



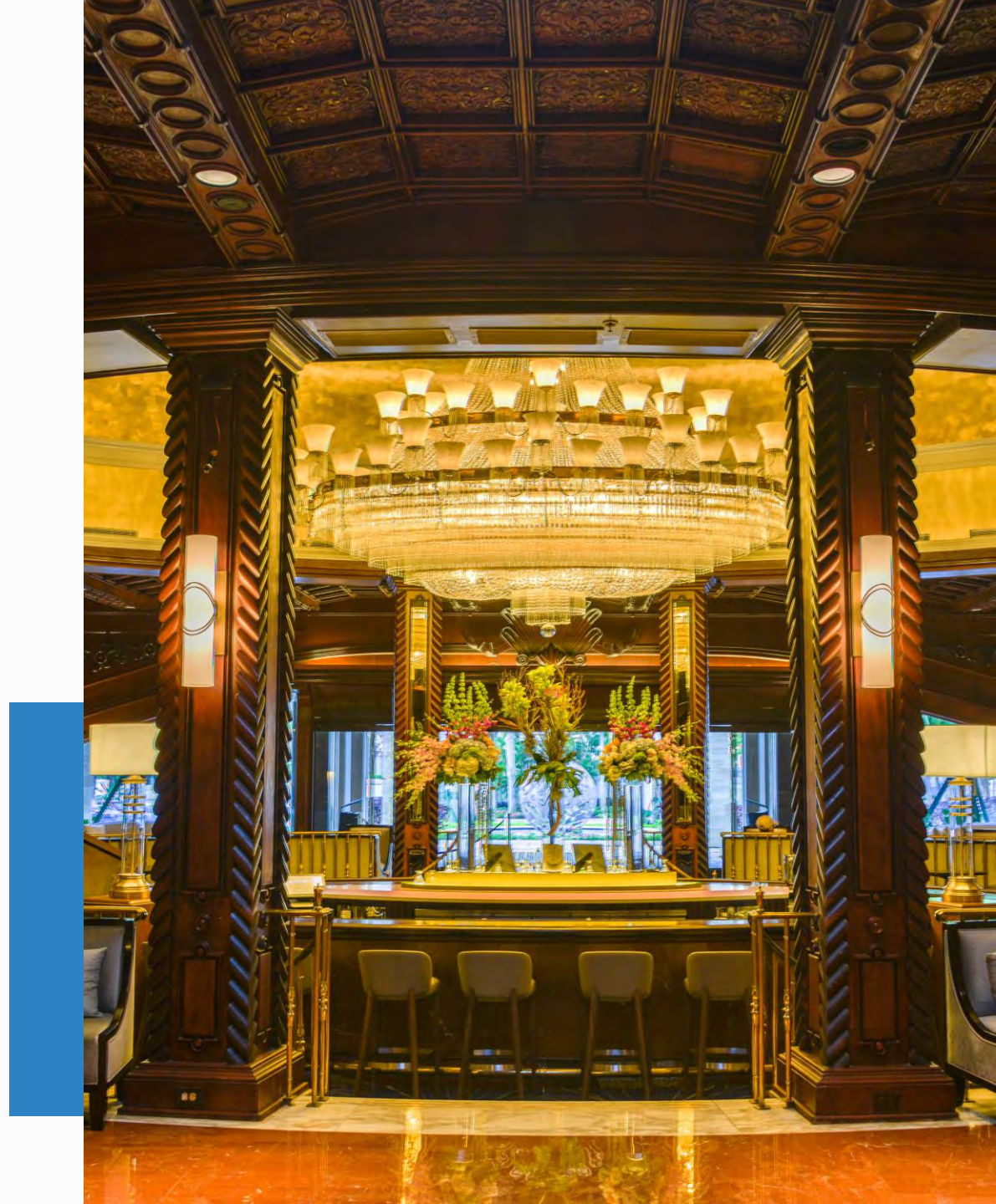
# 2022 Construction Industry Trends

Jose Torrens



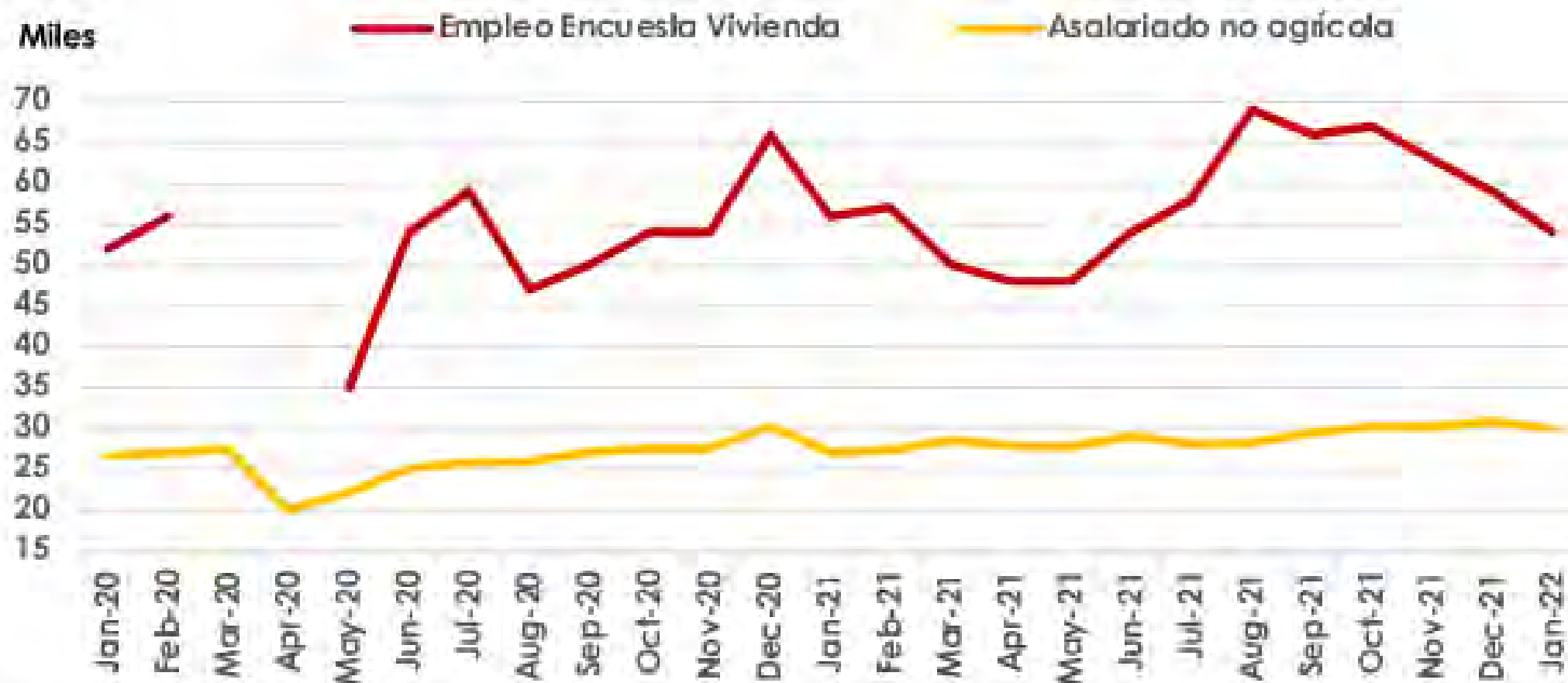
# Quick Overview

- Founded in 1983
- 650 employees
- Annual revenue \$165 million
- Over \$2.6 billion in projects completed
