Q2 2023 Market Conditions Report

DPR CONSTRUCTION

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On the cover: Lincoln Properties, Waller Place Mixed-Use Tower, Austin, TX (Photo by DPR Construction)

INDUSTRY INSIGHTS

Q2 2023 Market Conditions Report

Photo by Danny Sandler

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Industry Insights

Phil Bartkowski
National Preconstruction Leader

Information Overload

Industry analysts like ENR, Dodge, Cumming, and AGC promote an overwhelming amount of information that indicates the worst is over. This might be true.

The pandemic was a brutal rollercoaster of cost shifts that were difficult to wrangle. We are still experiencing some major impacts, but overall, volatile situations are subsiding and this sense of leveling-off is as good as it gets for now.

When it comes to costs, lumber has balanced out. Steel is settling. But concrete has seen better days. The indexes have been all over the map the last 12-24 months in most categories. There isn't one answer to how much of an impact this is (see our last report on that). And what about the other 80-90% of a projects' scope that is not lumber, concrete or steel. What about sinks? What about carpet? What about vinyl? What about ceiling tiles?

The broad picture is complex.

The data indicates that we would benefit from buying materials at scale. The data indicates that we should buy low. The data indicates that we should hold-off buying certain things.

The data says what it says. Collectively, if the design team, owner and DPR work together, we can consider the data and determine an approach together. If the target is inflexible, it will be more difficult, but not unachievable. If the team accepts the concept of wiggle room on design, cost, and time, then we can collaborate on a plan that can hit our targets.

Setting the Target & Hitting it

Over the last three years, we've experienced some drastic swings in two key categories related to construction: what things cost and how long they will take.

The typical contractual obligation builders face is to deliver a project on time and on budget. Seems like a pretty simple objective, right? In past Market Conditions reports, DPR has discussed how we forecast costs, how we track lead-time issues, and how we monitor labor availability. This scientific, analytical approach is still imperfect.

We continue to hear these questions on a regular basis:

"What do you think will happen to construction pricing in the next twelve months?"

"Ballpark it for me…how much will this job cost if I build it two years from now."

"If I had to forecast escalation over the next three years, what should I budget?"

"How about labor availability for construction, will that affect my job?"

"I have a pretty large portfolio of projects in the pipeline, when should I go to market to maximize my investment?"

We know our clients and the industry would like a simple answer:

"Plug in 4.5%"

"We'd anticipate the project value to increase 6%"

"I'd take a 3% year to year and run with that"

"No"

"I'd suggest you hold off for 6 months before starting"

> "Setting and achieving a cost and time target for a construction project is both an art and a science."
>
> – Sage Advice from DPR

If you've come to this report hoping for the answer to these questions, you may be disappointed. We believe a tailored approach is warranted. If we tell our client a number or a date, we should be willing and able to stand behind it.

General trends, graphs and percentages around construction related data are very generic and rarely directly applicable to actual projects.

For example, during the pandemic, when most indicators of future work on the horizon predicted a collapse, we experienced a rise in opportunities and a dramatic strain on key building materials. This, in turn, created such a pressure on cost that the whole industry seemed to be on an escalation red-alert.

The same is applicable right now. Sure, if you look at the major indicators (like we all do), the trend data would indicate we've leveled off to a near 0% month to month change according to several construction data trackers out there. But does this take into account the past several years of dramatic rise that got us to this new normal? Should we accept that and run with it?

The Art of Forecasting Science

Data can be extremely reliable, indicative, and valuable when attempting to set a target around time and money.

We do it regularly. Some of the most valuable information that we capture across the projects we build is around what we forecast versus actual outcome. Both from a time and cost perspective, we set out to build reliable and durable targets early, realizing that the first number or date is often the benchmark for all changes moving forward.

We use past data effectively. We look at industry trends and reports. We track supply chain notices and impacts. These things are a piece of the puzzle and should be leveraged.

But this is not ChatGPT. The difference is the practical, personal application of the data; how we take that information and determine how we can relate it, refute it, or use it for this project.

The art side takes as much effort as the data approach and the key is to marry those together in a cohesive way to paint an accurate picture. It's conversational. It's relational. It's prospecting. It's personal. It leverages practical experience to challenge the data and discover the true nature.

Data might tell you that the same building, with the same design, built on a similar site, should be the same cost and built within the same time frame. Though it might be close, it's not guaranteed.

A period of a few months between those projects could dramatically affect the project's duration overall due to potential supply chain disruptions. Building just one city or state away from the other project could introduce a completely new set of trade partners that are subject to an entirely different set of local market pressures and production capabilities.

The bottom line is every project is unique, but data alone doesn't treat them that way. Setting cost and schedule targets is as tailored a process as the project itself.

Where to go from here

So what can we do? What can we rely on?

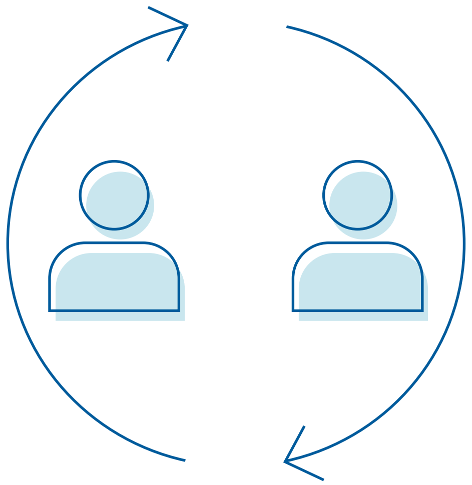
DATA & INFORMATION:

- Economic statistics
- Indexes & Indicators
- Past project experience
- Local market knowledge
- Trade partner relationships
- Supply Chain / Manufacturer relationships
- Real-life lessons learned

CANDID CONVERSATIONS:

- Understand the entirety of the scope
- Know our project goals and ideal outcomes
- Ask questions and uncover key discussions early
- Proactively approach bid results instead of just reacting to them
- Be aligned around targets
- Provide options – one dead end should lead to a viable detour
- Expect the unexpected and align on an approach to handle disruption

As you review data and begin having candid conversations, consider these questions:



- What's my real target?
- What's going to take priority?
- What is off the table for consideration?
- Am I open to options?
- Do I have a solid base scope to get reliable numbers?
- Have I been clear in my communication of my targets and goals?

Partner with a builder that will challenge you. Partner with a builder that asks the right questions to understand what you want. Partner with a builder that understands what to expect and is willing to not just report quotes back to you. Partner with a builder that is a collaborator and a steward of your money.

MANAGED SUPPLY CHAIN

Impacts, material prices, mitigation strategies

Photo by Danny Sandler

In This Section

Supply Chain | Material Prices | Impacts & Mitigation

Supply Chain

Tim Jed
DPR Supply Chain Leader

> "Inflation is when you pay fifteen dollars for the ten-dollar haircut you used to get for five dollars when you had hair." - Sam Ewing

Despite the recent bank failures and stock declines, optimism remains high in the construction industry.

