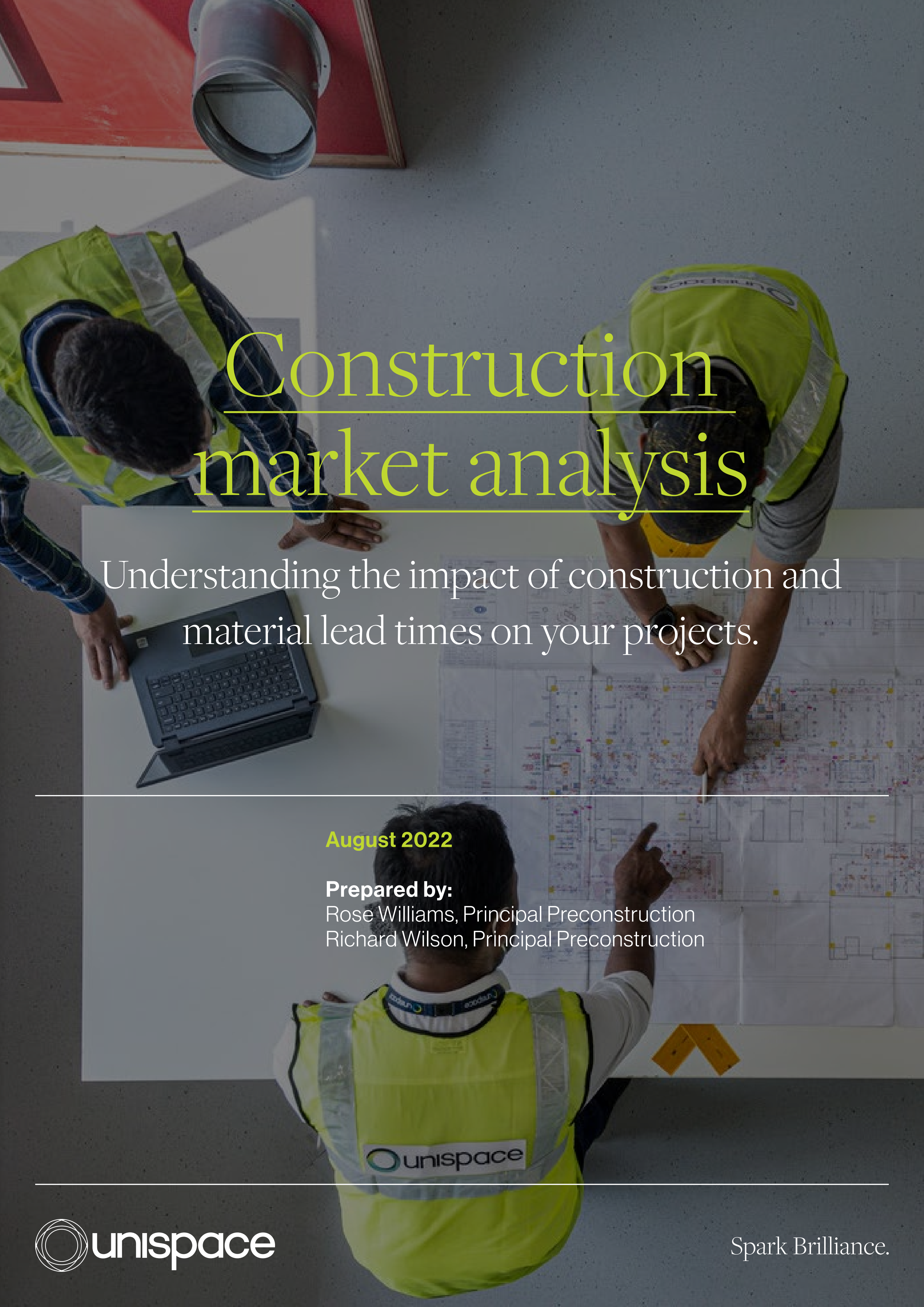

Construction market analysis

Understanding the impact of construction and material lead times on your projects.

