Procurement: Riding the Transformative Digital Wave

As businesses race to adapt to a new modus operandi in the face of disruptive technology, procurement leaders are using digital tools to capture both bottom-line efficiency and top-line growth.
Rapid advancement of disruptive digital technologies is changing both the customer experience and business operations—uncovering an array of challenges and unlocking a wealth of new opportunities. For businesses, digital is no longer only about using technologies to capture value. In today’s rapidly evolving environment, it is a powerful force for top-line growth, bottom-line efficiency, and radical business transformation. Spurred by both established and emerging technologies, digital-enabled businesses are becoming smarter, faster, and more scalable.

Backed by digital tools, the focus of procurement will be on collaborating with a network of external partners to create innovative new business models.

As digital trends disrupt the supply chain, business leaders are being forced to rethink their traditional operating models. With the advent of the digital age, expectations for procurement are no longer confined to the contribution to the bottom line. Backed by real-time access to market data and trends, procurement can offer valuable information for top-line strategic decisions. In addition, procurement—informed by detailed information, analytical tools, and collaboration technologies—will need to focus on traditional procurement activities to become more sophisticated in category management, supplier relationship management, and strategic sourcing.

Surviving in this new digital reality will require procurement to move beyond bottom-line efficiency by embracing digital and transforming the supply chain to become a valuable strategic business partner.

**Procurement 4.0: The Reality of Digital Procurement**

In the journey to help businesses gain a competitive advantage by tapping into the value of their supply chains, procurement has been becoming more sophisticated (see figure 1 on page 2). Over the past several decades, the function’s role has been elevated from transactional management to strategic sourcing. Now, backed by digital tools that automate downstream procurement activities, the focus of procurement will be on collaborating with a network of external partners to create innovative new business models.

To become the center of value creation, procurement will need to tackle two challenges: adopting technology to become more effective and using digital innovation to work in new ways. Armed with automation, advanced analytics, and artificial intelligence (AI), procurement will be empowered to manage more complex categories to unlock new areas of value while maintaining seamless and efficient downstream transactional activities.

Leading procurement organizations still focus on three pillars of procurement excellence to add value in the age of digital disruption (see figure 2 on page 3). Essentially, the pillars of procurement excellence remain the same; but the challenges shift, and huge new opportunities arise.
The Challenges of Embracing Digital

Faced with the need to change, many procurement leaders are aiming to manage the digital disruption by creating an integrated digital procurement transformation road map. However, success is often not guaranteed for several reasons:

**The overarching goal of the digital transformation is unclear.** Many companies do not know where to focus or how to adopt the myriad of technology offerings, be it analytics, automation, AI, or the Internet of Things. The result is an ongoing debate about the right methodology and the ideal approach to adopting digital tools.

**There are multiple concurrent initiatives.** Many companies dive into digital with a disconnected approach, hoping that at some point the efforts will simply click together. Unfortunately, that is rarely the case. Efforts are often duplicated by different functions with no synergy.

**The pace of change is too slow.** Experimentation and adoption of new digital tools are often not fast enough. A good litmus test in digital adoption is whether the technology will reduce the time spent on a task at an individual level. If the change is slow, people get disillusioned when they do not see substantial results early enough or, worse, they have a heavier workload as a result of the constant experimentation changes.

**Technology partnerships are inferior.** Many companies lack the knowledge and experience to identify the right tool and collaborate effectively. This results in non-optimal technology partnerships that may not be fully aligned with management’s aspirations. This invariably causes delays in experimentation and adoption of new trends in the market, costing companies precious time in getting ahead of their competitors.
One leading insurer and banking institution offers a good example of how these challenges can converge. The company embarked on a digital transformation journey with a vision to change both the front-end, customer-facing operation with a fuss-free digital marketplace and the back-end operation with process automation and connected offices. Although the company had a general goal to increase digital adoption, it lacked a detailed master plan to guide individual departments. This led to a disparate approach at the operational level. For example, two departments approached automation differently. One engaged IT consultants to automate portions of its processes through scripts; the other engaged business consultants who specialized in robotic process automation (RPA) to define the problem statement and adopt automation while enhancing the process to suit. This disparate approach created a struggle within the company as both departments tried to prove their approach was delivering more value. In the end, automation did not get widely adopted, and the company missed out on a wealth of synergistic value. In hindsight, procurement could have played a central role in helping the CIO understand the marketplace in terms of automation as well as defining a common approach and engaging suppliers.