It will take time to see the longer-term impact of these failures, but in positive news, the inflation rate has now fallen each month since July 2022, and the annual rate of inflation slowed to 6% from 6.4%—the lowest since September 2021.[1]

Due largely to this easing of inflation and shortage of housing, and despite decreased homebuilding sales volumes and lowered prices, homebuilder stocks are outperforming the market.[2] Many in the commercial construction industry remain optimistic and believe most segments will improve in 2023, with the exception of lodging, private office, and retail.[3]

Architectural billings dipped below 50 in November 2022, which was the first time that occurred since February 2021 (a score above 50 indicates an increase in billings, and a score below 50 indicates a decrease in billings). Although they are still below 50, they have been improving since December. The Dodge Momentum Index is echoing this sentiment, indicating anticipated increased construction spending a year out.[4]

6.0%

annual rate of inflation is the lowest since September 2021

1 https://www.msn.com/en-us/money/markets/cpi-shows-little-progress-on-cooling-off-high-us-inflation/ar-AA18BVxD
2 https://www.forbes.com/sites/greatspeculations/2023/03/08/why-homebuilder-stocks-are-outperforming-despite-a-tough-housing-market/?sh=518b27b307cc
3 AGC U.S. Construction Outlook: Rotation or Retreat, March 2023 (Ken Simonson) - AGC 2023 Outlook Survey that included 1032 total respondents
4 https://www.construction.com/news/December-2022-Starts

"I'd do anything for a cookie."[5]

Construction employment for 2022 was up in 40 of the 50 US states,[6] and as of February 2023, it is up 3.2% Y/Y and hit a record high 7,918,000, with average hourly earnings up 6.1% to $33.57 craft and office nonsupervisory labor in demand and tight.[7] 69% of firms expect to increase their headcount over the next 12 months.[8]

Even as *The Washington Post* reported The Girl Scouts' "hotly anticipated new cookie sold out faster than Beyoncé tickets, and wound up on eBay for four times the price,"9 the Global Supply Chain Pressure Index (GSCPI) for February dropped below its historical average for the first time since August 2019.[10]

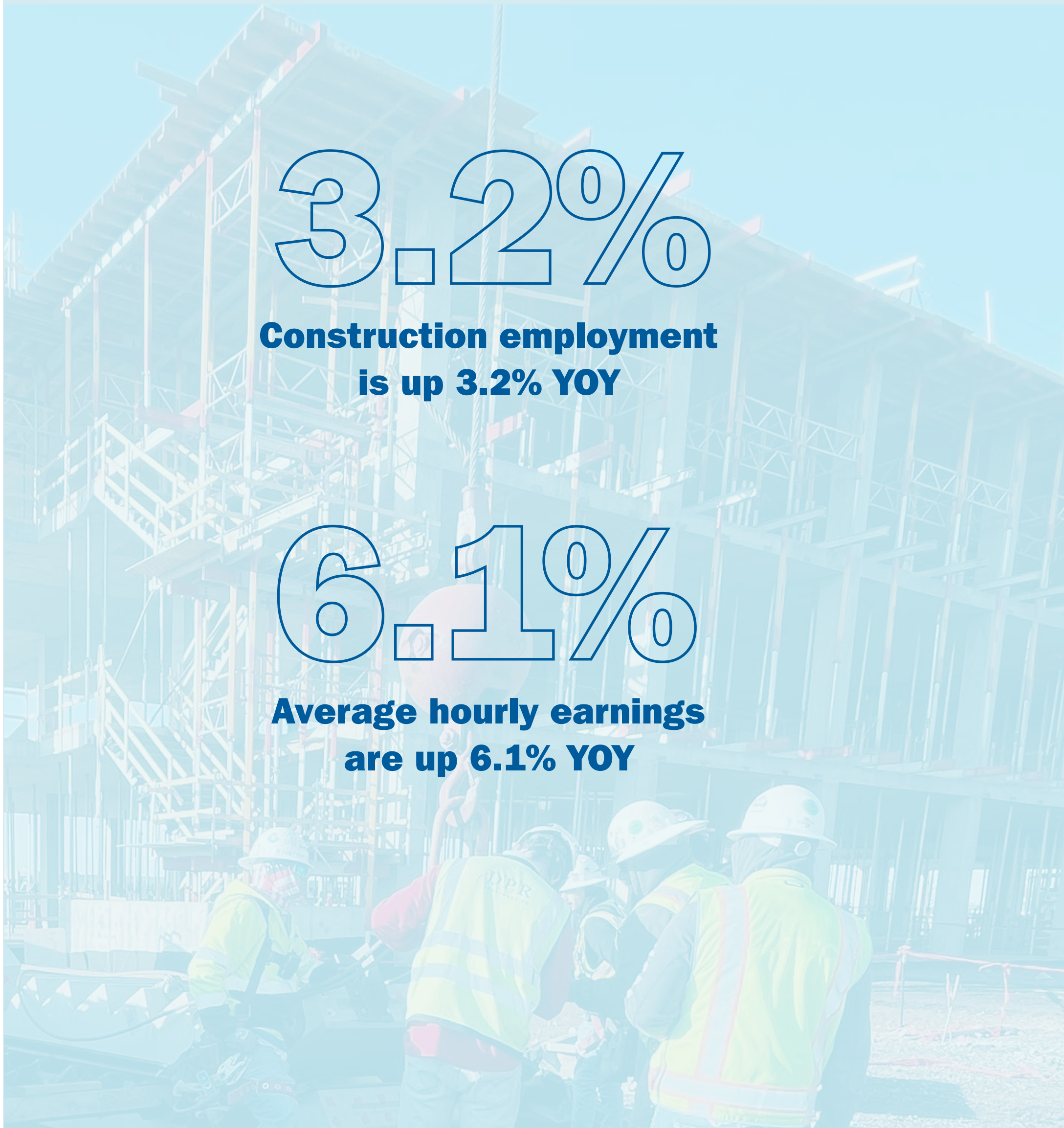
The number of impacts notices received by DPR (cost and lead time increases) has been steadily falling since September (with an expected tick-up in February, fed by annual notices).

Despite seeing overall improvement to the supply chain, certain products remain problematic with increasing lead times and manufacturers choosing not to quote materials until they are ready to manufacture them.

I'll take Wine with That

Semiconductors will continue to be in the discussion regarding the supply chain, and we will likely see continued lead time issues until our supply is shored up to meet the ever-growing demand. Emerging technologies will drive additional demand and time to build infrastructure will make this recovery slow.[11]

Products related to infrastructure and green initiatives[12] will continue to keep demand high, which means continued long lead times and high prices on transformers, generators, switchgear, breakers, metal sockets, and bus plugs. Although copper and aluminum are significantly down, prices have started increasing again. We've been told stories of transformers requiring a 174-week lead time at 40% cost premiums, and projects using refurbished short-life transformers to meet commissioning dates, with the assumption that they will need to be replaced within a couple of years after installation.



