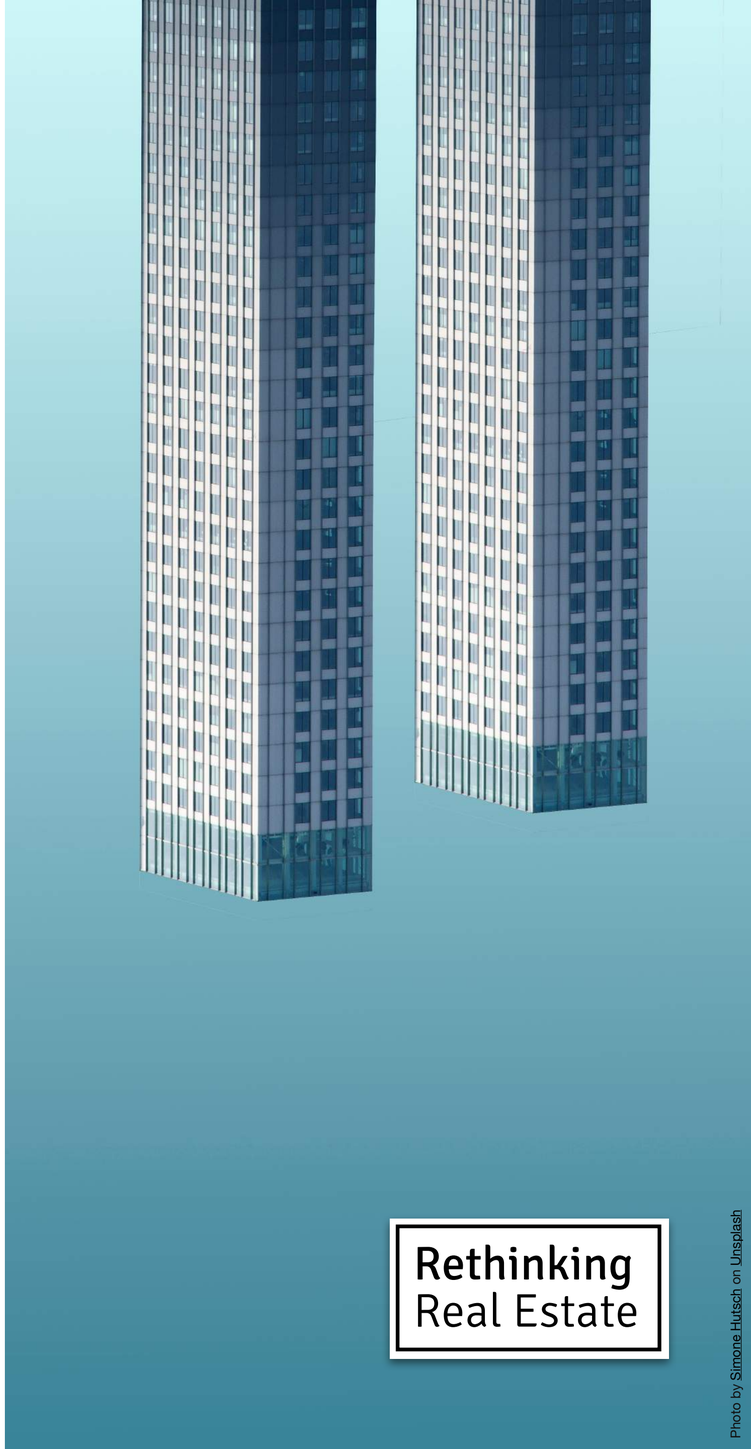
New Abundance, New Scarcity.

What Happens to Physical Space in a Digital World

Dror Poleg, May 2019



Rethinking
Real Estate

Photo by Simone Hutsch on Unsplash

“Software is eating the world”

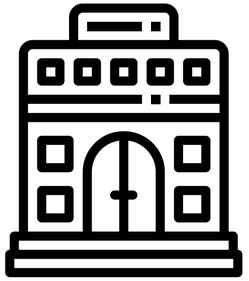
© Dror Poleg / Rethinking.RE

What did it eat so far?
Which real estate asset has been most “disrupted”?

Retail?

Office?

Housing?

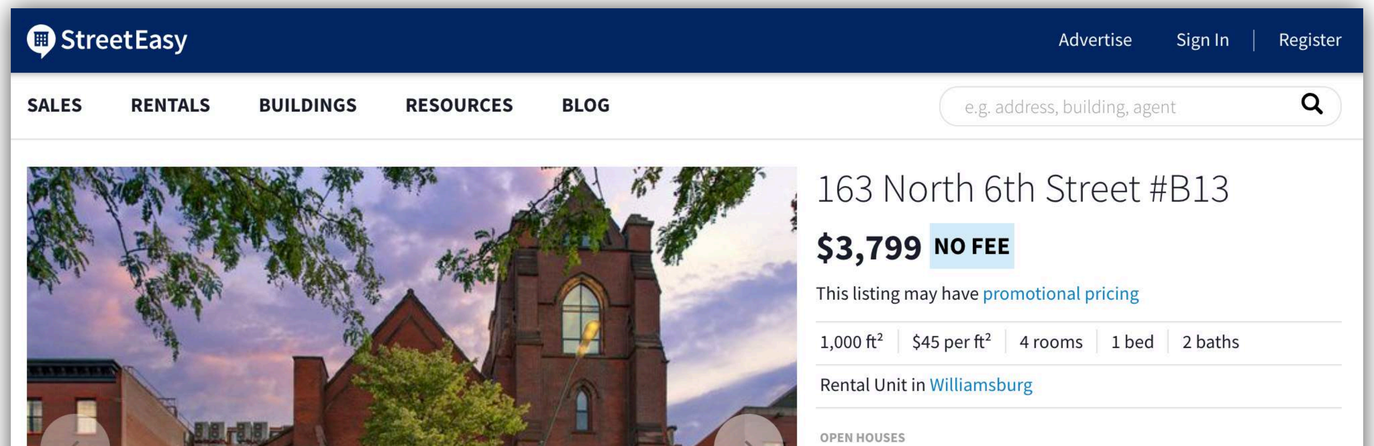


Lodging?

© Dror Poleg / Rethinking.RE

6,000 - 10,000 Churches shut down last year

1. …Past performance is no indicator . . .
2. No business model is safe
3. Tech's most profound impact is not direct
4. …every upheaval is an opportunity to create value (for direct competitors, as well as completely new uses)



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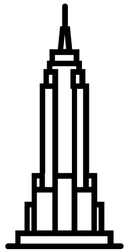
What determines and protects the value of real estate assets?

Location

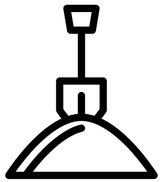
Accessibility



Visibility

Information

Regulation

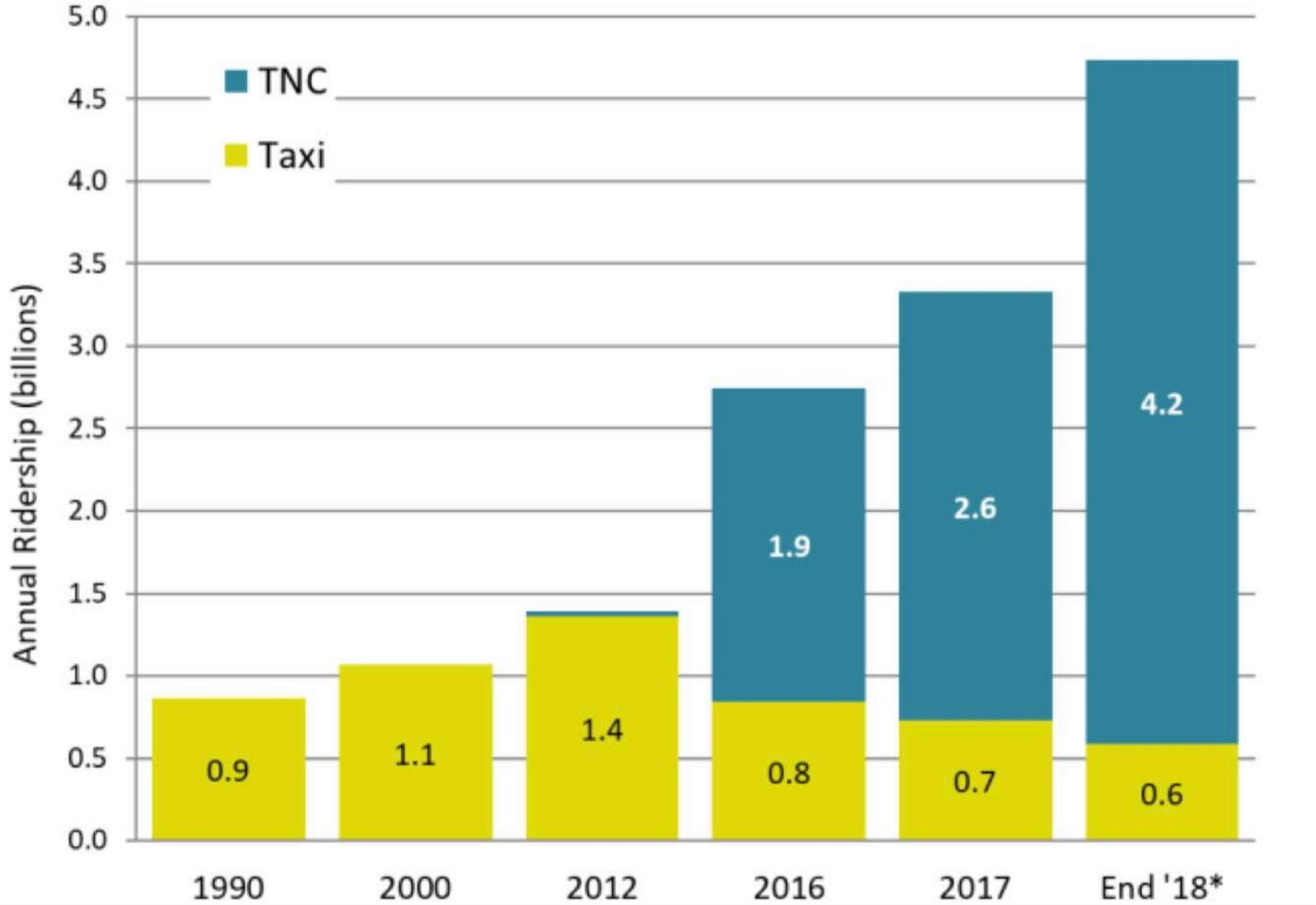


Scarcity

© Dror Poleg / Rethinking.RE

Location is redefined shared mobility

Uber



lyft

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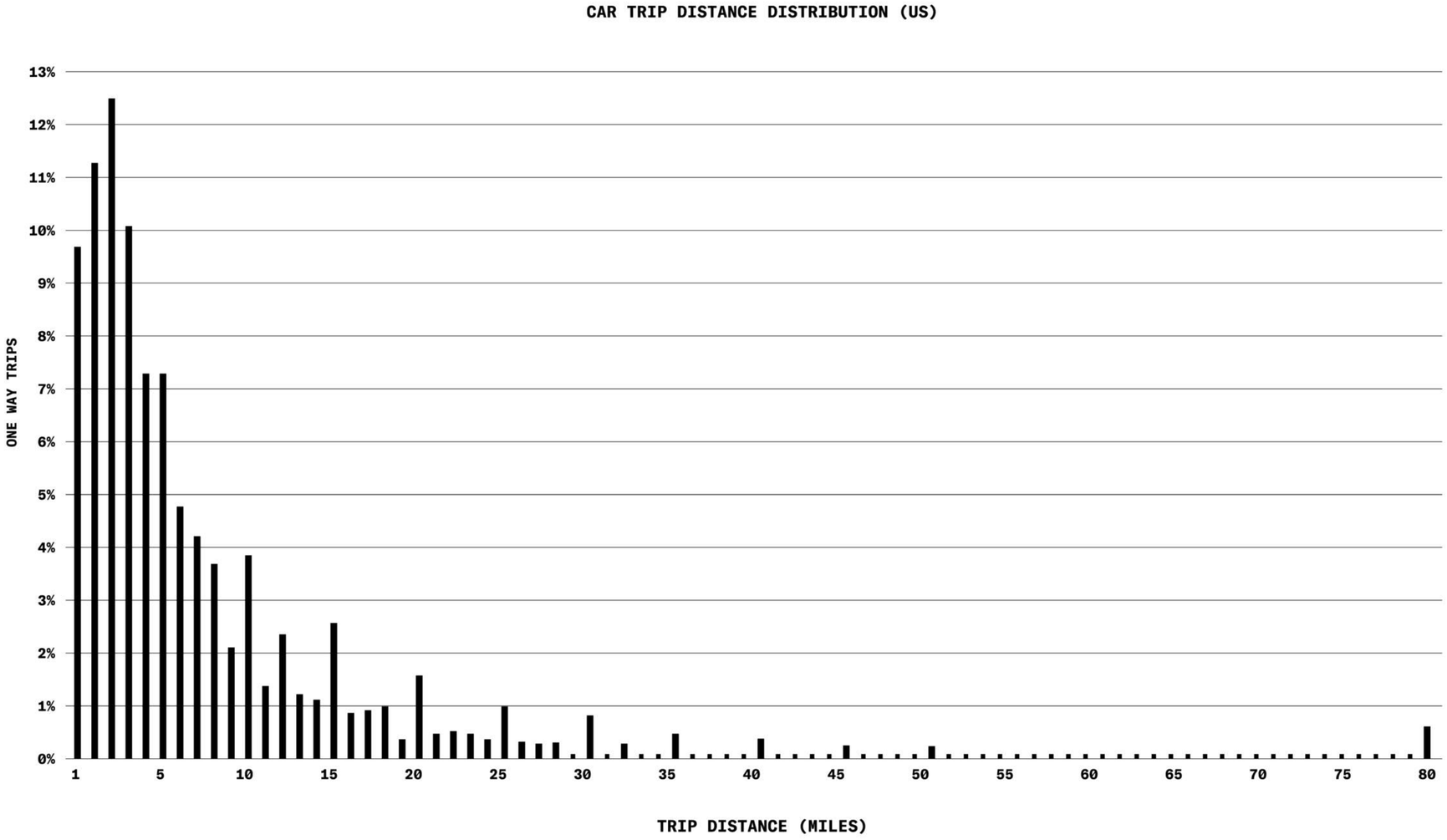
Source: Schaller Consulting

May 2019

Location is redefined by micro-mobility



Bird Zero

Boosted Mini S

Riese & Muller Packster 40 Vario

Veemo

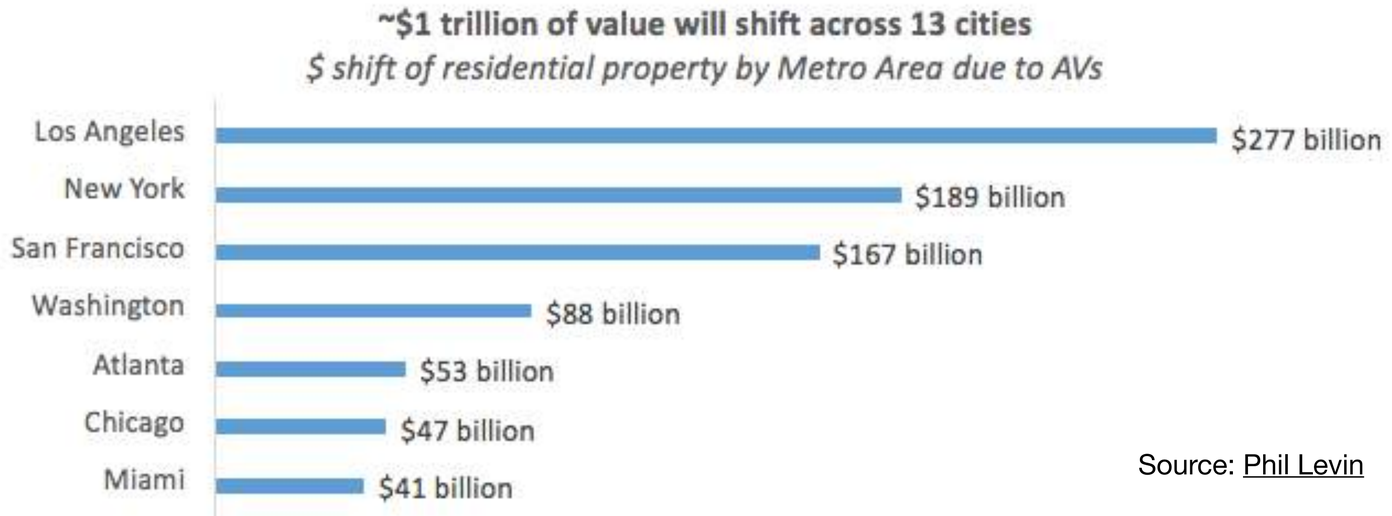
© Dror Poleg / Rethinking.RE

Source: MicroMobility.io

Source: Hugh Malkin

May 2019

Location will be redefined by autonomous vehicles



© Dror Poleg / Rethinking.RE

Source: Phil Levin

May 2019

It’s already moving things (but no people yet)

© Dror Poleg / Rethinking.RE

Meanwhile, the old ways of moving around are becoming more valuable than ever.

50% MILLENNIALS | 43% GENERATION X | 38% BABY BOOMERS

Prefer living within an easy walk of other places

51% MILLENNIALS | 44% GENERATION X | 43% BABY BOOMERS

Prefer living in attached housing (townhouse/condo)

32% MILLENNIALS | 19% GENERATION X | 13% BABY BOOMERS

Prefer walking as transportation for work/school

62% MILLENNIALS | 54% GENERATION X | 53% BABY BOOMERS

Prefer walking as transportation for errands

© Dror Poleg / Rethinking.RE

Source: National Association of Realtors

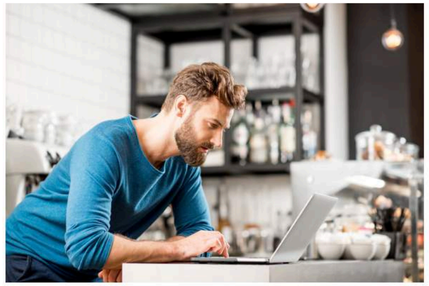
May 2019

“Visibility” is redefined — digital channels are creating “local” businesses that don’t exist.

CLOUD KITCHENS

HOME SMART KITCHENS DELIVERY-ONLY OUR PARTNERS GET STARTED

Better, faster, cheaper with CloudKitchens™

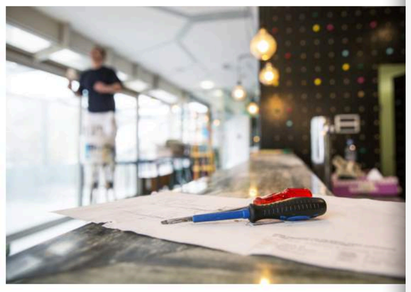


Lower Operational Cost

Dramatically reduce your real estate and labor costs for higher margins per location. For delivery, all you need is a small kitchen and a handful of staff.

