

# EXTERNAL SPEND OPTIMIZATION IN CONSTRUCTION

A HOLISTIC APPROACH THAT IDENTIFIES HIDDEN COSTS



External spend typically represents 50-70% of revenues in the construction industry. It comes as no surprise that the industry in consequence ensures that it is focused on buying cheaper. Yet our analysis suggests potential savings of 7-12% are currently being missed. There are many reasons why external spend remains higher than necessary. Not the least is that almost every construction project is unique. This makes procurement highly fragmented and predominantly local in nature, in contrast to the situation in most other industries. There are nonetheless ways to capture substantial savings by spending smarter.

From our experience, external spend represents a major source of untapped savings for the construction industry (building construction, real estate development, and civil engineering). That these savings are not currently being captured is due to the unique nature of the industry. Classic approaches to cost reduction are not sufficiently tailored to the specifics of the construction industry. Construction project purchases are highly diverse in nature, reliant upon local supplier panels and include a significant share of labor in total costs. The situation is made all the more difficult because suppliers are typically less mature than in other industries, as are purchasing organizations, both in terms of spend coverage and type of levers being addressed.

There are many good reasons for the industry to take a deeper look at external spend. Improvements can yield benefits in addition to direct financial savings. These opportunities include greater efficiency in terms of project delivery, overall quality improvements, and increased responsiveness to corporate social and environmental impact, all of which contribute to differentiating the value proposition.

Currently only a small number of companies have established a holistic approach to optimizing the external spend. Those that have done so have secured real competitive edge, generating substantial and sustainable savings, while at the same time improving commercial effectiveness and the customer experience.

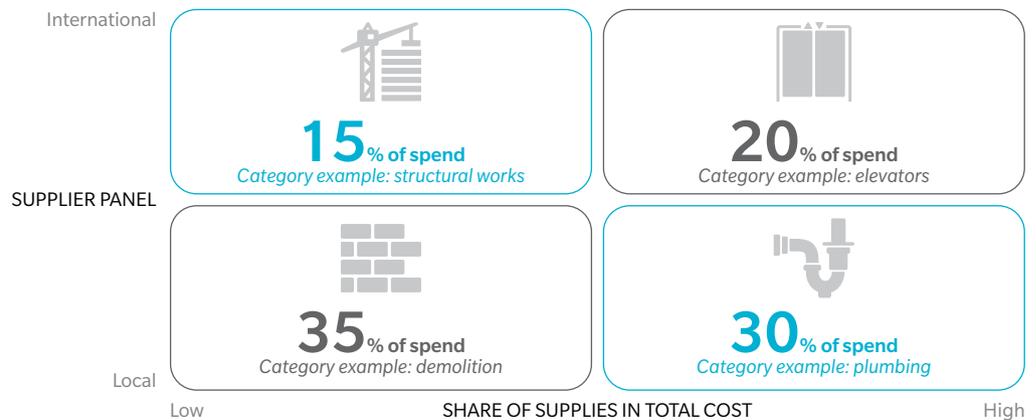
## WHY A CONSTRUCTION-SPECIFIC APPROACH IS ESSENTIAL

Construction is a unique industry. Simply applying purchasing approaches borrowed from other advanced industries, such as automotive and retail has not worked. This spend is highly fragmented and complex in nature. It is divided between local and international suppliers, with very different spreads according to the particular service being supplied (Exhibit 1). The complex and fragmented nature of purchasing is largely determined by five factors:

- **Services provision is not homogeneous.** The varied nature of the services required by the construction industry demands a range of different purchasing approaches:
  - Core construction (foundations, piping, finishing, etc.), characterized by a high share of labor costs and raw materials. Standard purchasing agreements are the norm.

## Exhibit 1: Mapping of macro spend categories

CATEGORY MAPPING EXAMPLE FOR ONE CONSTRUCTION COMPANY  
TARGET PANEL VS. SHARE OF SUPPLIES IN TOTAL COST (DISGUISED EXAMPLE)