3.2%

Construction employment is up 3.2% YOY

6.1%

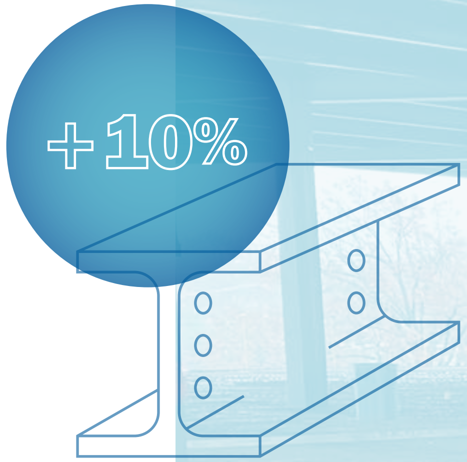
Average hourly earnings are up 6.1% YOY

5 https://youtu.be/0bgnAn5a2EA
6 AGC U.S. Construction Outlook: Rotation or Retreat, March 2023 (Ken Simonson)
7 AGC Data Digest Vol. 23 No. 9, March 6-10, 2023 (Ken Simonson)
8 AGC U.S. Construction Outlook: Rotation or Retreat, March 2023 (Ken Simonson) - AGC 2023 Outlook Survey that included 1032 total respondents
9 https://www.washingtonpost.com/business/2023/03/11/girl-scout-cookie-bakery-delay/
10 https://wolfstreet.com/2023/03/06/global-supply-chain-pressure-index-drops-below-average-for-first-time-since-aug-2019-after-horrendous-spikes/
11 https://fortune.com/2023/03/11/chips-and-science-act-semiconductor-shortage-rakesh-kumar/
12 Electric vehicle and solar products legislation like HR 3684 Infrastructure Investment and Jobs Act; CA CARB rule requiring 100% of new car sales in California to be zero-emission vehicles by 2035 California and is also considering banning all diesel trucks at ports by 2035 with and statewide by 2045 with new vehicles being powered by clean fuels starting in 2024 and other restrictions on high mile diesel trucks in 2025; PG&E's announcement plans to bury 10,000 miles of power lines in the next decade; The European Green Deal, to reduce greenhouse gas emissions by 55% by 2030 from 1990 levels, and become climate neutral by 2050.

Glass continues to be an at-risk product due to sand shortages, manufacturing constraints, competing demand from other industries like solar and automotive, and hoarding of cullet (broken glass used in recycled glass).

French winemakers are seeing issues related to availability of bottles,[13] not to be confused by the beer shortage of 2022 which was because of a shortage of carbon dioxide (not bottles).[14]

Steel is increasing in cost, which is anticipated to be 10% due to seasonal adjustments, inflation, increase interest rates; however, steel producers in Asia are offering lower prices to try to increase volume and regain lost market share. While Russia's invasion of Ukraine did not start an energy crisis, it affected the crisis significantly. The International Energy Agency (IEA) is calling it "the first truly global energy crisis, with impacts that will be felt for years to come." It has caused pricing volatility, supply shortages, security issues, and economic uncertainty.[15]



By Sea, Land and Air...

Bloomberg reported that ocean freight is back to 2018 rates.[16] The number of container ships in US coastal waters has fallen to less than half compared to this time last year, indicating a trade slowdown.[17]

Smaller container ships are being sold for scrap,[18] even as the China State Shipbuilding Corporation made delivery on the largest container ship in the world, capable of transporting 24,116 TEU (Twenty-foot Equivalent Units).[19]

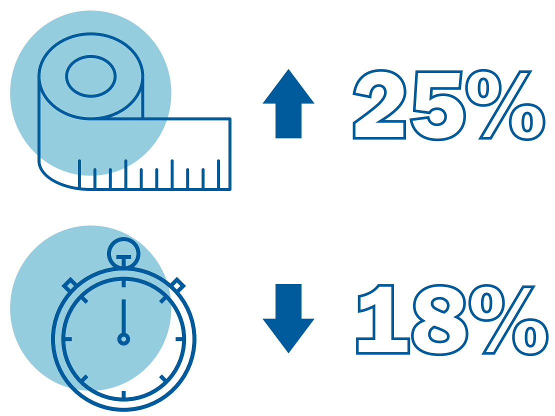
Due to improved snowpack and dredging, the barge traffic slowdown due to drought in the Mississippi river may be coming to an end, but it will take time for things to catch up and normalize.[20] The drought in other rivers, like the Rhine,[21] and Yangtze[22] have not abated, and this will cause continued slowdowns on related barge freight.

In trucking, spot rates for flatbeds are down 14.9% Y/Y, and van spot rates are down 27.0%[23] with the average break even price per mile at \$2.167.[24] Diesel fuel has generally been declining since June 2022, but still 33% above

13 Global glass shortage hits Washington winemakers (msn.com)
14 U.S. Could Face Another Beer Shortage in 2022 and Higher Prices (marketrealist.com)
15 https://www.weforum.org/agenda/2022/11/russia-ukraine-invasion-global-energy-crisis/
16 https://www.bloomberg.com/news/newsletters/2023-03-02/supply-chain-latest-shipping-rate-drop-muddles-cargo-talks-at-tpm23
17 https://economictimes.indiatimes.com/small-biz/trade/exports/insights/container-ship-count-in-us-waters-falls-by-half/articleshow/98621833.cms?from=mdr
18 https://www.hellenicshippingnews.com/ship-recycling-small-container-ships-sold-for-scrap/
19 https://newatlas.com/marine/msc-tessa-worlds-largest-container-ship/
20 https://kmch.com/2023/03/13/ag-informer-mississippi-crisis-ending/
21 https://www.bloomberg.com/news/articles/2023-02-25/europe-s-parched-lifeline-flashes-trade-disruption-warning?leadSource=uverify%20wall
22 https://www.reuters.com/world/china/chinese-cities-see-temperatures-hit-record-high-early-march-2023-03-08/
23 https://www.dat.com/trendlines
24 https://jbf-consulting.com/breakeven-costs-of-operating-a-commercial-truck/

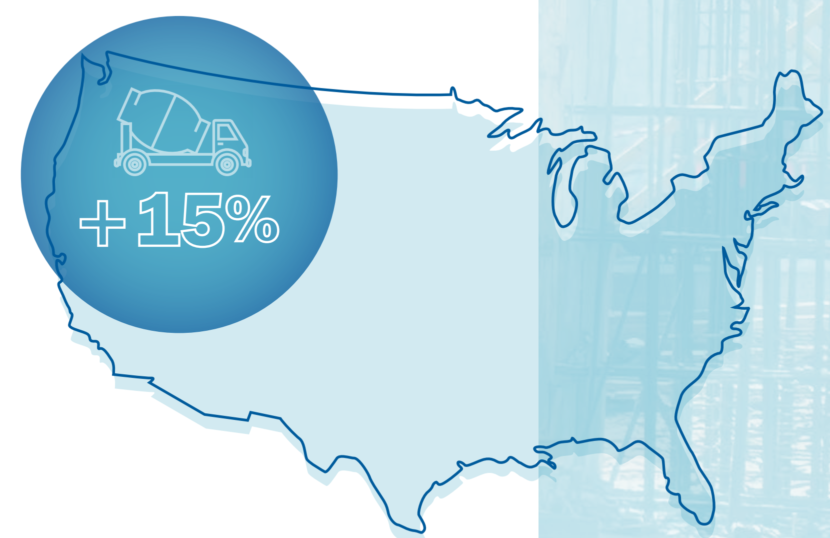
pre-Covid levels ($2.81 v $4.25/gal as of 3/12/22),[25] and US crude stockpiles are being rebuilt, and were up 1.2M barrels recently, having risen the last 10 weeks.[26]

Between January 28 and March 4 of this year, there were 5 train accidents in the US, involving multiple carriers. As we've reported in the past, there has been a steady decline in **rail service** over recent years despite increased profits.