Lower Upfront Costs

Rather than the +$1 million upfront to build out a brick and mortar restaurant, get started in a CloudKitchen™ for just around $20,000 and two months deposit and any special equipment.



Faster Expansion

With faster permitting time and kitchens ready to go, launch in just a few weeks.

BYTE-SIZED MEALS

UberEats is using data to create cool, non-existent restaurants

By Kabir Chibber • November 2, 2018

REUTERS/NEIL HALL

UberEats has come a long way in a few short years.

The Brooklyn Burger Factory has a simple, trendy banner image on its UberEats page and sells a variety of tasty-looking burgers—including a jerk burger—to people in the fast-gentrifying Crown Heights neighborhood of Brooklyn in New York. For locals, it looks like the perfect lazy delivery option after a long day at work. The only thing is that the Brooklyn Burger

© D 019

Tech is eroding the power of regulation, and the validity of zoning laws.

© Dror Poleg / Rethinking.RE

May 2019

Or empowering new operators to subvert zoning within the boundaries of the law.

Forbes

Aug 23, 2018, 09:30am

Sonder Raises $135 Million To Turn Airbnb-Style Apartments Into A Different Kind Of Hotel

BISNOW SUBSCRIBE

News

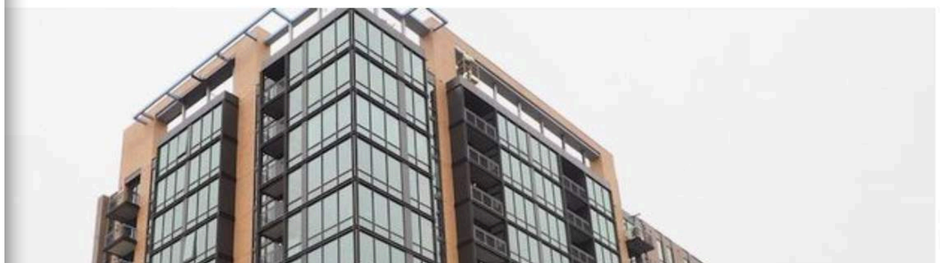
Washington DC Hotel

Inside The New NoMa Apartment Building Where WhyHotel Is Opening Its First D.C. Pop-Up

September 19, 2018 | Jon Banister, Bisnow Washington, D.C.

*Want to get a jump-start on upcoming deals? Meet the major D.C. players at **one of our upcoming events**!*

sidents began moving into NoMa's newest apartment project Friday, month hotel guests will begin staying at the same building.



Lyric raises $160 million in debt and equity to power the next generation of hospitality

© Dr 2019

Blurring the boundary between different uses…

EQUINOX

THE WALL STREET JOURNAL.

REAL ESTATE | PROPERTY REPORT

Equinox Gyms to Add Co-Working to the Workout

Gym operator joins with Industrious to offer flexible workspaces alongside some of its fitness clubs

INDUSTRIOUS

© Dror Poleg / Rethinking.RE

Creating new “vertical mixed use” projects…

What if someone stays for 4 months?

Members Lounge

Lodging

Coworking / Flex office

Office

convene

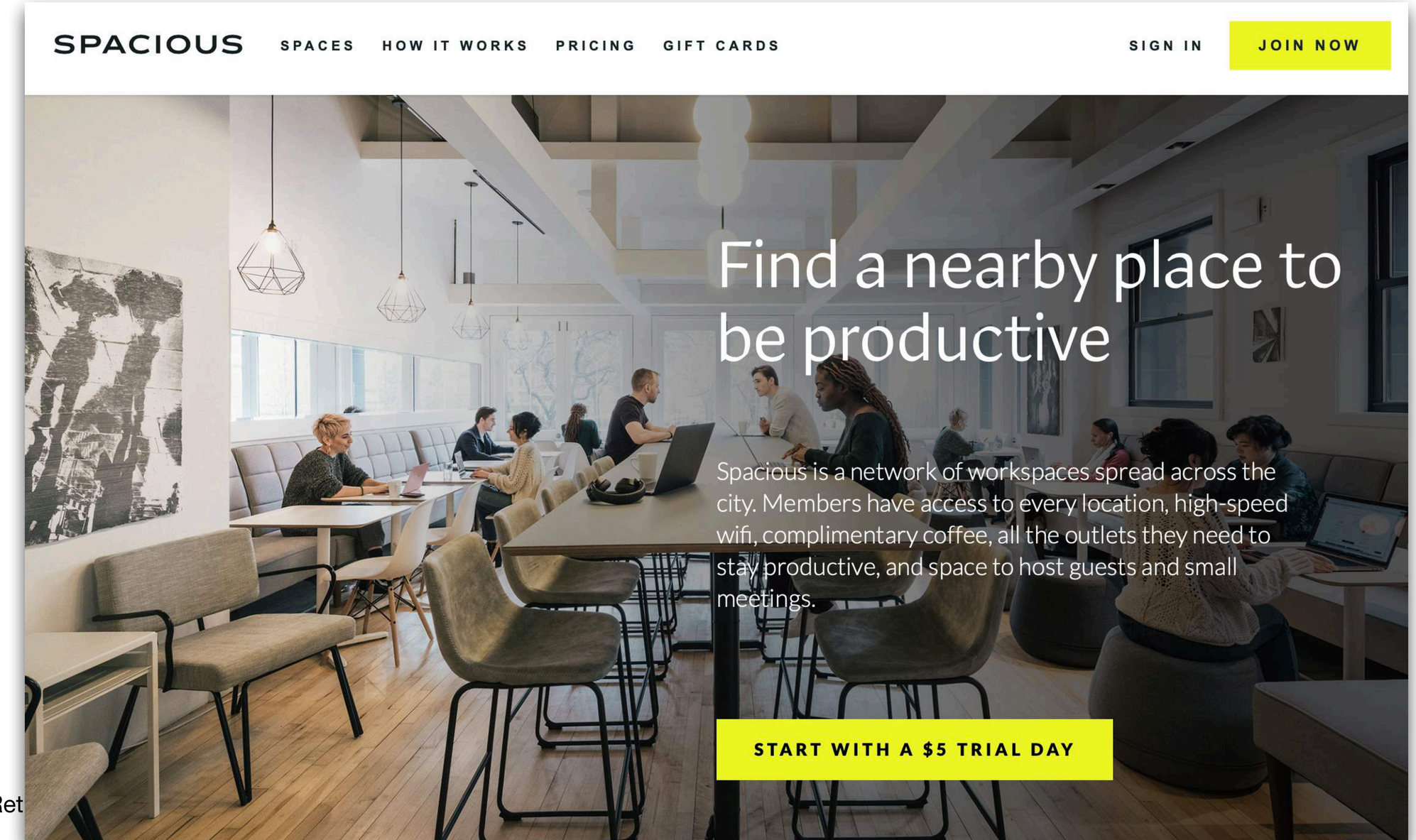
airbnb

wework

RXR

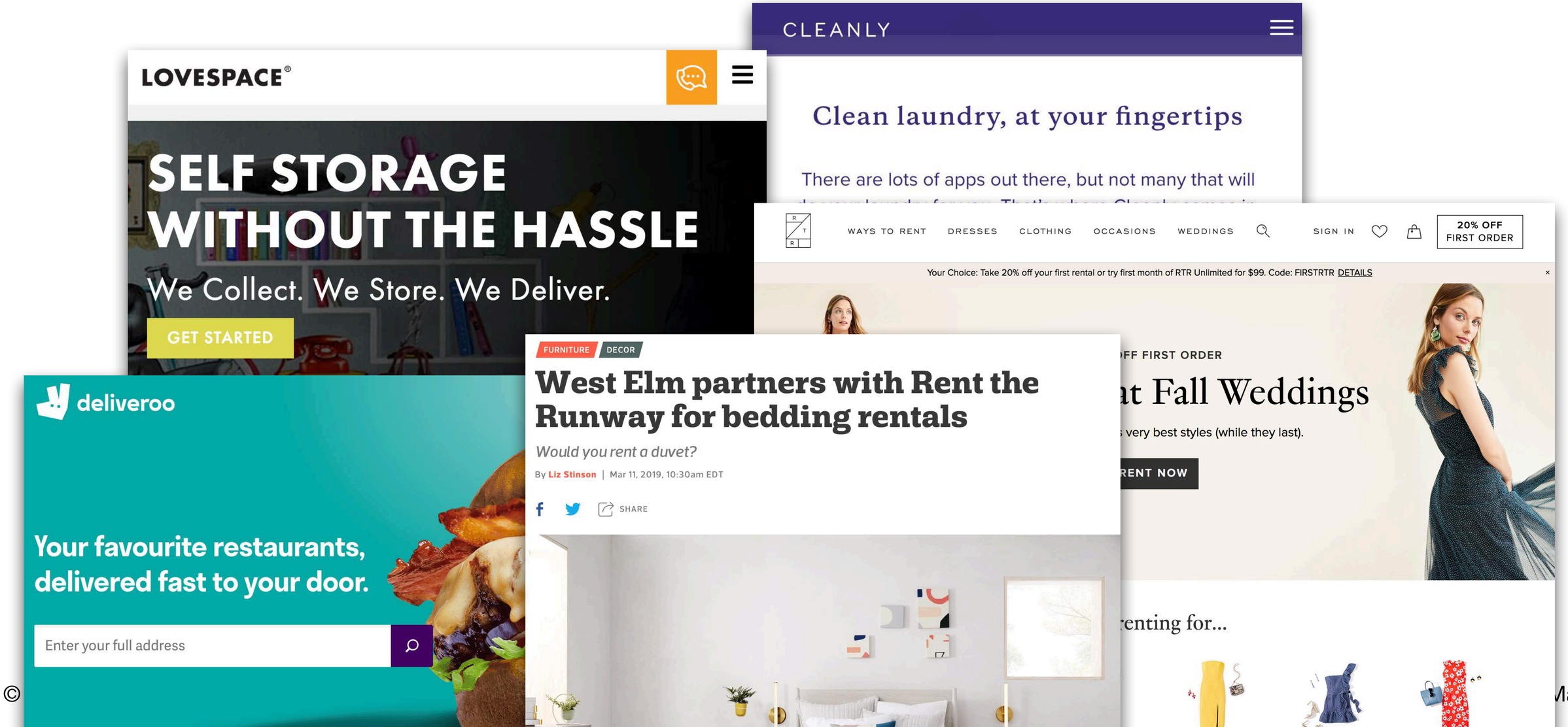
© Dror Poleg / Rethinking.RE

Facilitating more intensive use of existing locations.



© Dror Poleg / Ret

“Unbundles” tasks that used to require space within apartments



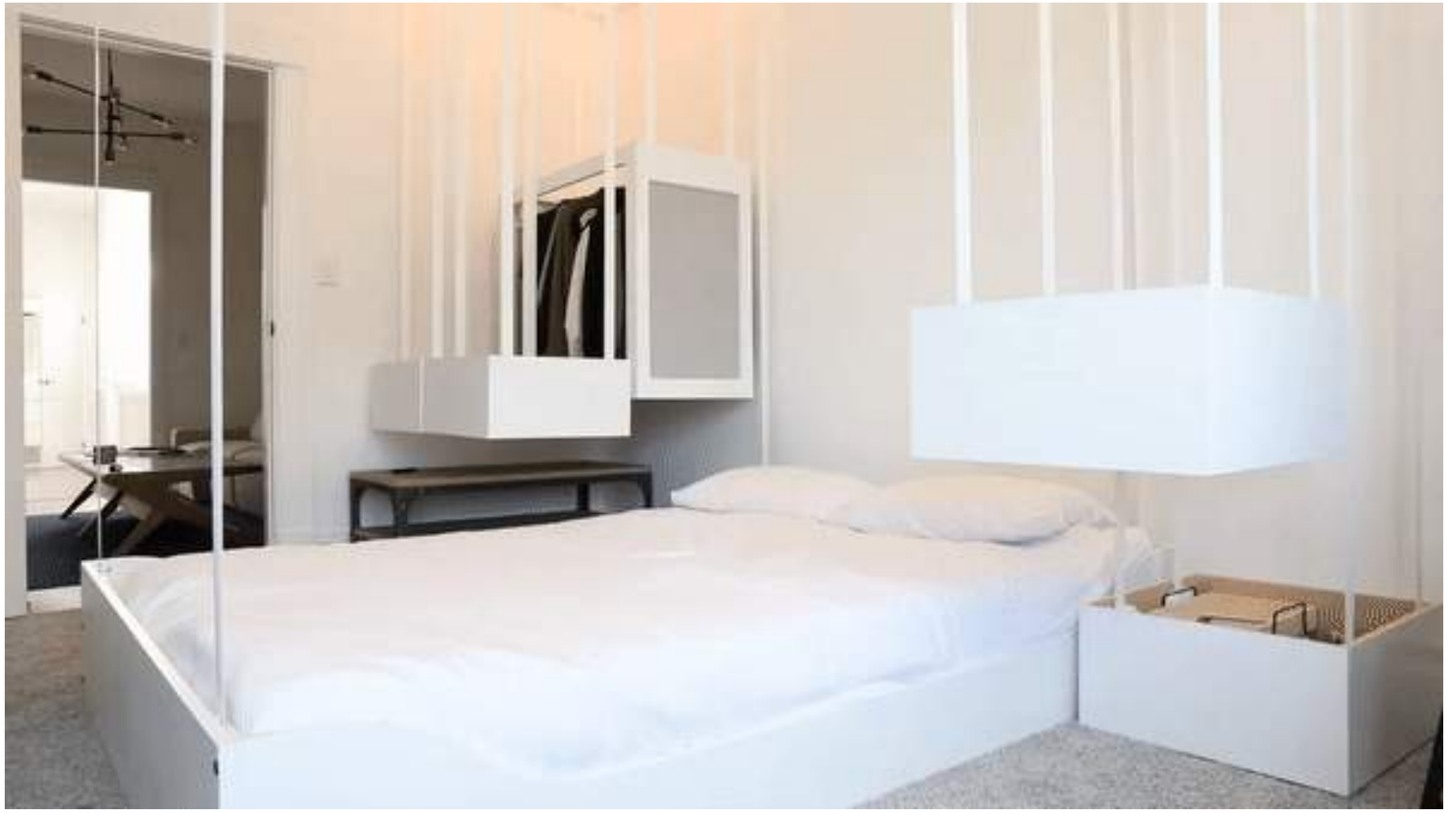
©

May 2019

Even hospitals… are being unbundled into prefabricated pods that provide prescriptions and drugs.

© Dror Poleg / Rethinking.RE

Meanwhile, hardware also helps to create more spaces and make the real world more playful.



Sources: Dezeen / NYT

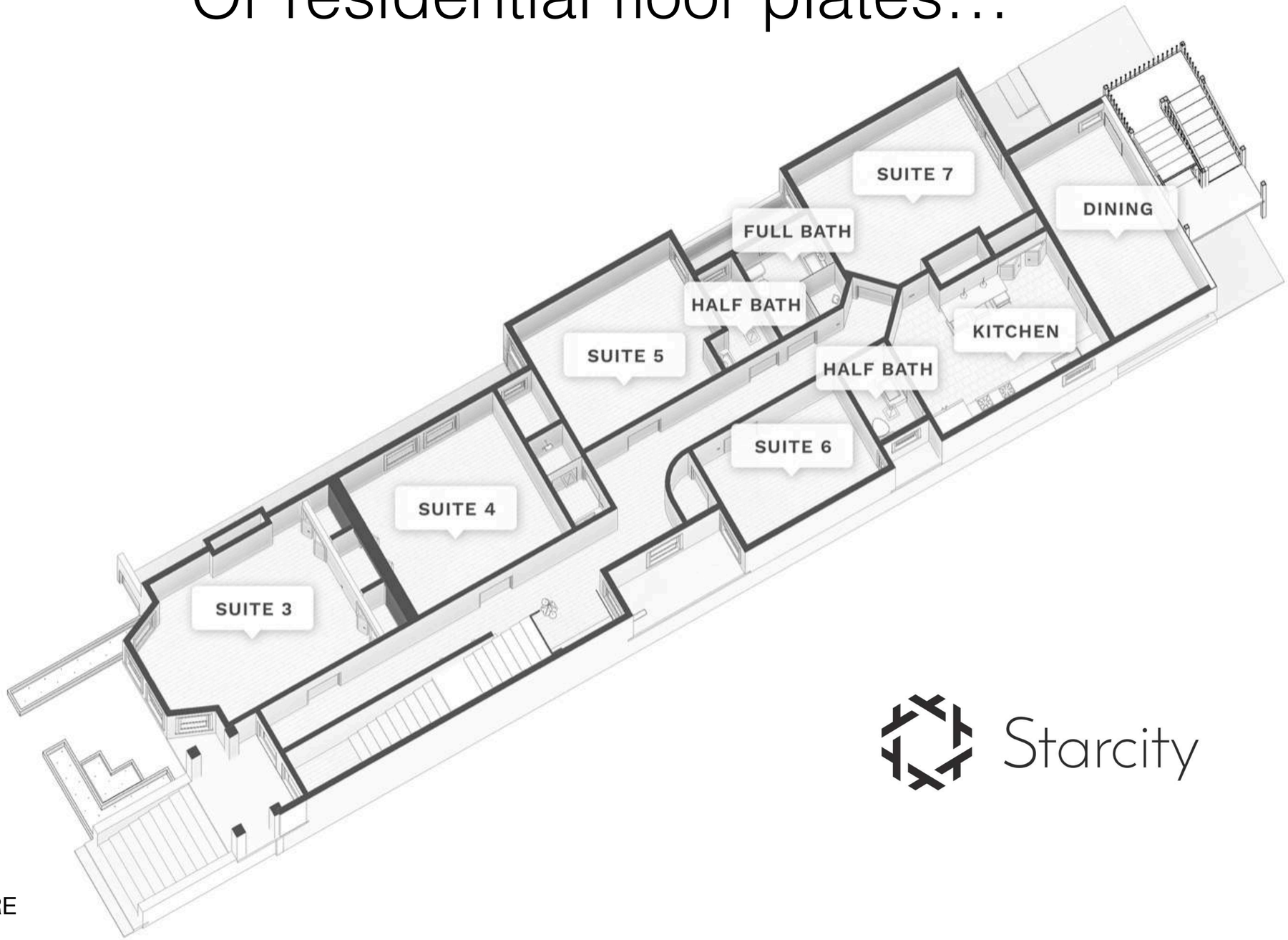
© Dror Poleg / Rethinking.RE

Fitting more people into traditional office floor-plates.