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unispace

Spark Brilliance.

Accurate price forecasting is paramount in a market where pricing is increasing rapidly.

We’ve all read the headlines – they’ve been a little bit concerning for the last couple of years – the effects of Covid-19, increased material costs, a broken supply chain, shipping disruptions, skilled labor shortage, and the staggering rise in inflation. Times are volatile and we’re all feeling the pressure. This isn’t new news.

With all the uncertainty in the market, our clients want to know how it will impact their projects. To guide them and help them make better informed decisions, we've analyzed and collated information covering the current state of the market.

We've provided an understanding of the drivers to increasing material and labor costs on construction projects, and recommendations on how to minimize risk and manage cost increases from the outset of a project.

Ryan Caffyn-Parsons
CEO, Americas
Unispace

How did we get here?

The top three reasons prices aren't what you expected, or budgeted for.

1 Transportation costs.

Driver wages, shipping, fuel, equipment, maintenance, and insurance coverage tend to go up each year. With the continual effects of Covid-19, the logistics industry is experiencing the highest constant peak in increased cost ever.

Challenges of securing ocean capacity amid current logjams and prospects of hugely inflated ocean freight costs in 2022 are forcing logistics buyers to consider radical options, such as:

1. Moving away from long-term shipping contracts at a fixed price and implementing greater pricing flexibility, giving opportunity to renegotiate and market test
2. Moving away from "just in time" inventory management to a large inventory strategy to mitigate shortages and disruptions

The crisis has turned the ocean transportation sector into both a seller's market and an inefficient, unreliable sector.[1] Even with these challenges, we have seen some easing on month-to-month rising costs in Q2 2022.

1. Zhenhub - Will Global Shipping Rates Continue to Rise in 2022 (February, 2022)

We all know that the last couple of years have upended supply chains. Road, air, and sea transporting costs will continue to rise dramatically this year – something inevitably passed along from providers to end users.[2]

The Russian invasion of Ukraine has also played a significant role in supply chain issues, increased prices, and increased transport timelines. It is predicted that as companies extradite themselves from Russian oil – regardless of sanctions – oil prices could jump by more than **30%**, to almost **$200** per barrel.[3]

While the U.S. does not import much of its oil from Russia, Europe does – meaning Europe's ban on Russian imports would increase competition for American oil, driving up prices.

2. IFMBlog - How Soaring Shipping Costs Raise Prices Around the World (March, 2022)
3. Cumming - US Construction Market Outlook (Q1, 2022)

The plight of the gas pump

237%

From April 2020 (the low point for prices of many goods during the early stage of the pandemic) to February 2022, the Producer Price Index (PPI) for diesel fuel (at the refinery or terminal) more than tripled.[4]

$5.03

As of August 2022, the national average retail price of diesel fuel has come down slightly from a month ago, but still sits **$1.73** higher than this time last year.[5]

4. AGC - Construction Inflation Alert (April, 2022)
5. AAA Gas Prices

2 Labor and material costs.

When the pandemic hit, the construction industry lost **1.1 million** employees within two months. By July 2021, **4.5%** of construction jobs were unfilled, totaling about **347,000** jobs. By November 2021, those figures had decreased marginally to **4.4%** and about **345,000** unfilled jobs.[6]

According to Contractor Magazine[7], some of this shortage is attributable to the fact that more than **five million** people over the age of **55** exited the labor force during the pandemic, and approximately **1.5 million** of those chose to take early retirement.

Fast-forward to 2022...

Residential construction firms have **added 161,000 workers**, while non-residential construction is still **down about 157,000 employees (3.4%).**

To attract, retain, and bring back their workers, construction firms have had to significantly raise pay. And it's evident that pay raises will need to increase in the coming months to remain competitive.

