

INTRODUCING

LARGE-SCALE

POSTER TITLE

Open Building: Planning for Incremental Development

PROBLEM STATEMENT

There are two conflicting trends in the community development market, each pulling in opposite directions. First is the rise of **large-scale negotiated agreements**, including Planned Unit Developments (PUD's) and Common Interest Developments (CID's, or HOA neighborhoods). Second is the push toward **"incremental development,"** the ability for neighborhoods to be incrementally improved lot-by-lot or building-by-building, as championed by Strong Towns, the Incremental Development Alliance and the rapidly growing "Missing Middle" movement.

While large negotiated agreements provide an efficient way to increase density and mixes of uses, and are often used to help create more diverse, walkable neighborhoods in towns and cities, the results are typically locked-in, and unable to evolve or improve over time and therefore preclude future incremental development. Open Building provides a foundation for sustainable, incremental community development for **continued evolution of large-scale development projects** after initial build-out is complete.

ABSTRACT

As economies of scale drive us toward larger development projects, how can we successfully build projects that **live and grow like organically-grown communities?**

Applying techniques derived from the Open Building movement may provide a path toward more economically-resilient cities.

CONTACT

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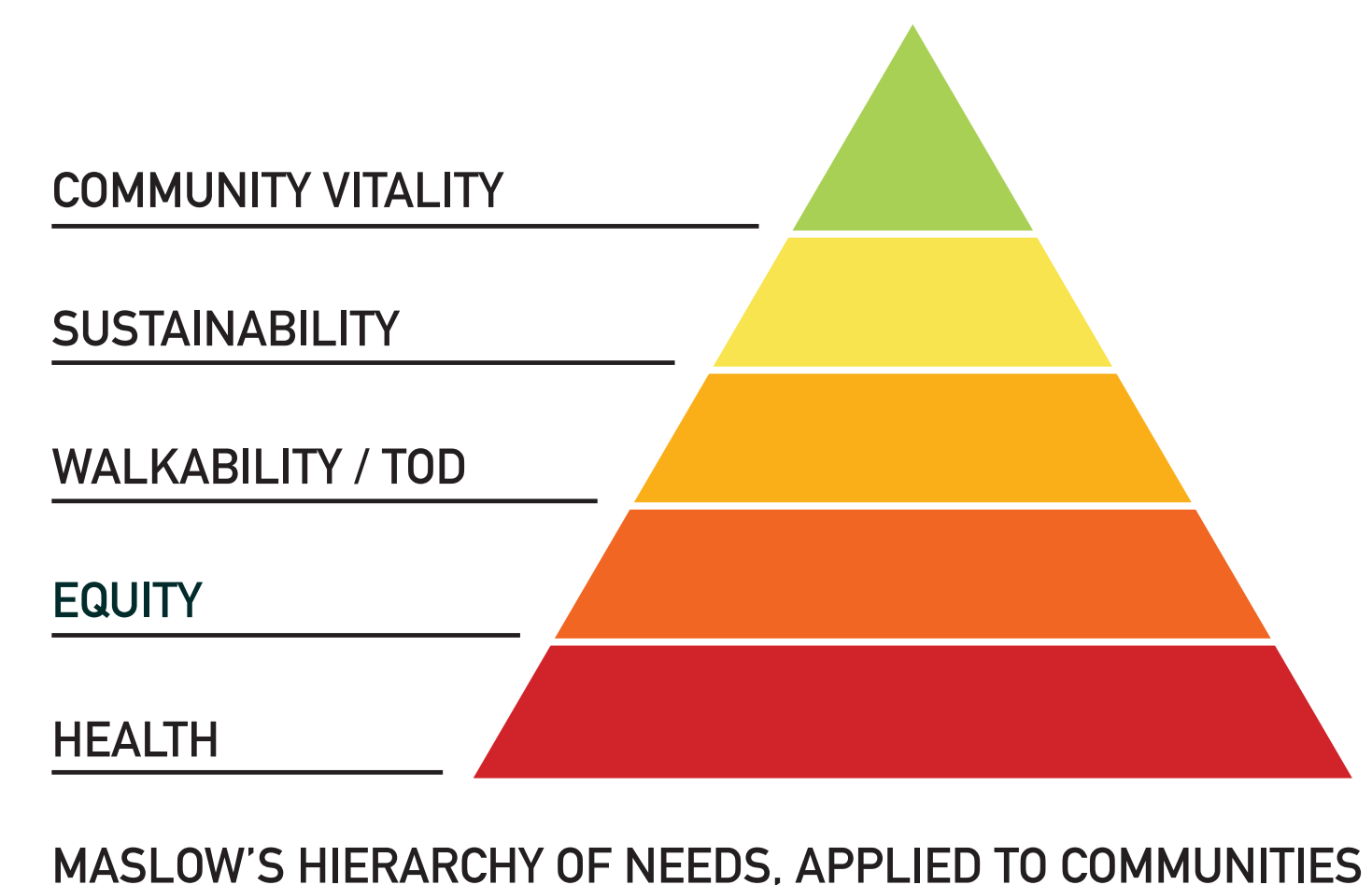
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KEY POINTS

