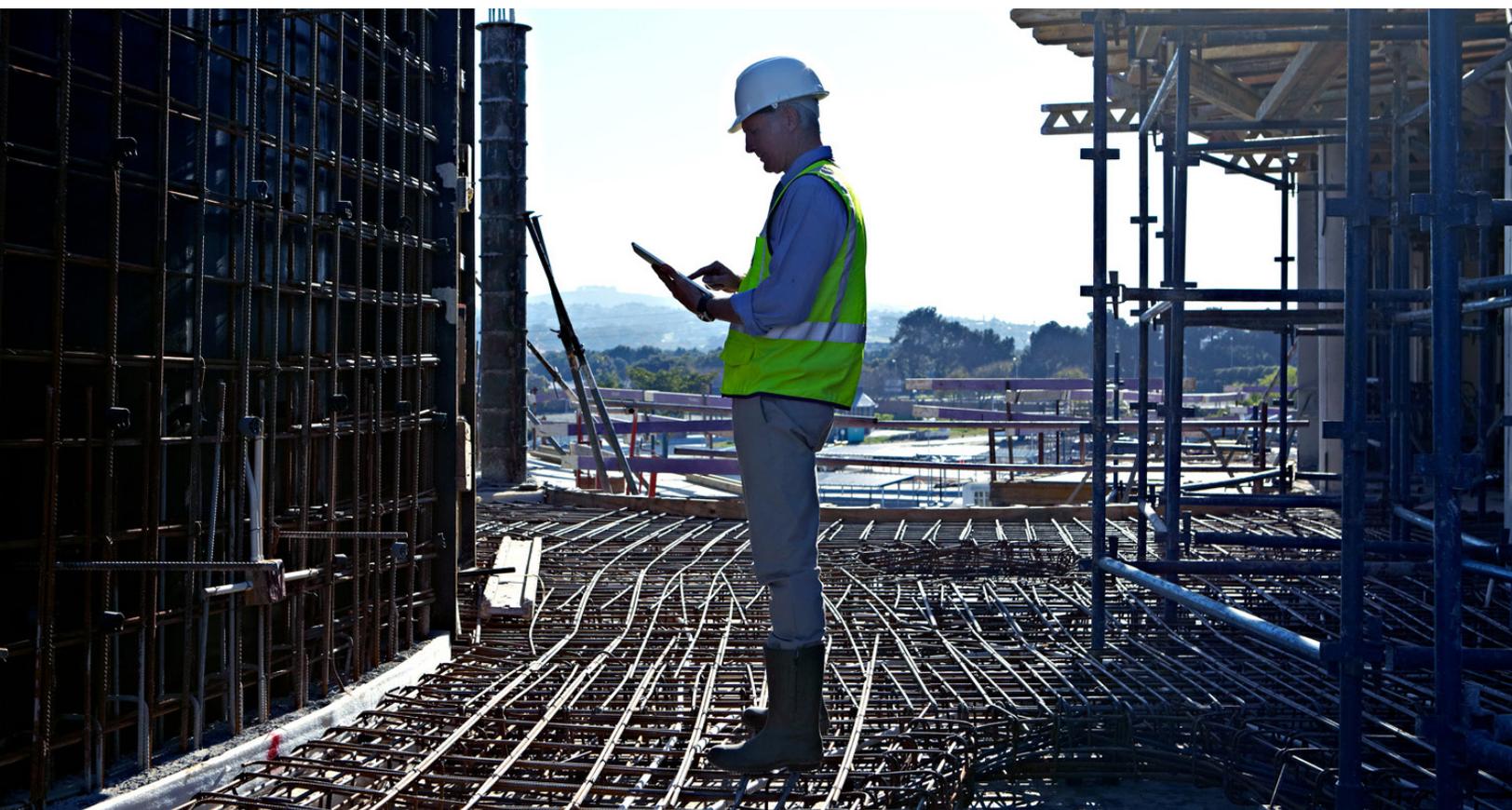


Materials Practice

# The strategic era of procurement in construction

As the industry transitions to sustainable construction, chief procurement officers will play key roles in helping companies decarbonize and improve profitability.

