



HARDER, BETTER, FASTER, STRONGER

EDITORIAL

In the recent years, Procurement functions have faced a significant and rather unique set of challenges, requiring innovative and transformative solutions. Procurement functions are asked to generate "harder" savings (as opposed to "soft" cost avoidance), requiring them to explore new territories in terms of scope and/or types of levers addressed. Sourcing strategies category management approaches need to better align to the companies' overall vision and objectives, raising the profile and demand of the Procurement function. Simultaneously, global organizations are moving faster than ever. Procurement has a critical, strategic role to play, for example: to accelerate the go to market in new geographies through agile sourcing strategies; to capture suppliers' innovation and immediately adapt to new, disruptive technologies. To stay ahead of evolving challenges, leading Procurement organizations are dedicating significant efforts to establish a stronger set of capabilities to support new, transformative profiles.

Harder, better, faster, stronger.

With this in mind, it is our pleasure to present the first edition of the Oliver Wyman Value Sourcing & Supply Chain Journal. This compendium represents our latest thinking and experiences on how companies have addressed these challenges to become best-in-class.

We hope these perspectives provide an interesting, thought-provoking read, and we welcome your feedback, discussion and spirited challenges.

Yours sincerely,

Gregory Kochersperger

Partner

Global Head of Value Sourcing & Supply

Chain Practice

Damien Calderini

Partner

Value Sourcing & Supply Chain Journal Editor

TABLE OF CONTENTS



SPENDING SMARTER UNLOCKING HIDDEN VALUE IN SOURCING





BECOME AN OPEN INNOVATOR MORE COMPANIES SHOULD TAP INTO THE





RECONCILING SOURCING PERFORMANCE AND P&L
NECESSARY, POSSIBLE AND PROFITABLE!





DESIGNING THE PERFECT PROCUREMENT **OPERATING MODEL**



TALENT PROCUREMENT THE NEXT CHALLENGE



PROCUREMENT OUTSOURCING A SMART MOVE, REALLY?



GLOBALIZATION IN MANUFACTURING INDUSTRIES





IN CONSTRUCTION
A HOLISTIC APPROACH THAT IDENTIFIES HIDDEN COSTS EXTERNAL SPEND OPTIMIZATION



SPENDING SMARTER: THE UNTAPPED VALUE IN SOURCING OLIVER WYMAN'S APPROACH TO UNLOCKING HIDDEN VALUE IN SOURCING

EXECUTIVE SUMMARY

Oliver Wyman has assessed that an initiative to reduce your external spend could have an EBITDA impact ranging from 150 basis points to more than 600 basis points, depending on which industry.

Based on our extensive experience in external spend optimization, we have identified **seven common pitfalls** that typically preclude companies from achieving this value, ranging from near-sighted focus to lack of performance tracking to siloes within the organization.

SO, WHERE TO START?

In short: **sophisticated** levers, **cross-functional** collaboration, and **accurate** measurement of the value generated.

Many companies feel they know this theory. But the fact is **fewer than one out of six companies can do this in practice**.

Companies need to approach this as a **Transformation Journey to ensure sustainability** and clear accountability from the entire organization. When appropriately implemented, it delivers **significant and long-term benefits** and has proven to be effective across industries in various contexts.

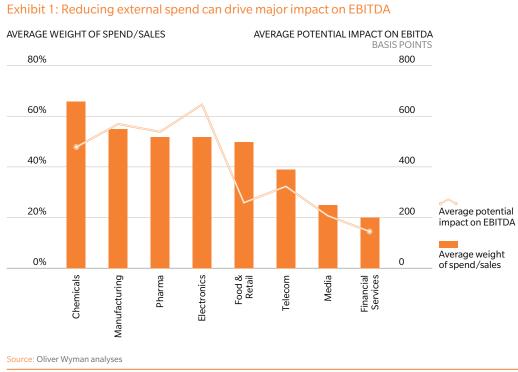
In order to support our clients in this journey, Oliver Wyman has developed a truly unique value proposition – Spend Smarter – built upon state-of-the-art capabilities and deep industry knowledge.

1. SPENDING SMARTER MATTERS NOW MORE THAN EVER

Faced with lasting economic pressures, continued raw material price increases, accelerated technological shifts, intensified global competition from lower labor-cost countries and value migration, all firms must contain costs to protect their margins. Even industries that have managed to maintain high margins are constantly looking to reduce costs to free up additional cash for growth (e.g. accelerated go-to-market, innovations, geographical expansion).

In addition to these external factors, companies are faced with continuous internal changes that have significant impact on costs such as mergers and acquisitions, geographical expansion, organizational transformations, etc.

Because it represents such a significant portion of costs regardless of industry, optimizing external spend is a persistent concern that remains firmly in the crosshairs of top executives.



While most companies periodically focus their efforts on reducing external costs, they are unable to achieve their initial target and often see costs creep back very rapidly.

As a matter of fact, Oliver Wyman regularly meets with top executives facing a paradox:

- They are not satisfied with their company's performance related to optimizing external spend
- Yet they are convinced that they are doing all the right things to address this issue

The following seven common pitfalls explain why companies often do not achieve high and sustainable performance.

- "Cost cutting is easy: let's stop spending" This usually means playing a "shell game" rather than addressing underlying causes. These efforts ostensibly cut spending in the near-term, but costs inevitably reappear as they cannot be maintained at lowest levels over time without damaging quality, impacting client satisfaction, or undermining employee morale.
- 2. "Some spend areas are not worth considering" More often than not, companies partially address, if at all, significant areas of external spend either because they don't think they spend enough to optimize spend or because they view those areas as "protected" (e.g. IT, Marketing). However, opening those new territories delivers more value, as they have not been scrutinized with the appropriate focus in the past.
- 3. "Our Procurement department can take care of cutting costs" Efforts are often launched by the company's Procurement department with inconsistent alignment and unclear accountability from key stakeholders. However, two-thirds of the value potential is not driven by price (e.g. standardizing specifications, reducing the number of SKUs, optimizing consumption) and therefore not in the purview of the Procurement department.
- 4. "We're already very cost-conscious. There is not much more left to trim"
 Organizations may find themselves penny-wise but dollar-foolish. Bottom-up
 approaches will typically limit the value generated as most of the potential does not lie in
 the hands of single stakeholders. Our extensive experience tells us that when individual
 departments work together to identify opportunities for savings, even companies
 that are already "cost-conscious" will be able to tap into additional value. In fact, those
 organizations often generate superior value because they demonstrate more appetite to
 implement sophisticated levers.
- 5. "We already squeeze 2% out of our suppliers every year" Such a statement probably indicates that initial price levels are too high suppliers can easily give back significant rebates year after year or that they are driven by deflating market trends. In any case, this approach is suggestive of a very transactional way to manage vendors and significantly increases mid-term risks (e.g. price upturn, supplier default). Once procurement basic coverage has been carried out and once price levels are set at reasonable levels, regular price optimization can only be obtained through deeper investigation of sophisticated opportunities involving internal stakeholders and suppliers.
- 6. "Sourcing initiatives are self-supporting, by nature" Initiatives are often not sustainable because they are conceived in a vacuum. In fact, it is virtually impossible to separate performance from organizational issues. An efficient organization will seek buyin from stakeholders beyond Procurement and will adapt existing infrastructure in light of new challenges to ensure that savings continue to be realized.
- 7. "It's impossible to measure the value. It's really more an act of faith" According to a recent Oliver Wyman study, fewer than one out of five CFOs are currently satisfied with the way purchasing performance is measured. Under-investment in performance measurement results in loss of traction with the internal stakeholders, difficulty in reconciling Finance numbers with the performance claimed by Procurement, and an inability to measure the ROI of the procurement function. Ultimately, this is a key reason driving the failure of external spend optimization initiatives as business partners struggle to see the benefits there are receiving.

2. WHERE TO START: THE SMART THINGS TO DO

Spending smarter is not just about trimming the fat and tightening the belt during slow economic times. It doesn't only aim at creating immediate savings. It transforms the Procurement function beyond the purchasing activity to create long-term value. More importantly, it aims at designing an overall performance-driven operating model where all stakeholders are collaborating to reach a shared objective.

Faced with limited and unsustainable benefits from traditional external spend reduction efforts, organizations may wonder how to actually spend smarter. Based on our extensive experience and successes, we have identified a number of Key Success Factors. Three of them, specifically, are good area to start: (1) extend the reach, (2) create a new operating model and (3) monitor and measure the impact.

Exhibit 2: Oliver Wyman has identified several common pitfalls of spend optimization and ways to address them

WHAT WE HEAR FROM TOP EXECUTIVES	WHY IT IS A RISK TO HIGH AND SUSTAINABLE PERFORMANCE	WHAT CAN YOU DO?
"Cutting costs is easy: let's stop spending"	Costs will inevitably reappear over time	Investigate sophisticated levers Increase spend coverage
"Some spend areas are not worth considering"	Significant portions spend remain mostly untapped	
3. "We already squeeze 2% out of our suppliers every year"	Suppliers will fight back to protect their margins	
"Our Procurement department can take care of cutting costs"	Procurement department does not have mandate to "interfere" beyond price	Develop a cross-functional operating model
5. "We're already very cost-conscious. There is not much more left to trim"	Up to 60% of the savings potential requires transverse collaboration	
"Sourcing savings are self- supporting, by nature"	Savings will not be sustainable	
7. "It's impossible to measure the value. It's really more an act of faith"	Poor performance measuring is a key driver of failed external spend optimization	Implement an accurate measurement system

2.1 EXTEND THE REACH

To reach maximum margin improvement, companies must not only rely on traditional negotiation and supplier consolidation levers, but also explore the full set of purchasing and value sourcing levers:

- Buy cheaper: challenge price and payment terms conditions by leveraging scale, consolidating suppliers, and finding market opportunities (e.g. pool volumes, optimize supplier panel, investigate alternative sourcing, negotiate master agreements)
- **Spend better:** optimize specifications to tailor products and services bought to actual internal needs (e.g. standardized catalogue creation, TCO trade-offs, specification improvements, Make or Buy decisions)

- **Spend less:** monitor consumption levels to avoid waste and over-consumption (e.g. best practices sharing, consumption dashboard monitoring, internal benchmarks, budgets constriction)
- Drive top-line: offer access to newest innovations (e.g. technology, distribution), participate in market monitoring (e.g. R&D, Marketing, competitors intelligence), increase ROI on Marketing spend

Fewer than one out of six companies actually implement these levers sustainably and across a large portion of their spend as it requires deep changes in the operating model.