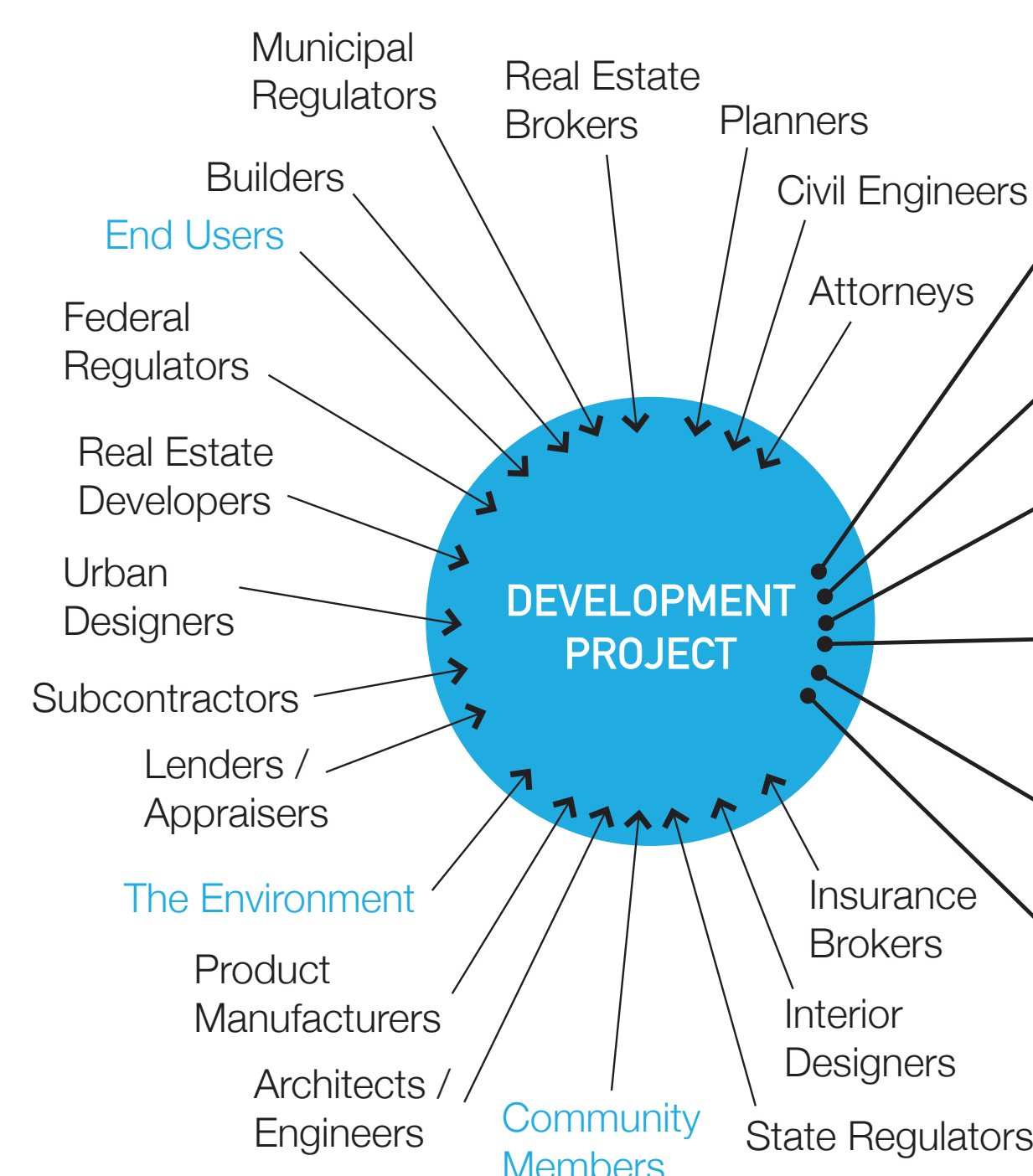
1. **Open Building is planning for change:** OB provides a built-in capacity for incremental renewal and a foundation for sustainable community development.
2. Open Building for urban planning and design is:
 - Open, not closed
 - Inclusive, not exclusive
 - Flexible and adaptable, not fixed
 - Multi-purpose, not single-purpose
3. Incremental renewal, at the scale of the individual building or lot rather than the block or whole neighborhood, is an essential function of sustainable, resilient communities.
4. The key missing element in many planning efforts and development projects is "time." Most contemporary large-scale projects "lock in" the decisions made at the time of inception.
5. If "resilience" is seen as the ability to resist or recover from extreme natural forces or events, Open Building expands on the concept to include an enhanced capacity for social and economic opportunity.

