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News Events Partnerships



# Constructing The Future - The Dilemma Of ESG & Supply Chains In The Construction Industry

James Swanston, CEO, Voyage Control

Thursday, 18 May 2023



## A Word From Today's Chairman

**Simon Mills**  
Senior Associate  
Z/Yen Group





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# Today's Agenda



- 10:00 – 10:05 Chairman's Introduction
- 10:05 – 10:25 Keynote Presentation – James Swanston
- 10:25 – 10:45 Question & Answer





## Today's Speaker

**James Swanston**  
CEO  
Voyage Control



# Constructing the future - the dilemma of ESG and supply chains in the construction industry

**James Swanston**

CEO

[james.swanston@voyagecontrol.com](mailto:james.swanston@voyagecontrol.com)

[@voyagecontrol](https://twitter.com/voyagecontrol)



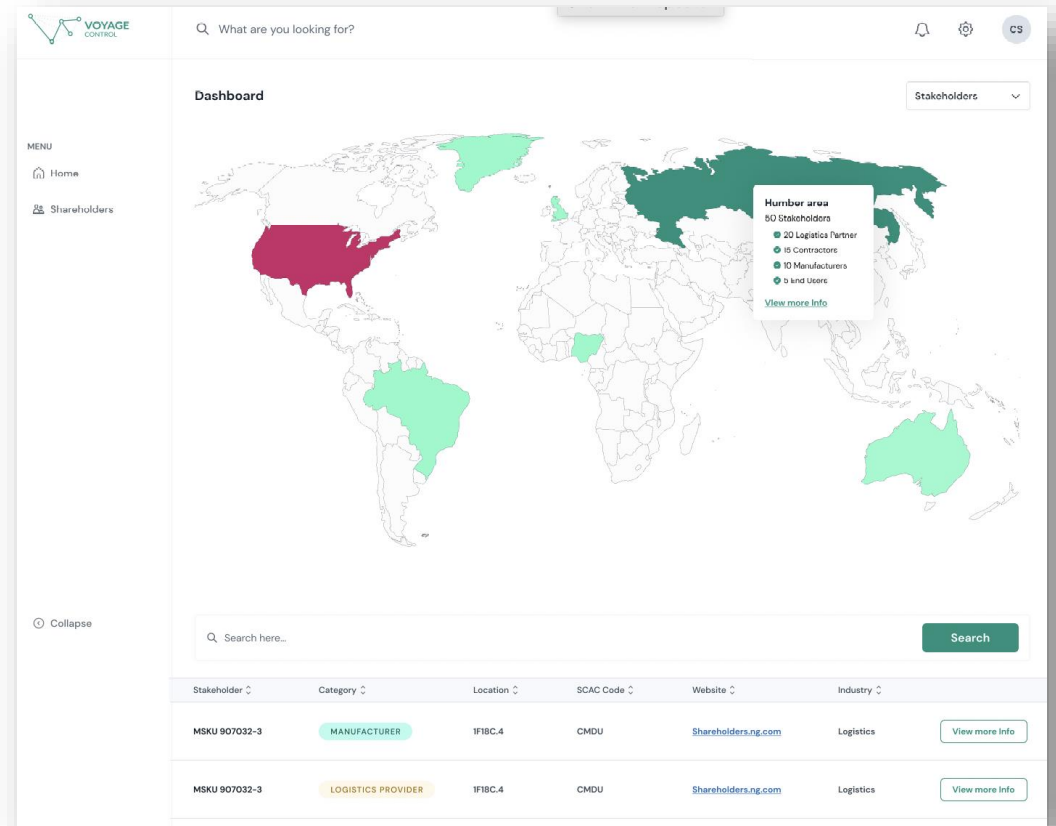
**VOYAGE**  
CONTROL



Where is my curtain wall???

# Our clients want/ need supply chains that are:

- Visible at a project and enterprise level
- Operationally efficient
- Resilient
- Sustainable and compliant with the law
- Meeting the needs of their customers





# Last mile delivery management to jobsites



# Inventory Management V1: Visibility through the supply chain

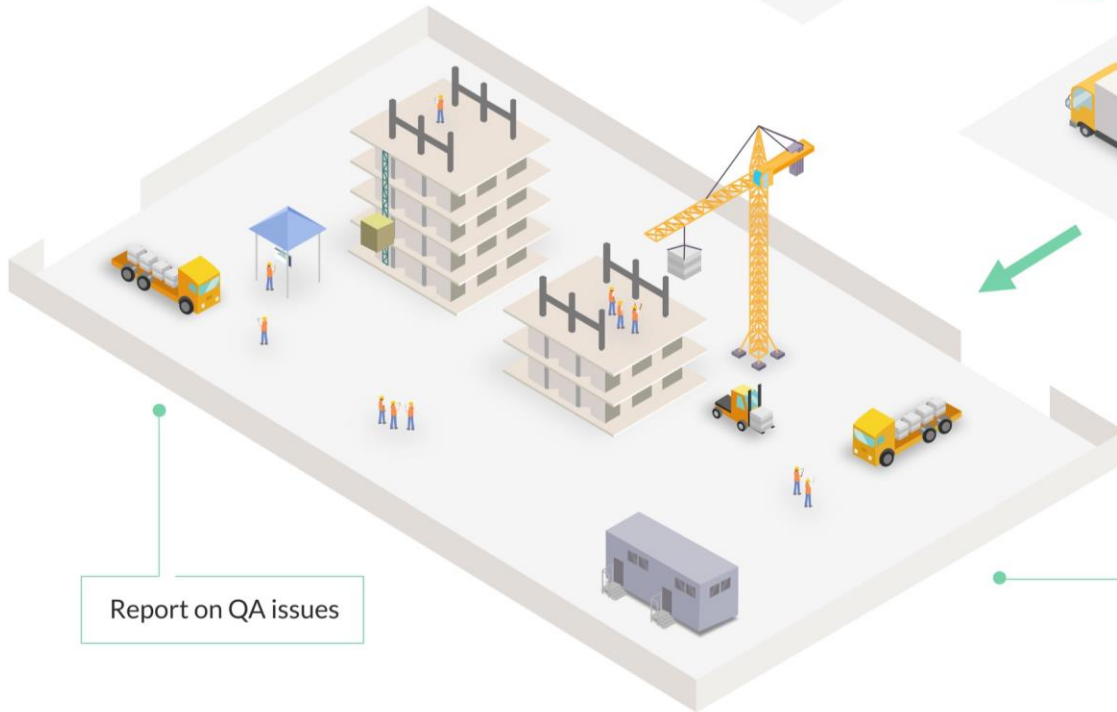
Track inventory from factory to warehouse to jobsite