US freight trains grew 25% in length between 2008 and 2017 (up to 3 miles in length) with 67% of trains now arriving on time, down 18% from pre-pandemic, and although the rail strike was averted last December, if there are new requirements to restrict train size or require additional safety standards, rail schedules, deliveries, or costs could be affected.

There were **concrete shortages** in 48 states last year and costs rose 15% in December of 2022 compared to a year earlier.[27] There are many reasons for this, including cement shortages and fly ash shortages (due to reduction of coal fired power plant combustion). **Drywall** manufactured east of the Rocky Mountains also competes for fly ash, so drywall manufacturers are shifting back to natural gypsum in the east, but this will take several years to fully implement. The President's announcement to strengthen the "Buy American" requirements during the State of the Union Address could complicate the supply chain for certain products (like concrete) due to the domestic limitations and shortages of raw materials.



25 https://www.eia.gov/petroleum/gasdiesel/
26 U.S. crude stockpiles up 1.2M barrels last week, rising 10th week in row (msn.com)
27 https://www.supplychainbrain.com/blogs/1-think-tank/post/36700-biden-wants-american-made-construction-materials-is-that-feasible

Breaking it down

The key takeaways, from our perspective: Collaboration, cooperation, and communication continue to be the key to working through the remaining issues in the supply chain.

Here are some of the things we can all do to continue building great things as we partner with our valued customers.

DPR can...

- Track impacts and inform teams
- Talk to Suppliers and Subcontractors – ask probing questions and listen for cues
- Proactively engage with manufacturers to understand current issues and risks
- Evaluate projects trade by trade and item by item to identify risks and take action
- Accelerate submittals
- Collaborate and partner with team members for best solutions
- Drive Collaboration

  Owners + Architects/Engineers + GC + Subs + Suppliers = Reduced Disruptions

Owners can...

- Give early releases— allowing early takeoffs, early orders, and early stocking
- Consider alternate materials
- Work with A/E teams to specify local and/or available materials and equipment
- Accelerate decisions and commitments for selections up in schedule
- Accelerate submittal approvals
- Prioritize projects
- Approve temporary materials, furnishings, and equipment where necessary
- Engage as a partner with your builder

Impacts & Mitigation

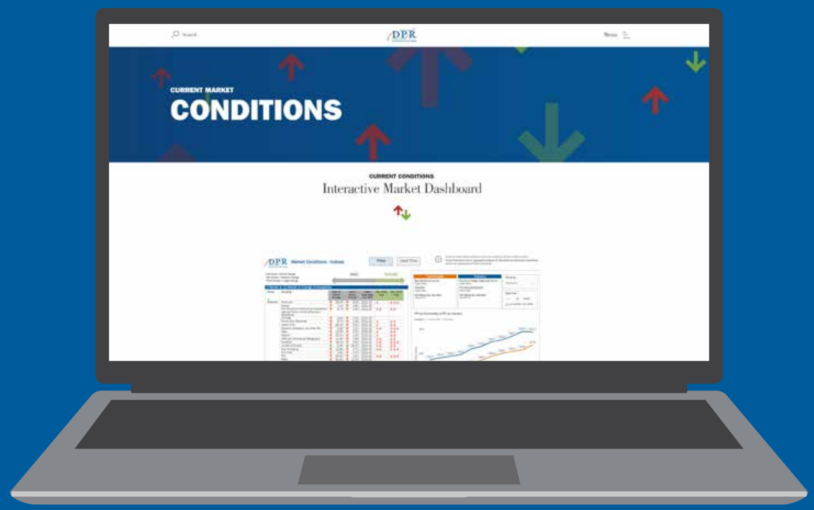
Biggest Impacts

These impacts are based on actual communications received from our suppliers and distributors, and may be different than the Market Conditions Dashboard, as this information is based on specific products compared to the general data in the Market Conditions Dashboard.

LOGISTICS SUMMARY	CAUSE	ACTION
Domestic Trucking Increase of 0% to 2% 0 - 1 week lead time	Spot market rates continue to decrease as capacity exceeds demand. National Flatbed rates have dropped from the high-water mark of $3.45 per truck mile in June 2022 to $2.72 per truck mile in March 2023, a 21% price drop. This has caused smaller trucking companies to leave the market. It is anticipated that the market will bottom out and may begin to rise.	Continue to look at the spot market to bid the best rates for loads.
Ocean Freight / Containers Decrease of 3%	Less consumer spending, couple inflationary pressures and lingering COVID issue has caused Ocean freight from Asia to US to drop 3%. • Asia-US West Coast prices (FBX01 Weekly) fell 3% to $1,040/FEU. This rate is 94% lower than the same time last year. • Asia-US East Coast prices (FBX03 Weekly) dipped 3% to $2,265/FEU, and are 88% lower than rates for this week last year.	Continue to look at the spot market to bid the best rates for ocean freight. Further, with a 7 million surplus in 20' shipping containers globally, it is a good time to purchase containers for short-term storage where needed.

IMPACTED TRADES	CAUSE	ACTION
Gypsum, ACT 5-20% price increase	Sustained increased cost across labor, energy, raw materials/fly ash constraints, and logistics	Early procurement advised for short-term projects
Cement Up 10-14%	Sustained increased cost across labor, energy, raw materials/fly ash constraints, and logistics	Early planning and procurement is advised, local lead times range from 2-6 weeks

MARKET CONDITIONS DASHBOARD



Scan the QR code or click to **view the current market conditions dashboard**

https://www.dpr.com/company/market-conditions

Past data reflects the movement of PPI indices, as provided by the US Bureau of Labor and Statistics and is captured and updated monthly.

Future forecast data is gathered through DPR's Supplier Relationship Management Program in coordination with leading industry manufacturers and suppliers. Forecasted data is captured and modeled quarterly as an average of several surveys to multiple suppliers within the trade.

IMPACTED TRADES	CAUSE	ACTION
Pipes, Fittings, Valves Up 4-24%	Sustained long lead time and raw material cost	Early procurement advised
Capital Mechanical Equipment Up 18-25%	Continued increase in demand and shortage of tier 2 components from international suppliers	Early release and procurement advised
Transformer, ATS, Water Chillers Leadtime 35-176 weeks	Continued increase in demand and shortage of tier 2 components from international suppliers	Early release and procurement advised

Mitigation Strategies Implemented on Recent Projects

While the easing of supply chain issues is positive, DPR has been actively working to control our destiny and prepare for the future in managing our supply chain. Our aim is to ensure a reliable supply chain that keeps our projects on track, hitting critical milestones, and minimizing the effects of outside events.

STRATEGIC SOURCING

As suppliers concern over demand and backlog grow, it creates opportunities to secure partnerships with manufacturers who, in stronger demand markets, would not consider selling direct to a general contractor. DPR is actively working with several manufacturers to align and partner with, offering better terms, pricing, and service.