Source Oliver Wyman analysis

- Technical work packages (electrical fittings, air conditioning, etc.) that include technical knowledge as well as equipment supply. Here Total Cost of Ownership (TCO) approaches apply.
- Professional services (architects, research and engineering offices, etc.) which drive the industry's ability to optimize costs and require a very different approach to purchasing. This includes applying incentives appropriate to each stakeholder.
- **Projects vary substantially in terms of their complexity.** Low-complexity projects require the use of standardized patterns both for processes and products (in particular for technical supplies, such as elevators, prefabricated balconies, etc.). In contrast, high-complexity projects that involve significant technical innovation or unique design features require the buying team to integrate suppliers earlier in the process, prior to defining specifications and materials to be used.
- **Reliable benchmarks are hard to come by.** As most purchases are non-recurring and managed locally, this creates significant difficulties in creating a reliable baseline from which to compare costs. This challenge is made all the greater because the requisite cost information often bundles equipment and labor, with no easy way to separate the two components. In many countries, the relatively low level of maturity of local suppliers makes it relatively hard to improve this situation in the short term.
- **Prescription drives costs.** In contrast to most other industries, at least 60% of the value at stake in construction is determined by the prescription and not by buying levers (for other industries the typical share of the prescription levers is closer to one-third). The design and engineering work carried out prior to the start of construction in specifying the exact needs of a particular project is therefore critical to the eventual outcome.
- **Regulatory requirements limit flexibility but offer opportunity.** Social and environmental impact responsibilities are coming to play an increasingly important role in determining construction costs and outcomes. From an environmental perspective, energy performance is rapidly becoming a key differentiator. Construction companies with effective control of their costs can focus on such aspects to create competitive advantage.

## THE VALUE AT STAKE

For the construction industry, external spend typically represents half to more than two-thirds of revenues. By “spending smarter” there is the opportunity to reduce costs by between 7% and 12% over three years. Given the specifics of the construction industry, traditional approaches are not sufficient and it is necessary to apply new optimization levers (Exhibit 2).

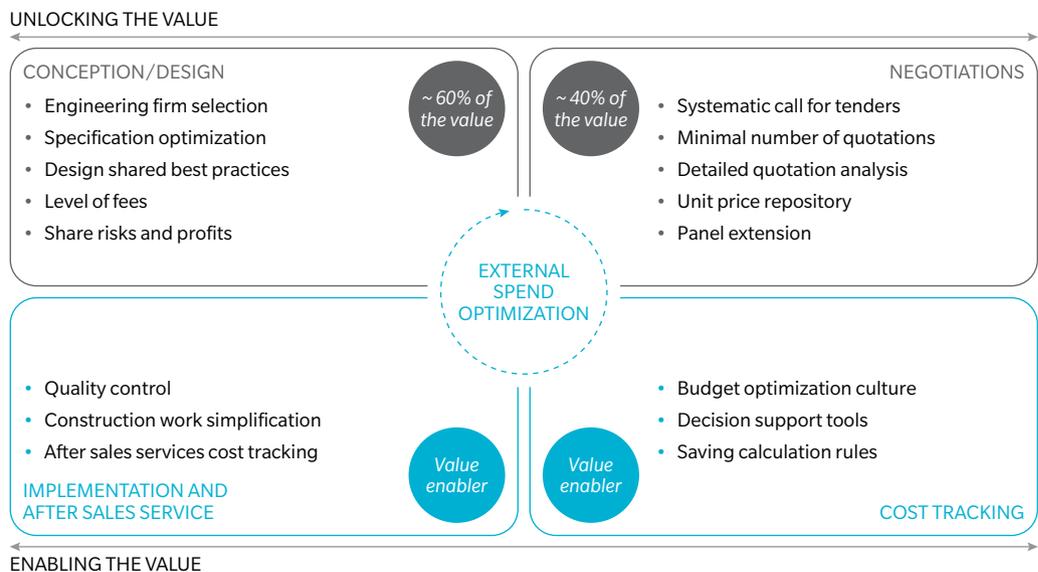
## SPENDING SMARTER

There is large opportunity in the industry for optimizing conception/design activities. This requires investing more in upstream studies. Doing so allows better definition of the real needs of the project, enabling the firm to identify potential reductions in costs and improvements to the timing of delivery. In our experience, in property development, for instance, though upfront studies represent costs of around 3.5% of budget, carrying out such studies can help secure actual costs to within 5% of the forecast. Without such upfront investment, costs tend to exceed the initial target by more than 5%. We have observed similar impact on the timing of delivery.

A second area of opportunity is prescription activities. The first thing to consider is the need to differentiate between what is visible to the client and what is not.

For elements not visible to the client, the priority is to better involve technical resources in challenging suppliers and engineering offices on the choice of raw materials and equipment, as well as their specification. Engineering offices are not incentivized to optimize costs but to lower risks whatever the cost. Our experience in the retail sector, for example, is that technical lots like air conditioning tend to be over-specified by 10-20% (including safety margins).