Maintain inventory awareness throughout supply chains



Export inventory information across supply chain into datalake and BI tools



Report on QA issues

Check inventory into jobsite and review documentation

# Our track record

- Digital platform launched October 2013
- Supporting **100** construction firms, owners and asset operators globally
- Over **ten** million deliveries scheduled by 150,000 businesses



## A few of our clients





# The line between disorder and order lies in logistics

*Sun Tzu*

# Market pain points



Delays of up to 80% of construction projects



Material and labour costs up to 100% or more in 2021



Shipping costs up to 500% in 2021/ early 2022



Fragmented and opaque supply chains



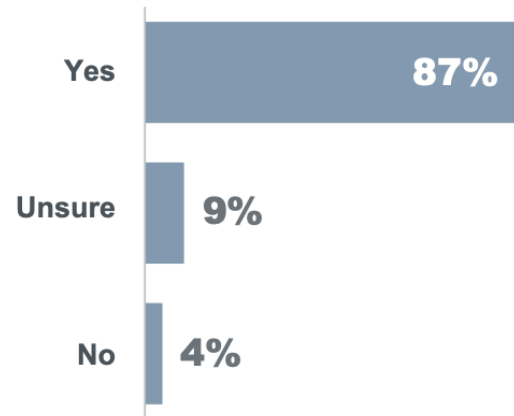
Net Zero and Modern Slavery legislation



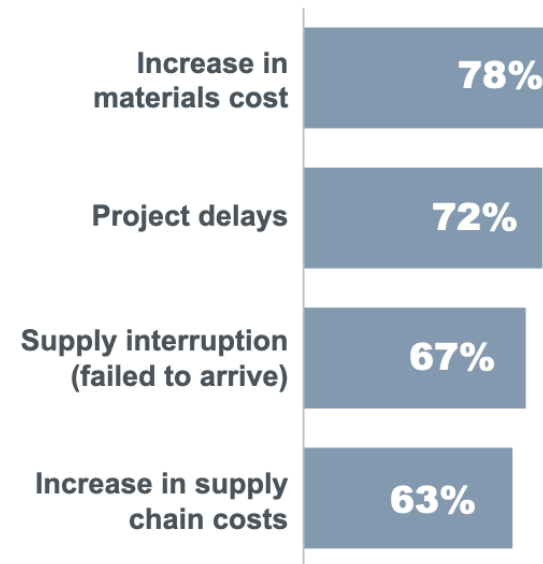
ESG commitments by 2040/2050 by major owners, developers and construction companies

# Survey conducted for Voyage Control from over 100 top US construction firms

Have any of your projects been impacted by recent supply chain problems?



(If yes) Select all that apply to your project experiences impacted by supply chain problems:

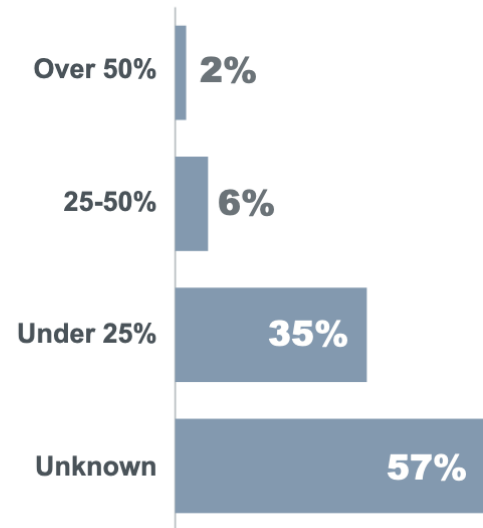


\*CIRT Sentiment Index Q3 2022

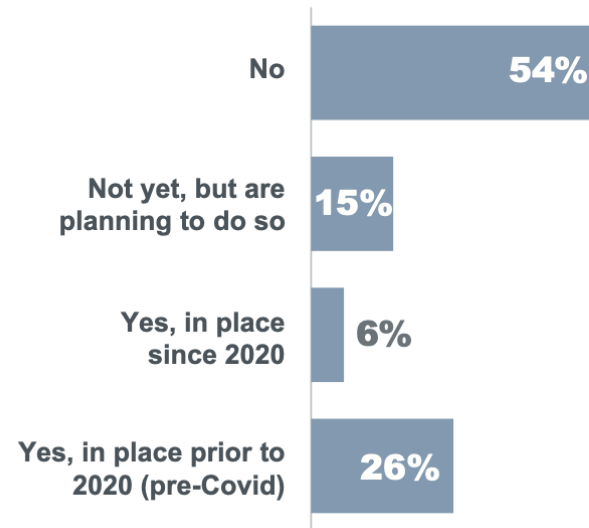


# Survey conducted for Voyage Control from over 100 top US construction firms

If known, what percentage of your materials are currently produced offshore for a typical project?