WHY THIS MATTERS: The advantage to the suppliers is steadier backlog, and the advantage to DPR and Owners are reduced disruption at better pricing.

SOURCING ALTERNATIVES

With increasing U.S. steel prices, DPR is developing strategic international relationships with producing and processing steel mills to capitalize on competitive pricing opportunities from foreign markets.

WHY THIS MATTERS: DPR recognizes current pressures on the domestic steel markets and looks for options that provide better pricing and delivery schedules.

EXPANDED LOGISTICS PROGRAM

With the recent reductions in freight and trucking costs, DPR has launched a new logistics branch to ensure greater control over transportation scheduling and on-time deliveries.

WHY THIS MATTERS: We are now able to receive transportation requests from our front-line teams, move materials, and provide storage close to the project site.

INNOVATING FOR QUALITY & EFFICIENCY

As an enhancement to our supplier quality program, DPR is expanding our qualifications for suppliers to include the Environmental, Social, and Governance (ESG).

WHY THIS MATTERS: This will enable us to better understand suppliers and will ensure capabilities in a more holistic manner. A robust quality and qualification program can also enable risk-free domestic and international sourcing as a long-term strategy to overcome supply chain issues.

LEVERAGING SUPPLIER RELATIONSHIPS

We have seen a recent spike in equipment manufacturers not fulfilling original delivery dates and issuing last minute changes to projects without details on abatement plan nor root cause.

WHY THIS MATTERS: DPR has leveraged our strategic relationships to perform root cause analysis and drive lead time improvements to projects, in some cases reducing delays by up to 18 weeks.

CORE MARKET INSIGHTS

Insights from our core market leaders on Life Sciences, Healthcare, Commercial, Higher Education and Advanced Technology trends

Photo by Danny Sandler

CORE MARKET INSIGHTS

Life Sciences

The Life Sciences construction market remains strong in 2023 but a sense of normalization to pre-pandemic levels is emerging across the broader market.

Multiple years of significant federal and private funding in R&D and manufacturing are starting to parallel a slowing global economy. Whether it is a reduced demand for COVID treatments, high inflation and interest rates, geopolitical uncertainty, supply chain challenges, lender impacts and banking stresses, or other influencing factors, there is no question Venture Capital (VC) investment and capital spend are showing signs of contraction.

Projects moving forward in 2023, whether in construction or design, have a sense of monetary caution. An emphasis on right sizing projects and eliminating the "nice-to-haves" is driving a behavioral shift from the past two years. This, combined with Global Social Responsibility goals, such as sustainability and trade partner diversity, emphasizes a requirement to plan it right from the beginning.

R&D / Biotech Market

The demand for R&D lab space has mostly stabilized across the market with some geographies seeing an increase over the past couple of years. The Bay Area and Cambridge continue to anchor the U.S. coasts, with moderate growth across all DPR geographies, including increases in emerging markets such as Texas and Colorado.

Dennis Kirkpatrick
Core Market Leader

Mike Marston
Core Market Leader

DPR MARKET ACTIVITY

R&D Projects

Market activity reflects the quantity of projects and potential opportunities, and DPR's high level analysis of the market.

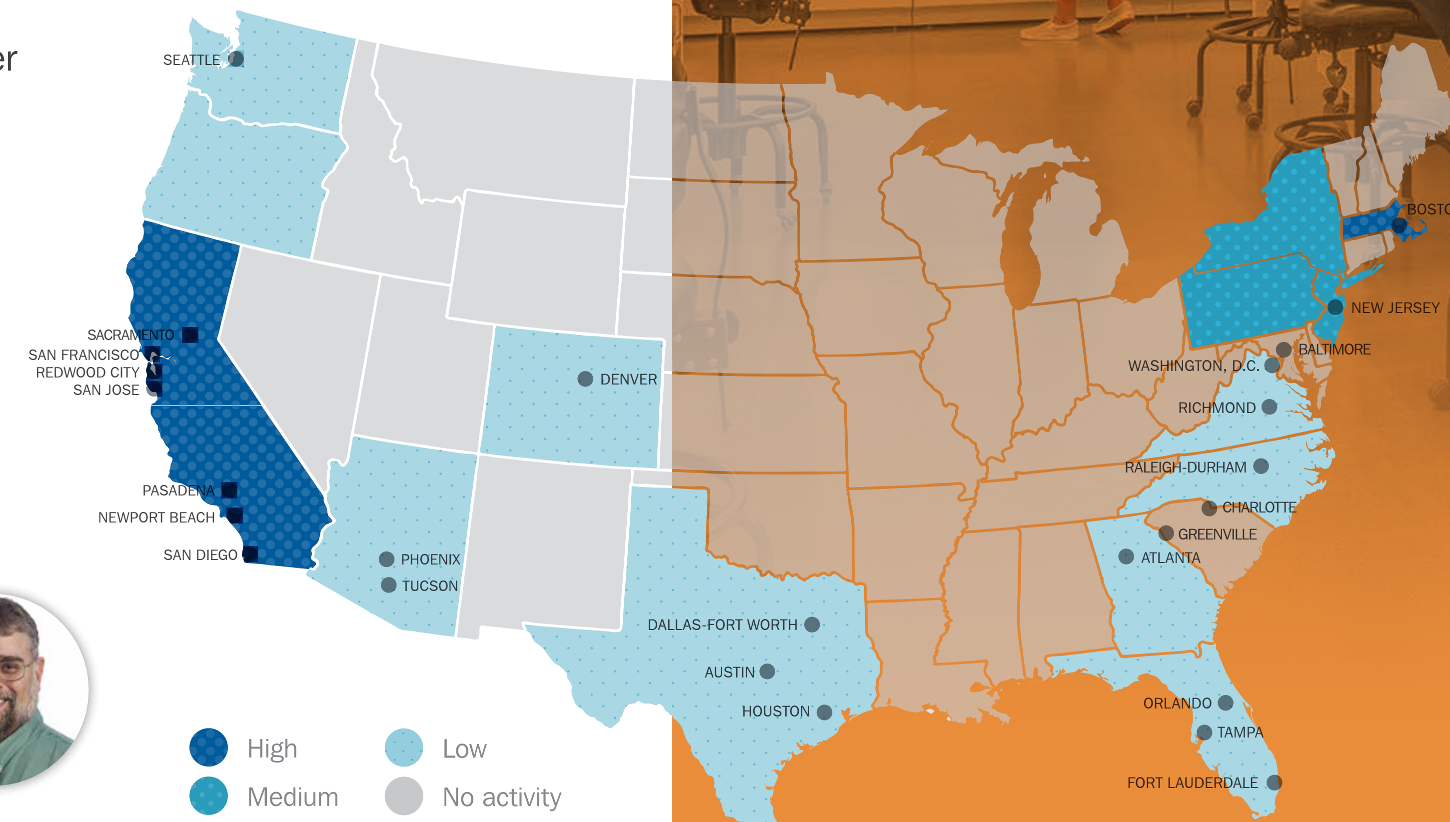


Photo by Warren Patterson Photography

The market is more focused on ensuring tenant security prior to building in lieu of speculative building. Ongoing pressures of inflation combined with lower VC rates of investment are allowing the market to better understand their current state, and therefore better predict the future.

