

Technology + Innovation:

New pieces of the real estate puzzle



Steve Weikal
MiT REILab
MiT Center for Real Estate

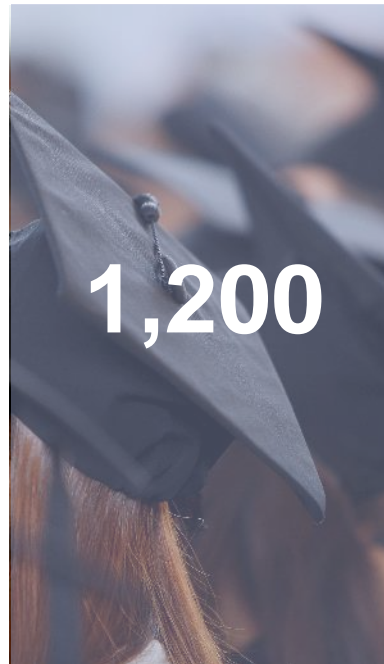
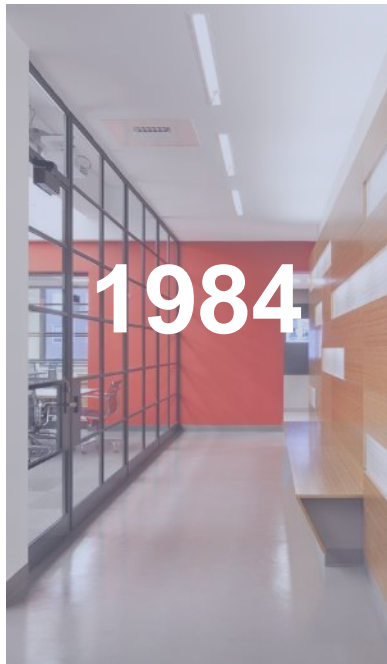
RECENT TRENDS

+11,000.00

The image features a dark, multi-layered background with various financial data visualizations. In the foreground, there are several overlapping candlestick charts and line graphs. The colors used include orange, green, blue, and purple. A prominent dashed white line trends upwards from left to right. In the center, the text '+11,000.00' is displayed in a light blue font. The overall aesthetic is technical and data-driven.