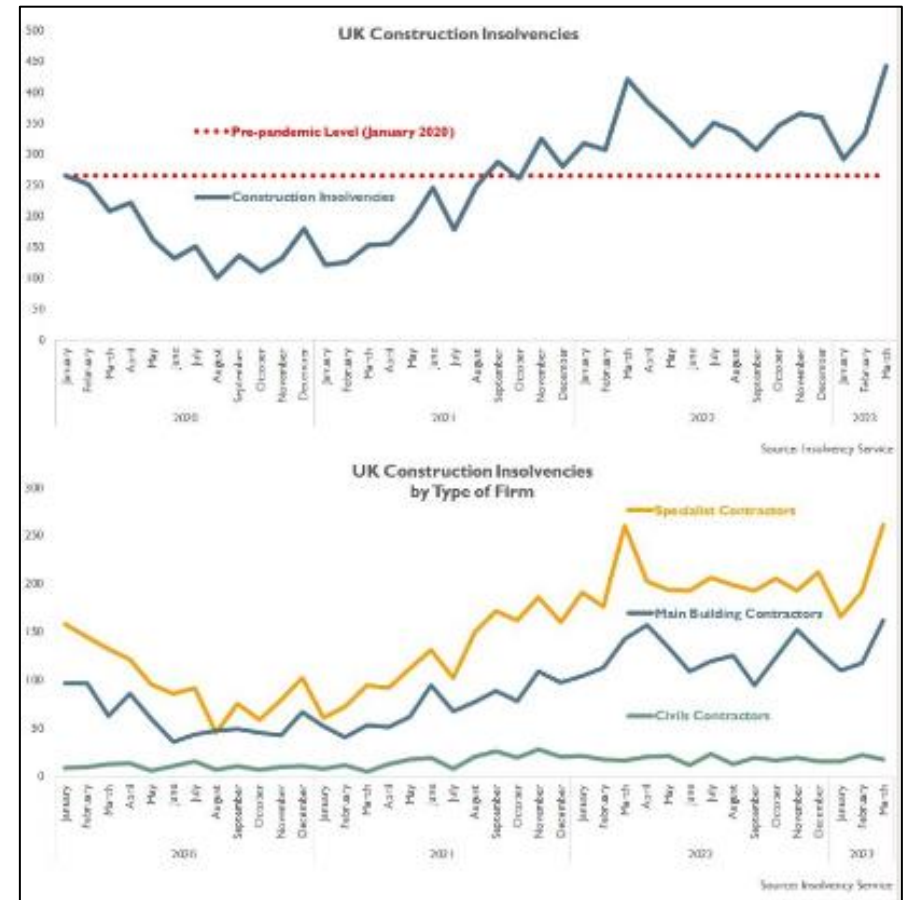
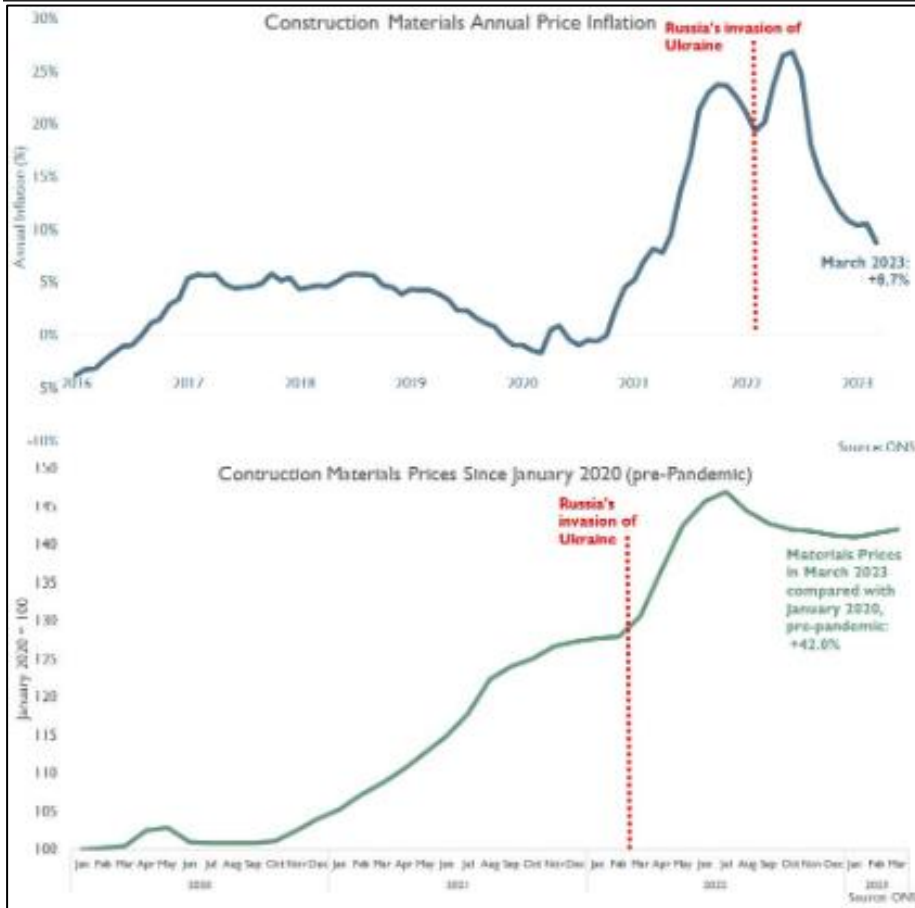


Do you have a centralized logistics and/or supply chain functions (leadership position and/or strategy) for your business?