World-class procurement creates value by harnessing the power of digital technologies to integrate business processes and collaborate across functions. For those that hope to catch up with the leaders, the first step is equipping procurement with the right tools and the corresponding structure to operate in a digital environment. Along with the new ways of working that digital brings, a procurement organization's structure must evolve to incorporate teams that have digital skills and knowledge. This allows procurement to advise business units to select the optimal technologies and partners to work with.

Next, we discuss the core elements of a successful procurement digital transformation. Then, we offer three examples of digital tools that are shaping the future of procurement: advanced analytics, RPA, and procurement performance management.
Procurement Transformation with a Digital Lens

When charting the digital procurement journey, the leaders know it requires focusing on more than simply adopting new technology. The organization must be equipped to manage it and adopt the right mind-set to transform, which is summarized in the following aspects:

**Have a clear vision of the digitalization needs.** There is a broad range of digital solutions and technologies that can add value across the procurement value chain, which can be segmented into two areas (see figure 3):

**Figure 3**
**Digitalization impacts the entire procurement value chain**

Notes: KPIs are key performance indicators; RPA is robotic process automation; eRFX is electronic requests for; TCO is total cost of ownership.
Source: A.T. Kearney analysis
• **Upstream strategic procurement.** Essential to strategic procurement is having a deep understanding of spending, sophisticated supply market insights, and an interconnected supplier network and relationship management. Digitalizing upstream procurement requires a three-prong strategy: create spend visibility and transparency, use advanced analytics to complement sourcing strategies and optimize business decisions, and foster collaboration and an interconnected supplier network to tap into suppliers’ innovation and expertise.

• **Downstream operational processes.** This is often much more transactional, involving large amounts of vital but repetitive tasks that require accuracy and consistency. Although these tasks consume a significant amount of time and resources, they deliver the least amount of strategic value. Digitalization should focus on automating processes and ensuring compliance to improve productivity, reduce errors, improve compliance, and ultimately lowering the cost to serve.

With this proliferation of tools and suppliers, procurement leaders need to have a clear vision of the “must have” and the “nice to have.” One organization may invest in a full end-to-end procure-to-pay solution, but another organization may only require one part of the solution.

For example, in an organization with a small number of large suppliers, the core requirement will be a robust contract management module. This will create visibility into the contractual terms with the core suppliers across business units. The same organization may not require an integrated source-to-contract module as it will not generate the same value as having an interconnected contract management tool.

**Build a technology partner ecosystem, and adopt an agile innovation model.** A successful digital journey requires taking an agile approach and cultivating the right infrastructure to allow the procurement organization to learn and adapt to emerging technologies as part of the digitalization of the core business (see sidebar: The Future of Procurement Technology). Forward-thinking companies invest in becoming proficient in key technology areas. A variety of models can be used to accelerate the adoption of innovation, such as incubation models with the business units to embed procurement elements along with business needs or focus (see figure 4 on page 6). The core of these innovation models is to enable a high degree of reactivity for the function and business to pilot, learn quick, fail fast, and deliver the right solution in the shortest amount of time.

In the world of procurement, the digital industry is relatively fragmented with a range of full-suite and functional specialist players. Most full-suite providers are either global companies that have been adopted by larger organizations or local-suite providers adopted in mid-size markets. These providers are aggressively expanding to broaden their customer base. Specialist providers, on the other hand, are focusing on achieving excellence in a specific niche and then expanding to build scale. Although there is no shortage of market research highlighting the value of each solution across the procurement value chain, there is no one-size-fits-all solution.