*by Francisco Marques, Gonçalo Ribeiro, and Erik Sjödin*



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**Although construction** is one of the world's largest ecosystems,<sup>1</sup> it typically performs with slim margins (approximately 5.0 percent earnings before interest and taxes) and low productivity improvements (an average productivity growth of 1.0 percent per annum for the past 20 years versus about 2.8 percent for the total economy<sup>2</sup>). Faced with additional pressure from recent disruptions, including the COVID-19 pandemic, the war in Ukraine, and overall slowdown in new building projects, construction companies are doubling down on procurement as a key driver of improving profitability and navigating uncertainty.

In addition, construction has a major role to play in achieving global sustainability goals. As an industry, construction is directly responsible for approximately 40 percent of CO<sub>2</sub> emissions and indirectly responsible for 25 percent of all greenhouse-gas (GHG) emissions.<sup>3</sup> The majority of these emissions are Scope 3, meaning they originate either with suppliers or from using and operating the built environment.

Keeping these points in mind, optimizing procurement can help accelerate construction's decarbonization efforts and become a source of competitive advantage in the years to come. In this article, we outline how procurement can deliver on its dual mission of improving profitability and driving decarbonization, and we recommend actions for chief procurement officers (CPOs) and other leaders across the value chain who want to take a proactive stance as the industry transitions.

## The procurement opportunity in construction

Procurement plays an important role in construction, typically accounting for 40 to 70 percent of a

company's total spending, and industry executives see the function as a trusted business partner.<sup>4</sup> Recently, construction companies have doubled down on procurement to better navigate uncertainty.

Recent McKinsey research highlights how the pandemic and the war in Ukraine have had a significant impact on commodity prices and supply chains.<sup>5</sup> This can already be seen in rising inflation around the world. For example, in 2022, most countries grappled with year-over-year inflation of more than 5 percent. And although the duration and impact of today's rates of inflation are unknown, they are certain to put additional pressure on construction's profitability.<sup>6</sup>

Despite the significant margin impact of procurement, the construction industry is not keeping up with other industries when it comes to implementing best practices (exhibit). This is partially explained by external challenges—such as limited control over project specifications and complex, fragmented supply chains—and internal challenges such as decentralized project-by-project mindsets.

Some construction companies have been able to overcome these challenges and develop group- or nationwide sourcing strategies that capture significant savings potential. Those with best-in-class procurement practices actively contribute to improving their companies' financial results, with margins that are sometimes five to ten percentage points higher than those of procurement laggards.<sup>7</sup> And many construction CPOs believe that consistently applying best-in-class procurement practices can generate savings of as much as 12 percent for their companies (see appendix, "Evergreen procurement: What procurement leaders in construction do differently").<sup>8</sup>

<sup>1</sup> This includes the full life cycle (design, materials manufacturing, construction, usage, and demolition) of all residential and commercial buildings and infrastructure.

<sup>2</sup> Filipe Barbosa, Jan Mischke, and Matthew Parsons, "Improving construction productivity," McKinsey, July 18, 2017.

<sup>3</sup> "Call for action: Seizing the decarbonization opportunity in construction," McKinsey, July 14, 2021.

<sup>4</sup> Based on an internal survey of CPOs of construction companies (n = 101).

<sup>5</sup> Knut Alicke, Richa Gupta, and Vera Trautwein, "Resetting supply chains for the next normal," McKinsey, July 21, 2020; "War in Ukraine: Lives and livelihoods, lost and disrupted," McKinsey, March 17, 2022.

<sup>6</sup> Roman Belotserkovskiy, Ezra Greenberg, Asutosh Padhi, and Sven Smit, "Navigating inflation: A new playbook for CEOs," *McKinsey Quarterly*, April 14, 2022.

<sup>7</sup> Nancy Busellato, Riccardo Drentin, and Sunil Kishore, "Now is the time for procurement to lead value capture," McKinsey, February 25, 2021.

<sup>8</sup> Survey of CPOs of construction companies (n = 101).