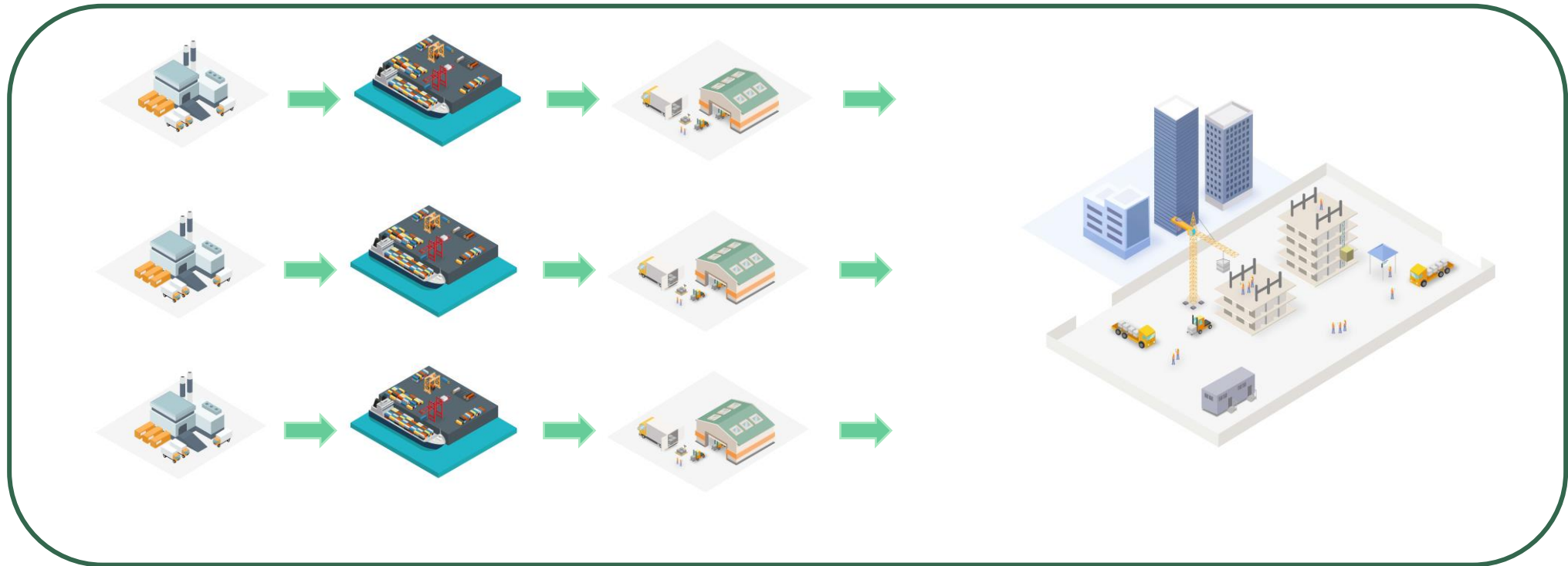


\*CIRT Sentiment Index Q3 2022

# A UK perspective



# International supply chain for an individual project



## What products?

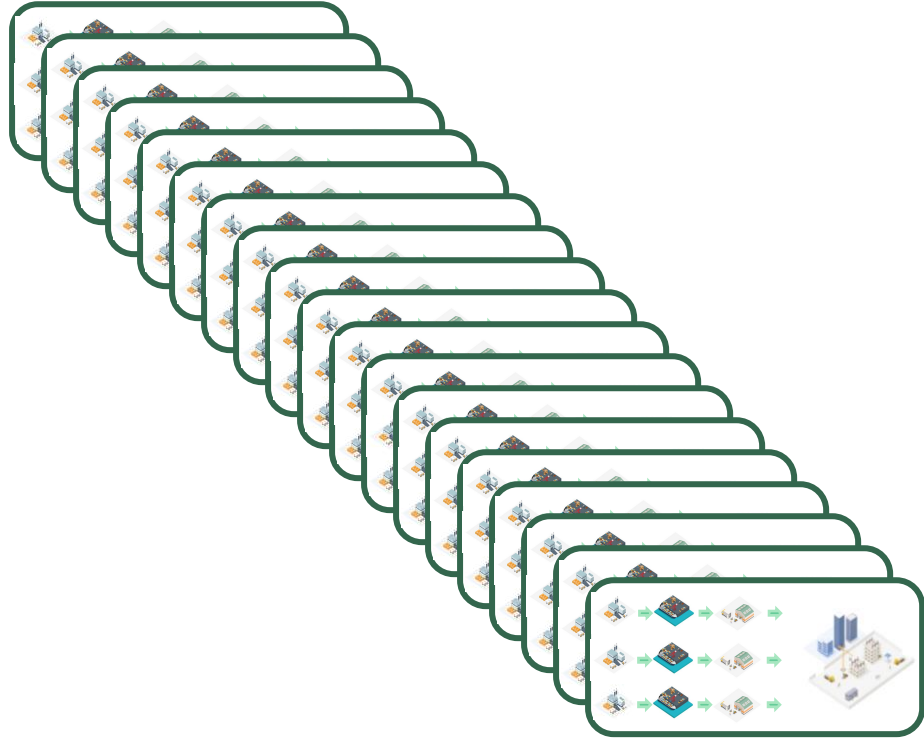
- Rebar/ precast (eg. China, Vietnam)
- Finishes and FFE (eg. Italy)
- High spec engineering (eg. Nordics)

## Project level inefficiencies:

- Project delays - where is it and is it going to be late?
- Fragmented and costly use of shipping/ logistics providers
- Difficult to audit what's actually happening
- Compliance risks

# International supply chain for a construction company

Many clients have 100s or 1000s of projects:

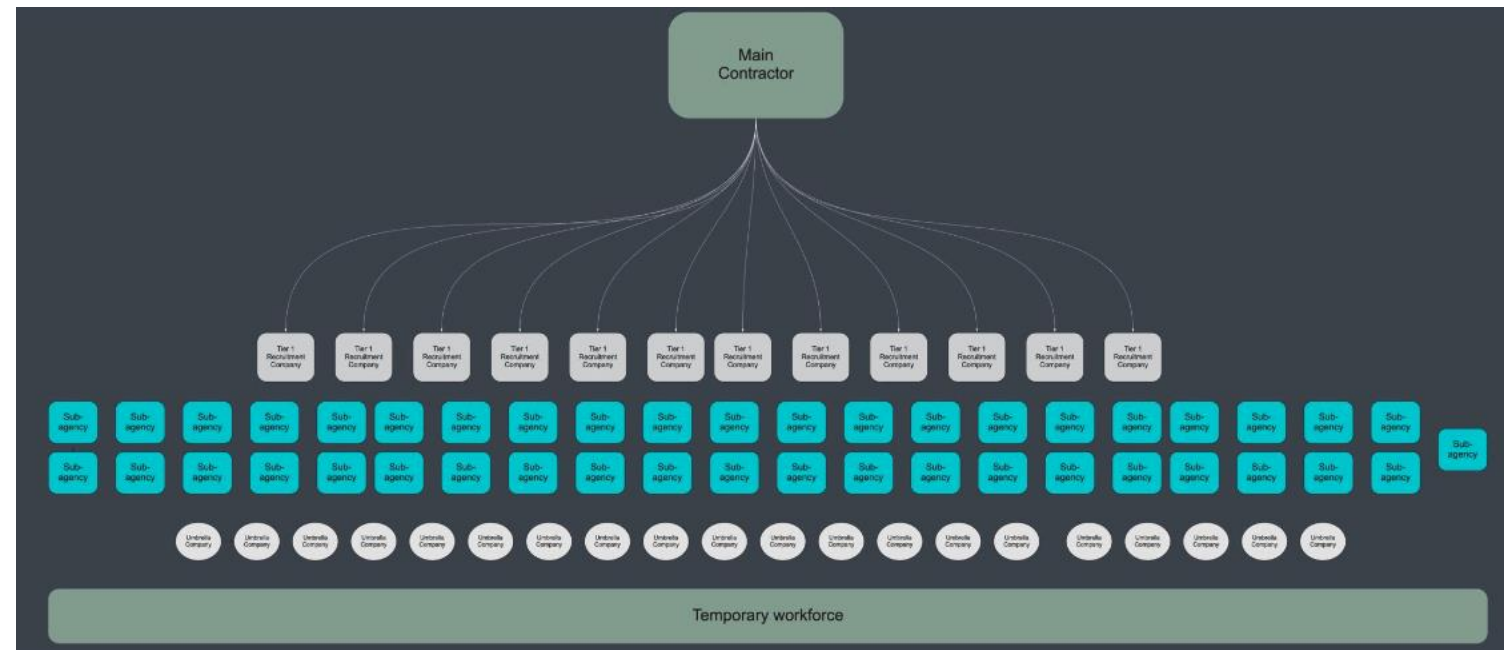


**Corporate level inefficiencies:**

- No use of potential buying power or expedited services due to fragmented supply chain
- Limited oversight of what's happening
- Deconfliction problems between projects if same manufacturers used by multiple projects
- Compliance risks (environment, modern slavery)

# How complex is a supply chain?

- Example: 700 tier one/ two suppliers across 40 sites



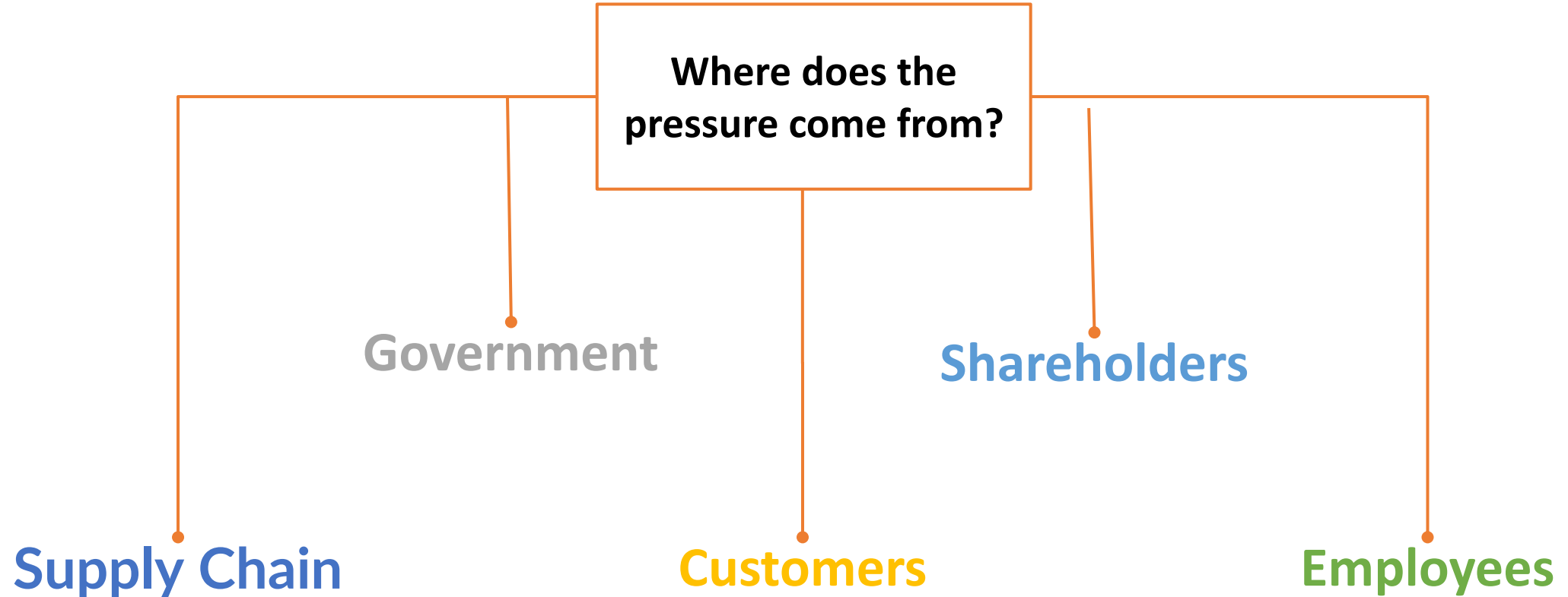
# Cost vs climate

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- Lowest bidder
- Cost now vs total future cost
- Who pays



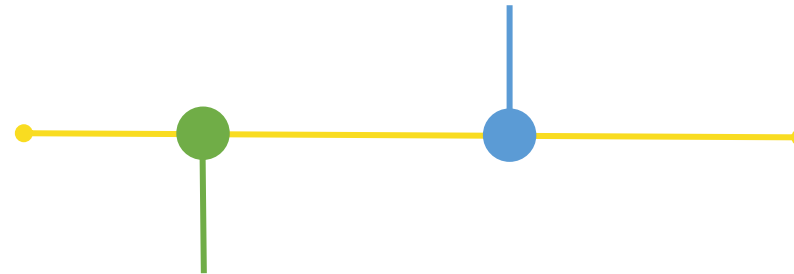
**It is increasingly expected that companies report their environmental performance and set goals for improvement**