Average construction hourly earnings, primarily for craft workers, **rose 6.2%** from March 2021 to February 2022.[9]

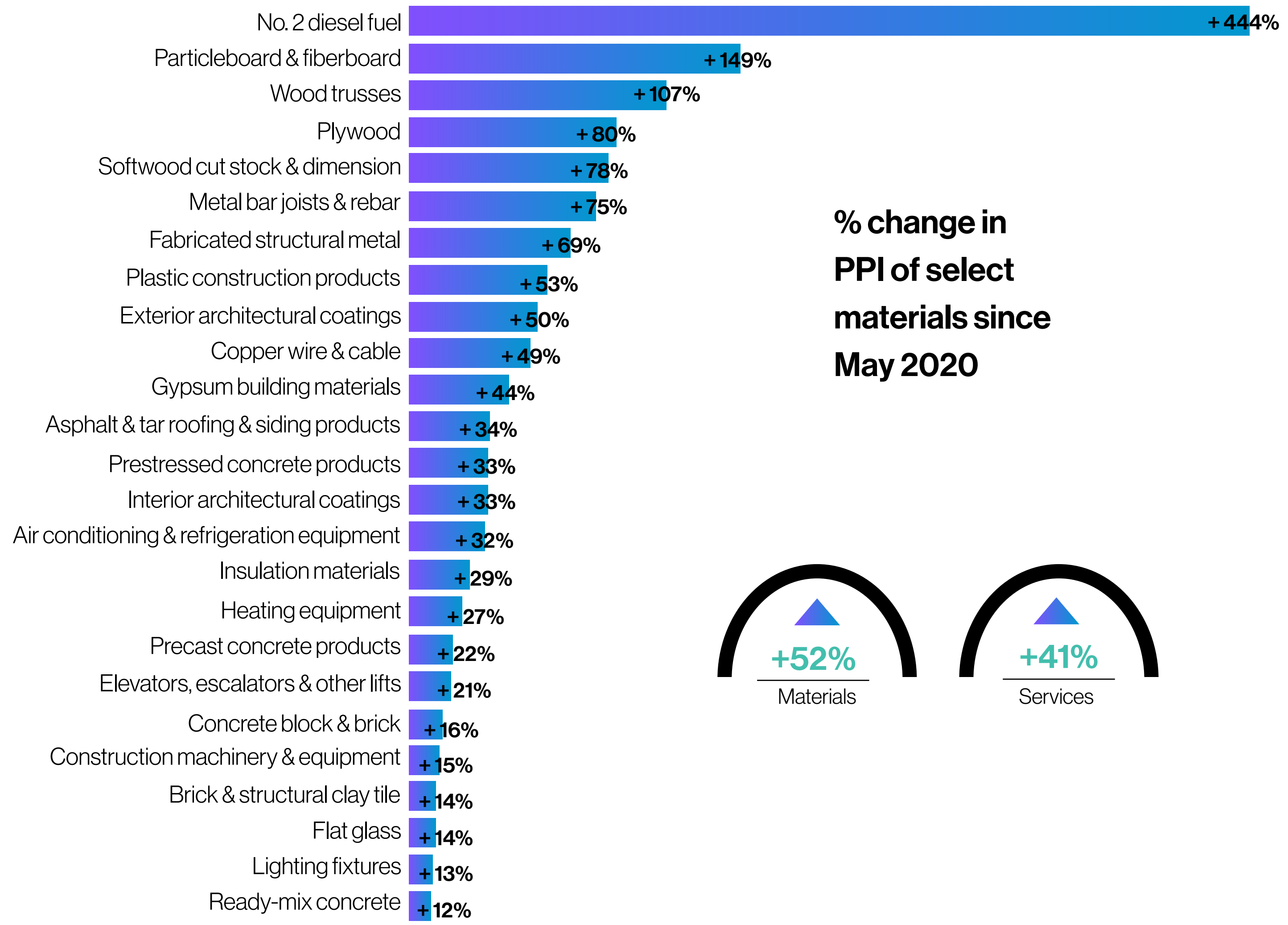
6. AGC - Construction Inflation Alert (April, 2022)
7. QuickDraw - The Second Half – Will Construction Costs Continue to Rise? (2022)
8 & 9. AGC - Construction Inflation Alert (April, 2022)

