

Houslets

simple, mobile,
modular building
in available space

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Hack the Housing Crisis, SF



@Houslets / Houslets.com

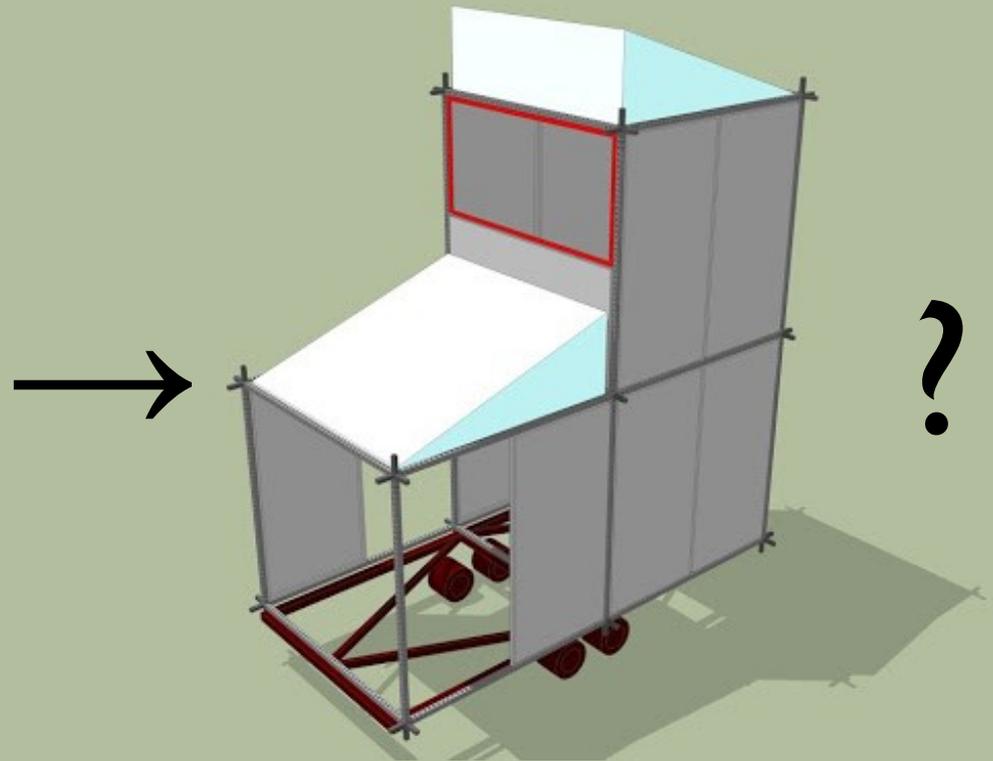
#housinghack #houslets

Parklets → Houslets

began with a question:

if we can convert parking spaces to parks (“parklets”)...

might we also convert them to housing (“houslets”)?



Context I: *lots of space!..*

but often poorly utilized, or allocated by regulation for other uses, which are perhaps *now less needed*. E.g, free parking, driveways, wide streets, disused public space, corporate campuses.



“hey, most of San Francisco (& London, etc) is not built on – only one third!

→ *Houslets began by considering what urban space is relatively usable / cheap*



Context 2: \$\$\$ process

complex, high-cost, & restrictive development processes:

- Help make much housing non-viable or unaffordable.
- High friction → tends to prevent incremental/adaptive change.



Breakdown of cost per 800 sq ft housing unit in SF, by Mark Hogan in SPUR Urbanist, 2014-02-11

→ *so what are some creative ways we might work / build different?
What's the opposite of the above?*