# Major tech and pharma companies are holding their suppliers to a higher environmental standard

**Amazon** and **Intel** aim to achieve net zero emissions across their supply chain by

**2040**



**Google, Meta, Cyrus One, Pfizer** and **Equinix** aim to achieve net zero emissions across their supply chain by

**2030**

# How are they holding their suppliers accountable?

## Google

- Currently working with suppliers to create systems to improve their environmental performance
- Requires suppliers to accurately disclose their environmental practices and reduce their consumption

## Meta

- Works with vendors to determine their emissions and provides training in setting goals and reducing emissions

## Amazon

- Committed to more sustainable construction practices with their new HQ being built with a 10% reduction in emissions compared to a typical project
- “Aims” to help suppliers improve their sustainability practices

## Intel

- Expects suppliers to adopt their own corporate responsibility goals and report their performance

# The UK Sustainable Disclosure Requirements would centralize UK sustainability and ESG reporting requirements

**Goal:** combat greenwashing and ensure investors are provided with the correct information on how the funds impact social or environmental sustainability

- This would require:
  - Full TCFD reporting, including Scope 3 emissions
  - Additional non-climate sustainability and ESG reporting disclosure
  - A detailed transition plan outlining the submitter's path to [net zero emissions](#)

# Proposed SEC regulation would require publicly traded companies to disclose more information about their climate change risks and their impact on the environment

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- This rule would be the first time the SEC will require companies to formally report about climate change risks when they make public filings
- It would require reporting on:
  - climate-related risks that are likely to have material impacts on its business or financial statements
  - the company's oversight and governance of climate-related risks and how those risks will have an impact on the company's business
  - disclosures of scope 1, 2, and 3 (when deemed material to investors) emissions

# Proposed regulation in the US could mean a higher standard for federal suppliers

DoD, GSA, and NASA are proposing to revise the FAR to **require major Federal suppliers to publicly disclose greenhouse gas (GHG) emissions and climate-related financial risk** and to set science-based reduction targets.

This rule will...



01 Give visibility to major annual sources of GHG emissions and climate risks throughout the Federal supply chain

02 Enable the Government to understand how and when the risks faced by major contractors will affect the government's activities

03 Lead to increased efficiency in the processes and industries by which major contractors disclose climate related financial risks



# The employee angle

## Workers give construction's slow tech adoption a thumbs down

Published May 9, 2023



**Matthew Thibault**  
Associate Editor



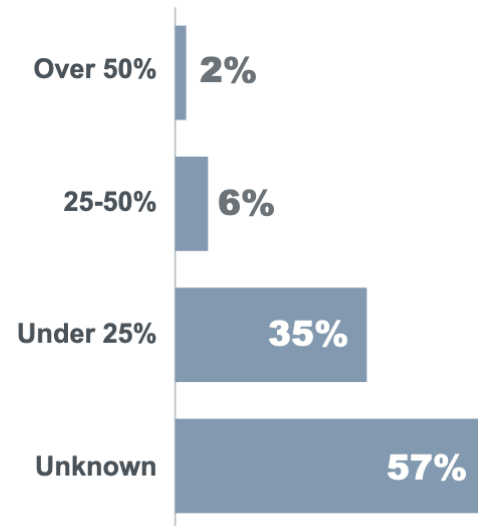
Tech is key for young workers, and industries that are slow to adopt it need to pick up the pace, says a new report.  
*mihailomilovanovic via Getty Images*