The other dimension to extend is the coverage of the Procurement function. Generally speaking, too many categories remain out of reach of the procurement function:

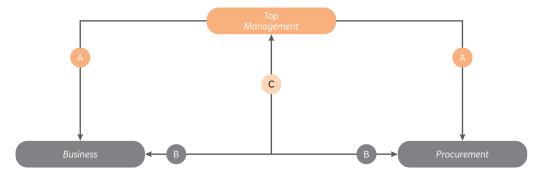
- Either because they are perceived to be "protected areas" in the hands of topic experts (e.g. IT, Marketing)
- Or because the impact is believed to be too low (e.g. office supplies)

2.2 CREATE A NEW CROSS-FUNCTIONAL OPERATING MODEL BY INITIATING KEY DYNAMICS

Prerequisite dynamics are needed to go beyond traditional levers and extend coverage:

- Dynamic A Assignment of shared objectives Top management sets ambitious top-down objectives shared by the business and the Procurement department.
 These objectives should be built on a strong analytical rationale to achieve buy-in from all stakeholders and be sufficiently granular by business unit, geography and Sourcing category.
- **Dynamic B Cross-functional collaboration** The shared objectives shift the relationships between the procurement function and the business operations. Procurement becomes an ally to meet the targets, and the interactions become "push and pull," with the businesses "pulling" assistance from Procurement and Procurement "pushing" new initiatives.
- Dynamic C Budget integration The early inclusion of the overall target in the budget guarantees the involvement of the entire company and prevents this from becoming an isolated effort from a limited number of people.

Exhibit 3: A cross-functional operating model is based on key dynamics



2.3 SUSTAIN THE PERFORMANCE THROUGH MEASUREMENT

A reliable measure of the value delivered is critical to engage all stakeholders, hold the organization accountable, and ultimately sustain high performance levels.

A comprehensive and robust performance measurement mostly relies on:

- Validation of some guiding principles by Finance and detailed value calculation rules agreed upon by all stakeholders
- Validation by Finance of the potential value associated to an initiative upstream, when identified and integration of the potential value upstream in the budgets
- Synchronization of purchasing and financial cycles to avoid "anticipated reconsumption" effects
- Clear identification of the impact in the P&L when it has occurred and recognition by all parties involved (including Finance)
- Dedicated tools and processes

In addition to engaging stakeholders, the continued tracking of the impact provides tangible data and high visibility on the value created to:

- Support business decisions such as the reallocation of value, cash vs. cost arbitrations, etc.
- Ensure timely implementation of actions to quickly realize value
- Measure the added value and ROI of the purchasing function
- Arbitrate on resources allocations depending on stakes

Exhibit 4: A reliable measure of the value delivered is critical



3. HOW CAN YOU MAKE IT HAPPEN?

3.1 A TRANSFORMATION JOURNEY

Putting theory to practice requires engaging in a real Transformation Journey. First, obtain the unconditional support from top management and involvement of key stakeholders to kick-start the transformation. Second, build tangible and analytically supported improvement plans to increase buy-in, ownership, and accountability of the entire organization. Finally, ensure an effective deployment of adequate organizational changes and dedicated tools and processes to lock-down of the benefits. Any organizational change should be considered as an enabler to a performance lever and be assessed against the value at stake.

This Transformation Journey that we call "Spend smarter" can be applied by itself or as part of a more comprehensive operational efficiency project. Oliver Wyman has applied it successfully both in conjunction with restructuring projects (e.g. global transformation projects, complete turnaround, mergers and acquisitions) and as a stand-alone initiative. Firms engaging in a transformation project will find spending smarter is a great first step: indeed, it generates value that can be reinvested in other cash demanding initiatives and encourages stronger transverse collaboration as well as increases overall business acumen across the organization. It sustainably upgrades capabilities and skills, increasing the readiness for changes without risking any major organization upheaval.

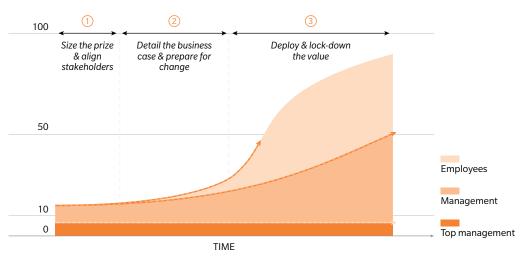


Exhibit 5: Progressively engage the organization to maximize buy-in

3.2 SIGNIFICANT AND SUSTAINABLE BENEFITS ACROSS ALL INDUSTRIES

When successfully implemented, such approaches yield significant and sustainable benefits across all industries.

In order to illustrate the potential impact of Spend Smarter, we have listed how some clients have recently leveraged those capabilities and the benefits they've achieved.

Major retailer, engaging in a major transformation

- Context and scope: client shifting from a very decentralized and entrepreneurship culture to a consolidated and more efficient back office. Project focused on goods not for resale
- Impact: \$400 MM of savings over a 3-year period on a total GNFR spend of \$3.7 BN, creation of a centralized GNFR function
- Key success factor: refined processes and tools to measure benefits with high granularity

Key player of information and technology, recently listed on NYSE

- Context and scope: strong need to demonstrate operational excellence and fund a broad transformation program. Sourcing project covered all categories (Technology, People and Indirect), for a total of \$120 MM of spend
- Impact: a total of \$15 MM savings identified and validated by all stakeholders
- Key success factor: complete set-up of a functional procurement department in three months

· Global pharmaceutical company, facing a significant market shift

Context and scope: increasing pressures on margins (healthcare reforms, generic molecules, low cost countries, etc.). Sourcing project covered 40 categories, representing a total of \$7.5 BN

- Impact: \$600 MM of savings identified over a 3-year period
- Key success factor: very rapid intervention with new sourcing strategies built under two months, while multiplying identified savings potential by two

Leading telecom carrier in a market opening to competition

- Context and scope: transformation program to adapt a previously state-owned company from a holistic position to a highly competitive situation. The scope addressed was \$2 BN
- Impact: \$150 MM of savings validated by all key stakeholders
- Key success factor: The procurement organization was positioned as a real partner, capable of supporting the company on core spend areas, such as Network, Program contents, ...

Major chemical companies, in the context of an international merger

- Context and scope: the overall project aimed at identifying potential synergies.
 The sourcing stream addressed \$9 BN over all categories, with very mature existing capabilities
- Impact: 75% of the synergies from the merger resulted from the optimization of the overall new sourcing spend

 Key success factor: the project didn't just align both companies on the best practices pre-existing the merger but went beyond and made NewCo better than the sum of both

Leader in consumer packaged goods, with rapid growth

- Context and scope: turnover increasing by 15% every year for this global leader of Consumer Packaged Goods (CPG) with a strong geographical expansion and a changing manufacturing footprint (previous dominant geography went from 80% of revenues to 30%). The sourcing stream covered non-COGS categories for a total spend of \$5 BN
- Impact: \$550 MM of savings across all geographies and business units
- Key success factor: designed an agile sourcing organization (org. charts, processes) to face further evolutions

· Hospitality and leisure leader in need to fund a new expansion phase

- Context and scope: extremely decentralized organization, facing increasing competitive pressures
- Impact: focused on \$1.2 BN of Indirect spend and a total of \$105 MM of savings potential identified. Main hurdles to implementation clearly identified
- Key success factor: the sourcing stream identified the required cash to fund further growth plans



BECOME AN OPEN INNOVATOR MORE COMPANIES SHOULD TAP INTO THE WELLSPRING OF GREAT IDEAS OUTSIDE THEIR WALLS

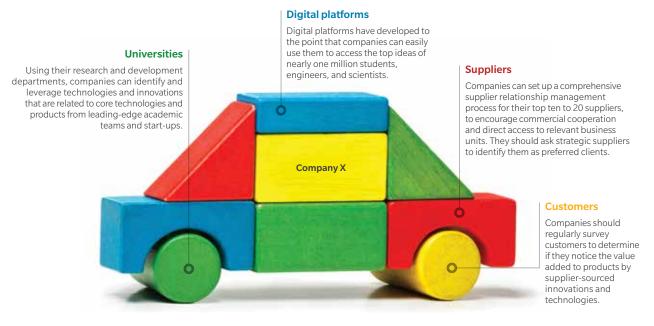
Ever since Thomas Edison pioneered open innovation – by reaching out to scientists, economists, and politicians for inspiration for his inventions – companies have tried to follow suit. But most attempts to normalize the process of sourcing innovative ideas from outside of their organizations have failed.

Only a handful of players in industries as varied as consumer products, fashion, autos, and pharmaceuticals have managed to produce a blockbuster product this way. But even these leaders in open innovation are discovering their processes are falling short.

Rapidly changing customer demands force companies to constantly reinvent and improve their products. Today's cutting-edge products become obsolete in months, not years. Companies draw upon hundreds of patents to produce phones, instead of dozens. All the while, research and development costs are doubling every five years.

Exhibit 1: Rethinking the Innovation Network

Companies need broader, open innovation networks for best-in-class innovations



Source: Oliver Wyman analysis.