ABOUT THE CENTER



BentallGreenOak

bxp Boston Properties

CARR PROPERTIES

Colliers INTERNATIONAL

equity international

AEW

GOODWIN

Gensler

First American Title Insurance Company

Fidelity INVESTMENTS

EY

T-Mobile

Hines

INNOVUS

INVESTBRIDGE CAPITAL

JIAMING INVESTMENT 嘉铭投资

JLL

view

PROLOGIS

NEW ENGLAND DEVELOPMENT

MERCK

MARCUS PARTNERS

LaSalle INVESTMENT MANAGEMENT

xymax

REAL CAPITAL ANALYTICS

re-pie real estate property investment equity

SKANSKA

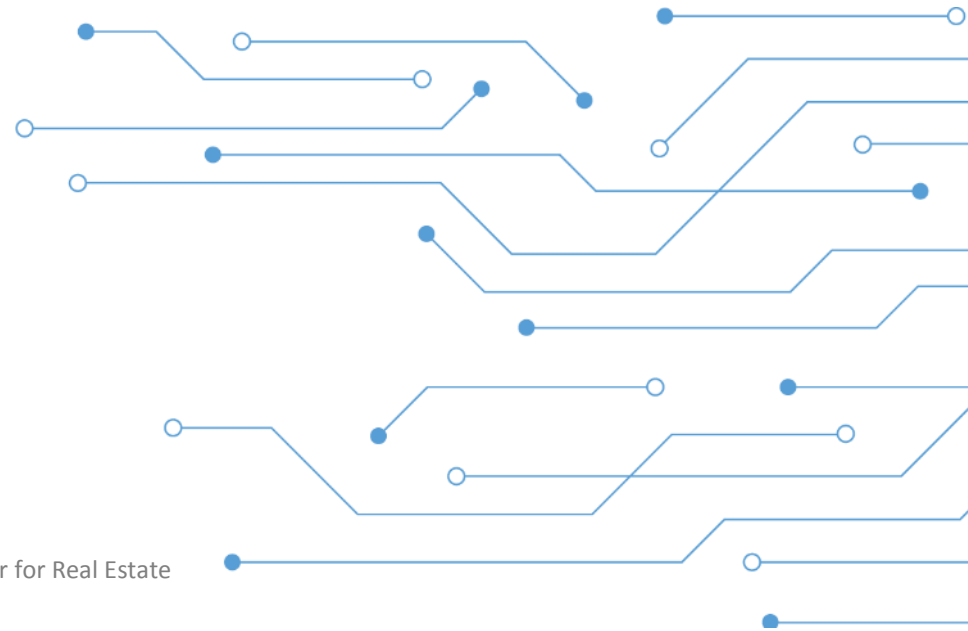
TA REALTY

TAURUS



RECENT TRENDS

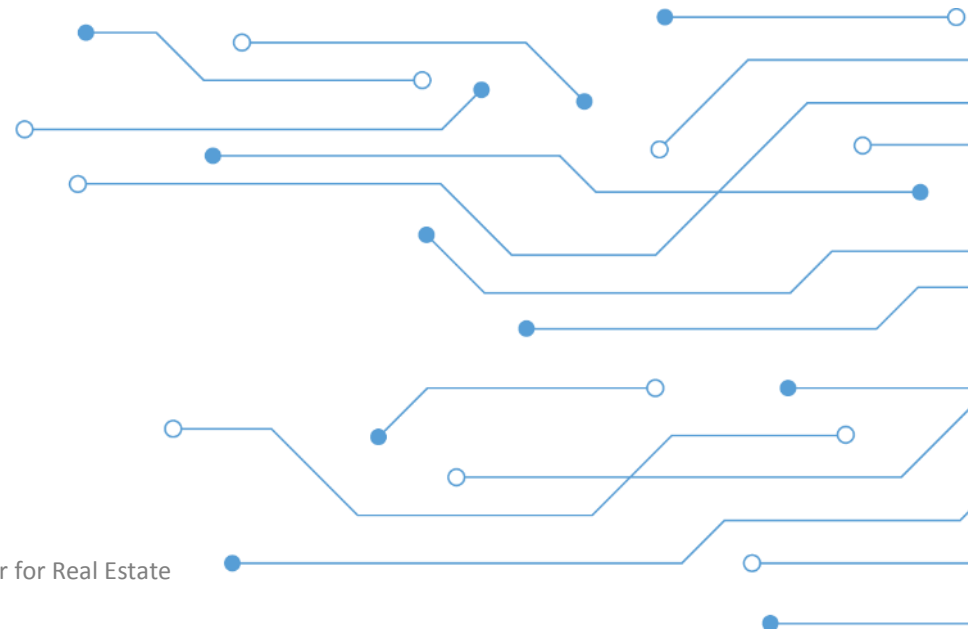
- Startup Tsunami





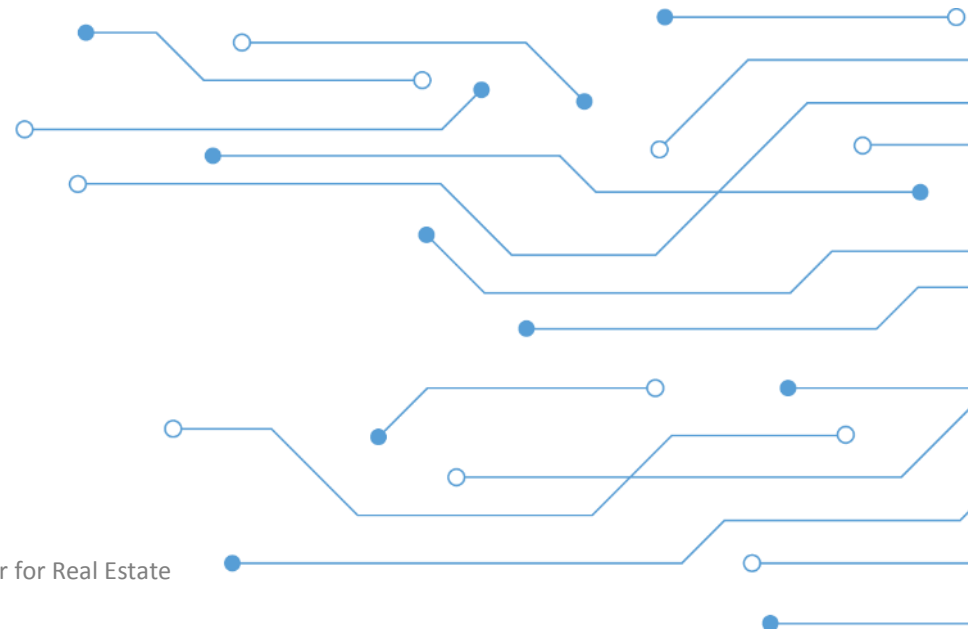
RECENT TRENDS

- Startup Tsunami
- Real Estate Fracking 3.0



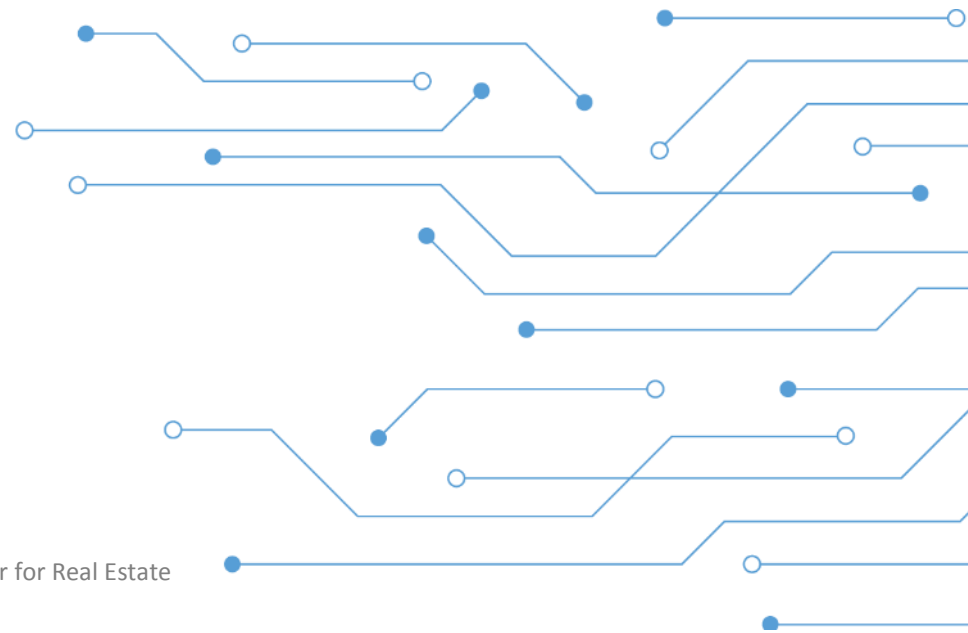
RECENT TRENDS

- Startup Tsunami
- Real Estate Fracking 3.0
- Real Estate is Getting Smarter



RECENT TRENDS

- Startup Tsunami
- Real Estate Fracking 3.0
- Real Estate is Getting Smarter
- **Construction Goes Digital**



