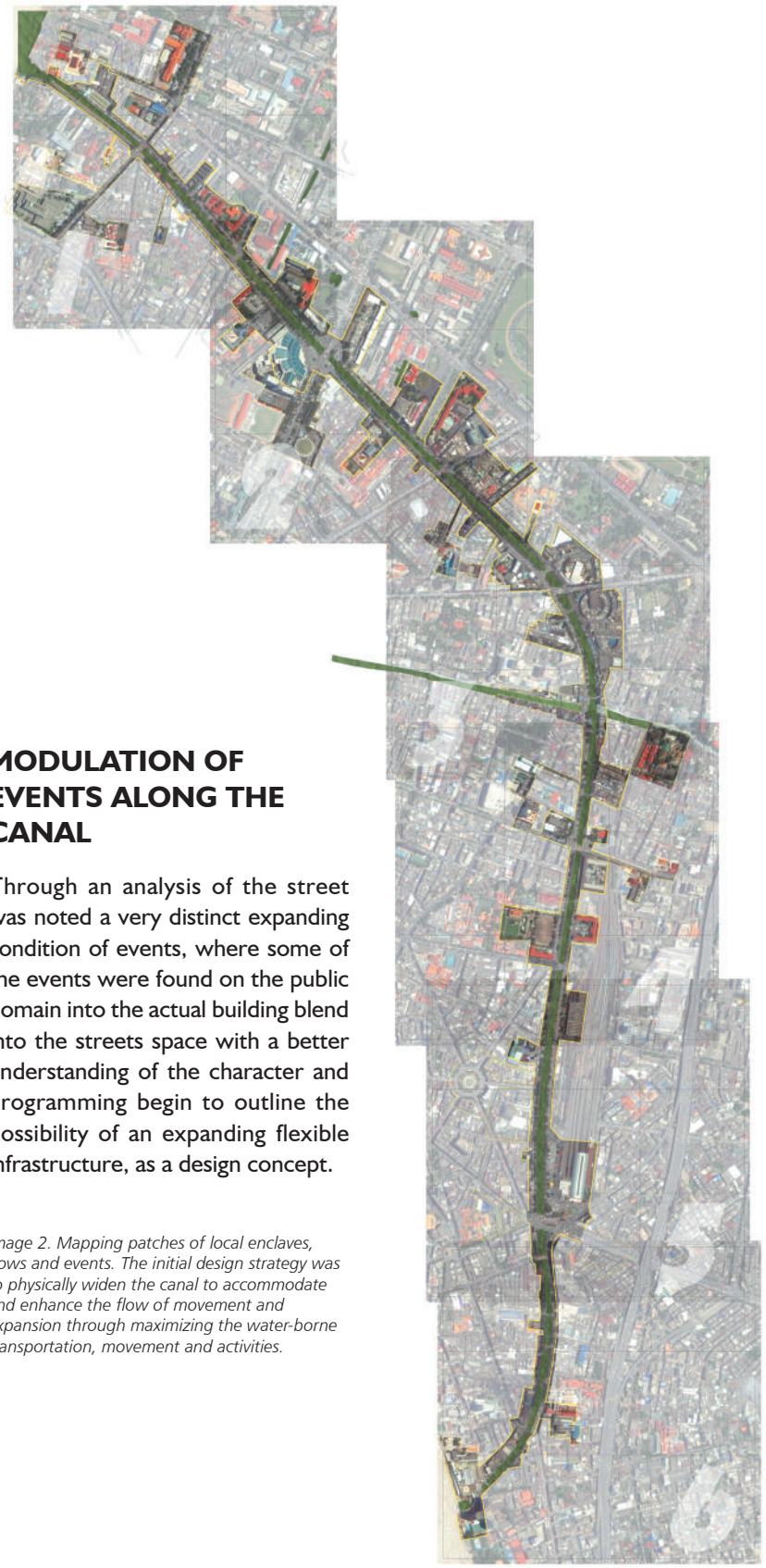
INTRODUCTION

The project intention is to recover Thai ways of coexisting with dynamics water flows. Traditionally with flows came a series of opportunities that Thai people knew how to take advantage of; the seasonal monsoon triggered events and activities that cropped up progressively as the water rose. Shops and ground floor re- appeared in a similar in the upper floors as water ways replaced the ground roads. Once the monsoon season was over, everything went back to the way it was. No destruction, no displacement, no waste. People and nature were prepared to adjust and adapt with this transformative aspects. The project intention is to use this great potential as the inspiration that drives the proposal.

Image 1. Modulation Envelope. The shifting and undulating envelope derives from the dynamic transformative qualities of surrounding spaces throughout the hour cycle.