The following three questions form a starting point for a diagnostic to discover if your company has the right strategy, supplier management process, and overarching organizational structure to adopt great ideas from outside:

- 1. How aligned is your procurement strategy with the key value drivers of your business?
- 2. How well do you leverage supplier innovations?
- 3. Does your company have the critical organizational capabilities it needs to conduct world-class open innovation?

So in this harsh, hyper consumer-driven environment, what separates the superior innovators from the rest? Strategists have developed some well-known rules for adopting open innovation practices. These rules have provided a playbook for success for leaders such as Procter & Gamble.

But we've also observed a disturbingly large number of cases in which companies blame external forces, such as poor supplier quality, for failures when their real hurdles are internal. Companies often cast off external ideas because they do not have a clear strategy for what should be insourced or outsourced. As a result, great ideas are not developed because they are "not invented here," appear too risky, or must draw upon resources that companies don't already have.

Before companies can truly excel at open innovation, they need to take a look in the mirror and revamp their internal processes. Here are three ideas for meeting the most common challenges:

1. Rethink procurement.

Executives can tell their managers to source innovative ideas from outside of their companies. But ultimately their procurement teams are the ones who must identify and adopt them.

Unfortunately, the mandate of most procurement divisions is often solely to reduce costs. Fewer than half of the Euro Stock 50 companies have an in-house "innovation group" to identify market solutions and co-design new offers. "Innovation groups" act as catalysts by helping procurement teams to better assess if an advance is a core capability for

a company to develop on its own or not. They also encourage collaboration across functions such as finance, legal, and marketing.

2. Collaborate in radical new ways.

Many companies have attempted to put open innovation into practice by holding innovation contests with suppliers and academics. But they merely scratch the surface of what can now be done. Using digital platforms, companies can reach hundreds of thousands of people all over the world. Virtual idea markets connect people who have never been in contact before – including customers – to tackle not just minor challenges but even long-term strategic stumbling blocks. Every day, Massachusetts-based crowd sourcer InnoCentive teams up thousands of "solution seekers" with more than 200,000 "problem solvers."

3. Create an open culture.

All too often we hear of middle managers who learn of, and then discard, outside inventions only for them to be picked up by a more savvy competitor. The main culprit is usually the company's culture. Some companies have a tendency to try to master all of the patents used in their products. Others reject outside advancements due to potential legal concerns.

Strategies fail when they don't account for the fact that companies' cultures are as varied as the people who work for them. But even the most risk-averse companies can become nimble open innovators by understanding and accounting for these differences.

One way to do this is to first define what a company can do well. Then people should be assigned to forge

customized pathways for ideas to be easily sourced

from outside and evaluated across divisions.

In some cases, companies may only realize they miss chances to openly innovate after a painful product failure shows what the company is doing wrong. But executives need not wait that long. A diagnostic exercise targeted at identifying if a company has the right strategy, supplier relationship management process, and overall structure to adopt external innovations can illuminate how much hidebound behavior prevents outside ideas from improving a company's bottom line. These can often match or surpass procurement teams' cost-focused initiatives.



RECONCILING SOURCING PERFORMANCE AND P&L NECESSARY, POSSIBLE AND PROFITABLE!

Many CFOs share the same issue: 4 out 5 are facing difficulties reconciling the savings generated by initiatives on external spend and the financial impact on the P&L. Why? It just appears too complex and too resource-consuming to invest in. Yet, the supposed complexity shouldn't serve as an impediment, knowing that external spend accounts for 30 to 80% of the total cost-base ... and as much of the cost optimization opportunity.

The absence of a shared objective between Procurement and Operations impacts a company's performance: Business Units conservatively account for only part of the savings potential in their budget – at most 50% – resulting in a limited mobilization from their team and, therefore, lower savings outcomes. A self-fulfilling prophecy ...

On the other hand, companies with an effective tracking process show a 30% better performance than their competitors.

Setting up a reconciliation mechanism is possible and profitable, if the following key principles are followed:

- Define the level of precision needed by the organization
- · Create relevant, but distinct savings tracking, between Procurement and Finance
- Rely on a comprehensive organizational system
- Approach the implementation from a practical perspective

ADAPT THE LEVEL OF PRECISION

It all depends on the current level of credibility of the existing performance on the external spend.

Some companies, already convinced by the value of the actions conducted by their team, settle for simplified savings tracking not necessarily recognized by Finance. However, fewer companies make that choice since the 2008 crisis.

On the way to reconciliation, there is some leeway: for example, a major European distributor created a detailed accounting tracking for each cost center (level 5) as this was necessary to prove the realization of the savings to store directors and get their buy-in. A French national telecom operator decided, rightfully, to only track savings in budgets (level 4) despite the hundreds of millions at stake.

DISTINCT BUT HOMOGENEOUS TRACKING BETWEEN PROCUREMENT AND FINANCE

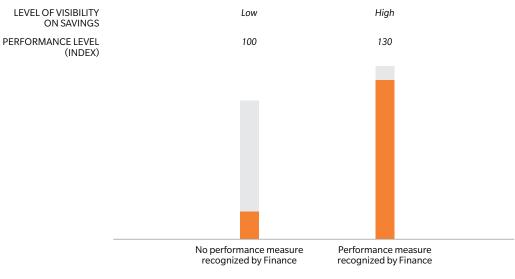
It is natural that Procurement and Finance would follow different performance objectives. For example, if Procurement adapts its purchasing strategy to face an increase in commodity costs, Finance will only notice it has maintained constant spend. The answer is to set up separated systems relying on the same management rules (data source, baseline, frequency etc.) and the same calculation rules. In today's service era, the buyers use accounting data and rules established by Finance to define the economic impact of all their savings. This same information is used by Finance, only accounting for the actions with a net P&L or cashflow impact.

COMPREHENSIVE RECONCILIATION PROCESS

The reconciliation process is organized around three keys components:

- A target, relying on practical and validated actions plans, in order to ensure their credibility and actionability?
- An integrated tracking system of the actions and their savings (SATT[®]) in order to provide
 a shared, auditable and up to date source of all the action plans
- An accounting process that allows for a clear integration of the actions' performance impact

Exhibit 1: A measurement system, recognized by Finance, not only improves the visibility but also increases the level of performance generated by Procurement initiatives



Source: Oliver Wyman data & experience

PRACTICAL IMPLEMENTATION

Many organizations struggle with the complexity, or the supposed complexity, of reconciliation. However, the efficiency is increased by the empowerment of all the stakeholders and a rational management of the actual stakes.

First of all, all the stakeholders need to be involved and their respective roles well defined:

- Procurement needs to provide the hypotheses on the external market and efficiently implement the actions
- Operations need to define the hypotheses on the business side, validate the impact of the initiatives on the P&L and control them
- Finance needs to determine the calculation rules, provide the initial data and pilot the overall process

Then, organize a controlled delegation and management of what is at stake:

- Ensure that the people in charge of implementing the actions are also responsible for tracking the associated savings, so that the analysis of hundreds or thousands of actions is completed by multiple individuals only responsible for several actions each
- Systematically analyze the 20% of actions representing 80% of the actual financial impact and only target a few of the remaining actions

The companies looking to improve their procurement financial performance consider reconciliation to be the cornerstone of a sustainable and reinforced collaboration between internal stakeholders. The principles are clear but rely on a true transformation of roles and responsibilities and the strong engagement of all parties that the tools and systems, as useful as they are, cannot provide.

Exhibit 2: Degree of maturity of organizations on external spend savings reconciliation

(5) ACCOUNTING **BUDGET** RECONCILIATION **MEASURE OF** INTEGRATION **PROCUREMENT** (3) PARTIAL ALIGNMENT **PERFORMANCE** 1 BASIC FOLLOW-UP Calculation rules are Basic calculation rules, no Sophisticated calculation Calculation rules are Calculation rules are alignment with Finance rules, no alignment with aligned and validated those used by Finance those used by Finance with Finance to prepare budgets to prepare budgets **Finance** Measure after the action only - no anticipation of Measure includes target Measure includes target. Measure includes target. A gap analysis is potential impact and realized savings secured and realized secured and realized conducted to confirm savings savings; target savings are realization of savings No acknowledgement Less than 30% of savings integrated into budgets by Finance acknowledged by Finance 30 to 50% of savings 100% of savings are acknowledged by Over 80% of savings acknowledged by Finance Finance are acknowledged by Finance LOW LEVEL OF ACKNOWLEDGMENT HIGH LEVEL OF ACKNOWLEDGEMENT BY FINANCE: NO RECONCILIATION BY FINANCE: RECONCILIATION



DESIGNING THE PERFECT PROCUREMENT OPERATING MODEL A MOVING TARGET

When it comes to defining the most efficient and effective operating model for procurement functions there are, unfortunately, no easy answers.

The operating model of a procurement function needs to be consistent with a company's overall strategy, global organization, and culture. It also needs to be aligned to its supplier market. Balancing internal and external pressures is a difficult task – and the target is often a moving one!

Indeed, procurement functions must adapt, perhaps more frequently than the rest of the company, as they are impacted by changes such as new corporate strategy, evolving manufacturing footprint, disruptive supplier innovations, changing supplier panels, and higher savings objectives, all of which require increased flexibility.

In our conversations with CPOs, we often hear the same questions: should my organization be centralized or more locally managed? The company is continuously evolving, how should I adapt the procurement organization? Should I consider outsourcing part of my organization?