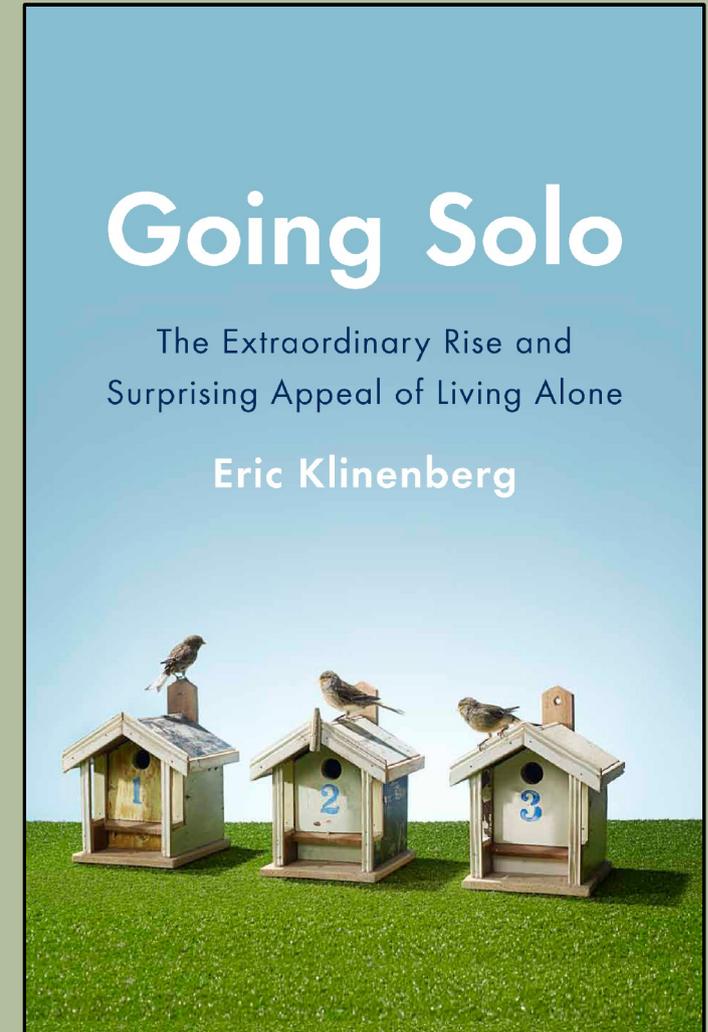


Context 3: social/tech change

Possibilities & needs have changed, due to many social & technological evolutions:

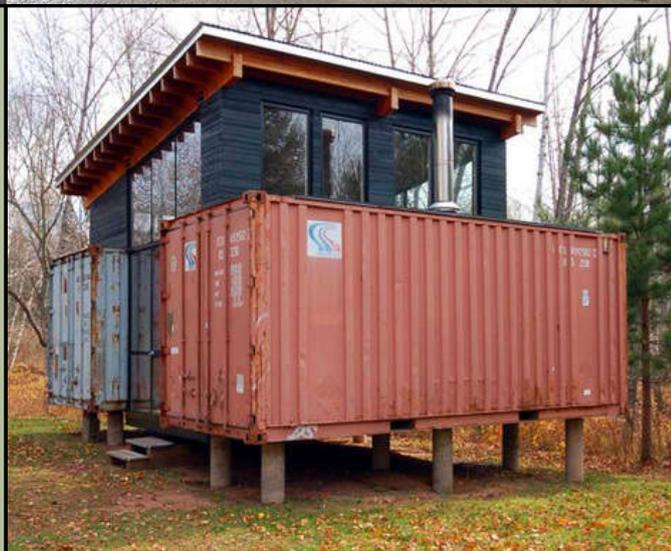
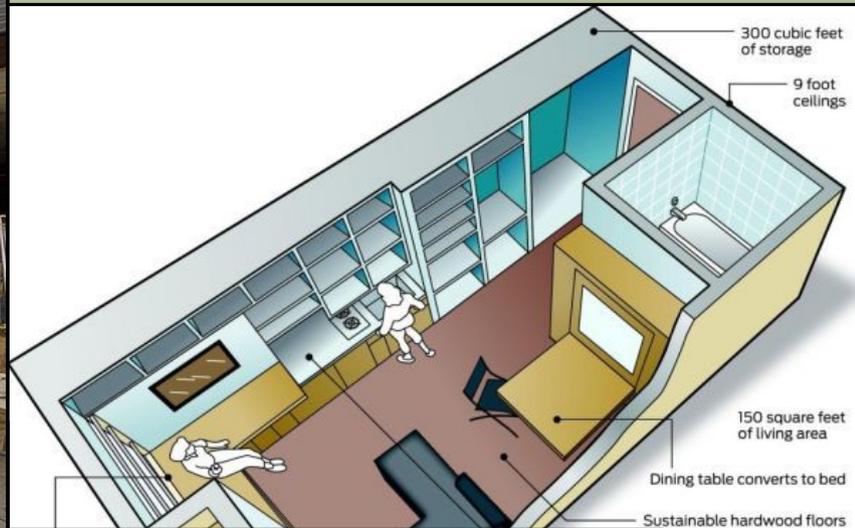
- **Off-grid living:** solar power, energy storage, composting toilets
- **Open-source** design, digital fabrication
- **Street/parking area freeing up** due to car-sharing, biking, driverless cars, etc
- **Solo, mobile households** increasingly pervasive, especially in cities. (Klinenberg, 2012)

So what might/should we do differently?



