



We Are Under-Demolished But You Ain't Seen Nothin' Yet

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Outline

- The growing supply of older buildings
- The surprising resilience of older buildings →
 - *Why aren't they going away!*
- Commercial space trends →
 - *Some surprises!*
- The Amazonization of America
 - The growing oversupply of parking
- Driverless cars and the next billionaires



Born 1973

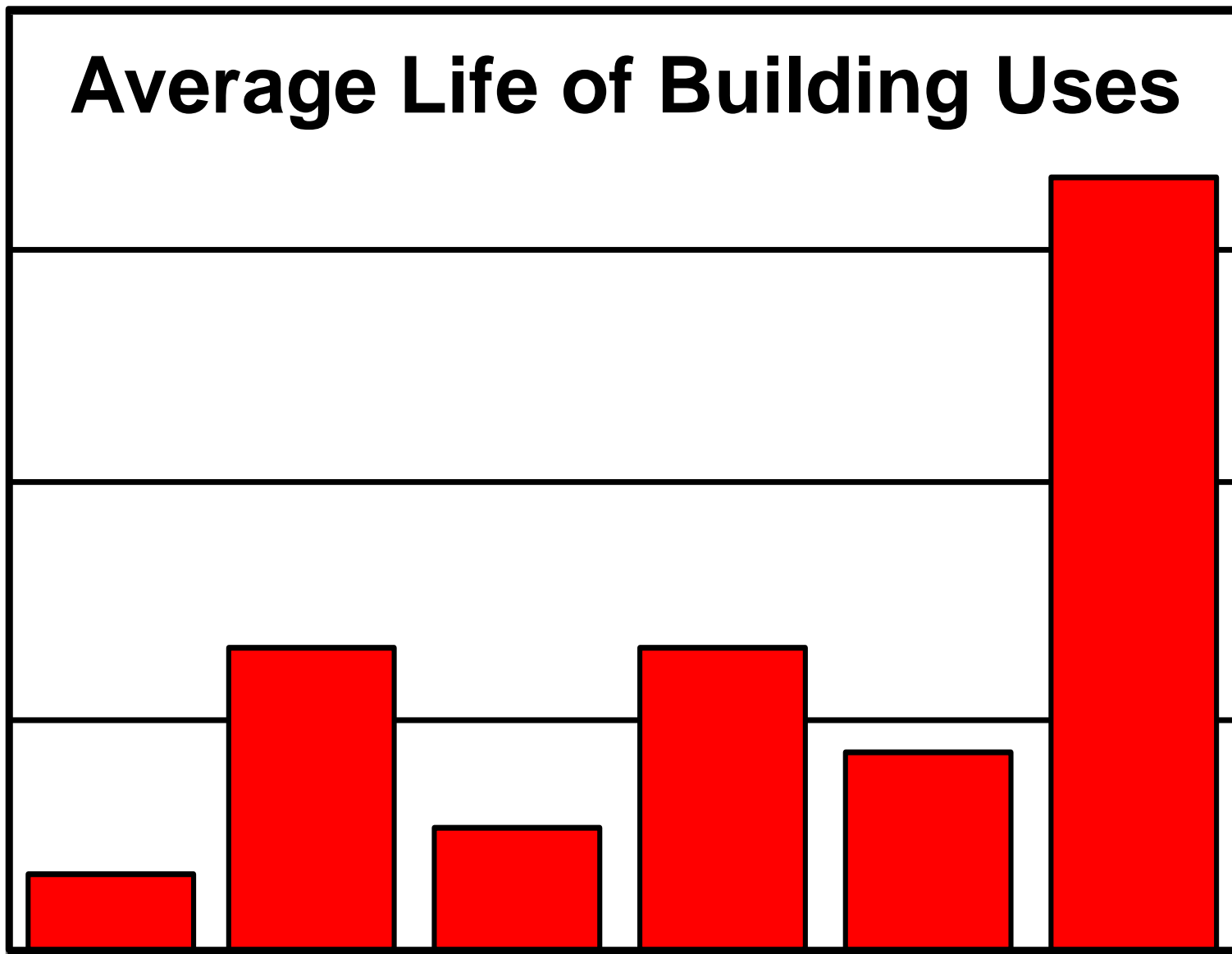


RIP 2018

Average Life of Building Uses

Years

200
150
100
50
0



Retail

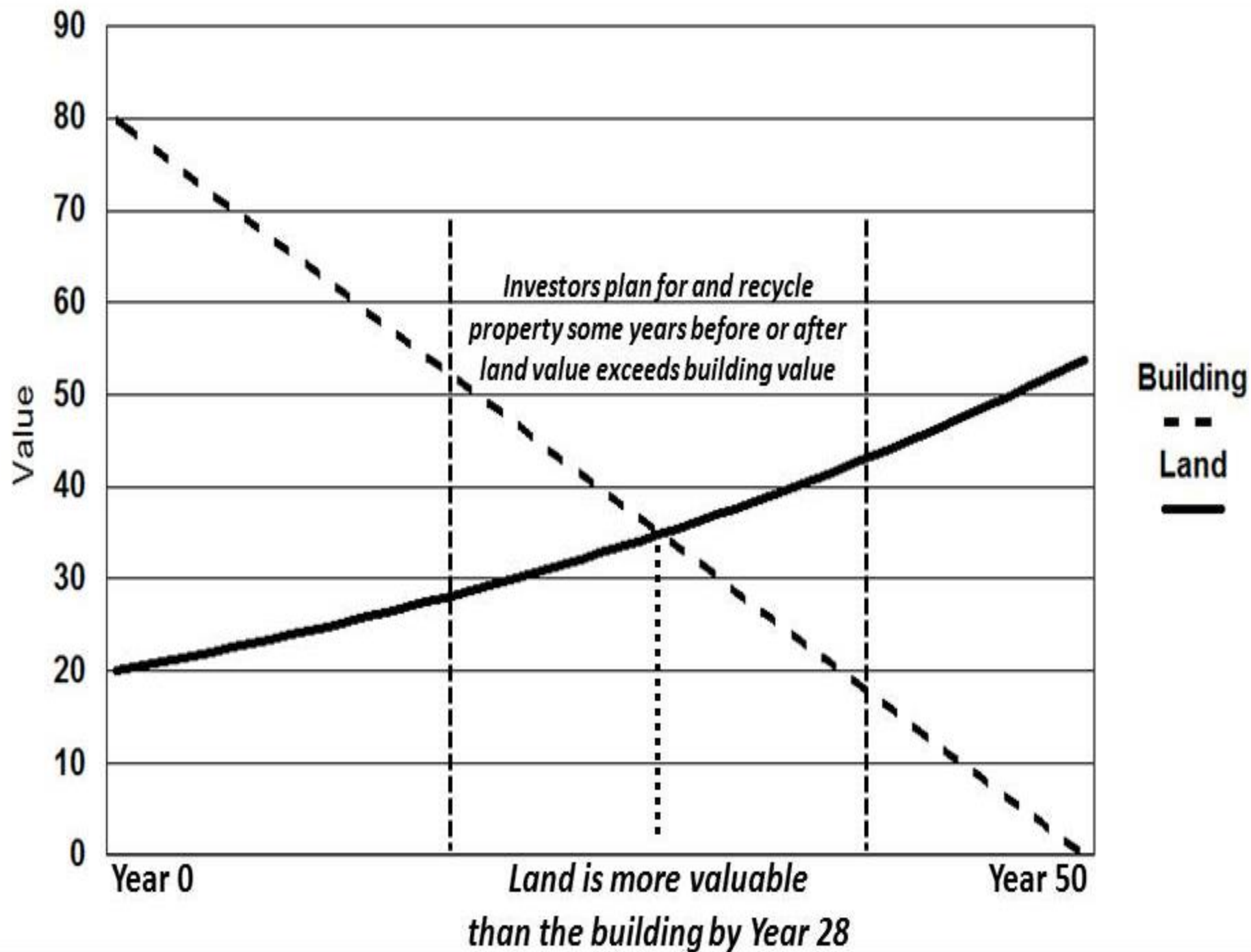
Office

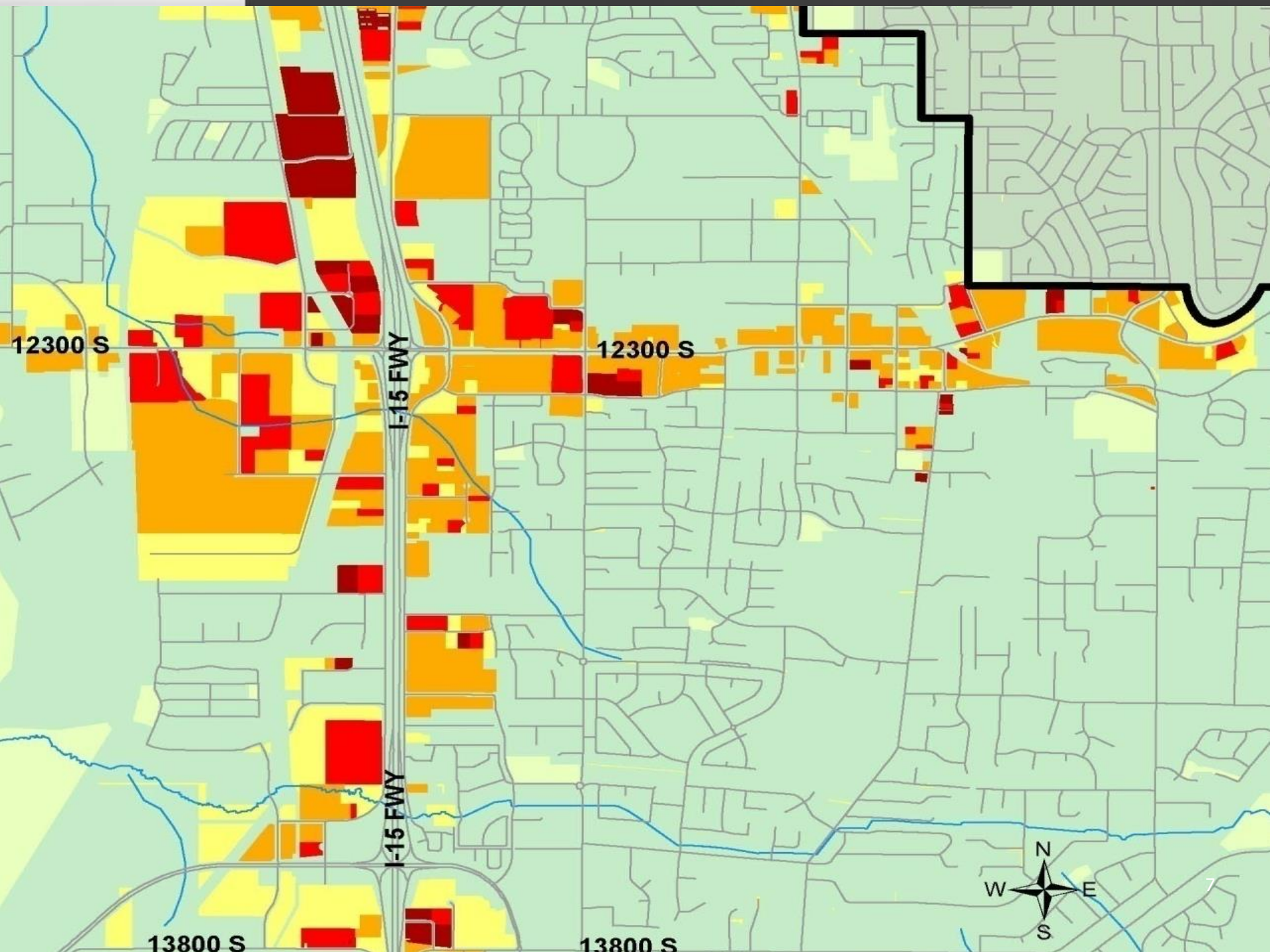
Warehouse

Education

Nonres.

Homes





The Growing Supply of Buildings 45+ Years Old

Metric	Buildings 1992 (thousands)	Buildings 2018 (thousands)	Change & Share
45+ Years Old	1,151	1,769	618
Total Buildings	4,806	5,557	751
Share	24%	32%	82%

Source: Commercial Buildings Energy Consumption Survey for 1992 and 2012
<https://www.eia.gov/consumption/commercial/> adjusted to 2018.