General lower performance and ROI over the last couple of years is showing potential optimism of recovery, dependent on the reduction of ongoing Federal interest rate hikes. More investment in growth opportunities like biotech will infuse energy into the R&D industry and drive more demand accordingly.

cGMP Manufacturing Expansion Continues

As mentioned in 2022, the development of new drugs and therapeutic biological products continues to drive manufacturing expansion. Financially stable organizations with existing revenue streams combined with clinical launch products continue to support the cGMP market but funding for emerging markets remains unknown. The need for early-stage clinical space exists within emerging firms and evaluation of constructing their own cGMP spaces will continue.

The North America market remains saturated with new projects and emerging players requiring a continued focus on finding the right partners. The supply chain—especially equipment—remains a risk to project budgets and schedules.

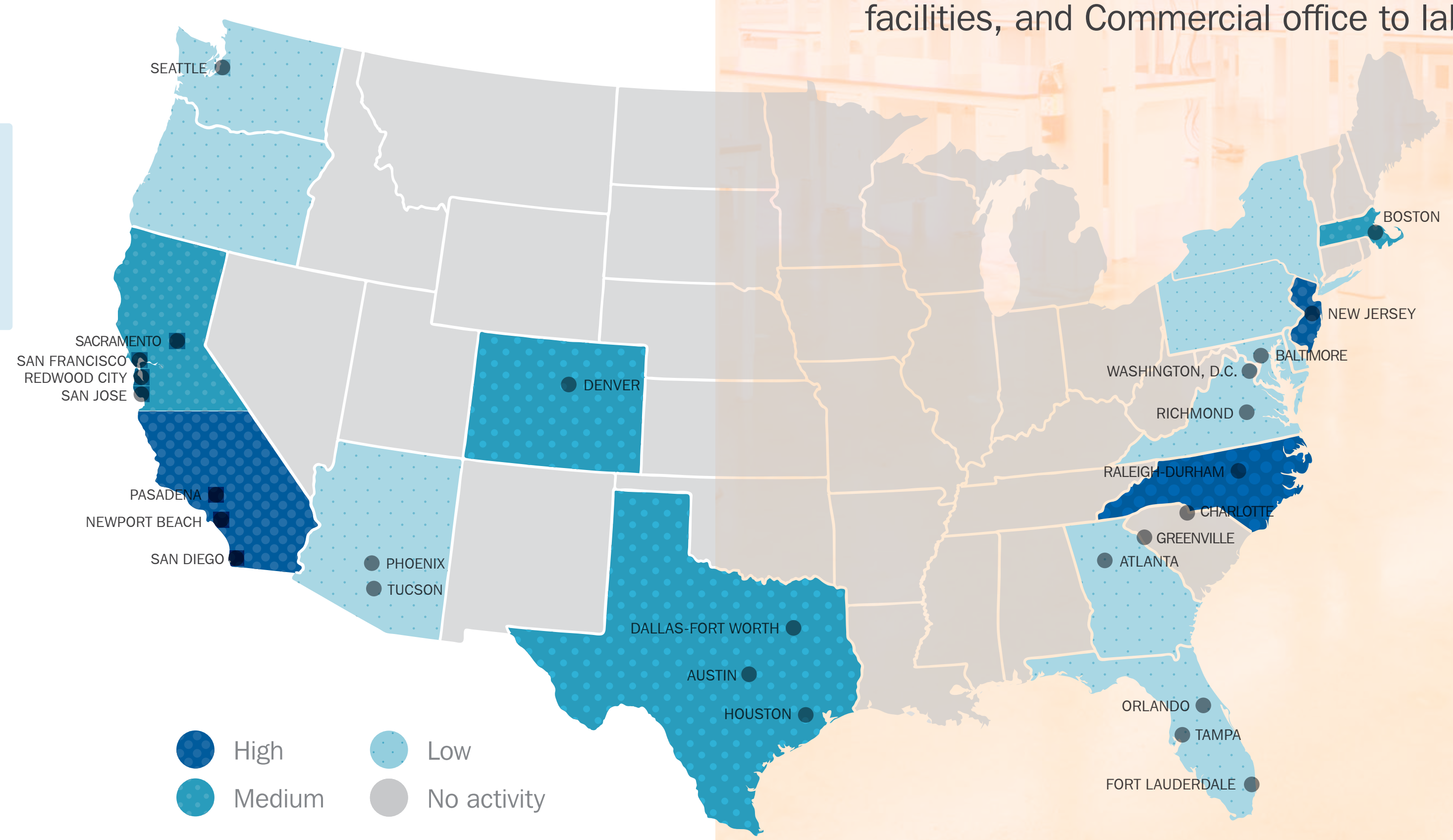
> While commodity pricing seems to be easing, the recovery to manufacturers is slow. Projects need to focus on equipment and material supply chains early in their projects to align financial and schedule expectations.

An emerging market worth noting is food science. Relying on similar manufacturing principles as the Life Sciences industry, it presents a dependable and sustainable food source alternative to a growing global population. The market is primarily VC funded, so concerns exist, but projects are developing across North America and APAC at a smaller scale, with larger expansions in the coming years.

DPR MARKET ACTIVITY

cGMP Projects

Market activity reflects the quantity of projects and potential opportunities, and DPR's high level analysis of the market.



How can we help?

- Consider **PREFABRICATION** to save time, money, and meet the challenge of labor shortages while building the highest quality facilities to enhance your brand with more detail and precision than traditional construction methodologies.
- **SELF-PERFORM** key components of the work to provide increased safety, quality, field execution and predictable outcomes for your projects.
- DPR's global reach brings the **FLEXIBILITY TO DEPLOY RESOURCES** to support increasing demand.
- Our continuous monitoring of market conditions provides you with **ACCURATE COST PREDICTABILITY.**
- DPR's Life Sciences experience lends **SUPPORT TO TECHNICAL PROJECTS** in other sectors such as Healthcare labs, Higher Education science & technology facilities, and Commercial office to lab conversions.

CORE MARKET INSIGHTS

Healthcare

2023 is a year of cash conservation and evolution for health systems.

A recent Kaufman Hall report states the issue is "primarily an expense story," with growth in expenses vastly outpacing growth in revenues. This math does not work for healthcare providers. Many systems are operating with lower revenues.

This is causing many healthcare providers to have a "wait and see" attitude about their design and construction projects, with projects being temporarily paused or deferred to later dates.

Healthcare's rapidly evolving realities of caring for an aging population, workforce shortages, burnout, increased uninsured, stressed operating margins and lower reimbursement contracts are challenging healthcare providers to deliver care at a lower cost more efficiently than ever within an environment where capital investments are scrutinized. Additionally, the industry forecasts strong growth in the care shift from acute care hospitals to lower-cost outpatient settings.

Providers are seeking greater speed in project delivery, cost certainty, increased efficiencies, increased connectivity, and coordination of services focused on one goal—demonstrated value.

Sean Ashcroft
Core Market Leader

Hamilton Espinosa
Core Market Leader

Photo by Warren Patterson Photography

Shifting to a total cost mindset

The design and construction industry is in a period where cost-cutting strategies for project delivery have become table stakes—necessitating new ways to evolve how we engage with our clients and their capital strategy.