Precedents I: small, mobile

RVs, Trailers, Tiny Houses, Capsules, Container Housing, Microunits, etc.



counter/computer work area
rick Kennedy's model
small apartment units
built in San Francisco.
John Blanchard / The Chronicle

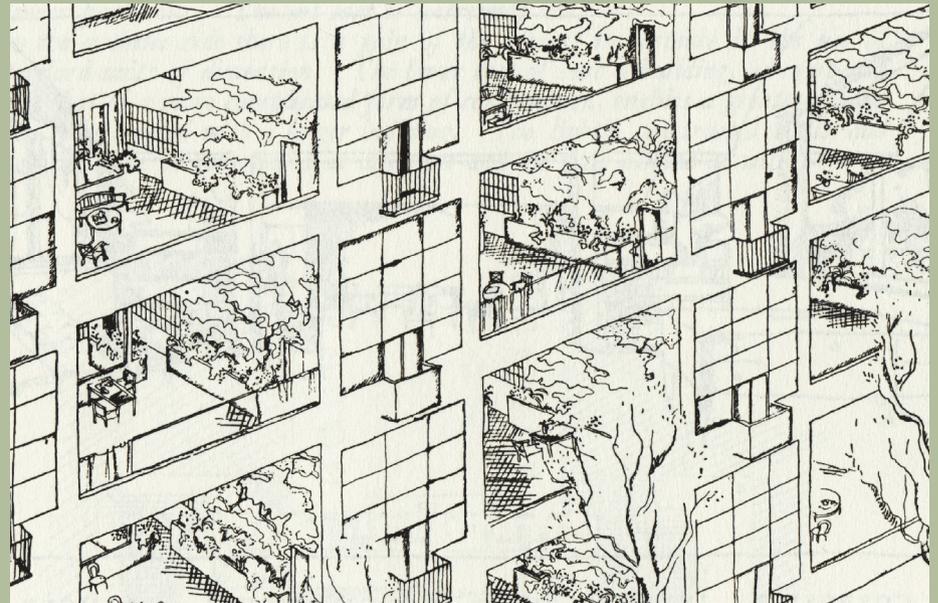


Principles I: modularity, mass-production

e.g. **Le Corbusier**, “honeycomb” housing.

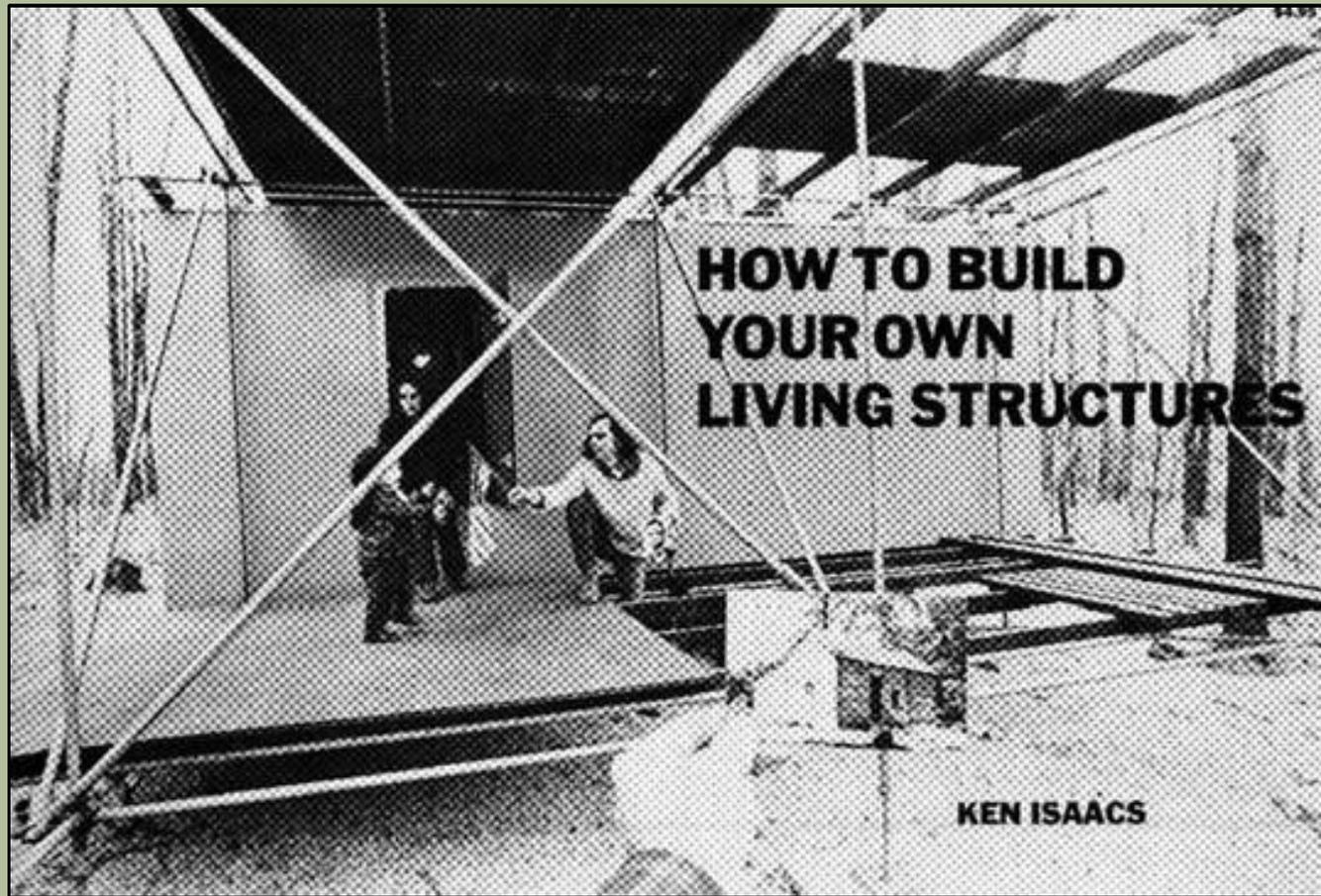
Left: "*Pavillon de l'Esprit Nouveau*" at the Paris Exposition des Arts Décoratifs, 1925