Exhibit 2: External spend optimization levers



Source Oliver Wyman analysis

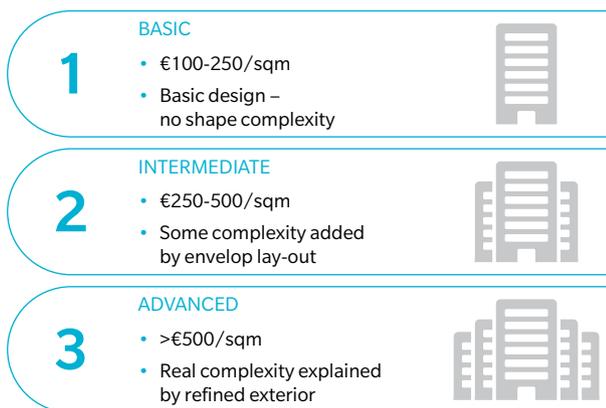
Challenging these prescriptions requires a combination of initiatives. The first action item is to set up an internal working team, equipped with the requisite technical skills necessary to challenge the prescription. Likewise, incentives need to be carefully thought through to ensure that all stakeholders are working toward the same goal. In our experience, one critical last step is to hire quantity surveyors (also known as construction cost managers) to internalize these capabilities and to support buyers in defining the optimum specifications, track costs, and consolidate the company’s experience into corporate best practices. Segmenting building envelope patterns, for instance, provides an opportunity to better monitor project costs (Exhibit 3).

For elements that are visible, the company needs to start by engaging users and marketing teams to identify what is most relevant and valued by the client. This might require going against preconceived notions. For example, it is typically much cheaper to invest in expensive materials than to design innovative building structures and elaborate skins. While a simple rectangular building will allow investment in a high-quality exterior finish, one valued by the client and its customers, a complicated design might not permit this.

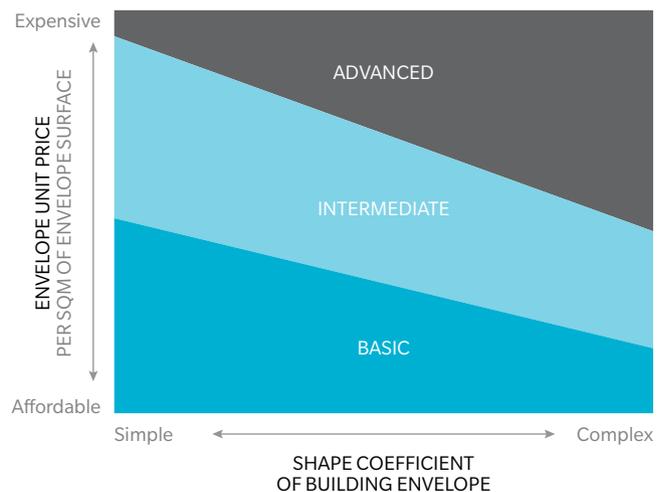
Interestingly, focusing on elements that are visible to the client can provide opportunities to impact the top line. For example, in real estate development, increasing the total living space in a building using smarter design for the interiors will help increase sales. Consumer research shows that the size of the main room is critical in the evaluation that an individual makes of a private apartment. Such insights, combined with technical considerations, need to be central to the overall prescription process.

### Exhibit 3: Envelope optimization lever

SEGMENT BUILDING ENVELOPE PATTERNS...  
€/SQM OF WEIGHTED LIVING SPACE ( LIVING SPACE + NET AREA )



...TO BETTER MONITOR PROJECT COSTS  
PROJECT MAPPING BASED ON ENVELOPE UNIT PRICE AND “SHAPE COEFFICIENT”



Source Oliver Wyman analysis

## BUYING CHEAPER

In the past, buying cheaper has been the first option for optimizing procurement. We believe that in today's circumstances this lever should only be applied once the conception and prescription have been properly defined upfront using the spending smarter lever.

The first priority is to establish the right team organization. In contrast to other industries, the unique nature of the construction industry means buyers with different profiles are needed. A project buyer should lead the process: s/he will spend most of its time on-site and ensure operational proximity, anticipating needs and addressing them as they arise. A market/category buyer will bring specific expertise of the products and handle transverse negotiations and global synergies. Finally, for international players, "portal" buyers with specific knowledge of a particular geographical zone can take input from project or category buyers and lead the buying process for this zone.