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**The Future of Procurement Technology**

In a related article, *In the Future of Procurement Technology: Mediocrity Is No Longer Acceptable*, the authors discuss the evolution of procurement technology and the tectonic shifts happening with technology. The article puts a spotlight on select procurement technology start-ups and presents three paths that procurement organizations can follow to blend technology with their existing assets.
Instead, the decision should be driven by individual business needs and priorities, coupled with distinct technology goals. Begin with a clear understanding of the business needs and the urgency across the procurement processes, and use an agile approach to test the various solutions. The ideal technology partners enable a business to harness the power of innovative partnerships to try and fail fast, which accelerates digitalization.

**Restructure the organization and the role of people.** As procurement embraces digitalization, the organization’s structure will change with a new allocation of resources and news way of working. Repetitive procurement tasks will become automated, and supply market data will be more prevalent, shifting resources from focusing on transactional and administrative tasks to integrating data and examining analytics. By 2025, 20 percent of procurement employees will be data experts, and 70 percent of savings will be generated by data analytics. Category and procurement knowledge will still be important, but the ability to analyze and generate strategic insights will become procurement’s most important skills. Concurrently, procurement’s working structure will evolve from functional organization to project-driven networks. This gives procurement more agility to respond to business requests and the ever-changing supply market. In the future, procurement will no longer be a large siloed department but will be integrated into the broader organization’s value chain. Superfluous processes will be eliminated, and each functional resource will come together to form a network of expertise to address business issues.
Core Digital Solutions in Play

Expansion of advanced analytics

A new era of digitally accelerated business models is gaining traction, fueled by advanced analytics that support a wide range of business agendas. Over the past decade, low-cost analytical tools and readily accessible computer processing power have fueled the analytics trend, elevating analytics from a support capability to a core competency (see figure 5).

As the gateway between the business and its suppliers, procurement will need strong skills in advanced analytics to gain a competitive advantage, improve productivity, and elevate its service to both the business and its suppliers. Advanced analytics enhance business intelligence capabilities from insight (the current state) to impact (the what-if scenarios).

Three complementary types of advanced analytics co-exist:

Descriptive analytics. Data aggregation and data mining are used to provide insights into the past and discover what already happened. One common example in procurement is the spend cube and dashboard and spend categorization.

Figure 5
Analytics can enrich every aspect of procurement

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<tr>
<th>Plan</th>
<th>Manage</th>
<th>Source</th>
<th>Deliver</th>
<th>Innovate</th>
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<td>Data elements</td>
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<td>Historical sales, demand, spend, budgets</td>
<td>Historical spend, KPIs, sensor</td>
<td>Seasonality, lead time, holding costs</td>
<td>RI/P</td>
<td>Historical trends, disruptions, macro-economics, census</td>
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<tr>
<td>Labor cost</td>
<td>Category yield, innovation, operational gains, contract terms</td>
<td>Historical spend and CRM data</td>
<td>Market research</td>
<td>News, patent, jobs, and literature</td>
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<td>Trade data</td>
<td>Price benchmarks</td>
<td>POS</td>
<td>Business constraints</td>
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<td>Macro-economic indicators</td>
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<td>Commercial conditions</td>
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<td>Advanced analytics methods</td>
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<td>Computer simulation</td>
<td>Big data analytics</td>
<td>Multi-echelon inventory modeling</td>
<td>Mathematical programming</td>
<td>Stochastic programming</td>
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<td>Multi-dimensional regression analysis</td>
<td>Internet of things</td>
<td>Discrete-event simulation</td>
<td>Information visualization</td>
<td>Machine learning</td>
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<td>Use cases</td>
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<td>Manpower modeling</td>
<td>Dynamic spend cube</td>
<td>Dynamic inventory management</td>
<td>Collaborative optimization</td>
<td>Supplier base segmentation</td>
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<tr>
<td>Predictive demand planning and forecasting</td>
<td>Algorithmic spend categorization</td>
<td>Demand fulfillment</td>
<td>Advanced sourcing</td>
<td>Strategic Intelligence solution (AI enabled)</td>
</tr>
<tr>
<td>Space elasticity assortment planning</td>
<td>AI-enabled spend categorization</td>
<td>Customer-centric category management</td>
<td>Multi-objective optimization</td>
<td>Advanced supplier sensing</td>
</tr>
</tbody>
</table>

Notes: KPIs are key performance indicators; CRM is customer relationship management; RFI/P is requests for information and proposals; POS is point of sale; AI is artificial intelligence.