Right: assembled into *Freehold Maisonettes* housing block design.



Principles 2: self-building

Thoreau, 1854. Ken Isaacs, 1975. Also, most people, in all of history.



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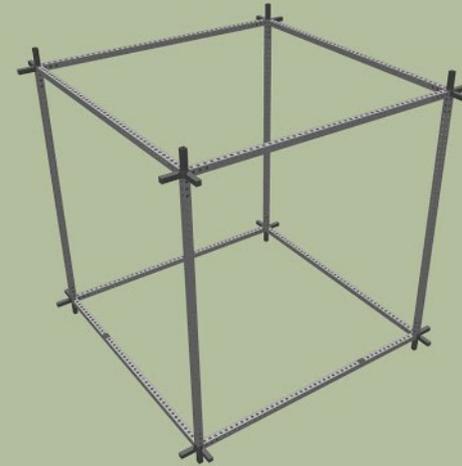
Principles 3: (from software)

Open source, modularity, open stack

1) at base: *standard space units*
(e.g. parking-space module)

2) *standard structure units*,
using standard components (e.g. Telespar,
gridbeam, perhaps 3D-printable)

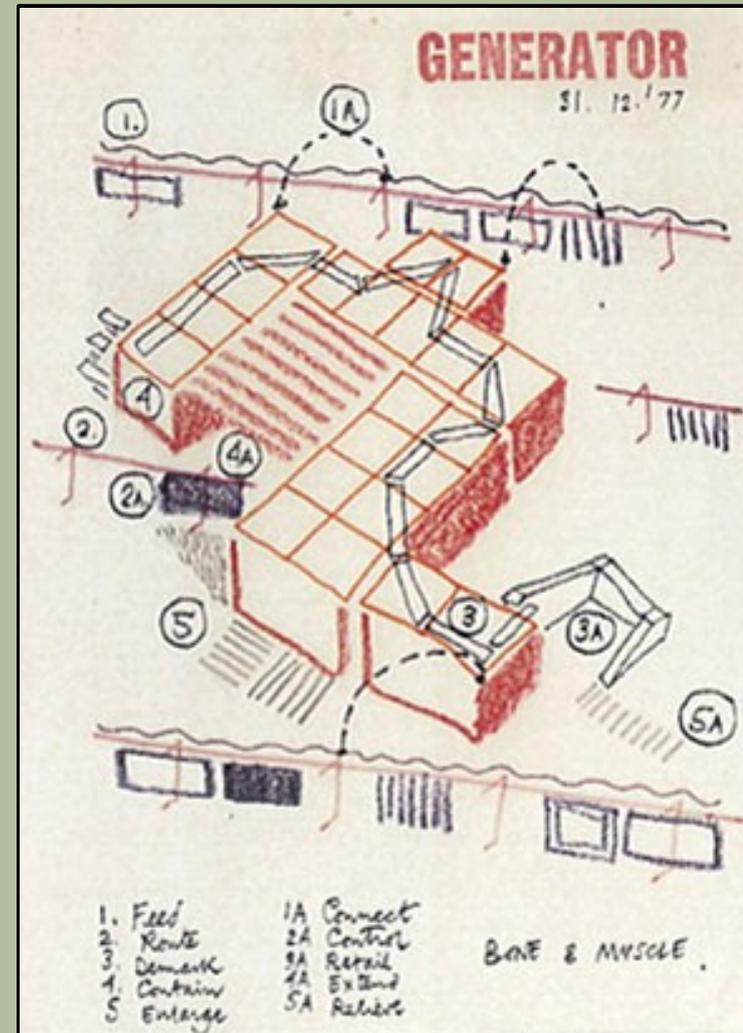
3) then, *independent layers* -
unbundled, interchangeable.
Siting, systems, cladding, roof,
interior. Highly adaptable to
contexts, needs, prefs.