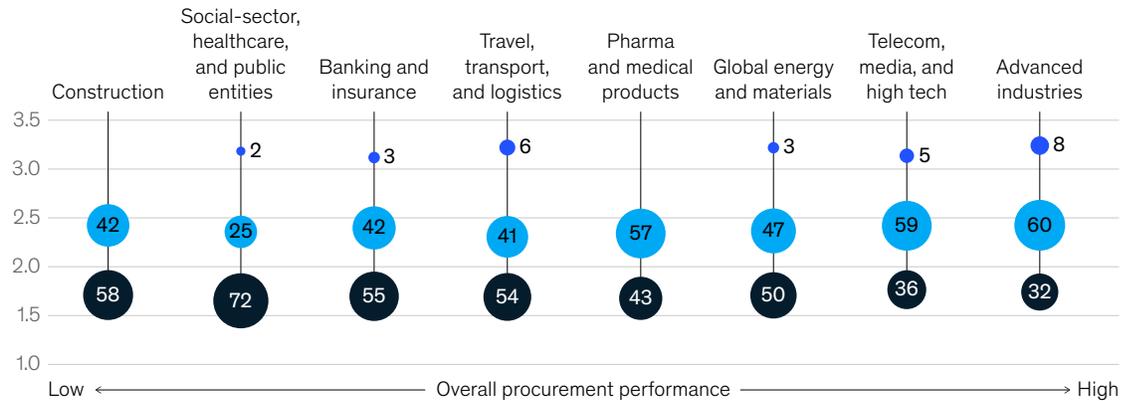
Exhibit

## Construction scores low on procurement practices compared with other industries.

Average procurement practice score by sector (scale: 1 = low, 5 = high)

Performance within sector (bubble size represents % within group)

● Procurement leaders ● Middle of the pack ● Procurement followers



Source: McKinsey GPE benchmarking database

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# The procurement function will need to excel in its dual mission of improving profitability in a volatile environment and meeting sustainability targets.

## The dual mission of procurement: A strategic era for CPOs in construction

In addition to playing a key role in improving profitability in volatile and inflationary times, procurement will likely play an even greater role in decarbonizing construction. Given that 90 percent of the emissions from construction companies are Scope 3,<sup>9</sup> and that procurement is the main interface

with the construction value chain, it's fair to say that CPOs will be in the driver's seat for reducing the CO<sub>2</sub> footprint of construction projects. Engineers and architects can help upstream by making changes in design, specifications, and materials procurement that complement downstream efforts. This can help elevate the role of the CPO in construction companies beyond a trusted business partner and

<sup>9</sup> Annual and Sustainability Report 2021, Skanska, March 8, 2022.

toward a more strategic function, as seen in the automotive industry.<sup>10</sup>

### Near-term levers

The following near-term levers can help procurement play a key role along the value chain:

1. *Create transparency for the CO<sub>2</sub> footprint.* Managing CO<sub>2</sub> targets will soon be as relevant as managing project budgets. Given the lack of standardized and widely accepted metrics for measuring emissions across the construction value chain, procurement experts will likely need to develop views of the full life cycle and provide estimates of emissions in material sourcing for suppliers—for example, assessing impact from sustainable versus nonsustainable materials or CO<sub>2</sub> cleansheets.
2. *Gain a granular perspective on materials and suppliers.* Knowing how materials and suppliers differ in cost and CO<sub>2</sub> emissions will become increasingly important for procurement. Creating a granular view of the value chain can include the material category and supplier and individual assets, such as the fuel or energy mix, raw materials, production processes, and logistics. This can enable informed sourcing decisions to effectively embed sustainability in the procurement process. On this point, procurement experts can work with suppliers to gather relevant inputs, such as volume, composition, energy efficiency, and fuel consumption, and complement their findings with expert research on emissions factors. In today's volatile environment, procurement teams can also develop a resilience toolbox along their supply base by refreshing category strategies and revisiting the risk operating model. This can be supported by a central nerve center, such as a spending control tower or a live resilience dashboard.
3. *Help manage trade-offs.* Procurement teams can work hand in hand with engineering and

project management teams to make the right trade-offs, further establishing themselves as key thought partners rather than a delivery function. The role of value engineering in construction will become even more relevant as companies seek to standardize models and components, improve and optimize designs, and push for lower-cost materials. Procurement teams will need to adjust the materials mix by prioritizing eco-friendly or low-emissions solutions and complementing them with the right set of tools to act as relevant advisers for value engineering in trade-offs of design cost versus CO<sub>2</sub> emissions. For example, an engineering, procurement, and construction player in oil and gas developed a tool and cross-functional processes to assess how different suppliers or materials may affect the construction process and plan. In particular, this tool can help assess when “green products” will yield premiums versus traditional solutions—which 65 percent of developers and contractors say is important.<sup>11</sup>