Startup Tsunami



4.014

5.472

6.645

8.670

9.538

9.87

N.23

E.57

5.792

H.4

E.78

N.45

H.5

N.67

E.89

H.7

H.6

N.88

H.8

N.91



Startup Tsunami



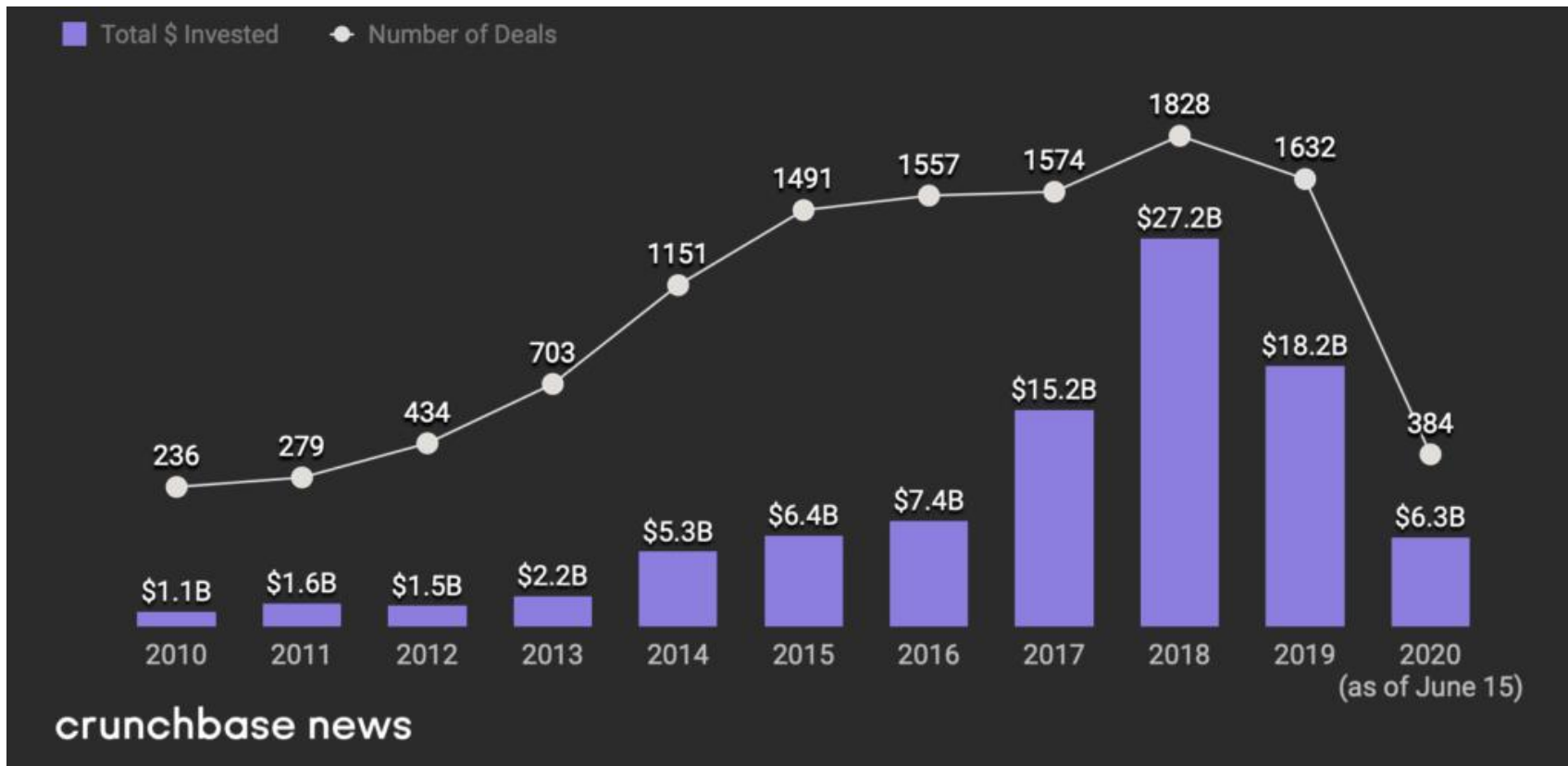


Startup Tsunami



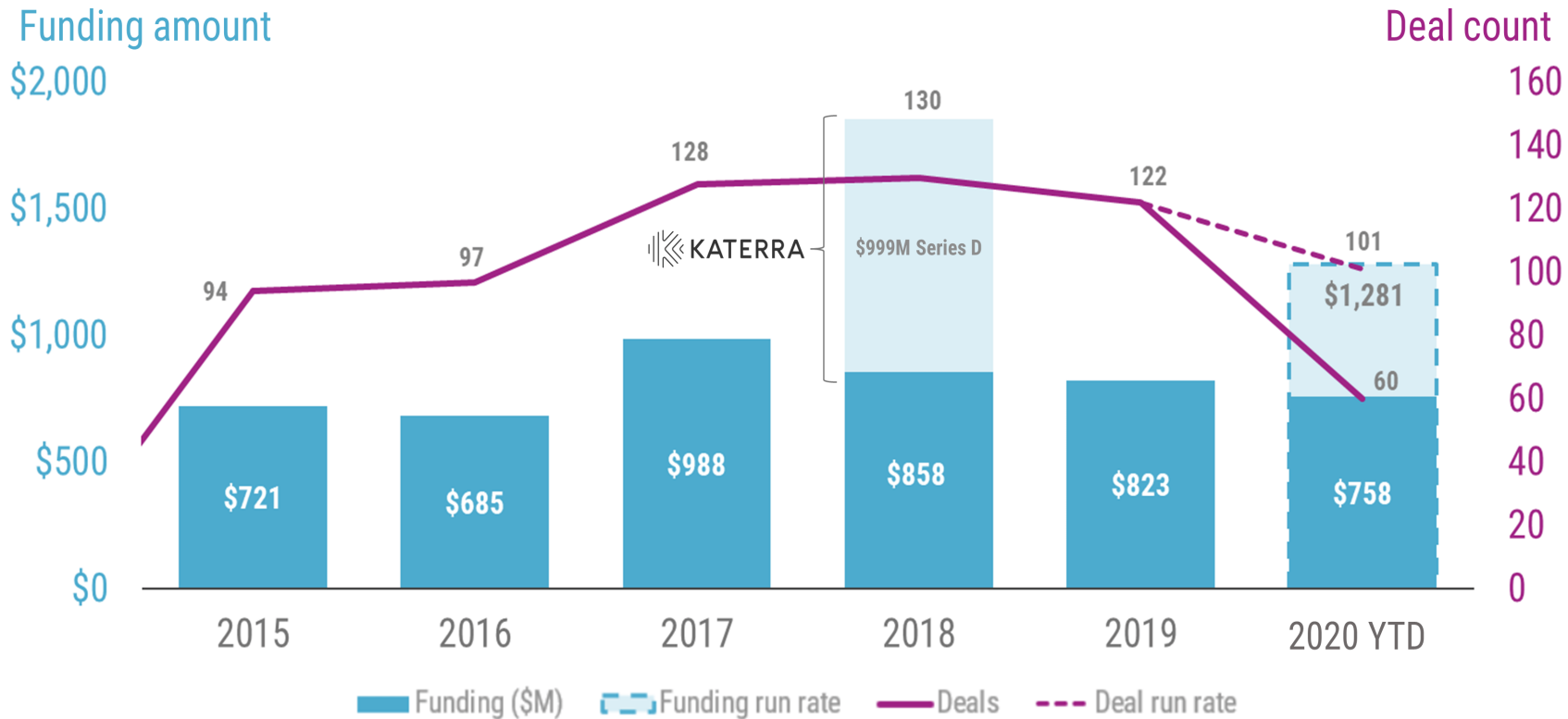


Real Estate Tech





Construction Tech



Note: 2018 funding figure excludes a \$999M Series D round to Katerra



Startup Tsunami

- Fifth Wall – Hines, British Land, Mitsubishi Estate, CBRE, Prologis,
- RETV, Simon Ventures, Brick & Mortar
- Brookfield, CEMEX, Grosvenor Hill, JLL Spark



Startup Tsunami

- Fifth Wall – Hines, British Land, Mitsubishi Estate, CBRE, Prologis,
- RETV, Simon Ventures, Brick & Mortar
- Brookfield, CEMEX, Grosvenor Hill, JLL Spark
- LatAm - \$4.6 billion VC dollars; ~8% Colombia according to LAVCA
- Kaszek Ventures, ALLVP



Startup Tsunami

- Lots of dry powder
- Focus on solving real problems; nice-to-have shifts to must-have
- Many won't survive, many will be created
- Historically, some great companies created during tough times



“VCs are funding the R&D for the real estate industry.” – Brad Greiwe, Fifth Wall

Real Estate Fracking





“Using technology to break real estate use apart and put it back together into something more productive . . . unlocking overlooked asset value.”