With the rise in labor costs comes a rise in materials costs. According to the latest Bureau of Labor Statistics, PPI report, the prices of goods used in residential construction show a **4.9%** increase in building material prices since the start of 2022. Building material prices are up **19.2%** year-over-year and have risen **35.6%** since the start of the pandemic.[10]

Higher material costs and extended lead times will remain a challenge in 2022.[11] **Figure 1** shows the change in material prices from May 2020 to May 2022.

10. NAHB - Building Materials Prices up More than 19% Year over Year (May, 2022)
11. WBUR - High Demand for Contractors, Even Through Construction is Becoming Way More Expensive (July, 2022)

Figure 1: Inflation in construction commodities (May 2020 - May 2022)



3

Taxes.

Import taxes and duties, which include tariffs, are another huge cost factor. The U.S. is currently carrying **25%** tariffs on steel imports against many nations, creating artificial impediments to the free-market system.

In November 2021, the US Commerce Department doubled the rate of import duties on Canadian softwood to an average of **17.9%** in hopes of increasing demand for domestic wood. Lumber remains in high demand in the U.S. due to supply chain shortages and the housing boom, meaning higher retail costs are falling on the consumers – leading to the current rise in prices we're seeing in market. [12]

When planning for the coming year, keep in mind that various raw materials and equipment carry additional tariffs when imported into the U.S.

The industry anticipates input costs pressure to remain high over the next two years, with some expectation that the pace of the cost increases will slow. And along with wage/salary increases, the rise in fuel/energy costs, and material costs – higher taxes cannot be forgotten for the role in additional business costs.[13] See **Figure 2** for this break down.

12. AreaDevelopment - 2022 Trade Concerns for Manufacturers (Q1, 2022)
13. Dharam Consulting - 2022-2023 Market Outlook, US Construction (January, 2022)

Figure 2: Current cost increases and where they're headed

	PAST 12 MONTHS	NEXT 12 MONTHS
TAXES	5% ↑	5-10% ↑
TRANSPORTATION COSTS	15-20% ↑	5-10% ↑
LABOR COSTS	5-10% ↑	10-15% ↑
MATERIAL COSTS	5-15% ↑	5-10% ↑

Market outlook.

What does this mean for the rest of the year?

The U.S. is currently one of the top five most expensive countries in the world to build[14] due to labor shortages, supply chain disruption, and material escalation on a global level.

Clients are feeling this impact. Working closely with construction partners is a must to best navigate early release packages, repurchase opportunities, and deeper supply chain outreach amongst other mitigation strategies.

This will be the norm going forward in the face of more uncertainty with transportation, labor, and material trends.

14. World Construction Today - The 10 Most Expensive Cities In The World to Construct In (July 2022)

Despite challenges that the U.S. is facing in terms of rising inflation, energy prices, and the uncertainty surrounding current geopolitical issues abroad, we anticipate that the construction industry will remain strong throughout the second half of 2022.

Unispace's construction cost movement indices (**Figure 3**) tracks costs of labor, materials, and overhead costs year-on-year (2021-2022). We expect these indices to further rise in the second half of 2022 before finding an equilibrium in 2023 and 2024.

Our construction cost data shows an average input cost increase of 14.5% **(Figure 4)** over the last 12 months. We do expect construction cost escalation to continue to increase at rates above national levels, albeit slower than seen over Q1 and Q2 of 2022.