### Longer-term levers

Longer-term or strategic levers will center on securing access to green materials. Anticipating where future shortages of materials will occur and securing access to supply in the long term will require strategic decision making and demand forecasting far beyond current project pipelines. Increasing integration with suppliers—via supplier development, demand, and capacity planning, as well as helping suppliers decarbonize their energy use—will continue to be relevant, but it will likely not suffice. The level of scarcity of certain materials may require construction companies to invest in, fully acquire, or build new suppliers to secure access, as the auto industry had to do when automotive OEMs invested in green-steel start-ups in Europe and the United States.<sup>12</sup>

Construction companies that are able to build such expertise and capabilities can lead in the green transition and position themselves to become attractive partners to developers and project

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<sup>10</sup> Celine Cherel-Bonnemaison, Gustav Erlandsson, Ben Ibach, and Peter Spiller, “Buying into a more sustainable value chain,” McKinsey, September 22, 2021.

<sup>11</sup> Survey of CPOs of construction companies (n = 101).

<sup>12</sup> Anna-Christina Fredershausen, Eric Hannon, Stefan Helmcke, and Tomas Nauclér, “It’s not easy buying green: How to win at sustainable sourcing,” McKinsey, February 25, 2022.



owners. However, this will require procurement teams to act along three dimensions:

1. *Talent and expertise.* Decarbonizing the construction of a building or structure is often highly complicated, with a nearly endless number of decisions and alternatives. As a result, it requires leading construction companies to build, train, and attract new expertise. To be a partner to forward-leaning project owners, developers, and other specifiers, leading construction companies need the expertise to guide and recommend trade-offs between alternative materials and technologies, weigh design simplifications against impact on function and value, and assess risks and evaluate unproven approaches. New expert roles should be not only embedded in the procurement organization but also closely integrated with engineering and design functions and project teams.
2. *Roles and mandates.* To ensure this expertise is fully leveraged to meet sustainability targets, construction companies can review roles and mandates. CPOs and procurement leaders should get involved in projects early, such as during the tendering phase, and act as key partners and decision makers on material and supplier selection. This entails providing specific recommendations or alternatives to optimize trade-offs between profitability and sustainability targets tailored to each category and each project, as well as securing access to scarce resources by pursuing M&A opportunities (among other strategies).
3. *Data and market intelligence.* As previously mentioned, procurement teams will need a more granular perspective on materials and suppliers, which requires access to additional

data as well as the right tools and dashboards to support decision-making processes. In the coming years, the construction and building materials industry is likely to progress rapidly and mature in production processes, alternative materials, new technologies, and other ways to decarbonize. During this time, data might not be readily available. To make informed decisions and to secure certifications, procurement teams can collect reliable information and data on alternatives, which may require building databases, conducting research, and even performing tests. Teams can also leverage available information such as environmental product declarations and life cycle assessments. However, this information should be complemented by highly granular information gathered in partnership with suppliers, such as the CO<sub>2</sub> footprints of certain materials or the manufacturer, plant, production line, and energy mix of specific production batches. Regarding new digital tools, teams can use dashboards similar to those used to manage customer relationships to collect, display, and interpret data ranging from emissions at the asset level to logistics costs and emissions, and use these data to support trade-off decisions tailored to each project's defined targets.

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As the main interface with the construction value chain, the procurement function will need to excel in its dual mission of improving profitability in a volatile environment and meeting sustainability targets. In doing so, procurement will be elevated to new heights as it emerges as a strategic function. CPOs who act now can help their companies lead the sustainability transition and position themselves as attractive partners to leading developers in the future.

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# Appendix

## Evergreen procurement: What procurement leaders in construction do differently

To achieve greater value from procurement, leaders can typically deploy best-in-class practices across three layers of optimization: commercial, demand, and technical (exhibit).