LOCAL MANDATES VS. CENTRALIZED ORGANIZATIONS

There are three key structural dimensions that drive the thinking on designing the procurement operating model: supplier market, user needs, and stakes. Each of them will shape the operating model differently, for each procurement spend category:

- 4. Supplier market: on this dimension, you will be looking at two main things: how the overall supplier market is structured and what the relative weight of the company is to this market. A supplier market is typically local, continental or global, and the weight of a company's purchase ranges from insignificant to significant. Obviously, the level of emphasis (staffing) and the set-up will depend on these factors. The more significant the overall weight of a company's spending and the more global the supplier market, the more centralized the procurement organization. When the supplier market is very fragmented and the spending is relatively small, local mandates are very relevant
- 5. **User needs:** here, three elements are at play:
 - The regularity of the need: is it a yearly one-off that can be managed locally or does it involve daily consumption that should be handled centrally?
 - The level of customization required against market standards: are you buying market standards (centrally) or do you require a high degree of customization at site level?
 - The overall homogeneity of your needs: is it one-size-fits-all for the entire company or does every site need custom specifications?

Answering these questions will allow you to decide if a category should be addressed locally or dealt with at the corporate level

6. Stakes: you need to assess what the actual stakes are for the company, for each procurement category. If a category is highly strategic, you may consider managing it close to the business it impacts, in a decentralized manner. On the contrary, categories that are least strategic will often be managed at a corporate level to maximize standardization and allow efficient demand management

Many organizations tend to over-emphasize the importance of the first dimension and attempt to perfectly "mirror" the supplier market. However, that often comes at the expense of an increased integration with the rest of the company and limits the procurement function's ability to reach internal collaborative levers (e.g. influencing specifications and consumption, challenging needs, encouraging standardization).

In many ways, these three drivers may seem to call for conflicting decisions: consolidate and disseminate, align to internal stakeholders as well as to suppliers.

In reality, no organization can strike a perfect balance along these three dimensions. A choice must be made to focus on a given dimension depending on the company's DNA, culture, organizational model, and overall level of maturity.

CONTINUOUS ADAPTATION TO THE COMPANY'S PROCUREMENT MATURITY

We distinguish three different stages of maturity: the emergent phase, the consolidation phase, and the balance phase.

- 1. The first phase is the emergent phase: at first, all purchases are made by users who are still largely scattered across the organization, with no real involvement of professional buyers. Then, top management becomes conscious of the potential of pooling purchasing and decides to professionalize and formalize the procurement function and separate the roles of buyer and user. The underlying idea is that a new role the professional buyer must emerge to challenge line managers in their often historical relationships with suppliers
- The second phase is the consolidation of the procurement organization: the procurement function is now given ambitious economic objectives based not only on price levers, but also on the mandate to challenge needs.

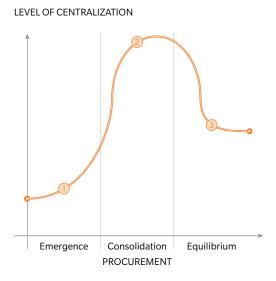


Exhibit 2: Procurement Organizations are

Observed to Mature in Three Major Stages

This ramp-up of procurement is often a source of friction, but forces the emergence of collaborative work with line managers and helps to demonstrate the value in upstream decision-making processes. It embeds the "buyer-user" tandem in the DNA of an organization

3. Then comes the balance phase: after consolidating procurement activities, recognizing the central role of the function and formalizing essential operational processes, most mature companies tend to re-distribute parts of strategic sourcing directly into their business units. The procurement function then morphs from a central and supervisory organization to a fully integrated function, helping the business units reach their savings objectives

OUTSOURCING: ARE YOU MATURE ENOUGH?

Exhibit 3: Reasons for outsourcing purchasing

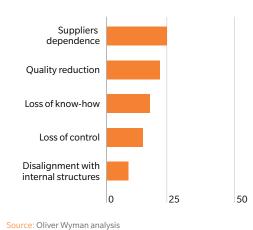
% OF SIGNED CONTRACTS



Source: Oliver Wyman analysis

Exhibit 4: Outsourcing – Related Risks

% OF BENCHMARKED COMPANIES USING OUTSOURCING



Third-party outsourcing of purchasing really started growing in the 1990s in North America and is quickly growing in all major developed countries to face increased pressure on costs and the need for greater flexibility to absorb economic fluctuations.

However, less than 40 percent of companies outsource a portion of their spend, and generally with low stakes when they do (less than five percent of total purchased volume).

Also, according to a recent survey conducted by Oliver Wyman, 78% of companies typically outsource only non-strategic, low-complexity and low-risk spend categories.

The inclination to outsource higher portions of spend grows as procurement functions become more mature and aim to focus their teams on more complex and value-added tasks.

Though on paper outsourcing may seem like an attractive solution, there are some important risks related to it. The three major risks cited by surveyed companies are:

- Dependency on the supplier
- Reduced quality
- Loss of internal skills

Indeed, just because a company outsources purchasing doesn't mean it can afford to eliminate the skills internally, as it will need to challenge its suppliers on a regular basis.

Many forces, both internal and external, shape the procurement function – and there are no obvious "one-size-fits-all" answers when it comes to designing your operating model. The optimum operating model is a moving target, and every company needs to find and continuously monitor the balance that serves its objectives and ensures the best return on investment.

FOCUS IS COVERAGE RATE ENOUGH?

Often, CPOs build their operating model with the "coverage rate" in mind. The coverage rate defines the portion of total spend you can act upon ("coverage"). CPOs are often obsessed with the coverage – in some ways, rightfully so. Continuously expanding the scope they cover is an important issue for procurement functions, particularly for those that have recently been through the consolidation phase. Indeed, every new conquered territory potentially holds substantial savings and will, in turn, support the expansion of the procurement function.

Typically the coverage rate can be increased by using two main levers:

- New mandates on more spend categories: some spend categories - legal, marketing and communications, intellectual services, real estate, among others - continue to be "sanctuaries", where procurement functions are rarely welcome. A major effort to promote procurement internally in close collaboration with the business is often required to convince the entire organization that the procurement function can add real value – not only from the cost perspective but also from the perspective of tightened relationships with preferred vendors, improved business processes, better control on budgets, and increased access to market innovations, among other side benefits. Starting off by positioning buyers as internal consultants to business units to help them achieve their objectives, for instance in company-wide projects, is a good way to open the doors to these "sacred lands".
- Increased geographical prerogatives: for global companies, geographical expansion is often another key lever to increase the scope of spend covered by the procurement function. However, to successfully expand geographically, local constraints must be identified and understood.

Indeed, the levels of maturity of supplier markets vary from one region to another. The procurement function needs to adapt accordingly, for instance by changing procurement procedures and reinforcing collaboration with line managers. It is also essential to grasp local specificities, particularly for subcontracting,

in order to offer very practical solutions that can be effectively implemented.

Best-in-class companies achieve coverage rates above 90%.

In fact, for these organizations, coverage is so high, and the involvement of the procurement function on the entire spend is so obvious (it is part of their DNA), that they no longer measure coverage, per se, as a KPI.

They have now shifted their focus to measuring their ability to add value at each step of the procurement process. In other words, they don't measure "coverage" but "effective coverage".

The measure of this effectiveness is tracked at three different steps of the procurement process:

- First indicator: the procurement function is involved early enough in the procurement process, right when needs are first expressed by internal stakeholders (users and influencers)
- Second indicator: the procurement function is involved in short-listing suppliers after needs have been expressed
- Third indicator: the procurement function helps select suppliers and is involved downstream mainly to negotiate and draft supplier agreements

In addition, organizations that have reached those levels of coverage have the luxury to focus their buyers on higher value add battles. They typically establish thresholds, under which the involvement of the procurement function is not required.

These purchases are generally delegated to line managers, through a simplified but robust process, and are continuously monitored and, if needed, supported by the procurement function. Other procurement functions set up decentralized "procurement liaisons" in the main locations to be responsible for small purchases.



TALENT PROCUREMENT THE NEXT CHALLENGE

CONTEXT

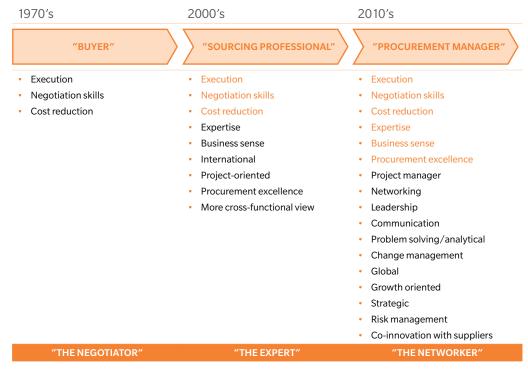
First, an observation: the typical profile required to deliver the value that leading organizations now expect from Procurement is becoming more sophisticated and evolving over time.

There are three periods in this evolution:

- 1. Until the late 90's, Procurement organizations were staffed with "Buyers", who had a cost reduction mindset and solid execution and negotiation skills: we call this "the Negotiator" period.
- 2. The need for sourcing professionals came along with the introduction of "Strategic Sourcing" in the early 2000s. True Procurement expertise, business sense and project management skills became a must have: we call this "the Expert" period.
- 3. More recently, globalization, digitalization, the need for advanced cost savings levers and increased risks of all kind have led to the emergence of a new profile: "the Procurement manager". That person must not only possess all of the capabilities of his predecessors but also leadership, problem solving, change management capabilities, strategic thinking, risk mindfulness and growth orientation: we call him "the Networker". With a demanding list of capabilities for its managers, it is fair to say that Procurement has now entered the war for talent. According to a CPO we recently interviewed, hiring this talent is turning into a real challenge. Some companies have already adapted and are "re-branding" their job titles to fit the new job expectations; a buyer is now considered to be an entry-level position, and senior positions are branded "Strategic Procurement Managers" and anecdotally earn twice as much.

Most CPOs we spoke to are faced with the demand for more "sophisticated" profiles. Yet, as shown in Exhibit 2, the current resource mix and the fairly simple compensation system indicate that this issue has yet to be addressed.