Dominated by Low-Rise Structures @ Low FAR

Metric	Buildings 1992 (thousands)	Buildings 2018 (thousands)	Change & Share
1-2 Floors	4,161	4,994	833
Total Buildings	4,806	5,557	751
Share	87%	90%	111%

Source: Commercial Buildings Energy Consumption Survey for 1992 and 2012
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***We Are Under-
Demolished!***



Resilience of Older Buildings

Why aren't they going away or being reused!

- Reason → **Economics of demolition** → sometimes land has negative value



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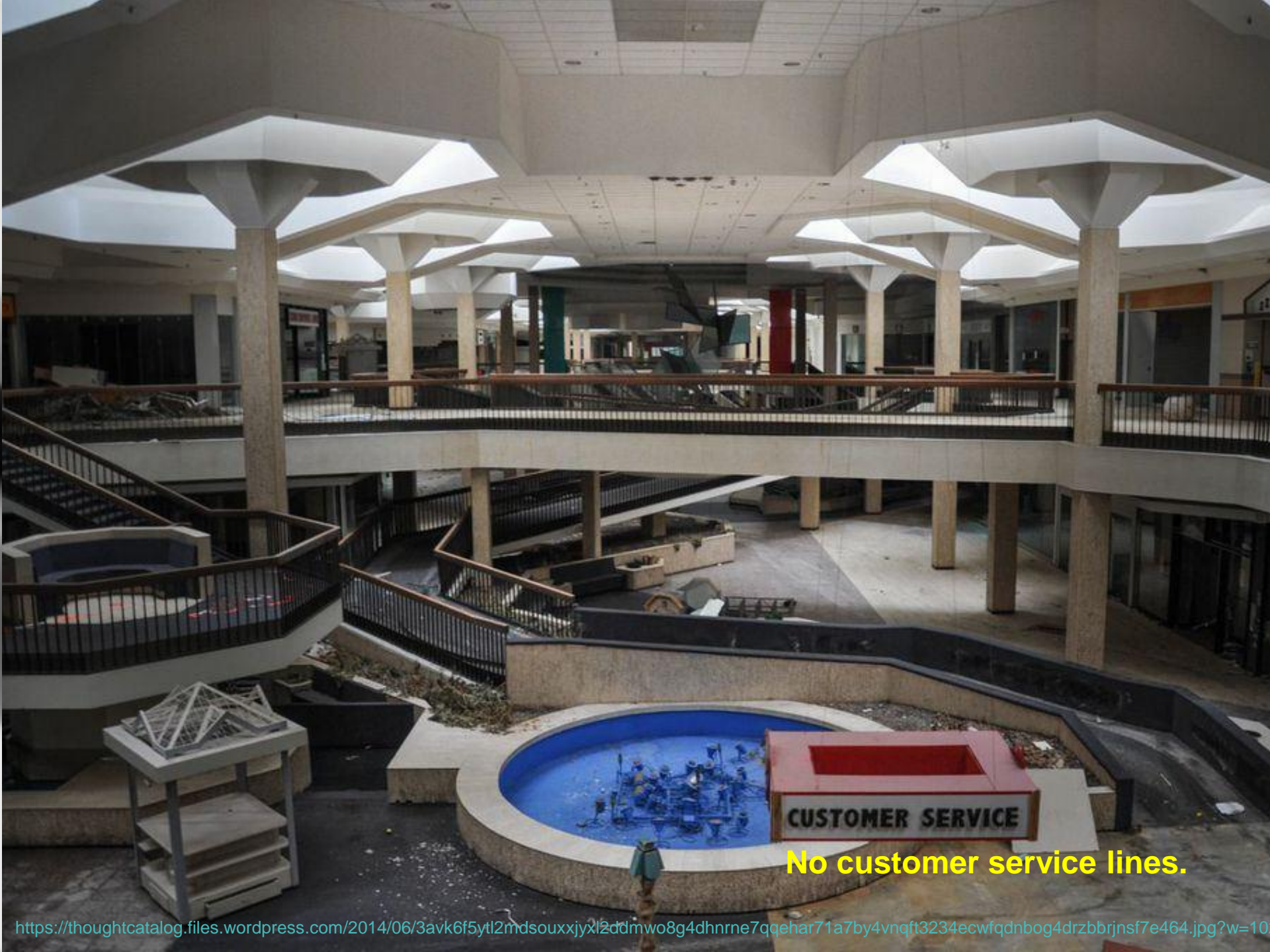
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- Reason → **Fast-buck** permitting because planning and building departments are rewarded for quick sprawl-based permitting over high cost, patient repurposing permitting.