Figure 3: Unispace construction cost movement indices

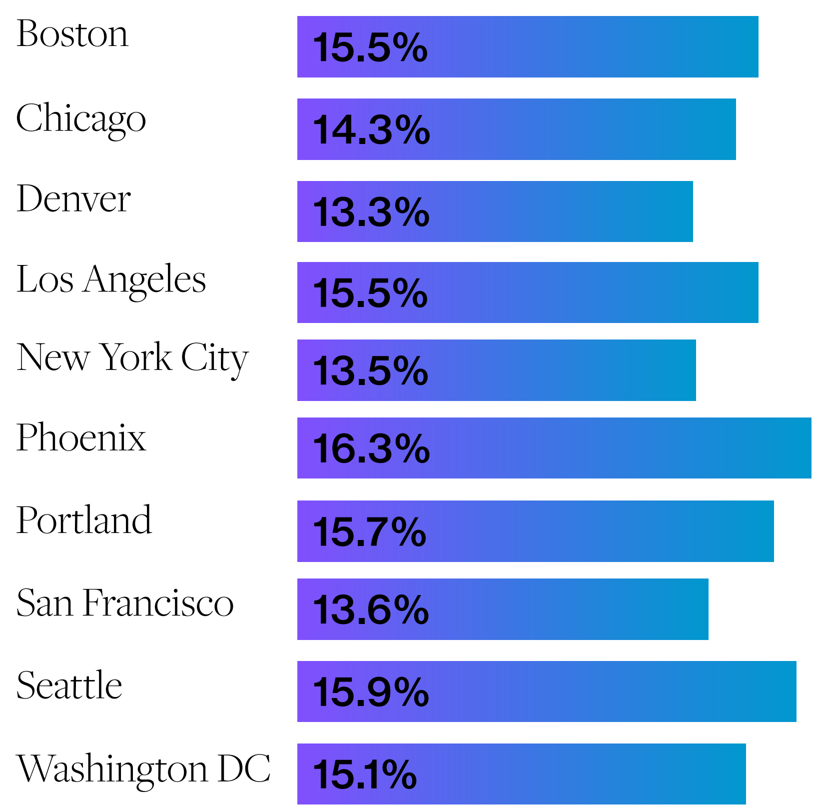
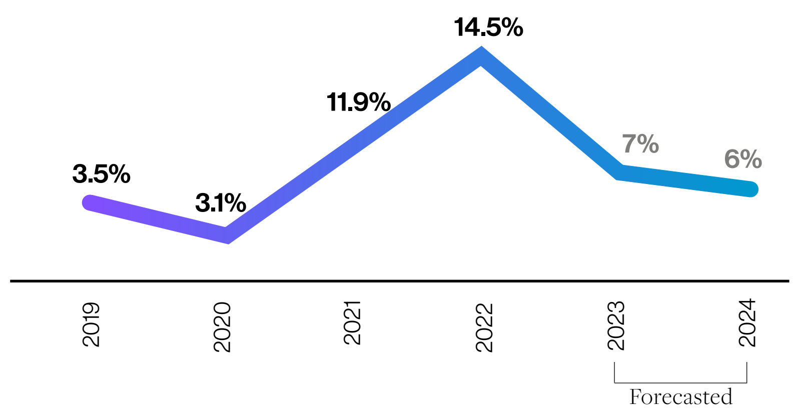


Figure 4: Unispace construction cost data



Boston: With incredibly strong life sciences and laboratories, education, healthcare and aviation related work, the Boston market is among the best recovered in the nation. Leasing activity especially has been strong in recent quarters. In the commercial sector we are seeing that clients are more open to putting projects on hold to gauge the market as we see input costs escalate.

Chicago: With Chicago's return to office beginning in earnest at the end of the first quarter 2022, occupancy rates are expected to see a rapid increase in the near term from current lows, but long-term rates remain uncertain as regional firms continue to negotiate hybrid work schedules. Newer work spaces are being completed and some office interior fit-out is occurring. Still many older office buildings are only partially let, even with the work force coming back into the city. The market is currently focused on new apartment buildings and converting condos to apartments.

Denver: Significant rent growth can be attributed to the industrial market's sustained success, while the office construction pipeline strongly rebounded in Q3 2022. Many higher education projects broke ground Q2 2022. There is a particular need for growth in collaborative workspaces as well as laboratories in the market place to get back to pre-pandemic levels.