THE GOAL OF PLANNING: COMMUNITY VITALITY

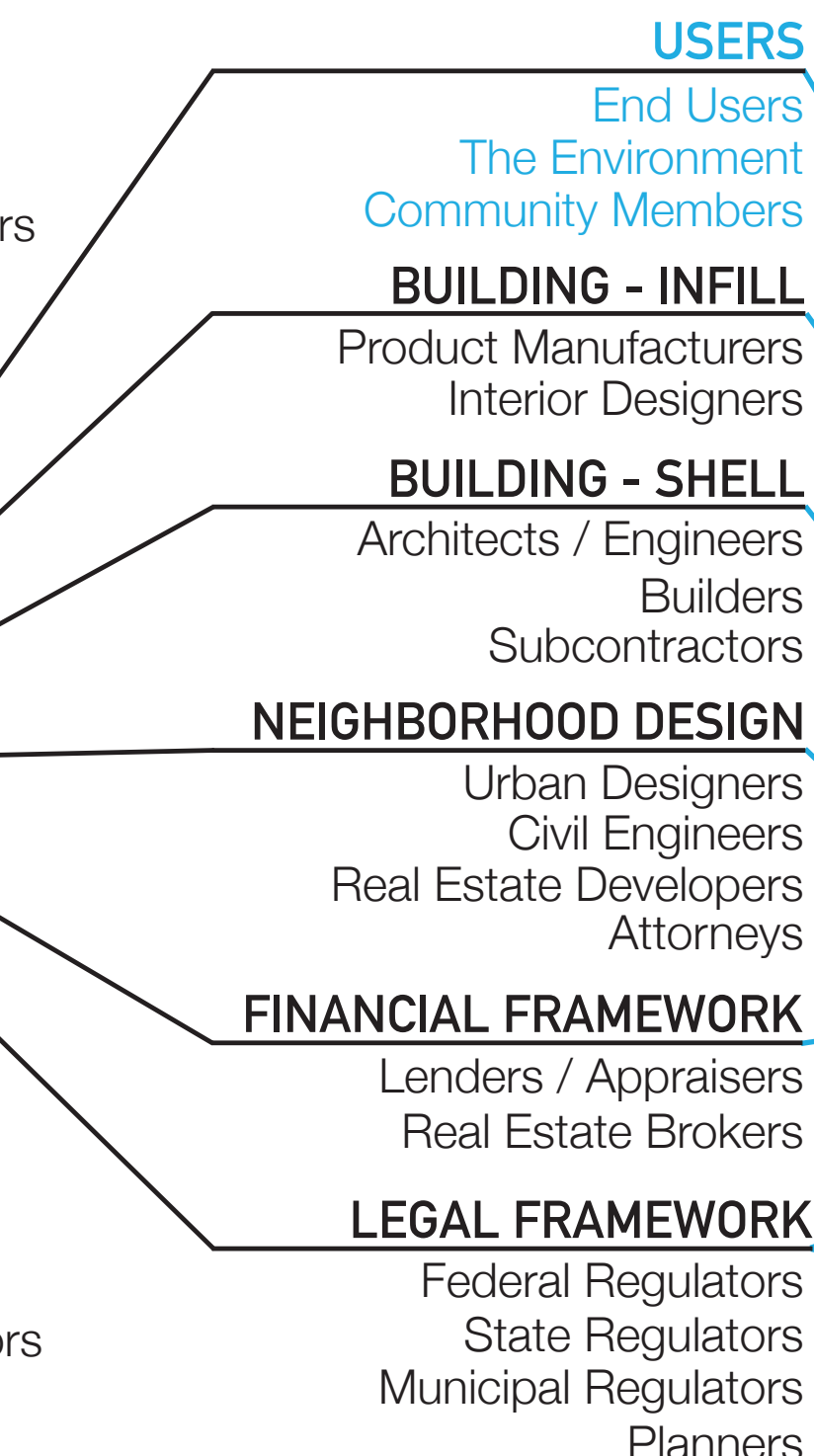


CREATING ORDER FROM CHAOS

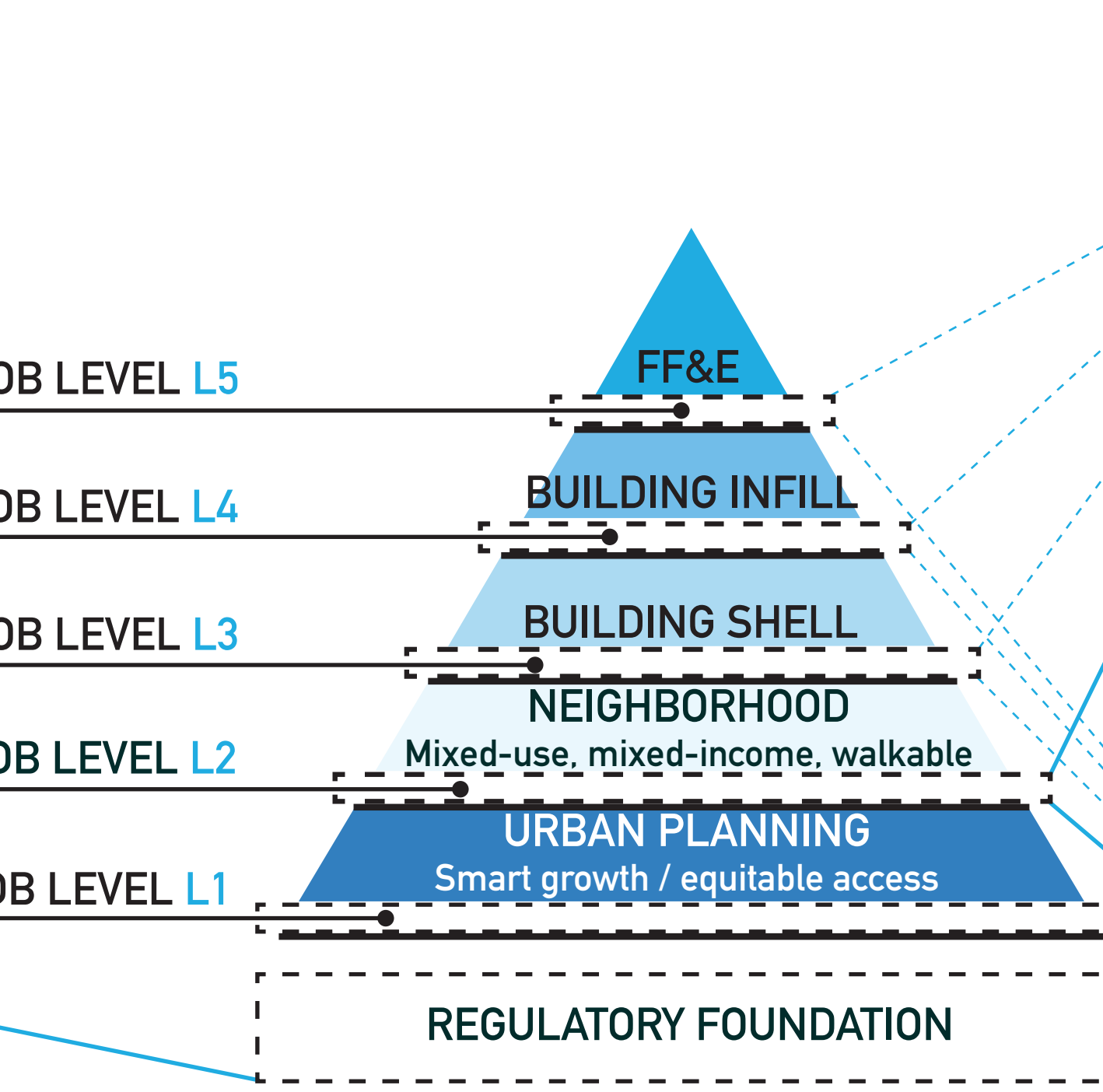
Development Stakeholders



Disentangling by Stakeholder



Prioritizing Stakeholder Engagement by Level










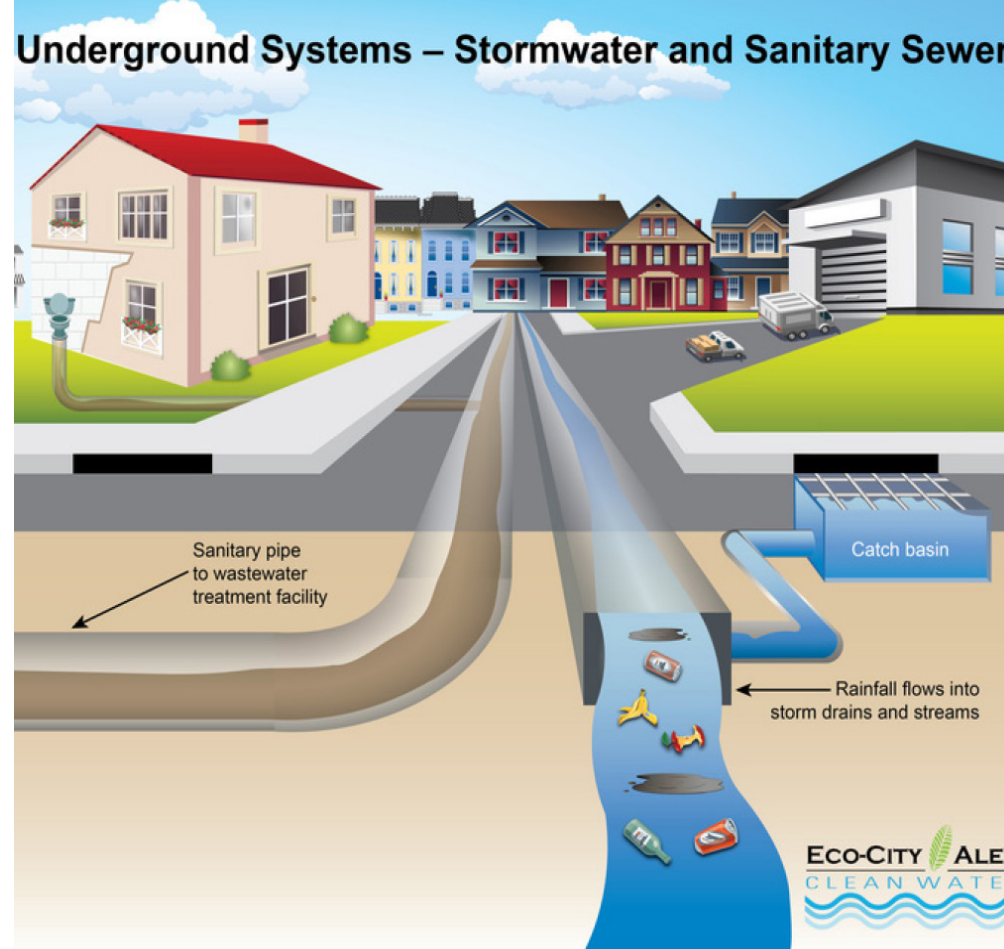



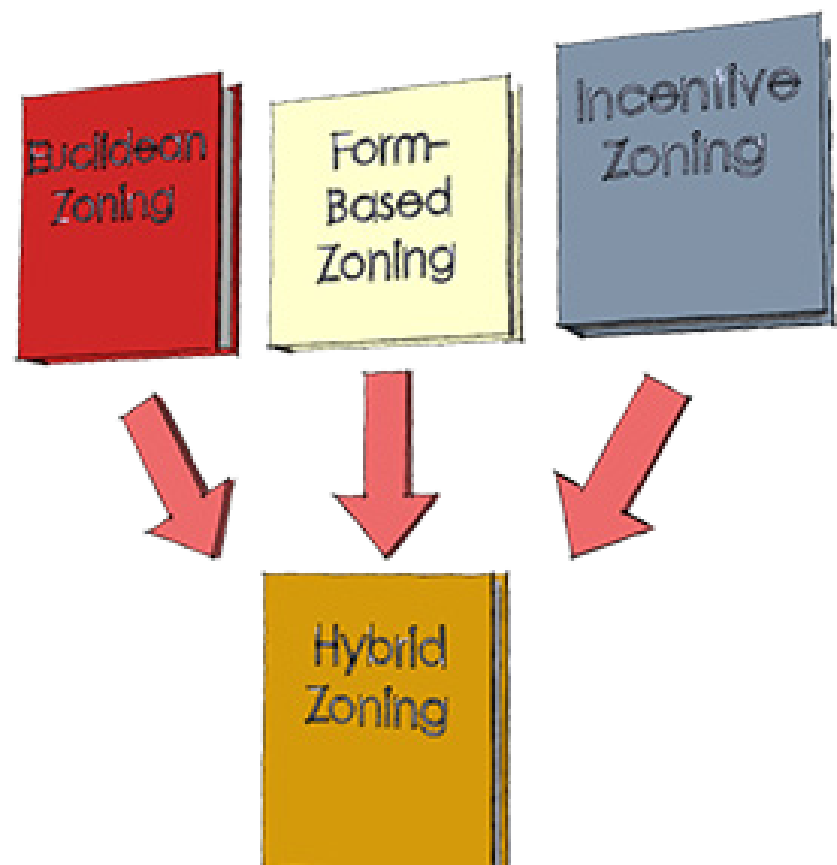






A Foundation for Adaptability at Each Level

1. **DISENTANGLING**
Within each Level, **disentangle** all of the individual elements.