Source: A.T. Kearney analysis
**Predictive analytics.** Statistical models and forecasts techniques are used to understand the future and forecast *what could happen*. This method combines historical data and trends to attempt to predict the future using tools such as predictive demand planning and forecasting.

**Prescriptive analytics.** Optimization and simulation algorithms are used to shed light on possible outcomes and determine *what to do next*. This relatively new field combines techniques and tools such as business rules, algorithms, machine learning, and computational modeling procedures, which are applied against vast data inputs to optimize solutions. Large companies are applying prescriptive analytics to use cases such as collaborative optimization and dynamic inventory management for optimal supply chain.

Amid a large array of methods and use cases, the essential role of advanced analytics is to make sense of vast amounts of data, transforming the deluge of information into practical insights and predictions.

Advanced analytics, complemented by AI and machine learning, have grown to play an integral part across the entire procurement value chain. Amid a large array of methods and use cases, the essential role of advanced analytics is to make sense of vast amounts of data, transforming the deluge of information into practical insights and predictions. When adopting these techniques, the core task is to define clear business objectives and determine the relevant big-data analytics techniques that will generate tangible business value.

**Automation in the works: robotic process automation**

RPA differs from traditional software by working at the user interface level, replicating the exact actions of a human user—effectively a virtual method of business process outsourcing (see sidebar: The Future of Procurement Arrives at Last). RPA augments human resources with virtual “bots” to improve productivity and allow people to focus on activities that add value.

It is important to note that RPA is about automating the workforce, not about adding costs and complexity to the existing IT infrastructure. In fact, a seamless process can bring significant

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**The Future of Procurement Arrives at Last**

A related article, *The Future of Procurement Arrives at Last*, offers insights and real-life examples of the automation technologies that are being tested and implemented. At the current rate, digital technologies are on pace to automate most routine procurement processes within three to five years.
Qualitative and quantitative benefits (see figure 6). Automating processes enables operational excellence (speed, accuracy, and quality), improves information visibility, enhances stakeholder engagement, and most importantly, contributes to the bottom line. There are a wealth of RPA opportunities across the procurement value chain, particularly within the downstream operational procure-to-pay process in which adaptation is the most straightforward and yet brings the most value. Many leading procurement organizations use RPA to drive automation and compliance across transactional activities, freeing up resources to focus on strategic business agendas.

Figure 6
**Robotic process automation can bring a wealth of value to procurement**

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Several factors increase the likelihood of a successful RPA project:

**Optimize processes.** Improve your processes before attempting to automate them. RPA often fails because the focus was on automating process issues, which only buries the problems within the automation codes. Instead, RPA must be treated as an opportunity to revamp process—using automation to optimally run the process.

**Engage stakeholders.** Assess change readiness, and engage business stakeholders early. Business stakeholders must be open to the change and ready to take on new tasks of managing the automation. Communicate with stakeholder groups early as hype about robots can create false perceptions that cause people to resist the change.

**Create a proof of concept.** Prioritize a proof of concept to deliver rapid benefits with minimal investment to build confidence in the solution. A typical RPA can be automated in six weeks and deliver an in-year return on investment of more than 300 percent.

Note: RFP is requests of proposals; BPO is business process outsourcing; SRM is supplier relationship management.

Source: A.T. Kearney analysis
**Focus on design.** Consider the entire operating model as the organization structure may need to be reshaped and roles reengineered. Focus on teams within the organization rather than on discrete processes.

**Learn along the way.** Adopt an agile approach to test and iteratively refine the solution, and then gradually roll out as capabilities within the team are built. Target to build capabilities early, and train a team of internal subject-matter experts to build, maintain, and manage the RPA virtual workforce.