- Certified Minority Business Enterprise
- Offices in Puerto Rico, North Carolina, and Florida





## Empleo en Construcción Encuesta de Vivienda y Asalariado (NAE)



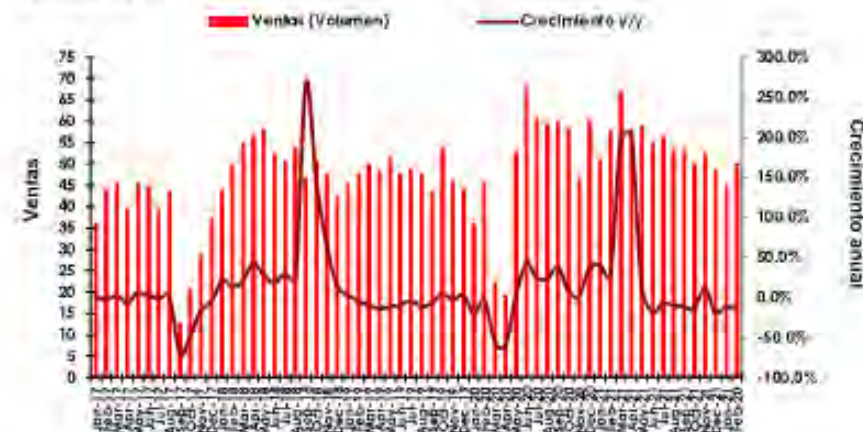
Fuente: Departamento del Trabajo y Recursos Humanos