It is important to define the optimum geographic level at which to address each category. The challenge here is to understand what it is preferable to buy locally versus what can be pooled and bought nationally or regionally through support contracts that can then benefit all future projects. Actually, only a limited set of equipment benefits from a more centralized approach (tiling, air conditioning systems, etc.). These products follow clear market standards: maximum price guarantees can be pre-negotiated to meet the needs of most construction projects. But even in these categories, this approach requires constant monitoring to ensure that costs do not creep back up over time.

A key procurement capability when seeking to buy cheaper is to set up well-defined unit price lists. The lists can be used to encourage suppliers to quote their work using standardized frameworks, thus making it easier to challenge them on costs. Being systematic in breaking down the main elements of cost (raw materials, equipment, labor, etc.) enables the firm to see the specifics of what is being purchased. Moreover, over time, this process enables it to develop a benchmark cost database which can be used to challenge suppliers.

The next step is to prioritize the Total Cost of Ownership (TCO). This requires modeling consumption and maintenance costs over the period of the construction's planned lifetime. When looking at the cost of constructing an access road for a building or a retail store, for instance, interlocking paving can often turn out cheaper than a traditional asphalt option due to its greater robustness, improved permeability to water, and better compliance with environmental legislation trends. Securing the lowest TCO, also requires leveraging supplier innovations: materials, in particular, are evolving quickly, and the latest technologies can deliver significant energy savings. Finally, make or buy alternatives also need to be properly analyzed. One well-known example is that of infrastructure construction, where companies often find it useful to assess whether it is more cost effective to hire or buy machinery (excavators, dump trucks, etc.). In the case of the rental, the ability to maximize the utilization rate of the hired equipment by utilizing it across several construction sites is critical to reduce the overall TCO.

## UNLOCKING THE VALUE OF PROCUREMENT OPTIMIZATION

In our experience, there are five important aspects to be tackled if the construction company is to successfully unlock the potential savings offered by external spend optimization:

1. **Set ambitious but realistic cost reduction goals.** Rather than cascading top-down targets to the purchasing teams, it is always more efficient to use a bottom-up approach to estimate potential savings through a fact-based diagnostic. Bringing technical teams alongside buyers is critical to developing a full understanding of the prescription levers that drive costs. Another key dimension is to communicate the objectives and the way forward to all the employees who will potentially be impacted by the initiative to secure buy-in.
2. **Set up the right organization and prioritize the purchasing function.** As discussed earlier, creating impact requires implementing the right team structure, one that integrates different buyer profiles: project, market/category and portal/sourcing buyers. Having the right combination of profiles is critical to developing an understanding of the specifics of construction industry procurement. Top-management support needs to provide additional glue, maintain the momentum, and show ongoing support to the purchasing function.
3. **Drive change by ensuring the right level of cooperation between functions.** Breaking down organizational silos is critical and requires putting in place cross-functional teams at the very beginning of the process to share best practices. It is usually appropriate for the foreman to remain the execution lead, but s/he should be provided with support from the other functions. It is also likely that incentives will need to be re-examined, as they play an important role in fostering collaboration.
4. **Implement dedicated tools.** A number of technological solutions can help boost efficiency, collaboration and follow-through. In terms of project management, using a digital model or BIM (Building Information Modeling) as an information-sharing platform is a key asset. This technology has transformed the way of working in other industries (automotive, for instance). E-procurement tools are critical in the context of local purchasing, to ensure that projected savings are actually delivered.
5. **Secure bottom-line impact.** It is essential to highlight successes by demonstrating the impact of the project on the bottom-line. This is particularly critical in construction, where savings in one area are often offset by other elements, and can be unclear because of the project-by-project nature of the industry. One approach is to break down the project spend by category (technical fees, building structure, etc.) and to define the cost drivers and patterns by category. This approach can be combined with volume forecasts to predict future costs and feed into the budgeting process to facilitate the tracking of savings in the P&L.

## GIVING SPEND OPTIMIZATION THE PRIORITY IT DESERVES

External spend in construction accounts for a very substantial share of total company revenues: this makes procurement optimization critical to company success. Rightly, it should be top priority. As has been shown here, taking a holistic approach to procurement not only offers companies critical advantages in terms of reducing costs, but can also help differentiate the company in a highly competitive environment. In today's economic climate, no construction company can afford to neglect spend optimization.

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