© Dror Poleg / Rethinking.RE

May 2019

Or residential floor plates…



Starcity

© Dror Poleg / Rethinking.RE

…through a combination of hardware & software

Acquired Company	Business
Teem	Meeting room management software
MissionU	Training and education (college alternative)
NakedHub	Coworking operator in China
Conductor	Content marketing platform
MeetIp	Social events platform
Flatiron School	Education and tech training
Unomy	Sales & Marketing Intelligence Platform
Spacemob	Coworking operator in Singapore
Fieldlens	Communicatino & collaboration for construction teams
Welkio	Visitor registration
CASE	Virtual design and BIM

Invested Company	Business
The Wing	Coworking space for women
Luna Lights	Automated lighting safety system
Hargol	Protein from grasshoppers…
Victor Tech	Small business marketing

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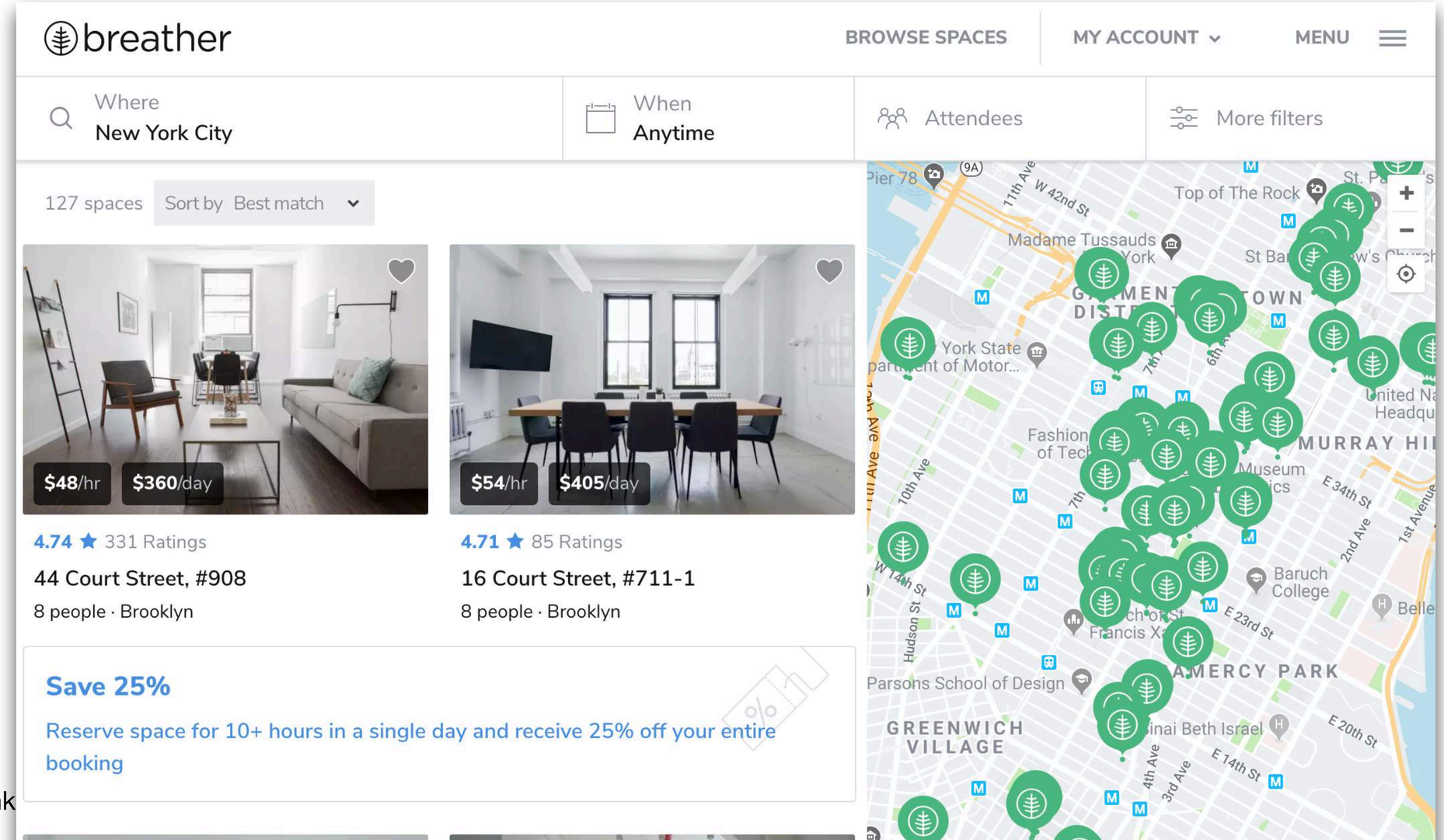
May 2019

Software makes networks of buildings worth more than the sum of their parts.



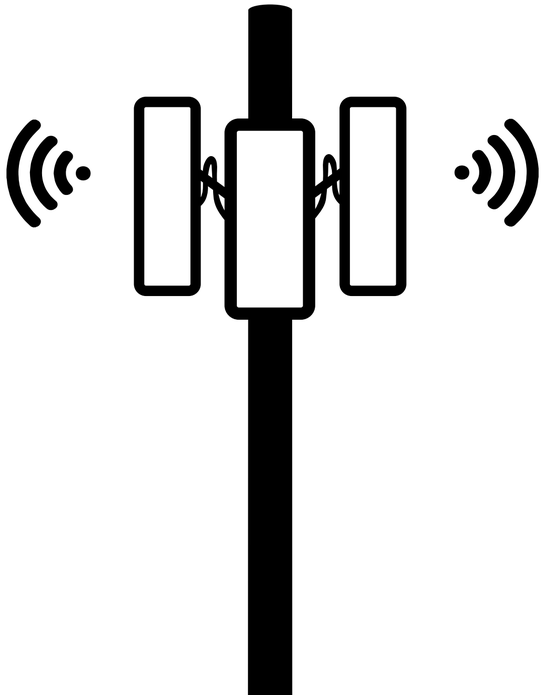
© Dror Poleg / Rethink

May 2019

Software can connect networks of buildings to create value in other unexpected ways.

© Dror Poleg /

Not just in a few years, but also very soon.

22 ×  = 5G

© Dror Poleg / Rethinking.RE

And in ways that can benefit the environment *and* generate new revenue

ALTERNATIVES

GLP-Brookfield joint venture aims to become China's top rooftop solar power provider

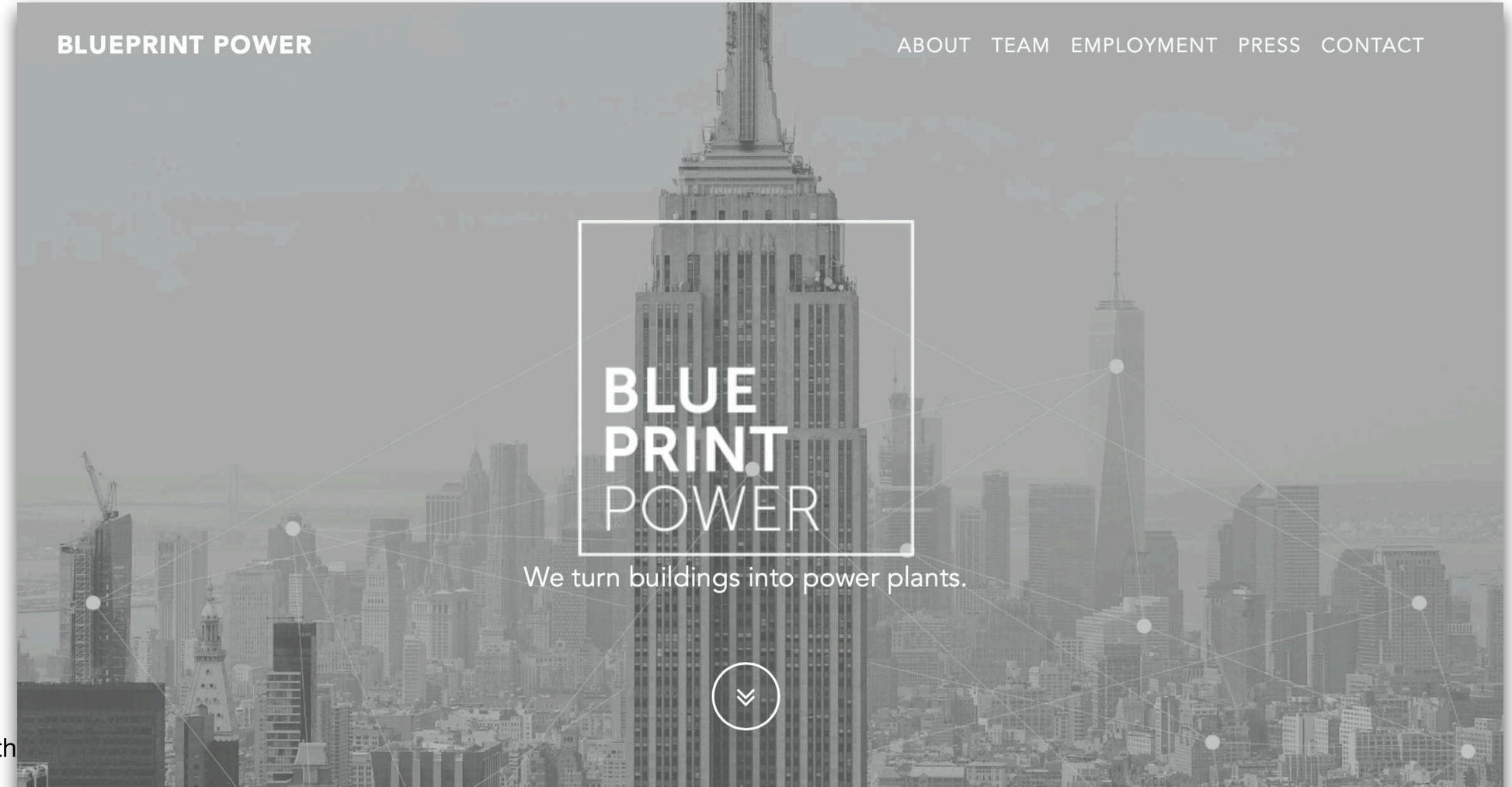
BY DOUGLAS APPELL · MARCH 21, 2018 10:03 AM · UPDATED 10:06 AM

GLP, a global provider of logistics facilities based in Singapore, and Brookfield Asset Management established a 50-50 joint venture to develop and operate solar power capacity on the rooftops of logistic and commercial facilities in China.

GETTY IMAGES/ISTOCKPHOTO

© Dror Poleg / Rethinking.RE

Turning buildings from power consumers to power producers.



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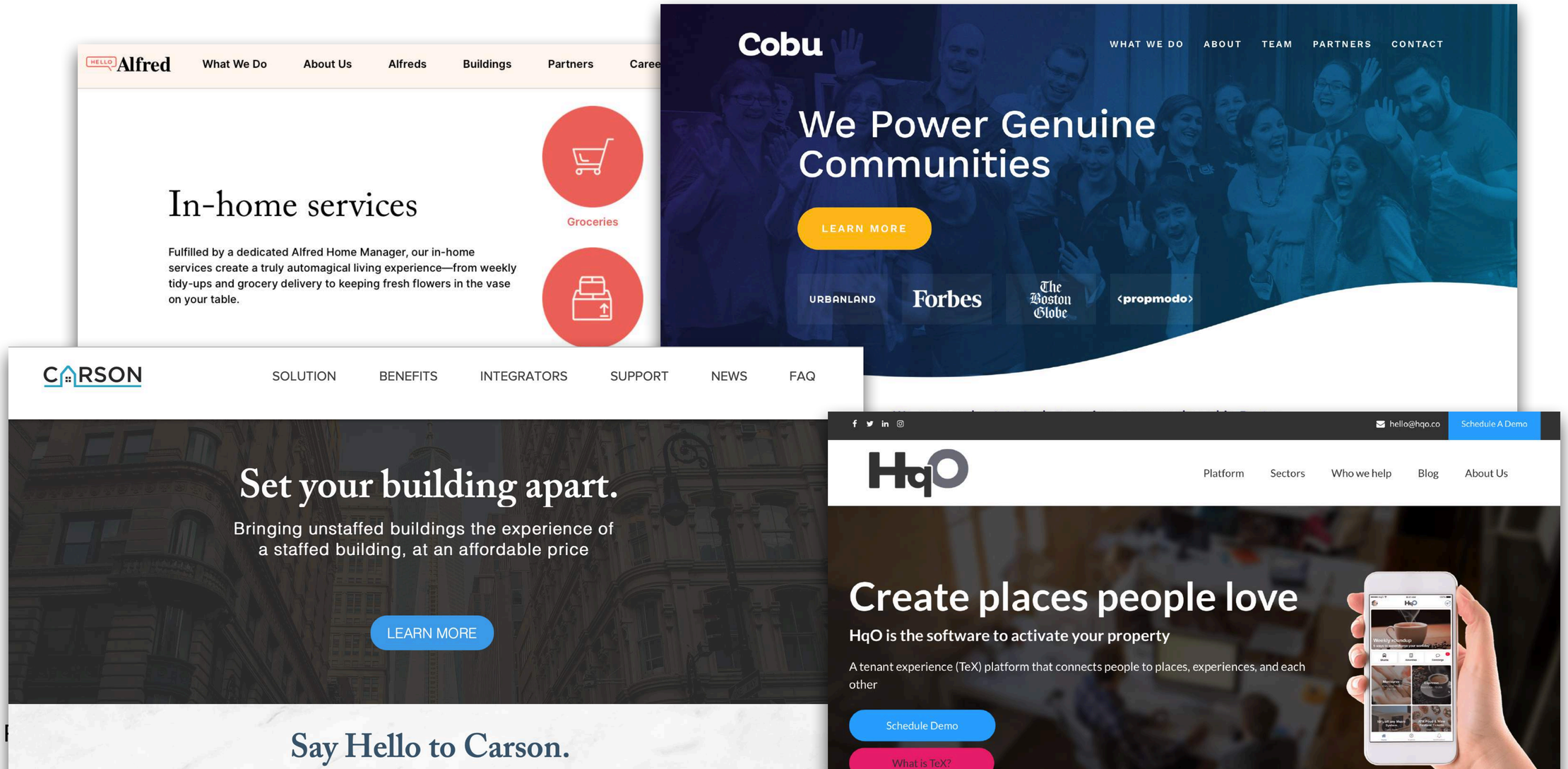
May 2019

Software adds new layers of service and community on top of existing buildings…



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May 2019

Landlords are trying to remain relevant by offering flexible solutions for small tenants.

PROPERTY MARKETS GROUP

TISHMAN SPEYER

CBRE

SIMON℠

KIMCO™ REALTY

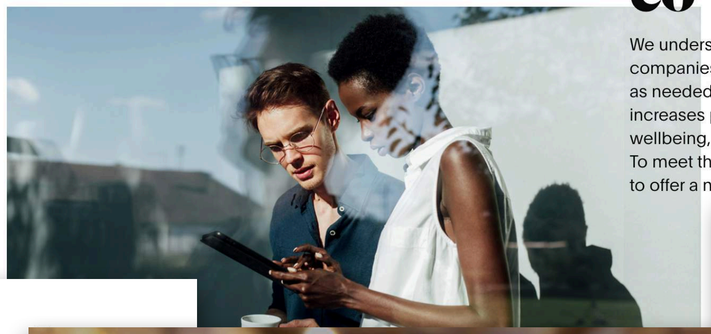
MACERICH®

BrandBox

Helping online brands move offline

BrandBox will help you expand offline

studio



elevated co-working

We understand the importance of agility, and the need for companies of all sizes to be able to move quickly and to scale as needed — when needed. We know that the right space increases productivity, optimizes innovation, and promotes wellbeing, allowing companies to focus on what they do best. To meet the needs of an evolving workplace, we are pleased to offer a new type of workspace.

hana

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05.15.17

Coliving Isn't Just For Star
A Giant Developer Is Build
Upscale Dorms For Adults

Developer PMG is building 3,500 units in Chicago, Brooklyn, and
featuring smaller living spaces and more shared space.

BRIEF

Simon bridges online and
ick-and-mortar with
ne Edit'

nne Howland

Or partnering with new companies to develop and operate new projects

airbnb MEDICI LIVING GROUP common ollie wework

'Upscale Co-Living' Will Occupy Northern Tower At Gables Station

Deirdra Funcheon, Bisnow South Florida

Common and Tishman Speyer want to make co-living a thing for families

New product called Kin will feature playrooms and on-demand child care

March 20, 2019 08:38AM

WeWork launches new investment fund, plans first ground-up development

"ARK" nears deal for Frank McCourt's Waller Creek site in Austin, Texas

onrad Putzier and David Jeans | November 05, 2018 03:13PM

Photographer: Andrew Harrer/Bloomberg

Technology

Brookfield Finds Common Ground With Airbnb in $200 Million Deal

By Oshrat Carmiel

December 18, 2017, 12:30 PM EST

Menu Search Bloomberg Settings Subscribe

Markets

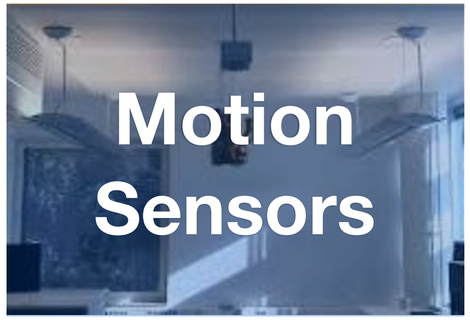
Co-Living Firm Wins $1.1 Billion Investment for Europe Expansion

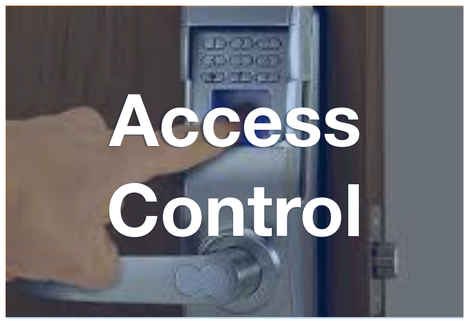
By Lily Katz

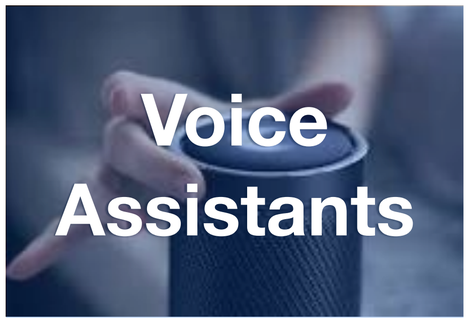
December 12, 2018, 2:25 AM EST

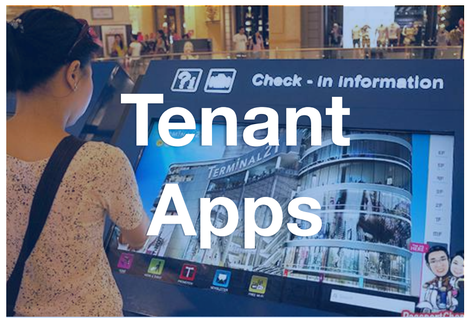
© Dror Pole

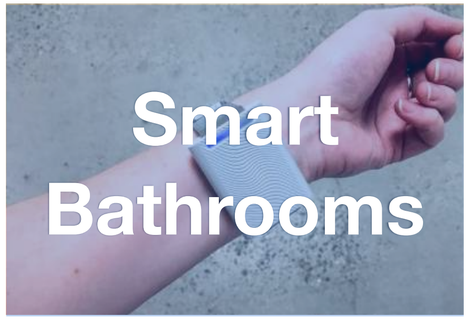
Real estate is also becoming personal in other ways…
Landlords are becoming “Datalords”.