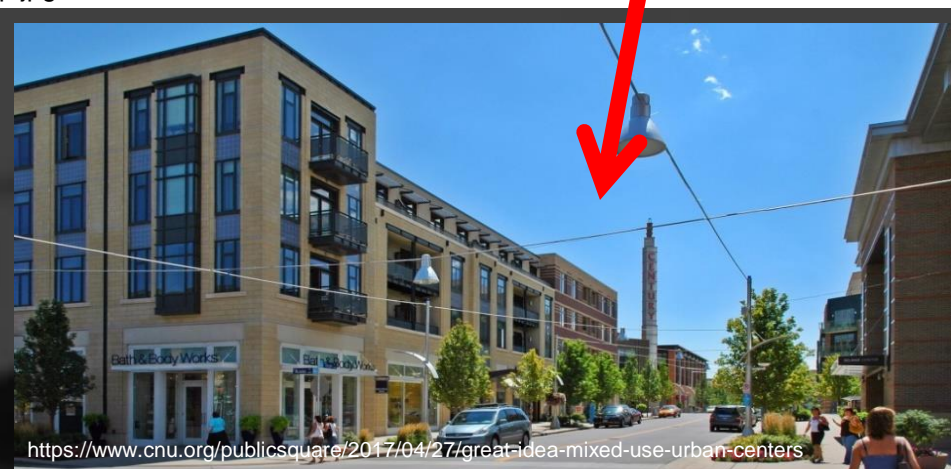
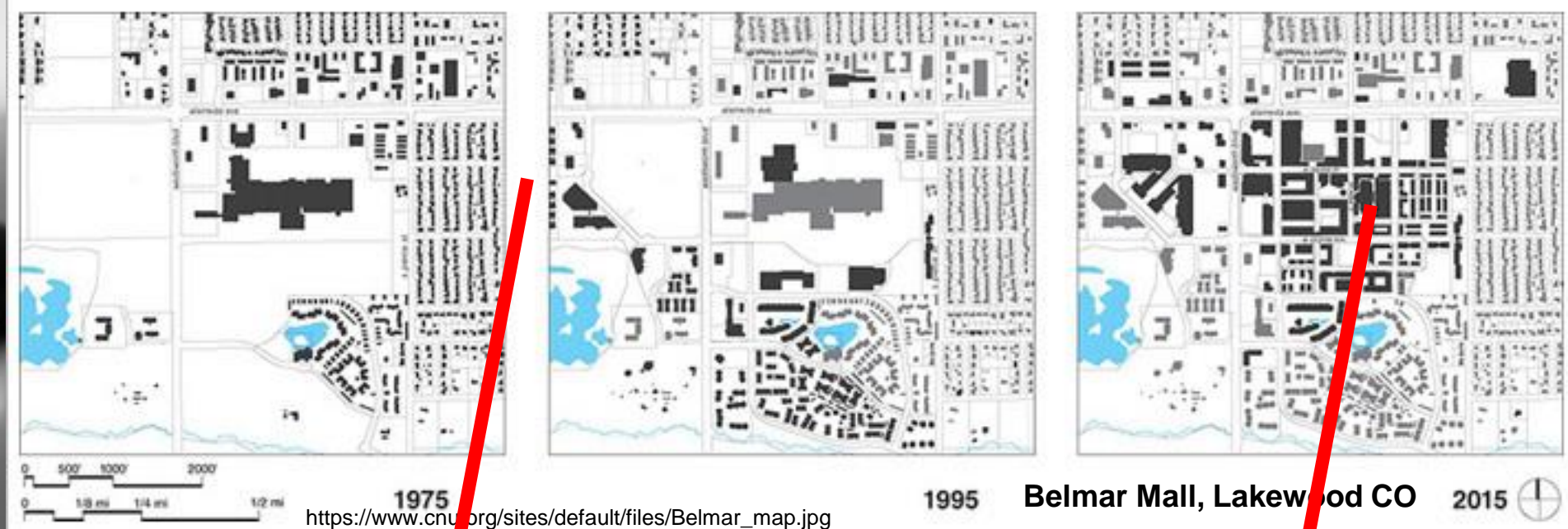


***We Aren't
Demolishing
Fast Enough!***



No customer service lines.