2. **PRIORITIZATION**
Prioritize the disentangled elements by **anticipated rates of change**.
3. **GUIDANCE**
Develop **frameworks for decisionmaking** based on the prioritization:
- within the Level
- in connection to the Levels above and below
4. **ANALYSIS**
Perform **capacity studies** and stress tests to confirm the utility and effectiveness of the adaptable frameworks. Refine as needed.

INCREMENTAL

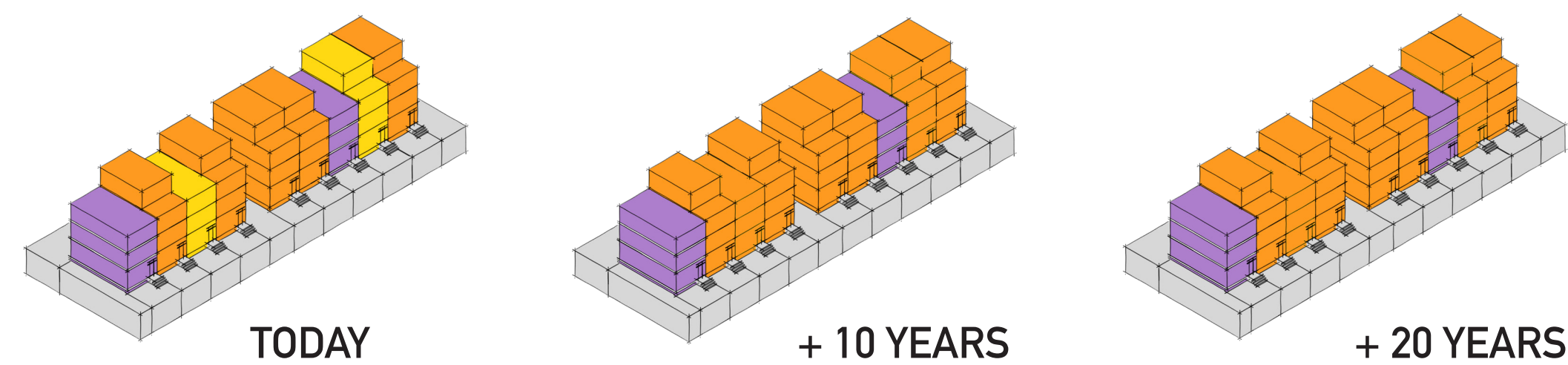
AN OPEN BUILDING FRAMEWORK IN URBAN PLANNING & DESIGN

