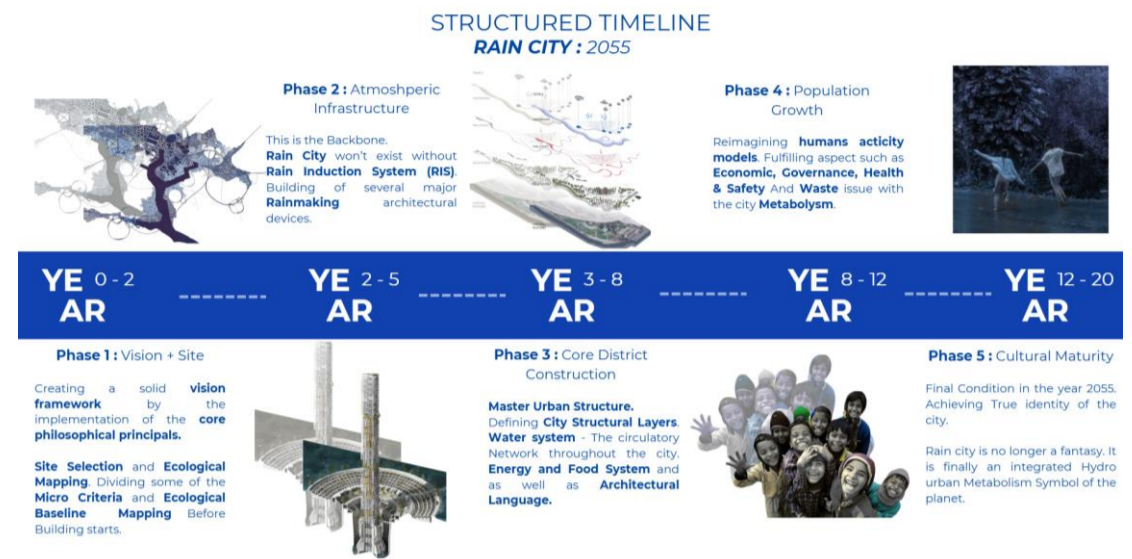




STATEMENT

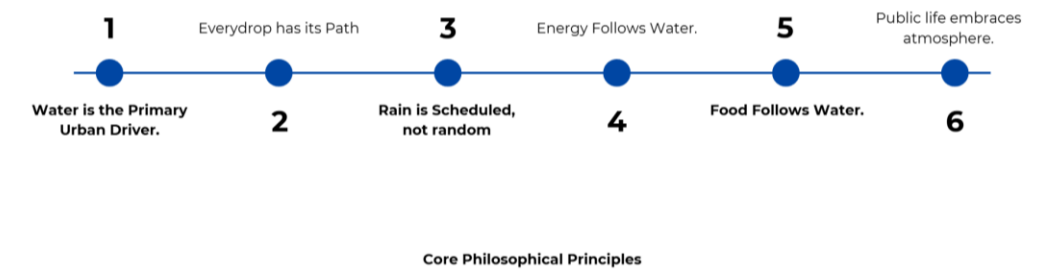
Rain City is a hydro-atmospheric urban paradigm where precipitation is a spatial generator, experiential medium, civic energy, and regenerative infrastructure redefining the city as an active agent within the hydrological and atmospheric cycles of the Anthropocene.

TIMELINE

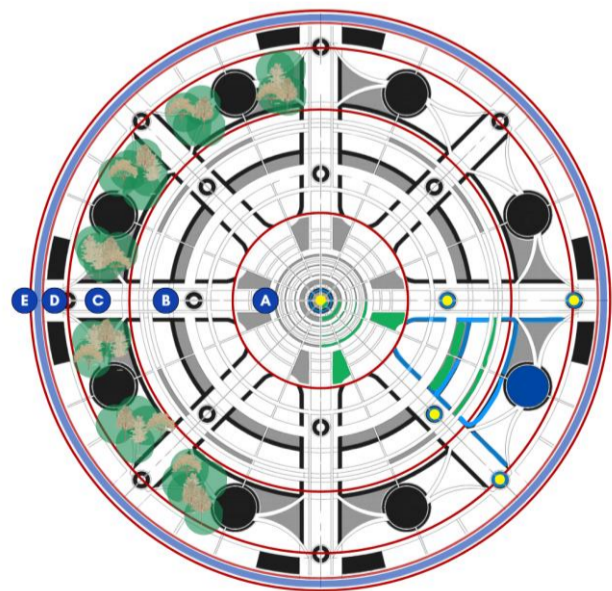


II. PHASE 0 : THE VISION FRAMEWORK (YEAR 0-1)

Rain City must define its epistemology: what kind of city it is, and how it understands water. This phase is not technical; it is ontological. It determines how every later decision is made.