– Prof. Dennis Frenchman, MIT



Real Estate Fracking





Real Estate Fracking





Real Estate Fracking



appear [here]



Real Estate Fracking



appear [here]





Real Estate Fracking





Real Estate Fracking – the COVID effect



Real Estate Fracking – the COVID effect

- Mondelez, Barclays, Nationwide, Facebook, Twitter, Coinbase, Shopify, Morgan Stanley announce permanent shift to remote



Real Estate Fracking – the COVID effect

- Mondelez, Barclays, Nationwide, Facebook, Twitter, Coinbase, Shopify, Morgan Stanley announce permanent shift to remote
- Uses converge





Real Estate Fracking – the COVID effect

- Mondelez, Barclays, Nationwide, Facebook, Twitter, Coinbase, Shopify, Morgan Stanley announce permanent shift to remote
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- *“Hotels are pitching their rooms as temporary offices for workers craving peace and privacy” – Wall Street Journal*

Real Estate Fracking – the COVID effect

- Mondelez, Barclays, Nationwide, Facebook, Twitter, Coinbase, Shopify, Morgan Stanley announce permanent shift to remote
- Uses converge
- *“Hotels are pitching their rooms as temporary offices for workers craving peace and privacy”* – Wall Street Journal

- Virtual Office





“The future of work is dynamic; going beyond just distributed and remote work.”