DESIGN	 <p>Land Use</p> <p>Flexible Land Use</p> <ul style="list-style-type: none"> Mixed (not fixed) uses Co-located on floors Changeable as needed 	 <p>Landscape</p> <p>Productive Landscape</p> <ul style="list-style-type: none"> Regenerative ecosystem Healthy environment Beautiful and productive 	 <p>Public Space</p> <p>Equitable Public Space</p> <ul style="list-style-type: none"> Multi-generational experience Accessible, welcoming spaces Flexible multifunctional furnishings 
	 <p>Mobility</p> <p>Networked Mobility</p> <ul style="list-style-type: none"> Connected places Multimodal transport Complete, shared streets 	 <p>Infrastructure</p> <p>Adaptable Infrastructure</p> <ul style="list-style-type: none"> Unentangled utility systems Plug and play, including at utility-to-building Built-in capacity 	 <p>Data</p> <p>Open Data</p> <ul style="list-style-type: none"> Shared information Reporting dashboard Case studies and benchmarks 
	 <p>Policy/Regulatory</p> <p>Open Policy & Regulations</p> <ul style="list-style-type: none"> Accommodating framework Innovation-friendly Hybrid zoning and mixed uses 	 <p>Engagement</p> <p>Meaningful Engagement</p> <ul style="list-style-type: none"> Inclusive community participation Celebrating diversity Equitable and people-centered 	 <p>Financing</p> <p>Innovative Financing</p> <ul style="list-style-type: none"> New products Developer incentives Proof – ROI 

Open Building Helps Unlock the Regenerative Potential of Communities

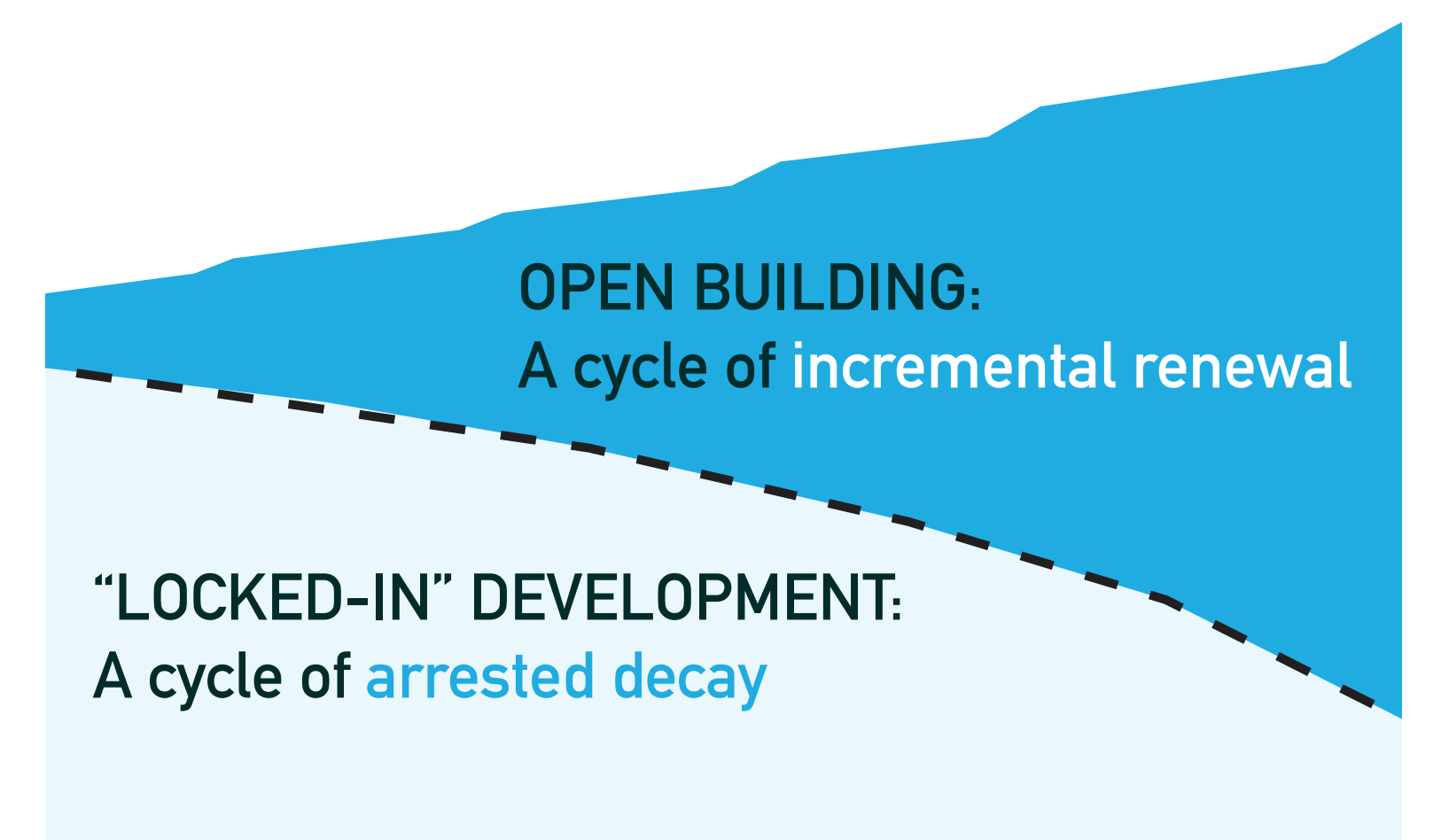
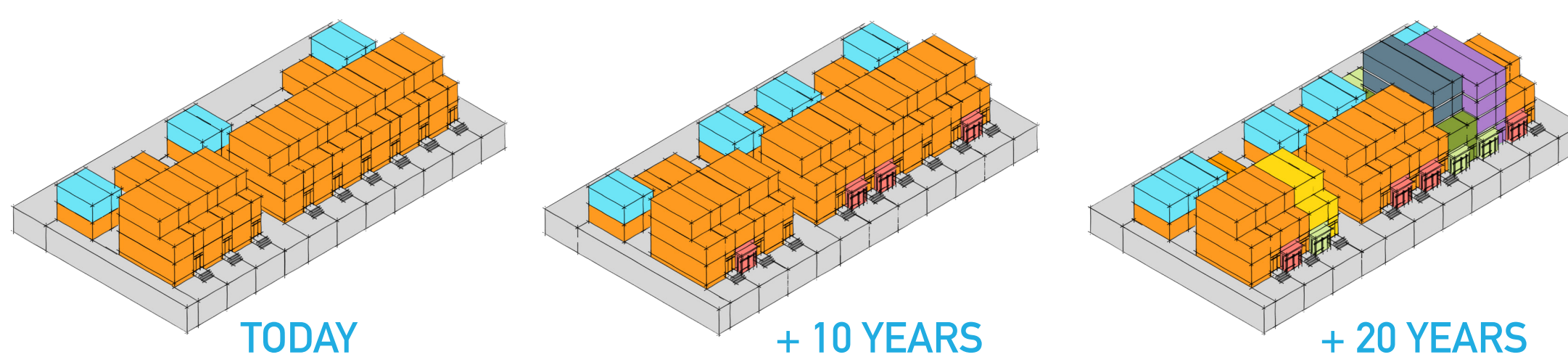
LOCKED-IN

- Community organizations such as HOA's and Architectural Review Boards (ARB's) resist change.
- Restrictions go beyond use and form: minor aesthetic changes are often prohibited in the interest of "protecting property rights."