Los Angeles : Leasing activity remains high and sublease availability is growing, hence the pent-up demand for residential space in Los Angeles, which despite large-scale projects being delivered is outstripping the current supply pipeline. Office supply pipeline equaled **1%** of existing stock, a significant drop from last year's **3%** benchmark and below the national average. No new construction starts, or completions were logged as of May 2022.

New York City: Construction costs rose sharply in 2021 and NYC is still one of the most expensive cities in the world to build in. A high rental market rate growth is above pre-pandemic rates bolstering the residential build market. With Covid-19 restrictions continuing to ease and the pandemic getting under control, offices are beginning to reopen. This is bringing a resurgence to the corporate interior market.

Phoenix: Construction activity in Phoenix will be on the rise in the coming years. While construction volume is stagnate for 2022 as the market returns to its pre-pandemic state, it should continue to grow with projects such as the Intel **$20bn** Arizona Plant Expansion and KOREPlex facility as well as numerous other infrastructure projects.

Portland: Residential construction – which accounts for just over half of the market – is expected to taper off in 2023 and 2024. Many residential projects are beginning to wrap up and the market is moving onto infrastructure, education, and healthcare. Portland has added construction workers throughout the first few months of 2022, which should push labor costs down as the market cools.

San Francisco: SF remains one of the most expensive places in the world to build. The Bay Area market is seeing an increase in tenant improvements with return to office initiatives on the rise. As of May, the San Francisco-Peninsula market had **5.3** million sqft of office space under construction.

Seattle: Construction activity rebounded from the 2020 pandemic-related slowdown. Large-scale projects being rolled out in the market kept contractors and trades busy last year such as the Washington State Convention Center, Microsoft Redmond campus modernization, and the Spring District neighborhood masterplan.

Washington DC: Lower sublease availability and active leasing from tech firms (TikTok, Amazon's HQ2, Meta) have dropped vacancy levels. And while federal agencies are returning to the office, driving up daily occupancy again, some uncertainty remains around the General Services Administration's leasing strategies moving forward.

With a surge in energy prices and wage growth it's no surprise that inflation has risen uncomfortably high over the past year. U.S. inflation, as measured by the Consumer Price Index shown in **Figure 5**, reached **6.2%** in 2021 and is forecasted to continue to rise this year, with a slight drop off in 2023.[15]

15. Cumming - US Construction Market Outlook (Q1, 2022)

Figure 5: U.S. consumer price index forecast (2002-2022)

As highlighted throughout this report, suppliers and subcontractors have been facing vast pressures on their costs. We have spoken to several suppliers and subcontractors across the interior fit out industry, who have expressed that the full impact of cost increases has not been passed onto clients.

“For 12 months there has been a steady increase in both material prices and lead time/availability issues. It's very difficult when subcontractors commit to a fixed price for a project and are then faced with price increases when it comes time to procure materials.

Labor is also affected by lead time issues. The "new normal" is causing multiple return trips to jobs that would have otherwise been finished. For example, if a light fixture delivery is delayed, it causes fixture installation to occur after workspaces and furniture have been installed. Crews then need to work around objects and equipment that would typically not be there – reducing labor efficiency.

Vice President of Interiors
Electrical subcontractor

“Unlike most construction trades, architectural millwork is the only major trade that operates both a production facility and site crew for every project. The past 12 months have proven to be quite challenging in all aspects of the millwork trade, from sourcing raw material, staffing the production facility, and managing site crews. All types of raw material has been hard to come by, and more recently the war in Ukraine completely cut-off Baltic Birch plywood from the U.S. market.

The price of raw material has also taken on a major spike across all categories. For example, a sheet of Baltic Birch on average costs $150/sheet in 2022 compared to $60/sheet in the beginning of 2021. The tight labor market has created many bottle necks in all levels of off site production and on site installation. Rapidly competing and rising labor rates have outpaced the bidding and pricing process of projects, anchoring operating margins and squeezing profits across all project categories.