– Armen Vartanian, Okta

Real Estate is Getting Smarter



```
mirror_mod.use  
mirror_mod.use  
mirror_mod.use  
elif_operation ==  
mirror_mod.use  
mirror_mod.use  
mirror_mod.use  
#selection at  
mirror_ob.select=  
modifier_ob.select
```




90% of the data in the world today has been created in the last two years alone. – IBM

90% of the data in the world today has been created in the last two years alone. – IBM

[The digital universe] is doubling in size every two years. – EMC/IDC



Getting Smarter: office

- User engagement



EQUIEM



Office App



CrowdComfort

Getting Smarter: office

- User engagement
- Space optimizers



EQUIEM



Office App



Crowd**Comfort**



Density



saltmine

Getting Smarter: office

- User engagement
- Space optimizers
- Market Data



EQUIEM



Office App



CrowdComfort



Density



saltmine

SOLILI



Getting Smarter: office

- User engagement
- Space optimizers
- Market Data
- Valuation



EQUIEM



Office App



CrowdComfort



Density



saltmine

SOLILI



Getting Smarter: residential

- Transactions



Getting Smarter: residential

- Transactions
- Mixed reality







Koffing / CP427







No Special effects or compositing was used in the production of this video.



Getting Smarter: residential

- Transactions
- Mixed reality
- iBuyers





or
te



Construction is Going Digital

Real Estate

Going Digital

- Design

PARAFIN

 SPACEMAKER



Key Count	239
Parking	125
Budget	\$60M
Cap Rate	9.52%

Going Digital

- Design
- Delivery

PARAFIN

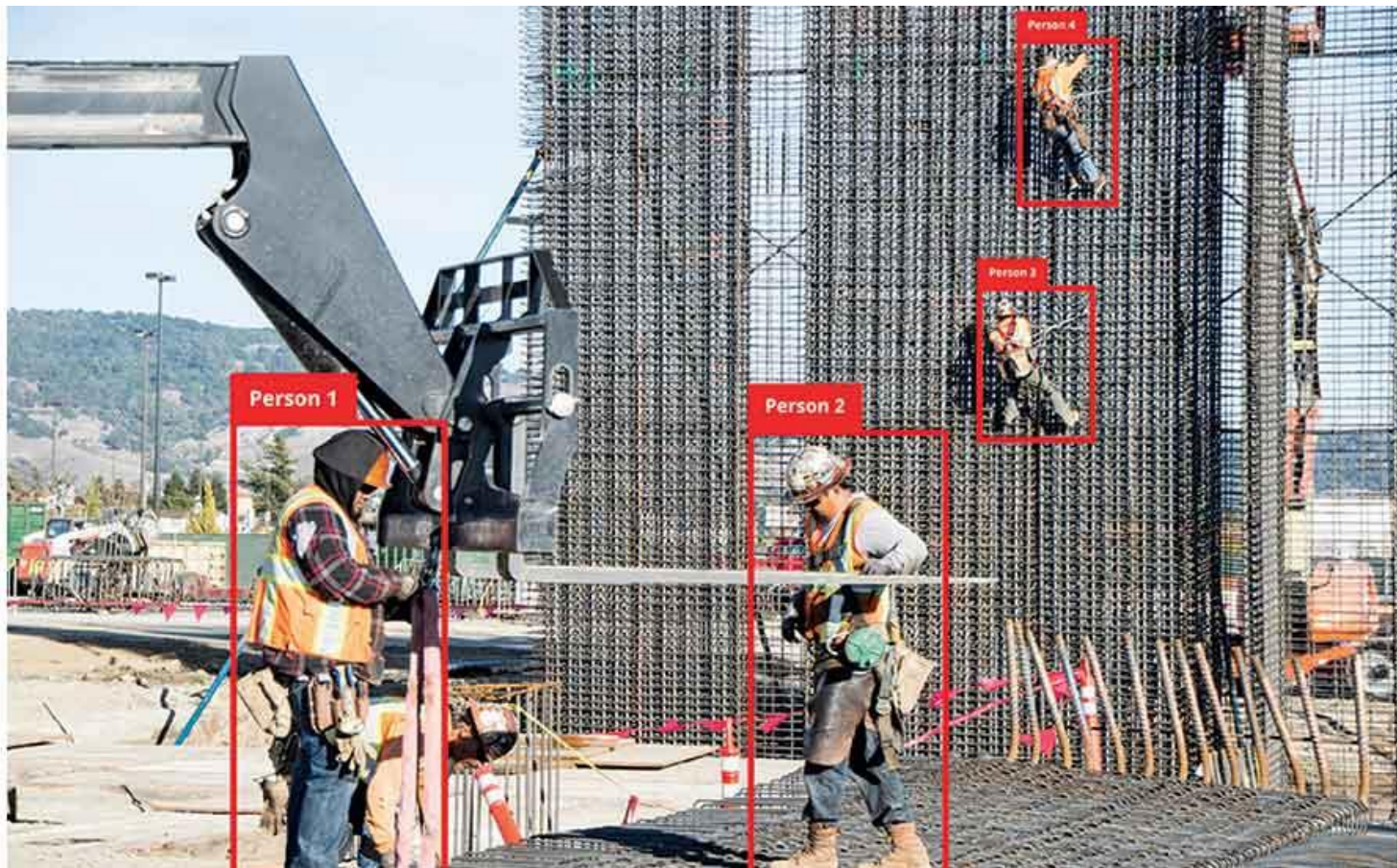
 SPACEMAKER

SMARTVID.IO

YNOMIA

 OPENSOURCE

solidspac3



Going Digital

- Design
- Delivery
- Wearables



Going Digital

- Design
- Delivery
- Wearables
- Exoskeletons

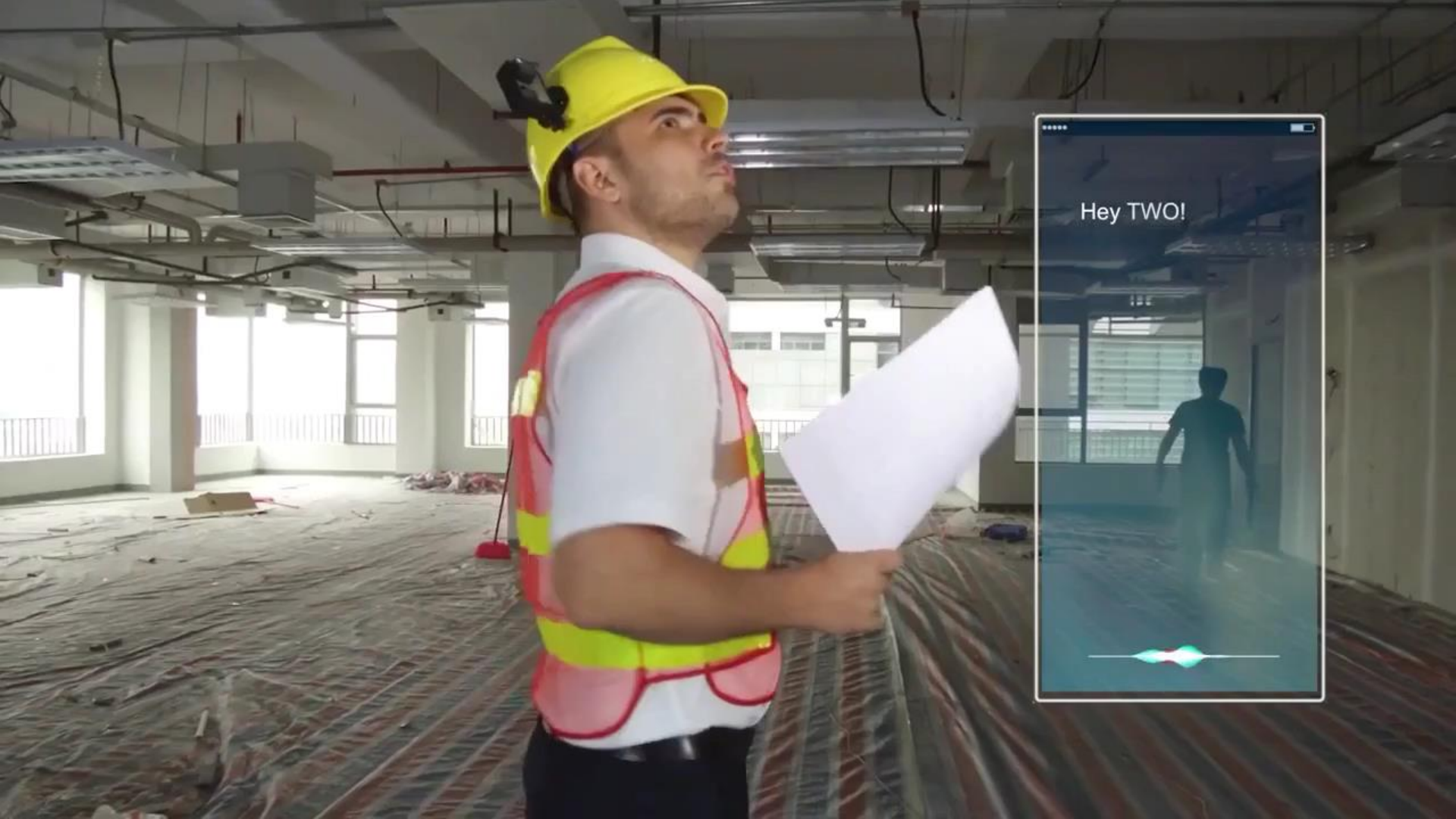




Going Digital

- Design
- Delivery
- Wearables
- Exoskeletons
- **Virtual assistant**





Hey TWO!