# Ventas de Cemento

- Luego de haber alcanzado su nivel máximo de ventas en marzo 2021, de 67,089 toneladas métricas, el volumen disminuyó para finales del 2021, cuando las ventas se redujeron en un 19.0% respecto al mismo mes del 2020. Para febrero el volumen de ventas repuntó aumentando a 50,180 toneladas métricas. No obstante, el aumento estuvo un 13.3% por debajo de febrero 2021.
- Aún así, el volumen total de ventas registrado durante el 2021 fue el más alto de los últimos años, sobrepasando el de 2019.

Volumen y Crecimiento Ventas de Cemento  
(En miles Tm)



Fuente: ANEP, INEC, Punto Vici, CEMEX, y Cementos Portland

Ventas de Cemento (En miles de toneladas métricas)



Fuente: ANEP

Ventas de Cemento (Miles toneladas métricas)



# Desglose Fondos Federales CDBG-DR

## I. CDBG-DR - \$20,259,870,230

### Recuperación (Huracanes 2017)

**\$10,005,815,230**

|                |                  |
|----------------|------------------|
| Vivienda       | \$5,093 millones |
| Economía       | \$1,317 millones |
| Pareo          | \$1,500 millones |
| Multisectorial | \$1,298 millones |
| Planificación  | \$161 millones   |
| Administración | \$635 millones   |

### Terremotos

**\$36,424,000**

### CDBG-DR MIT

**\$8,285,284,000**

### CDBG-DR Red Eléctrica

**\$1,932,347,000**

# Desglose Fondos Federales FEMA

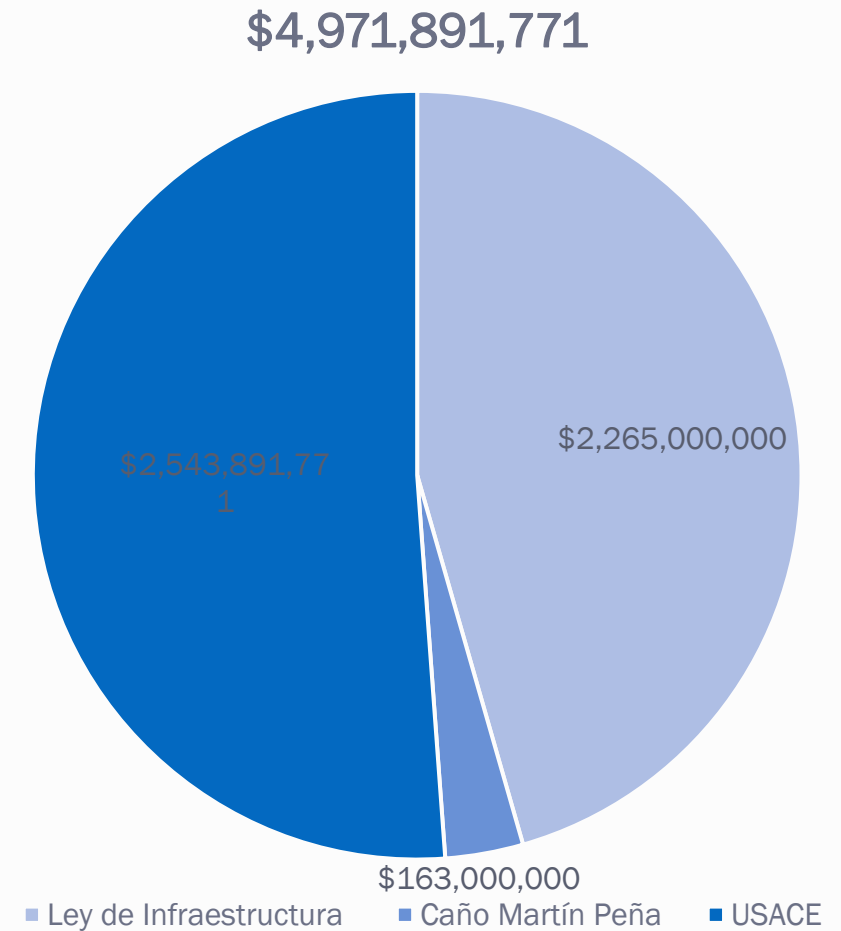
## I. FEMA

**Fondos MIT – Asistencia para Mitigación** \$2,999,975,000

**Fondos para Asistencia Pública** \$26,705,326,076

|                    |                  |
|--------------------|------------------|
| Agua               | \$3,881,430,457  |
| Edificios Públicos | \$1,719,962,788  |
| Educación          | \$3,297,013,309  |
| Energía            | \$11,458,962,512 |
| Municipios         | \$2,823,998,650  |
| Recursos Naturales | \$277,911,143    |
| Salud              | \$410,277,426    |
| Transportación     | \$620,739,676    |
| Vivienda           | \$1,491,046,266  |
| Otros              | \$718,968,657    |