As an industry, how do we shift thinking from an episodic projects approach to one that is broadly focused on the provider's sustainable cost reduction goals?

DELIVERING COST CERTAINTY

There is a new imperative for the design and construction industry to find ways to reduce project delivery costs. Accelerated shifts already taking place before the pandemic are challenging existing project delivery models as care increasingly goes to lower-cost sites of care and the providers shift to acclimate to technology disrupting traditional health care.

DIGITALLY-FORWARD HEALTHCARE

Healthcare and technology industries are inextricably linked, and likewise, the Digital Care Environment is becoming more intertwined with the Built Care Environment. But simply adding technology to old processes risks creating a more costly and inefficient system. Early alignment with the health system's strategic and tactical plans will become critical in ensuring that intentional selection, implementation, and training on these technologies deliver value for providers and patients.

NEW CARE MODELS

In a cost-constrained environment, considering the changing needs of regulatory guidelines and local Authorities Having Jurisdiction (AHJ) becomes essential to manage the total cost of a project. As funding increases drive the rise in behavioral and mental health facilities, a thorough understanding of AHJ requirements is imperative to deliver cost-effective spaces with minimal rework and speed to market in mind.

BUILDINGS AS PRODUCTS

Providers seek to limit the variability and volatility of their capital construction programs, whether initiating their expansion plans or because of merger and acquisition of assets. Through investment in building standards and prototypes, organizations can shift project delivery from time-intensive processes to address accelerated speed to market, cost certainty, consistency in quality, and branded user experience across sites of care leveraging best practices to enhance care delivery efficiency in parallel with achieving a reduction in operating expenses.

Learn more as the DPR's healthcare core market team considers how new pressures on the market will transform the delivery of care in our continuing series of Healthcare Insights.

https://www.dpr.com/media/collections/healthcare-insights

Healthcare Insights is a series from DPR Construction's healthcare core market team designed to consider how new pressures on the market will transform the delivery of care.

Focusing on rapidly addressing today's environment, our teams advance value to health care providers through strategic assessment, program and cost validation, and informing capital investments in real estate and technology—enabling strategic decisions much earlier in the delivery cycle.

Commercial

Challenges will continue in the commercial real estate market in 2023 given a difficult debt/equity marketplace and corporate America's challenge of redefining their work-place strategy.

Leasing velocity has been down over the past 6 months and very few large transactions are getting signed as companies navigate these murky waters. Forecasts for relief in the market are mixed but generally real estate developers continue to plan and design with cautious optimism that projects will proceed in mid-2024 when markets (hopefully) improve. That said, bright spots exist and the flight to quality commercial office is real.

Office

Around 75% of real estate executives believe the office is key to their future portfolio, however, office is going through a historic shift. Uncertainty at the outset of the pandemic drove a wave of short-term renewals, but recent trends favor relocation into higher quality space, at higher lease rates. Office visit patterns have changed with 48% attending 1 time per week, but the data is showing that steadily growing to 2-3 times per week. Many companies are seeking to continue that trend and bring their people back into the office by creating an amenity-rich environment focused on flexibility and wellness with the comforts of home. It is still a historically tight labor market, so the competition to attract and retain quality people remains extremely high. From a cost of real estate perspective, we are seeing tenant designs with less desks due to the hybrid work approach but a significant increase

Scott Lyons
Core Market Leader

48%

Office visit patterns have changed with 48% attending 1 time per week, but the data is showing that steadily growing to 2-3 times per week.

Photo by Chad Mellon

in collaborative space and a high demand for services (access to restaurants & cafes, fitness centers, outdoor space, and daycare).

For many firms, they may be taking less square footage but at a higher lease rate, thus netting a wash on their corporate income statements.

Adaptive Reuse

The repurposing of aged-out buildings is on the rise and gaining traction with potential tenants. The increased awareness of climate change impacts has been a key driver for investors, developers, and tenants to gradually adopt this approach and breathe new life into our downtowns. The possibilities of adaptive reuse are endless and come in many forms but is defined by transforming a current underutilized building for another purpose.

We have seen this with change in industrial to retail, office to multi-family, office to hotel and office to laboratory/research spaces catering to the rise in the Life Science sector.

How landlords, developers, and banks tackle the repurposement of aged buildings will be a "hot topic" for the next decade.

Hospitality

Despite macroeconomic headwinds, geopolitical tensions, and ongoing supply chain disruptions, **the global lodging industry remained resilient in 2022 with fundamental performance accelerating towards a full recovery to pre pandemic levels.** Projects scheduled to start construction in the next 12 months are up 14% YOY, and projects in the early planning stage increased 18% YOY.

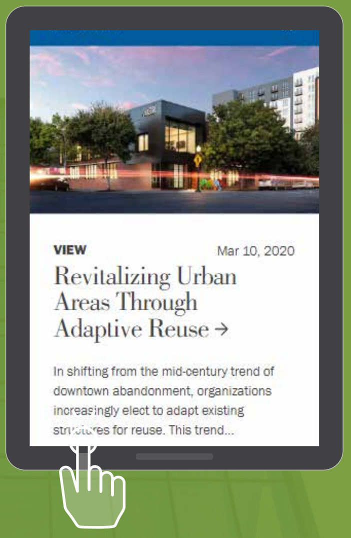
The pipeline in hotel development is happening on two tracks. Major hotel brands that paused or postponed their CapEx property improvement programs during the pandemic are still working through the backlog of five-year renovations. At the same time, new developments are happening in locations that are benefiting from residential and business migration. Markets like Dallas and Atlanta are pulling from major markets like New York and Chicago for both business and leisure travel.

The recovery of the hospitality industry to its 2019 level could happen by 2024 or later.

Source: McKinsey & Company

Check out a few commercial market insights that offer a deeper look into the evolution of office.

https://www.dpr.com/view/nextgen-office



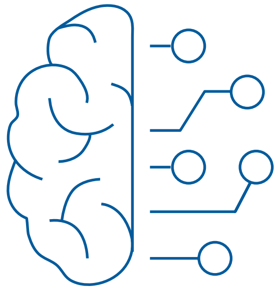
https://www.dpr.com/view/revitalizing-urban-areas-through-adaptive-reuse

Higher Education

Over the last year, both public and private institutions experienced change in nearly every part of the higher education ecosystem. Some changes will permanently influence and evolve the student experience regarding wellness, virtual learning, inclusivity, costs and environment.

Newest Trends: Influence of Tech/AI Campus

Perhaps the greatest change creating shockwaves in the higher ed community are the recent advances in artificial intelligence, more specifically ChatGPT. The artificial intelligence chatbot that can instantly create written material on nearly any subject is being called the "greatest creative disruptor to education and instruction in a generation." Since being released in late 2022, the higher ed community is deep in discussions regarding ethics, plagiarism, and integration of AI in the workforce, and how this shapes what higher education of the future may look like for both students and educators.



What role will AI play in curriculum development and course delivery? Has the age of the robot professor arrived? Will the benefits of the in-person "college experience" be overcome by the cost to benefit considerations offered by virtual and AI learning?