Sometimes you repurpose it



Sometimes you demolish it



https://upload.wikimedia.org/wikipedia/en/a/a2/Columbus_city_center_macys_exterior.JPG



<http://mckenzie news service.com/news/Columbus-Food-Truck-Festival/view.jpg>



<https://i.pinimg.com/originals/a8/3f/c3/a83fc345e06424a85a251e6859536fc4.jpg>



<https://i.pinimg.com/600x315/ba/87/5a/ba875a18b82ce5462c68ae89e75db295.jpg>



BUT WAIT...

NON-MALL Retail Trends

Source: http://www.macplus.net/local/cache-vignettes/L800xH600/ny_apple_store_inside-3b5c3.jpg

NON-MALL Commercial Space Per Capita, 2003-2015

Metric	2003	2015	Change
Total Square Feet per Capita	287.6	315.5	10%
Education	34.0	38.9	14%
Food Service	5.7	5.8	1%
Health Care	10.9	13.2	21%
Inpatient	6.6	7.5	15%
Outpatient	4.3	5.7	31%
Lodging	17.6	18.5	5%
Office	42.1	50.7	20%
Public Assembly	13.6	17.7	30%
Public Order and Safety	3.8	4.6	22%
Religious Worship	12.9	14.5	12%
Service	14.0	14.7	5%
Warehouse and Storage	34.7	41.4	19%
Other	6.0	6.4	6%

Sources: Population from Census; space derived from CBECS.

The Amazonization of America



Oversupply of Parking → Even on Black Friday



<http://www.11alive.com/article/life/shopping/your-real-time-black-friday-parking-traffic-guide/85-355856683>

**1 Billion Parking Spaces →
Nearly 1.5 times the size of ...**



Nonresidential Space Demand

Principal building activity	Per Capita Square Feet	Projected 2020 Sq.Ft. (millions)	Projected 2050 Sq.Ft. (millions)	Change Sq.Ft. (millions)
Population (millions)		335.1	426.4	91.4
Education	39.0	13,060	16,622	3,562
Food sales	4.0	1,336	1,700	364
Food service	5.8	1,941	2,470	529
Health care	13.2	4,434	5,643	1,209
<i>Inpatient</i>	7.6	2,533	3,224	691
<i>Outpatient</i>	5.7	1,900	2,419	518
Lodging	18.6	6,217	7,912	1,696
Mercantile	36.1	12,090	15,387	3,297
<i>Retail (other than mall)</i>	17.3	5,804	7,387	1,583
<i>Enclosed and strip malls</i>	18.8	6,285	7,999	1,714
Office	50.8	17,022	21,664	4,642
Public assembly	17.7	5,932	7,550	1,618
Public order and safety	4.6	1,537	1,956	419
Religious worship	14.5	4,863	6,189	1,326
Service	14.7	4,941	6,288	1,347
Warehouse and storage	41.6	13,954	17,760	3,806
Other	6.4	2,136	2,719	583
Manufacturing	33.4	11,194	14,247	3,053
Total	300.4	100,653	128,105	27,452

Source: Arthur C. Nelson based on Commercial and Manufacturing Energy Consumptions Surveys, USDOE.

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Replaced + New Space

Analysis Step	Calculation
2020 Inventory (millions), estimate	100,653
Average Lifespan, years	50
Average annual loss (millions)	2,013
Total space replaced, 2020-2050 (millions)	60,390
Percent of 2020 Inventory	60%
Net new space added 2020-2050 (millions)	27,452
Total square feet built/repurposed 2020-2050 (millions)	87,842
Percent of 2020 inventory	88%
Average building cost per square foot*	\$200
Total nonresidential investment 2020-2050 (billions)	\$17,568

