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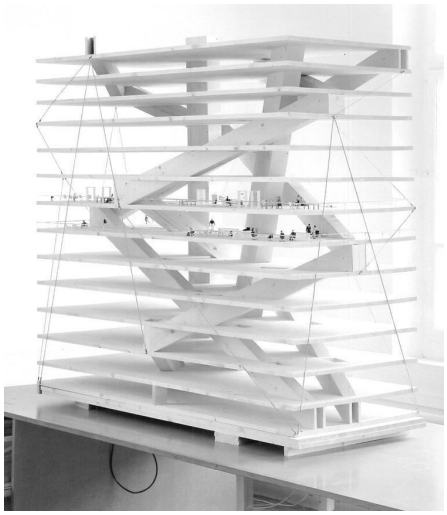
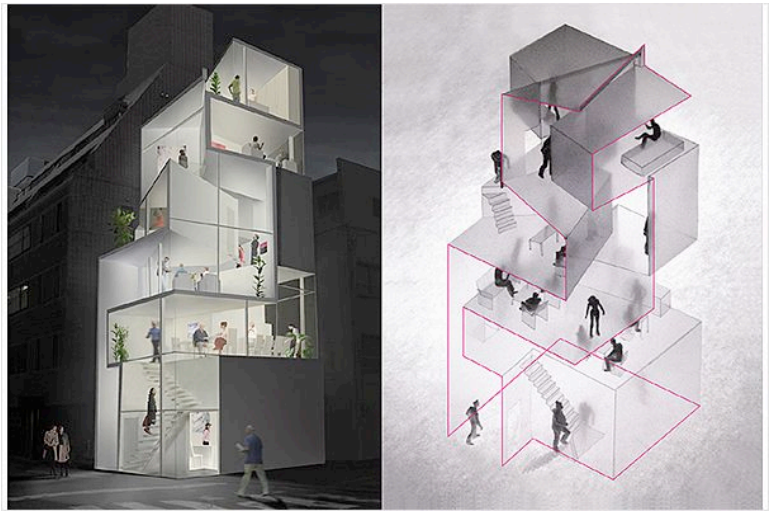
Spatial Infrastructure, Critical Imageability



Christian Kerez
Model for the Swiss-Re Next Offices (2008)



Akihisa Hirata
Gallery S project (2007)

This studio defines "spatial infrastructure" as a three-dimensional material construct that provides a building's primary internal organization of space, prior to the introduction of partitions. The library happens to be one of the least restrictive programmatic packages. Countless of different spatial typologies have proven appropriate to holding a library. It therefore lends itself to be explored through the notion of spatial infrastructure (one that rejects any identity between spatial typology and program) in especially productive ways. Moreover, in preceding programmatic specialization, spatial infrastructure taps into the increasing necessity for buildings to accommodate change over time—while resisting any compromise on architectural qualities in the name of "flexibility."

Spatial infrastructure will serve as a heuristic device to proceed toward a *critical imageability*, that is, toward imagining protocols of consistency between a building's imageable conditions and its primary spatial organization; between its representational character and its main three-dimensional kernel. Our premise will be that, in delineating *the spatial infrastructure approach*, the six propositions below give rise to a design framework that is particularly suitable to growing the domain of critical imageability:

1. Form-Program. The species of buildings resulting from this approach embodies *form-program* constructs. Here "program" is not construed as form's *a posteriori* infill, but as form's inherent content. Thus "form" becomes a programmatically inflected three-dimensional configuration, rather than the outcome of mere morphological operations.

2. **Curated Equilibrium between Order and Differentiation: Toward Three-Dimensional Field Conditions.** The spatial infrastructure approach favors a deliberate equilibrium between order and differentiation. It operates at the edge of control: it materializes a lawful pattern or set of decisions capable of catalyzing chance, variations, and obstacles by means of local adjustments, partly in dialogue with the urban context. It's coherent and yet diverse; consistent and yet nuanced. In a sense, it pursues the three-dimensionalization of Stan Allen's *field conditions*.

3. **Beyond Separation between Floors.** In-depth research into questions concerning internal organization will be prioritized as a means to free buildings from their pervasive identification with uniformly stratified space. Rather than some version of a vertical pile of slabs, we will consider spatial infrastructures capable of overcoming the separation between levels through an array of distinct configurational properties. These infrastructures will bring about alternative ways of organizing the various knowledge formats within the library as well as novel relationships with the itineraries around them.

4. **Structure as Spatial Medium.** The spatial infrastructure approach capitalizes on the subversive disciplinarity of the architecture-engineering hybrid. As a design domain whose basis lies at the intersection of both disciplines, the architecture-engineering hybrid channels a double understanding of the notion of structure, both in the conventional sense of the building's physical support and in that of the organizational properties of for. This will enable us to abstract properties away from the former and turn them into a generative spatial code in the latter. Consequently, a shift can be effected from structure as a series of neutral elements, unrelated to the conception of the building, to structure as a spatial medium coextensive with it.

5. **Distinctive Spatial Qualities.** Just like its bi-dimensional counterparts, the "free plan" and the "free section," the "free infrastructure" proposed here allows for multiple distributions within it, partitions and structure being independent. At the same time, since such an infrastructure is envisaged as a spatial medium, it materializes a specific configuration, and therefore, far from being neutral, it engenders a number of distinctive spatial qualities. Among other things, this kind of infrastructure suspends the idea of having "rooms" within it, offers new possibilities to tap into the historical importance of ceilings (and related openings) in libraries, and helps transcend the garden model by incorporating outdoor spaces as part of the *form-program* fabric.

6. **From Concealment to Integration of Services.** Louis Kahn famously distinguished between "served" and "servant" spaces, the latter encompassing most of what mechanical engineering deals with (ducts, pipes, etc.) as well as other connective elements, such as stairs, elevators, and corridors. Rather than placing the servant spaces in the building's leftover regions—i.e. rather than subordinating them to the served spaces—the spatial infrastructure approach devises the two sets as largely equivalent, the hierarchy between them dissolved. Can servant spaces be turned into the very elements articulating the library and further envisioned in connection with the structure? Can services and flows be reformulated again (after Ito's fundamental breakthrough at Sendai) by becoming built into the concept of the spatial organization itself?