Mark Zuckerburg's investments in Metauniversity is a great example of a VR-enabled learning environment aimed at establishing virtual universities accessible from anywhere. The timing appears right, as the industry is experiencing a historic rise in the number of university closures, acquisitions and mergers, and consolidations of smaller and less financially secure colleges. The concepts presented in a remote ecosystem offer expanded opportunities

Greg Fraikor
Core Market Leader

Photo by Mark Herboth Photography

particularly for rural communities that have been historically underserved. We can expect to see more of this gamification of learning throughout our educational system.

University Funding and Enrollment

Historically, obtaining a degree has been proven to increase an individual's earning potential, civic engagement, and leadership. For the last decade, rising tuition costs have outpaced inflation, driving scrutiny on the ROI for college degrees.

Tuition costs trended downward this year for the first time in over a decade. Increased competition and recent recessionary pressures resulted in an average of 4.5% tuition decrease. Although welcome news for parents and students alike, smaller institutions reliant on tuition will continue to feel pressures. A positive shift from the previous few years is that freshmen enrollment in all institution types increased by 4.3% in 2022. Furthermore, Biden's 2023 budget request outlines greater funding of our public higher education system with a focus on affordability in the form of enhanced Pell Grants and tuition-free Community Colleges, and historically underserved colleges such as HBCUs, TCCUs, and MSIs. Philanthropic gifts to American colleges and universities also saw an increase the past couple of years—a 12.5% increase in 2022 alone.

While enrollment is up, graduation rates are trending flat nationally hovering around 62.2% from four-year degree programs. Universities and colleges continue to seek creative ways to entice students with unfinished degrees to complete offering increased online courses and more transdisciplinary degree options.

Construction

Despite continued global economic uncertainties, the Higher Education design and construction market exhibits indicators of continued strength consistent with previous forecasting. While we continue to watch the AI and virtual revolutions evolve, student wellness continues to be a focus with new and major remodels of recreational and athletic facilities and student engagement projects moving forward. Facility security continues as an active and evolving priority and evaluation of mass timber solutions is gaining traction. Momentum additionally continues for the design and construction of interdisciplinary science and technology facilities and our outlook remains positive heading into the summer.

2x

Tuition increased by more than double between 2008 and 2020

Freshmen enrollment increased 4.3% in 2022, with applications up 20% from prepandemic numbers.

Recent increases in federal funding and philanthropic gifts.

Increase in student wellness and athletic facility projects, both new and remodels.

How can we help?

- While endowments and state spending are up for universities across the board, we still have record high inflation. DPR's industry leading **cost management systems and tools** are allowing our institutional clients **to choose the best design and construction solutions** to achieve the highest value quickly.
- Integration of DPR's **supply chain tools, prefabrication solutions** and communicating those through interactive Join.Build cost analysis sessions, continue to offer our clients **near real time cost and schedule solutioning** in volatile and increasing interest markets.
- Our **early integration and cost modeling services** provide critical project design and construction alternatives and information to help inform and execute successful procurements and projects.
- Presenting **innovative solutions to future flexibility** is our biggest advantage as our university clients seek to maximize funds and repurpose existing facilities.

Advanced Technology

Mission Critical and Advanced Manufacturing construction markets continue their growth in 2023.

Mission Critical

The world's dependence on digital infrastructure continues to grow exponentially year over year, prompting an urgency for more data centers to store, process, and connect our data. Data center demand is arguably the strongest of any real estate sector, and hyperscalers continue to be the largest users. Low vacancy rates in colocation/multi-tenant data centers will continue to fuel new supply growth. According to Greet Street Advisors, while the rate of growth (CAGR) in the U.S. will slow over the next five years compared to the prior five, the amount of supply put in place annually will nonetheless rise significantly. McKinsley & Company forecast U.S. data center demand to grow approximately 10 percent a year until 2030.

+10%

U.S. data center demand to grow approximately 10 percent a year until 2030

Advanced Manufacturing

Government incentive programs fueling tech sovereignty continue to influence spending in the semiconductor, electric vehicle, and lithium-ion battery spaces. Semiconductor Industry Association (SIA) tells us that despite a short-term cyclical downturn in 2022, the global semiconductor market's long-term outlook is strong. And with lithium mining fueling the electric vehicle revolution, Goldman Sachs forecasts EVs to be half of global car sales by 2035. Current long-term trends in international geopolitics and associated legislation are driving re-shoring in these same areas, bringing manufacturing closer to home with both new and expanded facilities. Environmental and economic challenges are driving wider adoption and demand for these technologies.

John Arcello
Core Market Leader

Andy Andres
Core Market Leader

Photo by Adam van Noort

Common Priorities

Looking at the priorities of our customers building data centers or advanced manufacturing facilities, there are a few common priorities we're seeing today.

The global demand is growing significantly and competition to deliver the supply with speed and low margins is prominent. Furthermore, government and trade organizations are very focused on bringing both compute and manufacturing capabilities within their control and soil.

Amongst the priorities you can expect, such as speed to market and controlling or reducing costs, there are a couple existential priorities we see our customers focused on to serve their business:

Cost and Schedule Certainty

Construction costs have escalated, lead times for mechanical and electrical equipment have reached unprecedented durations and demand for skilled labor remains consistent.

Sustainability

Data center sustainability will be more important than ever in 2023. As governing bodies, financial investors, developers, and enterprises are all pressured to accelerate programs serving clean and renewable energy, water conservation, and decarbonization, our customers are focused on different tactics and competitive advantages to grow their market share.

Renewable energy production in the U.S. surpassed coal becoming the #2 energy source by type in 2022. Renewables are driving higher demand for stationary storage—in the form of lithium-ion batteries—and other power electronic components funded through recent government incentives, which require components to be manufactured in the U.S. to qualify.

Increasing lead times have manufacturers choosing not to quote materials until they are ready to manufacture them.

Craft labor is in demand with 69% of firms expect to increase their headcount over the next 12 months.

How can we help?

- DPR is focused on delivering longer range options and bringing **more control of the supply chain** in house to serve our customers through utilization of Digital Building Components and EIG as two examples.
- We have focused on customers wanting to work collaboratively in **planning and procuring their projects in multiple global locations**, including aspects of design, VDC, self-performed scopes of work, prefabricated building components, MEP, and supply chain management.
- Our Advanced Technology core market team is focused on expanding our preconstruction services to **provide embodied carbon studies and metric tracking** to influence design decisions, alternative means and methods in construction, and carbon accounting for our customers.

How do we support the growth of digital infrastructure while also better managing its energy, water and carbon footprint?

Listen as stakeholders from across the industry discuss greener data centers through new approaches to design and construction.

https://www.dpr.com/media/collections/sustainable-data-centers

Q2
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Market
Conditions
Report

Resource Materials

Information in this report is compiled from third-party reporting that is available to the public. It is not owned by DPR Construction.

United States Census Bureau
https://www.census.gov/

United States Department of Labor
https://www.dol.gov/

United States Energy Information Administration
https://www.eia.gov/

United States Chamber of Commerce
https://www.uschamber.com/

United States Bureau of Labor Statistics
https://www.bls.gov/

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https://www.enr.com/

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https://cumming-group.com/