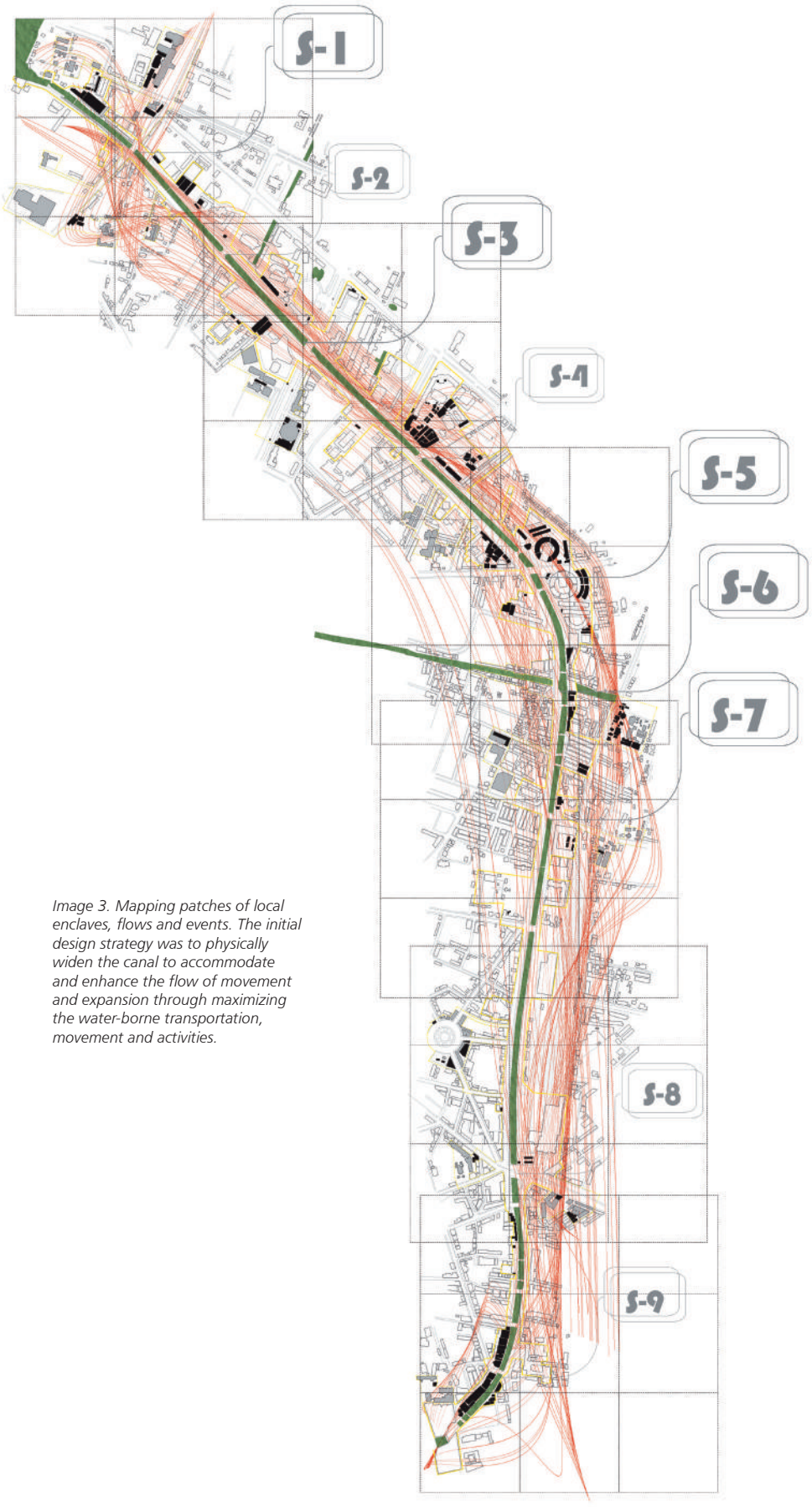
Fuente: Autor



MODULATION OF EVENTS ALONG THE CANAL

Through an analysis of the street was noted a very distinct expanding condition of events, where some of the events were found on the public domain into the actual building blend into the streets space with a better understanding of the character and programming begin to outline the possibility of an expanding flexible infrastructure, as a design concept.

Image 2. Mapping patches of local enclaves, flows and events. The initial design strategy was to physically widen the canal to accommodate and enhance the flow of movement and expansion through maximizing the water-borne transportation, movement and activities.