FRAMEWORKS FOR CHANGE

- Acting in their own best interest, property owners may provide a wider range of housing choices through subdivision or aggregation of homes, units, and uses.
- Communities that change **build character** over time, an attribute that many new communities attempt to recreate artificially.



OPEN BUILDING:
A cycle of incremental renewal

"LOCKED-IN" DEVELOPMENT:
A cycle of arrested decay

"You never stay the same.
You either go one way or the other."

— A-Rod

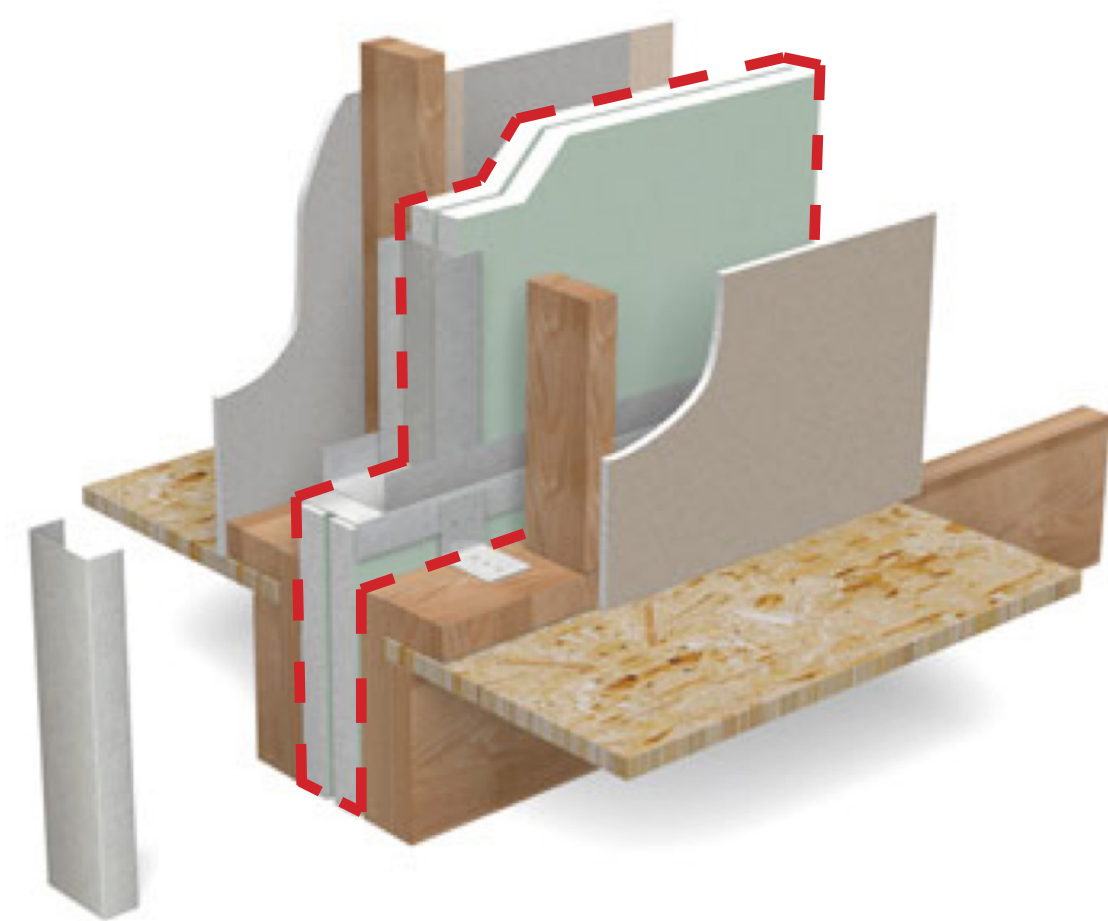
DEVELOPMENT

CASE STUDY: PLANNING DRIVES ARCHITECTURE

THE TOWNHOME PARTY WALL EVERYWHERE, USA

When planning and development decisions result in “locked-in” communities, **the buildings follow**.

The image on the right shows a shared one-hour-rated party wall, commonly used between units in condo buildings. Single family rowhouses typically require two separate one-hour rated wall assemblies, but when single-family townhomes are built in locked-in neighborhoods (such as a PUD or HOA community), **homebuilders use a condo-style unit separation wall instead**. This saves on initial cost, but as a result a row of townhomes is forever entangled and can never incorporate any use or density beyond single family homes, even if the PUD or HOA rules change later to allow it.

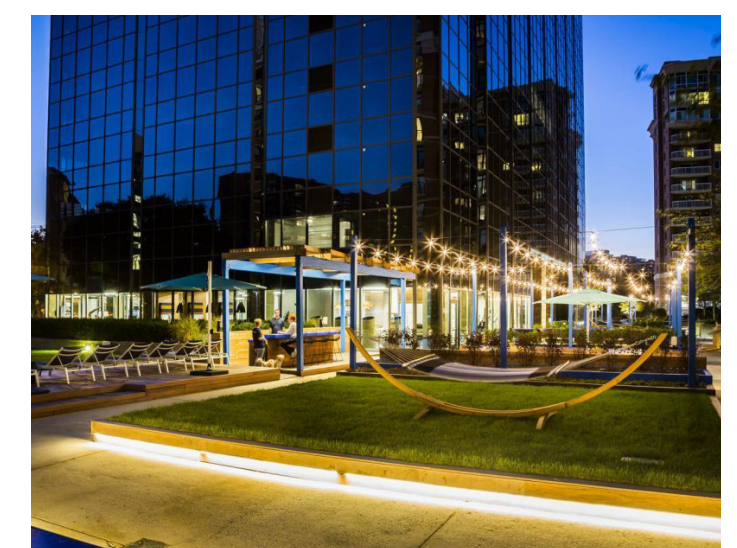


Typical **entangled** one-hour fire rated wall assembly between townhomes.