Principle: Make Space Adaptive

We might unlock/activate a lot of space by allowing flexible, **perhaps temporary uses** of space based on what is most needed.

Cedric Price,
Generator project 1976-77

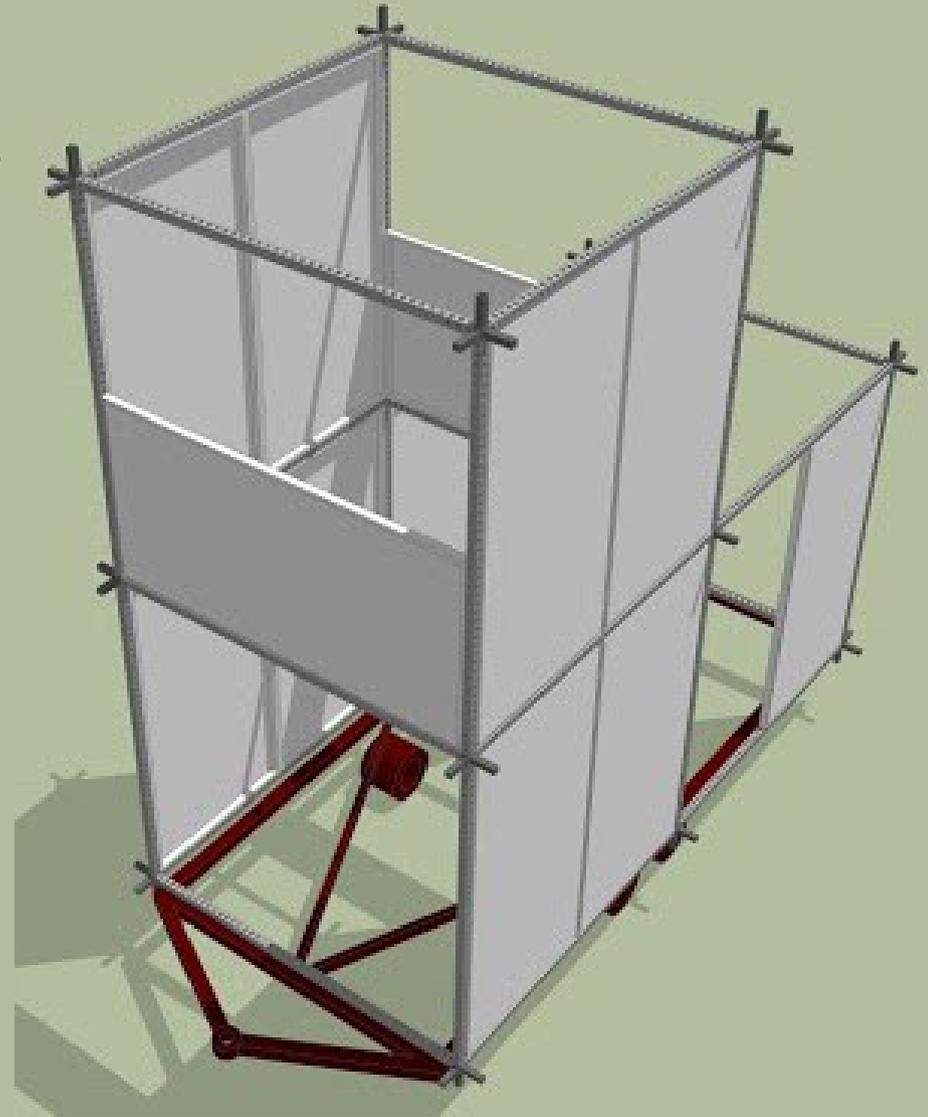


Houslets: modularizing

What if we used a module based on on **parking space / container size?**