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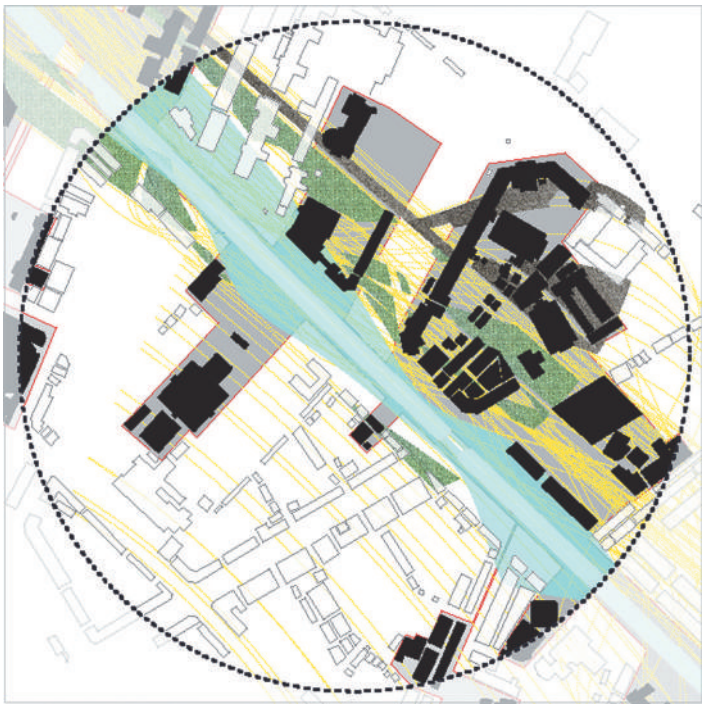


Image 2A

EXPANSION OF CANAL

ENCLAVES:

- Identifying neighboring
- enclaves with inherent
- connection to the canal