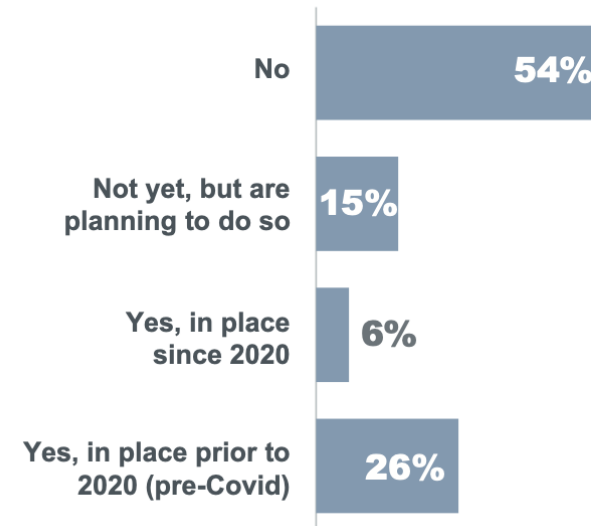
**So what...**

# CIRT report (again)

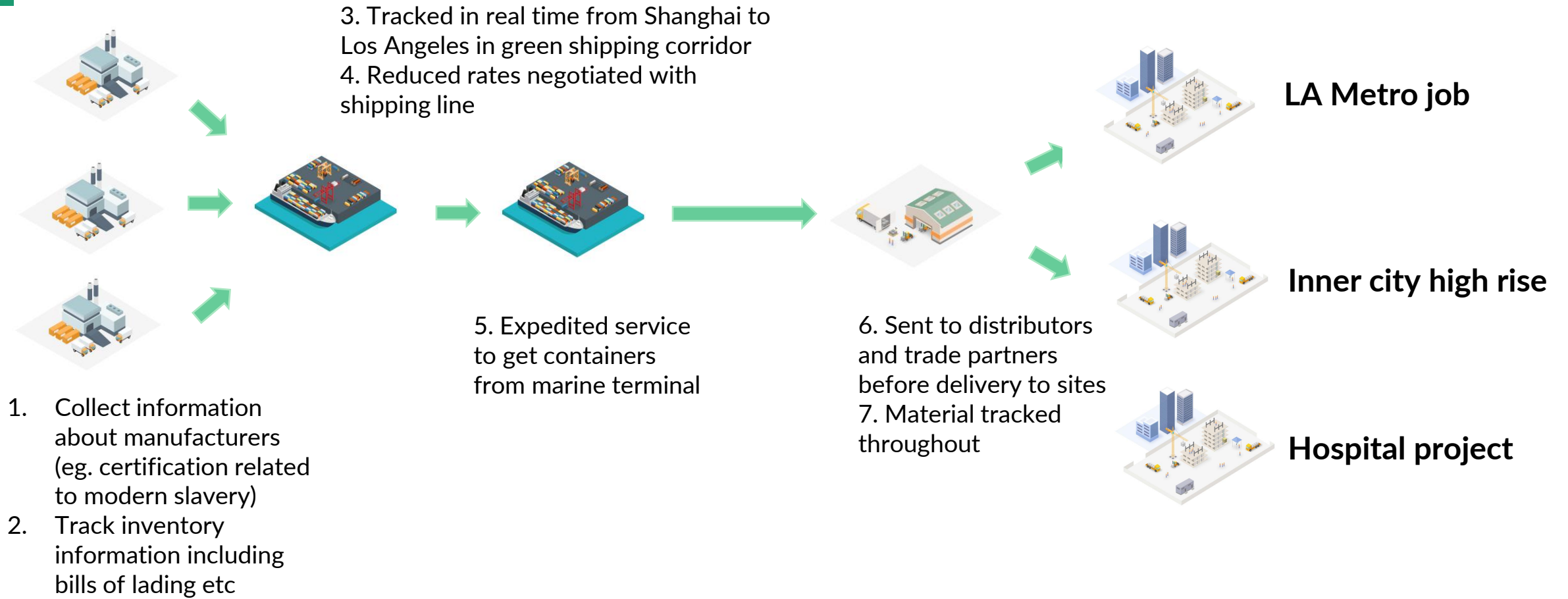
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# Visibility



# Efficiency



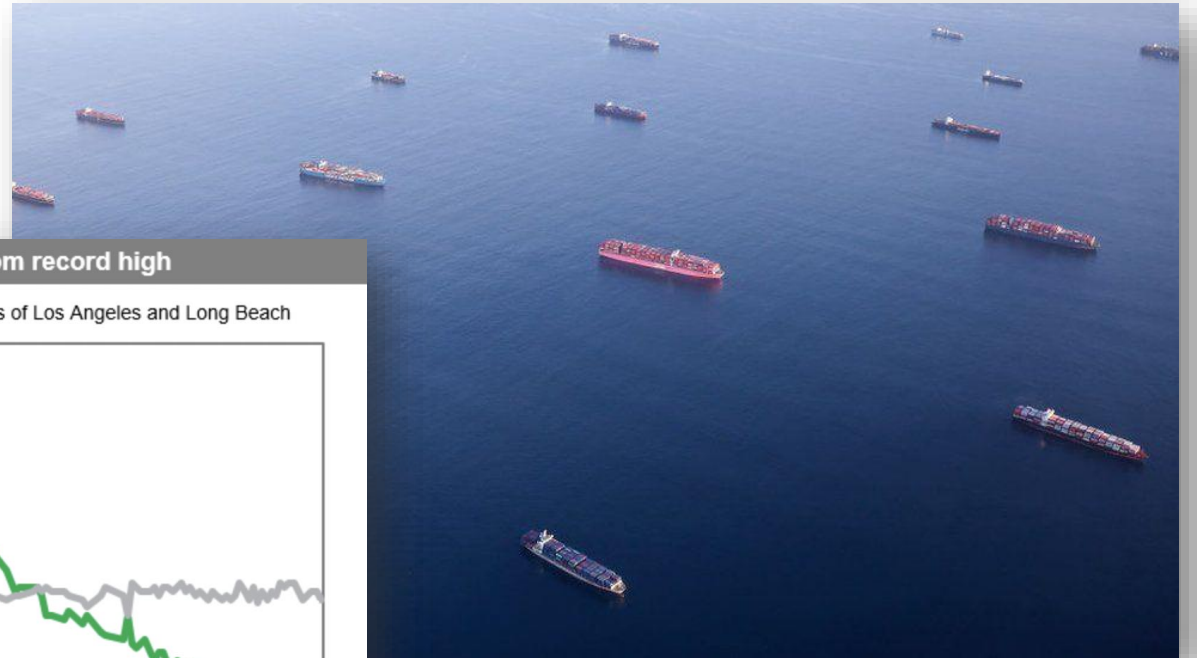
**AIRBUS**



*\*National Army Museum,  
corporate logos*

# Resilience

- Sourcing
- Cyber
- Insurance



Southern California container ship backlog falls from record high

Container ships waiting at anchor or loitering and at berth at the ports of Los Angeles and Long Beach