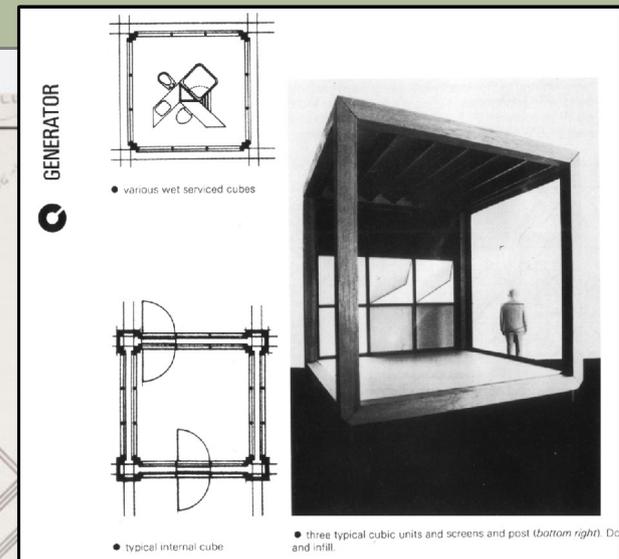
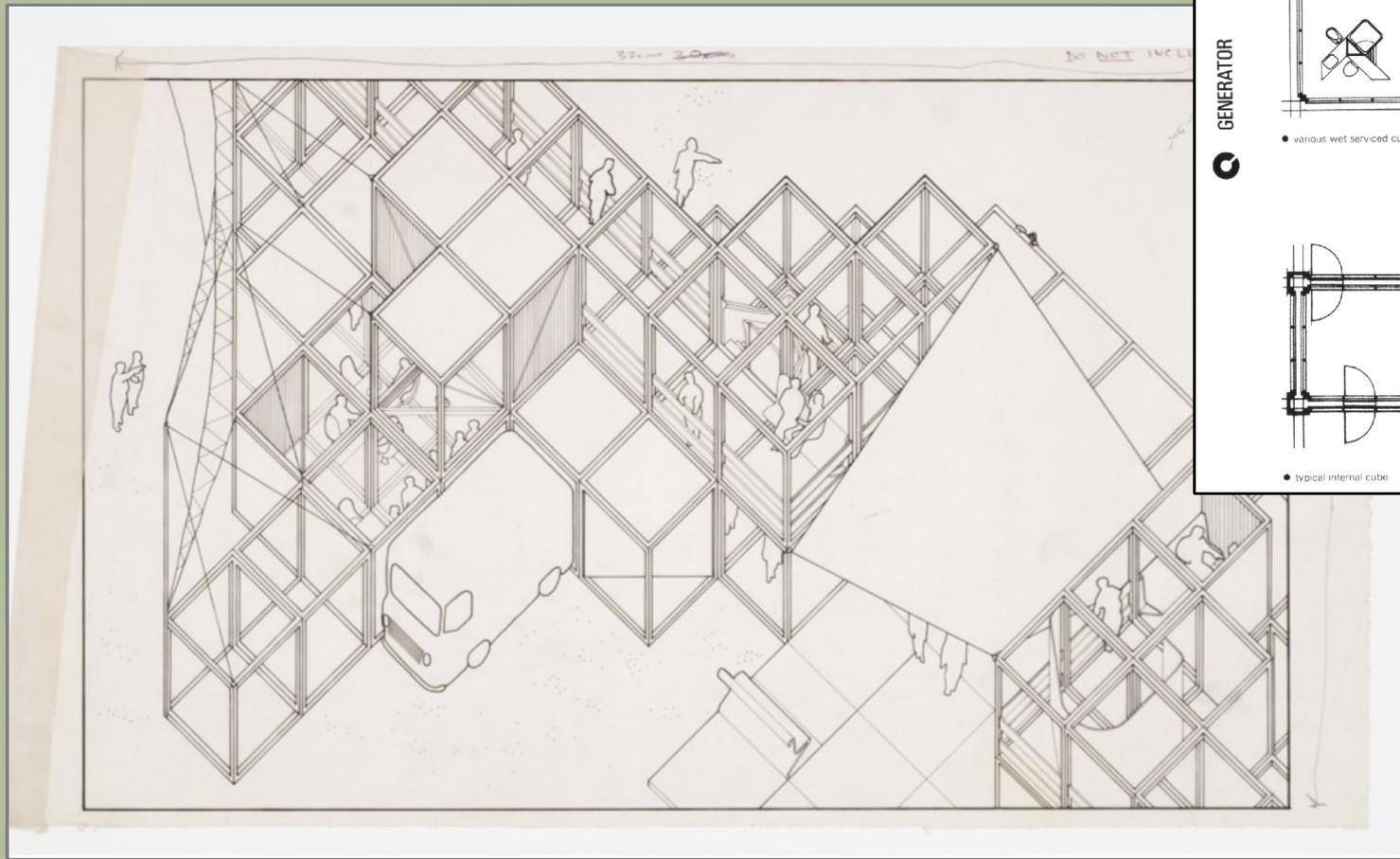
approx 8x8' → x2 = 8'x16' (128 sq ft)

- **Already pervasive** in land-use, building, materials, containers, transport.
- US **manufactured housing industry** uses 16' max width assembly line.
- sub-120ft and/or mobile units often zoned / building-coded differently
-