Exhibit 1: The typical profile of Procurement resources is constantly evolving toward a higher level of sophistication



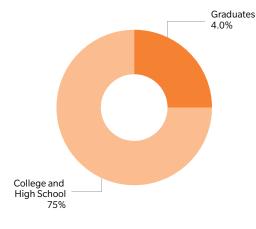
Source: Oliver Wyman

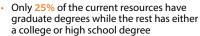
Exhibit 2: Current resource mix and fairly simple compensation schemes indicate that not all

Procurement organizations have yet embraced this evolution

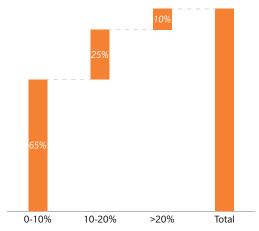
EDUCATION: HIGHEST LEVEL ATTAINED BY PROCUREMENT EMPLOYEES¹¹

COMPENSATION SCHEMES: SHARE OF VARIABLE COMP*1



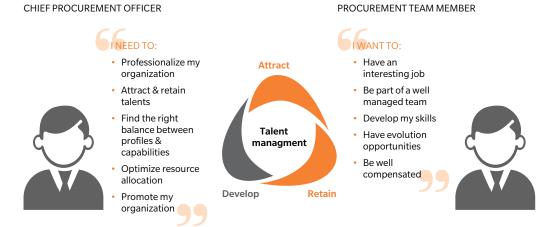


*1 SIG/Oliver Wyman Procurement Maturity Assessment 2014



 Although almost all companies have introduced a portion of variable compensation, the most common KPI remains savings generated In this context, especially when Procurement resources are scarce, it takes extra effort to reconcile the objectives of current or potential team members with those of CPOs: to professionalize the Procurement organization, build a balanced structure with the right profiles and capabilities, and optimize resource allocation.

Exhibit 3: The goal of talent management is to address these challenges and reconcile CPO objectives with employee ambition to create a high-performing organization



THAT IS WHAT TALENT MANAGEMENT AIMS TO DO: ATTRACT, DEVELOP AND RETAIN TALENT.

ATTRACT: WIN THE GLOBAL TALENT BATTLE

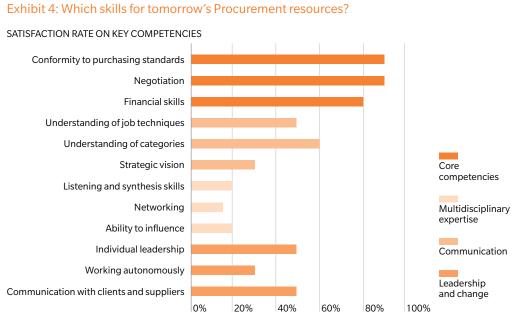
In this context, competition to attract talent has become fierce. Procurement functions are no longer hiring from a limited pool of specialized resources. Instead, they are competing for talent in a larger pool, not just against other companies but also against other parts of their own organization. With the internationalization of workforce, competition for talent has become global.

Attracting talent requires a sharp focus on increasing the attractiveness of the Procurement function. The following activities can help increase its appeal:

- 1. Be visible internally: Procurement functions can make better use of internal communication tools to promote themselves among their organization. They should highlight the contributions they make toward the company's overall success. It is also good practice to formalize an internal communication plan and leverage newer, nontraditional forms of media (video, online, social media).
- 2. Communicate externally: Procurement functions need to build their own brand and promote it outside the organization. Every opportunity to communicate externally is a chance to increase the attractiveness of the function, for example through conferences, press, etc. They also should develop their brand on campus both at undergraduate and graduate schools. It is important to adapt external communication to the appropriate industry and reputation of the company as a whole.

- 3. Offer great opportunities: Offering a clear career path within Procurement is necessary to increase the appeal of the Procurement function. This requires providing "alumni" success stories from both inside and outside the Procurement function, as well as demonstrating the position of Procurement as a stepping stone toward positions with increased responsibility, either within or outside of Procurement.
- 4. Selecting the right people during the recruiting process requires mapping the hard and soft skill gaps of the current Procurement team and using these gaps to define target profiles. When making hiring decisions, it is also good practice to take into account the company goals as a whole and to involve "internal clients" in the selection process. This will demonstrate that the procurement function is connected to the rest of the business and could also help ease day-to-day business and simplify rotation programs.

DEVELOP: MIND THE (CAPABILITIES) GAP!



Talent has become an issue for CPOs. According to an Oliver Wyman survey, organizations are skeptical about the current competencies in their organization for skills that will matter tomorrow, with satisfaction below 50% for most "non-core" competencies. In order to bridge the capability gap, Procurement functions should focus on the following:

With the proliferation of skills required to be a great Procurement professional, developing

- 1. **Train:** Training will be a major lever in increasing competencies; the difficulty lies in the right balance between soft and hard skills needed:
 - Soft skills: Multicultural competencies, managerial competencies, project management, leadership & coordination, market knowledge
 - Hard skills: transactional procurement skills, analytical skills, legal competencies, knowledge of IT systems

Defining the right balance of in-house and outsourced training is also important. For smaller organizations, leveraging external sources and promoting self-teaching can be efficient.

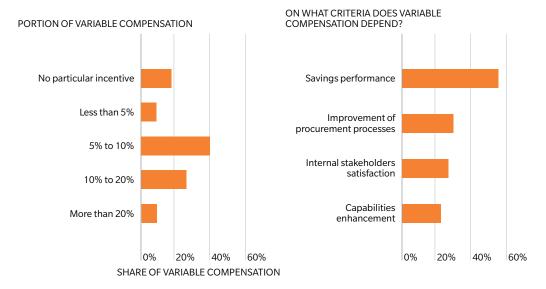
- 2. Coach/mentor: CPOs must clearly define an onboarding process for new team members to ensure rapid integration. A mentoring program can promote knowledge sharing among team members for both hard and soft skills and ensure knowledge transfer inside the team to maintain supplier relationships and internal connections.
- 3. Foster mobility: CPOs should foster mobility inside the Procurement team (across category portfolio and jobs), as well as create conditions for successful rotations outside of Procurement by being supportive of rotations and keeping an open line of communication with other functions. They should also work with HR to reinforce the presence of Procurement in leadership programs and encourage international mobility.

RETAIN: KEEP CALM AND EMBRACE CHURN

There are several methods to improve employee retention; we have highlighted a few of the most important levers:

- 1. Engage: CPOs should set a clear vision for the Procurement function. They need to sell this vision to their team, and work to highlight the contribution of the Procurement function to the success of the company as a whole. In order to maintain high levels of employee engagement, CPOs should define the appropriate job cycle (how long someone should stay in a given position) and increase the level of diversity / scope covered by a position over time.
- 2. Measure performance: In order to encourage positive behaviours and ensure long term success of the Procurement function, we recommend incentivising the Procurement team not only on real impacts (e.g. actual cost savings) but also developing clear performance management KPIs that go beyond savings to encourage improvement of soft skills (leadership, cooperation with internal stakeholders etc.).
- 3. Reward: Recognizing and celebrating individual contributions is fundamental. Providing an attractive compensation package vs. internal and external benchmarks and setting a sufficient level of variable compensation will ensure the team stays motivated. Variable compensation criteria should be carefully chosen to reward those who demonstrate strong performance (savings, competency development, internal clients' satisfaction etc.).
- 4. **Encourage churn:** The most important idea, which may be seen like a paradox, is to actually embrace churn. Hiring the best people requires planning for their departure, since they may want to pursue other career paths in the future. CPOs should set a target churn level and actively manage to it through forced attrition (terminations, resignations) and driven attrition (rotation, transfer). We have observed that leading Procurement organizations have a 15 to 20% annual churn rate, which means the average employee tenure is 5 to 6 years.

Exhibit 5: Variable compensation is generally low and performance criteria are still focused on savings performance



Source: Oliver Wyman/EBG

KEY TAKEAWAYS

The typical profile of Procurement resources is constantly evolving, and the focus has shifted from Buyers ("Negotiators") to more sophisticated Procurement managers ("Networkers").

As a result, attracting, developing and retaining talent is becoming even more complex for CPOs:

- The competition to attract global talent among firms and between internal functions is fiercer than ever
- The development of comprehensive talent pools requires greater emphasis on soft skills through training and mentoring
- Encouraging virtuous churn has become a key component of talent retention

At a time when Procurement is morphing into a service provider to the business, only Procurement organizations capable of attracting, developing and retaining exceptional people will achieve both their own goals and the broader business objectives of the organizations they serve.



PROCUREMENT OUTSOURCING A SMART MOVE, REALLY?

CONTEXT

The market for PO manages over \$200b in spend, resulting in annual contract fees of about ~\$2 BN, growing with approximately 10% annually. Although the PO market is growing, it still represents a very small portion of all direct and indirect spend that companies manage internally. Major PO service providers are traditional big Business Process Outsourcing (BPO) players such as Accenture and IBM.

A relatively small number of companies have engaged in Procurement outsourcing, but the trend is increasing. Companies that have engaged in Procurement outsourcing want to go further, while those that have not are still very reluctant to consider it.

On paper, the benefits (flexibility, savings, expertise) seem very appealing but in reality, the outcomes are often disappointing. Among the companies that have outsourced, strategies differ on what categories are eligible and if all of the procurement process or part of the P2P only should be outsourced.

The main objective quoted when deciding to outsource is cost savings – both on cost of goods and internal resources – but, more often than not, results are considered disappointing. PO does however seem to have the potential to free up internal resources that can then be redeployed and focused on high value-add activities and categories.