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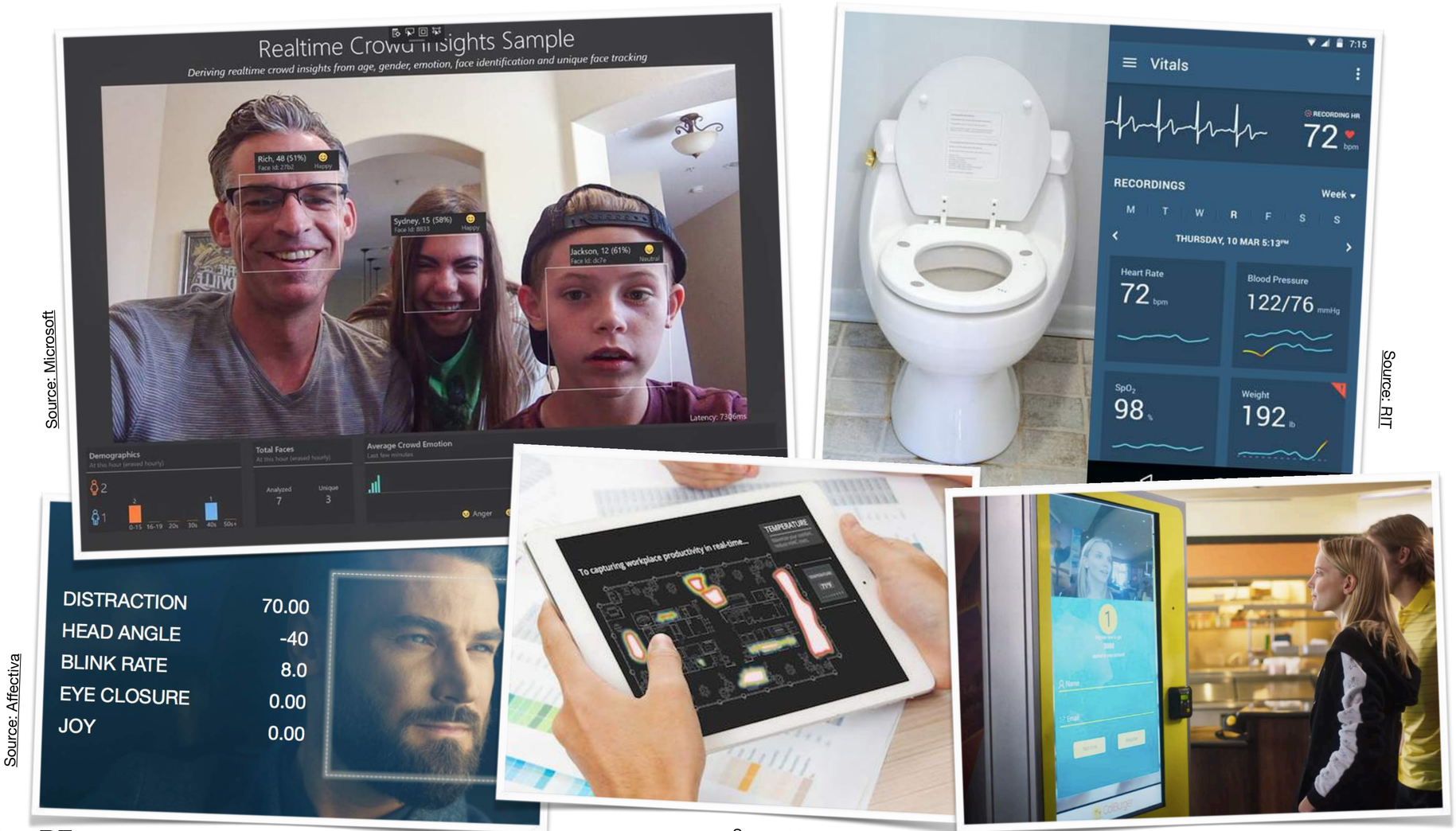
May 2019

A variety of (creepy) tools and business models are already in place.



Source: Microsoft

Source: RIT

Source: Affectiva

Source: Lighthouse.io

Source: Caliburger / NEC

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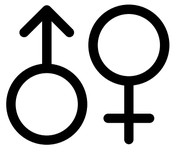
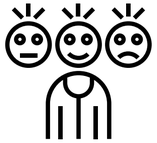
May 2019

All this new data is a goldmine…

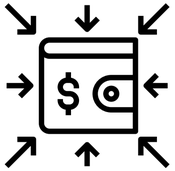


Gender



Mood

Health



Income Level

Relationships

Interests

Productivity

Ethnicity

© Dror Poleg / Rethinking.RE

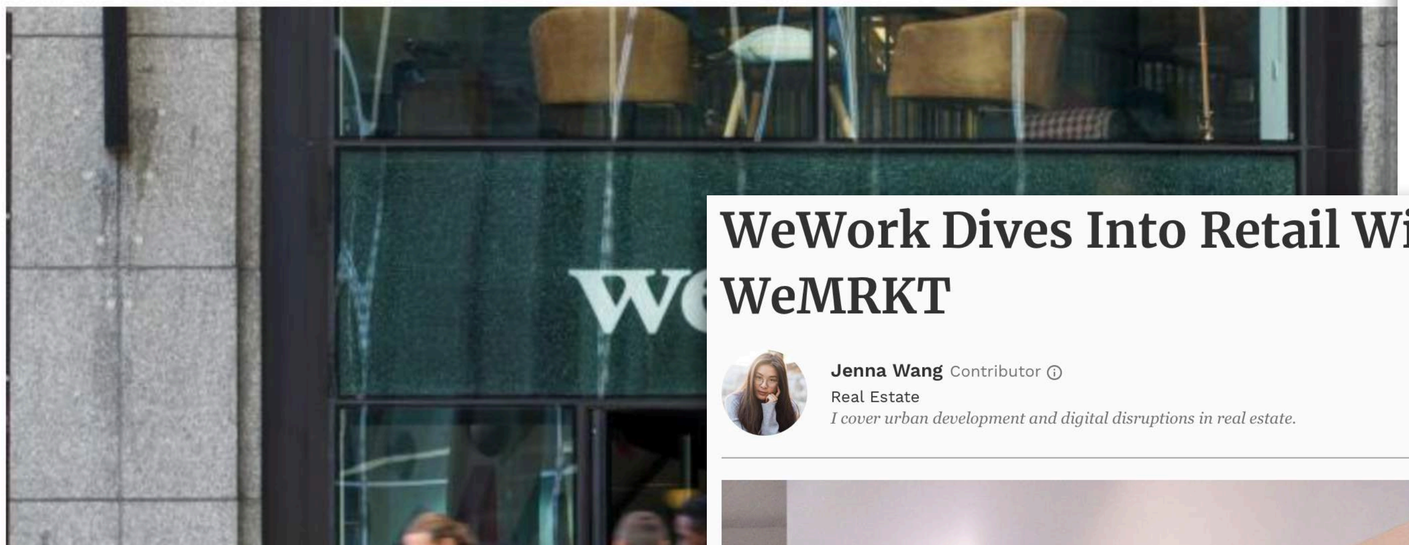
Data is enabling new operators to reduce rent and monetize their communities in other ways…

September 29, 2017 12:00 AM

WeWork offers 12 months of free rent in bid to poach tenants from rivals

DANIEL GEIGER

TWEET SHARE SHARE EMAIL



WeWork Dives Into Retail With WeMRKT

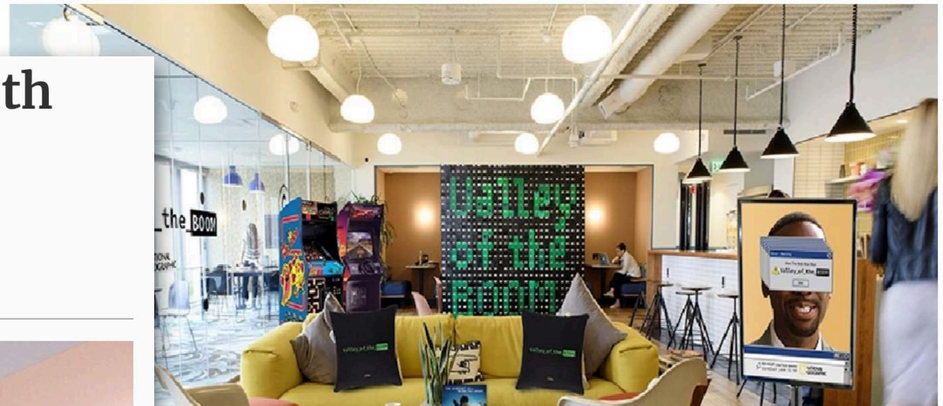
Jenna Wang Contributor

Real Estate

I cover urban development and digital disruptions in real estate.

psfk

WeWork And National Geographic Offer Customers Retro Internet Cafe-Themed Spaces



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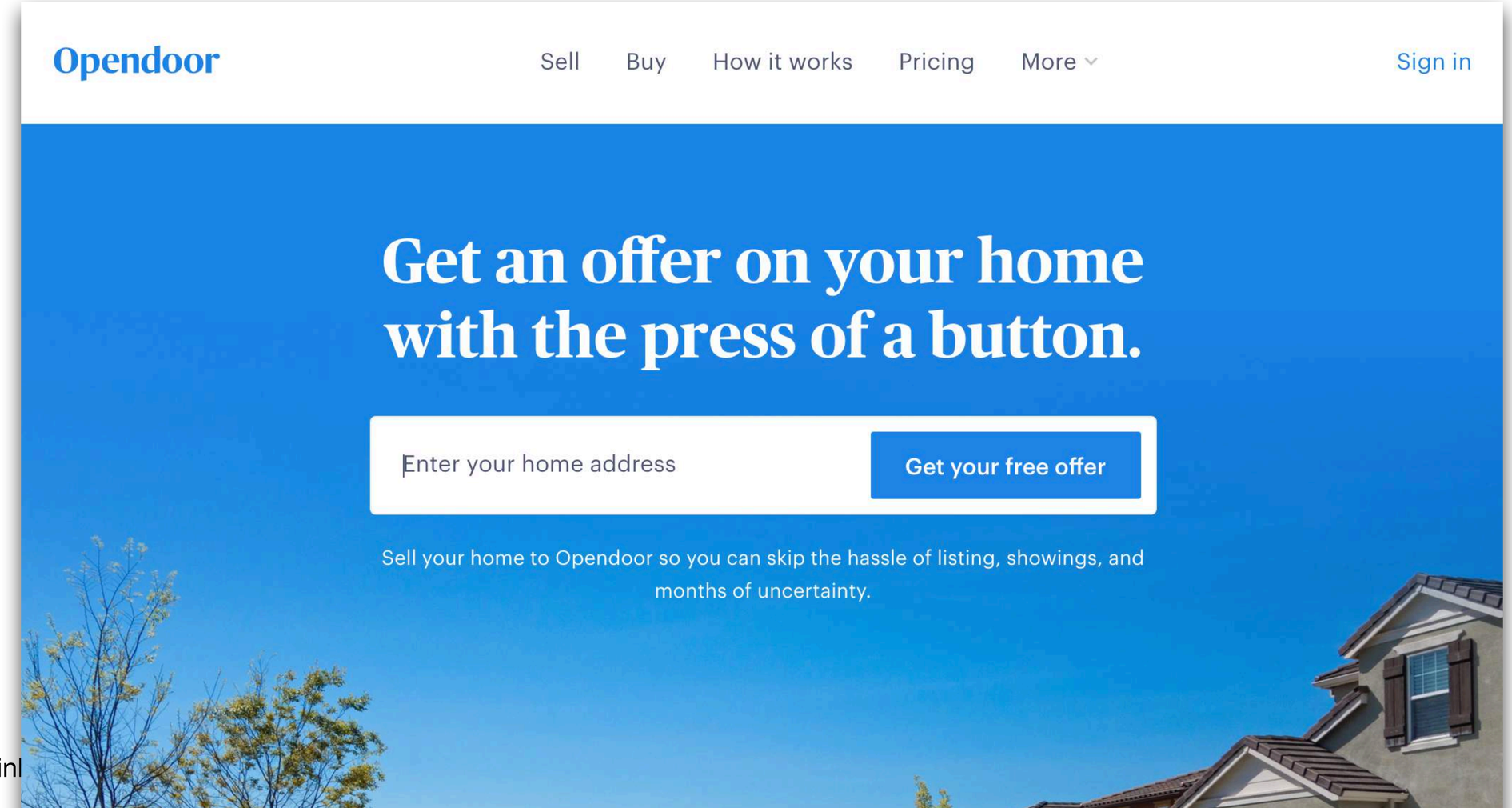
…it brings unprecedented liquidity to real estate markets

(starting with single family homes)



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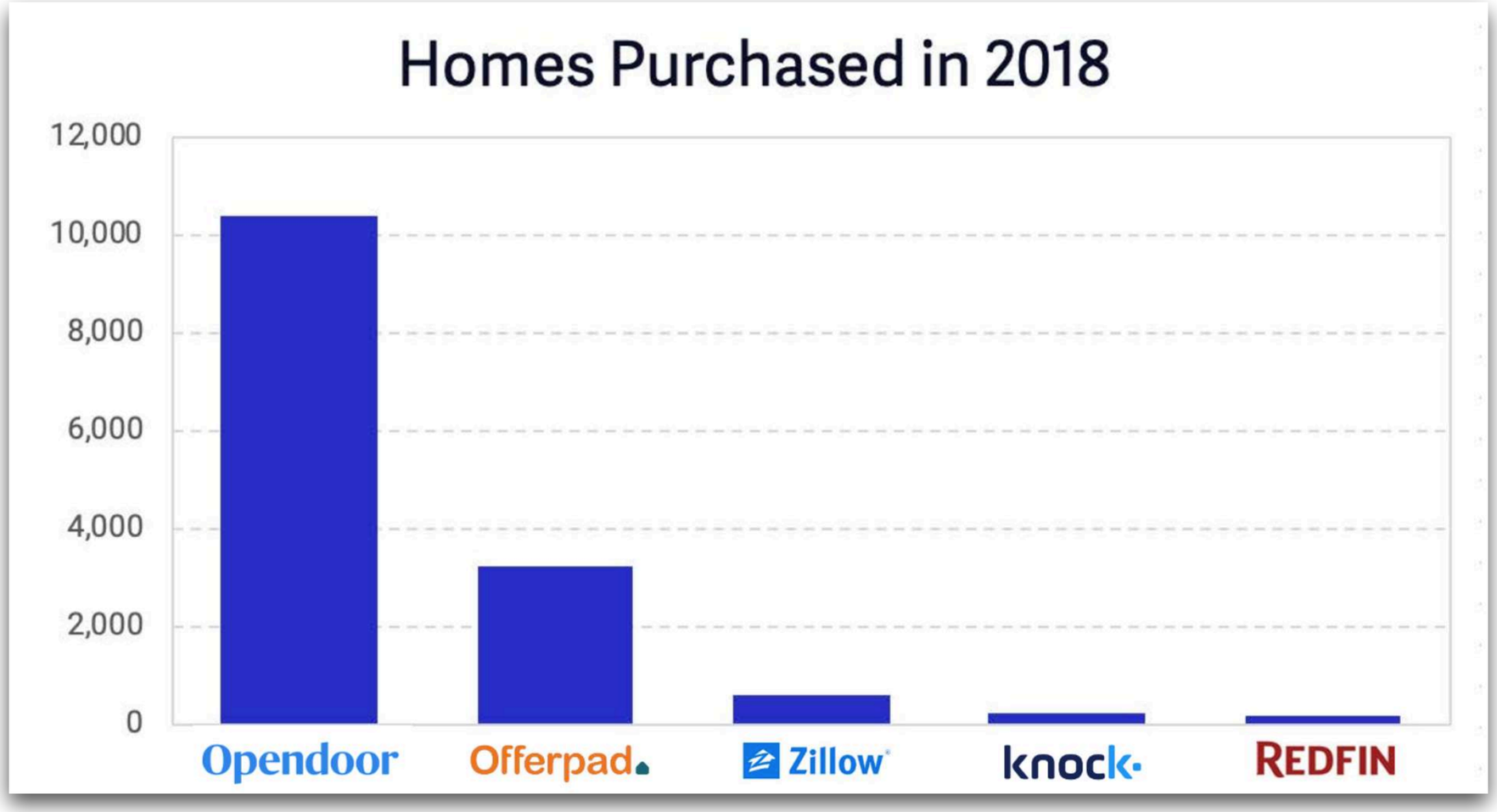
Powering tens of thousands of transactions a year



© Dror Poleg / Rethinking.RE

Source: Mike DelPrete

May 2019

Data is setting the foundation for new kinds of real estate fund managers.

© Dror Poleg / Rethinking.RE

But data is also a time bomb:
Introducing new financial, reputation, and political risks.

THE STAR

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By STAR EDITORIAL BOARD

Bloomberg

Technology

Facebook's $119 Billion One-Day Rout Makes U.S. History

By Sophie Caronello

July 26, 2018, 4:08 PM EDT

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AMAZON

A University Is Putting 2,300 Echo Dots in Student Living Spaces and What Could Go Wrong?

Jennings Brown

8/15/18 6:10pm • Filed to: AMAZON

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AP

'Location history' off? Google's still tracking you

An AP investigation found that Google saves your location history even if you've paused "Location History" on mobile devices. This map shows where Princeton privacy researcher Gunes Acar travelled over several days, from data saved to his Google account des

Newsweek SIGN IN SUBSCRIBE

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BY SUMMER MEZA ON 12/6/17 AT 9:48 AM

WIRED

Hacking

The rise of SamSam, the hacker group shutting down entire cities

The creators of the SamSam ransomware are making $300,000 a month and are getting more sophisticated. And nobody can work out who they are

©

There is a high price to pay…

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Venture capital is becoming real estate capital…

ANDREESSEN HOROWITZ	Cadre, Zumper, Point, and PeerStreet
greylockpartners.	AirBnB, Matterport, Zumber, LiquidSpace, Dynasty, NextDoor, Otto
SEQUOIA	Skyline.AI, Ziroom, Urwork, 24tidy, Dongpeng, Linshimuye, Plateno
khosla ventures	Cadre, OpenDoor
USV Union Square Ventures	Flip.Lease, RealtyShares
SoftBank	WeWork, Katerra, Compass, OYO
BENCHMARK	WeWork, Nextdoor
ACCEL PARTNERS	Housetrip, Duetto, Fabhotels, Hotel Tonight, Hotelogix
General Catalyst Partners	AirBnB, Bowery, Cadre, RealtyShares
NEA	OpenDoor, CVent, 42Floors, Zumper

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…and real estate capital is becoming venture capital.