FLOWS:

- expansion/contraction of
- existing programs based
- on events, movements and
- relationships.

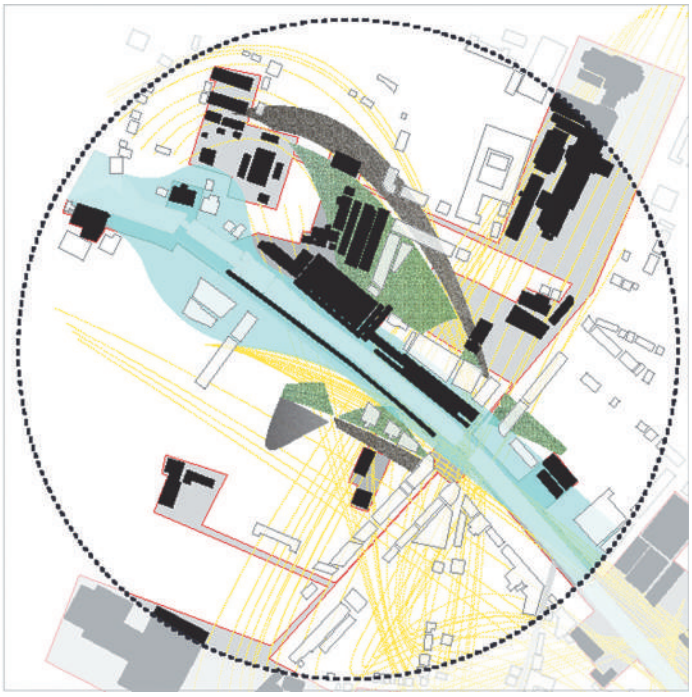
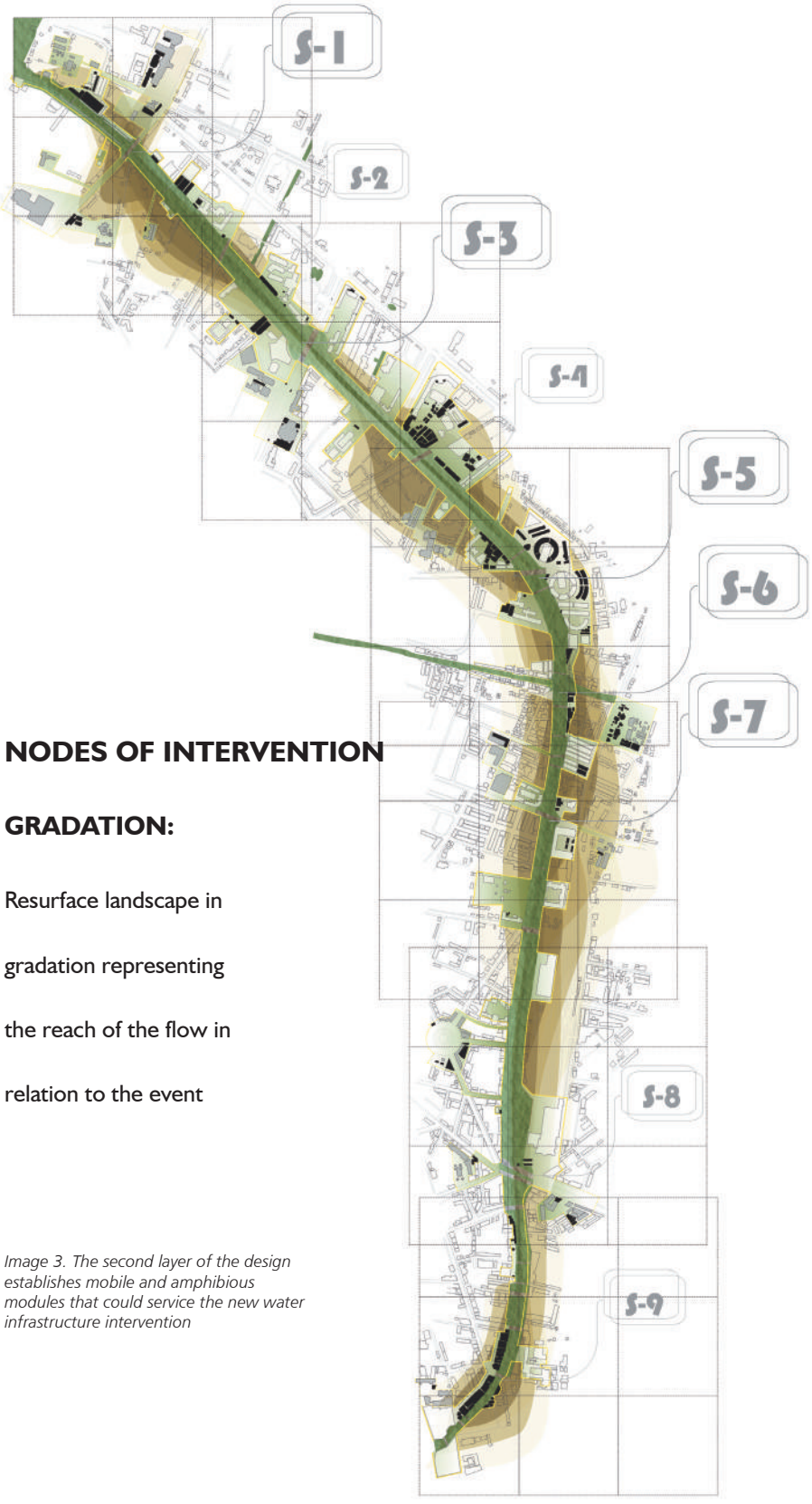