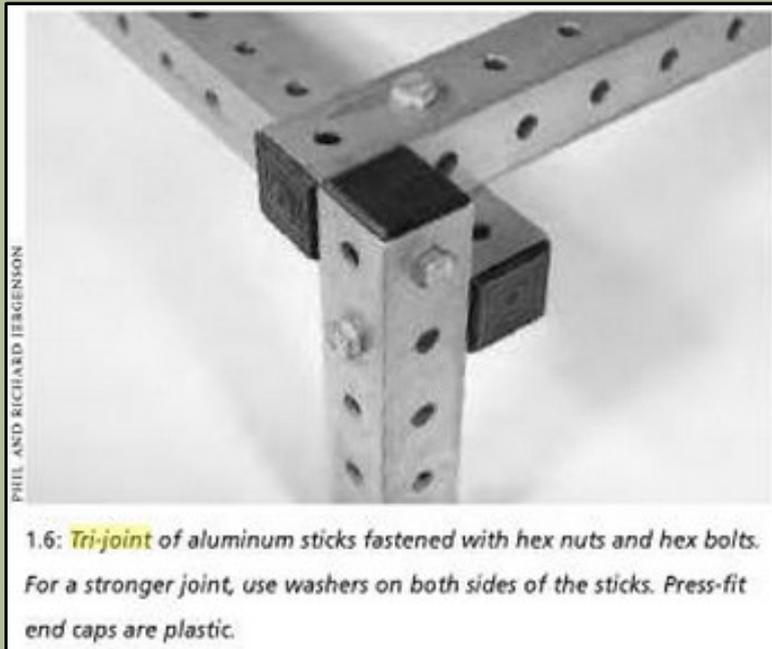


Combine Modularity + Mobility

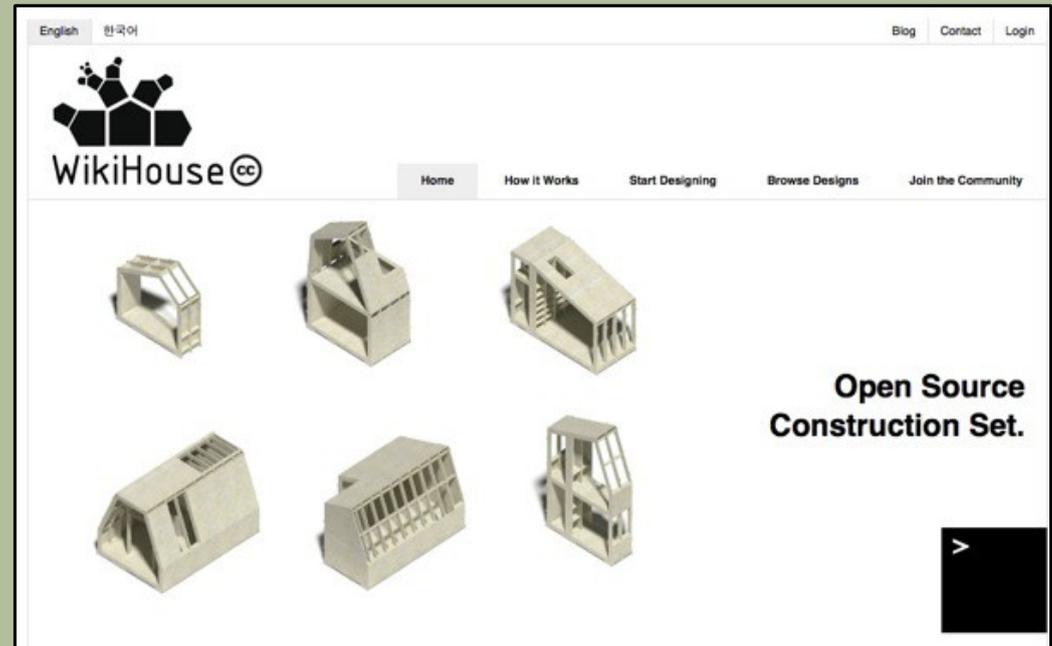
e.g. Cedric Price's Camden Town Center (1960s) & Generator projects (1976-77): movable, stackable, joinable cubes