**Scale the rollout.** Be prepared to rapidly scale the rollout. This will require a detailed plan comprising several sprints in parallel and a focus on building capabilities within the organization, both in the Center of Excellence for RPA and in business units.

**Measuring the output: procurement performance management**

When procurement is the hub of cross-functional collaboration, the leadership team often wants access and transparency into procurement’s performance. Many senior executives want real-time insights into procurement’s key performance indicators—from project status and actual savings to forecasts and the Return on Supply Management Asset (ROSMA™) metric.

To manage procurement’s performance, business leaders must be able to answer several questions:

- How are we doing on our goals for this year? (financial, productivity, intangible)
- Are our stakeholders aligned with our results? How are we doing from their point of view?
- Do we have visibility into our key value drivers? How are we doing with them? (spend coverage, velocity, category yields, compliance)
- Do we have the right resources and the right mix of talent?

A robust procurement performance management (PPM) platform encompasses all procurement solutions to elevate the value of procurement by bringing an array of benefits:

- **Greater transparency.** Providing one source of information improves C-level visibility into the value procurement is delivering.
- **Higher savings.** As the procurement team operates more efficiently and effectively, more spending can be addressed.
• **Faster results.** End-to-end status tracking with immediate intervention in cases of delay improves the sourcing and cycle times.

• **More value.** Collaborating and engaging with business stakeholders early in the process drives innovation and creates value from procurement.

• **An optimized workforce.** Monitoring resource workloads and capabilities optimizes the procurement organization and improves talent management.

A robust PPM platform rests on four building blocks, complemented by a range of capabilities (see figure 7).

Figure 7
**Performance management can elevate the value of procurement**

**Four building blocks of procurement performance management**

<table>
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<tr>
<th>Planning and pipeline management</th>
<th>Project execution and workspace</th>
<th>Finance validation and benefits tracking</th>
<th>Resource optimization and talent management</th>
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<tr>
<td>Helps manage the pipeline of projects planned</td>
<td>Shows real-time visibility of project status and accountability</td>
<td>Tracks key elements of projects end to end</td>
<td>Manages performance with scorecards spend managed and benefits achieved</td>
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<td>Forecasts savings</td>
<td>Provides a repository for activities, communications, and documents via project space</td>
<td>Facilitates validation of results with finance and business units</td>
<td>Monitors validated financial benefits delivered by supply management and drills-down into areas of improvement</td>
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<td>Drives stakeholder engagement, and aligns projects with goals and objectives</td>
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<td>Pushes data to metrics and dashboards</td>
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**Key capabilities**

- Manages the hard financial metrics and improves identification and validation of essential intangibles
- Allows visual comparison of expected savings and captured savings versus a set annual target
- Improves work methods, performance measurement tracking, and reporting
- Measures, tracks, and manages the Return on Supply Management Assets (ROSMA™) framework to inspire improvement ideas and help maximize the value from procurement

Source: A.T. Kearney analysis

Although the benefits seem straightforward, successful PPM implementation requires a balance of strategic objectives, technology, and key performance indicators. The leaders have a comprehensive implementation plan to rapidly onboard and sustain adoption. An end-to-end PPM adoption generally includes three phases: define the strategic business goals and requirements; identify solution functionalities, define the workflow, analyze the cost involved, and source for a technology partner; and implement by configuring and launching the solution and managing users’ adoption.
Ride the Wave or Risk Going Under

Digital disruption has been keeping business leaders awake at night, many of whom fear their businesses will get left behind. In reality, the digital wave is already rising. To stay relevant, procurement will need to not only embrace digital but also rethink their strategies and create a new organizational structure.

Despite digital disruptions shifting the procurement paradigm, three pillars of excellence remain the same: category, team, and supplier excellence. And yet, winning in this digital world requires focusing on these fundamentals in a new way. The leaders are embracing digital to move beyond bottom-line efficiency and become strategic business partners that contribute a wealth of value to top-line growth.

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