Going Digital

- Design
- Delivery
- Wearables
- Exoskeletons
- Virtual Assistant
- **Robots**



7:05 AM

WIND TURBINE FOUNDATION EXCAVATION

FOUNDATION DEPTH
9.0 ft

CY REMAINING
1,182.3 CY

RADIUS
32.5 ft

SLOPE
1.5:1

CY REMAINING
1,182.1 CY

FILL REMAINING
0.0 CY

TIME TO COMPLETION
10:16:43



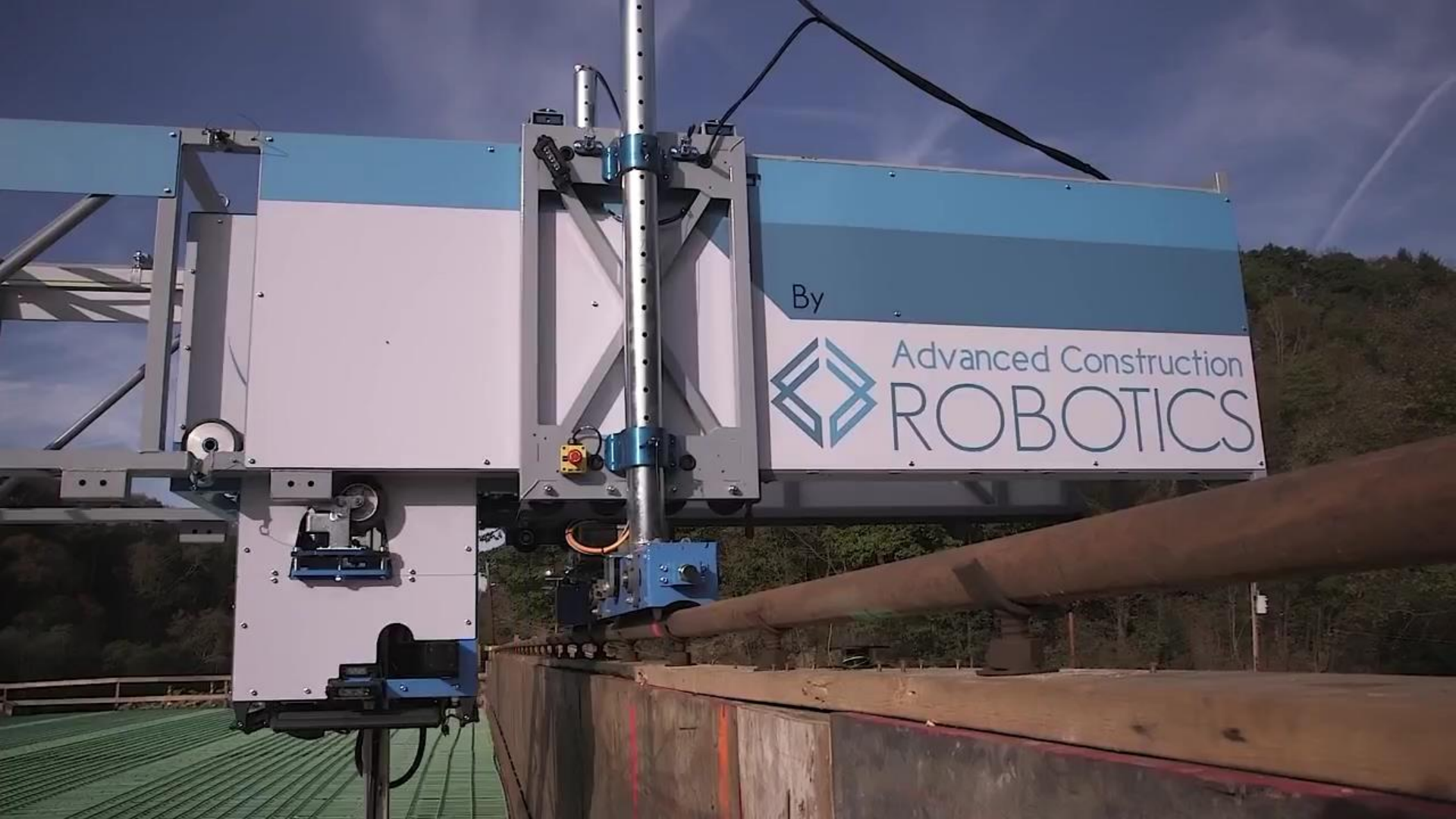
TIME SINCE START
05:13:57

CYCLE TIME
0:32



START JOB

STOP VEHICLE



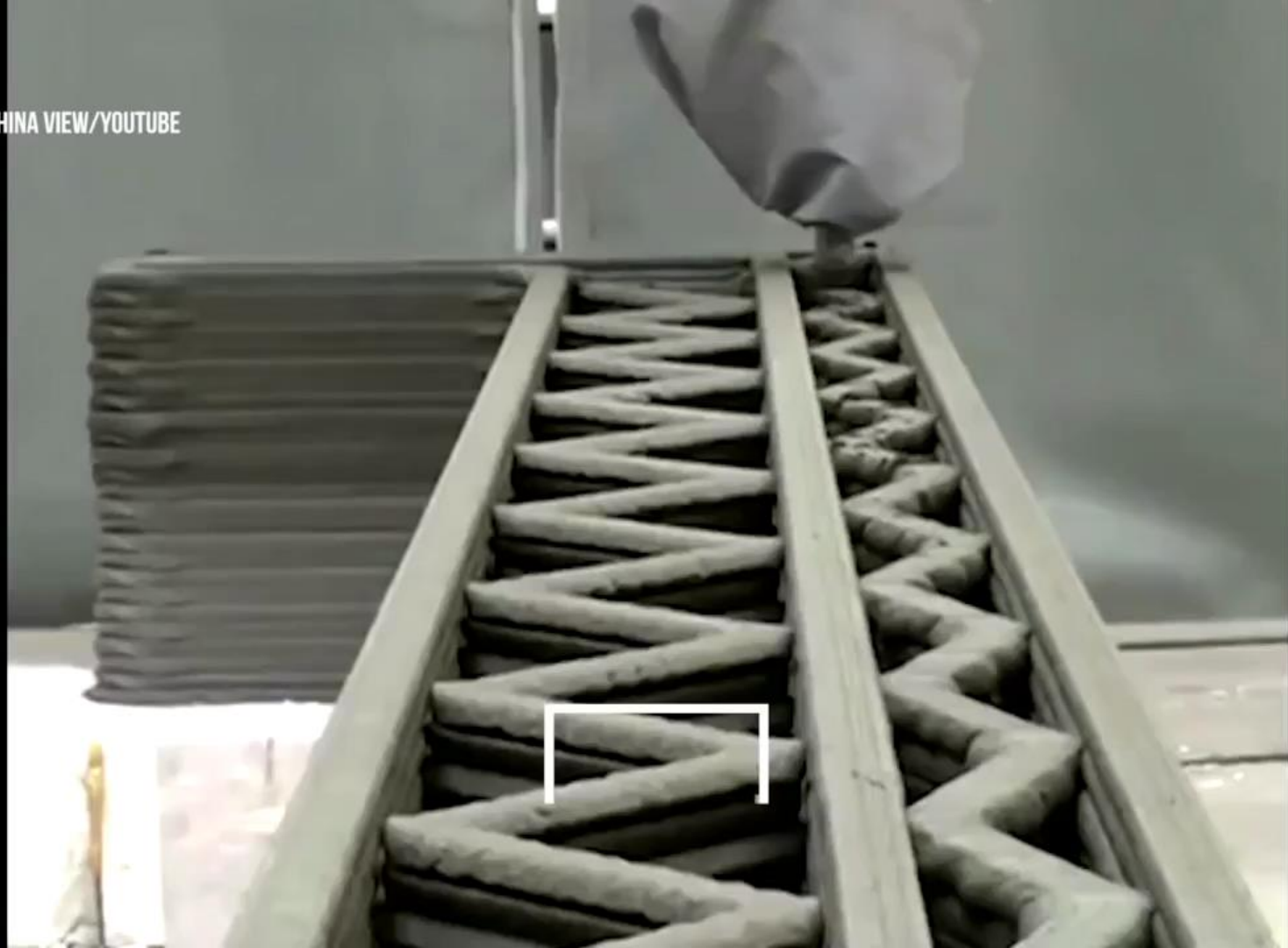
By



Advanced Construction
ROBOTICS



CHINA VIEW/YOUTUBE



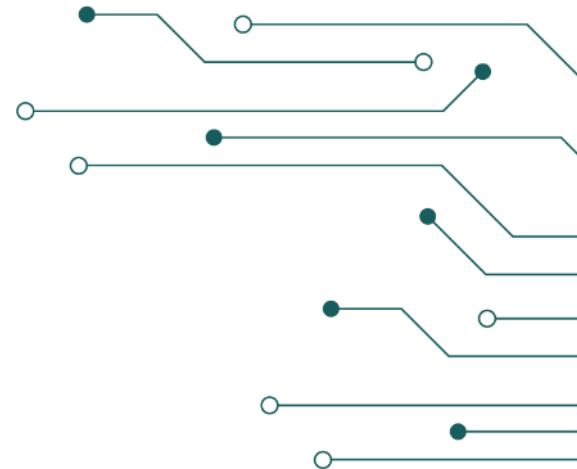






KEY TAKEAWAYS

- VC = industry R&D
- Fracking optimizes + unlocks value