# Desglose Fondos Federales Otros Programas





# **The industry has seen a lot of changes since 2020.**

Many construction projects were put on hold or are facing important challenges as a result of labor shortages, lack of materials, supply chain disruptions and rising costs.



# Labor Shortages

- The shutdowns and quarantine mandates of 2020 led to labor shortages in many industries, including construction.
- A survey by the *Associated General Contractors of America (AGC)* and *Autodesk* found that 89% of construction companies are struggling to find qualified workers.

# Supply Chain Disruptions

## Lack of Materials, Rising Costs

- The pandemic also exposed vulnerabilities in global supply chains.
- The supply of vital construction materials such as lumber, paint and coatings, aluminum, steel, and cement has been affected, causing project delays and double-digit cost hikes.
- According to the AGC survey, 93% of construction companies are wrestling with rising materials prices, and 88% have been experiencing project delays.



# Materials Cost Increase Nov 2021 vs Nov 2020

|              |        |
|--------------|--------|
| Steel        | 141.6% |
| Diesel       | 81%    |
| Aluminum     | 41.1%  |
| Gypsum Board | 20.9%  |
| Wood         | 12.2%  |



# Materials Cost Increase Q1 2021 vs Q1 2020

|             |           |
|-------------|-----------|
| Steel       | 60%-101%  |
| PVC Conduit | 200%-316% |
| Ductwork    | 185%      |
| Copper      | 66%       |
| Insulation  | 60%-75%   |



# Industry Growth

- While these problems will carry over to the coming year, construction spending is expected to continue increasing.
- In July 2021, spending peaked at \$1.57 trillion, a record high and 12% higher than 2019 average levels, global consulting firm *Deloitte* recently reported.
- Construction starts will rise 6% in 2022 led by a 35% increase in nonresidential building starts, according to *Dodge Construction Network's* latest forecast.



# Looking Forward

Several factors are poised to exert the most influence on the construction industry next year. Here are seven must-watch trends that can help builders stay competitive in 2022.

## New Construction Materials

- The rising cost of materials has driven construction companies to search for new, cost-effective building materials.
- The use of materials such as bendable or flexible concrete (also known as engineered cementitious composite or ECC), self-healing concrete, engineered timber and transparent aluminum will increase next year.

## More Tech & Digitalization

- The pandemic has forced many construction firms to embrace technology in order to counteract labor shortages, supply chain disruptions and rising materials costs.
- Digital tools are helping the industry increase productivity and efficiency, boost safety and reduce costs.





# Modular Construction

- Modularization will continue to gain popularity thanks to its high quality, lower costs and reduced waste.
- Modular construction involves building the modules of a structure off-site and transporting them to the project's site for assembly, saving time and money.
- Valued at about \$82.3 billion in 2020, the modular construction market is projected to reach nearly \$109 billion by 2025, global research firm *MarketsandMarkets* recently reported, attributing the growth to work-zone safety concerns, need for lower environmental impacts and supportive government initiatives.

# Drones

- The popularity of drones in the construction industry will continue to spread, with more companies using them to monitor project progress, survey land, conduct safety inspections, reduce labor costs and improve jobsite security.





# Drone Deploy

[illegible]



# Drone Deploy

Amgen FlexBatch

You're in Viewer Mode

FLY

UPLOAD

EXPLORE

REPORT

Share

Layers

Add

☒

Overlays (2)

☐ Plant Health

☒ Elevation

Terrain Only

1.2 acres

42.7 acres

0.9 acres

-19.48 ft

0

41.7 ft

100

☐ Cut/Fill

Media

Upload

☒ Photos, Videos, Panos (3)

☐ Map Photos (274)

☒ Annotations (0)

Export

Share

Help

Mar 15, 2022

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Compare

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# GPS Technology

- CIC is currently using GPS Technology at a new Amgen project in North Carolina. Earthwork machinery is equipped GPS grade control system.