CASE STUDY: ADAPTABLE BUILDINGS / ADAPTABLE ZONING

e-lofts NOVUS PROPERTY HOLDINGS (CAFRTZ INTERESTS) ALEXANDRIA, VA

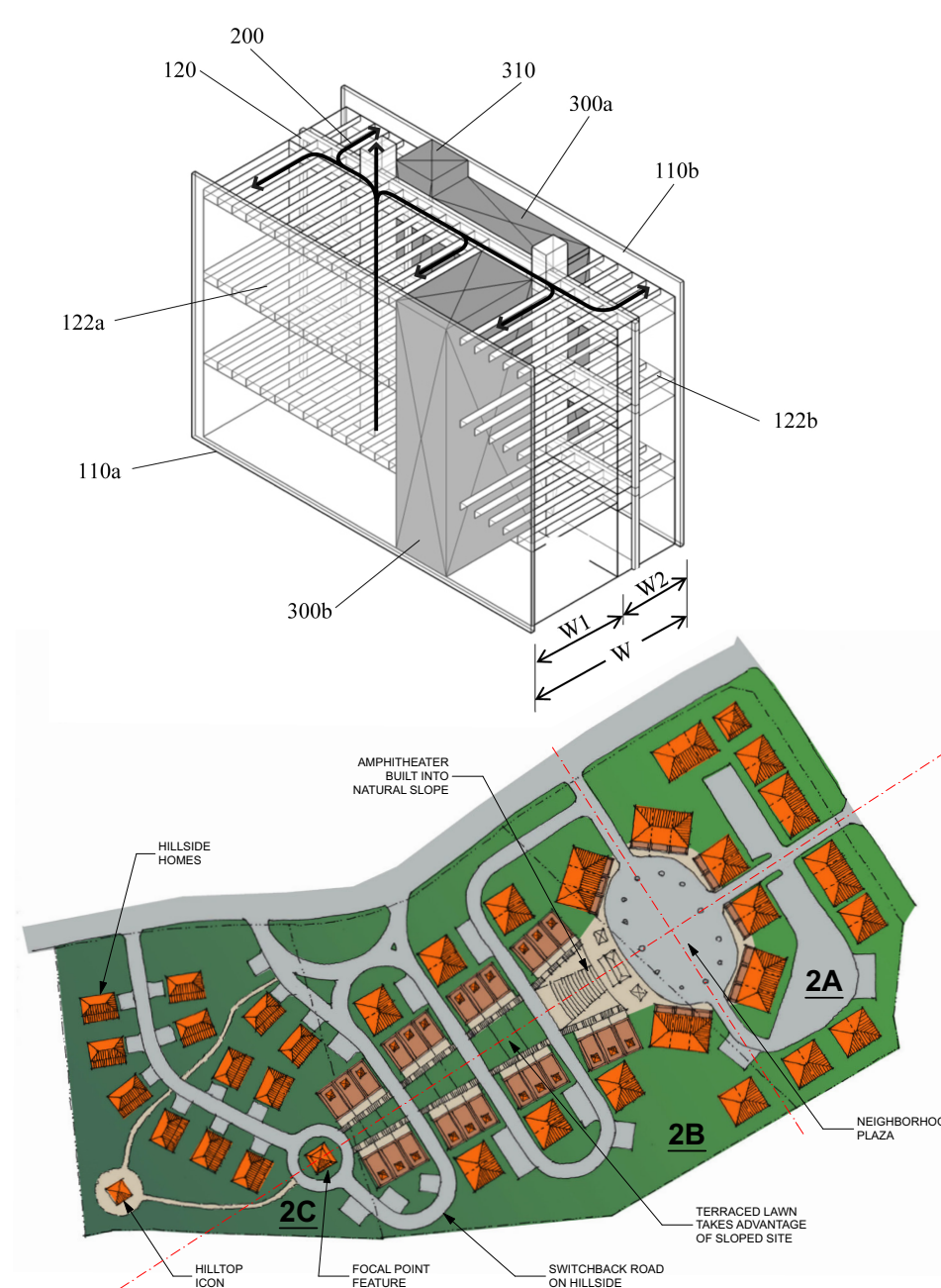
- Conversion of vacant office building to **user-defined** mixed-use building
- Universally-designed units serve as residence, office, or live/work
- “Dual-use concept” required new zoning regulations; Novus worked closely with the Alexandria County Department of Planning and Zoning to create and pilot a new solution
- The zoning re-write required **two phases**: first to get residential zoning approved for the existing commercially-zoned building; and second to add a new variant of the “CRMU-H” zoning designation, or Commercial Residential Mixed Use – High density zoning that was a combination of the two



CASE STUDY: ADAPTABLE URBAN DESIGN / ADAPTABLE BUILDINGS

USVI “PIVOT PILOT” DISTRICT HOMES / ENTERPRISE COMMUNITY PARTNERS

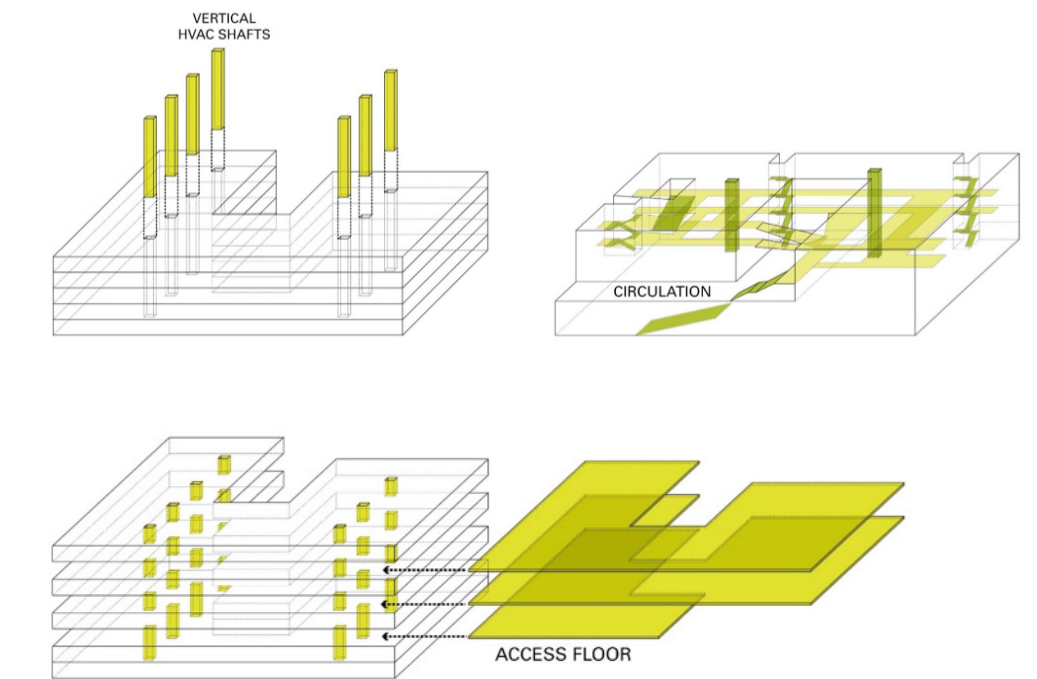
- New-construction mixed-use pocket community, with up to 80 homes and missing-middle-scale mixed-use structures
- Each home is designed with a capacity to change internal configurations, unit mixes, and uses over time, at a lower cost and resource use
- Designs based on District Homes’ patented “systems first” chassis system for greater flexibility during design, construction and occupancy
- Easier to maintain and upgrade over time
- District-utilities ready homes