Hence, when considering PO for your organization, it is important to clarify the strategic objectives and desired outcomes. This may require a change in mind-set:

Exhibit 1: Procurement Outsourcing: Strategic considerations

Unlocking the true potential benefits from Procurement Outsourcing requires a change in mindset

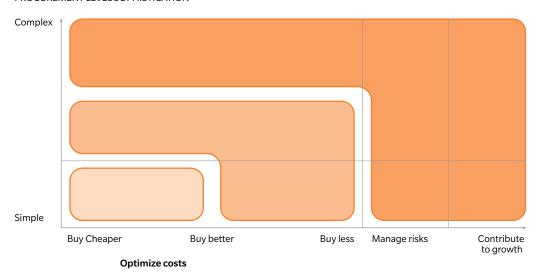
FROM: TO: What cost savings How can I best optimize the mix can I achieve through of resources available (internal procurement outsourcing? and external) to maximize the ROI of my function? **LOWER COGS** FOCUS INTERNAL **RESOURCES** INCREASE OPERATIONAL **EFFICIENCY** INCREASE ORGANIZATIONAL **FLEXIBILITY** LEVERAGE EXTERNAL **EXPERTISE**

WHEN DO I OUTSOURCE?

Procurement Outsourcing is an option at any maturity stage of your internal procurement operations. However, depending on your organization's maturity, the operating model and benefits for Procurement Outsourcing will take different shapes.

Exhibit 2: Increasing complexity of procurement levers

PROCUREMENT LEVEL SOPHISTICATION



TYPE OF PROCUREMENT LEVER

At the earliest stages of maturity, procurement levers mainly revolve around buying cheaper since little has been done to pool volumes, negotiate prices by leveraging strategic intel and position, etc. At this stage, Procurement Outsourcing can provide a short-term benefit by tapping into larger buying volumes, and leveraging existing relationships and optimized supplier panels to buy at the better (lower) price. These benefits however, do not necessarily provide a sustainable benefit – once tapped into, further (price) improvement is unlikely to be obtained.

At later stages of maturity – when your organization has mastered a specific procurement task or category, Procurement Outsourcing can be a tool to offload relative repetitive and "transactional" tasks to a third-party provider, and to free up your skilled resources to attack the next set of tasks or categories. In such a model, PO resources are typically used as staff augmentation, giving your organization the flexibility to scale and adjust in an agile way.

While this is an attractive option to make sure you keep your internal teams motivated and challenged, we should not underestimate the need and effort required to manage and monitor the third-party provider.

HOW DO I OUTSOURCE?

Exhibit 3: Approaches to Procurement Outsourcing

Given the maturity of your procurement organization, you have been able to determine what to expect from Procurement Outsourcing, which should give you a good idea of the expected benefits. However, how do I leverage a third-party organization and how do we best setup our operating structure and contract?

As with everything, there are several approaches, each with their distinct pros and cons.

Pilot Growth Steady-state **Experiment with safe categories** Award prioritized projects to specialized Outsource entire parts of the procurement and capabilities first; expand when service providers with highest function in a single major transformation benefits materialize expected impact Low-risk and commitment Focused execution Immediate scaling of benefits Explore and exploit strengths Limited project distraction for Exploit end-to-end service of model internal resources provider capabilities Benefits emerge and Limited transferability of Limited strategic control strengths and capabilities accrue slowly Missteps have large and longacross projects Limited scaling and leverage in term impact early stages

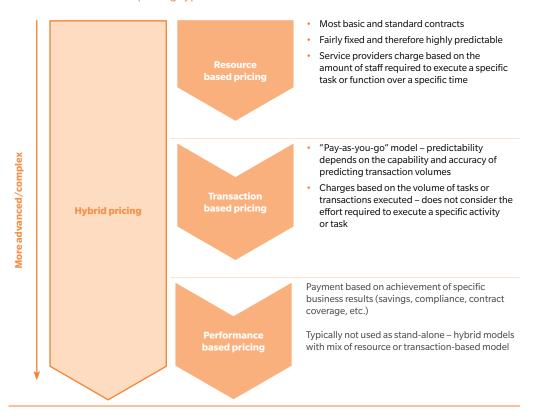
For a longer-term Procurement Outsourcing approach, you can roughly take two approaches: outsource one step at a time, or outsource everything with a big bang. The former allows you to test the waters first and provides the opportunity to tailor the way you interact with your provider through a slow learning process. The benefits however will accrue also with a slower pace, something the latter approach does not suffer from. The big bang approach however is a higher risk, higher reward approach: the benefits scale quickly, but if something goes wrong, it will have larger and longer lasting impacts that are harder to reverse and take back control over.

Where organizations who do PO well typically have success with, is utilizing the third-party vendor on a project to project basis. Whenever the company has a large project that enters new territories of sourcing, collaborating with a third-party sourcing provider allows you to experience the benefits for the project, without entering long-term contracts and commitments to hand over tasks and control to the outside vendor.

Whatever your preferred approach, we would always recommend to test the waters first through a pilot program before committing all the way.

Pricing schemes for Procurement Outsourcing contracts can take various shapes, but are typically structured around three main drivers; resources, transactions, and performance.

Exhibit 4: Contract and pricing types



WHAT DO I OUTSOURCE?

Procurement Outsourcing can be used as a tool to outsource both individual procurement tasks across multiple categories, as well as entire individual categories end-to-end. To identify the eligible categories of spend, we need to take a deeper look into the types of categories and the corresponding value drivers for each.

Typical area of focus for outsourcing are the indirect, non-core categories of spend such as office supplies, travel, etc. However, other category types can just as well be considered for PO. That said, categories of spend that are critical to the organization's day-to-day operations should be handled carefully, as letting go of strategic control can pose a significant risk. Same holds true for those categories and processes for which your organization has develop highly customized and sophisticated ways of working that will prove difficult to teach and replicate or automate with the third-party organization and resources.

Exhibit 5: Category types

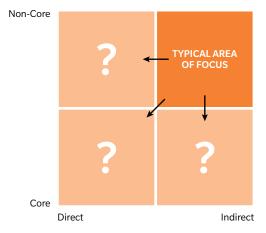
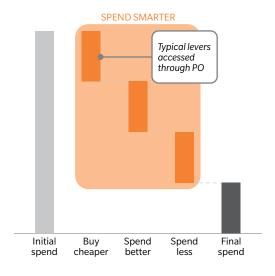


Exhibit 6: Category value drivers



The value drivers of the category also play an important role. Those categories characterized as "buy cheaper" are easier to outsource. Categories driven by "spend better" and "spend less" levers require more strategic and skilled approach to unlock benefits, and hence typically only transactional, contract management and supplier relationship management activities are outsourced.

The scope of outsourcing is not only defined with the various categories of spend, but also by the types of activities and process: from transactional activities and tactical and even strategic procurement activities.

Any optimal scope should take into account the stakes, the value drivers, and the level of maturity of the outsourced process and category.

KEY TAKEAWAYS

Procurement Outsourcing has proven to be both a highly successful and disappointing tool for procurement organizations in today's world. It can be done in many ways, with different approaches, operating models, contract structure, and scopes and at various maturity stages of your internal organization. However, a clear checklist of DOs should always be taken into consideration:

WHY?

- Look beyond direct savings on COGS
- Create labor arbitrage
- Free up skilled internal resources

WHEN?

 Anytime beyond a point of minimum internal maturity, but with varying levels of sophistication of the expected benefits

WHAT?

- Categories for which value drivers can be accessed through a third-party
- · Not-mission-critical operations that you've mastered internally first

HOW?

- Pilot "safe" categories/processes first
- Define clear measures of success
- Enforce strong tracking mechanisms to maintain strategic control

When considering if Procurement Outsourcing is right for you, always make sure that:

- 1. Upfront, clearly define and articulate the desired objectives and expected benefits towards the objective
- 2. Consider multiple objectives and outcomes that go beyond cost savings outsourcing relationships with a third-party are often way more complex and cannot be characterized by the single objective of cost savings



GLOBALIZATION IN MANUFACTURING INDUSTRIES

NEW PARADIGMS FOR "GLO-CALIZING" SOURCING AND SUPPLY

While demand for manufactured goods continues to increase globally, manufacturing companies' value-add is still biased toward traditional home markets. From a supply chain perspective, this mismatch creates inefficiencies in two ways: First, many companies still do not leverage the full potential of "best-cost country" sourcing to reduce supply costs when serving their traditional production sites. Second, manufacturing firms that already have existing production sites in emerging markets are facing the challenge of "localizing the supply chain" to enhance competitiveness and reduce time-to-market. Recent developments, such as increasingly diversified customer needs, diminishing emerging market cost advantages, and new means of supplier integration provide further reasons for companies to rethink their target set-up and integrate both paradigms.

The global demand for manufactured goods has shifted by 20 percent toward the BRIC countries during the past decade and is expected to shift to broader emerging markets by a further 10 percent in the coming decade. Nevertheless, the globalization of emerging market value chains still lags for many manufacturing companies. In 2012, for example, German mechanical engineering companies exported more than 75 percent of their goods, but deployed less than 30 percent of their resources outside of Europe. This mismatch is true not only for their own value-add in engineering or manufacturing, but also for supplied materials. Recent Oliver Wyman research found that more than two-thirds of German manufacturing companies' purchased parts are still procured from European suppliers.

This situation suggests exploring opportunities to further optimize supply chains and so to fully exploit the global supply market. There are two ways purchasing departments can help unlock this potential:

- Getting best-cost country (BCC) sourcing right. Purchasing departments are clearly
 in the driver's seat to re-think the BCC approach for a given legacy footprint, and
 then exploit the full potential of optimizing the supply chain, employing total cost of
 ownership (TCO) considerations.
- Properly localizing the supplier footprint, so as to effectively add local value (outside of traditional home markets). Even if in this regard, the purchasing department is generally a follower of decisions on a target footprint for manufacturing, engineering, etc., supply localization is a key enabler to ensuring such decisions are successful.

