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Botanical and Water Gardens along the Arno

"I hold it for a most delicate and pleasing thing to have a fair gallery, great chamber and other lodging that openeth fully upon the East and West, to be inwardly garnished with sweet herbs and flowers, yea and fruit if it were possible." Sir Hugh Platt, 1654.



1. Premise: Centuries of the Arno River overflowing its banks as it runs through Florence, Italy has resulted in engineering construction which have made the riverbanks inaccessible and functionally bifurcates the city. Yet, the desire to use the Arno River persists for boating, swimming, parties, fireworks, picnicking, and other forms of recreation during the dry seasons at low water levels. Contemporary accurate flooding prediction models provide 24-48 hour warning for rising river levels. As a result it is possible to reintegrate the Arno Riverbanks into the urban fabric and streetscape, and to enhance the environmental quality of the river system.

The historical center of Florence is composed of a dense and narrow streetscape. Most of the urban center is void of natural landscape. Much of the adjacent pedestrian streetscape is relatively narrow with vertically "over-scaled" buildings. Occupiable shade and natural landscape mostly occur in private interior courtyards. The riverbanks of the Arno to the East of the Ponte Vecchio, have become "parkland" for the city. The Arno Botanical Garden is composed of a series of interior gardens (winter garden), and exterior gardens which connect the city East to West, and connect the pedestrian to the Arno. The "garden-river path" is a thread which connects a number of "garden themes and public events" both along and across the Arno. Each themed garden requires a specific light and ventilation level, min.-max temperatures and humidity. The Botanical Garden also includes a public overlook tower, riverbank courtyard for public events, opportunity to public street markets, and outdoor dining for adjacent restaurants.

2. Site: The site is located along the Arno river, beginning near the Ponte Vecchio and Uffizi extending 4,800 feet to the Ponte San Niccolò bridge to the East. (It is assumed that recent flood control measures have guaranteed that the flooding of 1966 cannot reoccur due to the installation of Leonardo DiVinci's plan to install canals around the city.)

The site can be seen as multilayered, both vertically and horizontally. Horizontally the layers progress from the existing urban façade, to sidewalk, to street, to walkway along the Arno, to the landscape of the river's edge to the Arno itself. Vertically the layers move from the river at it many levels, to the lower landscape along the river, to the datum of the streetscape, moving upward to the botanical gardens and ultimately to the urban overlook.



3. Program: The interior and exterior park areas should connect via a single pedestrian path permitting a specific sequence of landscape features and events. The design should also permit visiting individual interior gardens, exterior gardens and other urban spaces directly from surrounding streets and pedestrian paths. Two of the five interior gardens are arid or humid and must remain "enclosed" throughout the year. The Botanical Garden is intended to be occupied during all months of the year and all times of the day-night.

The design of each Interior Garden must control heat gain and loss, have proper thermal storage, control and temper natural lighting, be artificially illuminated in the evening, and control natural ventilation. Overall the design must relate to both the historical urban context and river's natural landscape. The Botanical Garden gardens and other functions are specifically meant to resolve the relationship between the Arno River and the historical urban context. The exterior gardens are **not** intended to duplicate the historical Italian gardens at Giardino dei Semplici or the Boboli Gardens which are within short walking distance to the south and to the north. The new Botanical Garden is to provide both intense urban spaces and activities, and passive and contemplative environments.

Contemporary Landscape design suggests that the interior and exterior gardens should be based upon two design strategies. The "natural landscape" untamed, never pruned, indigenous materials, reaching its own equilibrium, illustrating the natural cycles of growth and decay. With are no specific paths, nor absolute edges. The second "architectural landscape" creates orchestrated sequences which are integrated into the form of the city. The Botanical Garden, its gardens, paths and other public functions are designed to continue urban patterns, materials, formal systems, etc. Plant materials are cultivated for specific effect, trimmed to control and define "manmade form", and are selected for specific horticultural events throughout the year. Overall, all the ten gardens will be "theme based" rather than organized by similar plant materials. Themes may include; 1) the senses: color, sight, smell, sound and touch, 2) environmental diversity: warming, cooling, in the shade, in a clearing, 3) experiential and theatrical: on stage, by the hearth, at the water's edge, subterranean.