Faris Souman
Bestmark National - Millwork

“Supply houses love to blame Covid-19 as the reason that material is taking longer to get. I believe the real reason is that all supply houses are short staffed and can't produce the material in time due to this.

It's absolutely ridiculous.

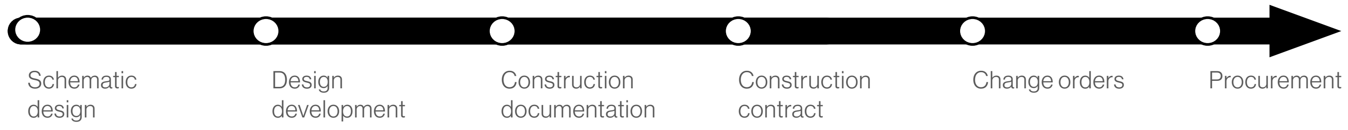
Michael J. Breslaw
Mac Felder Plumbing

The top three things you can do to minimize your risk.

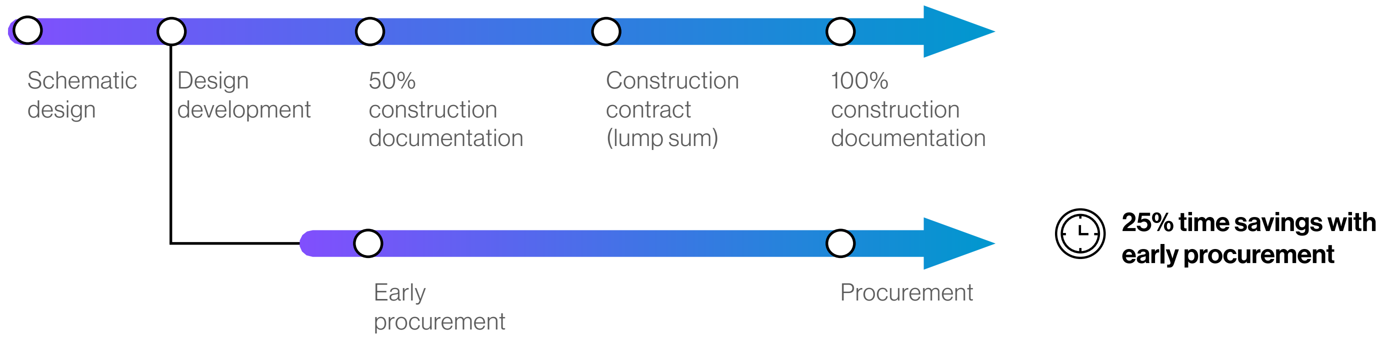
There is a lot of emphasis on trying to predict future outcomes and forecasting possible trends going forward as clients try to mitigate risks on their projects. This begs the following questions: Who bears the risk of these price escalations? And how can construction stakeholders mitigate these risks?

- **Procure materials with the most volatile prices and longest lead times as early as possible** and consider purchasing materials for multiple projects if your project pipeline supports it. Having a preconstruction team looped in early in the process is also advantegous as they navigate long lead procurement from as early as schematic design – ensuring certainty for your project.
- **Engage preconstruction and construction teams early** in the process – even during your due diligence phase. This will inform and validate the subcontractor pipeline and anticipate material availability and price increases early in the project, not just when the project goes out to bid.
- **Engage subcontractors early** to identify materials which may be susceptible to supply chain issues. Come up with comparable products/ materials that are locally available and less susceptible to pricing volatility.

TYPICAL TIMELINE:



UNISPACE DESIGN BUILD PROCESS:



Preconstruction teams can be a valuable partner as you look at your future capital needs. They can provide insight into cost and timing by giving real time construction market analysis at both a macro and micro level, helping assure that you make the best decisions for your business.

Reach out to our preconstruction team to understand the risks associated with your project.

GET IN TOUCH

Spark Brilliance.