*Includes demolition, onsite prep, offsite work, infrastructure

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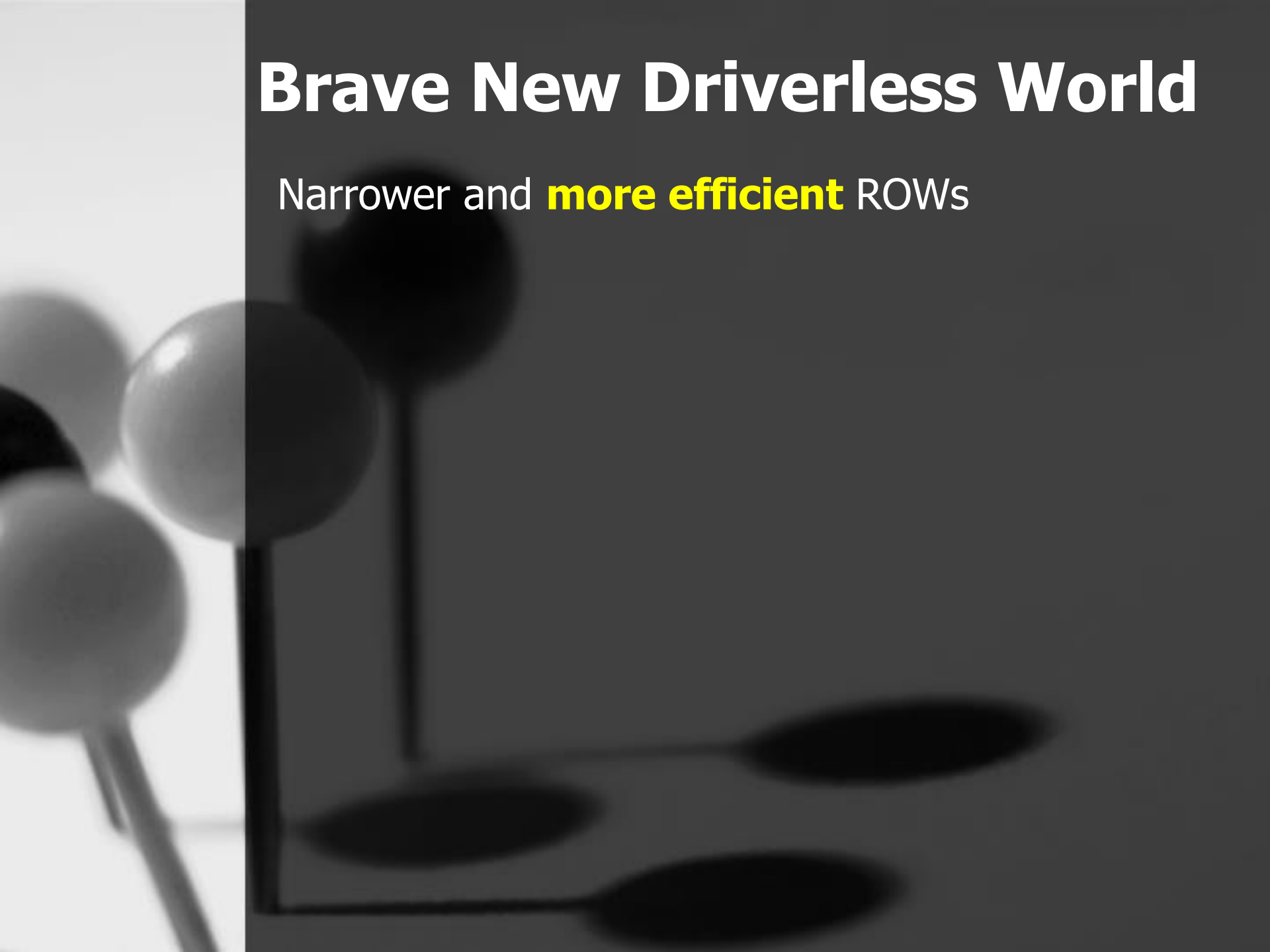
**But You Ain't
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https://www.bloomberg.com/features/2015-gm-super-cruise-driverless-car/img/current_500pxwide.jpg

Brave New Driverless World

Narrower and **more efficient** ROWs





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Increased **demand for drop-off** areas that will reshape streets