# Artificial Intelligence

- Combined with other technologies—such as cloud-based software, building information management, sensors, wearables and other monitoring tools—AI enables builders to make better-formed decisions in real time.
- AI improves forecasting and construction management, lowers construction costs and promotes safety by analyzing images of a jobsite and identifying hazardous situations or high-risk worker behavior.



# Artificial Intelligence

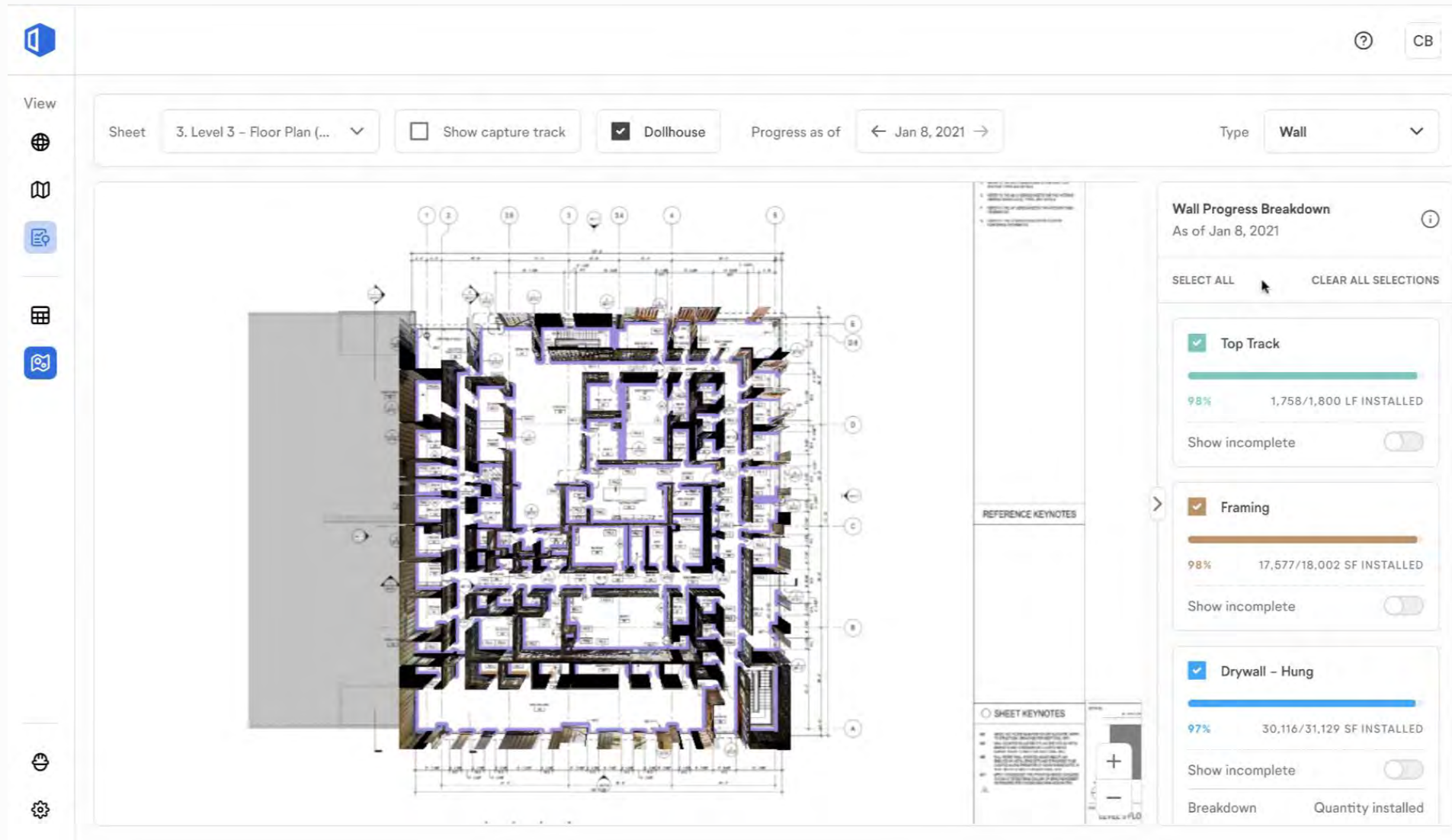


**Capture** your site  
with unmatched  
speed and simplicity

Turn the 360 camera on, tap go, and just walk your site. The OpenSpace Vision Engine maps photos to your plans automatically. And it's lightning fast, with 15-minute processing times—not hours, not days.