DYNAMIC BEST-COST COUNTRY SOURCING

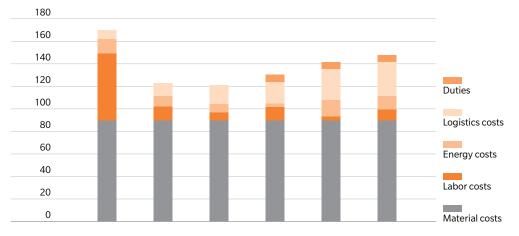
Best practice for supplying traditional production sites in home markets is to source using a best-cost country approach. This implies making sourcing decisions based on TCO considerations, including:

- Supplier cost and quality, e.g., price, capex requirements, data interfaces, quality certification
- Engineering and production implications, e.g., technical IT compatibility, working capital, resident engineers
- Transactional cost, e.g., supplier management, packaging and logistics
- Supply risk profile, e.g., intellectual property, supply disruption, foreign exchange

Traditional BCC-frameworks followed a static approach (Exhibit 1). Today, however, such frameworks must be more dynamic, as manufacturing supply chain needs can shift rapidly in response to guicker product changes and shorter innovation cycles.

Exhibit 1: Comparison of manufacturing and logistics costs*1

COMPARATIVE CALCULATION FOR A CAST IRON PART FOR GERMAN CLIENTS, IN EUROS (2012)

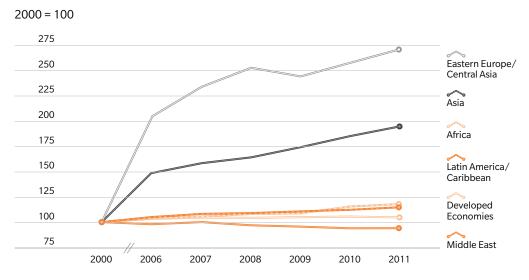


^{*1} Not including other costs (constant)

Source: Bundesanzeiger, Institut der deutschen Wirtschaft, Economist 2013, Eurostat, International Energy Agency, Exporthelp Europa, Statistisches Bundesamt, Beschaffung aktuell, Oliver Wyman analysis

In addition, production technologies have become increasingly flexible, and labor and energy cost advantages have diminished in (formerly) low-cost countries (Exhibit 2). Indeed, the traditional juxtaposition of low labor cost countries competing against high labor cost countries is no longer true; rather, different production processes and technologies compete against each other in regions with differing factor costs.

Exhibit 2: Indexed cumulative real wage growth by region since 2000



Note: Africa 2008-2011, Asia 2011, Middle East 2009-2011 estimated based on available country coverage Source: International Labour Organisation, United Nations

There are plenty of examples of companies finding themselves in the middle of a product life cycle with an installed supplier footprint that was appropriate some years ago, but that is now a source of competitive disadvantage due to changes in the original business case. Modeling and simulation of potential dynamic changes in BCC frameworks often can lead to different decisions regarding the optimum supplier footprint. Cost-based optimization of course must be assessed from the perspective of contractual, sustainability, investment, and risk considerations before migrating supply volumes or switching suppliers.

SUPPLY CHAIN LOCALIZATION

A second principle with regard to the set-up of a global supply chain is localization. Maximizing local sourcing to support local production enhances competitiveness through reduced costs (e.g., local labor, direct supplier handling, less inventory, lower transportation cost) and speeds time-to-market.

The growing mid-range segment for certain products is a strong driver for localizing in emerging markets. The strategy however requires almost full localization, which many manufacturing firms have not been able to implement, especially on the supply side. Limitations in worker qualifications (e.g., language capabilities), the inability to find and develop a qualified local supply base, or the operational complexity of daily interactions often have prevented companies from localizing the supply chain as they initially intended. These manufacturers thus face the odd situation of having to pay logistics and handling costs twice – once to import materials from capable suppliers in their home markets and again for the final product to be exported back to that home market. This often leads to a deterioration in assumed cost advantages and has on occasion resulted in back-shoring of production.

Companies with a high value-add in equipment installation and commissioning activities also face major challenges. Demand from emerging markets requires consideration of two types of value services: Labor intensive but highly complex and quality-sensitive commissioning services and more basic installation services. The ideal strategy would be to source the latter locally and only deploy limited internal resources for coordination and quality oversight. Limited standardized work descriptions, changing sites and countries for each project, and the high impact of complex commissioning activities on overall success as well as on the likelihood of quality problems (even with an internal workforce) are major challenges for purchasing teams. Not to mention, most have limited best practices upon which to rely.

Additionally, highly engineered materials or components with short life cycles and frequent engineering changes have proven difficult to procure in regions with limited supplier capability. These products typically employ new technologies or have very high quality requirements, requiring technology infrastructures that do not exist in all markets (e.g., availability of advanced materials) or a high degree of automation or manufacturing technical competency which reduces the advantages of low labor cost countries. In these cases, supply options are limited to tried-and-true home market suppliers, where close collaboration in product development between OEM and supplier is possible.

GLOBAL CHALLENGES AHEAD

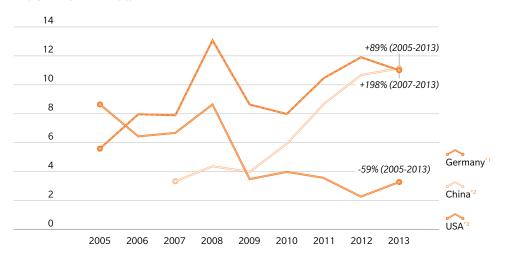
Taken together, the best-cost country and localization paradigms converge as a dynamically adjusted TCO approach – one that makes sense for nearly all types of manufacturers. In addition, there are several major global trends which can be expected to further challenge current supply chain setups and drive the need for adaptation:

- Manufactured products of all types are facing ever more challenging customer demands
 for features and styling that align with the unique requirements and tastes of their end
 markets. This trend favors short supply chains with manufacturing close to the final
 customer and close cooperation between manufacturers and suppliers to speed product
 development. To enable this, manufacturers are establishing regional engineering
 and marketing centers and focusing more on suppliers who can provide similar
 localized capabilities
- Technology and innovation are becoming more crucial to meet increasingly stringent regulatory and consumer needs, driving increased collaboration between manufacturers and their suppliers. Additionally, shorter product development cycles raise the need to work closely with strategic suppliers earlier in the process
- Lastly, labor and energy costs will continue to evolve, as automation continues to become less expensive, labor rates in emerging markets continue to increase, and lowcost energy and new energy sources multiply (e.g., gas price development – Exhibit 3)

As a result of these trends, decisions on the supplier footprint and appropriate supplier relationship management strategies are becoming more dynamic than ever, increasing the need for an analytically driven, multidimensional supplier selection and sourcing process that can rigorously account for and model important variables on a real-time basis.

Exhibit 3: Wholesale prices for gas

IN DOLLARS PER MMBtu



- *1 Annual average price: Russian Natural Gas Border Price in Germany
- *2 Annual average China LNG-Import Price
- *3 Annual average US Henry Hub Natural Gas Price

Source: IMF, Oliver Wyman analysis

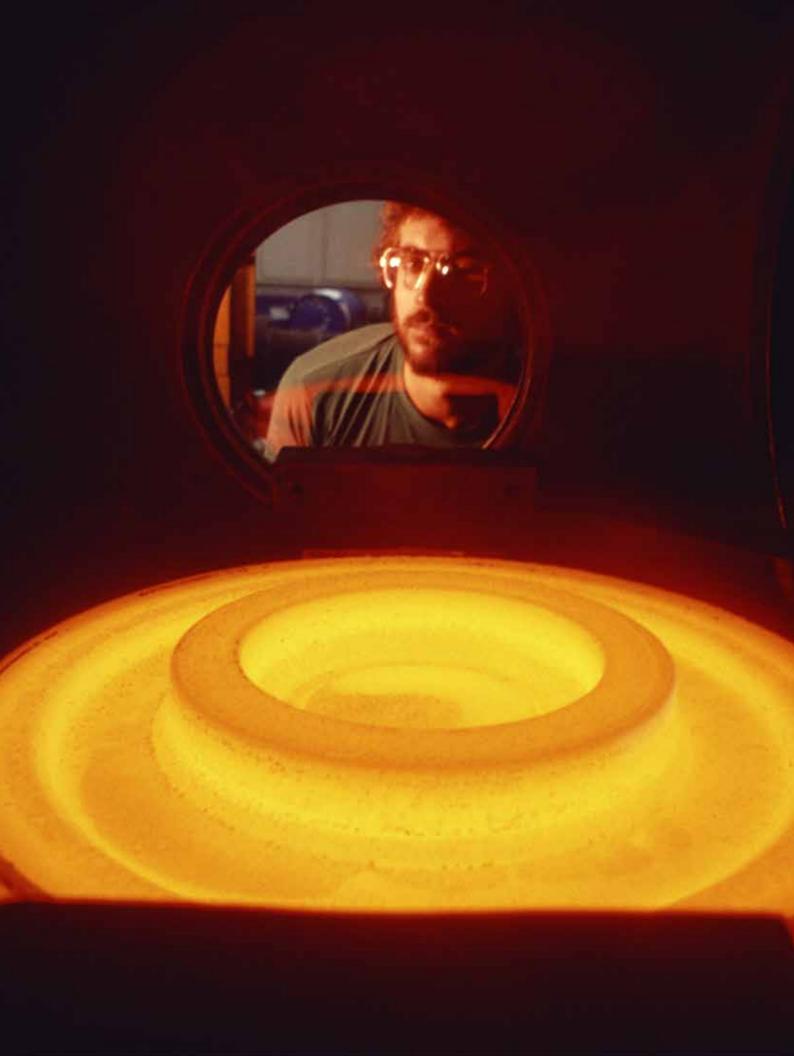
SUMMARY: DRIVING "GLO-CALIZATION"

From a mid- to long-term perspective, manufacturing companies need to rethink their value-add distribution to respond to shifting demand and further localize production and engineering. Their ability to dynamically "glo-calize" the supply chain for market-adapted product development and production will be critical to long-term competitiveness.