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MASSIVE Excess Parking

New Parking Paradigm





Driverless Cars and Commercial Real Estate

- **Parking will be uncoupled** from buildings

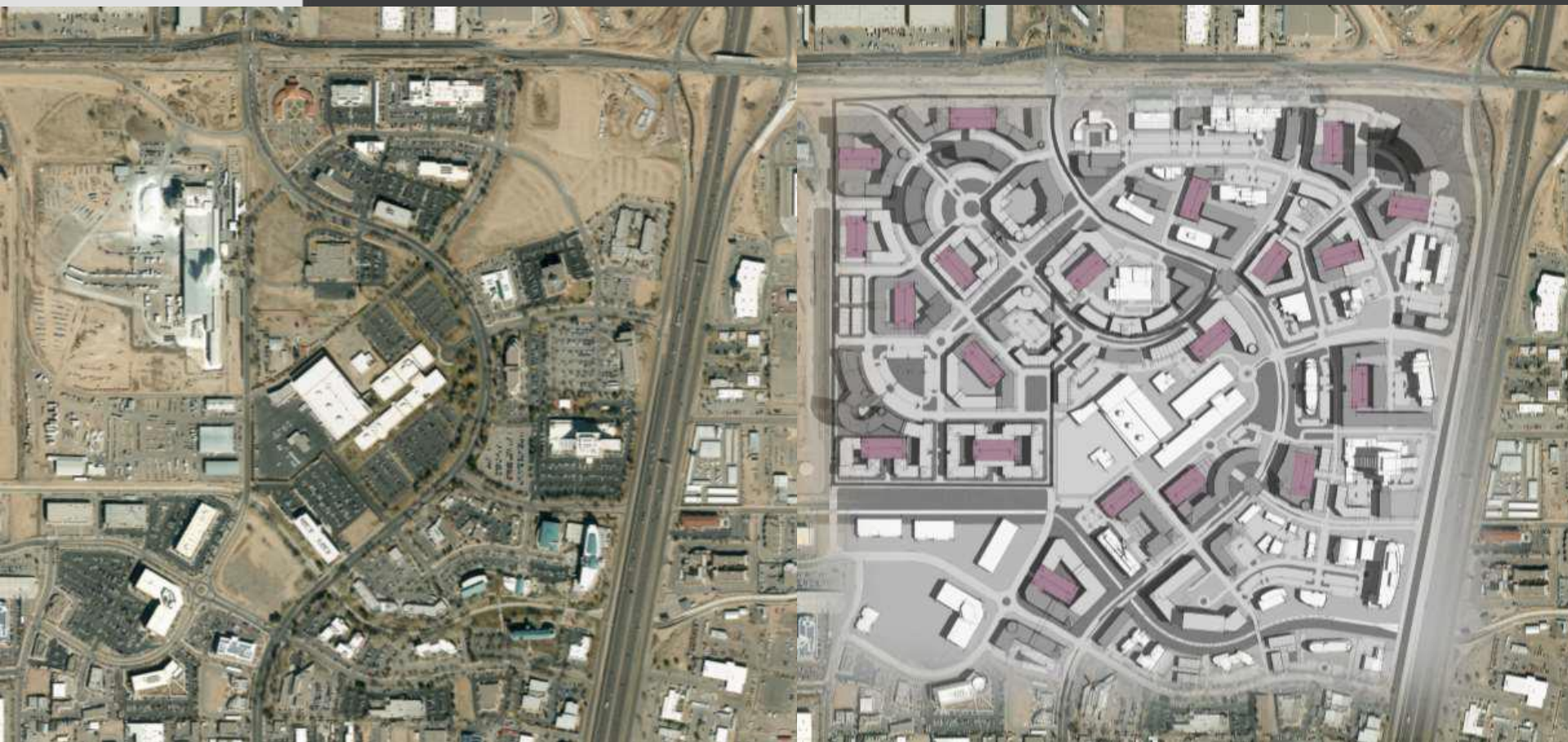


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- **Unknown new uses for old spaces** will be invented.



1980

Building Area→ 3.6 m sf
Floor Area Ratio→ 0.3 FAR
Parking→ 14,000 surface
Residential→ 0 units

2040

Building Area→ 12.0 m sf
Floor Area Ratio→ 1.0 FAR
Parking→ 8,000 total
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- = **\$16 trillion** investment on excess parking lots



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- Opportunity → **Reverse exactions** so that repurposed development generating net new fiscal revenues **are rewarded**





https://www.jaxdailyrecord.com/sites/default/files/styles/sliders_and_planned_story_image_870x580/public/136800_standard.jpeg?itok=0jaE0ztm

The New Promised Land