 Chat with an Expert

# Artificial Intelligence – Progress Review



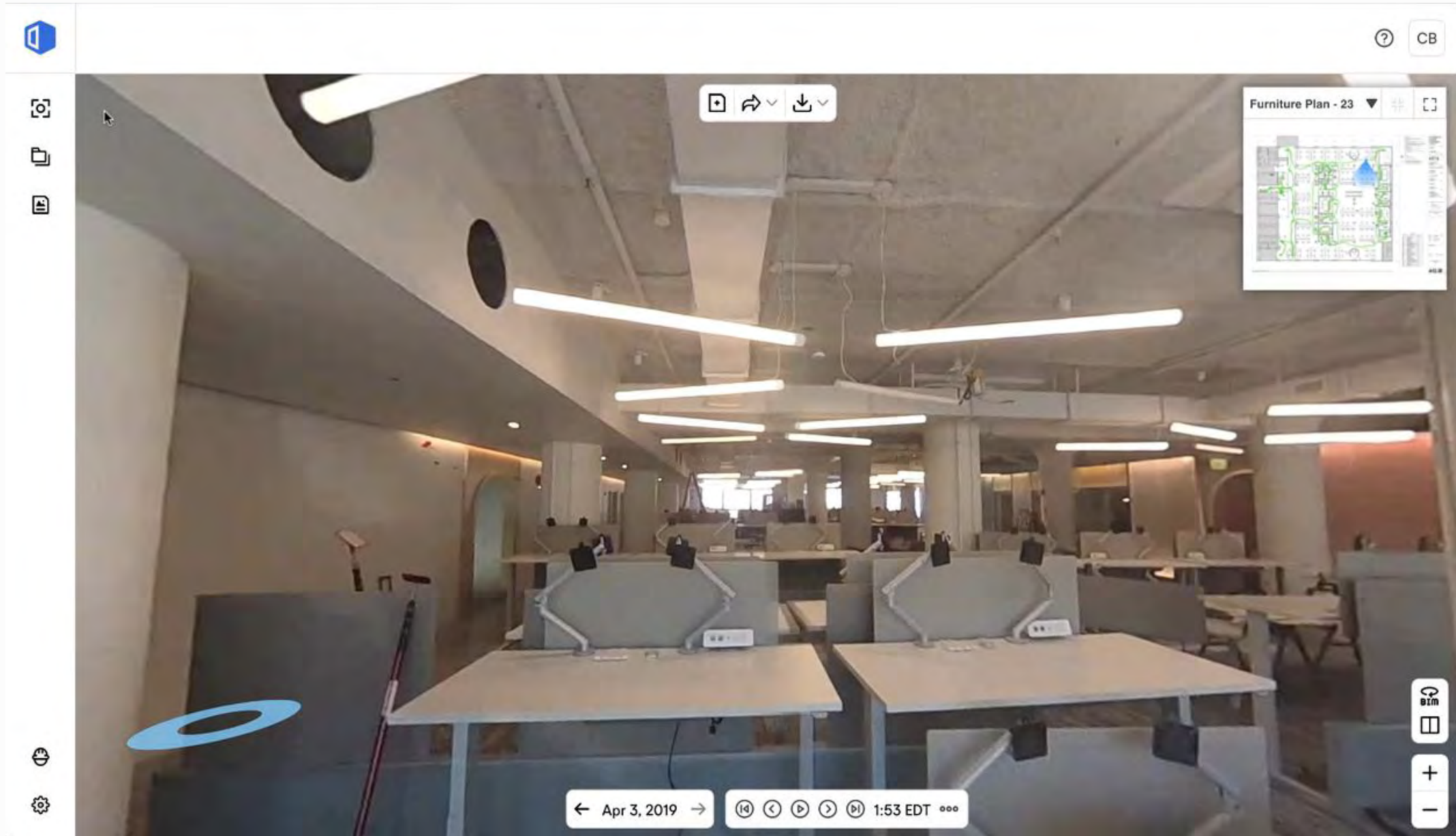


# Building Information Modeling

- Known as BIM, this cloud-based tool integrates multi-disciplinary data to generate and manage digital representations of the physical and functional characteristics of a built asset, including planning, schedules, cost, materials, construction and operations.



# Walkthrough & BIM Compare







**Thank you!**