Image 3A



NODES OF INTERVENTION

GRADATION:

Resurface landscape in gradation representing the reach of the flow in relation to the event

Image 3. The second layer of the design establishes mobile and amphibious modules that could service the new water infrastructure intervention

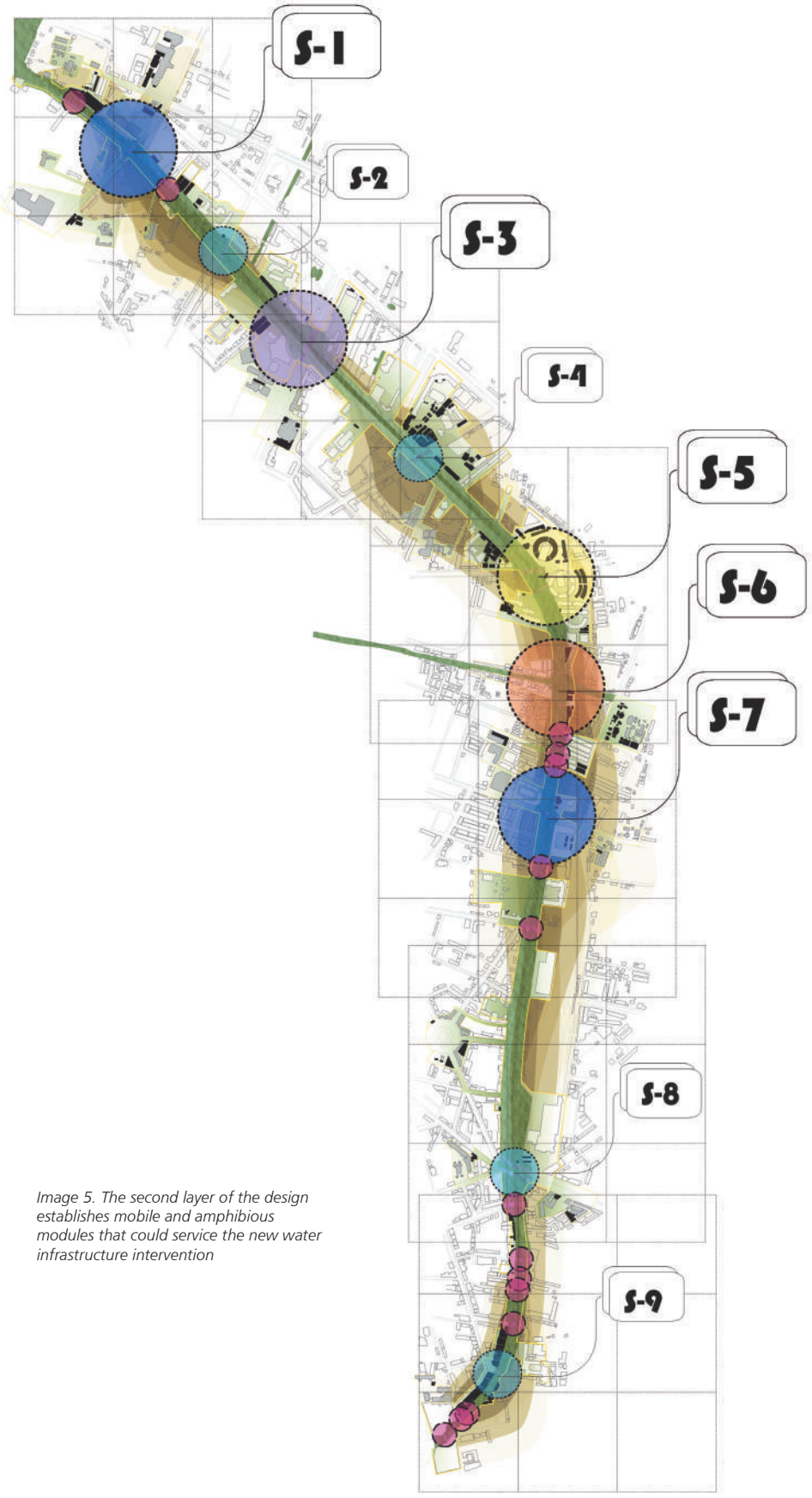


Image 5. The second layer of the design establishes mobile and amphibious modules that could service the new water infrastructure intervention

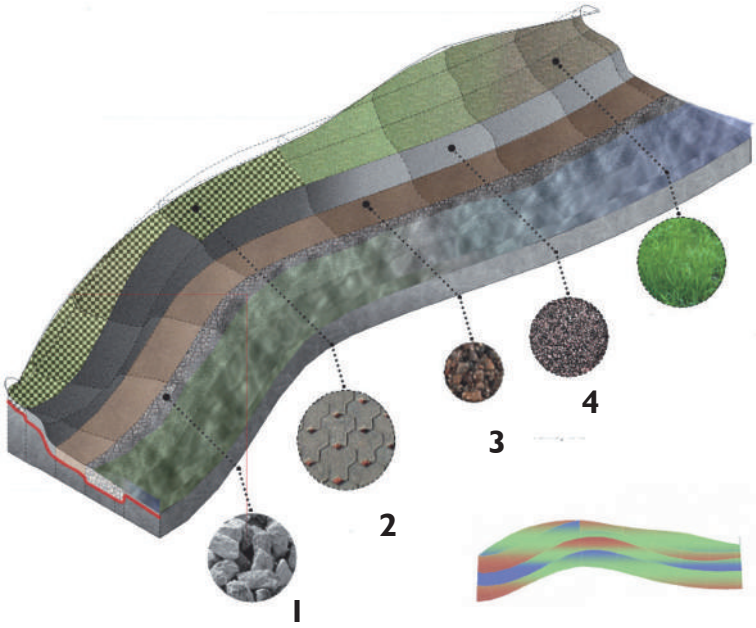


Image 4. Perfomative Section

FLOW SCAPE:

carving and shaping the

canal edge in relation to the

event flow.

RE-MASING:

PERFORMATIVE SECTION

By populating the new canal embankment with modules that contain different degrees of porosity and absorption, a field condition arises and with it new programmatic opportunities that take advantage of this amphibious condition.

1. RIP- RAP:

Crushed rock reduces water erosion

dissipating the energy of flowing water

2. PICP:

Stones in the joints provide full permeability

and the base filters stormwater and reduces

pollutants.

3. PREVIOUS CONCRETE:

after heavy rains acts as mini holding ponds, and

allow water to gradually absorb into the soil below.