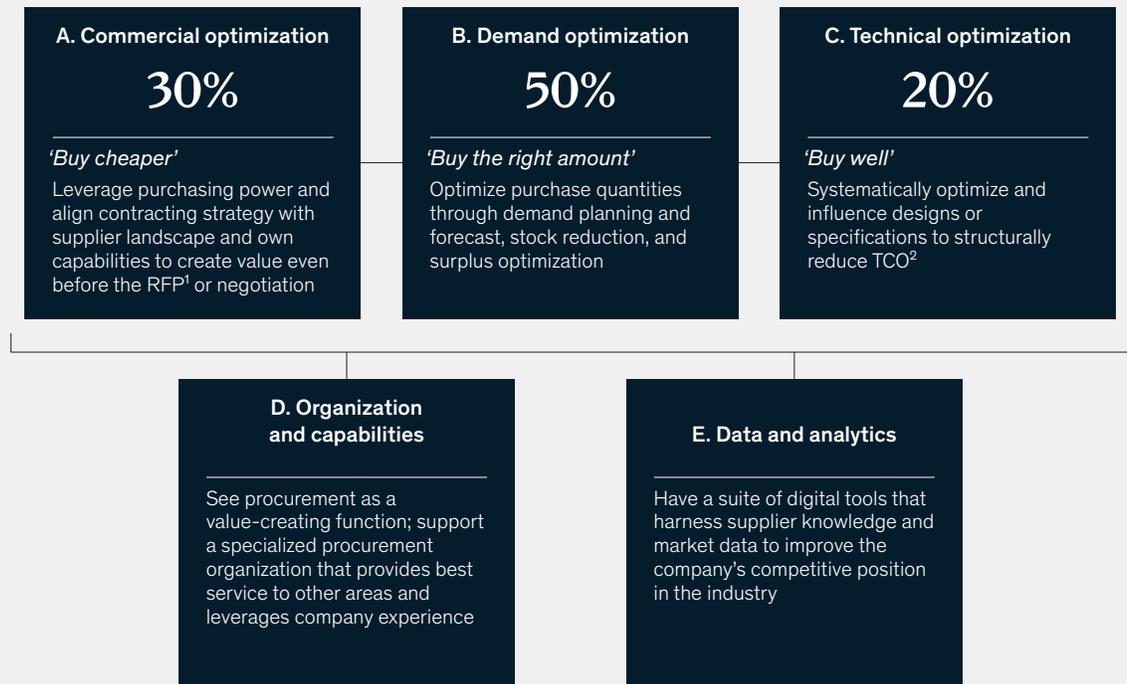
- *Commercial optimization.* Procurement organizations often focus on “buying cheaper,” typically by leveraging the scale of construction companies and consolidating volumes for scale in sourcing. Another approach is to align the company’s strategy with the supplier landscape

to include both local and low-cost countries. Organizations can also develop capabilities to create value before the request-for-proposal (RFP) and negotiation processes begin by building category or supplier know-how, playbooks, and technical knowledge.

- *Demand optimization.* The objective of “buying the right amount” is to optimize quantities purchased through demand planning and forecasting as well as stock and surplus. For

Exhibit

### Leaders can optimize procurement across three layers and support it with improvements in two areas.



Note: Percentage represents typical contribution to total savings.  
<sup>1</sup>Request for proposal.  
<sup>2</sup>Total cost of ownership.

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instance, a major contractor in Europe linked constant and precise forecasting with an increased purchasing rate for procurement teams. This action enabled the contractor to reduce stock levels from three months to two weeks and to reduce order quantities to diversify the supplier base and accelerate price updates.

- *Technical optimization.* “Buying well” is aimed at designs or specifications that structurally optimize the total cost of ownership. For example, a leading contractor defined six different elevator models to be deployed in its projects worldwide. This enabled significant savings in negotiations with elevator OEMs by simplifying manufacturing processes, logistics, and maintenance.

These optimization layers can be further supported by improvements to organization and capabilities and to data and analytics.

In terms of organization and capabilities, construction leaders who see procurement as a value-creating function often employ highly specialized procurement teams that support project teams and central areas while leveraging in-house expertise. This can require leaders to

adjust the operating model by providing a mandate for procurement to capture cross-project benefits, such as specification harmonization, gains in scale, and strategic partnerships with top suppliers, as well as shifting away from a project-by-project mindset and ensuring collaboration and leadership involvement. For example, a midsize European contractor centralized the vast majority of its procurement above the project level and adjusted the operating model by adding highly skilled category managers and a dedicated procurement leader for each project. The procurement leader served as a point of contact for the various category managers, who had been involved since the tendering process.

On the second point, a suite of digital and analytics tools can help create further procurement value by harnessing supplier knowledge and improving the company’s competitive positioning in the industry. Most players create a center of excellence for digital and analytics capabilities, with dedicated resources that support the procurement organization, including e-sourcing and postmortem analytics. Doing so can increase transparency around costs and enable stronger connections within and across projects.