Blackstone	• Invitation Homes, a tech-driven housing management venture • Invested in VTS, Entic • Acquired The Office Group
Brookfield	• Invested in Convene • Set up a $300m venture capital fund to invest in technologies and platforms that affect its
GIC	• Invested in JustCo, a coworking operator • Invested in Nova, a rental / coliving / residential management platform • Set up the Bridge Forum to connect Asia property investors to Silicon Valley

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Let’s recap

1. The traditional defenses are losing their power — location, accessibility, visibility, zoning, capital, information.
2. Boundaries between asset types are blurring.
3. Competition is shifting to new dimensions — flexibility, service, meaning.
4. The value of an asset is increasingly dependent on its operator.
5. Real Estate assets can be monetized in new and exciting ways.
6. Networks of buildings can create new synergies and value.
7. Companies of various sizes and kinds are suddenly in direct competition.
8. An abundance of venture and PE capital is funding the transformation of the industry.
9. The Channel is becoming as important as the Product.

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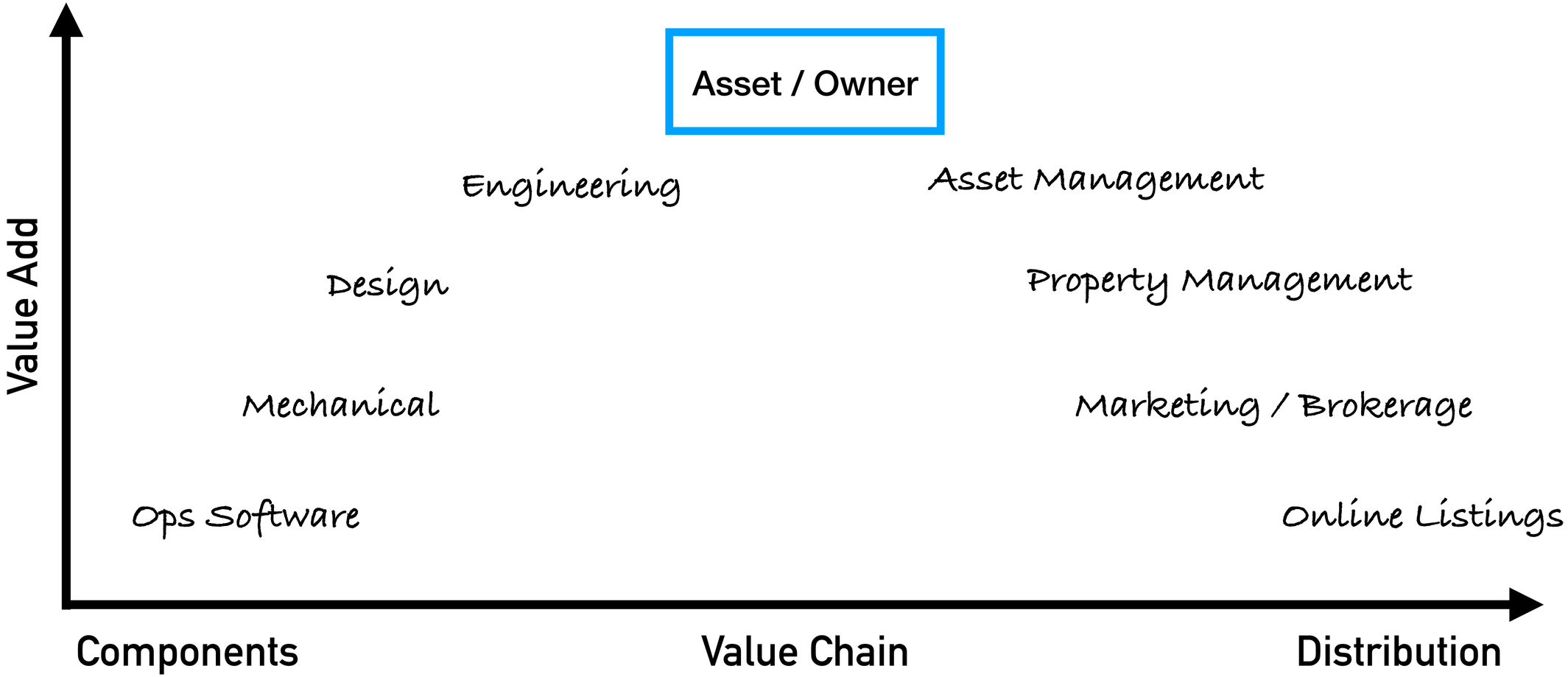
The traditional Real Estate value add distribution



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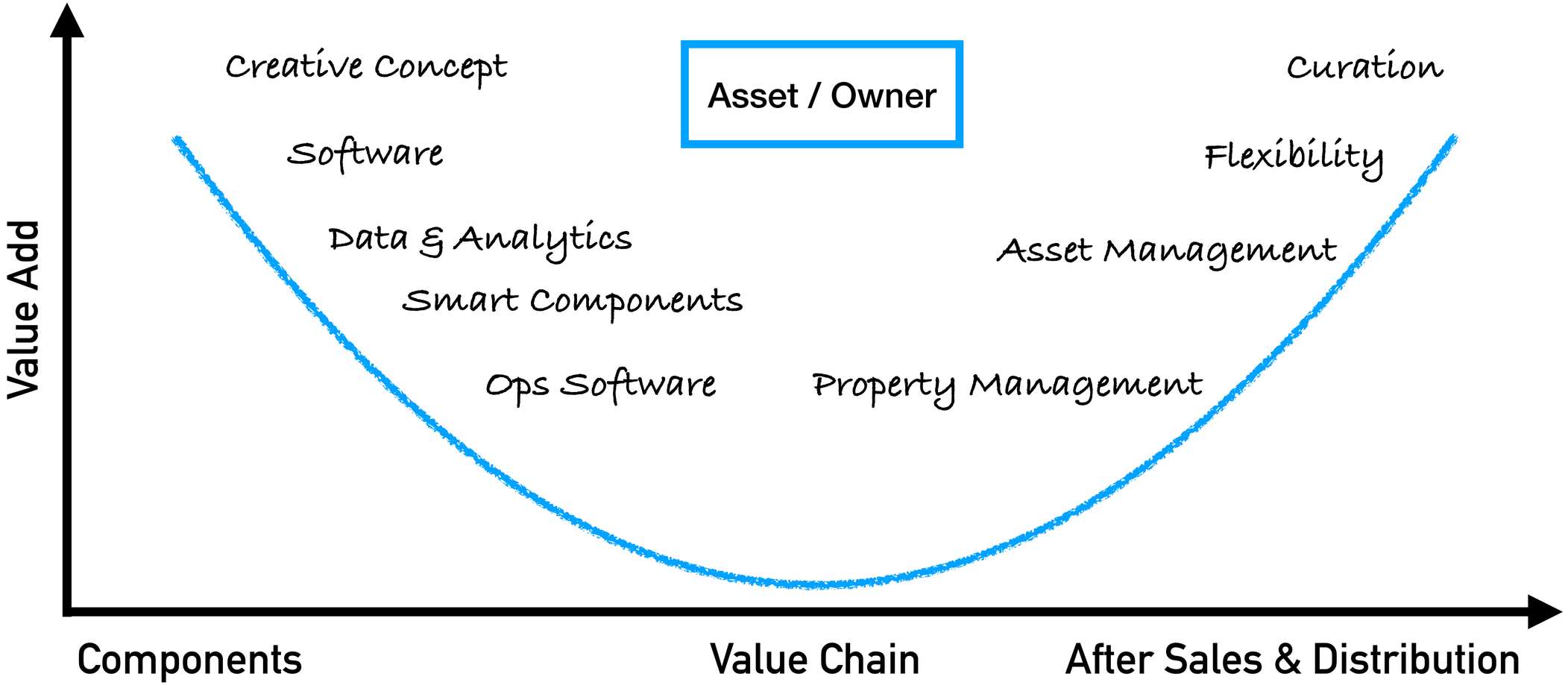
The Real Estate Smiling Curve



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How to make the most of it?

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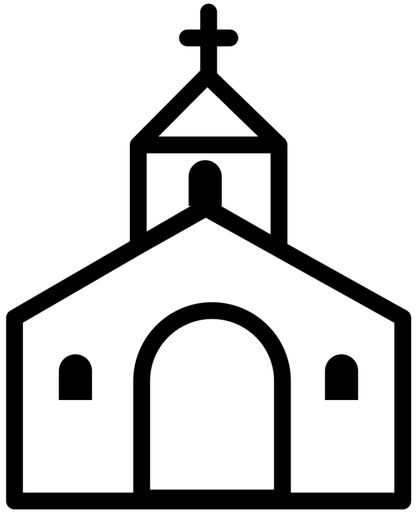
Back to Churches: What made them so successful to begin with?

1. Focus on the needs & aspirations of specific individuals
2. Have a tangible and intangible value proposition
3. Take the physical world is a given, focus on what's missing
4. Constantly reconsider your alliances & adversaries
5. Leverage network effects (a platform, not an individual asset)
6. Obsessive dedication to documentation and data
7. Align the incentives of all stakeholders
8. Treat uncertainty is an ally



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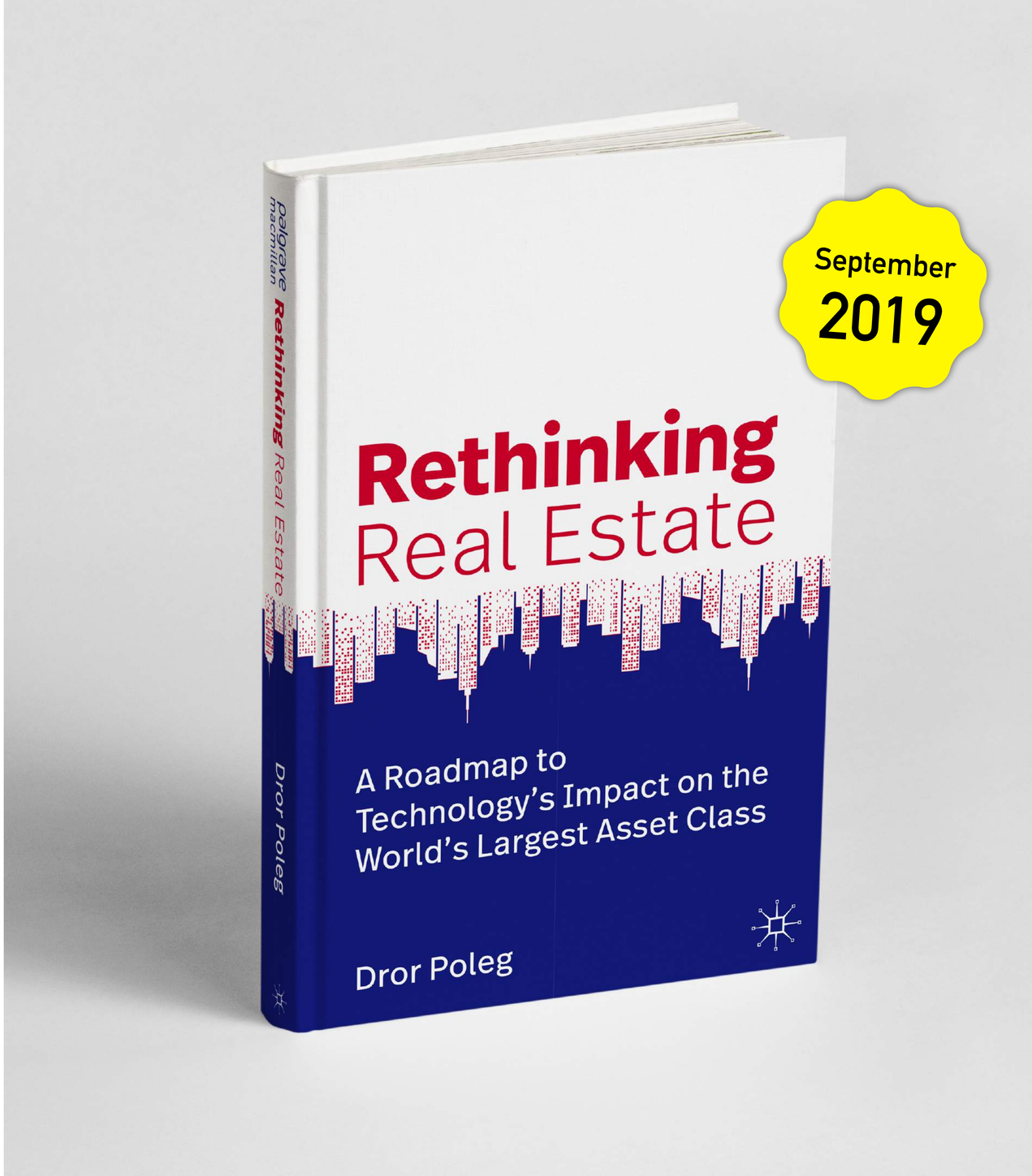
Thank you.

Questions?



What’s happening with humans?

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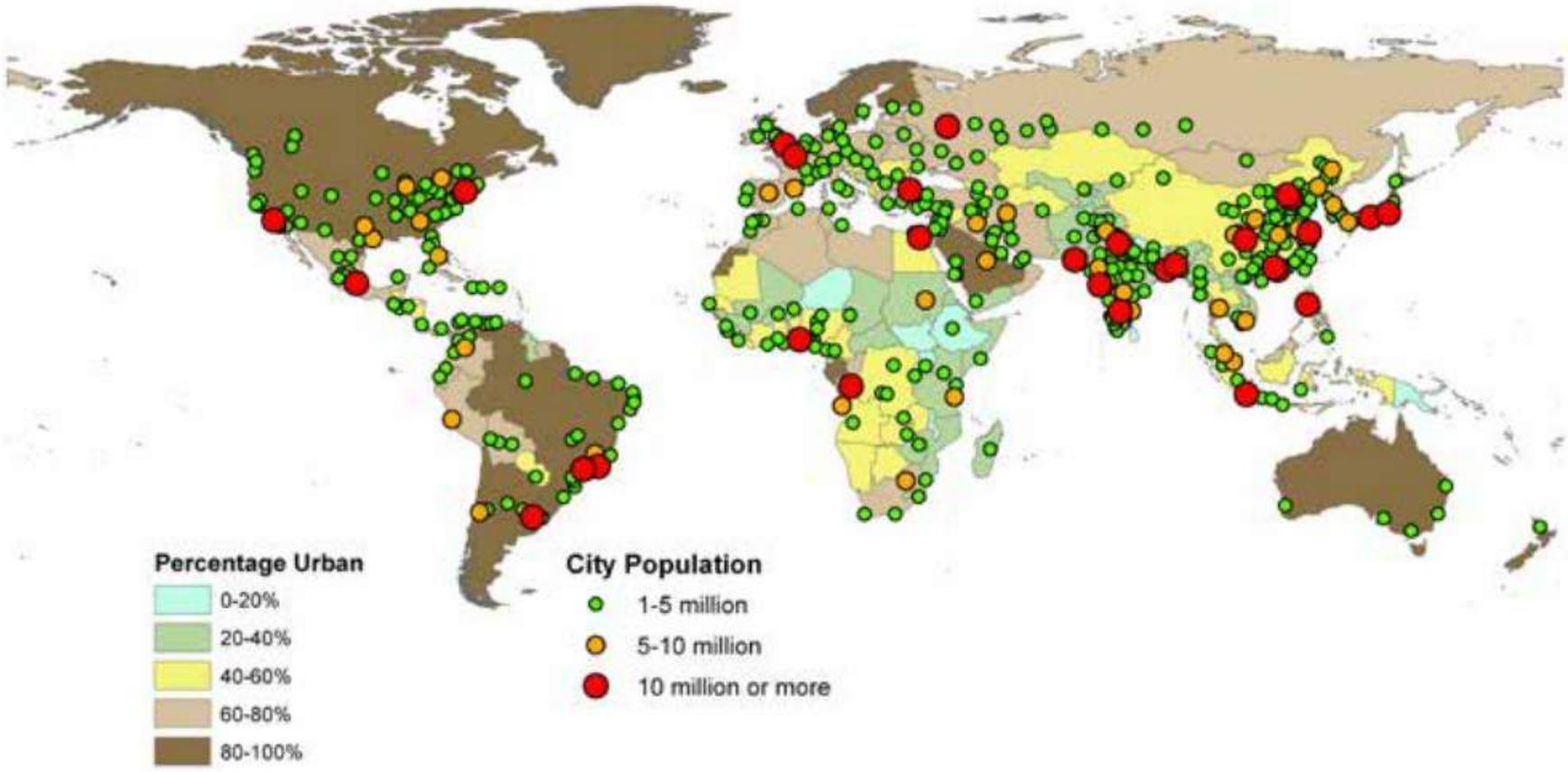
In recent decades, nearly all of global population growth has been concentrated in cities with a population of over 1 million, where about 20% of global population currently lives.



© Dror Poleg / Re

About 10,000 people turn 65 in the US each day. The home ownership rate for these retiring Baby Boomers is 75%.

TABLE 1

Homeownership among Baby Boomers, Gen Xers, and Millennials in 2015

Generation	Years born	Age	Population	Current homeownership (%)	Homeownership at age 25–34 (%)
Millennials	1981–97	18–34	75,170,263	32.2%	37.0%
Gen Xers	1965–80	35–50	66,441,487	60.4%	45.4%
Baby boomers	1946–64	51–69	74,649,971	75.0%	45.0%

Sources: 1990 and 2000 Decennial Censuses and the 2015 American Community Survey.