4. GRID PAVIMENT:

capable to grow grass with stability

paving Stone preventing soil run off

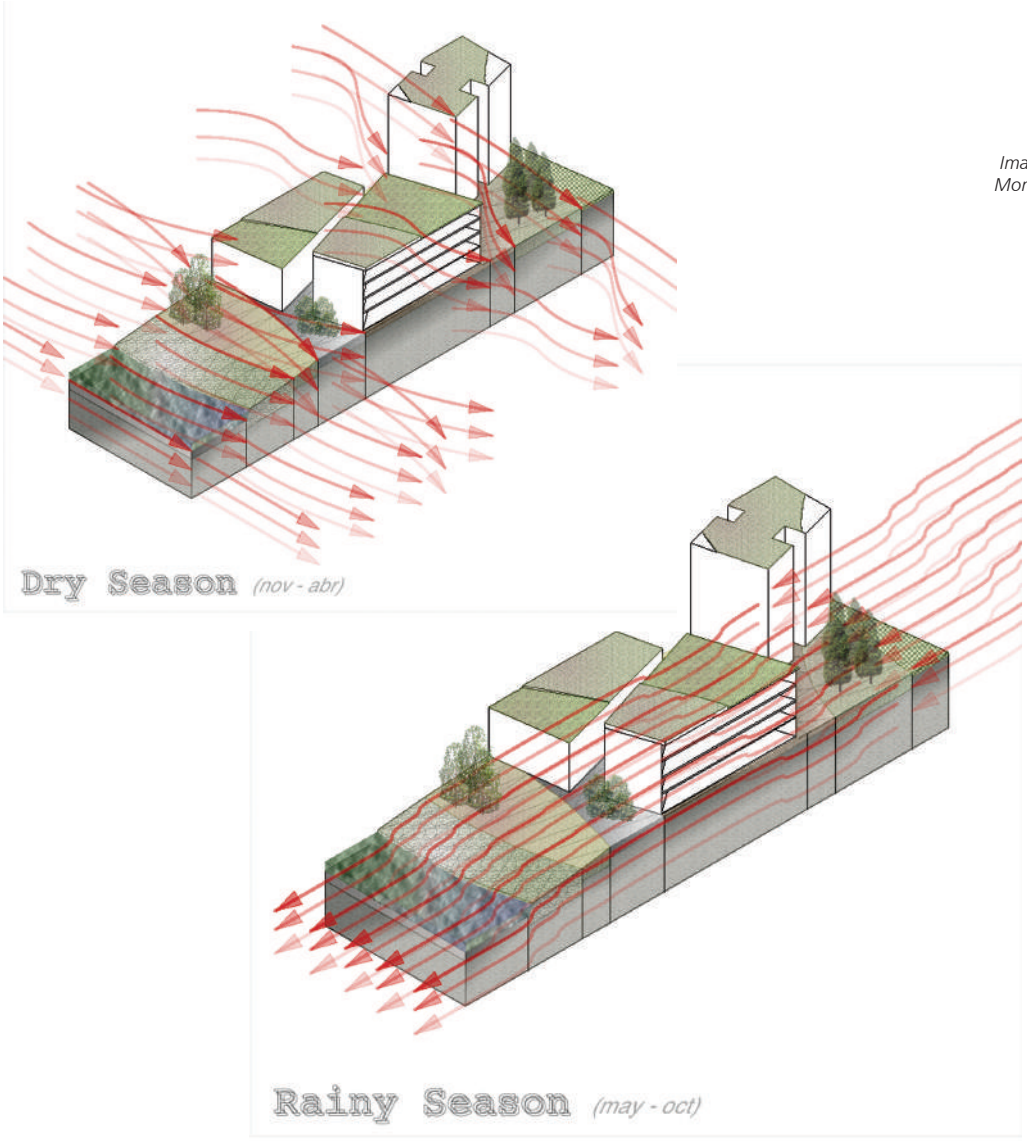


Image 5 and 6. Dry Season and Monsoon Season

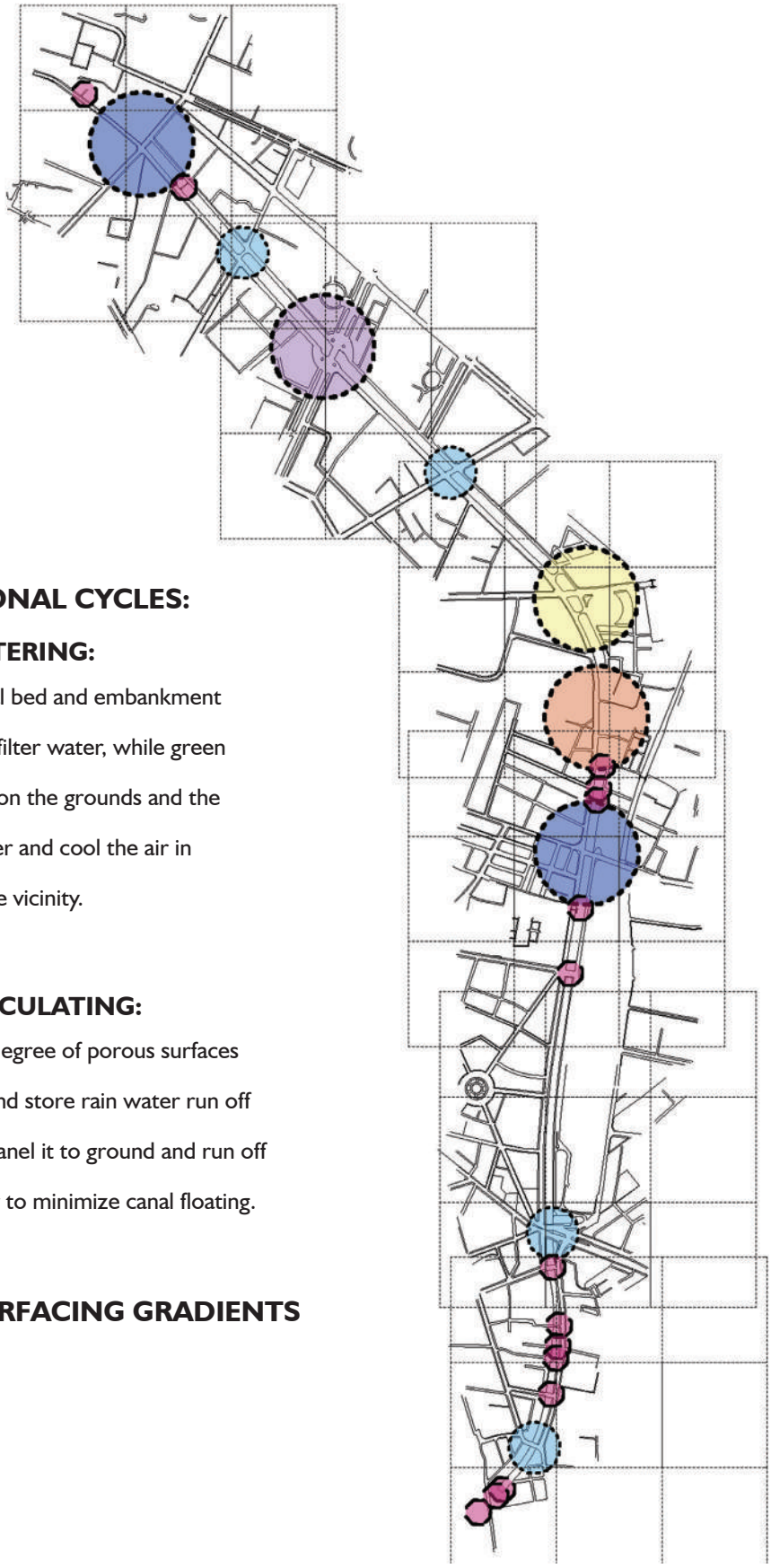


Image 7. Resurfacing Gradients

SEASONAL CYCLES:

RE-FILTERING:

The canal bed and embankment surfaces filter water, while green surfaces on the grounds and the roofs filter and cool the air in inmediate vicinity.

RE-CIRCULATING:

Varying degree of porous surfaces absorb and store rain water run off and rechanel it to ground and run off reservoir to minimize canal floating.

RE-SURFACING GRADIENTS

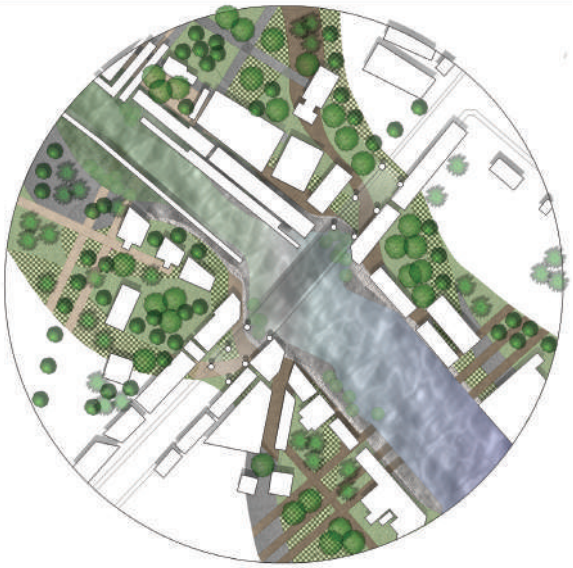


Image 8.

FLOATING EDGE:

Blending both program and water to trigger

new activities on the water edge

REPARIAN EDGE:

gradual sloping through a gradation of

different that help negotiate the wet and dry

condition in relation to the changing tides.

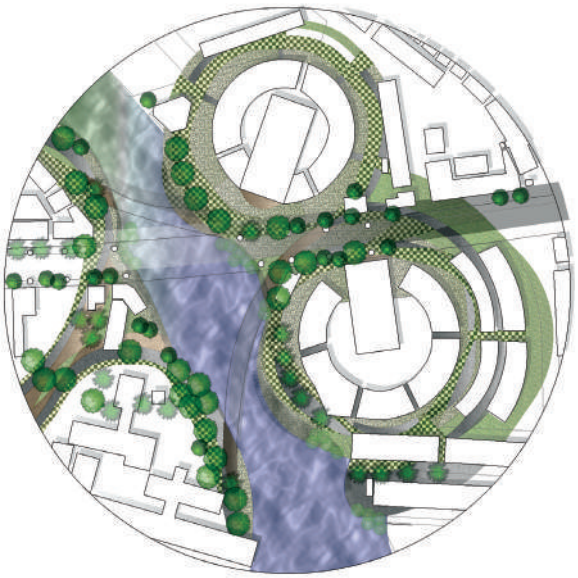


Image 9

EXTENDED EDGE:

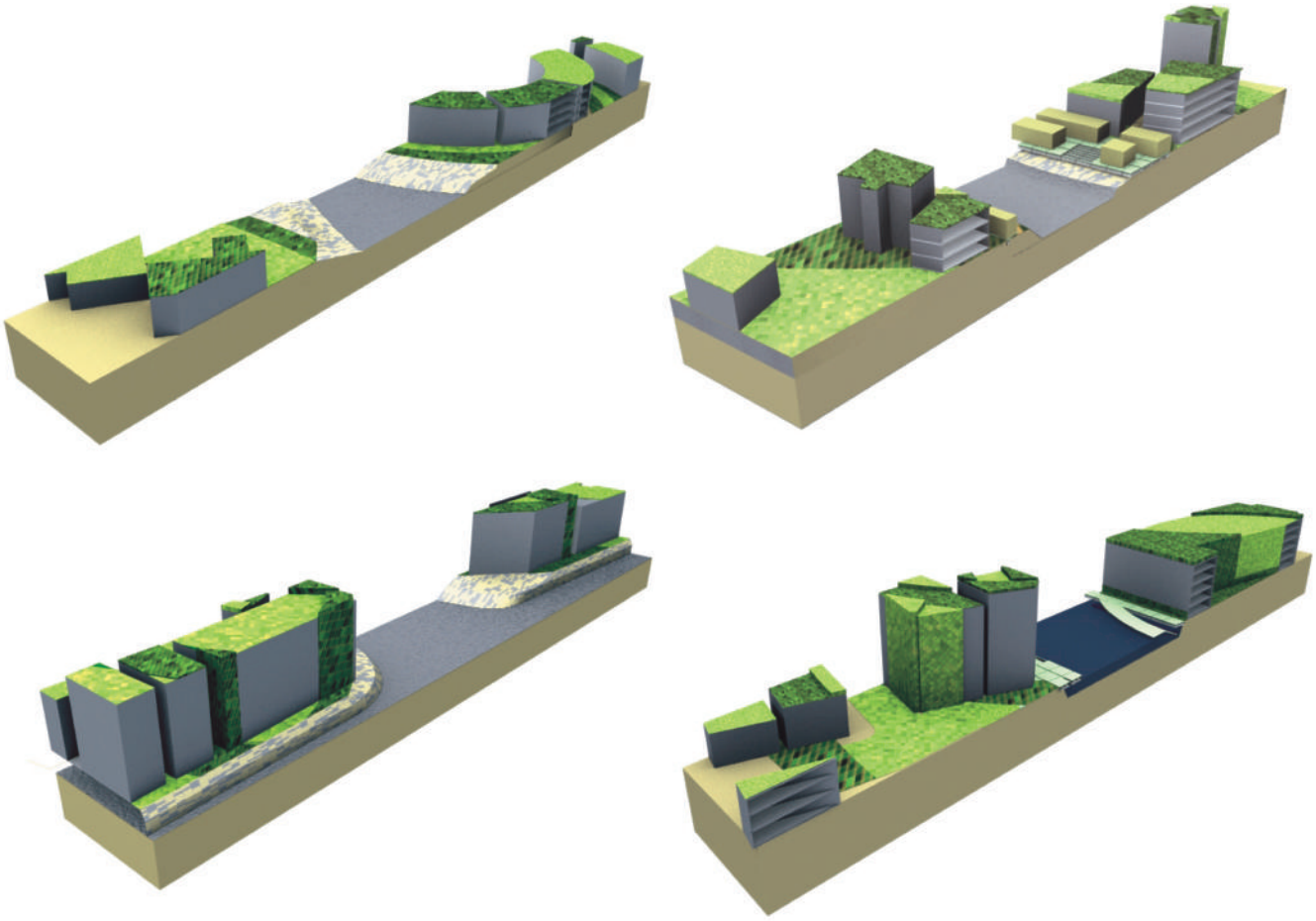
merging of existing building blocks and resurface components into continuos medium that acts as a directional field for the different flows happening around the canal.

Image 10

Image 11

MULTI AXIAL SURFACING:

As ground and reparian edge gets resurfaced, the coverage of the new surface continues to the facade and roof of the surrounding buildings



Images 12 to 15

Temporal landscape:

A changing threshold trigged by the variation of water, will allow the flexibility and adaptability to cyclical, yet informal ocurrences of events.