Participating in the heavily growing mid-market segment in emerging markets is an important but only intermediate step. The competitive end game – in particular against strongly expanding Chinese players – will be to optimize the global value chain through a superior balance of global synergies and local responsiveness.

The purchasing department will be measured increasingly by its capability to play a driving role in enabling this target footprint, which means customizing the best-cost country paradigm to local conditions and making TCO-based decisions based on local and dynamic rationales. To implement a "glo-cally" balanced selection of key suppliers, supplier integration and volume allocations need to take a mid to long-term partnership perspective and incorporate suppliers' willingness and ability to make investments and follow the manufacturer to its local markets.

In the short-term – for a given footprint – purchasing should start with a review of historic supply decisions, particularly of low-cost country sourcing for traditional high-cost sites, as historic cost advantages are fading away. The predominant rationale for continued low-cost country supply should shift from cost to market responsiveness considerations for localized production.



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.

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.

CATEGORY MAPPING EXAMPLE FOR ONE CONSTRUCTION COMPANY TARGET PANEL VS. SHARE OF SUPPLIES IN TOTAL COST (DISGUISED EXAMPLE) International SUPPLIER PANEL 35% of spend Category example: structural works Category example: demolition Category example: plumbing

SHARE OF SUPPLIES IN TOTAL COST

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.

Low

Source: Oliver Wyman analysis

High

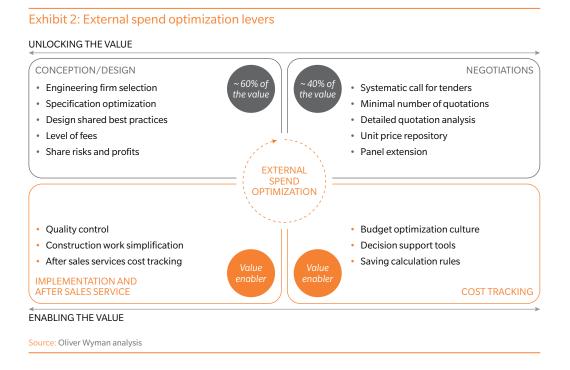
WHY A CONSTRUCTION-SPECIFIC APPROACH IS ESSENTIAL

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.
 - 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, highcomplexity 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).

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.

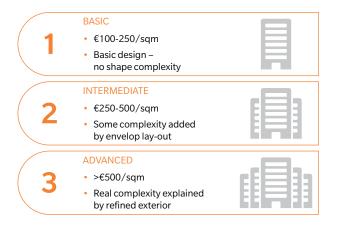
Interestingly, focusing on elements that are visible to the client can provide opportunities to impact the top line. For example, in real estate development, increasing the total living space in a building using smarter design for the interiors will help increase sales. Consumer research shows that the 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.

AND "SHAPE COFFFICIENT"

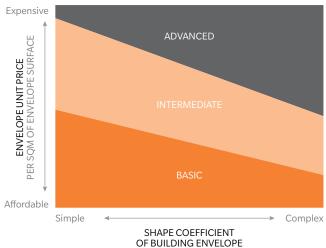
Exhibit 3: Envelope optimization lever

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



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 benfits 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.

AUTHORS

DAMIEN CALDERINI

Partner

Phone: +1 212 345 2436

Email: damien.calderini@oliverwyman.com

LAURENT GUERRY

Partner

Phone: +971 4 425 7000

 $Email: \ laurent.guerry@oliverwyman.com$

KEVIN HAUSER

Partner

Phone: +1 248 797 1811

Email: kevin.hauser@oliverwyman.com

CHRISTIAN HEISS

Partner

Phone: +41 44 55 33 7 33

Email: christian.heiss@oliverwyman.com

GREGORY KOCHERSPERGER

Partner

Phone: +41 44 553 37 71

Email: gregory.kochersperger@oliverwyman.com

XAVIER NOUGUES

Partner

Phone: +33 1 45 02 33 11

Email: xavier.nougues@oliverwyman.com

STEPHAN PICARD

Engagement Manager Phone: +1 212 345 2308

Email: stephan.picard@oliverwyman.com

XAVIER RUAUX

Partner

Phone: +33 1 45 02 32 77

Email: xavier.ruaux@oliverwyman.com

REMI SENERS

Principal

Phone: +33 1 45 02 33 41

Email: remi.seners@oliverwyman.com

TOBIAS SITTE

Partner

Phone: +49 89 93949 541

Email: tobias.sitte@oliverwyman.com

DAMIEN CALDERINI

Partner 2016 Value Sourcing & Supply Chain Journal Editor damien.calderini@oliverwyman.com

CONTACTS

GREGORY KOCHERSPERGER

Global Head of Value Sourcing & Supply Chair

gregory kochersperger@oliverwyman.com

XAVIER NOUGUES

Europe

xavier nougues@oliverwyman.com

KEVIN HAUSER
North America
kevin hauser@oliverwyman.com

LAURENT GUERRY
International

TOBBIAS SITTE

Central Europe
tobbias.sitte@oliverwyman.com

ABOUT OLIVER WYMAN

Oliver Wyman is a global leader in management consulting that combines deep industry knowledge with specialised expertise in strategy, operations, risk management, and organization transformation.

Oliver Wyman's global Value Sourcing & Supply Chain Practice is one of our key capabilities in Operational Efficiency. In addition to our dedicated team, we have created a Procurement Expertise Center. Leveraging a wide internal and external network of experts, this Center of Expertise supports our teams on all key Sourcing topics, from category expertise to organizational focus.

For more information, visit www.oliverwyman.com. Follow Oliver Wyman on Twitter @OliverWyman

RECENT PUBLICATIONSFROM OLIVER WYMAN

For these publications and other inquiries, please email tenideas@oliverwyman.com or visit www.oliverwyman.com.



INCUMBENTS IN THE DIGITAL WORLD

The digital revolution is fundamentally transforming the global economy. It is creating challenges and opportunities in all areas, from value proposition to operating model, culture to economics.



THE OLIVER WYMAN RETAIL JOURNAL, VOL. 4

The Journal is a collection of the publications, interviews, and studies we have published over the course of the year. As always, our focus is two-fold. We write regarding improving on the evergreen topics of tactics, capabilities, cost, and efficiency.



TEN IDEAS FROM OLIVER WYMAN, VOL. 2

In this collection of articles, we showcase ten ideas from across our firm for how business leaders can improve and grow their businesses.



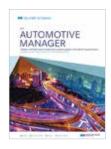
TEN IDEAS FROM OLIVER WYMAN, VOL. 1

In this collection of articles, we showcase ten ideas from across our firm for how business leaders can improve and grow their businesses.



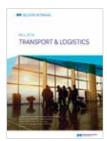
THE PROCUREMENT PLAYBOOK

In this Playbook, we explore the evolution of the procurement function's missions, from its original cost reduction role to risk management and to contribution to growth as a strategic partner.



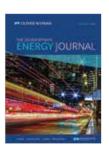
THE OLIVER WYMAN AUTOMOTIVE MANAGER 2014

A magazine for automotive industry leaders which provides insights into trends, prospects, and solutions for manufacturers, suppliers, and dealers.



THE OLIVER WYMAN TRANSPORT & LOGISTICS JOURNAL

A publication that discusses issues facing global transportation and logistics industries.



THE OLIVER WYMAN ENERGY JOURNAL, VOL. 1

This inaugural issue of the Oliver Wyman Energy Journal reflects the latest thinking across Oliver Wyman's energy practice on how shifts underway will create new risks and opportunities not just for the energy sector, but also for every company and person that depends on it.



THE OLIVER WYMAN ONLINE RETAIL REPORT

This selection of articles explains how existing bricks-and-mortar retailers can resist the loss of revenue to online players and how they can build their own successful online offer.



THE OLIVER WYMAN RISK JOURNAL, VOL. 4

A collection of perspectives on the complex risks that are determining many companies' futures.



MODULAR FINANCIAL SERVICES

Banks and insurers have adapted to new technology in the past and we think they will do so again. Nonetheless, financial services will be more modular in ten years' time and today's banks and insurers may look very different.



THE PATIENT-TO-CONSUMER REVOLUTION

How the tech attack radically advances US healthcare – and creates a clear path to market sustainability – by unleashing consumer demand and forever changing the basis of competition.



A NEW PARADIGM FOR COMPETITION: CLOCK SPEED

Digital disruptors have been a force in business for a decade or more, but their collective impact is now reaching an inflection point.



THE STATE OF FINANCIAL SERVICES 2015

Managing complexity: The 18th edition of this annual report explains how financial firms can reduce the costs of complexity while reaping its benefits.



WELCOME TO THE HUMAN ERA

A new model for building trusting connections, and what brands need to do about it.



WOMEN IN FINANCIAL SERVICES

From evolution to revolution: The time is now.

Copyright © 2016 Oliver Wyman

All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of Oliver Wyman and Oliver Wyman accepts no liability whatsoever for the actions of third parties in this respect.

The information and opinions in this report were prepared by Oliver Wyman. This report is not investment advice and should not be relied on for such advice or as a substitute for consultation with professional accountants, tax, legal or financial advisors. Oliver Wyman has made every effort to use reliable, up-to-date and comprehensive information and analysis, but all information is provided without warranty of any kind, express or implied. Oliver Wyman disclaims any responsibility to update the information or conclusions in this report. Oliver Wyman accepts no liability for any loss arising from any action taken or refrained from as a result of information contained in this report or any reports or sources of information referred to herein, or for any consequential, special or similar damages even if advised of the possibility of such damages. The report is not an offer to buy or sell securities or a solicitation of an offer to buy or sell securities. This report may not be sold without the written consent of Oliver Wyman.