[1] **Pew** **Urban Institute**

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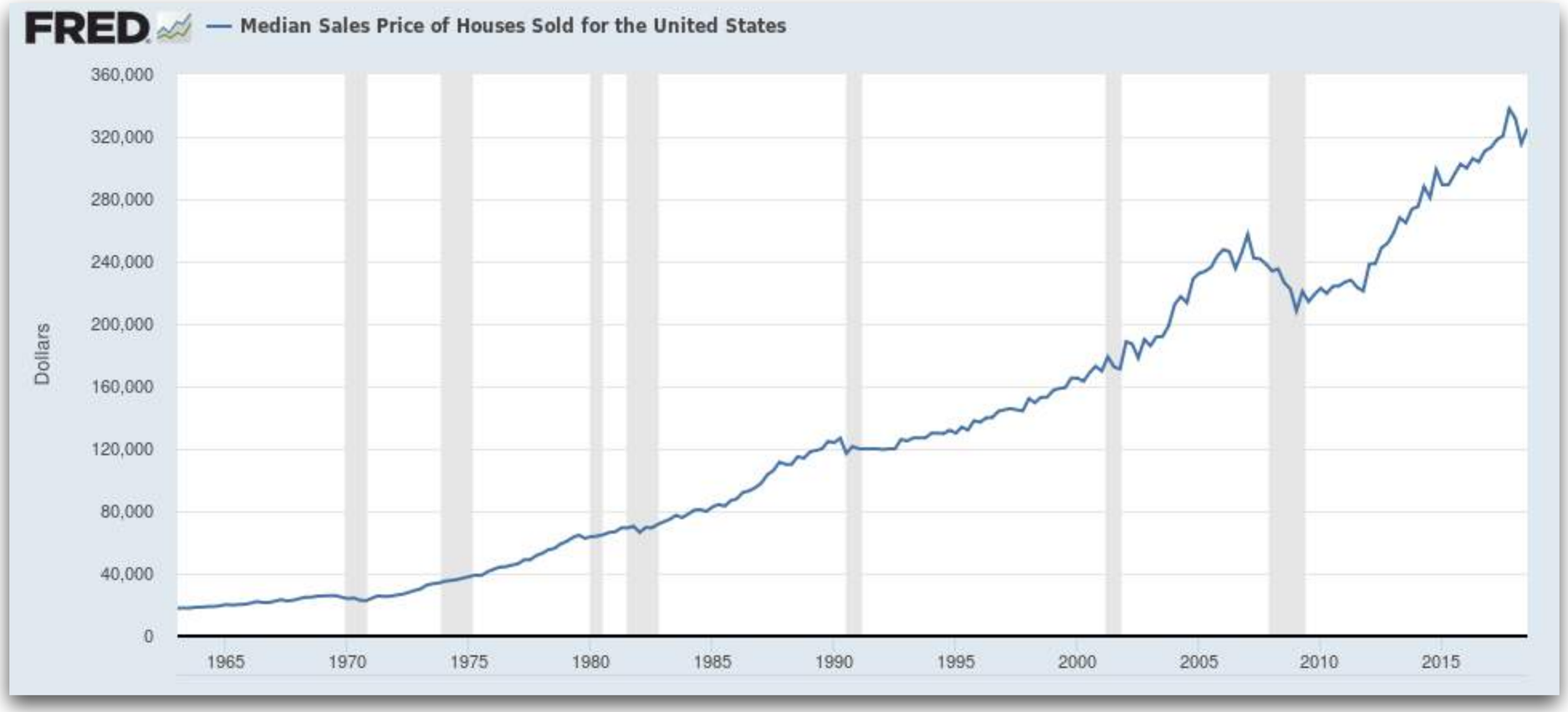
The US median house price is around $300,000. Assuming 10% of them are planning to move once they retired — that's $300 million in housing stock hitting the market per day.



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[3] **FRED**

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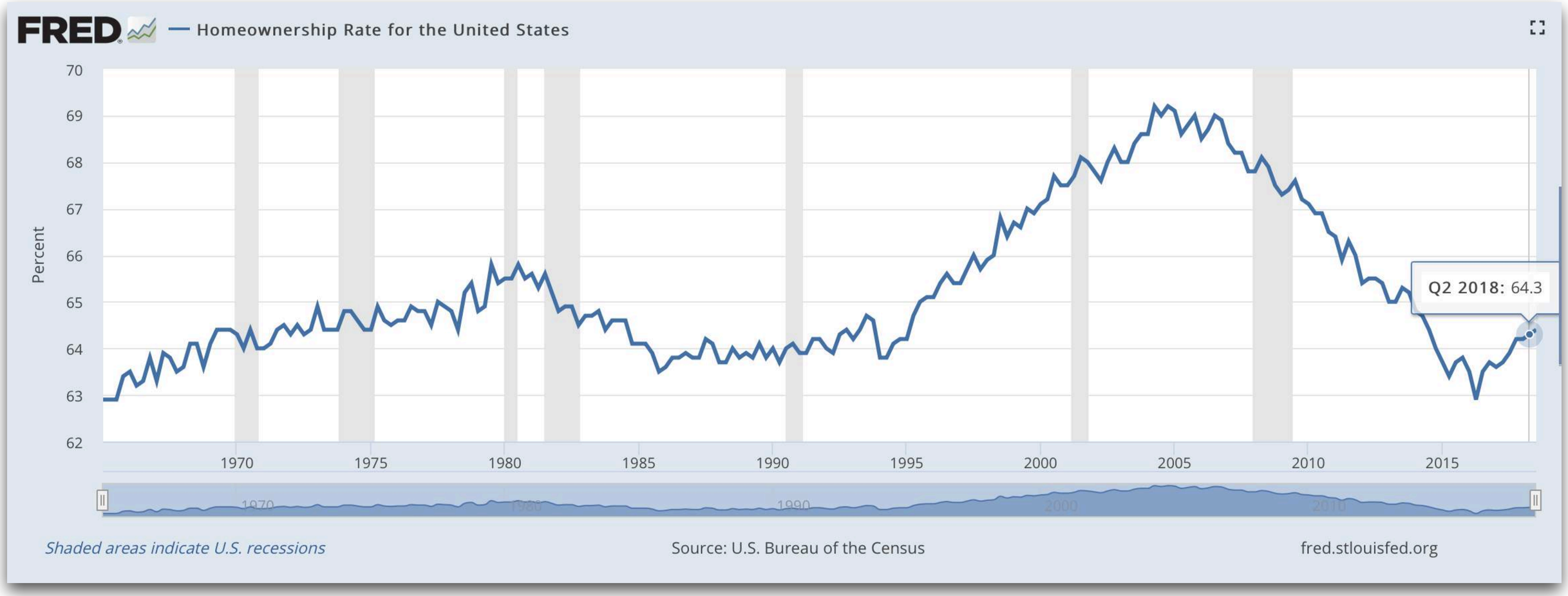
General home ownership is close to its lowest point since the 1960s, especially for those under 30.



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Even more broadly, the symbolic role of a “home” as a way to define oneself and communicate values is changing.

CRITIC'S NOTEBOOK

The Existential Void of the Pop-Up ‘Experience’

I went to as many Instagramable “museums,” “factories” and “mansions” as I could. They nearly broke me.

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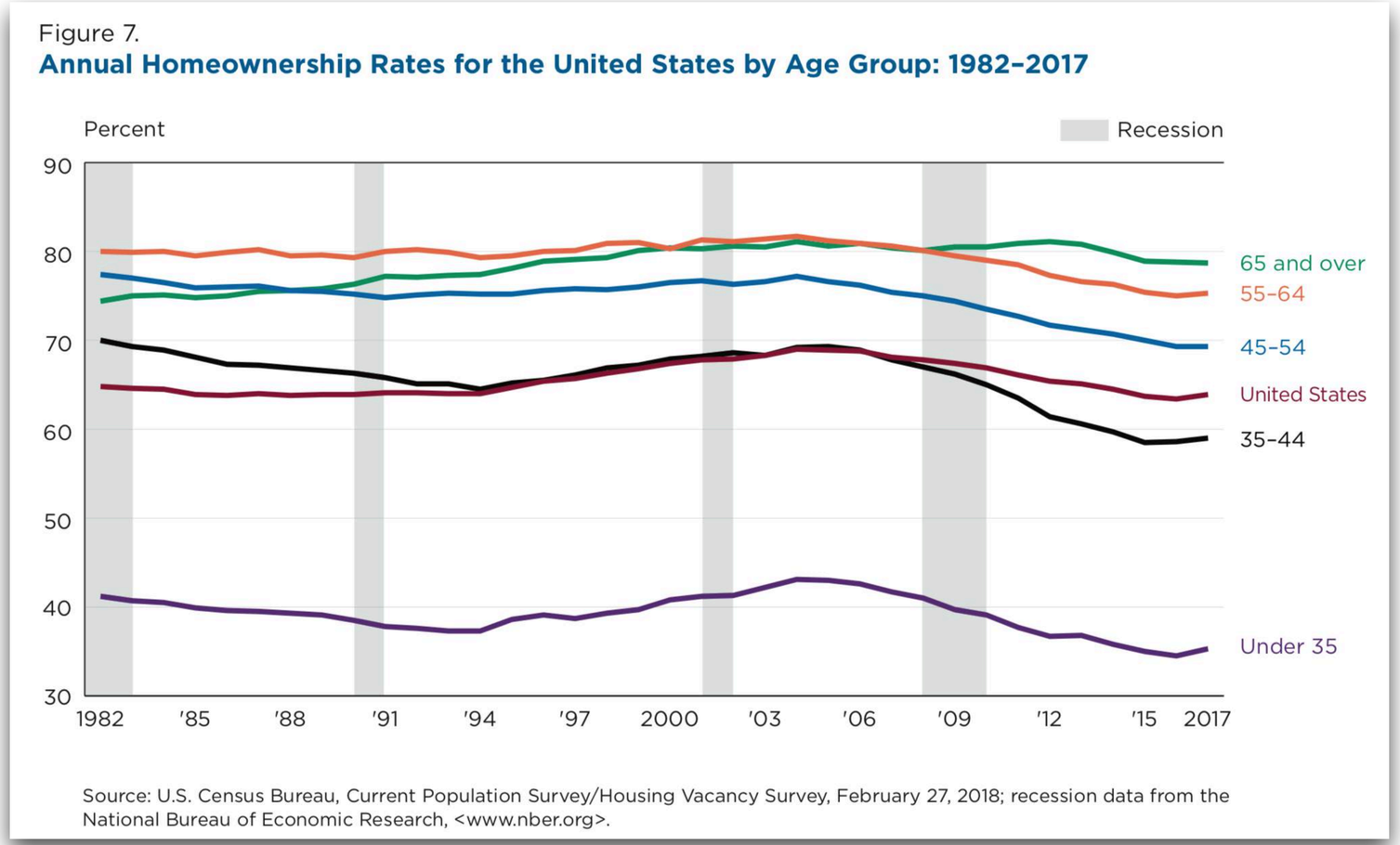
But “millennials” are not the only ones with declining home ownership. Other generations are increasingly renters as well.



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NBER / Census.gov

May 2019

Rent is outpacing income growth, encouraging people to live with roommates. In big cities, sharing an apartment can lead to dramatic savings.

Manhattan

Monthly Rent Living Alone* $2,745

SAVINGS FROM SPLITTING A 2-BEDROOM

$795 MONTHLY

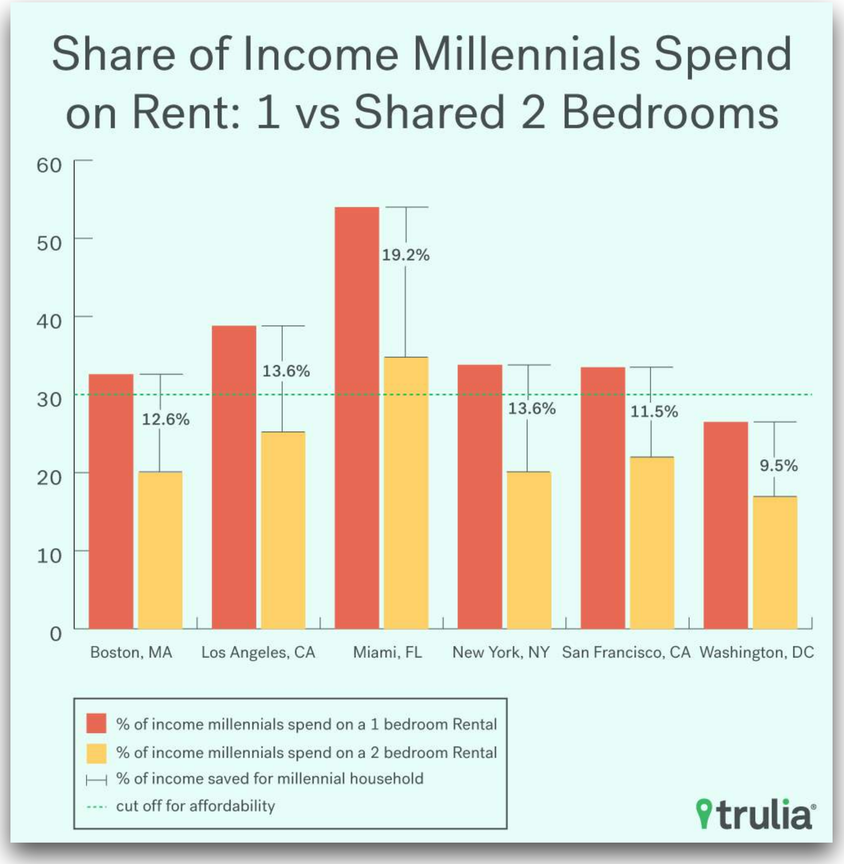
19% OF ANNUAL SALARY

SAVINGS FROM SPLITTING A 3-BEDROOM

$980 MONTHLY

23% OF ANNUAL SALARY

StreetEasy



Trulia

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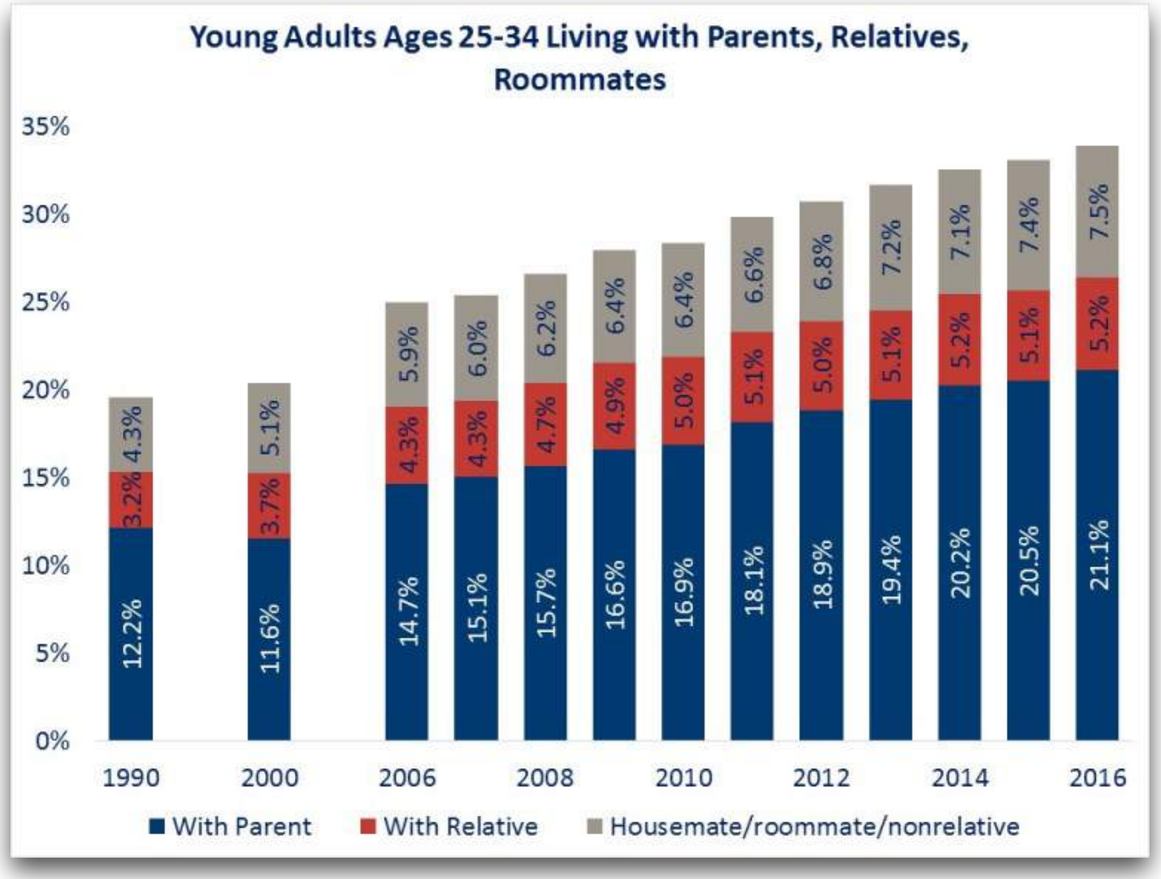
As a result, the number of adults living as roommates had almost doubled over the last 30 years, including with relatives.



NAHB

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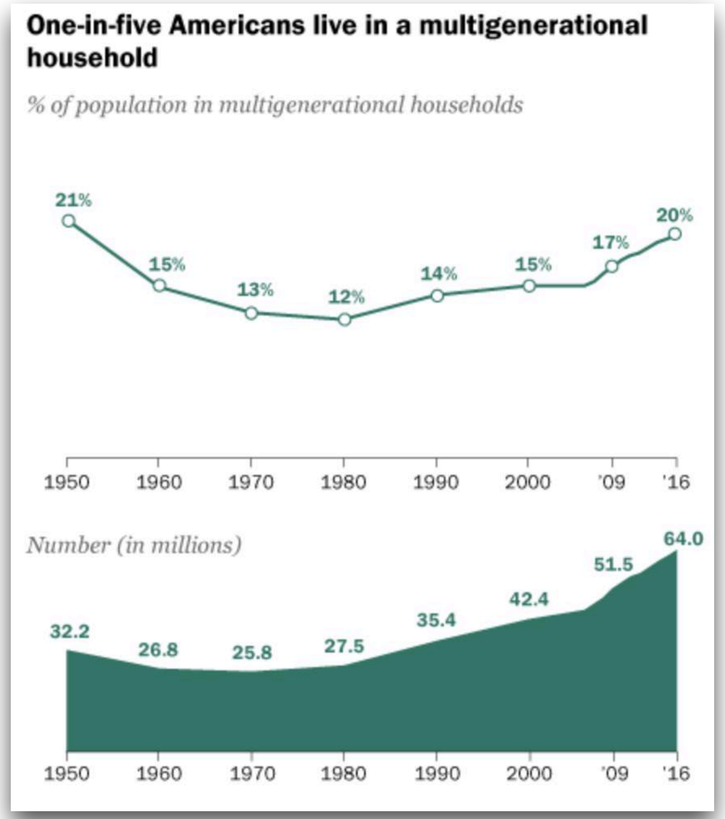
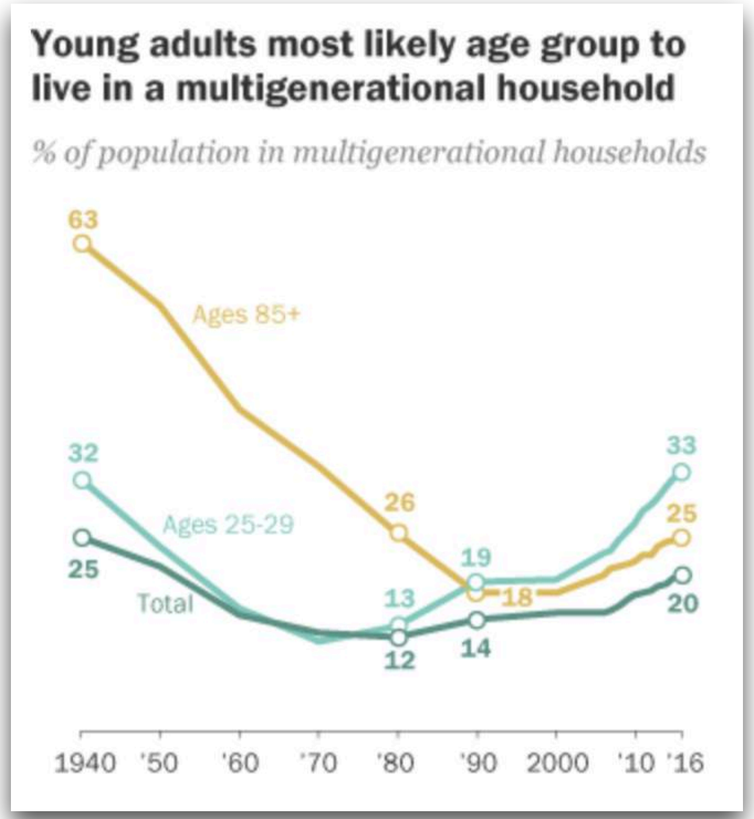
Many are living with roommates well into their 30s and 40s. A record number of people live in multigenerational households.