MASTER PLAN



PHASE 1 : SITE SELECTION & ECOLOGICAL MAPPING (TABLE FRAMEWORK)

A. MACRO CRITERIA — TERRITORIAL SELECTION

Criteria	Scientific Basis	Key Parameters	Architectural Implication	Design Strategies
High Humidity (>70%)	Atmospheric moisture content enables condensation and evapotranspiration cycles	Relative humidity, dew point, latent heat	Buildings act as moisture collectors rather than passive shelters	Double-skin façades, hydrophilic materials, condensation surfaces, relative cooling roofs
Tropical / Subtropical Belt	Influenced by ITCZ and monsoon systems	Seasonal rainfall intensity, atmospheric pressure cycles	City must respond to seasonal water abundance vs scarcity	Dual-phase system: rain capture (wet seasons) + storage/release (dry season)
Near Coast / Water Body	Evaporation increases atmospheric moisture; sea breeze circulates humid air	Distance to coastline, water temperature, evaporation rate	Site becomes part of regional hydrological cycle	Align urban grid with wind corridors, integrate lagoons/reservoirs, buffer flood zones
Topography (2-5% slope)	Gravity-driven flow optimization without erosion	Elevation gradient, runoff speed	Enables layered zoning based on water movement	Terraced planning, gravity-fed drainage, stepped water infrastructure
Stable Tectonic Condition	Ensures long-term stability of underground water systems	Seismic activity, soil stability, subsidence risk	Allows permanent hydrological infrastructure	Deep aquifer integration, underground reservoirs, long-life infrastructure

B. ECOLOGICAL BASELINE MAPPING — SITE INTELLIGENCE

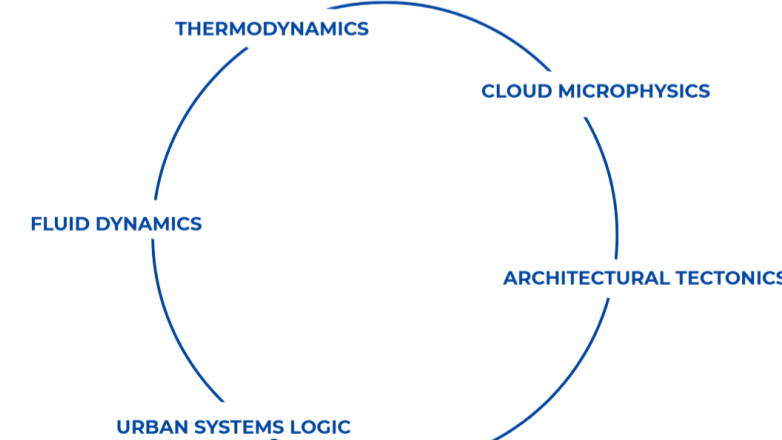
Mapping Layer	What is Measured	Tools / Methods	Scientific Purpose	Architectural Translation
Watershed Study	Catchment areas, flow direction, flood zones	GIS mapping, hydrological modeling	Defines natural water boundaries and flow logic	Roads follow drainage lines, public spaces as flood basins, zoning based on flow hierarchy
Soil Infiltration	Absorption rate of soil layers	Percolation test, infiltrometer	Determines groundwater recharge capacity	Permeable pavements, bioswales, infiltration parks
Aquifer Capacity	Water table depth, recharge rate, storage	Borehole data, hydrogeological survey	Defines long-term water storage potential	Recharge wells, underground reservoirs, controlled extraction systems
Wind Pattern	Direction, speed, seasonal variation	wind rose diagrams, CFD simulation	Maps moisture transport and ventilation potential	Orient buildings to wind, create ventilation corridors, porous urban blocks
Heat Island Simulation	Surface temperature variation, heat retention	ENVI-met, thermal GIS modeling	Predicts urban climate impact on water cycle	Green roofs, shaded streets, water bodies for cooling, high-albedo materials

SYSTEM OVERVIEW - THE ARTIFICIAL HYDROLOGICAL CYCLE

SYSTEM OVERVIEW — THE ARTIFICIAL HYDROLOGICAL CYCLE

The Rain City creates a synthetic but ecologically integrated rain cycle:

The Atmospheric Processes Framework



VISUALIZATION