Source: Marine Exchange of Southern California

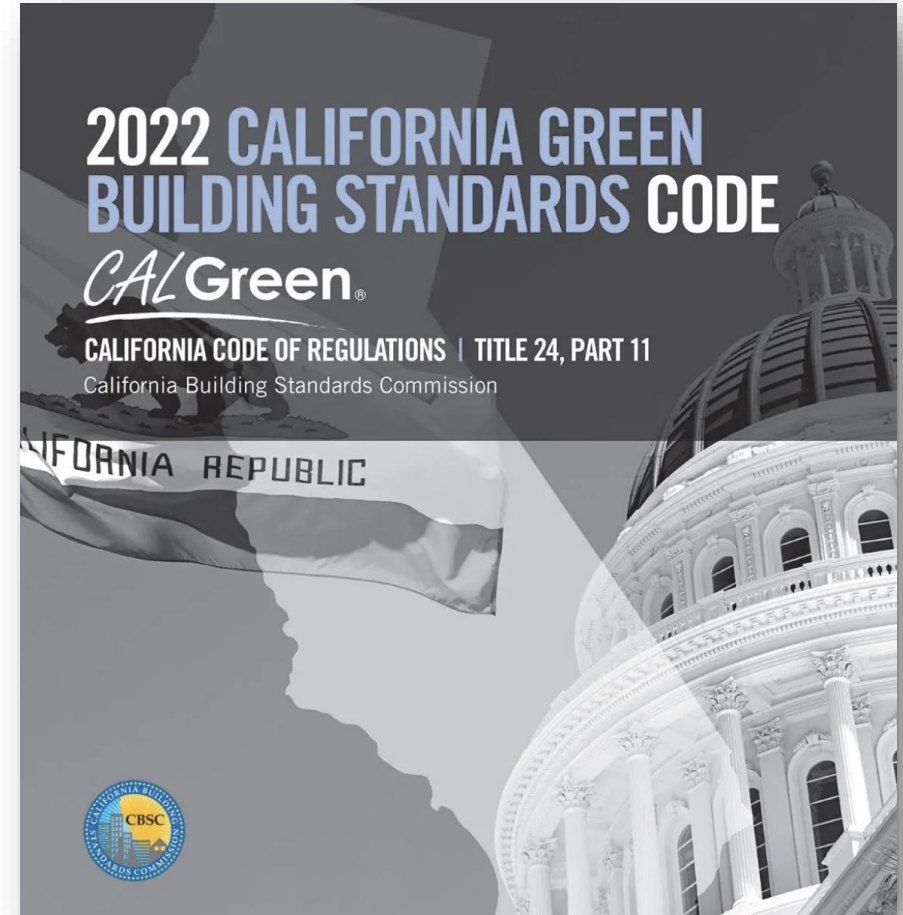
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\*BBC



# Sustainability and compliance

- Regulation
- Internal
- Customers



# Customer need

Brookfield



2021 Sustainability Report | Introduction | **Environment** | Society | Governance | Appendix



technologies: Amazon's Climate Pledge Fund—a corporate venture fund that invests in sustainability—recently announced it has invested in EH2 in the U.S. and Sunfire in Germany, two companies helping to push the green hydrogen industry forward.

It will take time to remove carbon emissions from heavy transportation systems, including ocean shipping, aviation, and trucking. Governments and the private sector need to come together on this important work. Amazon is at the heart of such industry initiatives and government partnerships, including the Cargo Owners for Zero Emission Vessels network (coZEV), the First Movers Coalition, the Sustainable Aviation Buyers Alliance (SABA), and the Clean Energy Demand Initiative.

## Developing More-Sustainable Transportation Infrastructure

Reducing carbon emissions in transportation is a complex challenge for many companies. We plan to make half of our shipments net-zero carbon by 2030, and to do that, we are creating a worldwide fleet of zero-emission vehicles. Right now, the vehicles and charging infrastructure don't exist at the scale needed to serve customers. We need the supply to increase dramatically. We have ordered 100,000 electric vehicles (EVs) from Rivian, and thousands more from manufacturers such as Mercedes-Benz, Stellantis, and Mahindra Electric. These orders have sent a demand signal that is shifting the market to meet not only our needs, but also the needs of other companies around the world.

We announced in November that, in the city of Paris, two-thirds of our shipments are delivered using zero-emission transport such as EVs, electric cargo bikes, and on-foot deliveries. We also are exploring green hydrogen

renewable energy through a combination of off-site and on-site solar projects. And we plan to achieve Leadership in Energy and Environmental Design (LEED) Platinum certification, the highest sustainability building certification issued by the U.S. Green Building Council.

We also continue to innovate with construction techniques to make our fulfillment centers more sustainable. Many of our fulfillment facilities throughout the U.S., Europe, and India are powered by on-site solar, where a rooftop installation can power up to 80% of the facility's energy use. As of 2021, 115 of our global fulfillment facilities have rooftop solar installations.

Constructing our AWS data centers also presents challenges related to sustainability. Concrete and steel used in construction are two of the largest contributors of embodied carbon in a data center building, and we have multiple initiatives to reduce their carbon impact. For example, our design standards now require concrete with 20% reduction in embodied carbon compared with standard concrete for new U.S. data centers, and we are expanding this requirement globally. Also, instead of using steel from oxygen furnaces that burn coal or gas, we are moving to steel from electric-arc furnaces, which use scrap steel and can create steel using renewable energy and up to 100% recycled content. In 2021, six AWS data centers were constructed with steel made this way, and we have plans to build more in the future.

## Constructing More-Sustainable Buildings

Businesses also face the challenge of removing carbon emissions from new building construction. Via The Climate Pledge Fund, Amazon has invested in CarbonCure Technologies, which enables concrete producers to make the same high-quality concrete with a lower carbon footprint, and Brimstone Energy, which seeks to make cement carbon-neutral through a process focused on calcium silicate rocks, which have no embedded CO<sub>2</sub>, as well as magnesium species, which passively absorb CO<sub>2</sub>. Amazon is lowering the carbon footprint of our buildings by using CarbonCure's systems and Brimstone Energy cement in some new construction, including in Amazon's second headquarters in Virginia (HQ2).

HQ2 will be a model for sustainable construction. We've electrified the operations of HQ2, eliminating the use of fossil fuels for buildings systems and food service. We have committed to powering 100% of HQ2's operations with



2021 ESG REPORT

# Brookfield Asset Management

# It's a marathon not a sprint...



Blockchain



Artificial Intelligence/ Machine Learning



Connecting logistics & supply chain with schedule and procurement



Inventory control/ end to end supply chain tracking



Complex digital logistics scheduling



Basic digital logistics scheduling



No management/ manual processes

# Thank you!



**VOYAGE**  
CONTROL

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[@voyagecontrol](#)





# Comments, Questions & Answers



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## Forthcoming Events

- Fri, 19 May (16:00-17:00) Thinking About, Preparing For, And Responding To Threats To Resilience
- Tue, 23 May (15:00-18:30) Catalysing The Green Development Pact Through Financial Architecture Reform
- Wed, 24 May (11:00-11:45) Parametric Insurance In 2023 - In, Out & Shaking About
- Thu, 25 May (09:00-09:45) Launch Of Smart Centres Index 7

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