Pew

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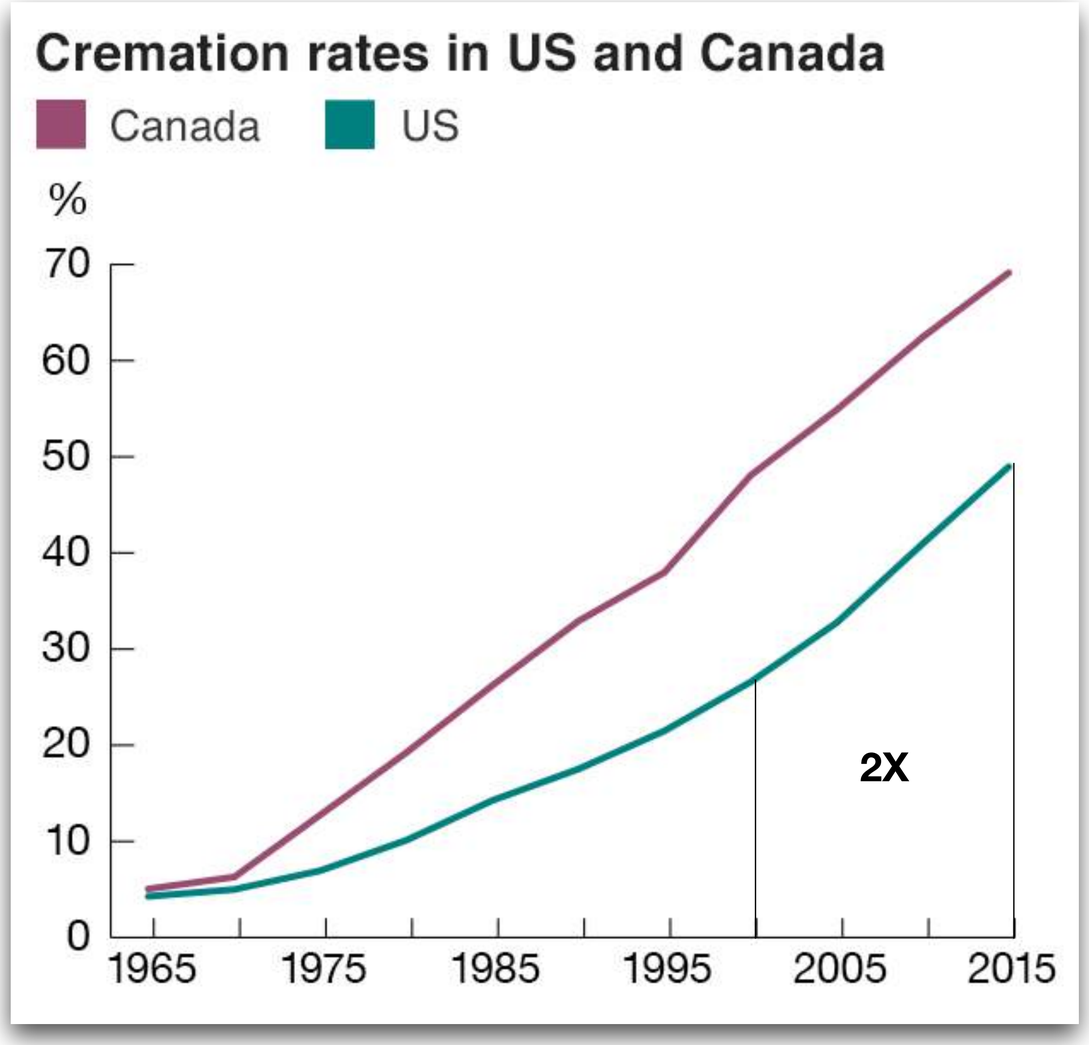
Even death does not take as much space as it used to…

- Price
- Flexibility (moving)
- Environmental concerns
- Faith & Religious Acceptance
- First step in other ways to remembers



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Source: BBC / CANA

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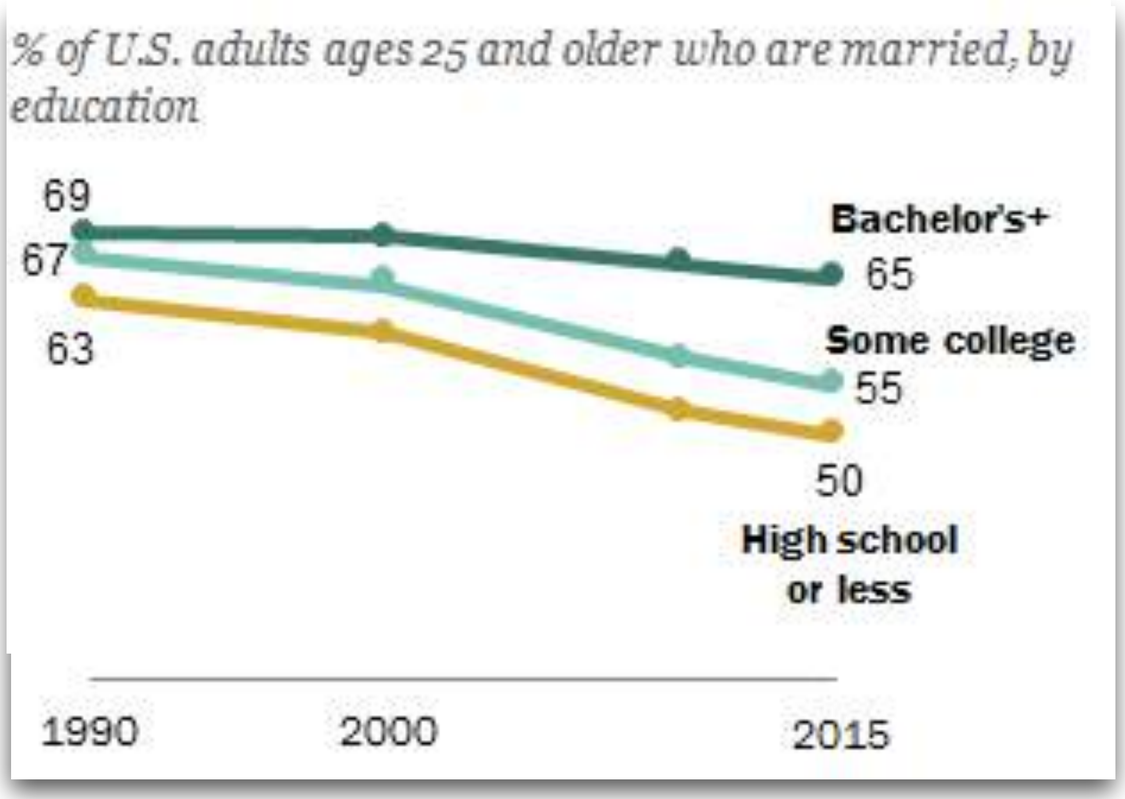
In the US, about 50% of adults are married, down from 72% in 1960. Marriage rates vary significantly with level of education.



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Pew

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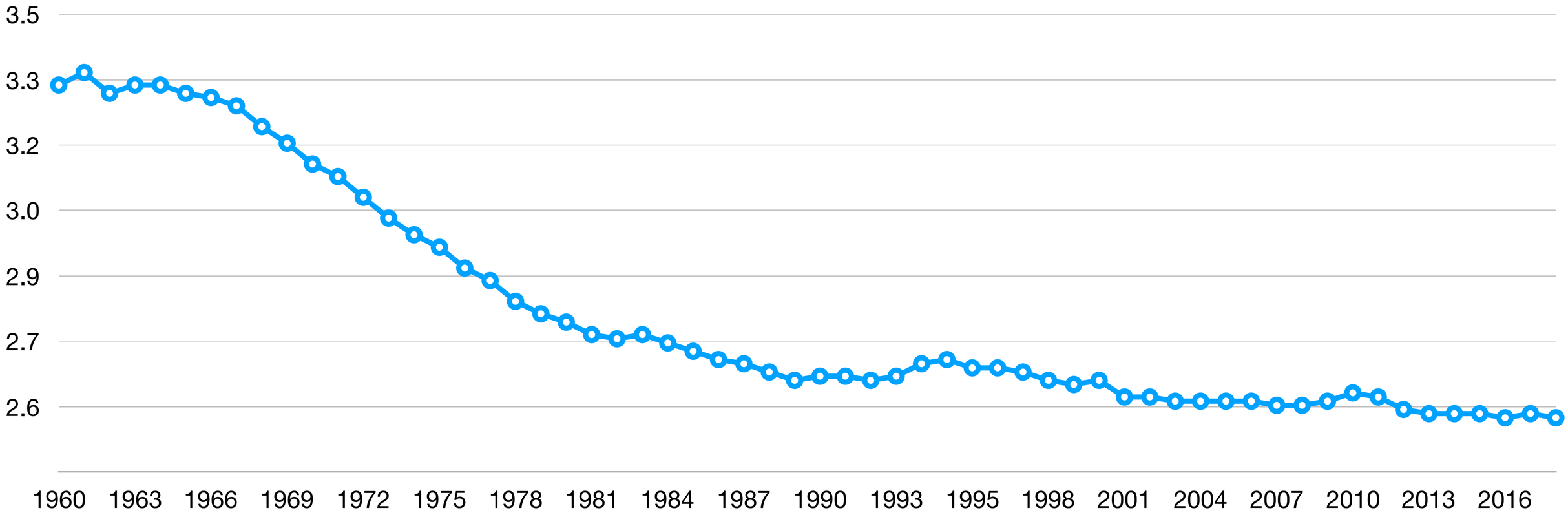
Which means the average number of people per household is declining — from 4 people 100 years ago to 2.5 today.



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Census.gov

May 2019

People’s professional lives are becoming more flexible

70%

Of organizations allow some sort of

Telecommuting

57%

Of organizations allow some sort of

Flextime

SHRM
SOCIETY FOR HUMAN RESOURCE MANAGEMENT

Source: SHRM

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A growing number of companies are set up as fully distributed organizations (no HQ)

AUTOMATTIC

1. Home

Work With Us

Want to make the web a better place for more than a billion people each mont

Open positions

HOW WE WORK

Choose your own adventure · Everyone works from the location they choose. We're spread out all over the world in more than 60 countries. We track about 70 percent of our projects on P2-themed WordPress.com blogs, 25 percent in private chat rooms, and the rest on Slack. Because of the geographic variance, we're active 24/7. We care about the work you produce, not just the hours you put in.

JOBS | *Stripe Dublin engineering hub. Image: Stripe*

Stripe to hire 100 engineers for its new remote engineering hub

by John Kennedy

4K VIEWS

…nts to put its engineers closer to its

…gineers for its fifth engineering hub but has

…os in Dublin, San Francisco, Seattle and

…ustomers, which is key to building great products'

– DAVID SINGLETON

in

Join our team and change the way digital products are designed.

WORK FROM ANYWHERE

HEALTH & WELLNESS

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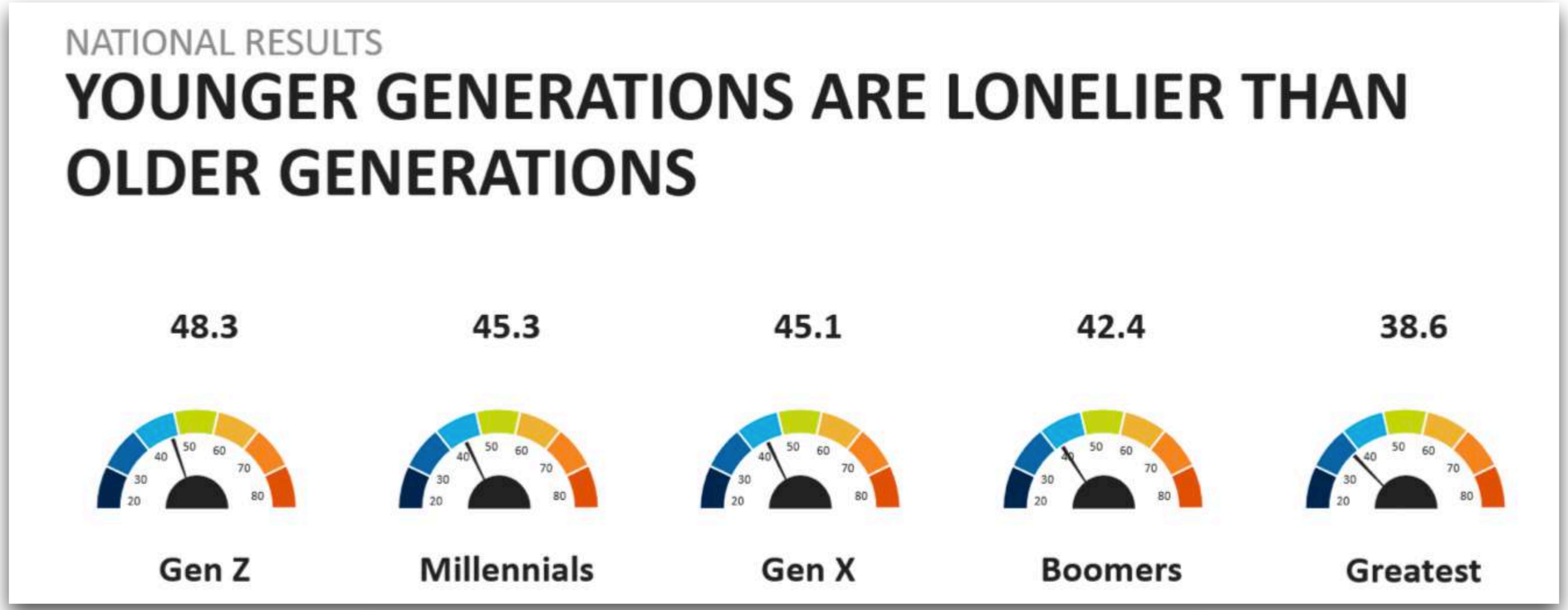
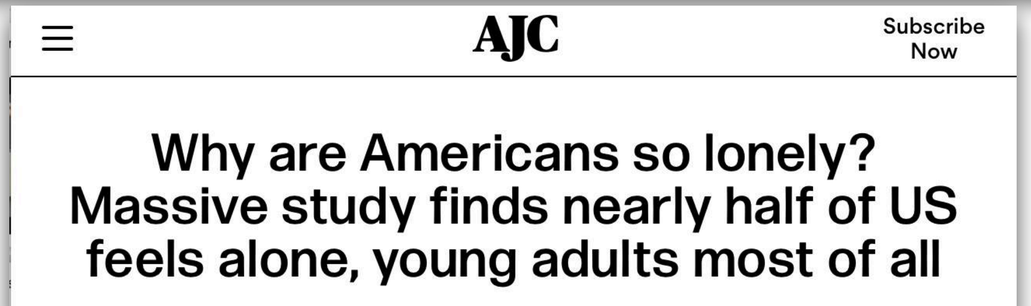
Scarcity of companionship and understanding, especially among younger generations




AJC

Subscribe Now

Why are Americans so lonely? Massive study finds nearly half of US feels alone, young adults most of all

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Cigna May 2019

Depression and anxiety are higher than ever, taking a toll on the lives of hundreds of millions of people and exacerbating other medical conditions.