CASE STUDY: ADAPTABLE BUILDINGS – EDUCATION

SANTA MONICA HIGH SCHOOL (SAMOHI) MOORE RUBLE YUDELL / HED DESIGN

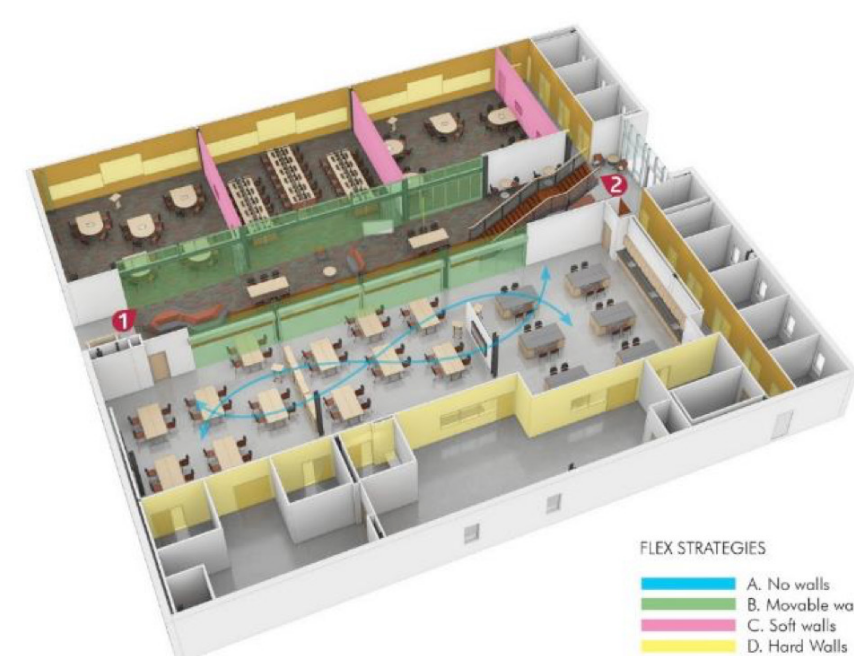
- New academic complex on Samohi’s North Campus, replacing existing science and technology buildings
- The building is designed as a ‘loft’ building with a flexible, open column grid, raised floor for air supply, power and data and non-load bearing walls which can be reconfigured over time.
- Regular structural grid and HVAC shaft layouts provide universal framework for classrooms and associated spaces
- Incorporates innovative steel moment frame structural system that allows for maximum interior flexibility by eliminating diagonal support bracing



CASE STUDY: ADAPTABLE BUILDINGS – EDUCATION

MISSOURI INNOVATION CAMPUS DLR GROUP / GOULD EVANS

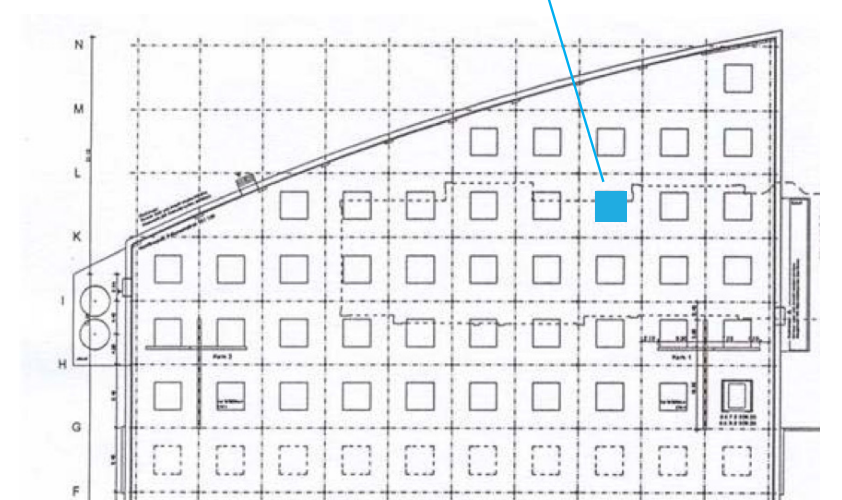
- A shared central campus designed for change – Lee’s Summit School District and University of Central Missouri share one building
- Designed as an adaptable “Learning Warehouse,” the building envelope is modular; metal panels and windows are sized to allow future relocation of openings, reflecting shifting interior program needs
- Flex open learning studios support a wide range of learning modes ranging from individual to team-based
- Space normally dedicated to circulation has been repurposed as Learning Commons for each department, increasing the usable footprint and raising efficiency significantly



CASE STUDY: ADAPTABLE BUILDINGS – HEALTHCARE

INO TEACHING FACILITY INSELSPIITAL – UNIVERSITY HOSPITAL BERN, SWITZERLAND

- Inselspital is one of the largest and oldest medical campuses and teaching hospitals in Switzerland; founded in 1353 and located just outside the historic core of Bern
- The INO is a 500,000 sq ft. teaching facility with emergency, surgical, office, laboratory and pharmacy functions
- The building was designed as an adaptable shell building, and architecture firms competed to design the fit-out, taking best advantage of the built-in adaptability of the shell
- Each floor plate has square “knock-out” opportunities in each bay for light shafts, additional vertical circulation or mechanical shafts; Holes in the slab can be cut at any time, connecting any number of floors at a time



Floor plan, indicating regular **block-outs** for vertical shafts.