- The future of work is dynamic
- Real estate is getting smarter
- Construction is going digital



FINAL THOUGHTS



“We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten.”

– Bill Gates



“I would like to die on mars...just not on impact.”

– Elon Musk, SpaceX





Center for
Real Estate



Bloomberg

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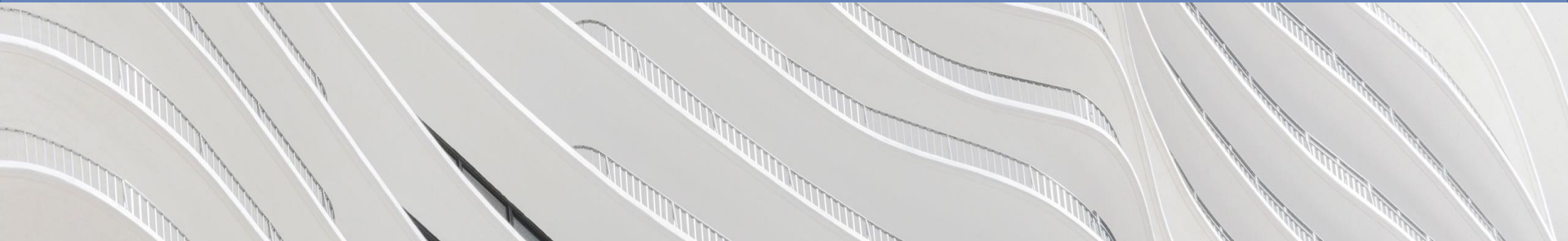


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Learn More:

<http://realestateinnovationlab.mit.edu/>

<https://www.unissu.com/>

<http://www.CREtech.com/>

<https://propmodo.com/>

<https://builtworlds.com/>