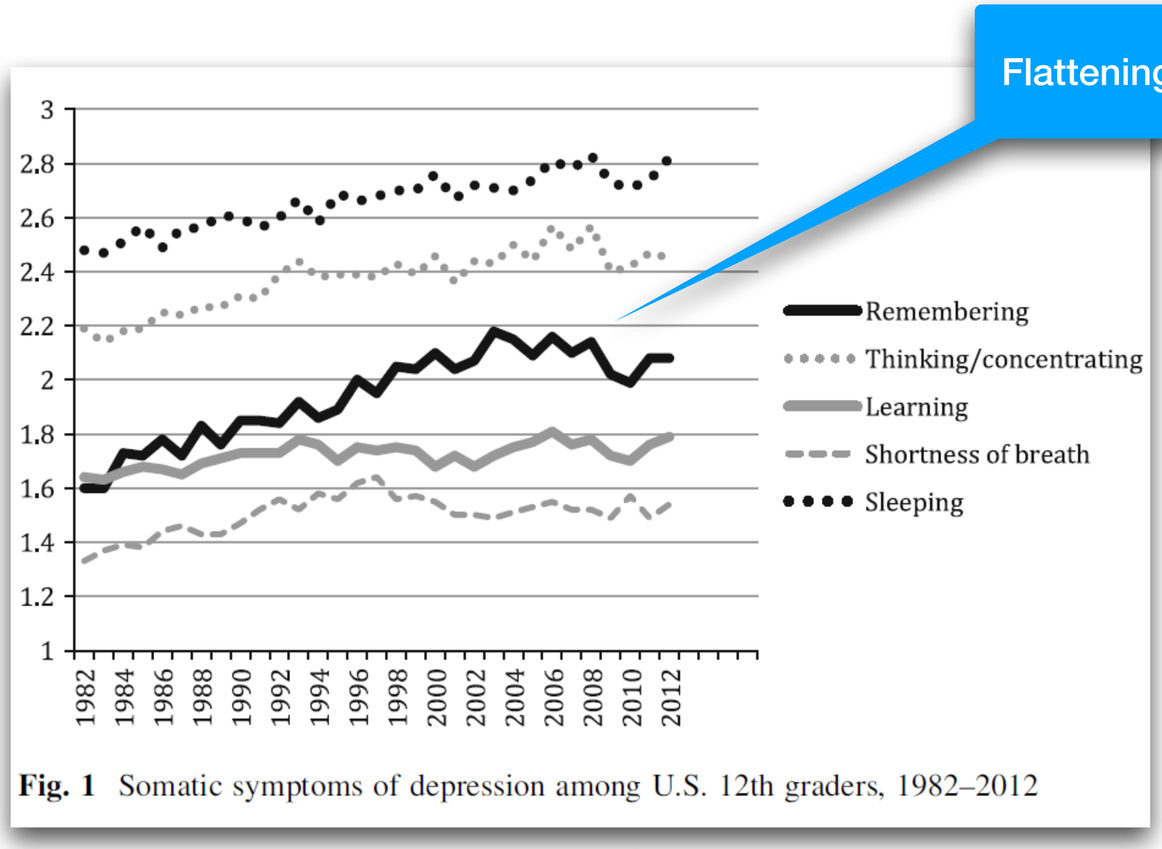
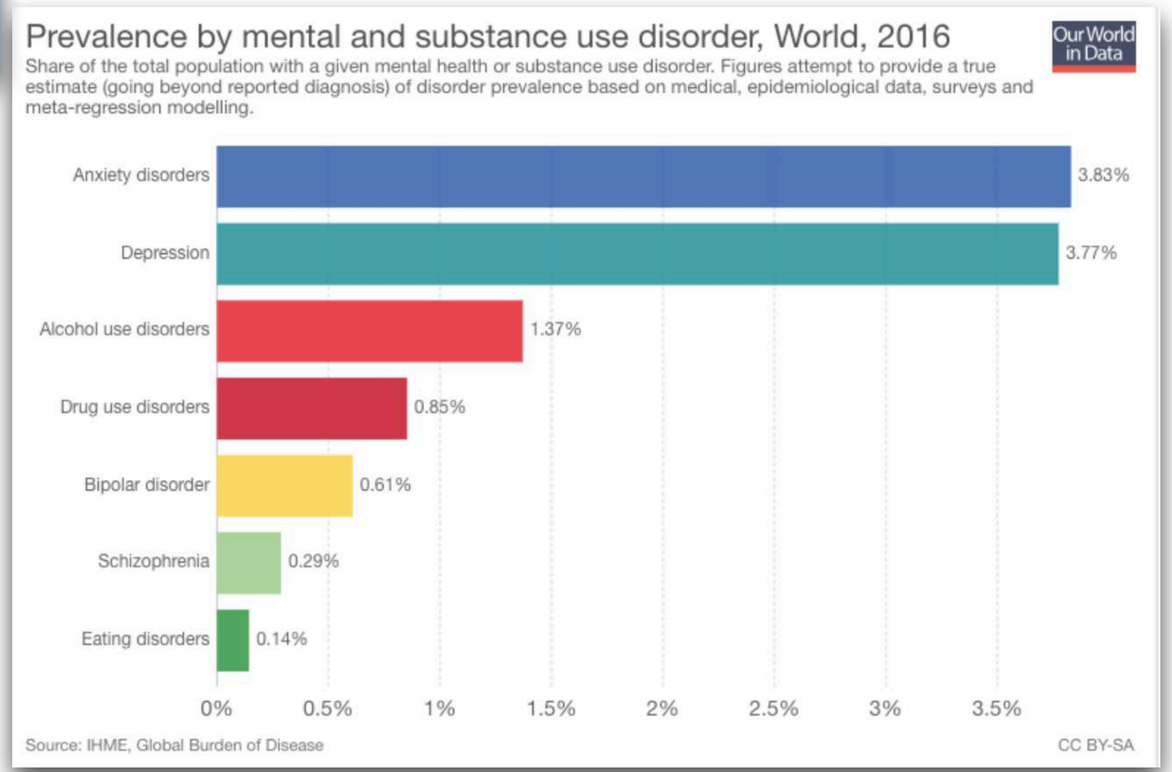


Fig. 1 Somatic symptoms of depression among U.S. 12th graders, 1982–2012

Social Indicators Research



World Economic Forum

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There is scarcity of meaning…

The We Company's guiding mission will be to elevate the world's consciousness. Living a conscious life means choosing to live proactively and with purpose. It means being a student of life, for life, where we accept that we are always growing and in a constant state of self-discovery, self-growth, and change.

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A scarcity of agency…

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Not just of things, but of experiences as well.

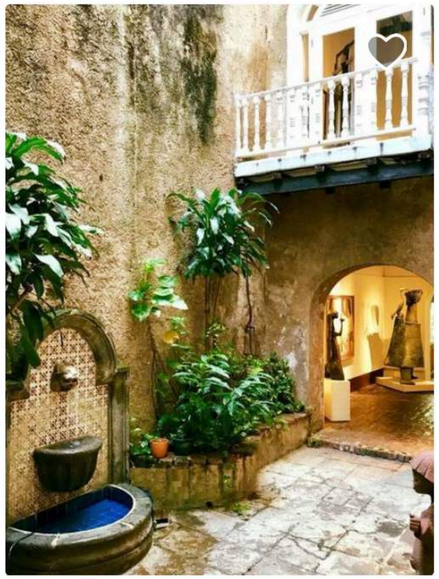
Anywhere · Experiences

Become a host Help Sign up Log in

Dates Guests Price Time of day

Top-rated experiences

Highly reviewed by locals and travelers worldwide

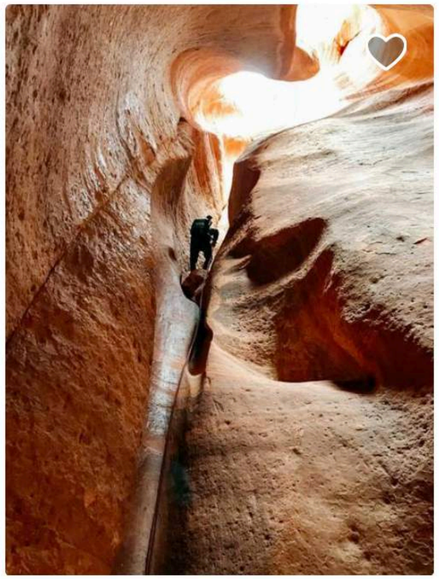


HISTORY WALK · SAN JUAN

Old San Juan Best Kept Secrets Tour

$25 per person · 2.5 hours · Snacks included

4.96 ★★★★★ 490

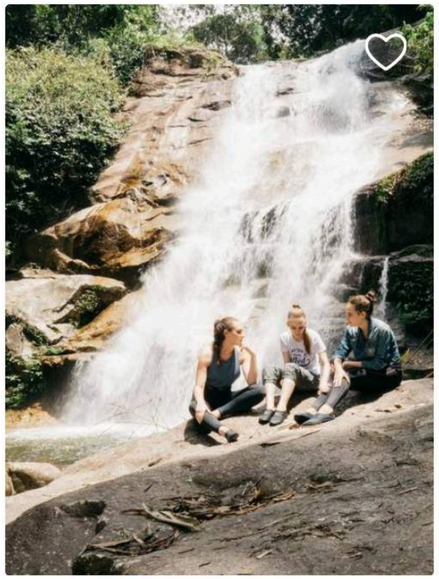


RAPPELLING · ORDERVILLE

Private East Zion Slot Canyon Tour

$139 per person · 4 hours · Transportation, Equipment included

4.99 ★★★★★ 214

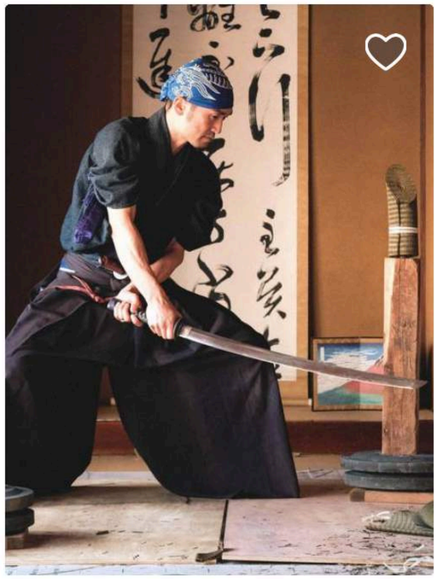


GUIDED HIKE · KUALA LUMPUR

Waterfalls Hiking + Batu Caves

$48 per person · 7 hours · Transportation, 1 meal, Drinks included

4.99 ★★★★★ 259



MARTIAL ARTS · TOKYO

Feeling Samurai Soul

$91 per person · 2 hours · Drinks, Snacks, Equipment included

4.98 ★★★★★ 504

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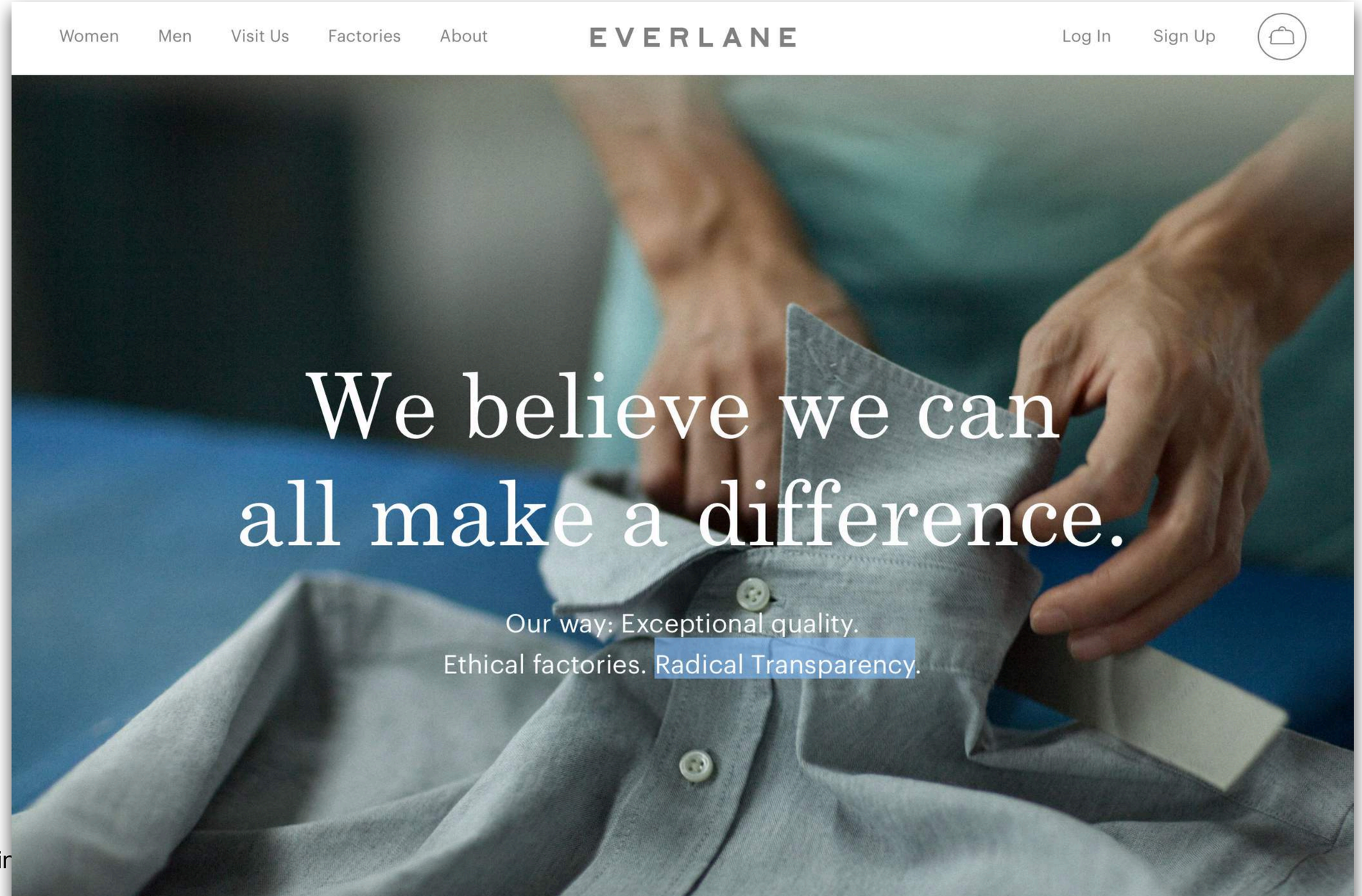
…and transparency into how things are made.



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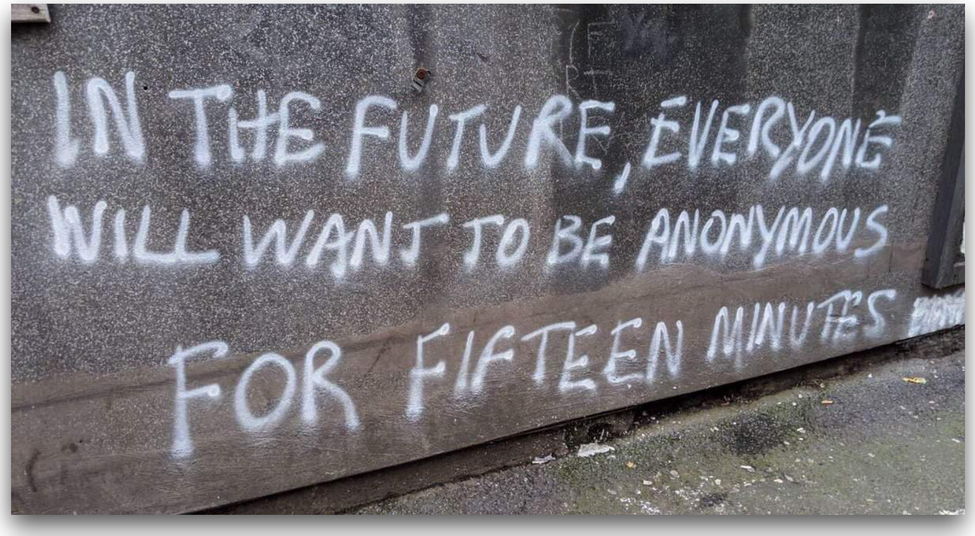
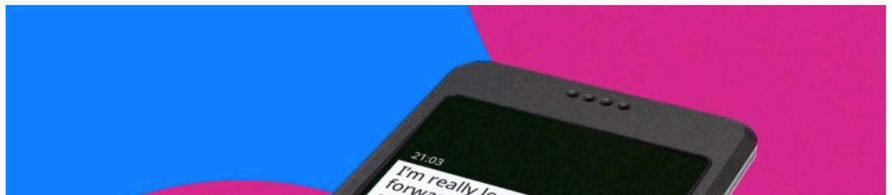
A scarcity of privacy.



09.18.18 | WANTED

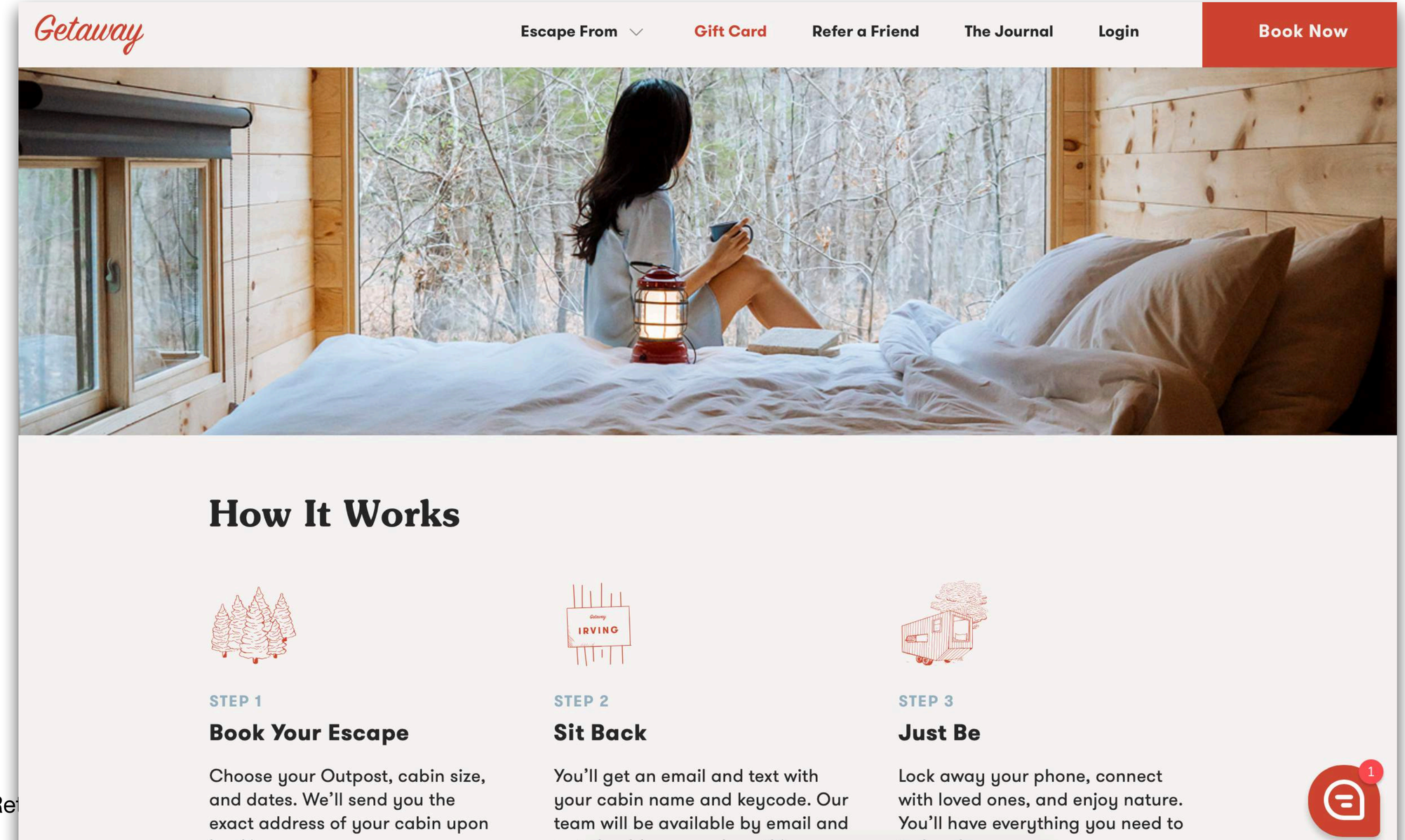
Want to toss your smartphone? The perfect dumbphone is here

Sure, we all want to disconnect, but who can afford to? The Jasper Morrison-designed Punkt MP02 has the simple appeal of a dumbphone–but still connects to the internet.



© D

And of dis-connectivity…



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