Go all the way by making it: Standardized, Productized, Open



“Gridbeam” construction

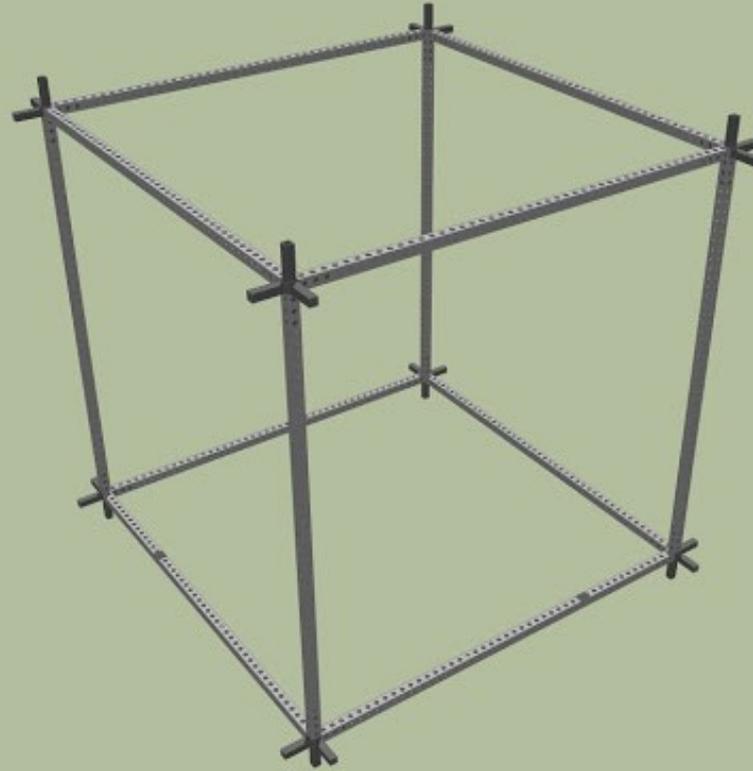


WikiHouse project is another model/possibility

not: Site-specific, Case/Client-specific, Professional, Discretionary, Negotiated, Politically controlled, or Proprietary

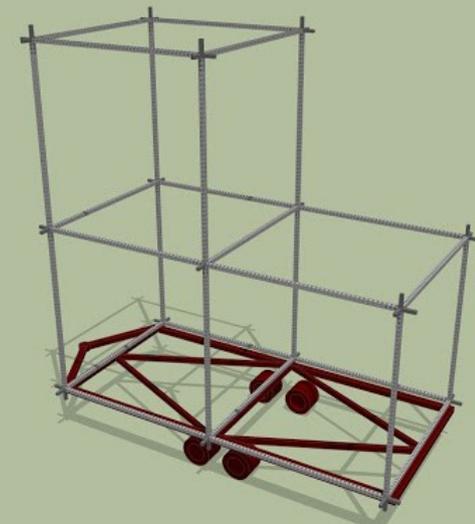


= Houslets:
simple,
user-buildable
mobile,
modular,
standardized,
productized,
open-source
building & space-use



Houslets: Next Steps

1. **prototype**-building, exhibiting, testing
e.g at urban Prototyping Festivals, IFTF
2. developing **pilot programs** e.g. in
Palo Alto, perhaps corporate campuses
3. use for **Accessory Dwelling** (in-law unit)
conversions; backyard cottages
4. **fundraising** - seed/angel, accelerator, grant,
possibly crowdfund, etc.
5. develop **business model**:
 - design/consulting service;
 - platform to supply services, components.
 - offer plan materials, components for fee/sale.
 - branded, franchised, certified installation
(like e.g. Temo Sunrooms).
6. *Thanks / Questions / Comments*
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Appendix slides



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Context 4: 'wicked problem'

Housing is a complex intersection of social practices, far more than just building methods:

Property/tax system, regulatory system, professional practices, political interests, etc.

BUT

Structures are part of the equation, and a focal point around which to explore possibilities, new social practices.

I'm also interested/working on other parts of the equation, e.g. "Smart Code," urban innovation zones, permitting practices.



Precedents: **Thoreau, Walden**

Thoreau. *Walden; or, Life in the Woods*, 1854. American archetype of self-sufficiency



Thoreau's self-built 10x12' cabin. (replica).
"Nothing was given me of which I have not rendered account."



Self-building today: **Maker!**

“If you can't open it, you don't own it.”
-Maker motto.

YOUNG MAKERS
DIY
ART TECH BOTS CNC SPACE LIGHT TOYS
HACKERSPACES
COKE ZERO & MENTOS FOUNTAINS
ALTERNATIVE ENERGY VEHICLES
ELECTRONICS
SOLAR CIRCUITS CRAFTS SUSTAINABILITY
URBAN FARMING
LED
ENGINEERING ART CARS HANDS-ON BIOLOGY CERAMICS GAMES OPEN SOURCE UPCYCLING SOLDERING STEAMPUNK COMPOSTING PERCUSSION BATTERIES
ROBOTS
WEARABLE DEVICES
LEGO GADGETS LASERS DIGITAL SOUND COMMUNITY PHYSICS COMPUTERS
MICROCONTROLLER AERODYNAMICS PAPER CRAFTS HOME GROWN
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If You Can Think It, You Can Build It!

Why not for housing?
It's happening: WikiHouse, 3D house printing, etc.



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